UTILIS
multidec®
swiss type tools

THE REFERENCE IN MICRO-CUTTING

GENERAL CATALOG 2022/23



future since 1915

UTILIS®
Tooling for High Technology

<< MAIN MENU

Welcome!

Dear Sir or Madam,

UTILIS is bundling the expertise it has gained from over 25 years of experience in the field of micro-cutting. On this basis, our company is developing and delivering tool solutions worldwide for processing modern materials in the fields of watch and medical technology, in the automotive and electrical industries and also in aviation.

We are continuously striving to expand and improve the existing range of our "multidec®" own brand to increase your productivity. In this respect, we are driven by the following concepts:

– **Innovative power** in tool design and in our company's production.
– Customer service and **close collaboration with our customers** to develop the right or best solutions.
– **Highly cohesive** relationships with our technical and commercial partners.
– A **large autonomy** in our activities, from construction to production right up to marketing and selling our own products.

With this general catalogue, we are pleased to offer you a wide range of precision tools that will support you effectively in the micro-cutting process. All of the items listed are also available in our webshop.



We wish you every success with our products and services.

Ludger IGNASZAK, CEO



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<< MAIN MENU



Future since 1915 – ideas change the world

UTILIS AG is one of the world's leading providers in the area of precision tools for micro-cutting – your partner for machining. We have been developing technologically leading solutions for more than 100 years, and provide you with top class technology in our products and services.

Do you know what "UTILIS" stands for?

Utilitarian: "with regard to the benefits" or "utility-based" or "person who only focuses on the benefits"

Since the establishment of the company, our declared goal has been to develop and manufacture high-quality tools which provide our customers with a long-term benefit. We are not looking for short-term gain, but long-term value generation by means of market leadership and differentiation.

For us as a traditional, medium-sized Swiss family-run company, it is natural to make quality and customer proximity the highest priority. The products, technologies and services of UTILIS are something special.
Our claim: We provide you with products that set standards in all areas. We can only achieve this by our own researching, developing and manufacturing.

We have therefore taken the conscious decision to manufacture our "multidec®" own brand products in Switzerland. This puts us in a position to guarantee that all of our products fulfill the high UTILIS quality requirements.

We now have more than 100 employees at the Müllheim site, and are represented in more than 60 countries. This fills us with a great deal of pride, and compels and motivates us at the same time to always be a step ahead, also in the future.

<< MAIN MENU

If you want to place an order at any time of the day ...



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Select and order the product you require with a few clicks.

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UTILIS®
Tooling for High Technology

- ***Utilis AG, Precision Tools***
  Kreuzlingerstrasse 22, CH-8555 Müllheim, Switzerland
  Phone +41 52 762 62 62, Fax +41 52 762 62 00
  info@utilis.com, www.utilis.com

MAIN INNOVATIONS IN THIS CATALOG

multidec®-LUB

Tool plates with an integrated cooling system

Increases the performance of your machine.

CITIZEN star TORNOS



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multidec®-CUT

G-LINE inserts

The performance boost in machining. New technology for creation of any three-dimensional chip-breaker shapes.



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multidec®-ISO

FN-PF05 inserts

Further development of chip breaker, carbide substrate and coating for ultimate productivity and process security.



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multidec®-BROACH

SD-BRM single-tooth broaching tool

Hexagonal profile, flexible and fast yet highly accurate.

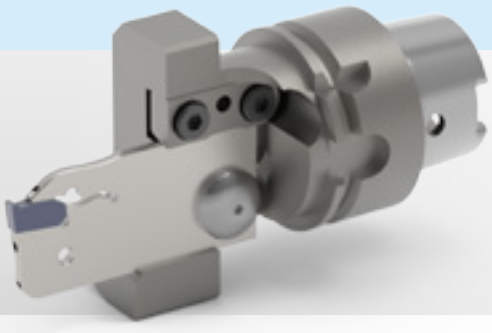


... 400

multidec®-4000

Parting tool with integrated cooling

Developed for parting off large diameters on multi-tasking machines.



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UTILIS multidec® swiss type tools

Legend

Different information about multidec® application refer to certain machining methods. In addition, simple symbols inform of the product assortment and where additional products and technical information can be found.

Dimensions
All dimensions are in millimeter (mm); native dimensions in inch are calculated into millimeter.

Page information
12… See page 12 and the following (example)

Recommended usage
- ● Preferred application
- ○ Possible application
- – Application not recommended

Availability
- ■ Standard articles
- ■ Standard articles, new in this catalog
- ■ Discontinued articles

Categorization of materials
The information on using multidec® tools refers to certain materials.
The materials to be machined are categorized in the same color throughout the entire catalog:

Steel (non-alloyed, low alloyed and high alloyed)
Stainless steel
Titanium and Ti-alloys
Non-ferrous metals (gold, aluminum and brass)
Hard materials

Order designation
To the designation of the selected type of product, the desired cutting material code must be added.
Supplementing information to the grades can be found according to the page references (…).

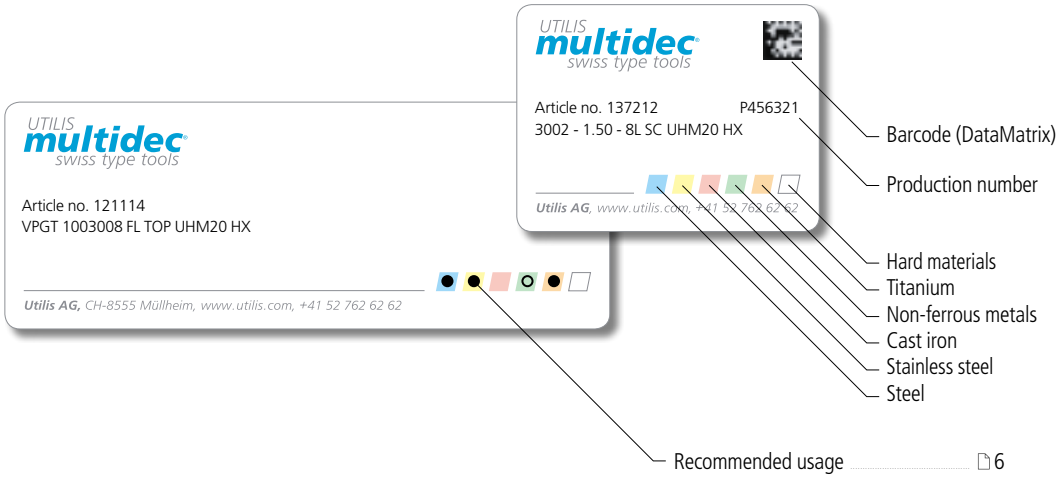
Order designation		Carbide 18		
		○	●	●
		○	●	●
		○	●	●
		●	○	–
		–	–	○
L	R	UHM 20	UHM 20 HPX	UHM 20 TX+
1605-0.5-1.5 L …	1605-0.5-1.5 R …	■	■	■
1605-1.0-2.5 L …	1605-1.0-2.5 R …	■	■	■
1605-1.5-3 L …	1605-1.5-3 R …	■	■	■

Example: 1605-0.5-1.5 L UHM 20

Legend

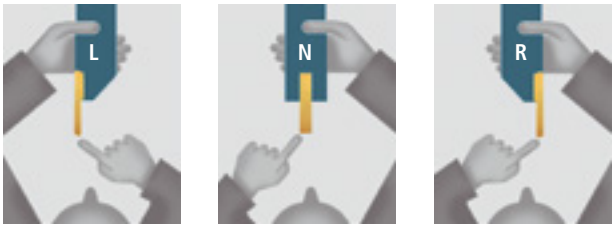
Packaging information

The product labels illustrate the content of the packaging and also show the materials on which the cutting insert can be used. For this purpose, UTILIS uses the ISO standard coding.
The UTILIS article number is generally also printed as a barcode on the UTILIS (multidec®) product packaging.



Execution of holder/insert

The side on which the insert is located determines whether it is a "left-" or "right-hand" holder. For this purpose, the holder is viewed with the insert pointing towards the observer.



Left hand holder | Neutral holder | Right hand holder

Pictures

The right-hand version of the tools is usually shown. (Exceptions are possible). The tool colours illustrated here are not binding.

Product lines

To meet today´s requirements of modern production it is not necessary to use the most accurate – but to use the tools adapted to the requirements. This means, the more accurate and sophisticated the process, the higher must be the accuracy of the produced tools. Therefore, the product range has been divided into three different accuracy classes. Your advantage: you buy the quality, which is effectively required.

Product line	Description
PREMIUM-LINE	The PREMIUM-LINE includes UTILIS tools with the highest accuracy requirements, especially for the production of micro parts. Tightest dimensional tolerances, precisely executed, highest surface quality and high repeatability are the features of this line. The manufacturing of these high-class tools requires considerable additional cost in production, which justifies the higher price of this product line.
STANDARD-LINE	The STANDARD-LINE meets the highest demands on the quality, which is demanded for Swiss type tools in production of small parts. Tight dimensional tolerances and high surface quality are implemented. These are quality standard tools, which are very well positioning this line in a wide range of applications.
VALUE-LINE	The VALUE-LINE is based on the known positions of our STANDARD-LINE. The most important functional elements – such as inserts and holders – are manufactured with the normal dimensional tolerances seen in the industry. Designed for the production of low-cost components, this line offers optimal quality standards. The greater tolerances and the reduced surface quality lower the production costs considerably, which also lowers the price in comparison to the standard product line.

Notes

Technical information

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Problems and their remedies in different cases 23

Working situations 24

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Surface quality

For the definition of surface roughness measured values are defined by DIN-ISO. In particular it means:

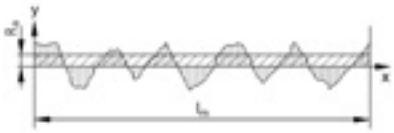
– Single surface roughness depth $Z_1 \ldots Z_5$
This is the vertical distance between the highest and the lowest point of the roughness profile R within a single measured length l_e.

– Average roughness depth R_z (DIN 4768)
This is defined as the average value resulting from the single roughness depths of five successive single measured lengths l_e.

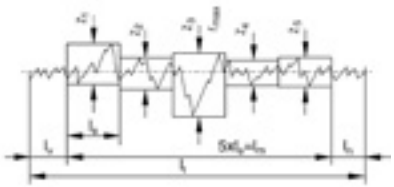
– Average roughness value R_a (DIN 4768)
This is defined as the arithmetical mean of the absolute sums of the roughness profile R within the entire measured length l_m.

– Max. surface roughness depth R_t (DIN 4768/1)
This is the distance between the elevation and depression of the line within the measured length (reference distance) of profile filtered according to DIN 4768 sheet 1.

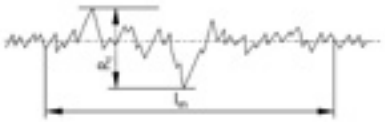
Average roughness value R_a



Single surface roughness depht Z



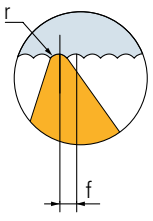
Maximum surface roughness R_t



Surface roughness by machining method

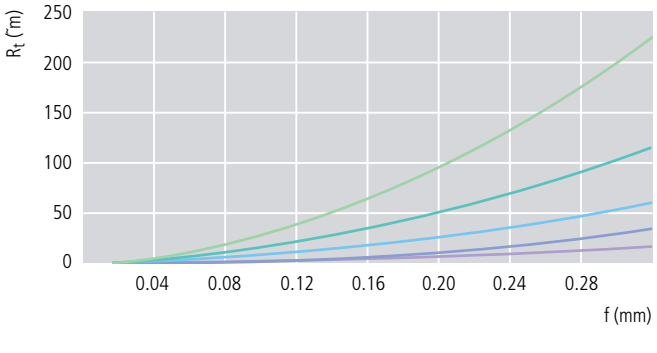
Surface roughness		Micro finishing ▼▼▼							Finishing ▼▼			Roughing ▼	
Surface symbol according to ISO 1302		0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
Roughness index (former)		N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12
Average roughness value	R_a (µm)	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
Surface roughness depth	R_z (µm)	0.025	0.63	1	1.6	2.5	4–6.3	10	16–25	40	63	100	160

Theoretical surface roughness



r = Corner radius (mm)
R_t = Theoretical surface roughness (µm)
f = Feed (mm)

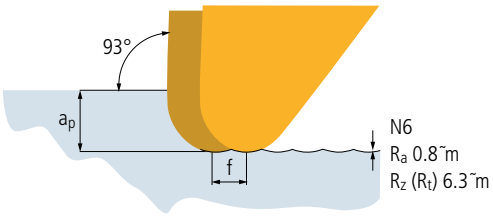
Standard design



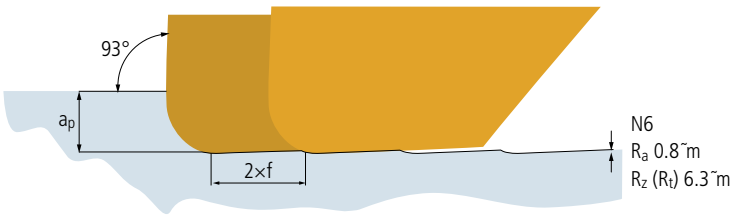
Improvement of feed rate by drag-cut with TOP System

By using the TOP system with drag-cut and a 93° holder the feed rate can be increased up to 2 times. This way the machining time can be decreased significantly by keeping the same quality. On the other hand within the same machining time the surface roughness can be improved clearly.

The following example illustrates the principle exactly.



Holder 93°
Corner radius 0.8 mm



Holder 93°
Corner radius 0.8 mm
multidec®-TOP insert

Categorization of materials

Steel (non-alloyed, low alloyed and high alloyed)

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
I	1.0116	St37-3	–	E24-U, E24-3, E24-4	A573-81 65, A573 Gr. 58	–	–	125
I	1.0144	St44-3	–	E28-4	A573-81	–	–	125
I	1.0301	C 10	–	AF 34 C, XC 10	–	S 10 C	–	125–155
I	1.0401	C 15	–	C18, AF3 7 C 12, XC 18, CC12	1015, 1016, 1017	S 15 C	–	98–178
I	1.0402	C 22	–	AF 42 C 20, 1 C 22, XC 25	1020, 1023	S 20 C, S 33 C	–	149–225
I	1.0501	C 35	–	C 35, 1 C 35, AF 55 C35, XC 38	1035	S 35 C, S 35 CM	–	178–225
I	1.0503	C 45	–	C 45, 1 C 45, AF 65 C 45	1045, 1043	S 45 C, S 45 CM	–	–
I	1.0535	C 55	–	C 54, 1 C 55, AF 70 C 55	1055	S 55 C, 1 C 55	–	–255
I	1.0570	St52-3, S355 J2G3 C	–	E 36-3, E 36-4	–	SM 50 YA	–	180
I	1.0601	C 60	–	C 60, 1 C 60, AF 70 C 55	1060	S 58 C	–	–255
I	1.0715	11 SMn 30, 9 SMn 28	11 SMn 28, 9 SMn 28	S 250	1213	SUM 22	–	107–169
I	1.0718	11 SMnPb 30, 9 SMnPb 28	11 SMnPb 28, 9 SMnPb 28	S 250 Pb	12 L 13	SUM 22 L, SUM 23 L, SUM 24 L	–	–
I	1.0721	10 S 20	–	10 F 1	1108	–	–	125–155
I	1.0722	10 SPb 20	–	10 PbF 2	11 L 08	–	–	–
I	1.0726	35 S 20	–	35 MF 6	1140	–	–	–
I	1.0727	46 S 20	–	–	–	–	–	178–214
I	1.0728	60 S 20	–	–	–	–	–	–
I	1.0736	11 SMn 37, 9 SMn 36	–	S 300	1215	SUM 25	–	–
I	1.0737	11 SMnPb 37, 9 SMnPb 36	11 SMnPb 35, 9 SMnPb 36	S 300 Pb	12 L 14	–	–	–
I	1.0756	35 SPb 20	–	–	–	–	–	–
I	1.0757	46 SPb 20	–	–	–	–	–	–
I	1.0758	60 SPb 20	–	–	–	–	–	–
I	1.0760	38 SMn 28	–	–	–	–	–	–
I	1.0761	38 SMnPb 28	–	–	–	–	–	–
I	1.0762	44 SMn 28, ETG 100	44 SMn 28	–	AISI 1144	–	–	320
I	1.0763	44 SMnPb 28	–	–	–	–	–	–
II	1.0904	55 Si 7	–	55 S 7	9255	–	–	235–290
II	1.0961	60 SiCr 7	–	60 SC 7	9262	SUP 7	–	245–310
I	1.1121	C 10 E, Ck 10	–	XC 10	–	S 10 C, S 9 CK	–	–
I	1.1141	C 15 E, Ck 15	–	XC 12, XC 15, XC 18	1015	S 15, S 15 CK	–	149–184
I	1.1157	40 Mn 4	–	35 M 5, 40 M 5	1039	–	–	–
I	1.1165	30 Mn 5	–	30 M 5	–	SMn 433 H, SCMn 2	–	238–280
I	1.1167	36 Mn 5, GS-36 Mn 5	–	35 M 5, 40 M 5	1335, 1541	SMn 438, SCMn 3	–	–217
I	1.1170	28 Mn 6	–	20 M 5, 28 Mn 6	1330	SCMn 1	–	223–255
I	1.1183	Cf 35	–	XC 38 H 1 TS	1035	S 35 C, S 35 CM	–	–
I	1.1191	C 45 E, Ck 45	–	C 45, 2 C 45, XC 42 H1, XC 45	1042, 1045	S 45 C, S 45 CM	–	207–255
I	1.1203	C 55 E, Ck 55	–	2 C 55, XC 55 H1, XC 54, XC 55	1055	S 55 C, S 55 CM	–	229–255
I	1.1213	Cf 53	–	XC 48 H 1 TS	1050, 1055	S 50 C, S 50 CM	–	–
I	1.1221	Ck 60	–	C 60, 2 C 60, XC 60	1064	S 58 C, S 60 CM, S 65 CM	–	241–255
I	1.1231	C 67 S, Ck 67	–	CX 68	–	S 70 CM	–	–92
I	1.1274	C 100 S, Ck 101	–	C 100, XC 100	1095	SUP 4, SK 4 CSP	–	–
I	1.1545	C 105 U, C 105 W 1	–	Y1 105	W 110	SK 3	–	190
I	1.1663	C 125 W	–	Y2 120	W 112	–	–	–
I	1.1730	C 45 W	–	–	–	–	–	–
II	1.2067	102 Cr 6, 100 Cr 6	–	Y 100 C 6	L 3	SUJ 2	–	–
III	1.2080	X 210 Cr 12	–	Z 200 C 12	D 3	SKD 1	–	–225
III	1.2083	X 42 Cr 13	–	Z 40 C 14	–	SUS 420 J 2	–	225
III	1.2210	115 CrV 3	–	100 C 3	L 2	–	–	–250
III	1.2311	40 CrMnMo 7	–	–	–	–	–	–235
III	1.2343	X 38 CrMoV 5-1	–	Z 38 CDV 5	H 11	SKD 6	–	–
III	1.2344	X 40 CrMoV 5-1	–	Z 40 CDV 5	H 13	SKD 61	–	–229
III	1.2355	50 CrMoV 13-15	–	–	–	–	–	–
III	1.2363	X 100 CrMoV 5-1	–	Z 100 CDV 5	A 2	SKD 12	–	–241

Categorization of materials

Steel (non-alloyed, low alloyed and high alloyed)

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
III	1.2365	X 32 CrMoV 3 3	–	32 DCV 28	H 10	SKD 7	–	–
II	1.2379	X 155 CrVMo 12 1	–	Z 160 CDV 12	D 2	SKD 11	–	–
II	1.2419	105 WCr 6	–	105 WCr 5, 105 Wc 13	–	SKS 2, SKS 3, SKS31	–	–
III	1.2436	X 210 CrW 12	–	Z 210 CW 12–01	–	–	–	–250
III	1.2510	100 MnCrW 4	–	90 MWCV 5	O 1	SKS 3	–	–
III	1.2516	120 WV 4	–	200 WC 20	F 1	–	–	–
II	1.2542	45 WCrV 7	–	45 WCrV 8, 45 WCV 20	S 1	–	–	–
III	1.2581	X 30 WCrV 9-3	–	Z 30 WCV 9	H 21	SKD 5	–	–
III	1.2601	X 165 CrMoV 12	–	–	H 12	–	–	–
II	1.2713	55 NiCrMoV 6	–	55 NCDV 7, 55 NCDV 7	L 6	SKT 4	–	–
III	1.2714	55 NiCrMoV 7	–	–	–	–	–	–350
III	1.2735	15 NiCr 14	–	10 NC 12	–	SNC 22	–	–
III	1.2738	40 CrMnNiMo 7	–	–	–	–	–	–350
II	1.3243	HS 6-5-2-5, S 6-5-2-5	–	Z 85 WDKCV 06-05-05-04-02	–	SKH 55	–	–269
II	1.3255	HS 18-1-2-5, S 18-1-2-5	–	Z 80 WKCV 18-05-04-01	T 4	SKH 3	–	–265
II	1.3343	HS 6-5-2, S 6-5-2	–	Z 85 WDCV 06-05-04-02	M 2	SKH 51	–	–280
II	1.3344	HS 6-5-3, S 6-5-3	–	Z 120 WDCV 06-05-01	M 3 Cl. 2, M 1	SKH 52, SKH 53	–	–
II	1.3346	HS 2-9-1, S 2-9-1	–	Z 85 DCWV 08-04-02-0	H 41, M 1	–	–	–
II	1.3348	HS 2-9-2, S 2-9-2	–	Z 100 DCWV 09-04-02-02	M 7	–	–	–
II	1.3355	HS 18-0-1, S 18-0-1	–	Z 80 WCV 18-04-01	T 1	SKH 2	–	–269
III	1.3505	100 Cr 6	–	–	52100	SUJ 2, SUJ 4	–	–207
II	1.5120	38 MnSi 4	–	–	–	–	–	–
II	1.5415	16 Mo 3, 15 Mo 3	–	15 D 3	A 204 Gr. A	STBA 12, STFA 12, STPA 12	–	–
II	1.5423	16 Mo 5	–	–	4419, 4520	SB 450 M, SB 480 M	–	–
II	1.5622	14 Ni 6	–	16 N 6	A 203	–	–	–
III	1.5680	X 12 Ni 5, 12 Ni 19	–	Z 18 N 5, 5 Ni, Z 10 N 05	2515, 2517	SL 5 N 590	–	–
II	1.5710	36 NiCr 6	–	–	3135	SNC 236	–	–
II	1.5732	14 NiCr 10	–	15 NC 11, 16 NC 11	3415	SNC 415, SNC 415 (H)	–	–
II	1.5736	36 NiCr 10	–	30 NC 11	–	SNC 631, SNC 631 (H)	–	–
II	1.5752	15 NiCr 13, 14 NiCr 14	–	12 NC 15, 14 NC 12, 13 NiCr 14	3310; 3312, 3316	SNC 815	–	–255
II	1.5755	31 NiCr 14	–	18 NC 13	–	SNC 836	–	–
II	1.6510	39 NiCrMo 3	–	–	–	–	–	–240
II	1.6511	36 CrNiMo 4, GS-36 CrNiMo4	–	35 NCD 5, 40 NCD 3	9840	SNCM 439	–	–250
II	1.6523	20 NiCrMo 2-2, 21 NiCrMo 2	–	20 NCD 2, 22 NCD 2	8615, 8617, 8620	SNCM 220, SNCM 220 (H)	–	–212
II	1.6546	40 NiCrMo 2-2	–	40 NCD 2	8640, 8740	SNCM 240	–	–
II	1.6580	30 CrNiMo 8	–	30 CND 8	–	SNCM 431	–	375–430
II	1.6582	34 CrNiMo 6, GS-34 CrNiMo 6	–	35 NCD 6	4337, 4340	SNCM 447	–	296–350
II	1.6587	18 CrNiMo7-6, 17 CrNiMo 6	–	18 NCD 6	–	–	–	159–207
II	1.6657	14 NiCrMo 13-4	–	16 NCD 13	9310	–	–	–
II	1.7015	15 Cr 3	–	12 C 3, 15 Cr 2, 18 C 3	5015	SCr 415	–	–174
II	1.7033	34 Cr 4	–	32 C 4, 34 Cr 4	5132	SCr 430	–	–255
II	1.7034	37 Cr 4	–	38 C 4	–	SCr 435 H	–	–255
II	1.7035	41 Cr 4	–	41 Cr 4, 42 C 4	5140	SCr 440	–	–255
II	1.7045	42 Cr 4	–	42 C 4 TS	5140	SCr 440	–	–255
II	1.7103	67 SiCr 5	–	67 SiCr 5	9254	–	–	–
II	1.7131	16 MnCr 5	–	16 MC 5, 16 MnCr 5	5115	–	–	–207
II	1.7139	16 MnCrS 5	–	16 MnCrS 5	5115	–	–	–207
II	1.7147	20 MnCr 5	–	20 MC 5	–	SMnC 420, SMnC 420 (H)	–	296–372
II	1.7176	55 Cr 3	–	55 C 3	5155	SUP 9	–	–280
II	1.7218	25 CrMo 4	–	25 CD 4	4130	SCM 420, SCM 430	–	–255
II	1.7220	34 CrMo 4	–	34 CD 4	4130, 4135, 4137	SCM 432, SCM 435 H, SCCrM 3	–	–255
II	1.7223	41 CrMo 4	–	42 CD 4 TS	4142	SNB 22, SCM 440	–	–
II	1.7225	42 CrMo 4	–	42 CD 4	4140, 4142	SCM 440, SNB 7	–	311–350
II	1.7228	50 CrMo 4	–	–	–	–	–	360–372
II	1.7262	15 CrMo 5	–	12 CD 4	–	SCM 415	–	–
II	1.7335	13 CrMo 4-5, 13 CrMo 4-4	–	15 CD 4.05	A 182–F11, F12	SFVA F 12, STBA 20, STBA 22	–	–
II	1.7361	32 CrMo 12	–	30 CD 12	–	–	–	–

Categorization of materials

Steel (non-alloyed, low alloyed and high alloyed)

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
II	1.7380	12 CrMo 9-10	–	12 CD 9-10, 10 CD 9-10	A 182-F22	SFVA F 22 A/B, SCMV 4, SCPH 32-CF	–	–
II	1.7715	14 MoV 6-3	–	14 Mo 6	K11591	–	–	–
II	1.8159	50 CrV 4	–	51 CV 4, 50 CV 4, 51 CrV 4	6150	SUP 10	–	–248
II	1.8161	58 CrV 4	–	–	–	–	–	–255
II	1.8507	34 CrAlMo 5	–	30 CAD 6-12	–	–	–	–
II	1.8509	41 CrAlMo 7-10	–	40 CAD 6-12	E 7140	SACM 1, SACM 645	–	–255
II	1.8519	31 CrMoC 9	–	–	–	–	–	–248
II	1.8522	33 CrMoV 12-9	–	–	–	–	Nitrodur 8522	–
II	1.8523	40 CrMoV 13-9, 39 CrMoV 13-9	–	–	–	–	–	–

Stainless steel

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
V	1.4000	X 6 Cr 13	–	Z 8 C 12, Z 6 C 13	403	SUS 403	–	–200
V	1.4001	X 7 Cr 14	–	Z 8 C 13 FF	410 S	SUS 410 S	–	130–180
V	1.4002	X 6 CrAl 13	–	Z 6 CA 13	405	SUS 405	–	130–180
V	1.4005	X 12 CrS 13	–	X 12 CrS 13	416	SUS 416	–	–220
V	1.4006	X 12 Cr 13	–	Z 10 C 13	410, CA-15	SUS 410	–	–220
VI	1.4016	X 6 Cr 17	–	Z 8 C 17	430	SUS 430	–	240
VI	1.4021	X 20 Cr 13	–	Z 20 C 13	S420 00	SUS 420 J1	–	–230
VI	1.4027	GX 20 Cr 14	–	Z 20 C 13 M	–	SCS 2	–	170–240
VI	1.4028	X 30 Cr 13	–	–	420 / 420F	SUS 420 J2	–	–245
VI	1.4034	X 46 Cr 13	–	Z 44 C 14	420	SUS 420	–	–245
VI	1.4035	X 45 CrS 13	–	–	420 F	SUS 420 F	–	–245
VI	1.4057	X 17 CrNi 16-2	–	Z 15 CN 16-02	431	SUS 431	–	–295
V	1.4104	X 12 CrMoS 17	–	Z 10 CF 17	430 F	SUS 430 F	–	–220
V	1.4105	X 6 CrMoS 17, X 4 CrMoS 18	–	Z 8 CF 17	430 FR	SUS 430F	–	–200
VI	1.4108	X 30 CrMoN 15-1	–	–	5898	–	Cronidur 30	200–240
VI	1.4109	X 70 CrMo 15, X 65 CrMo 14	–	S44 002	440 A	–	–	–280
V	1.4112	X 90 CrMoV 18	–	X 90 CrMoV 18	440 B	SUS 44 B	–	–255
V	1.4113	X 6 CrMo 17-1	–	Z 8 CD 17-01	434	SUS 434	–	–200
VI	1.4123	X 40 CrMoVN 16-2	–	Z 40 CDV 16-02	420 Mod	–	–	–265
V	1.4125	X 105 CrMo 17	–	Z 100 CD 17	440 C	SUS 440 C	–	–255
V	1.4197	X 20 CrNiMoS 13-1	–	–	420F Mod	–	–	–220
V	1.4301	X 5 CrNi 18-10	–	Z 6 CN 18-10	304, 304 H	SUS 304	–	–215
V	1.4305	X 8 CrNiS 18-9	X 10 CrNiS 18-9	Z 8 CNF 18-09	303	SUS 303	–	–230
V	1.4306	X 2 CrNi 19-11, X 2 CrNi 18-11	X 2 CrNi 19-11	Z 3 CN 19-11, Z 2 CN 18-10	304 L	SUS 304 L, SCS 19	–	–215
V	1.4308	X 6 CrNi 18-9	–	Z 6 CN 18-10 M	CF-8	SCS 13	–	130–200
V	1.4310	X 10 CrNi 18-8, X 12 CrNi 17-7	X 10 CrNi 19-8	Z 11 CN 18-08, Z 12 CN 18-09	301, 302	SUS 301	–	–
V	1.4311	X 2 CrNiN 18-10	–	Z 3 CN 18-10 Az	304 LN	SUS 304 LN	–	–230
VI	1.4313	X 3 CrNi 13-4	–	Z 4 CND 13-4, Z 6 CN 13-4	CA 6-NM	SCS 5	–	–320
VI	1.4317	GX 4 CrNi 13-4	–	Z 8 CD 17-1	CA 6-NM	SCS 6	–	230–350
V	1.4401	X 5 CrNiMo 18-10, X 5 CrNiMo 17-12-2	–	Z 6 CND 17-11, Z 6 CND 17-12-02	316	SUS 316	–	–215
V	1.4404	X 2 CrNiMo 17-12-2+S+Cu, X 2 CrNiMo 17-12-2	–	Z3CND17-11-02	316 L	SUS 316 F	–	–215
V	1.4408	X 6 CrNiMo 18-10	–	J 92 900	CF–8M	SCS 14	–	130–200
V	1.4410	X 2 CrNiMoN 25-7-4	–	Z2 CND 25-07-04 Az	F53	–	–	–230
V	1.4427	X 12 CrNiMoS 18-11	–	–	316 L	SUS 316 F	–	–
VI	1.4429	X 2 CrNiMoN 17-13-3, X 2 CrNiMoN 17-11-2	–	Z 2 CND 17-13 Az, Z 3 CND 17-11-03 Az	316 LN	SUS 316 LN	–	–250
V	1.4435	X 2 CrNiMo 18-14-3	–	Z 3 CND 18-14-03	316L	SUS 316 L, SCS 16	–	–215

Categorization of materials

Stainless steel

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
V	1.4436	X 5 CrNiMo 17-13-3	–	Z 6 CND 18-12-03	316	SUS 316	–	–215
V	1.4438	X 2 CrNiMo 18-15-4	–	Z 2 CND 19-15-04	317L	SUS 317L	–	–215
V	1.4441	X 2 CrNiMo 18-15-3	5832-1	–	316 LVM, F 138	SUS 316	–	–
V	1.4452	X 13 CrMnMoN 18-14-3	–	–	–	–	–	–
VI	1.4460	X 3 CrNiMo 27-5-2, X 8 CrNiMo 27-5	–	Z 5 CND 27-05 Az	329	SUS 329 J 1, SCS 11, SCH 11	–	–260
VI	1.4462	X 2 CrNiMoN 22-5-3	–	Z2 CND 22-05-03 AZ	329 A	–	Uranus 45 N	–270
V	1.4501	X 2 CrNiMoCuWN 25-7-4	–	Z2 CNDUW 25-07-04 AZ	F55	–	Zeron 100	–230
VI	1.4507	X 2 CrNiMoCuN 25-6-3	–	Z3 CNDU 25-07 AZ	F61	–	Uranus 52 N	–185
V	1.4510	X 6 CrTi 17, X 3 CrTi 17	–	Z 8 CT 17	XM 8, 430 Ti	SUS 430 LX	–	–185
V	1.4512	X 5 CrTi 12, X 2 CrTi 12	–	Z 6 CT 12	409	SUH 409	–	–180
VI	1.4539	X 1 NiCrMoCu 25-20-5	–	Z 2 NCDU 25-20	904 L	–	Uranus B6	–230
VI	1.4541	X 6 CrNiTi 18-10	–	Z 6 CNT 18-10	321	SUS 321	–	–215
VI	1.4542	X 5 CrNiCuNb 16-4, X 7 CrNiCu 16-4-4	–	Z7 CNU 17-04-04	630, 17-4 PH	SCS 24, SUS 630	Armco	–360
VI	1.4543	X 3 CrNiCuTiNb 12-9	–	–	XM-16	–	–	–
VI	1.4547	X 1 CrNiMoCuN 20-18-17	–	Z1 CNDU 20-18-06 AZ	F44	–	–	–250
VI	1.4548	X 5 CrNiCuNb 17-4-4	–	–	–	–	–	–360
VI	1.4550	X 6 CrNiNb 18-10	–	Z 6 CNNb 18-10	347, 348	SUS 347	–	–230
V	1.4568	X 7 CrNiAl 17-7	–	–	17-7 PH	–	–	–230
V	1.4570	X6 CrNICuS 18-9-2	–	–	–	–	–	–215
V	1.4571	X 6 CrNiMoTi 17-12-2	–	Z 6 CNDT 17-12	316 Ti	SUS 316 Ti	–	–215
V	1.4581	GX 5 CrNiMoNb 19-11-2	–	Z 4 CNDNb 18-12 M	–	SCS 22	–	130–200
V	1.4583	X 10 CrNiMoNb 18-12	–	–	318	–	–	130–220
VI	1.4718	X 45 CrSi 9-3	–	Z 45 CS 9	HNV 3	SUH 1	Pyrodur 4718	–300
V	1.4724	X 10 CrAl 13, X 10 CrAlSi 13	–	Z 13 C 13	405	SUS 405	–	–192
V	1.4742	X 10 CrAl 18, X 10 CrSiAl 18-1-1	–	Z 10 CAS 18	430	SUH 21, SUS 430	–	–212
VI	1.4757	X 80 CrNiSi 20	–	–	HNV6	SUH 4	–	–
V	1.4762	X 10 CrAl 24, X 10 CrAlSi 25	–	Z 12 CAS 25	446	SUH 446	–	–223
V	1.4828	X 15 CrNiSi 20-12	–	Z 9 CN 24-13, Z17 CNS 20-12	309	SUH 309	–	–223
V	1.4841	X 15 CrNiSi 25-20	–	Z15 CNS 25-20	314	–	–	165–225
VI	1.4845	X 8 CrNi 25-21, X 12 CrNi 25-21	–	Z 8 CN 25-20, Z 12 CN 25-20	310 S	SUH 310, SUS 310 S	–	–
VI	1.4864	X 12 NiCrSi 35-16, X 12 NiCrSi 36-16	–	Z 20 NCS 33-16	330	SUH 330	–	–
VI	1.4865	GX 40 NiCrSi 38-19, GX 40 NiCrSi 38-18	–	–	–	SCH 15, SCH 16	–	–
V	1.4871	X 53 CrMnNiN 21-9	–	Z 52 CMN 21-09 Az	EV 8	SUH 35, SUH 36	–	–
V	1.4876	X 10 NiAlTi 32-21, X10 NiCrAlTi 32-21	–	–	314	–	NICROFER® 3220 h	135–205
V	1.4878	X 12 CrNiTi 18-9, X 8 CrNiTi 18-10	–	Z 6 CNT 18-10	321	SUS 321	–	215
VI	1.4923	X 20 CrMoV 12-1, X 22 CrMoV 12-1	–	–	–	–	–	–270
V	1.4944	X 6 NiCrTiMoV 26-15	–	–	660	–	–	–200
VI	1.4980	X 6 NiCrTiMoVB 25-15 2	–	–	453	–	INCOLOY® Alloy A-286	248–341
VI	1.6359	X 2 NICoMo 18-8-5	–	–	–	–	MARVAL 18	–
VI	2.4068	Nickel 201	–	UNS N02201	–	–	–	–
VI	2.4668	NiCr19Fe18Nb5Mo3 Ti1AlC	–	–	–	–	INCONEL® Alloy 718	> 352
VI	2.4711	CoCr20Ni15Mo7	–	K13C20N16Fe15D7	F1058	–	Phynox® KL	–
VI	Co Cr	Co Cr	–	–	–	–	–	–

Categorization of materials

Titanium and Ti-alloys

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
IV	3.7025	TiCP Grade 1	5832-2	T35	B 348, F67	KS-40	–	~120
IV	3.7035	TiCP Grade 2	5832-2	T40	B 348/265, F 67	KS-50	–	~150
IV	3.7034	TiCP Grade 2	5832-2	T40	B 348/265, F 67	KS-50	–	~150
IV	3.7055	Ti 3 (Grade 3)	5832-2	T50	F67	KS-70	–	~170
IV	3.7064	TiCP Grade 4, TiCP Grade 4B	5832-2	T60	B 348, F 67, B265	KS-85	–	~200
IV	3.7065	TiCP Grade 4B, TiCP Grade 4	5832-2	–	B 348, F 67	KS-85	–	~200
IV	3.7115	Ti Al 2.5 5n (Grade 6)	–	–	B 348/TA 5E	KS-115 AS	–	–
IV	3.7134	TiCu 2	–	–	B 348, F 67	–	–	<260
IV	3.7164	Ti6AlV4 Grade 5, TiAl 8 Mo 1 V 1	5832-3	TA6V	B265, B348, 4911, 4928	KS-130 AV	–	~310
IV	3.7165	Ti6AlV4 Grade 5	5832-3	TA6V	B265, B348, 4911, 4928	KS-130 AV	–	~310
IV	3.7235	Ti 2 Pd (Grade 7)	–	–	B 348/F 67	–	–	~150
IV	3.7154	TiAl 6 Zr 5	–	–	B 348	KS-50 Pd	–	–
IV	3.7194	Ti 3 Al 2.5V (Grade 9)	–	–	B 348	KS-50 Pd	–	–
IV	3.7225	Ti 7 (Grade 7)	–	–	–	–	–	~150
IV	9.9367	TiAl6Nb7	5832-11	TA6Nb7	F1295	–	Protasul	–

Non-ferrous metals (aluminum)

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
VII	2.1871	G-AlCu 4 TiMg	–	–	–	–	–	–
VII	3.0205	Al99	–	1200 (A4)	–	–	–	–
VII	3.0255	Al99.5	–	1050 A	1000	–	–	–
VII	3.0275	Al99.7	–	1070 A	–	–	–	–
VII	3.0285	Al99.8	–	1080 A	–	–	–	–
VII	3.1255	AlCuSiMn	–	–	2014	–	AVIONAL 14	–
VII	3.1325	AlCuMg 1	–	2017 A (AU4G)	–	–	AVIONAL 17	–
VII	3.1355	AlCuMg 2	–	2024 (AU4G1)	–	–	AVIONAL 24	–
VII	3.1645	AlCuMgPb	–	2030 (AU4Pb)	–	–	–	–
VII	3.1655	AlCuBiPb, AlCu 6 BiPb	–	2001 (AU5PbBi)	–	–	–	–
VII	3.1754	G-AlCu 5 Ni 1.5	–	–	–	–	–	–
VII	3.2163	G-AlSi 9 Cu 3	–	–	–	–	–	–
VII	3.2315	AlMgSi 1	–	–	6082	–	ANTICORODAL 100	–
VII	3.2371	G-AlSi 7 Mg	–	–	4218 B	–	–	–
VII	3.2373	G-AlSi 9 Mg	–	–	–	–	–	–
VII	3.2381	G-AlSi 10 Mg	–	–	–	–	–	–
VII	3.2382	GD-AlSi 10 Mg	–	–	–	–	–	–
VII	3.2383	G-AlSi 10 Mg (Cu)	–	–	A 360.2	–	–	–
VII	3.2581	G-AlSi 12	–	–	A 413.2	–	–	–
VII	3.2582	GD-AlSi 12	–	–	A 413.0	–	–	–
VII	3.2583	G-AlSi 12 (Cu)	–	–	A 413.1	–	–	–
VII	3.3206	AlMgSi 0.5	–	6060 (AGS)	6063	–	ANTICORODAL 63 - AL6060	–
VII	3.3207	E-AlMgSi 0.5	–	–	6101	–	ALDREY	–
VII	3.3214	AlMgSi 0.5	–	–	6061	–	ANTICORODAL 61	–
VII	3.3315	AlMg 1	–	5005 (AlMg1)	–	–	–	–
VII	3.3545	AlMg 4 Mn	–	5086 (AG4MC)	5083	–	PERALUMAN 44	–
VII	3.3547	AlMg 4.5 Mn 0.7	–	5083 (AlMg5Mn0.7)	5083	A 5083	–	–
VII	3.3561	G-AlMg 5	–	–	–	–	–	–
VII	3.4335	AlZn 4.5 Mg 1	–	7020 (AZ5G)	7020	–	CARPENTAL	–
VII	3.4345	AlZnMgCu 0.5	–	–	7050	–	–	–
VII	3.4365	AlZnMgCu1.5	–	7075 (AZ5GU)	7075	–	ERGAL	–
VII	3.5101	G-MgZn 4 SE 1 Zr 1	–	–	ZE 41	–	–	–
VII	3.5103	MgSE 3 Zn 2 Zr 1	–	–	EZ 33	–	–	–
VII	3.5106	G-MgAg 3 SE 2 Zr 1	–	–	QE 22	–	–	–
VII	3.5812	G-MgAl 8 Zn 1	–	–	AZ 81	–	–	–
VII	3.5912	G-MgAl 9 Zn 1	–	–	AZ 91	–	–	–

Categorization of materials

Non-ferrous metals (brass / lead-free brass)

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
VIII	2.0220	CuZn 5	–	–	C 21000	C2100	–	65–110
VIII	2.0230	CuZn 10	–	–	–	–	–	75–130
VIII	2.0240	CuZn 15	–	–	–	–	–	65–145
VIII	2.0250	CuZn 20	–	–	–	–	–	65–150
VIII	2.0265	CuZn 30	–	–	C 26000	C2600	–	70–165
VIII	2.0321	CuZn 37	–	–	C 27200, C 27400	C2700, C2720	–	70–180
VIII	2.0331	CuZn 35 Pb 1, CuZn 36 Pb 1.5	CuZn 35 Pb 1	–	C 34000, C 34700	C3501	–	95–120
VIII	2.0335	CuZn 36	CuZn 37	–	C 27000, C 27200	C2700	–	65–130
VIII	2.0360	CuZn 40	–	–	–	–	–	95–120
VIII	2.0371	CuZn 38 Pb 2, CuZn 38 Pb 1.5	CuZn 38 Pb 2	–	C 37700	C3771, C3561	–	80–160
VIII	2.0375	CuZn 36 Pb 3	–	–	–	–	–	80–155
VIII	2.0380	CuZn 39 Pb 2	CuZn 38 Pb 2	–	C 37700	C3771, C3561	–	95–150
VIII	2.0401	CuZn 39 Pb 3	CuZn 38 Pb 3	–	C 38500	C3603	–	80–145
VIII	2.0402	CuZn 40 Pb 2	CuZn 40 Pb 2	–	C 38000	C3771, C3561	–	80–145
VIII	2.0410	CuZn 44 Pb 2	–	–	–	–	–	–
VIII	2.0490	CuZn 31 Si	CuZn 31 Si 1	–	C 69800	–	–	<180
VIII	2.0540	CuZn 35 Ni	–	–	–	–	–	–
VIII	2.0550	CuZn 40 Al 2, CuZn 37 Mn 3 Al 2 PbSi	CuZn 37 Mn 3 Al 2 Si	–	C 67400	–	–	130–200
VIII	2.0572	CuZn 40 Mn 2 Fe 1	–	–	–	–	–	–
VIII	2.0771	CuNi 7 Zn 39 Mn 5 Pb 3	–	–	–	–	–	130–200
VIII	2.0853	CuNi 1 Si	–	–	C 19010	–	–	–170
VIII	2.1191	CuAg 0.1, CuAg0.10P	–	–	C 10700, C 12100	–	–	–120
VIII	2.1293	CuCr 1 Zr	–	–	C 18150	–	–	–170
VIII	2.1310	CuFe 2 P	–	–	C 19400	–	–	–170
VIII	2.1498	CuSP, CuS (P0.01)	–	–	C 14700	–	–	–140

Non-ferrous metals (Synthetics reinforced/composits)

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HB)
IX	Glass-fibre reinforced plastics (GRP)							
IX	Carbon-fibre reinforced plastics (CRP)							

Hard materials

Category	Material number	Specifications					Market designation	Hardness
		DIN	ISO	AFNOR	AISI/SAE/ASTM	JIS		(HRC)
X	Hardened steels							–70
X	1.3334	HS 6-5-2 C		Z 85 WDCV 6	M 2 reg. C		HSS	–66
X							Hardox 400	45
X							Hardox 500	55

Properties and application range of carbide, cermet and HSS

Grade	Norm	Application range											Materials (category) and hardness value (HB) / HRC									
		DIN/ISO 513 Toughness Hardness											125–300 Steel non-alloyed (I)	180–250 Steel low alloyed (II)	200–350 Steel high alloyed (III)	180–220 Stainless steel (V)	220–330 Stainless steel (VI)	Titanium (IV)	60–130 Aluminum (VII)	Brass / lead-free brass (VIII)	Synthetics reinforced/composits (IX)	45–70 HRC Hard materials (X)
		1	5	10	15	20	25	30	35	40	45	50										
Carbide																						
UHM 10	K 10 / N 10 / S 10												–	–	–	–	–	○	●	●	–	–
UHM 10 HX	K 10 / N 10 / S 10												○	○	○	●	●	●	○	○	–	–
UHM 10 TX+	P 10 / M 10 / S 10 / H 10												●	●	●	●	●	●	–	–	–	●
UHM 10 MZ	P 15												●	●	●	–	–	–	–	–	–	–
UHM 20	N 20												○	○	○	○	○	○	●	●	–	–
UHM 20 HPX	P 20–40 / M 20–40 / S 20–40												●	●	●	●	●	●	○	○	–	–
UHM 20 HX	P 20 / M 20 / S 20												●	●	●	●	●	●	○	○	–	–
UHM 20 TX+	P 20 / M 20 / S 20 / H 20												●	●	●	●	●	●	–	–	–	○
UHM 20 MZ	P 25 / M 20												●	●	●	○	○	–	–	–	–	–
UHM 30 HX	P 25 / M 25 / S 25 / N 25												○	○	○	●	●	●	○	–	–	–
UHM 30 TX+	P 25 / M 25 / S 25												●	●	●	●	●	●	–	–	–	–
UHM 30 MZ	P 35 / M 30												●	○	–	●	●	–	–	–	–	–
Cermet																						
UCM 10	P 15 / M 10												●	●	●	●	●	–	–	–	–	–
UCM 10 HX	P 10 / M 10												●	●	●	●	●	–	–	–	–	–
UCM 10 MZ	P 10 / M 10												●	●	●	○	○	○	–	–	–	–
HSS																						
HSS	P 40–50 / M 40–50 / N 40–50												●	●	●	○	○	–	●	●	–	–
HSS HX	P 40–50 / M 40–50 / N 40–50												●	●	●	●	●	○	○	○	–	–

Application range for diamond ..... 19…

Legend ..... 6…

Properties and application range for diamond

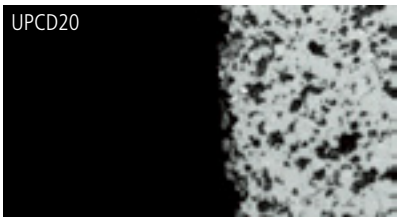
Grade	Norm	Application range	Materials (category) and hardness value (HB) / (HRC)									
		DIN/ISO 513 Toughness Hardness	125–300 Steel non-alloyed (I)	180–250 Steel low alloyed (II)	200–350 Steel high alloyed (III)	180–220 Stainless steel (V)	220–330 Stainless steel (VI)	Titanium (IV)	60–130 Aluminum (VII)	Brass / lead-free brass (VIII)	Synthetics reinforced/composits (IX)	45–70 HRC Hard materials (X)
		01 05 10 15 20 25 30 35 40 45 50										
Diamond												
UCVD 08		■ ■	–	–	–	–	–	–	●	●	●	–
UPCD 15		■ ■ ■ ■ ■	–	–	–	–	–	–	●	●	–	–
UPCD 20		■ ■ ■	–	–	–	–	–	–	●	●	○	–

The exceptional hardness of diamonds in the various tool versions enables much higher cutting parameters to be achieved compared when conventional cutting materials are used.
In addition to traditional grinding and erosion machining, the use of high tech lasers not only produces top quality cutting edges, but also enables 3D chip removal geometries to be obtained.

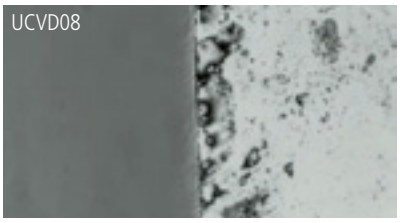
UPCD15 / UPCD20
UPCD (polycrystalline diamond) is a sintered diamond powder in a metallic bonding matrix. Its grain structure ranging from ultra-fine (UPCD15) to coarse (UPCD20) gives the UPCD varying degrees of toughness, so greatly extending the range of possible applications.
With its diamond content of around 90 % only, UPCD has a much lower hardness and hence wear-resistance than UCVD.



Suitable for the following materials:
– Aluminum with 8–20 % SiC
– Brass, copper and bronze
– Platinum and gold



UCVD08
This diamond is produced by the CVD technique with a thickness of 0.8 mm. No binder is used. Minute diamond crystals are separated from the gas phase into a thick polymer diamond substrate which consists of up to 99.9 % diamond material.
Because of its high wear resistance, the life time of this innovative cutting material is between 2 and 10 times longer than that of UPCD.
The extremely sharp cutting edge enables reduced cutting pressure to be applied, therefore achieving excellent surface quality.



Suitable for the following materials:
– CFK… up to 80 % carbon fiber
– GFK… up to 80 % glass fiber
– Plastics
– Aluminum with 8–20 % SiC
– Brass, copper and bronze
– Platinum and gold

Legend ..... 6…

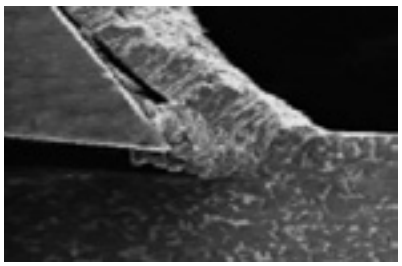
Properties and application range of coatings

UTILIS coating code	Coating	Materials (Category)										Characteristics
		(I) Steel non-alloyed	(II) Steel low alloyed	(III) Steel high alloyed	(V) Stainless steel	(VI) Stainless steel	(IV) Titanium	(VII) Aluminum	(VIII) Brass / lead-free brass	(IX) Synthetics reinforced/composits	(X) Hard materials	
Standard for general applications												
HX	TiAlN / AlTiN	●	●	●	●	●	●	●	●	○	–	Standard allround coating for finishing and micro-finishing operations on a wide range of materials.
HPX	TiAlN / AlTiN	●	●	●	●	●	●	○	○	○	–	
MZ	TiN / TiAlN	●	●	●	●	●	–	–	–	–	–	Standard allround coating for roughing and finishing operations in steel and stainless steel.
TX+	TiSiN	–	○	●	●	●	●	–	–	–	●	High-performance coating for micro finishing and finishing operations in steel, stainless steel and highly heat resistant materials as well as micro cutting of hardened steels up to 70 HRC.
Special applications (upon customer request)												
HX-F	AlCrN	●	●	●	●	●	○	–	–	–	–	High-performance coating for micro finishing operations in steel and stainless steel. Recommended for sharp edges, which are used in micro machining.
DX-T	Diamond DLC	–	–	–	–	–	–	●	●	○	–	Diamond coating for non-ferrous metals. Recommended for aluminium, plastic, brass and copper.
DX-HC	Diamond Ta-C	–	–	–	–	–	–	●	●	●	–	Diamond coating for non-ferrous metals. Recommended for aluminium alloys, platinum, silver, gold, composites and reinforced synthetics

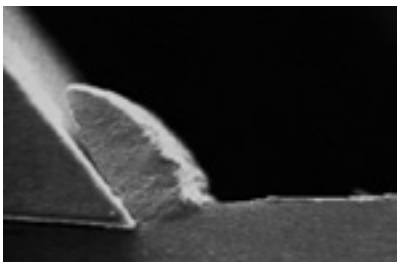
Legend ..... 6…

Properties and application range of coatings

With the refinement of cutting tools with an additional coating the wear will be decisively reduced. Rubbing, warming up, diffusion and oxidation decreases significantly.



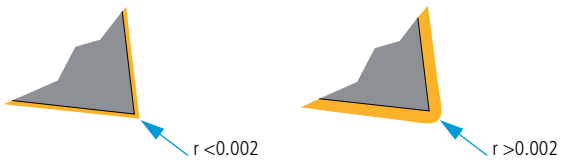
Cutting process without coated tool



Cutting process with coated tool

Rounded edges among coated inserts

Every coating of a carbide insert results in arounded cutting edge. The smaller the diameter of the material to be cut, the more significant are the consequences in the cutting performance. Therefore the rounding off of the cutting edge depends on the thickness of the coated layer. As thicker the coating, as greater is the radius created along the cutting edge.



Comparison of default hardness values

Tensile strength (N/mm²)	Vickers HV	Brinell HB	Rockwell HRC	Shore C
700	200	200	–	28
740	210	210	–	29
770	220	220	–	30
810	230	230	19.2	31
840	240	240	21.2	33
880	250	250	23	34
910	260	260	24.7	35
950	270	270	26.1	36
980	280	280	27.6	37
1020	290	290	29	39
1050	300	300	30.3	40
1090	310	310	31.5	41
1120	320	320	32.9	42
1150	330	330	33.8	43
1190	340	340	34.9	44
1230	350	350	36	45
1260	360	359	37	46
1300	370	368	38	47
1330	380	373	38.9	48
1370	390	385	39.8	49
1400	400	393	40.7	50
1440	410	400	41.5	51
1470	420	407	42.3	52
1510	430	416	43.2	53
1540	440	423	44	54
1580	450	429	44.8	55
1610	460	435	45.5	56
1650	470	441	46.3	57
1680	480	450	47	58
1720	490	457	47.7	59
1750	500	465	48.3	60
1790	510	474	49	61
1820	520	482	49.6	62
1860	530	489	50.3	63
1890	540	496	50.9	64
1930	550	503	51.5	65
1960	560	511	52.1	66
2000	570	520	52.7	67

Tensile strength (N/mm²)	Vickers HV	Brinell HB	Rockwell HRC	Shore C
2030	580	527	53.3	68
2070	590	533	53.8	69
2100	600	533	54.4	70
2140	610	543	54.9	71
2170	620	549	55.4	72
2210	630	555	55.9	73
2240	640	561	56.4	74
2280	650	568	56.9	75
2310	660	574	57.4	75
2350	670	581	57.9	76
2380	680	588	58.7	77
2410	690	595	58.9	78
2450	700	602	59.3	79
2480	710	609	59.8	80
2520	720	616	60.2	81
2550	730	622	60.7	82
2590	740	627	61.1	83
2630	750	633	61.5	83
2660	760	639	61.9	84
2700	770	644	62.3	85
2730	780	650	62.7	86
2770	790	656	63.1	86
2800	800	661	63.5	87
2840	810	666	63.9	87
2870	820	670	64.3	88
2910	830	677	64.6	89
2940	840	682	65	89
2980	850	–	65.3	90
3010	860	–	65.7	90
3050	870	–	66	91
3080	880	–	66.3	91
3120	890	–	66.6	92
3150	900	–	66.9	92
3190	910	–	67.2	–
3220	920	–	67.5	–
3260	930	–	67.7	–
3290	940	–	68	–

Causes and remedies of wear

A Flank wear



Reasons:
– Cutting speed too high
– Carbide grade with too little wear resistance
– Feed rate not adapted

Remedies:
– Reduce cutting speed
– Select better wear resistant carbide grade
– Adapt feed rate to cutting speed and cutting depth (increase feed rate)

Abrasion on flank, normal wear after a certain machining time.

B Edge chipping



Reasons:
– Grade with too high wear resistance
– Vibrations
– Feed rate too high or excessive cutting depth
– Interrupted cut
– Swarf damage

Remedies:
– Use tougher carbide grade
– Use negative cutting edge geometry with chip groove
– Increase stability (tool and work piece)

Through excessive mechanical stress at the cutting edge fracture and chipping can take place.

C Cratering



Reasons:
– Too high cutting speed and/or feed rate
– Rake angle too shallow
– Carbide grade with little wear resistance
– Insufficient coolant supply

Remedies:
– Reduce cutting speed and/or feed rate
– Increase coolant quantity and/or pressure, optimize coolant supply
– Use carbide grade which is more resistant to cratering

The hot chip which is being evacuated causes cratering at the rake face of the cutting edge.

D Plastic deformation



Reasons:
– Too high machining temperature, resulting in softening of substrate
– Damaged coatings

Remedies:
– Reduce cutting speed
– Choose carbide grade with higher wear resistance
– Provide cooling

High machining temperature and simultaneous mechanical stress can lead to plastic deformation.

E Built-up edges



Reasons:
– Too low cutting speed
– Too small rake angle
– Wrong cutting material
– Lack of cooling/lubrication

Remedies:
– Increase cutting speed
– Enlarge rake angle
– Select more resistant coating
– Use emulsion with higher concentration

Built-up material/edges occur when the chip is not evacuated properly due to a too low cutting temperature.

F Insert breakage



Reasons:
– Excessive stress of cutting material
– Lack of stability
– Corner angle too small
– Excessive notching

Remedies:
– Use tougher carbide grade
– Use protective edge chamfer
– Increase honing of cutting edge
– Use more stable geometry

Excessive stress of the insert causes breakage.

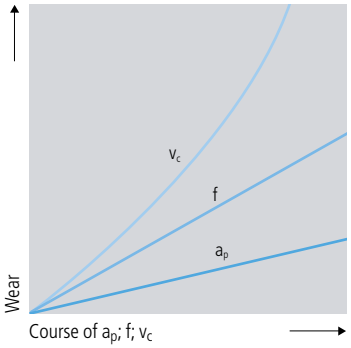
Problems and their remedies in different cases

Problem	Remedy / Measure: Cutting speed	Feed	Carbide toughness	Carbide hardness	Clearance angle	Rake angle	Stability	Rounded edge condition	Coolant	Face/radial runout
A* Excessive flank wear	↓	↑		↑						
B* Chipping of cutting edge	↑	↓	↑			🔍	↑	↑		
C* Excessive cratering	↓	↓		↑					↑	
D* Plastic deformation	↓	↓		↑		🔍			🔍	
E* Built up edge	↑	↑			🔍	↑		🔍	↑	
F* Insert breakage		↓	↑			🔍	↑			
Poor surface finish	↑	↓					↑	↓	🔍	↑
Chip forming, chip pile up					🔍	🔍			🔍	
Vibration	🔍	🔍			↓	↑	↑			↑
Hairline cracks	↓	↓	🔍		↓				↑	

* Further information ..... 22…

↑ increase ↓ decrease 🔍 inspect, optimise

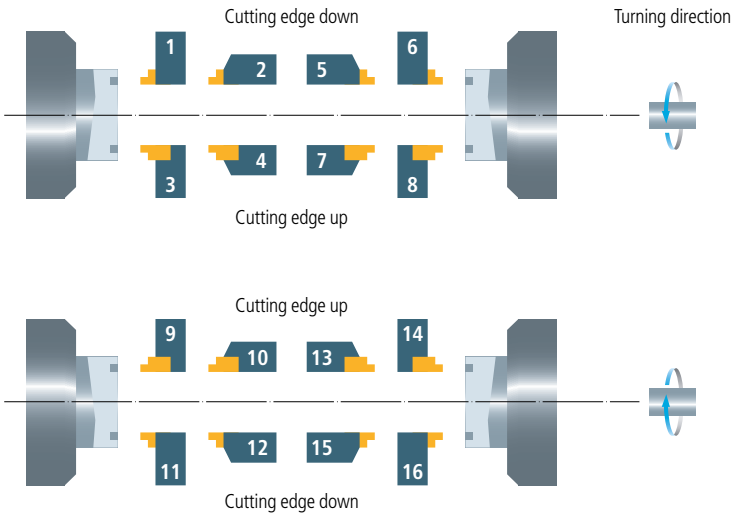
The cutting temperature particularly the wear depends significantly on the cutting conditions (v_c, f and a_p). Thermal causes of wear like oxidation and diffusion increase disproportionately.



v_c = Cutting speed
f = Feed
a_p = Depth of cut

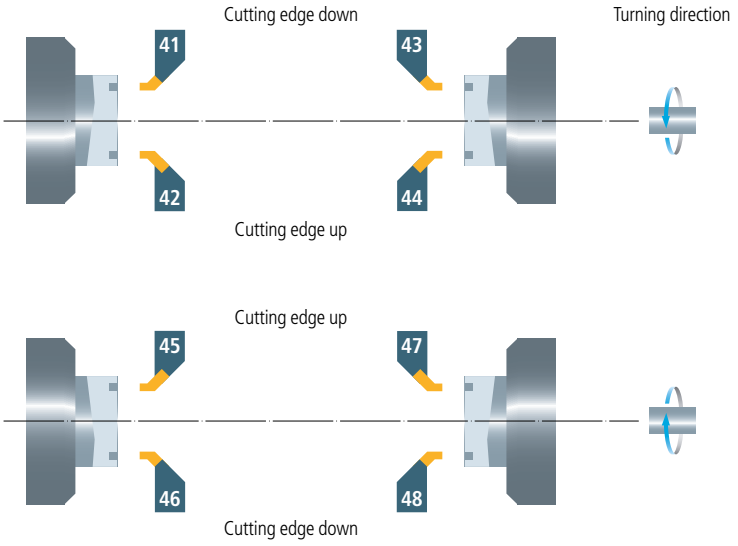
With the illustration below it is possible to achieve up different tooling situations. Choose yours and we will recommend you the suitable tooling solution.

Turning axial



Situation	Execution	
	Holder	Insert
1	R	L
2	L	L
3	R	L
4	L	L
5	R	R
6	L	R
7	R	R
8	L	R
9	L	R
10	R	R
11	L	R
12	R	R
13	L	L
14	R	L
15	L	L
16	R	L

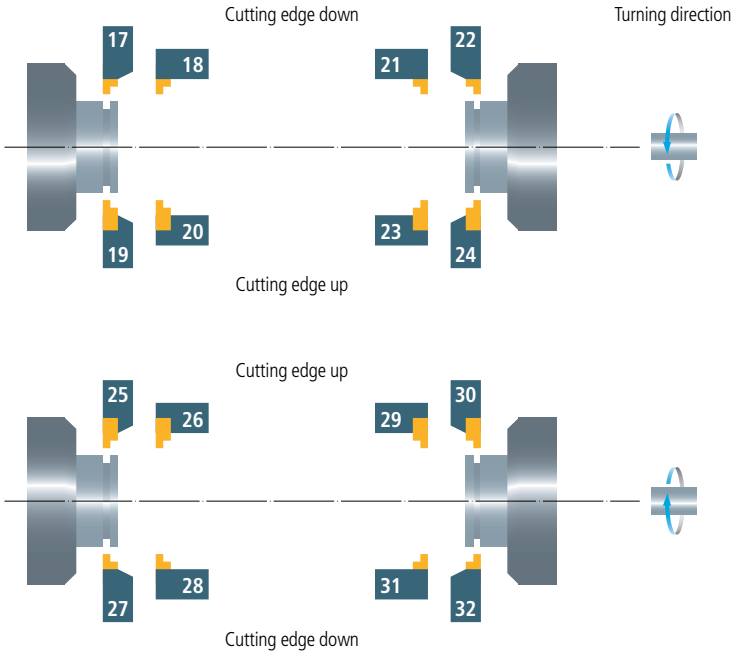
Turning axial (with holder 45°)



Situation	Execution	
	Holder	Insert
41	R	R
42	R	R
43	L	L
44	L	L
45	L	L
46	L	L
47	R	R
48	R	R

Working situations

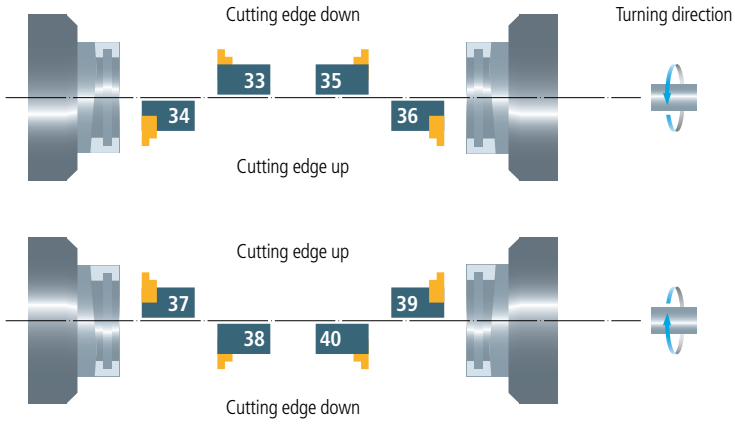
Turning radial outside



Situation	Execution	
	Holder	Insert
17	R	R
18	L	R
19	R	R
20	L	R
21	R	L
22	L	L
23	R	L
24	L	L
25	L	L
26	R	L
27	L	L
28	R	L
29	L	R
30	R	R
31	L	R
32	R	R

R = right L = left

Turning radial inside

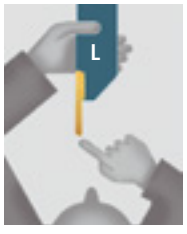


Situation	Execution	
	Holder	Insert
33	R	L
34	R	L
35	L	R
36	L	R
37	L	R
38	L	R
39	R	L
40	R	L

R = right L = left

Execution of holder/insert

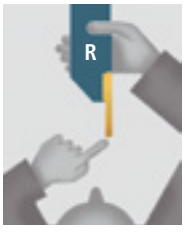
The side on which the insert is located determines whether it is a "left-" or "right-hand" holder. For this purpose, the holder is viewed with the insert pointing towards the observer.



Left hand holder



Neutral holder



Right hand holder

Designation system (ISO 1832)

Indexable inserts

Form of insert

Index	α
V	35°
D	55°
C	80°



Clearance angle

Index	α
C	7°
N	0°
P	11°



Tolerance

Index	s ±	d ±
E	0.025	0.025
G	0.13	0.025
M	0.13	0.05–0.15*
X	0.1	0.04



* Dependent on dimension of insert

Distinctive mark

Index	
W	
T	
U	
X/Z	Special shape

DCGT 0702015 FN -A3 UHM 30 HX

Chip breaker 220

Carbide 18

Coating 21

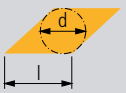
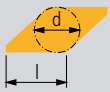
Edge condition

Index	
F	Sharp
E	Rounded

Cutting direction

Index		
L	Left	
N	Neutral	
R	Right	

Edge length

Index	l	d	
06	6.4	6.35	
09	9.7	9.53	
12	12.9	12.7	
07	7.75	6.35	
11	11.6	9.53	
11	11.1	6.35	
16	16.6	9.53	
10	10	6.35	

Insert thickness

Index	s	
02	2.38	
03	3.18	
T3	3.97	
04	4.76	

Corner radius

Index	R
00/ZZ	0
003	0.03
006	0.06
008	0.08
01	0.1
015	0.15
02	0.2
035	0.35
04	0.4
075	0.75
08	0.8

Designation system (ISO 4983)

Holder OD turning

Shaft height
h_1/h_2



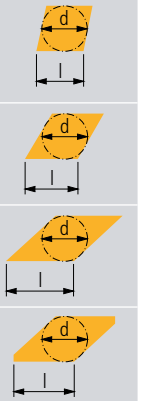
Shaft width
b



Holder lenght	
Index	l_1
D	60
E	70
F	80
H	100
K	125
M	150
X	Special shape



Edge length			
Index	l	d	
06	6.4	6.35	
09	9.7	9.53	
12	12.9	12.7	
07	7.75	6.35	
11	11.6	9.53	
11	11.1	6.35	
16	16.6	9.59	
10	10	6.35	



Special shape	
Index	
U	For Swiss type automatic lathes

SDJCR 1212 H07 U

Clamping		
Index		
S	Screwed	



Form of insert		
Index	α	
V	35°	
D	55°	
C	80°	



Clearance angle		
Index	α	
C	7°	
N	0°	
P	11°	



Cutting direction		
Index		
L	Left	L
N	Neutral	N
R	Right	R

Holder form											
Index	α		Index	α		Index	α		Index	α	
A	90°		**J**	93°		**P**	117.5°		**V**	72.5°	
D	45°		**L**	95°		**Q***	93°		**X**	Special shape	
H	107.5°		**N**	62.5°		**U**	93°				

* UTILIS standard

Designation system (ISO 8024)

Holder ID turning

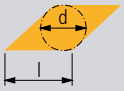
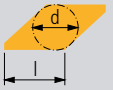
Shaft execution	
Index	
A	Steel shaft with internal cooling

Shaft diameter
d_1



Holder lenght	
Index	l_1
F	80
H	100
K	125
M	150
Q	180
R	200
S	250
T	300
X...	Special



Edge length			
Index	l	d	
06	6.4	6.35	
09	9.7	9.53	
12	12.9	12.7	
07	7.75	6.35	
11	11.6	9.53	
11	11.1	6.35	
16	16.6	9.59	
10	10	6.35	

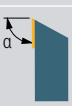
A12K SDUCR 07

Clamping		
Index		
S	Screwed	

Form of insert		
Index	α	
V	35°	
D	55°	
C	80°	

Clearance angle		
Index	α	
C	7°	
N	0°	
P	11°	

Cutting direction		
Index		
L	Left	
N	Neutral	
R	Right	

Holder form								
Index	α		Index	α		Index	α	
F	90°		L	95°		Q	107.5°	
D	45°		O	95°		U	93°	
J	93°		Q*	92°		X	Special shape	

* UTILIS standard

Formulas

Cutting speed (v_c)

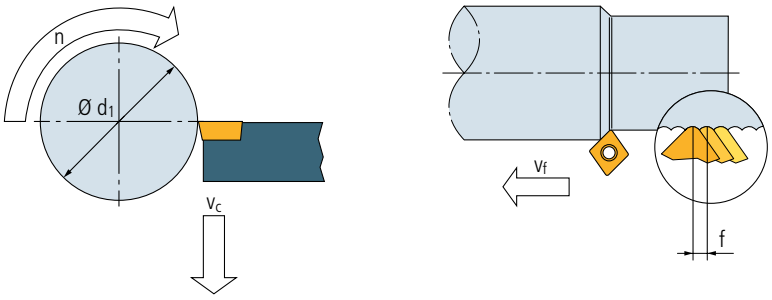
$$v_c = \frac{d_1 \cdot \pi \cdot n}{1000} \text{ [m/min]}$$

Revolutions per minute (n)

$$n = \frac{v_c \cdot 1000}{d_1 \cdot \pi} \text{ [min}^{-1}\text{]}$$

Feedrate (v_f)

$$v_f = f \cdot n \text{ [mm/min]}$$



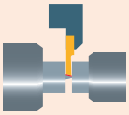
multidec®-CUT

multidec®-CUT is most commonly used in OD-turning or alternatively in ID-turning. 5 systems are distinguished by the cutting depth or width and application field of machining process. All inserts are replaceable very easy and known for its great repeat accuracy. For cutting of all common materials we offer ideal adjusted micrograin carbides grades (K10–K40 PVD coated and uncoated).

Application		Type	multidec®-CUT tool system (holder and insert)				
			500	1600	1700	3000	3600
	Maximum of bar diameter		16	10	10	32	20
	Blank	… 01	●	●	●	●	●
	CUT off	… 02		●		●	
	Front turning	… 03		●		●	
	Back turning	… 04		●		●	
	Copy turning	… 04 SP		●		●	
	Grooving and turning	… 05		●		●	●
	Threading	… 06		●	●	●	
	Radius-grooving	… 07		●		●	
	Grooving (radial)	… 10		●	●		
	Grooving (axial)	… 11		●	●		
	Chamfering	… 12		●		●	
Holder shank size			▨ 6–10	▨ 7–25 ▨ 3/8"–3/4" ▨ 12–20	▨ 8–20 ▨ 3/8"–3/4" ▨ 16	▨ 8–25 ▨ 3/8"–3/4"	▨ 10–25 ▨ 3/8"–3/4"

Overview – multidec®-CUT

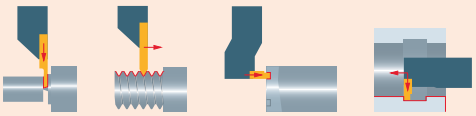
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Machining methods 32



Choice of inserts 34



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Designation system 41



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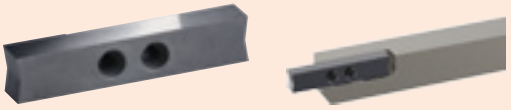
Overview inserts and holders 1600 51



Overview inserts and holders 1700 107



Overview inserts and holders 3000 123



Overview inserts and holders 3600 183



Cutting specification / Cutting specification G-LINE 190 / 192

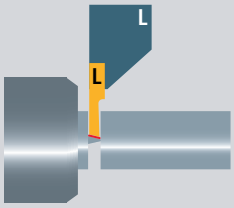
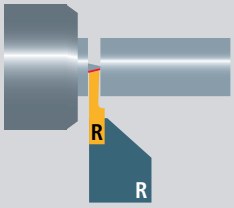
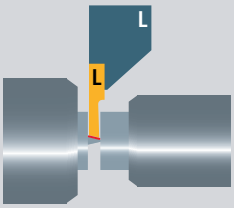
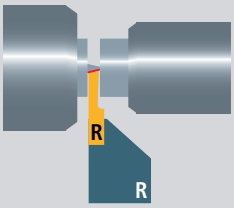
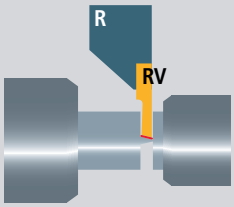
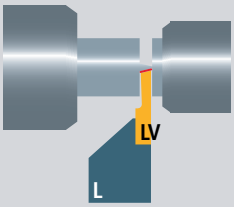
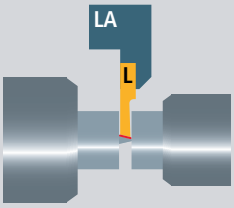
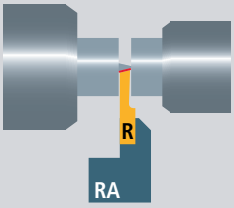
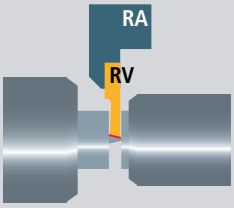
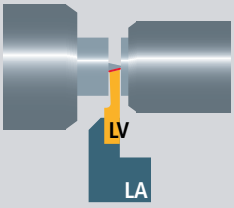
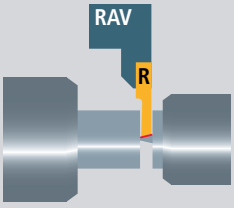
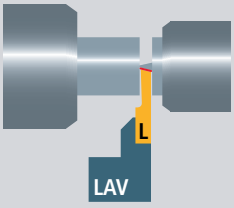
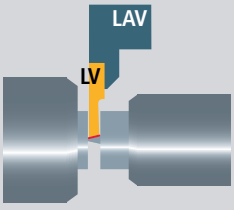
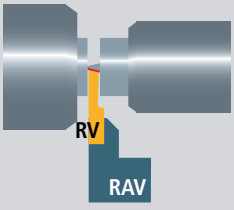
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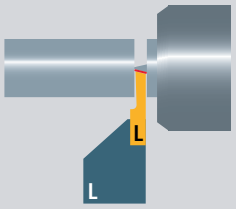
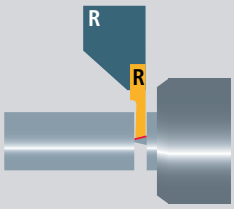
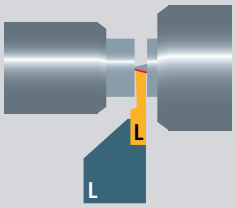
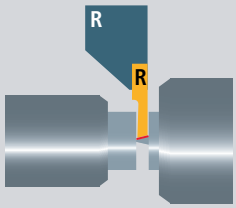
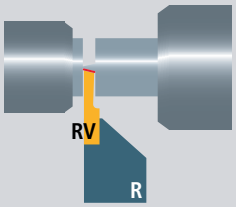
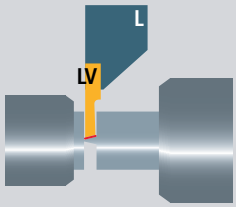
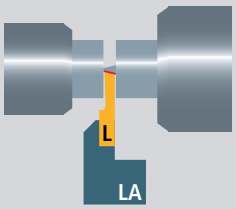
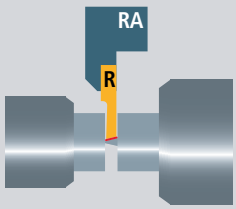
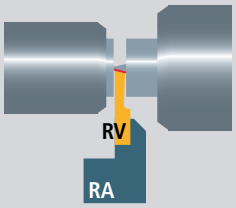
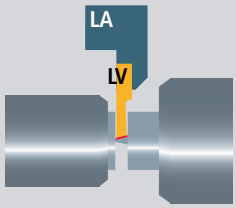
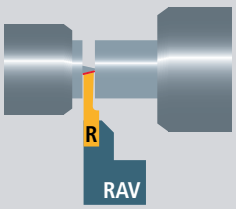
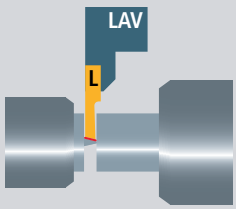
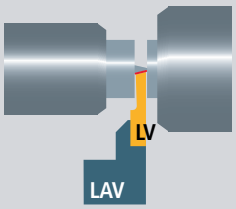
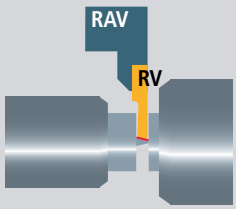
Special tools – multidec4you® 636



Accessories 703

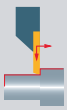
A different combination of holder and insert allows cutting even in difficult situations.

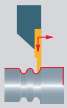
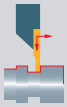
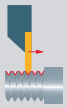
Main-spindle left	Possibilities of insert execution	Main-spindle left	Possibilities of insert execution	
				1
				2
				3
				4
				5
				6
				7
A		B		

Main-spindle right	Possibilities of insert execution	Main-spindle right	Possibilities of insert execution	
				1
				2
				3
				4
				5
				6
				7
C		D		

Choice of inserts

multidec®-CUT

Application	Type and chip breaker		Machining Method ▼▼▼	Machining Method ▼▼	Machining Method ▼	Characteristics
		..02 ..	●	●	○	CUT off without chip breaker
			●	●	○	
			●	●	○	
			–	–	–	
			●	●	–	
		..02.. GS	–	○	●	CUT off with chip breaker
			–	○	●	
			–	○	●	
			–	○	○	
			●	○	–	
		..02.. GS12	●	●	●	Cut off with chip breaker G-LINE
			●	●	●	
			●	●	●	
			○	○	○	
			○	○	–	
		..02.. GT20	●	●	●	Cut off with chip breaker G-LINE
			●	●	●	
			●	●	●	
			●	●	○	
			●	○	–	
		..02.. SC	●	●	●	CUT off with chip breaker
			●	●	●	
			●	●	●	
			–	–	–	
			●	●	●	
		..02.. SPT	○	○	–	CUT off with chip breaker for tender material
			●	●	○	
			●	●	○	
			●	●	●	
			●	○	–	
		..03..	●	●	●	Front turning without chip breaker
			●	●	●	
			●	●	○	
			–	–	○	
			●	●	○	
		..03.. SP	●	●	–	Front turning with chip breaker
			●	●	–	
			●	●	–	
			●	●	–	
			●	–	–	
		..03.. CP TOP	●	●	–	Front turning with chip breaker and cutting edge "TOP"
			●	●	–	
			●	●	–	
			●	●	–	
			●	–	–	
		..03.. GA20	●	●	○	Front turning, facing, back turning with chip breaker G-LINE
			●	●	○	
			●	●	○	
			●	●	●	
			●	○	–	
		..04..	●	●	●	Back turning without chip breaker
			○	●	●	
			○	●	●	
			○	○	○	
			●	○	○	
		..04.. CP	●	●	○	Back turning with chip breaker
			●	●	○	
			●	●	○	
			●	●	○	
			●	○	–	

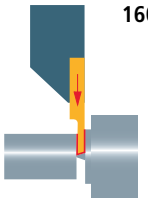
Application	Type and chip breaker		Machining Method ▼▼▼	Machining Method ▼▼	Machining Method ▼	Characteristics
		..04.. SP	●	●	○	Copy turning with chip breaker
			●	●	○	
			●	●	○	
			●	●	●	
			●	–	–	
		..04.. GB20	●	●	○	Copy turning with chip breaker G-LINE
			●	●	○	
			●	●	○	
			●	●	●	
			●	○	–	
		..04.. TOP	●	●	○	Back turning with chip breaker and cutting edge "TOP"
			●	●	○	
			●	●	○	
			●	●	●	
			●	○	–	
		..05..	●	●	●	Grooving and turning without chip breaker
			●	●	●	
			○	○	○	
			○	○	○	
			●	●	○	
		..05.. CP	●	●	○	Grooving and turning with chip breaker
			●	●	○	
			●	●	○	
			●	●	●	
			●	–	–	
		..05.. GC20	●	●	●	Grooving and turning with chip breaker G-LINE
			●	●	●	
			●	●	●	
			●	●	●	
			●	○	–	
		..06..	●	●	–	Threading partial profile
			●	●	–	
			●	●	–	
			●	○	–	
			●	○	○	
		..06.. VP	●	–	–	Threading full profile
			●	–	–	
			●	–	–	
			●	○	–	
			○	–	–	
		..07..	●	●	–	Radius-grooving
			●	●	–	
			●	●	–	
			●	●	–	
			●	–	–	
		..10..	●	●	–	Grooving radial
			●	●	–	
			●	●	–	
			●	●	–	
			●	○	–	
		..11..	●	●	–	Grooving axial
			●	●	–	
			●	●	–	
			●	●	–	
			●	○	–	
		..12..	●	●	–	Chamfering
			●	●	–	
			●	●	–	
			●	●	–	
			●	–	–	

Legend ..... 6…

CUT off

Inserts 54…

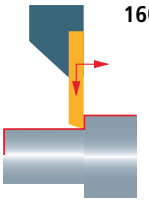
1602…



Front turning

Inserts 66…

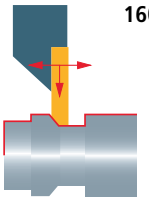
1603…



Front turning, facing, back turning

Inserts 69…

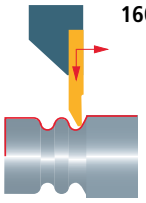
1603… GA..



Copy turning (front)

Inserts 71…

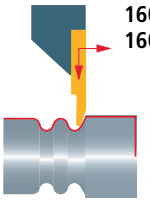
1604… V SP..



Copy turning (back)

Inserts 70…/74…

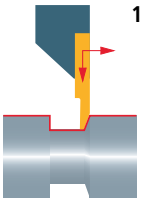
1604… SP..
1604… GB..



Back turning

Inserts 72…

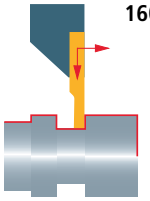
1604…



Grooving and Turning

Inserts 76…

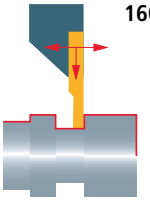
1605…



Grooving and Turning

Inserts 78…

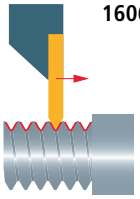
1605… GC..



Threading

Inserts 80…

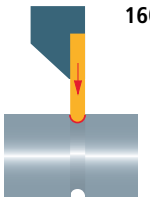
1606…



Radius-grooving

Inserts 85…

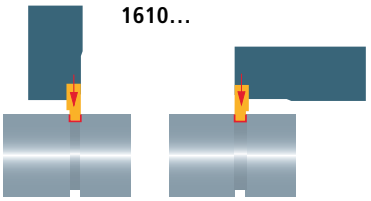
1607…



Grooving (radial)

Inserts 86…

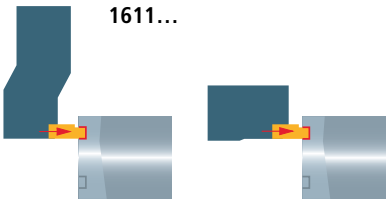
1610…



Grooving (axial)

Inserts 87…

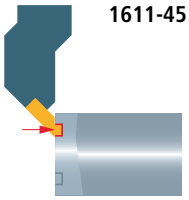
1611…



Miniature grooving (axial)

Inserts 88…

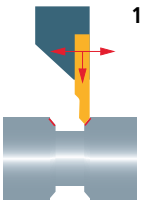
1611-45…



Chamfering

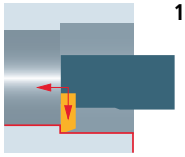
89…

1612…



Front turning

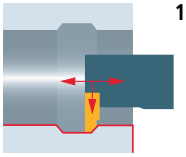
Inserts 66…



1603…

Front turning, facing, back turning

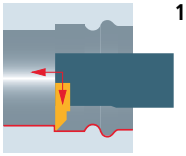
Inserts 69…



1603… GA..

Copy turning (front)

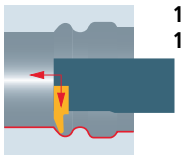
Inserts 71…



1604…V SP..

Copy turning (back)

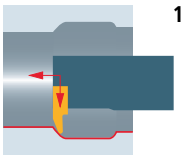
Inserts 70…/74…



1604… SP..
1604… GB..

Back turning

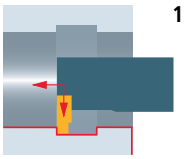
Inserts 72…



1604…

Grooving and Turning

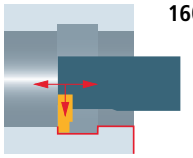
Inserts 76…



1605…

Grooving and Turning

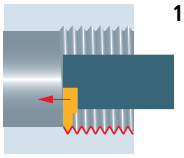
Inserts 78…



1605… GC..

Threading

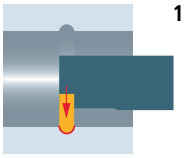
Inserts 83…



1606…

Radius-grooving

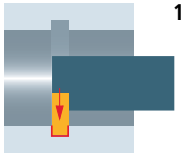
Inserts 85…



1607…

Grooving

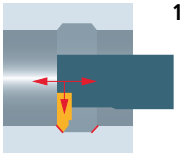
Inserts 86…



1610…

Chamfering

Inserts 89…



1612…

Holders 90…

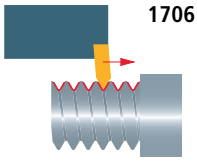
All illustrations show right hand design. Left hand design is also available.

Application OD turning

multidec®-CUT 1700

Threading

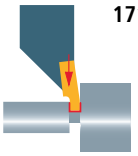
Inserts 109…



1706…

Grooving (radial)

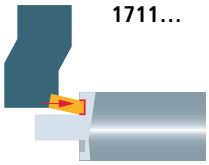
Inserts 110…



1710…

Grooving (axial)

Inserts 111…



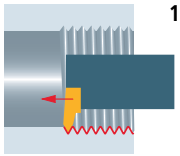
1711…

Application ID turning

multidec®-CUT 1700

Threading

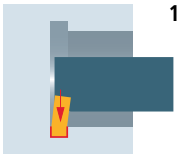
Inserts 109…



1706…

Grooving

Inserts 110…



1710…

Holders 113…

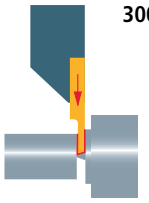
All illustrations show right hand design. Left hand design is also available.

Application OD turning

multidec®-CUT 3000

CUT off

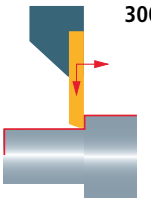
Inserts 126…



3002…

Front turning

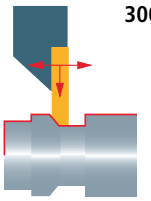
Inserts 151…



3003…

Front turning, facing, back turning

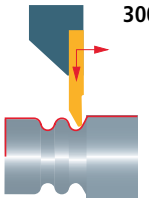
Inserts 153…



3003… GA..

Copy turning (front)

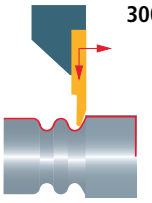
Inserts 154…



3004… V SP..

Copy turning (back)

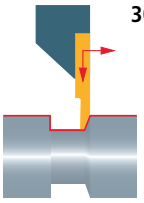
Inserts 155…



3004… SP../3004… GB..

Back turning

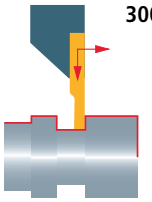
Inserts 158…



3004…

Grooving and Turning

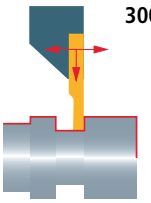
Inserts 162…



3005…

Grooving and Turning

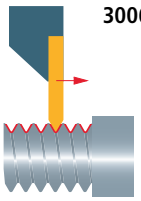
Inserts 164…



3005… GC..

Threading

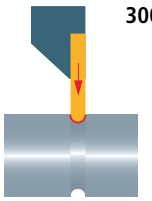
Inserts 165…



3006…

Radius-grooving

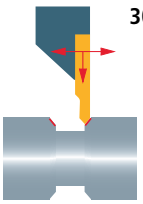
Inserts 170…



3007…

Chamfering

Inserts 171…



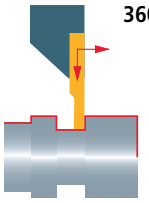
3012…

Holders 172…

All illustrations show right hand design. Left hand design is also available.

Grooving and Turning

Inserts 185…



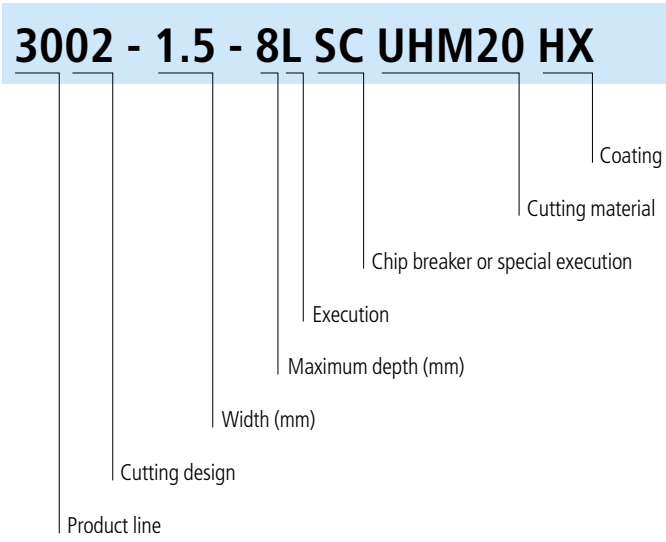
3605…

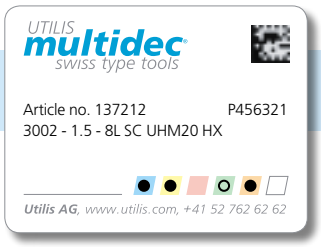
Holders 186…

All illustrations show right hand design. Left hand design is also available.

The designation of every insert and holder includes all important information according to the follwing system:

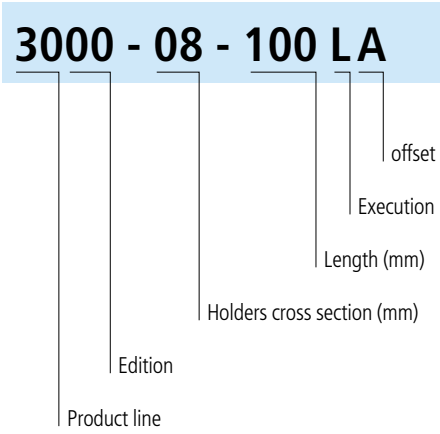
Inserts

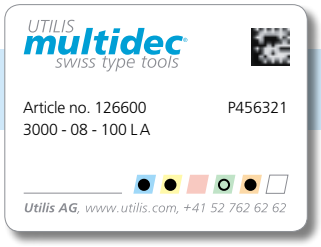




*

Holders





*

* Packaging Information 6

multidec®-CUT 500

The turn and cut-off system 500 is suitable for Swiss type cam lathes up to bar diameter 15mm. The neutral cutting inserts, only available as blanks, consist of one cutting edge and will be mounted on tool holders with a repeatability of < 0.01 mm.
Even for the ground, hardened and nickel plated holders a wide range of possibilities with shank sizes between 6 and 10 mm are available. For Swiss-type automatic lathes special holders have been designed and complete the wide range of choices.







Advantages:
– Replace brazed tools on cam machines
– Neutral inserts with mirror polished cutting face
– Coated and uncoated blanks available
– The machine operator can grind his own cutting geometries

Overview – multidec®-CUT 500

Technical information 9



Inserts

501… N 44

501… 44



Holders

500… 45

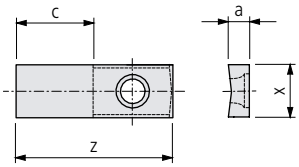
500… INCH 45



Replacement and spare parts 45

Blank



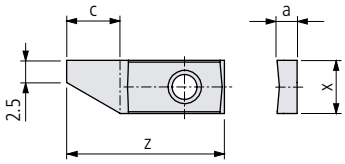


501… N

Order designation	Carbide ▯18			Dimensions							Holders ▯45…
N	UHM 10	UHM 10 HX	UHM 10 TX+	a	c	x	z				
PREMIUM-LINE											
501-2-6 N P …*	■	■	■	2	8.5	6	17.8				500…
STANDARD-LINE											
501-2-6 N …	■	■	■	2	8.5	6	17.8				500…

* Mirror polished





501…

Order designation		Carbide ▯18			Dimensions							Holders ▯45…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	a	c	x	z				
PREMIUM-LINE												
501-1.5-6 L P …*	501-1.5-6 R P …*	■	■	■	1.5	6	6	17.8				500…
501-2-6 L P …*	501-2-6 R P …*	■	■	■	2	8.5	6	17.8				500…

* Mirror polished

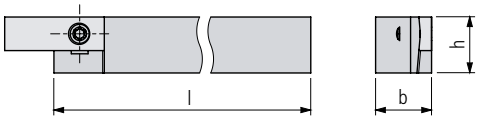
Holders

multidec®-CUT 500

R

Standard





500…

Order designation L		Order designation R		Dimensions h	b	l						Inserts 44…
STANDARD-LINE												
500-06x130 N	■	500-06x130 N	■	6	6	130						501…
500-07x130 L	■	500-07x130 R	■	7	7	130						501…
500-08x130 L	■	500-08x130 R	■	8	8	130						501…
500-10x130 L	■	500-10x130 R	■	10	10	130						501…

500… INCH

Order designation L		Order designation R		Dimensions b	h	l						Inserts 44…
STANDARD-LINE												
500-3/8"x130 L	■	500-3/8"x130 R	■	9.525	9.525	130						501…

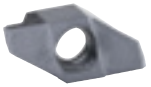
Replacement and spare parts

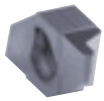
multidec®-CUT 500

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	500…

TORX screwdriver ..... 703…

The turn and cut-off system 1600 is suitable for Swiss type lathes up to bar diameter 10 mm. The cutting inserts consist of two cutting edges.
Even for the holders a wide range of possibilities with shank sizes between 7 and 25 mm are available. For Swiss-type automatic lathes special holders have been designed and complete the wide range of choices.







Advantages:
– Large selection of cutting geometries with different chip breakers especially made for smallest parts
– Full profile threading inserts starting from M 0.2 (0.06 mm pitch)
– Grooving inserts width starting from 0.05 mm



"IC" tool holder with integrated cooling

Cost-efficient processing of modern materials increasingly requires accurate control of the coolant at the cutting edge. Conveying the coolant as close as possible to the cutting edge is often a difficult task in the machine rooms of Swiss type turning lathes.
The multidec®-IC program offers a wide range of holders with integrated cooling. Because of the high precision and pressure, it is possible to discharge the chip quickly and safely from the cut-ting edge and the workpiece, which pro-tects the cutting edge of the insert. This means significantly longer tool life as well as very reliable serial production.

Advantages:
– All holders feature five possible connectors for the coolant supply
– Fixed coolant exit allows for small set-up in front of the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely



"TWIN" holder with and without integrated coolant supply

The "TWIN" range allows you to work with two inserts on the same holder.
Different combinations are possible, and provide the user with a high degree of flexibility. Holders are available with shank cross-sections of 8 to 20 mm, with and without internal cooling.

Advantages:
– Twice the number of tools on the machine
– Two different turning operations are possible with a single tool holder
– All holders with an integrated coolant supply have five connecting options



"Y-AXIS" holder with and without integrated coolant supply

Y-AXIS holders solve the chip control problems that can occur when cutting long-chip materials. With the Y-AXIS holder, the cutting edge is offset by 90° compared to the standard holder, whereby the chips fall in the bed of the machine. This prevents troublesome tumbling and flowing chips that can become caught on the cutting edge and damage it.

Advantages:
– Suitable for long chipping materials
– The problem of chip control is solved
– Holders with internal cooling
– All holders feature five possible connectors for the coolant supply



Free form chip breakers for small part manufacturing and micro cutting

With a focus on high productivity, process reliability, and the longest possible too life, perfect chip control becomes a central issue in all modern production. These requirements are often difficult to fulfill with traditionally ground chip breakers because of insufficient chip break and removal.

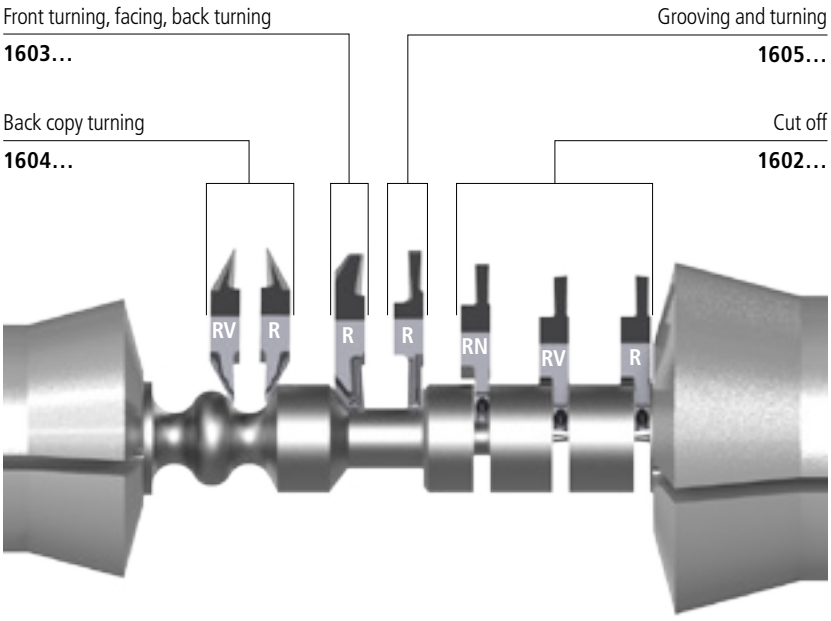
In comparison to traditional grinding technologies, new manufacturing technologies have increased the degree of design free form tremendously, providing the ability to generate any three-dimensional shape. The new G-Line from multidec® has adopted the use of this new free form design technology, resulting in well thought-out chip breaking geometries that are fitted to the well-tried multidec®-CUT 1600 serie of turning inserts, providing maximum performance.

Free form modeled chip breakers achieve significant improvements in a wide range of materials when compared to ground chip breakers. This advantage is particularly evident with difficult to machine materials such as super-alloys. In addition to significantly improved chip control, multidec®-G-Line inserts can achieve up to 30 % higher cutting values and up to 50 % longer tool life.

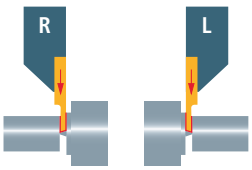


Advantages:
– improved chip control
– better cutting values
– longer tool life
– smaller chip volume
– better process reliability
– wear-resistant and tough carbide substrate with two heavy-duty coatings
– sharp and rounded cutting edges
– can be used on all multidec®-CUT 1600 holders

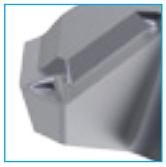
multidec®-CUT 1600

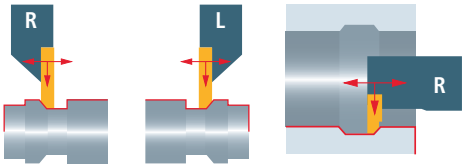






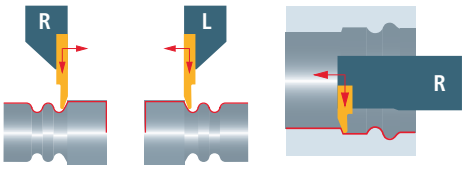
Cutting off with the GT20 chip breaker
The "GT20" geometry is another parting-off geometry which is available with a sharp and a slightly rounded cutting edge in comparison to the "GS12". The special design of this chip breaker guarantees excellent chip flow, short chips and generates smooth surfaces on the workpiece, even with higher feed rates.



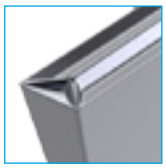


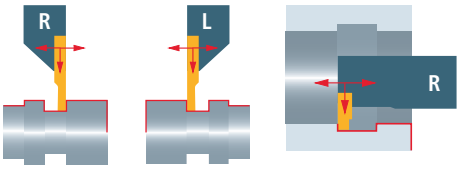
Front turning, facing and back turning with chip breaker GA20
With the "GA20" geometry, the proven chip breaker of the multidec®-TOP insert was used as the basis and optimised. A circumferential chip breaker enables turning in three directions. Perfect chip control is guaranteed during facing, turning, grooving solid material and back turning. The cutting edge "TOP" also enables up to 100% higher feed.





Copy turning (rear) with chip breaker GB20
The "GB20" geometry provides optimum and process-reliable chip formation with both low and higher cutting depths and feed rates with an extremely sharp cutting edge in combination with multi-stage chip breakers.





Grooving and turning with chip breaker GC20
The "GC20" geometry was tailored for facing, grooving and turning operations. Turning in three directions with extremely low and high cutting depths and feed rates requires a very sophisticated chip breaker in order to achieve optimum chip control.
This geometry provides a good solution in almost any material. This geometry even achieves excellent results in lead-free brass, a material with which chip control is difficult.

Overview – multidec®-CUT 1600

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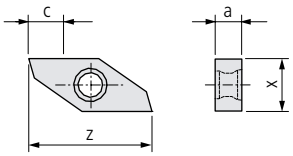
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Blank

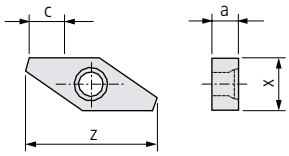


1601…

1601-3…



1601-4…/-6…/-8…
1601 B-3…

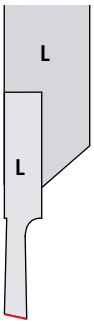


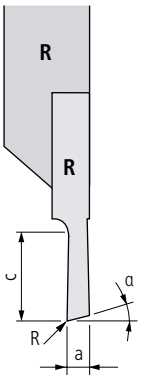
Order designation	Carbide 18						HSS		Dimensions					Holders
	–	–	●	○	●	●	●	●						90…
	–	●	●	○	●	●	○	●						
	○	●	●	○	●	●	–	○						
	●	○	–	●	○	–	●	○						
	–	–	●	–	–	–	–	–						
N	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	HSS	HSS HX	a	c	x	z		
PREMIUM-LINE														
1601-3-5 N P …*				■	■	■			3	5	6	16		1600…
1601-4-5 N P …*				■	■	■			4	5	6	16		1600…
1601-6-5 N P …*				■	■	■			6	5	6	16		1600…
1601-8-5 N P …*				■	■	■			8	5	6	16		1600…
STANDARD-LINE														
1601-3-5 N …				■	■	■	■	■	3	5	6	16		1600…
1601-4-5 N …				■	■	■	■	■	4	5	6	16		1600…
1601-6-5 N …				■	■	■	■	■	6	5	6	16		1600…
1601-8-5 N …				■	■	■	■	■	8	5	6	16		1600…
VALUE-LINE														
1601 B-3-5 N …				■					3	5	6	16		1600…

* Mirror polished



CUT off







1602…

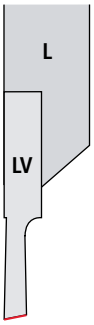
Order designation		Carbide ▯18						Dimensions							Holders ▯90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R				
PREMIUM-LINE															
1602-0.5-2.5 L G20 …	1602-0.5-2.5 R G20 …				■	■	■	0.5	2.5	20°	0				1600…
STANDARD-LINE															
1602-0.8-5 L …	1602-0.8-5 R …				■	■	■	0.8	5	15°	0				1600…
1602-1.0-5 L …	1602-1.0-5 R …				■	■	■	1	5	15°	0				1600…
1602-1.2-5 L …	1602-1.2-5 R …				■	■	■	1.2	5	15°	0				1600…
1602-1.5-5 L …	1602-1.5-5 R …				■	■	■	1.5	5	15°	0				1600…
VALUE-LINE															
1602 B-1.0-5 L …	1602 B-1.0-5 R…				■	■		1	5	15°	0				1600…
1602 B-1.5-5 L …	1602 B-1.5-5 R…				■	■		1.5	5	15°	0				1600…



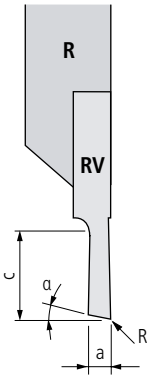
CUT off



1602… V



V: offset



Order designation		Carbide ▯18						Dimensions							Holders ▯90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R				
PREMIUM-LINE															
1602-0.5-2.5 LV G20 …	1602-0.5-2.5 RV G20 …				■	■	■	0.5	2.5	20°	–				1600…
STANDARD-LINE															
1602-0.8-5 LV …	1602-0.8-5 RV …				■	■	■	0.8	5	15°	–				1600…
1602-1.0-5 LV …	1602-1.0-5 RV …				■	■	■	1	5	15°	–				1600…
1602-1.2-5 LV …	1602-1.2-5 RV …				■	■	■	1.2	5	15°	–				1600…
1602-1.5-5 LV …	1602-1.5-5 RV …				■	■	■	1.5	5	15°	–				1600…
VALUE-LINE															
1602 B-1.0-5 LV …	1602 B-1.0-5 RV …				■	■		1	5	15°	–				1600…
1602 B-1.5-5 LV …	1602 B-1.5-5 RV …				■	■		1.5	5	15°	–				1600…

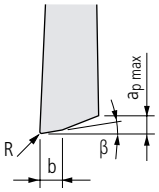


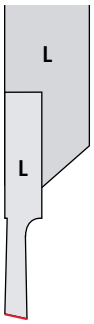
Turning and cut off

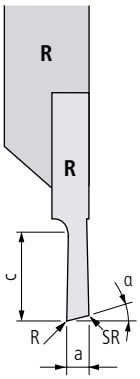


1602… TOP*

Detail TOP*







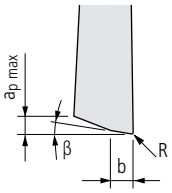
Order designation L	Order designation R	Carbide ▯18 UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R/SR**	β	b	$a_{p\,max}$	Holders ▯90…
STANDARD-LINE															
1602-1.5-5 L TOP 008 …	1602-1.5-5 R TOP 008 …				■	■	■	1.5	5	15°	0.08	1.5°	0.3	0.3	1600…

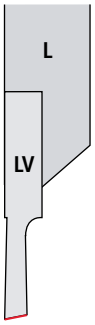
* Description TOP ▯11
** SR: Protection radius



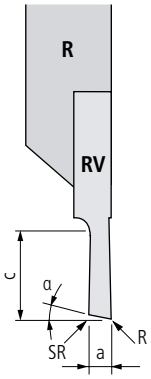
1602… V TOP*

Detail TOP*





V: offset

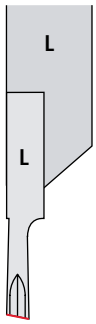


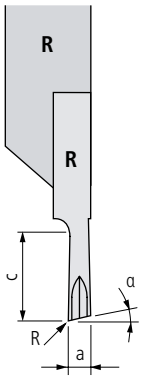
Order designation L	Order designation R	Carbide ▯18 UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R/SR**	β	b	$a_{p\,max}$	Holders ▯90…
STANDARD-LINE															
1602-1.5-5 LV TOP 008 …	1602-1.5-5 RV TOP 008 …				■	■	■	1.5	5	15°	0.08	1.5°	0.3	0.3	1600…

* Description TOP ▯11
** SR: Protection radius



CUT off

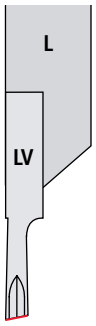


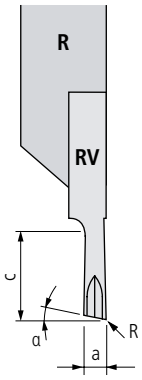




1602… SC

Order designation L	Order designation R	Carbide UHM 10	Carbide UHM 10 HX	Carbide UHM 10 TX+	Carbide UHM 20	Carbide UHM 20 HPX	Carbide UHM 20 TX+	Dimensions a	Dimensions c	Dimensions α	Dimensions R	Holders ▯90…
–	–	●	○	●	●							
–	●	●	○	●	●							
○	●	●	○	●	●							
●	○	–	●	○	–							
–	–	●	–	–	–							
STANDARD-LINE												
1602-1.5-5 L SC …	1602-1.5-5 R SC …				■	■	■	1.5	5	15°	–	1600…







1602… V SC

V: offset

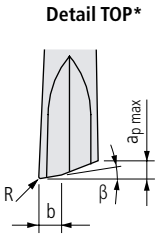
Order designation L	Order designation R	Carbide UHM 10	Carbide UHM 10 HX	Carbide UHM 10 TX+	Carbide UHM 20	Carbide UHM 20 HPX	Carbide UHM 20 TX+	Dimensions a	Dimensions c	Dimensions α	Dimensions R	Holders ▯90…
–	–	●	○	●	●							
–	●	●	○	●	●							
○	●	●	○	●	●							
●	○	–	●	○	–							
–	–	●	–	–	–							
STANDARD-LINE												
1602-1.5-5 LV SC …	1602-1.5-5 RV SC …				■	■	■	1.5	5	15°	–	1600…

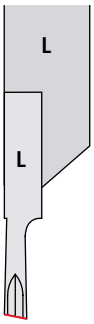


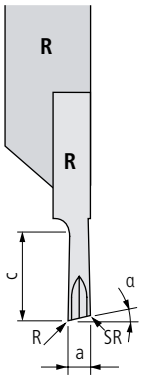
Turning and cut off



1602… SC TOP*





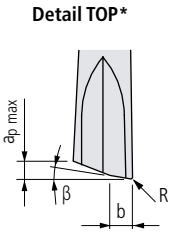


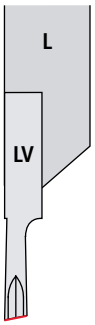
Order designation L	Order designation R	Carbide UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R/SR**	β	b	$a_{p\,max}$	Holders
–	–	●	○	●	●	●	●								
–	●	●	○	●	●	●	●								
○	●	●	○	●	●	●	●								
●	○	–	●	○	–										
–	–	●	–	–	–										
STANDARD-LINE															
1602-1.5-5 L SC TOP 008 …	1602-1.5-5 R SC TOP 008 …				■	■	■	1.5	5	15°	0.08	1.5°	0.3	0.3	1600…

* Description TOP … 11
** SR: Protection radius

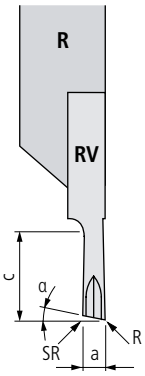


1602… V SC TOP*





V: offset



Order designation L	Order designation R	Carbide UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R/SR**	β	b	$a_{p\,max}$	Holders
–	–	●	○	●	●	●	●								
–	●	●	○	●	●	●	●								
○	●	●	○	●	●	●	●								
●	○	–	●	○	–										
–	–	●	–	–	–										
STANDARD-LINE															
1602-1.5-5 LV SC TOP 008 …	1602-1.5-5 RV SC TOP 008 …				■	■	■	1.5	5	15°	0.08	1.5°	0.3	0.3	1600…

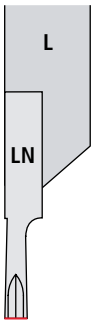
* Description TOP … 11
** SR: Protection radius



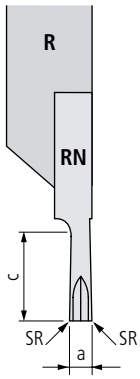
CUT off



1602… N SC



N: neutral



Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	SR*					
STANDARD-LINE															
1602-1.5-5 LN SC …	1602-1.5-5 RN SC …				■	■	■	1.5	5	0.05					1600…

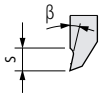
* SR: Protection radius

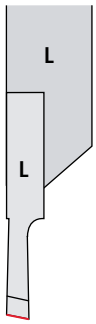


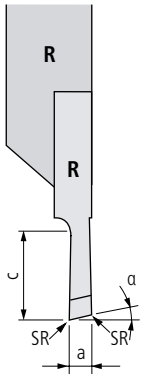
CUT off



1602… SPT







Order designation		Carbide ▯18						Dimensions							Holders ▯90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	SR*	s		
PREMIUM-LINE															
1602-0.5-2.5 L SPT G20 …	1602-0.5-2.5-R SPT G20 …				■	■	■	0.5	2.5	20°	20°	–	2		1600…
STANDARD-LINE															
1602-0.8-5 L SPT …	1602-0.8-5 R SPT …				■	■	■	0.8	5	15°	20°	–	2		1600…
1602-1.0-5 L SPT …	1602-1.0-5 R SPT …				■	■	■	1	5	15°	20°	–	2		1600…
1602-1.0-5 L SPT06 …	1602-1.0-5 R SPT06 …				■	■	■	1	5	15°	6°	0.05	2		1600…
1602-1.0-5 L SPT12 …	1602-1.0-5 R SPT12 …				■	■	■	1	5	15°	12°	0.05	2		1600…
1602-1.2-5 L SPT …	1602-1.2-5 R SPT …				■	■	■	1.2	5	15°	20°	–	2		1600…
1602-1.5-5 L SPT …	1602-1.5-5 R SPT …				■	■	■	1.5	5	15°	20°	–	2		1600…
1602-1.5-5 L SPT06 …	1602-1.5-5 R SPT06 …				■	■	■	1.5	5	15°	6°	0.05	2		1600…
1602-1.5-5 L SPT12 …	1602-1.5-5 R SPT12 …				■	■	■	1.5	5	15°	12°	0.05	2		1600…
VALUE-LINE															
1602 B-1.0-5 L SPT06 …	1602 B-1.0-5 R SPT06 …				■	■		1	5	15°	6°	0.05	2		1600…
1602 B-1.5-5 L SPT06 …	1602 B-1.5-5 R SPT06 …				■	■		1.5	5	15°	6°	0.05	2		1600…

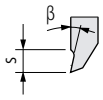
* SR: Protection radius

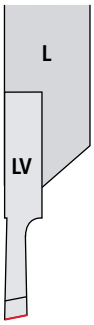


CUT off

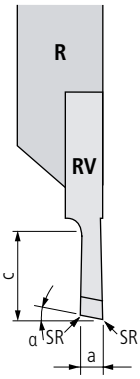


1602… V SPT





V: offset



Order designation		Carbide ▯18						Dimensions							Holders ▯90…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	SR*	s		
PREMIUM-LINE															
1602-0.5-2.5 LV SPT G20 …	1602-0.5-2.5-RV SPT G20 …				■	■	■	0.5	2.5	20°	20°	–	2		1600…
STANDARD-LINE															
1602-0.8-5 LV SPT …	1602-0.8-5 RV SPT …				■	■	■	0.8	5	15°	20°	–	2		1600…
1602-1.0-5 LV SPT …	1602-1.0-5 RV SPT …				■	■	■	1	5	15°	20°	–	2		1600…
1602-1.0-5 LV SPT06 …	1602-1.0-5 RV SPT06 …				■	■	■	1	5	15°	6°	0.05	2		1600…
1602-1.0-5 LV SPT12 …	1602-1.0-5 RV SPT12 …				■	■	■	1	5	15°	12°	0.05	2		1600…
1602-1.2-5 LV SPT …	1602-1.2-5 RV SPT …				■	■	■	1.2	5	15°	20°	–	2		1600…
1602-1.5-5 LV SPT …	1602-1.5-5 RV SPT …				■	■	■	1.5	5	15°	20°	–	2		1600…
1602-1.5-5 LV SPT06 …	1602-1.5-5 RV SPT06 …				■	■	■	1.5	5	15°	6°	0.05	2		1600…
1602-1.5-5 LV SPT12 …	1602-1.5-5 RV SPT12 …				■	■	■	1.5	5	15°	12°	0.05	2		1600…
VALUE-LINE															
1602 B-1.0-5 LV SPT06 …	1602 B-1.0-5 RV SPT06 …				■	■		1	5	15°	6°	0.05	2		1600…
1602 B-1.5-5 LV SPT06 …	1602 B-1.5-5 RV SPT06 …				■	■		1.5	5	15°	6°	0.05	2		1600…

* SR: Protection radius



CUT off
"GT20" chip breaker

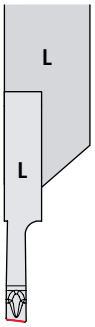


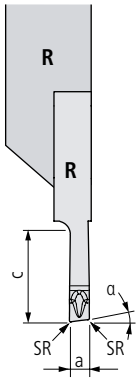
1602… F. GT20





F: Insert with sharp cutting edge





Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α		SR*			
PREMIUM-LINE															
1602-0.8-5 FL GT20 …	1602-0.8-5 FR GT20 …				■	■	■	0.8	5	7°		0.05			1600…
1602-1.0-5 FL GT20 …	1602-1.0-5 FR GT20 …				■	■	■	1	5	7°		0.05			1600…
1602-1.5-5 FL GT20 …	1602-1.5-5 FR GT20 …				■	■	■	1.5	5	7°		0.05			1600…

* SR: Protection radius

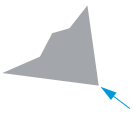


CUT off (offset)
"GT20" chip breaker

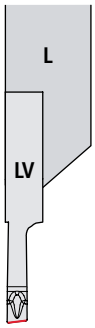


1602… F.V GT20

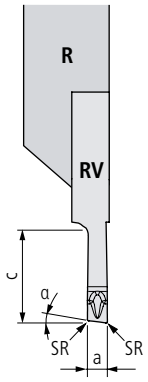




F: Insert with sharp cutting edge



V: offset



Order designation		Carbide ▯18						Dimensions							Holders ▯90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α		SR*			
PREMIUM-LINE															
1602-0.8-5 FLV GT20 …	1602-0.8-5 FRV GT20 …				■	■	■	0.8	5	7°		0.05			1600…
1602-1.0-5 FLV GT20 …	1602-1.0-5 FRV GT20 …				■	■	■	1	5	7°		0.05			1600…
1602-1.5-5 FLV GT20 …	1602-1.5-5 FRV GT20 …				■	■	■	1.5	5	7°		0.05			1600…

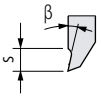
* SR: Protection radius

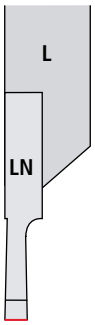


CUT off

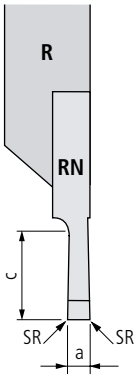


1602… N SPT





N: neutral



Order designation		Carbide ▯18						Dimensions							Holders ▯90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	SR*	s	β			
PREMIUM-LINE															
1602-0.5-2.5-LN SPT …	1602-0.5-2.5-RN SPT …				■	■	■	0.5	2.5	0.05	2	20°			1600…
STANDARD-LINE															
1602-0.8-5 LN SPT …	1602-0.8-5 RN SPT …				■	■	■	0.8	5	0.05	2	20°			1600…
1602-1.0-5 LN SPT …	1602-1.0-5 RN SPT …				■	■	■	1	5	0.05	2	20°			1600…
1602-1.0-5 LN SPT06 …	1602-1.0-5 RN SPT06 …				■	■	■	1	5	0.05	2	6°			1600…
1602-1.0-5 LN SPT12 …	1602-1.0-5 RN SPT12 …				■	■	■	1	5	0.05	2	12°			1600…
1602-1.2-5 LN SPT …	1602-1.2-5 RN SPT …				■	■	■	1.2	5	0.05	2	20°			1600…
1602-1.5-5 LN SPT …	1602-1.5-5 RN SPT …				■	■	■	1.5	5	0.05	2	20°			1600…
1602-1.5-5 LN SPT06 …	1602-1.5-5 RN SPT06 …				■	■	■	1.5	5	0.05	2	6°			1600…
1602-1.5-5 LN SPT12 …	1602-1.5-5 RN SPT12 …				■	■	■	1.5	5	0.05	2	12°			1600…
VALUE-LINE															
1602 B-1.0-5 LN SPT06 …	1602 B-1.0-5 RN SPT06 …				■	■		1	5	0.05	2	6°			1600…
1602 B-1.5-5 LN SPT06 …	1602 B-1.5-5 RN SPT06 …				■	■		1.5	5	0.05	2	6°			1600…

* SR: Protection radius

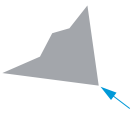


CUT off (neutral)
"GT20" chip breaker

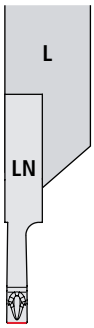


1602… F.N GT20

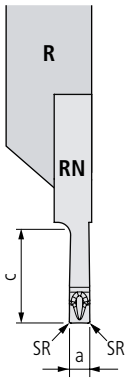




F: Insert with sharp cutting edge

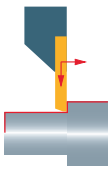


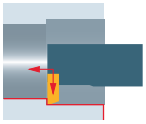
N: neutral



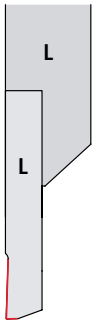
Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c			SR*			
PREMIUM-LINE															
1602-0.8-5 FLN GT20 …	1602-0.8-5 FRN GT20 …				■	■	■	0.8	5			0.05			1600…
1602-1.0-5 FLN GT20 …	1602-1.0-5 FRN GT20 …				■	■	■	1	5			0.05			1600…
1602-1.5-5 FLN GT20 …	1602-1.5-5 FRN GT20 …				■	■	■	1.5	5			0.05			1600…

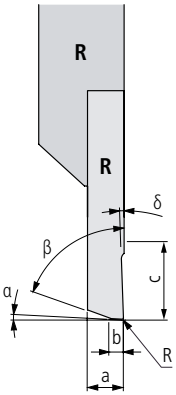
* SR: Protection radius





Front turning







1603…

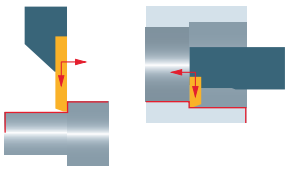


1603… 55…



1603… 35…

Order designation		Carbide ▯18						Dimensions							Holders ▯90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	b	c	α	β	δ	R	
STANDARD-LINE															
1603-3.0-4 L …	1603-3.0-4 R …				■	■	■	3	1	4	3°	70°	–	–	1600…
1603-3.0-5 L 55008 …	1603-3.0-5 R 55008 …				■	■	■	3	–	5	–	55°	2°	0.08	1600…
1603-3.0-5 L 55015 …	1603-3.0-5 R 55015 …				■	■	■	3	–	5	–	55°	2°	0.15	1600…
1603-3.0-5 L 35008 …	1603-3.0-5 R 35008 …				■	■	■	3	–	5	–	35°	2°	0.08	1600…
1603-3.0-5 L 35015 …	1603-3.0-5 R 35015 …				■	■	■	3	–	5	–	35°	2°	0.15	1600…
VALUE-LINE															
1603 B-3.0-4 L …	1603 B-3.0-4 R …				■	■		3	1	4	3°	70°	–	–	1600…



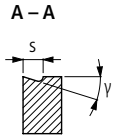
Front turning

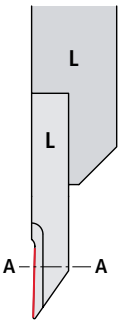


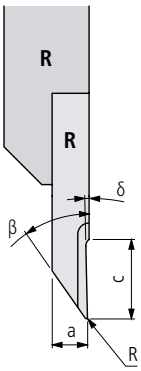
1603… SP U55…



1603… SP U35…

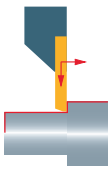






Order designation		Carbide ▯18						Dimensions							Holders ▯90…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	β	R	s	γ	δ	
STANDARD-LINE															
1603-3.0-4 L SP U55003 …	1603-3.0-4 R SP U55003 …				■	■	■	3	4	55°	0.03	1	12°	2°	1600…
1603-3.0-4 L SP U55008 …	1603-3.0-4 R SP U55008 …				■	■	■	3	4	55°	0.08	1	12°	2°	1600…
1603-3.0-4 L SP U55015 …	1603-3.0-4 R SP U55015 …				■	■	■	3	4	55°	0.15	1	12°	2°	1600…
1603-3.0-4 L SP U35003 …	1603-3.0-4 R SP U35003 …				■	■	■	3	4	35°	0.03	1	12°	2°	1600…
1603-3.0-4 L SP U35008 …	1603-3.0-4 R SP U35008 …				■	■	■	3	4	35°	0.08	1	12°	2°	1600…
1603-3.0-4 L SP U35015 …	1603-3.0-4 R SP U35015 …				■	■	■	3	4	35°	0.15	1	12°	2°	1600…

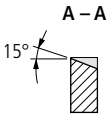
UTILIS multidec swiss type tools

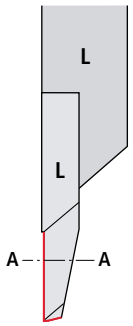


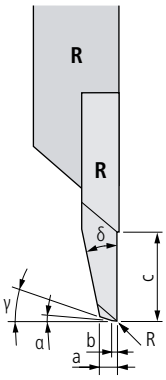
Front turning



1603… CP TOP*

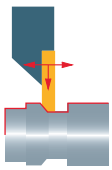


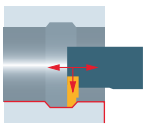




Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	b	c	α	γ	R	δ	
STANDARD-LINE															
1603-3.0-3.5 L CP TOP ZZ …	1603-3.0-3.5 R CP TOP ZZ …				■	■	■	0.8	0.2	4	1°	2°	–	25°	1600…
1603-3.0-3.5 L CP TOP 003 …	1603-3.0-3.5 R CP TOP 003 …				■	■	■	0.8	0.2	4	1°	2°	0.03	25°	1600…

* Description TOP 11

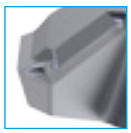


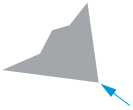


Front turning, facing, back turning chip breaker "GA20"

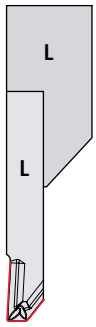


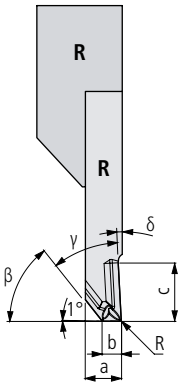
1603… F. GA20



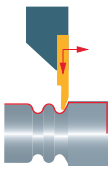


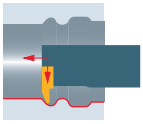
F: Insert with sharp cutting edge



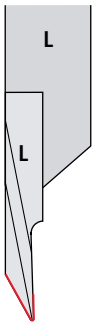


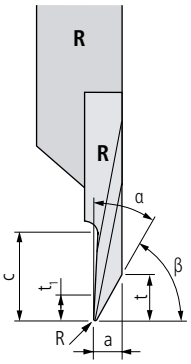
Order designation		Carbide ▯18						Dimensions							Holders ▯90…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	b	c	β	γ	δ	R	
PREMIUM-LINE															
1603-3.0-5 FL GA20 TOP ZZ …	1603-3.0-5 FR GA20 TOP ZZ …				■	■	■	3	1.6	5	52°	35°	3°	–	1600…
1603-3.0-5 FL GA20 TOP R03…	1603-3.0-5 FR GA20 TOP R03…				■	■	■	3	1.6	5	52°	35°	3°	0.03	1600…
1603-3.0-5 FL GA20 TOP R05…	1603-3.0-5 FR GA20 TOP R05…				■	■	■	3	1.6	5	52°	35°	3°	0.05	1600…
1603-3.0-5 FL GA20 TOP R15…	1603-3.0-5 FR GA20 TOP R15…				■	■	■	3	1.6	5	52°	35°	3°	0.15	1600…





Copy turning (back)

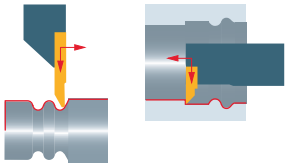






1604… SP

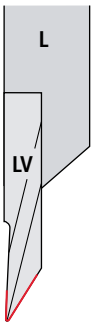
Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	R	t	t_1	
STANDARD-LINE															
1604-1.25-2-3 L SP29005 …	1604-1.25-2-3 R SP29005 …				■	■	■	1.25	2.5	29°	61°	0.05	2	1	1600…
1604-2.5-4-5 L SP29005 …	1604-2.5-4-5 R SP29005 …				■	■	■	2.5	5	29°	61°	0.05	4	2	1600…
1604-2.5-4-5 L SP29015 …	1604-2.5-4-5 R SP29015 …				■	■	■	2.5	5	29°	61°	0.15	4	2	1600…



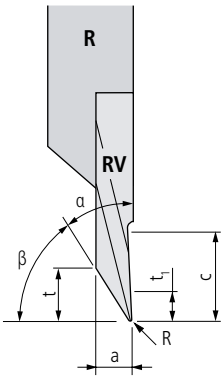
Copy turning (front)



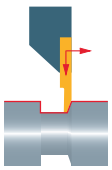
1604… V SP

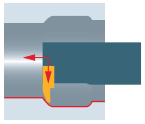


V: offset

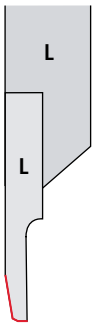


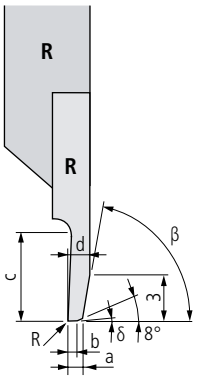
Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	R	t	t_1	
STANDARD-LINE															
1604-2.5-4-5 LV SP29005 …	1604-2.5-4-5 RV SP29005 …				■	■	■	2.5	5	29°	61°	0.05	4	2	1600…
1604-2.5-4-5 LV SP29015 …	1604-2.5-4-5 RV SP29015 …				■	■	■	2.5	5	29°	61°	0.15	4	2	1600…





Back turning



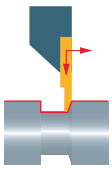


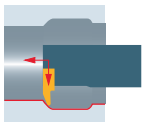


1604… TOP*

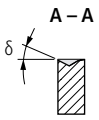
Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	b	c	d	β	R	δ	
STANDARD-LINE															
1604-0.15-2 L TOP ZZ …	1604-0.15-2 R TOP ZZ …				■	■	■	0.15	0.05	2	1	70°	–	–	1600…
1604-0.2-2 L TOP 008 …	1604-0.2-2 R TOP 008 …				■	■	■	0.25	0.15	2	1	70°	0.08	–	1600…
1604-0.4-4 L TOP 008 …	1604-0.4-4 R TOP 008 …				■	■	■	0.4	0.15	4	1.6	70°	0.08	–	1600…
1604-0.8-4 L TOP 008 …	1604-0.8-4 R TOP 008 …				■	■	■	0.8	0.15	4	2	70°	0.08	–	1600…
1604-1.2-4 L TOP ZZ …	1604-1.2-4 R TOP ZZ …				■	■	■	1.2	0.5	4	2.4	70°	–	1°	1600…
VALUE-LINE															
1604 B-0.8-4 L TOP 008 …	1604 B-0.8-4 R TOP 008 …				■	■		0.8	0.15	4	2	70°	0.08	–	1600…
1604 B-1.2-4 L TOP ZZ …	1604 B-1.2-4 R TOP ZZ …				■	■		1.2	0.5	4	2.4	70°	–	1°	1600…

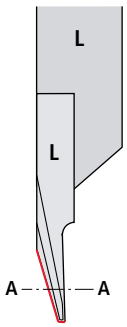
* Description TOP 11

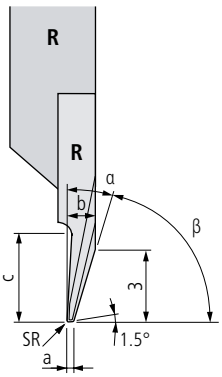




Back turning







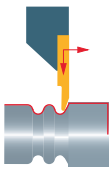


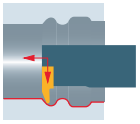
1604… SP TOP*

Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	b	α	β	δ	SR**	
STANDARD-LINE															
1604-1.5-3 L SP TOP 20ZZ …	1604-1.5-3 R SP TOP 20ZZ …				■	■	■	0.3	3	1.5	20°	70°	15°	–	1600…
1604-1.5-3 L SP TOP 20005 …	1604-1.5-3 R SP TOP 20005 …				■	■	■	0.3	3	1.5	20°	70°	15°	0.05	1600…

* Description TOP 11

** SR: Protection radius





Copy turning (back) chip breaker "GB20"

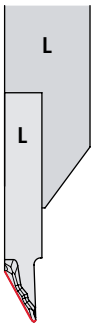


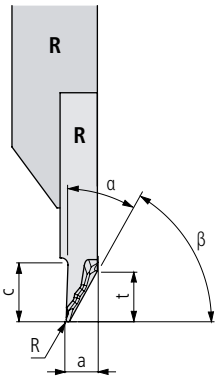
1604… F. GB20



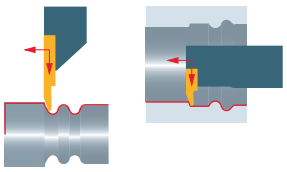


F: Insert with sharp cutting edge

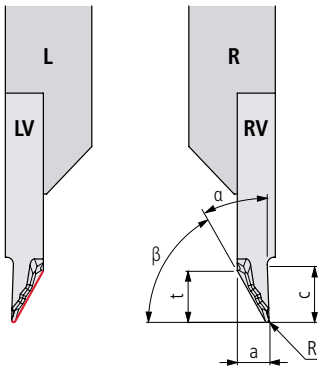




Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	R	t		
PREMIUM-LINE															
1604-2.5-4-5 FL 29005 GB20 …	1604-2.5-4-5 FR 29005 GB20 …				■	■	■	2.5	4.5	27°	61°	0.05	4		1600…
1604-2.5-4-5 FL 29015 GB20 …	1604-2.5-4-5 FR 29015 GB20 …				■	■	■	2.5	4.5	27°	61°	0.15	4		1600…



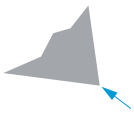
Copy turning (back, offset)
chip breaker "GB20"





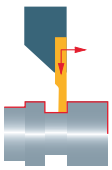
1604… F.V GB20

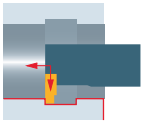




F: Insert with sharp cutting edge

Order designation		Carbide 18						Dimensions							Holders 90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	R	t		
PREMIUM-LINE															
1604-2.5-4-5 FLV 29005 GB20 …	1604-2.5-4-5 FRV 29005 GB20 …				■	■	■	2.5	4.5	27°	61°	0.05	4		1600…
1604-2.5-4-5 FLV 29015 GB20 …	1604-2.5-4-5 FRV 29015 GB20 …				■	■	■	2.5	4.5	27°	61°	0.15	4		1600…

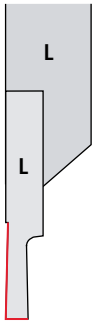


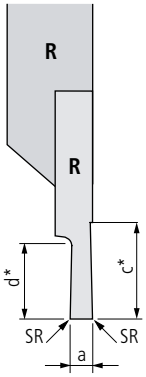


Grooving and turning



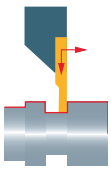
1605…

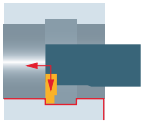




Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c*	d*	SR**				
STANDARD-LINE															
1605-0.5-1.5 L …	1605-0.5-1.5 R …				■	■	■	0.5	1.5	1.5	0.05				1600…
1605-1.0-2.5 L …	1605-1.0-2.5 R …				■	■	■	1	2.5	2.5	0.05				1600…
1605-1.5-3 L …	1605-1.5-3 R …				■	■	■	1.5	3	3	0.05				1600…
VALUE-LINE															
1605 B-1.0-2.5 L …	1605 B-1.0-2.5 R …				■	■		1	2.5	2.5	0.05				1600…
1605 B-1.5-3 L …	1605 B-1.5-3 R …				■	■		1.5	3	3	0.05				1600…

* c: maximal turning capacity
d: maximal grooving capacity
** SR: Protection radius

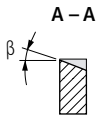


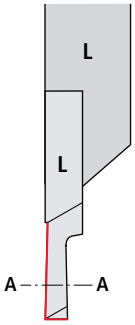


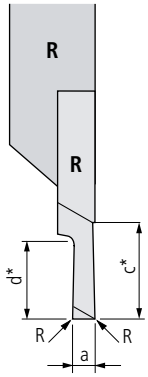
Grooving and turning



1605… CP

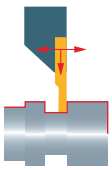


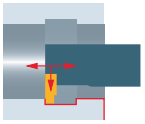




Order designation		Carbide ▯18						Dimensions							Holders ▯90…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c*	d*	R	β			
STANDARD-LINE															
1605-0.8-2.5 L CP …	1605-0.8-2.5 R CP …				■	■	■	0.8	2.5	2.5	–	15°			1600…
1605-1.0-3.5 L CP …	1605-1.0-3.5 R CP …				■	■	■	1	3.5	3.5	–	15°			1600…
1605-1.0-3.5 L CP R05 …	1605-1.0-3.5 R CP R05 …				■	■	■	1	3.5	3.5	0.05	15°			1600…
1605-1.5-3.5 L CP …	1605-1.5-3.5 R CP …				■	■	■	1.5	3.5	3.5	–	15°			1600…
1605-1.5-3.5 L CP R08 …	1605-1.5-3.5 R CP R08 …				■	■	■	1.5	3.5	3.5	0.08	15°			1600…
1605-2.0-3.5 L CP …	1605-2.0-3.5 R CP …				■	■	■	2	3.5	3.5	–	15°			1600…
1605-2.0-3.5 L CP R08 …	1605-2.0-3.5 R CP R08 …				■	■	■	2	3.5	3.5	0.08	15°			1600…

* c: maximal turning capacity
d: maximal grooving capacity



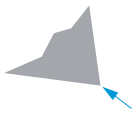


Grooving and turning "GC20" chip breaker

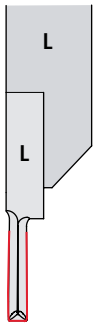


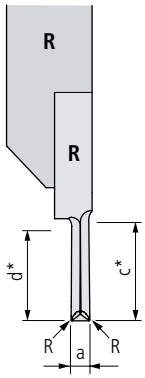
1605… F. GC20





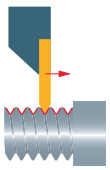
F: Insert with sharp cutting edge





Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c*	d*		R			
PREMIUM-LINE															
1605-0.8-1.5 FL GC20 ZZ …	1605-0.8-1.5 FR GC20 ZZ …				■	■	■	0.8	1.5	1.5		–			1600…
1605-0.8-1.5 FL GC20 R02 …	1605-0.8-1.5 FR GC20 R02 …				■	■	■	0.8	1.5	1.5		0.02			1600…
1605-0.8-1.5 FL GC20 R05 …	1605-0.8-1.5 FR GC20 R05 …				■	■	■	0.8	1.5	1.5		0.05			1600…
1605-1.0-1.5 FL GC20 ZZ …	1605-1.0-1.5 FR GC20 ZZ …				■	■	■	1	1.5	1.5		–			1600…
1605-1.0-1.5 FL GC20 R02 …	1605-1.0-1.5 FR GC20 R02 …				■	■	■	1	1.5	1.5		0.02			1600…
1605-1.0-1.5 FL GC20 R05 …	1605-1.0-1.5 FR GC20 R05 …				■	■	■	1	1.5	1.5		0.05			1600…
1605-1.0-3.5 FL GC20 ZZ …	1605-1.0-3.5 FR GC20 ZZ …				■	■	■	1	5	3.5		–			1600…
1605-1.0-3.5 FL GC20 R05 …	1605-1.0-3.5 FR GC20 R05 …				■	■	■	1	5	3.5		0.05			1600…
1605-1.5-4.5 FL GC20 R05 …	1605-1.5-4.5 FR GC20 R05 …				■	■	■	1.5	5	4.5		0.05			1600…
1605-2.0-5 FL GC20 R05 …	1605-2.0-5 FR GC20 R05 …				■	■	■	2	5	5		0.05			1600…
1605-2.0-5 FL GC20 R15 …	1605-2.0-5 FR GC20 R15 …				■	■	■	2	5	5		0.15			1600…

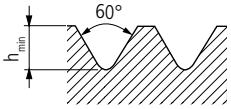
* c: maximal turning capacity
d: maximal grooving capacity

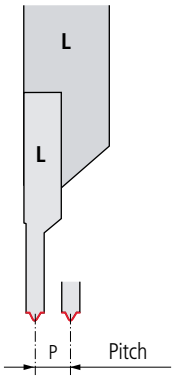


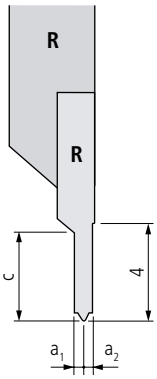
Threading (full profile metric)



1606… VP





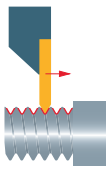


Order designation		Carbide ▯18						Standard			Dimensions					Holders ▯90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO DIN13	NIHS 06-03	NIHS 06-02	P	h_{min}	a_1	a_2	c	
PREMIUM-LINE																
1606-0.06-60 VP L …	1606-0.06-60 VP R …				■	■	■	–	–	S 0.2*	0.06	0.034	0.04	0.03	–	1600…
1606-0.08-60 VP L …	1606-0.08-60 VP R …				■	■	■	–	–	S 0.3	0.08	0.045	0.05	0.04	–	1600…
1606-0.09-60 VP L …	1606-0.09-60 VP R …				■	■	■	–	–	S 0.35	0.09	0.05	0.05	0.05	–	1600…
1606-0.1-60 VP L …	1606-0.1-60 VP R …				■	■	■	–	–	S 0.4	0.1	0.056	0.06	0.06	–	1600…
1606-0.125-60 VP L …	1606-0.125-60 VP R …				■	■	■	–	–	S 0.5	0.125	0.07	0.08	0.07	–	1600…
1606-0.15-60 VP L …	1606-0.15-60 VP R …				■	■	■	–	–	S 0.6	0.15	0.084	0.09	0.08	–	1600…
1606-0.175-60 VP L …	1606-0.175-60 VP R …				■	■	■	–	–	S 0.7	0.175	0.098	0.11	0.1	–	1600…
1606-0.2-60 VP L …	1606-0.2-60 VP R …				■	■	■	–	–	S 0.8	0.2	0.112	0.12	0.11	–	1600…
1606-0.225-60 VP L …	1606-0.225-60 VP R …				■	■	■	–	–	S 0.9	0.225	0.126	0.14	0.12	–	1600…
1606-0.25-60 VP L …	1606-0.25-60 VP R …				■	■	■	M 1/1.2	M 1/1.2	S 1/1.2	0.25	0.14	0.15	0.14	–	1600…
1606-0.3-60 VP L …	1606-0.3-60 VP R …				■	■	■	–	M 1.4	S 1.4	0.3	0.168	0.18	0.17	–	1600…
1606-0.35-60 VP L …	1606-0.35-60 VP R …				■	■	■	M 1.6	M 1.6/1.8	–	0.35	0.215	0.21	0.19	–	1600…
1606-0.4-60 VP L …	1606-0.4-60 VP R …				■	■	■	M 2	M 2	–	0.4	0.245	0.24	0.22	–	1600…
1606-0.45-60 VP L …	1606-0.45-60 VP R …				■	■	■	M 2.5	M 2.2/2.5	–	0.45	0.276	0.27	0.25	–	1600…
STANDARD-LINE																
1606-0.5-60 VP L …	1606-0.5-60 VP R …				■	■	■	M 3	M 3	–	0.5	0.307	0.28	0.28	1.3	1600…
1606-0.6-60 VP L …	1606-0.6-60 VP R …				■	■	■	–	M 3.5	–	0.6	0.368	0.33	0.33	1.5	1600…
1606-0.7-60 VP L …	1606-0.7-60 VP R …				■	■	■	M 4	M 4	–	0.7	0.429	0.39	0.39	1.8	1600…
1606-0.75-60 VP L …	1606-0.75-60 VP R …				■	■	■	–	M4.5	–	0.75	0.46	0.41	0.41	1.9	1600…
1606-0.8-60 VP L …	1606-0.8-60 VP R …				■	■	■	M5	M5	–	0.8	0.491	0.44	0.44	2	1600…
1606-1.0-60 VP L …	1606-1.0-60 VP R …				■	■	■	M6/7	–	–	1	0.613	0.55	0.55	2.5	1600…
1606-1.25-60 VP L …	1606-1.25-60 VP R …				■	■	■	M8/9	–	–	1.25	0.767	0.69	0.69	3	1600…

* Similar to the norme

Recommendations for thread cutting ▯194

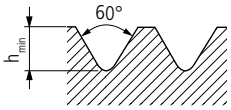
Cutting specification ▯190… Legend ▯6…

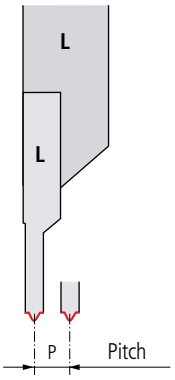


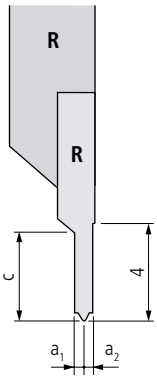
Threading (full profile UN)



1606… UN … VP





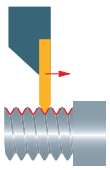


Order designation		Carbide 18						Standard / thread type						Dimensions						Holders
		–	–	●	○	●	●	ANSI / ASME B1.1 (Tolerance class 2A / 2B / 3A / 3B)												90…
		–	●	●	○	●	●													
		○	●	●	○	●	●													
		●	○	–	●	○	–													
		–	–	●	–	–	–													
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	UN	UNC	UNF	UNEF	UNS	UNR	P (T/Inch)	P	h_{min}	a_1	a_2	c	
PREMIUM-LINE																				
1606-80 UN 60 VP L …	1606-80 UN 60 VP R …				■	■	■			●				80	0.318	0.195	0.22	0.17	–	1600…
1606-72 UN 60 VP L …	1606-72 UN 60 VP R …				■	■	■			●				72	0.353	0.216	0.25	0.19	–	1600…
1606-64 UN 60 VP L.…	1606-64 UN 60 VP R …				■	■	■		●	●				64	0.397	0.243	0.28	0.22	–	1600…
1606-56 UN 60 VP L …	1606-56 UN 60 VP R …				■	■	■		●	●		●		56	0.454	0.278	0.32	0.25	–	1600…
STANDARD-LINE																				
1606-48 UN 60 VP L …	1606-48 UN 60 VP R …				■	■	■		●	●		●		48	0.529	0.325	0.29	0.29	1.4	1600…
1606-44 UN 60 VP L …	1606-44 UN 60 VP R …				■	■	■			●				44	0.577	0.354	0.32	0.32	1.4	1600…
1606-40 UN 60 VP L …	1606-40 UN 60 VP R …				■	■	■		●	●		●		40	0.635	0.39	0.35	0.35	1.8	1600…
1606-36 UN 60 VP L …	1606-36 UN 60 VP R …				■	■	■			●		●		36	0.705	0.432	0.39	0.39	1.8	1600…
1606-32 UN 60 VP L …	1606-32 UN 60 VP R …				■	■	■		●	●	●		●	32	0.794	0.487	0.44	0.44	2	1600…
1606-28 UN 60 VP L …	1606-28 UN 60 VP R …				■	■	■		●	●		●	●	28	0.907	0.556	0.5	0.5	2.2	1600…
1606-24 UN 60 VP L …	1606-24 UN 60 VP R …				■	■	■		●	●	●	●		24	1.058	0.649	0.58	0.58	2.2	1600…
1606-20 UN 60 VP L …	1606-20 UN 60 VP R …				■	■	■	●	●	●	●		●	20	1.27	0.779	0.7	0.7	2.9	1600…

Recommendations for thread cutting 194

Cutting specification 190…

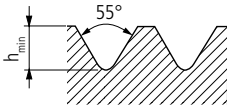
Legend 6…

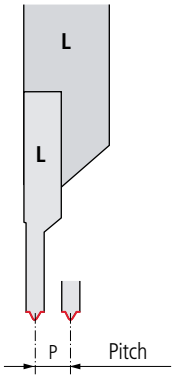


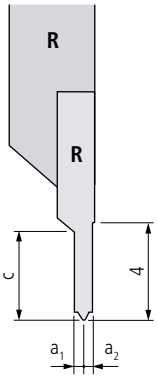
Threading (full profile pipe thread)



1606-G …VP





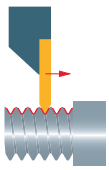


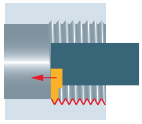
Order designation		Carbide ▯18						Standard		Dimensions						Holders ▯90…
		–	–	●	○	●	●									
		–	●	●	○	●	●									
		○	●	●	○	●	●									
		●	○	–	●	○	–									
		–	–	●	–	–	–									
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ANSI B1.1		P (T/Inch)	P	h_{min}	a_1	a_2	c	
STANDARD-LINE																
1606-G 28-55 VP L …	1606-G 28-55 VP R …				■	■	■	1/8		28	0.907	0.581	0.5	0.5	2.3	1600…
								1/16		28	0.907	0.581	0.5	0.5	2.3	1600…
1606-G 19-55 VP L …	1606-G 19-55 VP R …				■	■	■	1/4		19	1.337	0.856	0.74	0.74	3.3	1600…
								3/8		19	1.337	0.856	0.74	0.74	3.3	1600…
1606-G 14-55 VP L …	1606-G 14-55 VP R …				■	■	■	1/2		14	1.814	1.162	1	1	3.6	1600…
								5/8		14	1.814	1.162	1	1	3.6	1600…
								3/4		14	1.814	1.162	1	1	3.6	1600…
								7/8		14	1.814	1.162	1	1	3.6	1600…

Recommendations for thread cutting ▯194

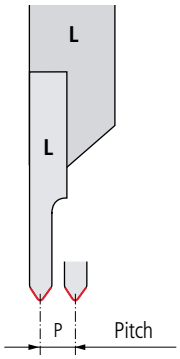
Cutting specification ▯190…

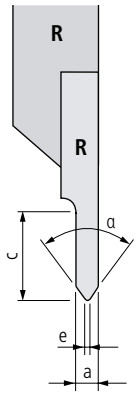
Legend ▯6…





Threading (partial profile 55°/60°)







1606…

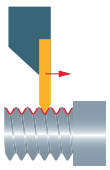
Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								90…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	P	a	c	α	e			
STANDARD-LINE															
1606-2-4-55 L …	1606-2-4-55 R …				■	■	■	0.25–2	2	4	55°	0.035			1600…
1606-2-4-60 L …	1606-2-4-60 R …				■	■	■	0.25–2	2	4	60°	0.035			1600…
VALUE-LINE															
1606 B-2-4-55 L …	1606 B-2-4-55 R …				■	■		0.25-2	2	4	55°	0.035			1600…
1606 B-2-4-60 L …	1606 B-2-4-60 R …				■	■		0.25-2	2	4	60°	0.035			1600…

Recommendations for thread cutting 194

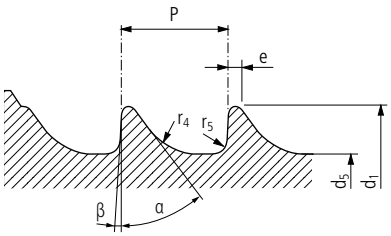
Cutting specification 190…

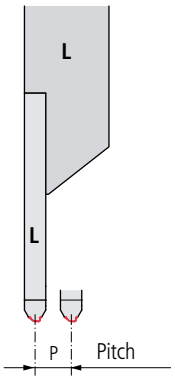
Legend 6…

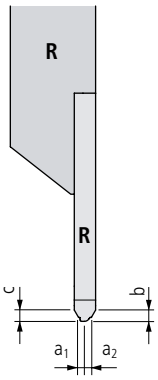
Threading (full profile for implants in surgical-reconstructive medicine)











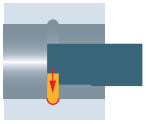
1606 HA… VP …

Order designation L	Order designation R	Carbide UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	Standard ISO 5835	P	a_1	a_2	α	β	d_1 0/-0.15	d_5	Tolerance	e	r_4	r_5	Holders 90…
STANDARD-LINE																				
1606 HA1.5 VP L …	1606 HA1.5 VP R …				■	■	■	HA1.5	0.5	0.4	0.4	35°	3°	1.5	1.1	0/-0.1	0.1	0.3	0.1	1600…
1606 HA2.0 VP L …	1606 HA2.0 VP R …				■	■	■	HA2.0	0.6	0.45	0.45	35°	3°	2	1.3	0/-0.1	0.1	0.4	0.1	1600…
1606 HA2.7 VP L …	1606 HA2.7 VP R …				■	■	■	HA2.7	1	0.65	0.65	35°	3°	2.7	1.9	0/-0.15	0.1	0.6	0.2	1600…
1606 HA3.5 VP L …	1606 HA3.5 VP R …				■	■	■	HA3.5	1.25	0.78	0.78	35°	3°	3.5	2.4	0/-0.15	0.1	0.8	0.2	1600…
1606 HA4.0 VP L …	1606 HA4.0 VP R …				■	■	■	HA4.0	1.5	0.9	0.9	35°	3°	4	2.9	0/-0.15	0.1	0.8	0.2	1600…
1606 HA4.5 VP L …	1606 HA4.5 VP R …				■	■	■	HA4.5	1.75	1.03	1.03	35°	3°	4.5	3	0/-0.15	0.1	1	0.3	1600…
1606 HA5.0 VP L …	1606 HA5.0 VP R …				■	■	■	HA5.0	1.75	1.03	1.03	35°	3°	5	3.5	0/-0.15	0.1	1	0.3	1600…

1606 HB… VP …

Order designation L	Order designation R	Carbide UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	Standard ISO 5835	P	a_1	a_2	α	β	d_1 0/-0.15	d_5	Tolerance	e	r_4	r_5	Holders 90…
STANDARD-LINE																				
1606 HB4.0 VP L …	1606 HB4.0 VP R …				■	■	■	HB4.0	1.75	1.03	1.03	25°	5°	4	1.9	0/-0.15	0.1	0.8	0.3	1600…
1606 HB6.5 VP L …	1606 HB6.5 VP R …				■	■	■	HB4.5	2.75	1.58	1.58	25°	5°	6.5	3	0/-0.15	0.2	1.2	0.8	1600…-4

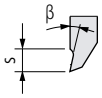


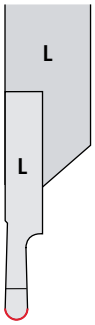


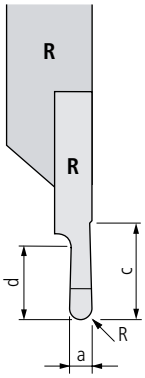
Radius-grooving



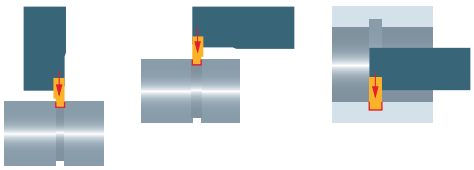
1607…







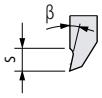
Order designation		Carbide ▯18						Dimensions							Holders ▯90…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	d	β	R	s		
PREMIUM-LINE															
1607-R0.25-2 L …	1607-R0.25-2 R …				■	■	■	0.5	5	2	6°	0.25	2		1600…
STANDARD-LINE															
1607-R0.4-2.5 L …	1607-R0.4-2.5 R …				■	■	■	0.8	5	2.5	6°	0.4	2		1600…
1607-R0.5-2.5 L …	1607-R0.5-2.5 R …				■	■	■	1	5	2.5	6°	0.5	2		1600…
1607-R0.6-2.5 L …	1607-R0.6-2.5 R …				■	■	■	1.2	5	2.5	6°	0.6	2		1600…
1607-R0.75-3.0 L …	1607-R0.75-3.0 R …				■	■	■	1.5	5	3	6°	0.75	2		1600…
1607-R0.8-3.0 L …	1607-R0.8-3.0 R …				■	■	■	1.6	5	3	6°	0.8	2		1600…
1607-R1.0-4.0 L …	1607-R1.0-4.0 R …				■	■	■	2	5	4	6°	1	2		1600…
1607-R1.5-4.0 L …	1607-R1.5-4.0 R …				■	■	■	3	5	4	6°	1.5	2		1600…

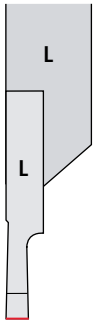


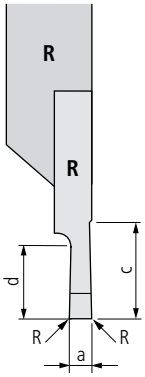
Grooving (radial)



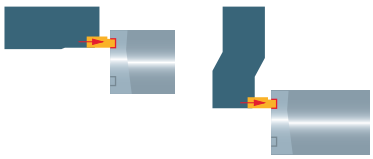
1610…





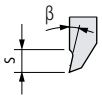


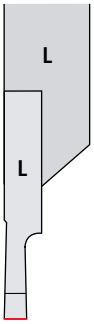
Order designation		Carbide ▯18						Standard	Dimensions							Holders ▯90…
		–	–	●	○	●	●									
		–	●	●	○	●	●									
		○	●	●	○	●	●									
		●	○	–	●	○	–									
		–	–	●	–	–	–									
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO DIN	a		R	c	d	β	s	
PREMIUM-LINE																
1610-0.05-0.1 L …	1610-0.05-0.1 R …				■	■	■	–	0.05	±0.01	–	5	0.1	6°	1	1600…
1610-0.1-0.2 L …	1610-0.1-0.2 R …				■	■	■	–	0.1	±0.01	–	5	0.2	6°	1	1600…
1610-0.15-0.3 L …	1610-0.15-0.3 R …				■	■	■	–	0.15	±0.01	–	5	0.3	6°	1	1600…
STANDARD-LINE																
1610-0.24-0.5 L …	1610-0.24-0.5 R …				■	■	■	6799	0.24	+0.04/0	–	5	0.5	10°	3	1600…
1610-0.3-0.6 L …	1610-0.3-0.6 R …				■	■	■	–	0.3	±0.02	–	5	0.6	6°	1	1600…
1610-0.34-0.6 L …	1610-0.34-0.6 R …				■	■	■	6799	0.34	+0.04/0	–	5	0.6	10°	3	1600…
1610-0.4-0.8 L …	1610-0.4-0.8 R …				■	■	■	–	0.4	±0.02	–	5	0.8	6°	1	1600…
1610-0.44-0.8 L …	1610-0.44-0.8 R …				■	■	■	6799	0.44	+0.04/0	–	5	0.8	10°	3	1600…
1610-0.45-1.5 L …	1610-0.45-1.5 R …				■	■	■	–	0.45	±0.02	–	5	1.5	6°	1	1600…
1610-0.5-1.0 L …	1610-0.5-1.0 R …				■	■	■	–	0.5	±0.02	–	5	1	6°	1	1600…
1610-0.54-0.8 L …	1610-0.54-0.8 R …				■	■	■	6799	0.54	+0.05/0	–	5	0.8	10°	3	1600…
1610-0.6-1.2 L …	1610-0.6-1.2 R …				■	■	■	–	0.6	±0.02	–	5	1.2	6°	1	1600…
1610-0.64-1.0 L …	1610-0.64-1.0 R …				■	■	■	6799	0.64	+0.05/0	–	5	1	10°	3	1600…
1610-0.64-1.2 L …	1610-0.64-1.2 R …				■	■	■	6799	0.64	+0.05/0	–	5	1.2	10°	3	1600…
1610-0.65-0.7 L …	1610-0.65-0.7 R …				■	■	■	471	0.65	±0.02	–	5	0.7	10°	3	1600…
1610-0.7-1.4 L …	1610-0.7-1.4 R …				■	■	■	–	0.7	±0.02	–	5	1.4	6°	1	1600…
1610-0.74-1.8 L …	1610-0.74-1.8 R …				■	■	■	6799	0.74	+0.05/0	–	5	1.8	10°	3	1600…
1610-0.85-0.9 L …	1610-0.85-0.9 R …				■	■	■	471	0.85	±0.02	–	5	0.9	10°	3	1600…
1610-0.85-1.2 L …	1610-0.85-1.2 R …				■	■	■	–	0.85	±0.02	–	5	1.2	10°	3	1600…
1610-0.94-2.3 L …	1610-0.94-2.3 R …				■	■	■	6799	0.94	+0.05/0	–	5	2.3	10°	3	1600…
1610-0.95-1.0 L …	1610-0.95-1.0 R …				■	■	■	471	0.95	±0.02	–	5	1	10°	3	1600…
1610-1.0-1.14 L …	1610-1.0-1.14 R …				■	■	■	471	1	±0.02	–	5	1.14	10°	3	1600…
1610-1.05-2.3 L …	1610-1.05-2.3 R …				■	■	■	6799	1.05	+0.08/0	–	5	2.3	10°	3	1600…
1610-1.15-2.8 L …	1610-1.15-2.8 R …				■	■	■	6799	1.15	+0.08/0	–	5	2.8	10°	3	1600…
1610-1.2-1.34 L …	1610-1.2-1.34 R …				■	■	■	471/472	1.2	±0.02	–	5	1.34	10°	3	1600…
1610-1.25-2.8 L …	1610-1.25-2.8 R …				■	■	■	6799	1.25	+0.08/0	–	5	2.8	10°	3	1600…
1610-1.35-3.3 L …	1610-1.35-3.3 R …				■	■	■	6799	1.35	+0.08/0	–	5	3.3	10°	3	1600…
1610-1.4-1.53 L …	1610-1.4-1.53 R …				■	■	■	471/472	1.4	±0.02	–	5	1.53	10°	3	1600…
1610-1.5-3.0 L …	1610-1.5-3.0 R …				■	■	■	–	1.5	±0.02	–	5	3	10°	3	1600…
1610-1.55-3.8 L …	1610-1.55-3.8 R …				■	■	■	6799	1.55	+0.08/0	–	5	3.8	10°	3	1600…
1610-1.7-1.82 L …	1610-1.7-1.82 R …				■	■	■	471/472	1.7	±0.02	–	5	1.82	10°	3	1600…
1610-1.95-2.0 L …	1610-1.95-2.0 R …				■	■	■	471/472	1.95	±0.02	–	5	2	10°	3	1600…
1610-2.25-2.0 L …	1610-2.25-2.0 R …				■	■	■	471/472	2.25	±0.02	–	5	2	10°	3	1600…
1610-2.75-2.0 L …	1610-2.75-2.0 R …				■	■	■	471/472	2.75	±0.02	–	5	2	10°	3	1600…

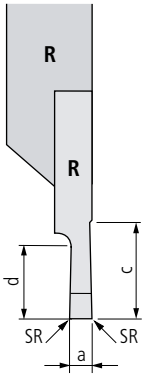


Grooving (axial)





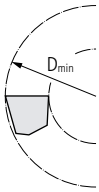




1611…

Order designation		Carbide ▯18						Dimensions							Holders ▯90…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a ±0.02	SR*	c	D_{min}	d	β	s	
STANDARD-LINE															
1611-0.5-1.0 L …	1611-0.5-1.0 R …				■	■	■	0.5	0.05	4	7	1	8°	1.2	1600…
1611-0.6-1.2 L …	1611-0.6-1.2 R …				■	■	■	0.6	0.05	4	8	1.2	8°	1.2	1600…
1611-0.8-1.5 L …	1611-0.8-1.5 R …				■	■	■	0.8	0.05	4	8	1.5	8°	1.2	1600…
1611-1.0-2.0 L …	1611-1.0-2.0 R …				■	■	■	1	0.05	4	8	2	8°	1.2	1600…
1611-1.5-2.5 L …	1611-1.5-2.5 R …				■	■	■	1.5	0.05	4	14	2.5	8°	1.2	1600…
1611-2.0-3.0 L …	1611-2.0-3.0 R …				■	■	■	2	0.05	4	18	3	8°	1.2	1600…
1611-2.5-3.5 L …	1611-2.5-3.5 R …				■	■	■	2.5	0.05	4	18	3.5	8°	1.2	1600…

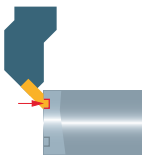
* SR: Protection radius



Attention
The groove must not be made underneath the D_{min}-position.

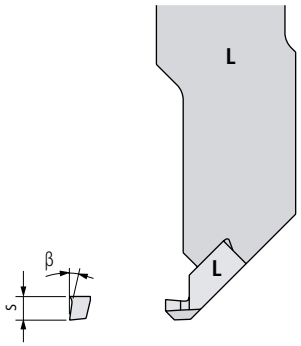
Pay attention to the "working situations" for the correct selection of the combinations of tools and inserts ▯24…

Miniature groowing (axial)

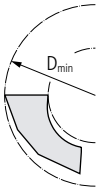




1611-45…



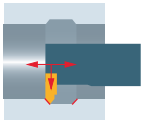
Order designation		Carbide 18						Dimensions						Holders 101
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a ±0.01	R	D_{min}	d	β	s	
PREMIUM-LINE														
1611-45-0.25-0.5 L …	1611-45-0.25-0.5 R …				■	■	■	0.25	–	0.8	0.5	8°	0.5	1600… 45 ST A
1611-45-0.5-1.0 L …	1611-45-0.5-1.0 R …				■	■	■	0.5	–	1.6	1	8°	1	1600… 45 ST A
1611-45-0.75-1.5 L …	1611-45-0.75-1.5 R …				■	■	■	0.75	–	2.4	1.5	8°	1.5	1600… 45 ST A
1611-45-1.0-2.0 L …	1611-45-1.0-2.0 R …				■	■	■	1	–	3.2	2	8°	2	1600… 45 ST A



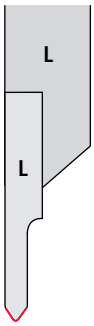
Attention
The first groove must be made exactly on the D_{min}-position.

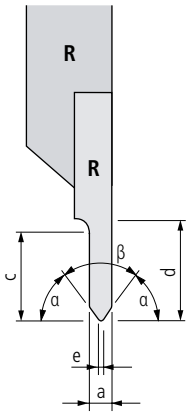
Pay attention to the "working situations" for the correct selection of the combinations of tools and inserts 24…





Chamfering

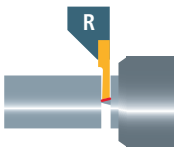






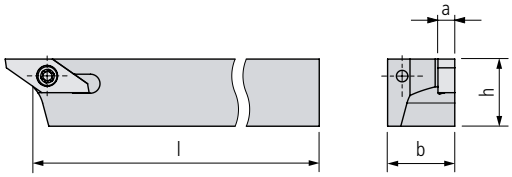
1612…

Order designation		Carbide ▯18						Dimensions							Holders ▯90…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	d	α	β	e		
STANDARD-LINE															
1612-1-4-45 L …	1612-1-4-45 R …				■	■	■	1	4	4	45°	90°	–		1600…
1612-2-4-60 L …	1612-2-4-60 R …				■	■	■	2	4	4	60°	60°	0.035		1600…



Standard





1600… *

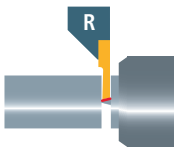
Order designation L		Order designation R		Dimensions h	b	l	a					Inserts 53…
STANDARD-LINE												
1600-07x100 L	■	1600-07x100 R	■	7	7	100	3					16…
1600-08x80 L	■	1600-08x80 R	■	8	8	80	3					16…
1600-08x100 L	■	1600-08x100 R	■	8	8	100	3					16…
1600-10x80 L	■	1600-10x80 R	■	10	10	80	3					16…
1600-10x100 L	■	1600-10x100 R	■	10	10	100	3					16…
1600-12x100 L	■	1600-12x100 R	■	12	12	100	3					16…
1600-16x125 L	■	1600-16x125 R	■	16	16	125	3					16…
1600-20x125 L	■	1600-20x125 R	■	20	20	125	3					16…
1600-25x125 L	■	1600-25x125 R	■	25	25	125	3					16…
VALUE-LINE												
1600 B-10x100 L	■	1600 B-10x100 R	■	10	10	100	3					16…
1600 B-12x100 L	■	1600 B-12x100 R	■	12	12	100	3					16…
1600 B-16x125 L	■	1600 B-16x125 R	■	16	16	125	3					16…

1600… INCH

Order designation L		Order designation R		Dimensions h	b	l	a					Inserts 53…
STANDARD-LINE												
1600-3/8"x80 L	■	1600-3/8"x80 R	■	9.525	9.525	80	3					16…
1600-3/8"x100 L	■	1600-3/8"x100 R	■	9.525	9.525	100	3					16…
1600-1/2"x100 L	■	1600-1/2"x100 R	■	12.7	12.7	100	3					16…
1600-5/8"x125 L	■	1600-5/8"x125 R	■	15.875	15.875	125	3					16…
1600-3/4"x125 L	■	1600-3/4"x125 R	■	19.05	19.05	125	3					16…

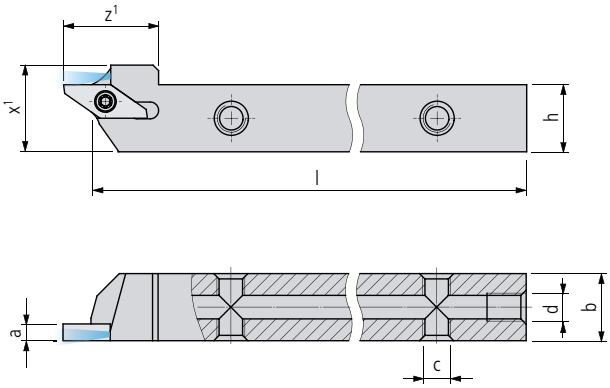
Note
Holders with a shaft heigh of "h" = 6 mm are also available as a special version by request.

Legend ..... 6…



With internal cooling





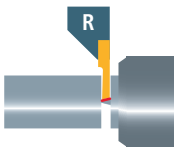
1600… IC

Order designation L		Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 53…
PREMIUM-LINE												
1600-08x100 L IC	■	1600-08x100 R IC	■	8	10	100	3	15	11.5	M5	M5	16…
1600-10x100 L IC	■	1600-10x100 R IC	■	10	10	100	3	15	13.5	M5	M5	16…
1600-12x100 L IC	■	1600-12x100 R IC	■	12	12	100	3	17	15.5	M5	M5	16…
1600-16x125 L IC	■	1600-16x125 R IC	■	16	16	125	3	17	19.5	M5	G⅛"	16…
1600-20x125 L IC	■	1600-20x125 R IC	■	20	20	125	3	20	23.5	M5	G⅛"	16…

1600… IC INCH

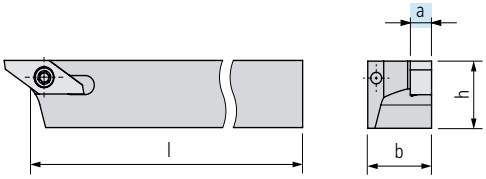
Order designation L		Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 53…
PREMIUM-LINE												
1600-3/8"x100 L IC	■	1600-3/8"x100 R IC	■	9.525	9.525	100	3	15	13	M5	M5	16…
1600-1/2"x100 L IC	■	1600-1/2"x100 R IC	■	12.7	12.7	100	3	17	16.2	M5	M5	16…
1600-5/8"x125 L IC	■	1600-5/8"x125 R IC	■	15.875	15.875	125	3	17	19.4	M5	G⅛"	16…
1600-3/4"x125 L IC	■	1600-3/4"x125 R IC	■	19.05	19.05	125	3	20	22.6	M5	G⅛"	16…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



For 4 mm and 6 mm wide inserts



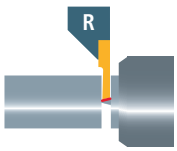


1600…-4

Order designation L		Order designation R		h	b	l	a					Inserts 636…
STANDARD-LINE												
1600-08x80-4 L	■	1600-08x80-4 R	■	8	8	80	4					16…
1600-08x100-4 L	■	1600-08x100-4 R	■	8	8	100	4					16…
1600-10x80-4 L	■	1600-10x80-4 R	■	10	10	80	4					16…
1600-10x100-4 L	■	1600-10x100-4 R	■	10	10	100	4					16…
1600-12x100-4 L	■	1600-12x100-4 R	■	12	12	100	4					16…
1600-16x125-4 L	■	1600-16x125-4 R	■	16	16	125	4					16…
1600-20x125-4 L	■	1600-20x125-4 R	■	20	20	125	4					16…
1600-25x125-4 L	■	1600-25x125-4 R	■	25	25	125	4					16…

1600…-6

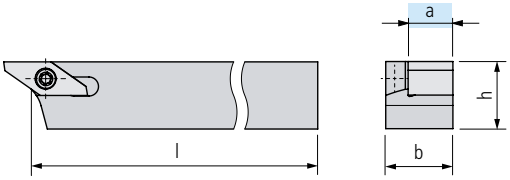
Order designation L		Order designation R		h	b	l	a					Inserts 636…
STANDARD-LINE												
1600-10x80-6 L	■	1600-10x80-6 R	■	10	10	80	6					16…
1600-10x100-6 L	■	1600-10x100-6 R	■	10	10	100	6					16…
1600-12x100-6 L	■	1600-12x100-6 R	■	12	12	100	6					16…
1600-16x125-6 L	■	1600-16x125-6 R	■	16	16	125	6					16…
1600-20x125-6 L	■	1600-20x125-6 R	■	20	20	125	6					16…
1600-25x125-6 L	■	1600-25x125-6 R	■	25	25	125	6					16…



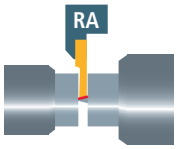
For 8 mm wide inserts



1600…-8

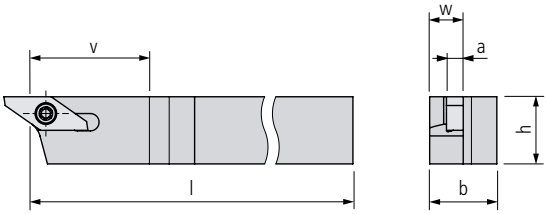


Order designation				Dimensions								Inserts
L		R		h	b	l	a					636…
STANDARD-LINE												
1600-12x100-8 L	■	1600-12x100-8 R	■	12	12	100	8					16…
1600-16x125-8 L	■	1600-16x125-8 R	■	16	16	125	8					16…
1600-20x125-8 L	■	1600-20x125-8 R	■	20	20	125	8					16…
1600-25x125-8 L	■	1600-25x125-8 R	■	25	25	125	8					16…



With off-set shank and insert



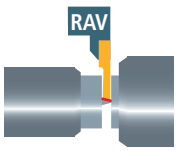


1600… A

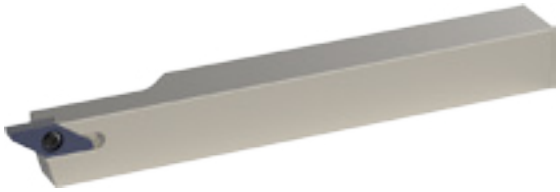
Order designation L		Order designation R		Dimensions h	b	l	v	w	a			Inserts 53…
STANDARD-LINE												
1600-08x80 LA	■	1600-08x80 RA	■	8	8	80	21	6	3			16…
1600-08x100 LA	■	1600-08x100 RA	■	8	8	100	21	6	3			16…
1600-10x80 LA	■	1600-10x80 RA	■	10	10	80	21	6	3			16…
1600-10x100 LA	■	1600-10x100 RA	■	10	10	100	21	6	3			16…
1600-12x100 LA	■	1600-12x100 RA	■	12	12	100	21	6	3			16…
1600-16x125 LA	■	1600-16x125 RA	■	16	16	125	21	6	3			16…

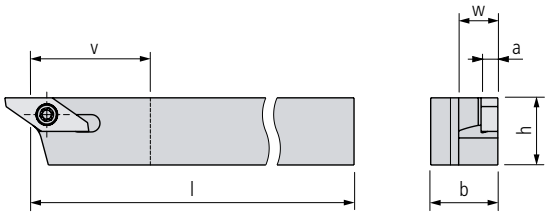
1600… A INCH

Order designation L		Order designation R		Dimensions h	b	l	v	w	a			Inserts 53…
STANDARD-LINE												
1600-3/8"x80 LA	■	1600-3/8"x80 RA	■	9.525	9.525	80	21	6	3			16…
1600-3/8"x100 LA	■	1600-3/8"x100 RA	■	9.525	9.525	100	21	6	3			16…
1600-1/2"x100 LA	■	1600-1/2"x100 RA	■	12.7	12.7	100	21	6	3			16…
1600-5/8"x125 LA	■	1600-5/8"x125 RA	■	15.875	15.875	125	21	6	3			16…



With off-set shank



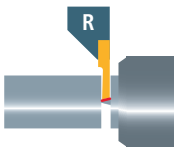


1600… AV

Order designation L		Order designation R		Dimensions h	b	l	v	w	a			Inserts 53…
STANDARD-LINE												
1600-08x80 LAV	■	1600-08x80 RAV	■	8	8	80	21	6	3			16…
1600-08x100 LAV	■	1600-08x100 RAV	■	8	8	100	21	6	3			16…
1600-10x80 LAV	■	1600-10x80 RAV	■	10	10	80	21	6	3			16…
1600-10x100 LAV	■	1600-10x100 RAV	■	10	10	100	21	6	3			16…
1600-12x100 LAV	■	1600-12x100 RAV	■	12	12	100	21	6	3			16…
1600-16x125 LAV	■	1600-16x125 RAV	■	16	16	125	21	6	3			16…

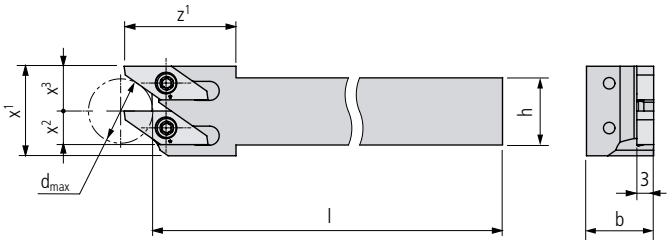
1600… AV INCH

Order designation L		Order designation R		Dimensions h	b	l	v	w	a			Inserts 53…
STANDARD-LINE												
1600-3/8"x80 LAV	■	1600-3/8"x80 RAV	■	9.525	9.525	80	21	6	3			16…
1600-3/8"x100 LAV	■	1600-3/8"x100 RAV	■	9.525	9.525	100	21	6	3			16…
1600-1/2"x100 LAV	■	1600-1/2"x100 RAV	■	12.7	12.7	100	21	6	3			16…
1600-5/8"x125 LAV	■	1600-5/8"x125 RAV	■	15.875	15.875	125	21	6	3			16…



"TWIN" version





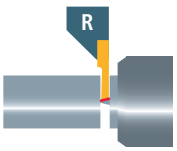
1600/1600… TWIN

Order designation				Dimensions									Inserts
L L		R R		h	b	l	z^1	x^1	x^2	x^3		d_{max}	53…
STANDARD-LINE													
1600L/1600L-0810x100 Twin	■	1600R/1600R-0810x100 Twin	■	8	10	100	20	16	4	8		11.5	16…
1600L/1600L-10x100 Twin	■	1600R/1600R-10x100 Twin	■	10	10	100	20	16	5	8		11.5	16…
1600L/1600L-12x100 Twin	■	1600R/1600R-12x100 Twin	■	12	12	100	20	16	6	8		11.5	16…
1600L/1600L-16x125 Twin	■	1600R/1600R-16x125 Twin	■	16	16	125	20	20	8	10		19	16…
1600L/1600L-20x125 Twin	■	1600R/1600R-20x125 Twin	■	20	20	125	20	24	8	14		34	16…

1600/1600… TWIN INCH

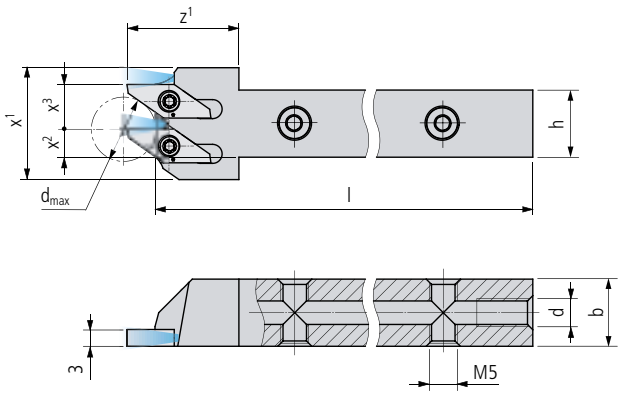
Order designation				Dimensions									Inserts
L L		R R		h	b	l	z^1	x^1	x^2	x^3		d_{max}	53…
STANDARD-LINE													
1600L/1600L-3/8"x100 Twin	■	1600R/1600R-3/8"x100 Twin	■	9.525	9.525	100	20	16	5	8		11.5	16…
1600L/1600L-1/2"x100 Twin	■	1600R/1600R-1/2"x100 Twin	■	12.7	12.7	100	20	16	6	8		11.5	16…
1600L/1600L-5/8"x125 Twin	■	1600R/1600R-5/8"x125 Twin	■	15.875	15.875	125	20	20	8	10		19	16…
1600L/1600L-3/4"x125 Twin	■	1600R/1600R-3/4"x125 Twin	■	19.05	19.05	125	20	24	7	14		34	16…

Legend ..... 6…



"TWIN" version with internal cooling





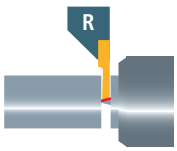
1600/1600… TWIN IC

Order designation				Dimensions									Inserts
L L		R R		h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	53…
PREMIUM-LINE													
1600L/1600L-0812x100 Twin IC	■	1600R/1600R-0812x100 Twin IC	■	8	12	100	20	20	3	8	M5	11.5	16…
1600L/1600L-1012x100 Twin IC	■	1600R/1600R-1012x100 Twin IC	■	10	12	100	20	20	4	8	M5	11.5	16…
1600L/1600L-12x100 Twin IC	■	1600R/1600R-12x100 Twin IC	■	12	12	100	20	20	5	8	M5	11.5	16…
1600L/1600L-16x125 Twin IC	■	1600R/1600R-16x125 Twin IC	■	16	16	125	20	24	7	10	G⅛"	19	16…
1600L/1600L-20x125 Twin IC	■	1600R/1600R-20x125 Twin IC	■	20	20	125	20	28	7	14	G⅛"	34	16…

1600/1600… TWIN IC INCH

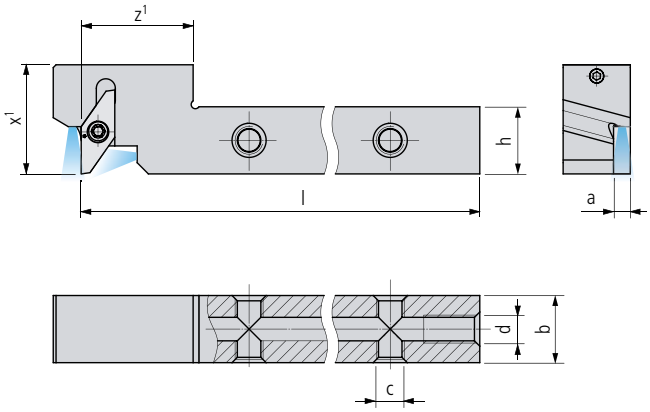
Order designation				Dimensions									Inserts
L L		R R		h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	53…
PREMIUM-LINE													
1600L/1600L-3/8"12x100 Twin IC	■	1600R/1600R-3/8"12x100 Twin IC	■	9.525	12	100	20	20	4	8	M5	11.5	16…
1600L/1600L-1/2"x100 Twin IC	■	1600R/1600R-1/2"x100 Twin IC	■	12.7	12.7	100	20	20	6	8	M5	11.5	16…
1600L/1600L-5/8"x125 Twin IC	■	1600R/1600R-5/8"x125 Twin IC	■	15.875	15.875	125	20	24	7	10	G⅛"	19	16…
1600L/1600L-3/4"x125 Twin IC	■	1600R/1600R-3/4"x125 Twin IC	■	19.05	19.05	125	20	28	6	14	G⅛"	34	16…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"Y-AXIS" version with internal cooling





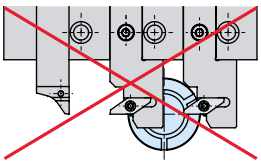
1600 YA… IC

Order designation L	Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 53…
PREMIUM-LINE											
	1600 YA-12x100-20 R IC	■	12	12	100	3	20	19.5	M5	M5	16…
	1600 YA-12x100-25 R IC	■	12	12	100	3	25	19.5	M5	M5	16…
	1600 YA-12x100-30 R IC	■	12	12	100	3	30	19.5	M5	M5	16…
	1600 YA-16x125-20 R IC	■	16	16	125	3	20	19.5	M5	G⅛	16…
	1600 YA-16x125-25 R IC	■	16	16	125	3	25	19.5	M5	G⅛	16…
	1600 YA-16x125-30 R IC	■	16	16	125	3	30	19.5	M5	G⅛	16…

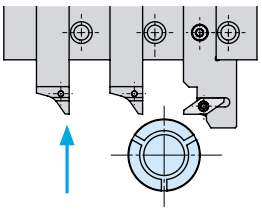
1600 YA… IC INCH

Order designation L	Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 53…
PREMIUM-LINE											
	1600 YA-1/2"x100-20 R IC	■	12.7	12.7	100	3	20	19.5	M5	M5	16…
	1600 YA-1/2"x100-25 R IC	■	12.7	12.7	100	3	25	19.5	M5	M5	16…
	1600 YA-1/2"x100-30 R IC	■	12.7	12.7	100	3	30	19.5	M5	M5	16…
	1600 YA-5/8"x125-20 R IC	■	15.875	15.875	125	3	20	19.5	M5	G⅛	16…
	1600 YA-5/8"x125-25 R IC	■	15.875	15.875	125	3	25	19.5	M5	G⅛	16…
	1600 YA-5/8"x125-30 R IC	■	15.875	15.875	125	3	30	19.5	M5	G⅛	16…

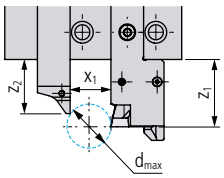
Usage notes:



To avoid problems, two Y-AXIS holders must not be mounted directly next to each other.
Mount a standard tool holder between the Y-AXIS holders.



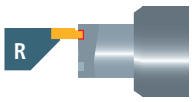
To prevent collisions, move back the holder in accordance with the overhanging length before changing the tool position.



$$d_{max} = \frac{(z_1 - z_2)^2 + x_1^2}{x_1}$$

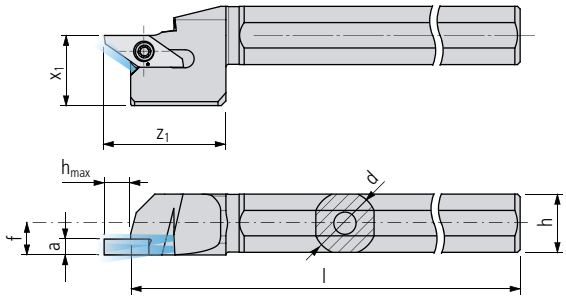
Scope of delivery: Holder without coolant connector
Coolant system ..... 671…

Legend ..... 6…



With round shank





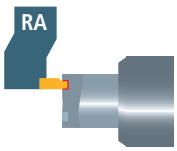
1600… 00 RD . IC+*

Order designation L		Order designation R		Dimensions d	l	h_{max}	a	h	f	z_1	x_1	Inserts 53…
STANDARD-LINE												
1600-12x125 00 RD L IC+	■	1600-12x125 00 RD R IC+	■	12	125	5	3	11	6	23	13.25	16…
1600-16x125 00 RD L IC+	■	1600-16x125 00 RD R IC+	■	16	125	5	3	15	8	23	13.25	16…
1600-20x125 00 RD L IC+	■	1600-20x125 00 RD R IC+	■	20	125	5	3	19	10	23	13.25	16…
1600-22x125 00 RD L IC+	■	1600-22x125 00 RD R IC+	■	22	125	5	3	21	11	23	13.25	16…
1600-25x125 00 RD L IC+	■	1600-25x125 00 RD R IC+	■	25	125	5	3	24	12.5	23	13.25	16…

1600… 00 RD . IC+ INCH*

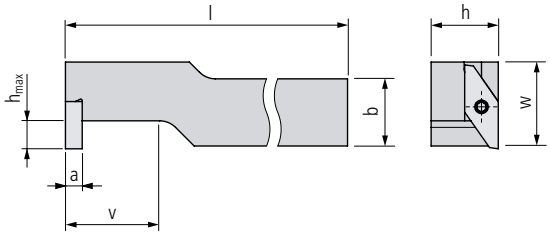
Order designation L		Order designation R		Dimensions d	l	h_{max}	a	h	f	z_1	x_1	Inserts 53…
STANDARD-LINE												
1600-1/2"x125 00 RD L IC+	■	1600-1/2"x125 00 RD R IC+	■	12.7	125	5	3	11.7	6.35	23	13.25	16…
1600-5/8"x125 00 RD L IC+	■	1600-5/8"x125 00 RD R IC+	■	19.875	125	5	3	14.875	7.937	23	13.25	16…
1600-3/4"x125 00 RD L IC+	■	1600-3/4"x125 00 RD R IC+	■	19.05	125	5	3	18	9.53	23	13.25	16…
1600-1"x125 00 RD L IC+	■	1600-1"x125 00 RD R IC+	■	25.4	125	5	3	24.4	12.7	23	13.25	16…

* With internal cooling IC+ (with additional cooling of clearance angle)



With off-set shank





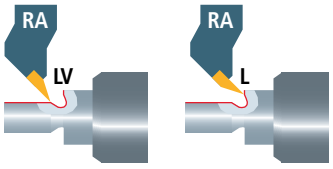
1600… 90 ST A

Order designation L		Order designation R		Dimensions h	b	l	v	w	h_{max}	a		Inserts* 87…
STANDARD-LINE												
1600-08x80 90 ST LA	■	1600-08x80 90 ST RA	■	8	8	80	17	15	5	3		1611…
1600-08x100 90 ST LA	■	1600-08x100 90 ST RA	■	8	8	100	17	15	5	3		1611…
1600-10x80 90 ST LA	■	1600-10x80 90 ST RA	■	10	10	80	17	15	5	3		1611…
1600-10x100 90 ST LA	■	1600-10x100 90 ST RA	■	10	10	100	17	15	5	3		1611…
1600-12x100 90 ST LA	■	1600-12x100 90 ST RA	■	12	12	100	17	15	5	3		1611…
1600-16x125 90 ST LA	■	1600-16x125 90 ST RA	■	16	16	125	17	16	5	3		1611…
1600-20x125 90 ST LA	■	1600-20x125 90 ST RA	■	20	20	125	17	20	5	3		1611…

1600… 90 ST A INCH

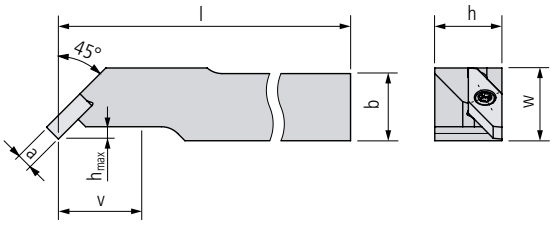
Order designation L		Order designation R		Dimensions h	b	l	v	w	h_{max}	a		Inserts* 87…
STANDARD-LINE												
1600-3/8"x80 90 ST LA	■	1600-3/8"x80 90 ST RA	■	9.525	9.525	80	17	15	5	3		1611…
1600-3/8"x100 90 ST LA	■	1600-3/8"x100 90 ST RA	■	9.525	9.525	100	17	15	5	3		1611…
1600-1/2"x100 90 ST LA	■	1600-1/2"x100 90 ST RA	■	12.7	12.7	100	17	15	5	3		1611…
1600-5/8"x125 90 ST LA	■	1600-5/8"x125 90 ST RA	■	15.875	15.875	125	17	15.875	5	3		1611…
1600-3/4"x125 90 ST LA	■	1600-3/4"x125 90 ST RA	■	19.05	19.05	125	17	19.05	5	3		1611…

*** Attention**
Right hand holder needs left hand insert!



With off-set shank





1600… 45 ST A

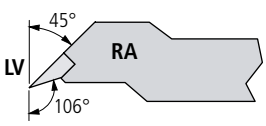
Order designation L	Order designation R	Dimensions h	b	l	v	w	h_{max}	a	Inserts* 70…
STANDARD-LINE									
1600-08x100 45 ST LA ■	1600-08x100 45 ST RA ■	8	8	100	17	13	2	3	1604…SP 1611-45…
1600-10x80 45 ST LA ■	1600-10x80 45 ST RA ■	10	10	80	17	13	2	3	
1600-10x100 45 ST LA ■	1600-10x100 45 ST RA ■	10	10	100	17	13	2	3	
1600-12x100 45 ST LA ■	1600-12x100 45 ST RA ■	12	12	100	17	13	2	3	
1600-16x125 45 ST LA ■	1600-16x125 45 ST RA ■	16	16	125	17	16	2	3	

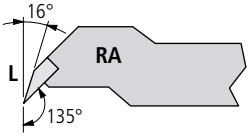
1600… 45 ST A INCH

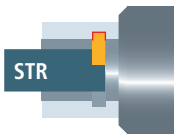
Order designation L	Order designation R	Dimensions h	b	l	v	w	h_{max}	a	Inserts* 70…
STANDARD-LINE									
1600-3/8"x80 45 ST LA ■	1600-3/8"x80 45 ST RA ■	9.525	9.525	80	17	13	2	3	1604…SP 1611-45…
1600-3/8"x100 45 ST LA ■	1600-3/8"x100 45 ST RA ■	9.525	9.525	100	17	13	2	3	
1600-1/2"x100 45 ST LA ■	1600-1/2"x100 45 ST RA ■	12.7	12.7	100	17	13	2	3	
1600-5/8"x125 45 ST LA ■	1600-5/8"x125 45 ST RA ■	15.875	15.875	125	17	15.875	2	3	

*** Attention**
Right hand holder needs left hand insert!

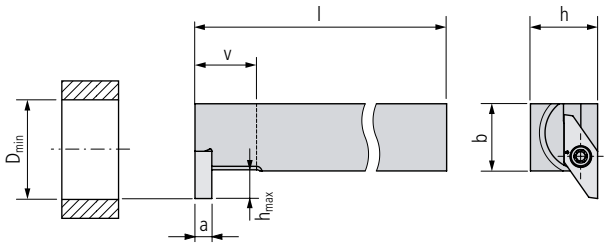
With these combinations of holder and insert, radially and axially undercuts, up to a limited depth, can be turned with standard inserts 1604… SP…
Otherwise, we can grind special inserts, adapted to your needs.







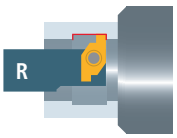




1600… 90 ST

Order designation				Dimensions								Inserts*
L		R		h	b	l	v	h_{max}	D_{min}	a		53…
STANDARD-LINE												
1600-10x100 90 ST L	■	1600-10x100 90 ST R	■	10	10	100	11	5	21	3		16…
1600-12x100 90 ST L	■	1600-12x100 90 ST R	■	12	12	100	11	5	21	3		16…
1600-16x125 90 ST L	■	1600-16x125 90 ST R	■	16	16	125	11	5	21	3		16…

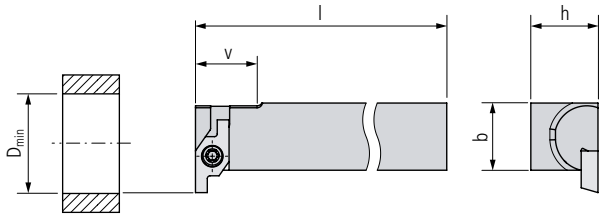
*** Attention**
Right hand holder needs left hand insert!



For special inserts – multidec4you®

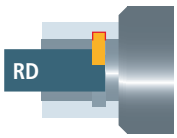


1600… 90

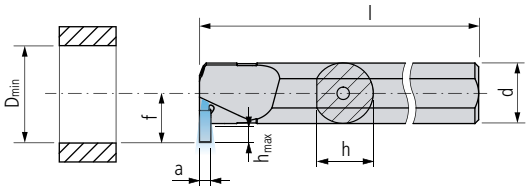


Order designation				Dimensions								Inserts*
L		R		h	b	l	v	D_{min}				636…
STANDARD-LINE												
1600-10x100 90 L	■	1600-10x100 90 R	■	10	10	100	11	17				16…
1600-12x100 90 L	■	1600-12x100 90 R	■	12	12	100	11	17				16…

*** Attention**
Right hand holder needs left hand insert!







1600… 90 RD . IC

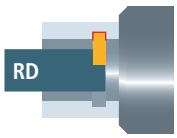
Order designation				Dimensions								Inserts*
L		R		d g6	l	h_{max}	D_{min}	a	f	h		53…
STANDARD-LINE												
1600-12x125 90 RD L IC	■	1600-12x125 90 RD R IC	■	12	125	3	17	3	11	11		16…
1600-16x150 90 RD L IC	■	1600-16x150 90 RD R IC	■	16	150	3.5	21	3	13	15		16…
1600-20x180 90 RD L IC	■	1600-20x180 90 RD R IC	■	20	180	4	25	3	15	19		16…

*** Attention**
Right hand holder needs left hand insert!

Legend ..... 6…

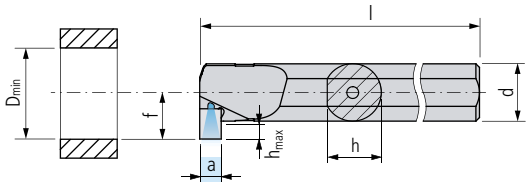
Holders

multidec®-CUT 1600



For 6 mm and 8 mm wide inserts





1600…-6-8 90 RD . IC

Order designation L		Order designation R		Dimensions d g6	l	h_{max}	D_{min}	a	f	h		Inserts* 636…
STANDARD-LINE												
1600-16x150-6-8 90 RD L IC	■	1600-16x150-6-8 90 RD R IC	■	16	150	3.5	21	6	13	15		16…
1600-20x180-6-8 90 RD L IC	■	1600-20x180-6-8 90 RD R IC	■	20	180	4	25	6	15	19		16…

*** Attention**
Right hand holder needs left hand insert!

Replacement and spare parts

multidec®-CUT 1600

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5×6 T08	MSP 25060 T08	■	1600… 3*
		M2.5×7 T08	MSP 25070 T08	■	1600… 4*
		M2.5×9 T08	MSP 25090 T08	■	1600… 6* 1600… 8*
	Screw plug	M5	MSP VSR M5 IB2.5	■	1600… (h≤–12)
		G⅛	MSP VSR G1/8 IB5	■	1600… (h≥–16)

* Cutting edge width "a"

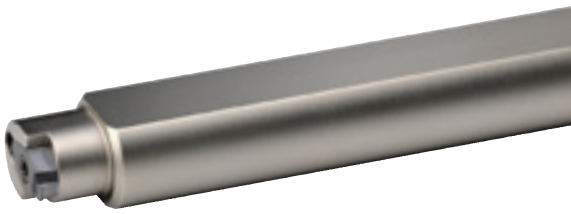
TORX screwdriver ..... 703…

The turning system 1700 ideally complements the existing system 1600.
With the 2° obliquely installed insert, you can easily avoid protruding contours that would otherwise lead to a collision.
Even for the holders a wide range of possibilities with shank sizes between 8 and 20 mm are available. For Swiss-type automatic lathes special holders have been designed and complete the wide range of choices.

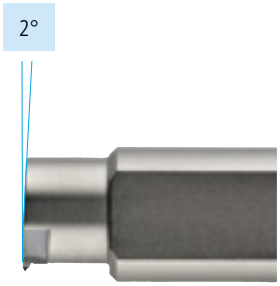




Advantages:
– Tool holder clearance given from insert seat
– Grooving inserts width starting from 0.05 mm
– "WCT" threading program for turning NIHS 60–30 threads in watch cases







Overview – multidec®-CUT 1700

Technical information 9



Inserts

1701… 108

1706… WCT 109

1710… 110

1711… 111



Holders

1700… WCT 113

1700…, 1700… INCH 114

1700… 92 ST, 1700… 92 ST INCH 115

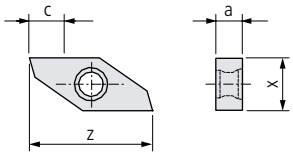
1700… 92 ST A, 1700… 92 ST A INCH 116



Replacement and spare parts 117

Blank

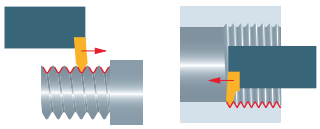




1701…

Order designation	Carbide 18						HSS		Dimensions					Holders
	–	–	●	○	●	●	●	●						113…
	–	●	●	○	●	●	○	●						
	○	●	●	○	●	●	–	○						
	●	○	–	●	○	–	●	○						
	–	–	●	–	–	–	–	–						
N	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	HSS	HSS HX	a	c	x	z		
PREMIUM-LINE														
1701-3-5 N P …*				■	■	■			3	5	6	16		1700…
STANDARD-LINE														
1701-3-5 N …				■	■	■	■	■	3	5	6	16		1700…

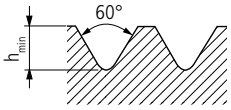
* Mirror polished

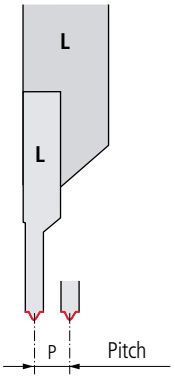


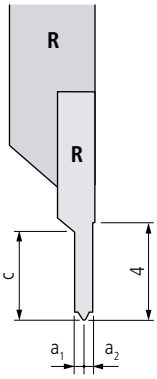
Threading (full profile metric) watch cases
2° obliquely installed insert



1706… WCT



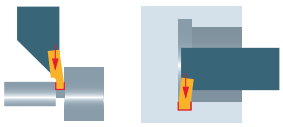




Order designation		Carbide 18						Standard	Dimensions						Holders
		–	–	●	○	●	●								113…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	NIHS 60-30	P	h_{min}	a_1	a_2	b	c	
PREMIUM-LINE															
1706-0.5-60 VP L WCT NIHS…	1706-0.5-60 VP R WCT NIHS…				■	■	■		0.5	0.315	0.35	0.28	2	1	1700… WCT*

Recommendations for thread cutting 194

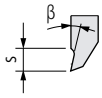
*** Attention**
Inserts labelled "WCT" are only compatible with holders that are also labelled "WCT".

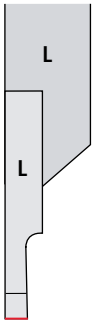


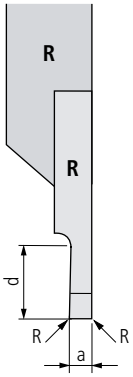
Grooving (radial)
2° obliquely installed insert



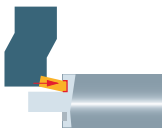
1710…







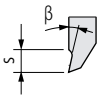
Order designation		Carbide ▯18						Dimensions							Holders ▯114…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a		R	d	β	s		
PREMIUM-LINE															
1710-0.05-0.1 L …	1710-0.05-0.1 R …				■	■	■	0.05	±0.01	–	0.1	6°	1.2		1700…
1710-0.1-0.2 L …	1710-0.1-0.2 R …				■	■	■	0.1	±0.01	–	0.2	6°	1.2		1700…
1710-0.2-0.4 L …	1710-0.2-0.4 R …				■	■	■	0.2	±0.01	–	0.4	6°	1.2		1700…
STANDARD-LINE															
1710-0.3-0.6 L …	1710-0.3-0.6 R …				■	■	■	0.3	±0.02	–	0.6	6°	1.2		1700…
1710-0.4-0.8 L …	1710-0.4-0.8 R …				■	■	■	0.4	±0.02	–	0.8	6°	1.2		1700…
1710-0.5-1.0 L …	1710-0.5-1.0 R …				■	■	■	0.5	±0.02	–	1	6°	1.2		1700…
1710-0.6-1.2 L …	1710-0.6-1.2 R …				■	■	■	0.6	±0.02	–	1.2	6°	1.2		1700…
1710-0.7-1.4 L ….	1710-0.7-1.4 R …				■	■	■	0.7	±0.02	–	1.4	6°	1.2		1700…
1710-0.8-1.6 L …	1710-0.8-1.6 R …				■	■	■	0.8	±0.02	–	1.6	6°	1.2		1700…
1710-1.0-2.0 L …	1710-1.0-2.0 R …				■	■	■	1	±0.02	–	2	6°	1.2		1700…
1710-1.5-3.0 L …	1710-1.5-3.0 R …				■	■	■	1.5	±0.02	–	3	6°	1.2		1700…
1710-2.0-4.0 L …	1710-2.0-4.0 R …				■	■	■	2	±0.02	–	4	6°	1.2		1700…

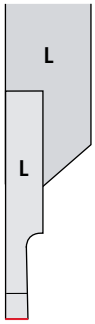


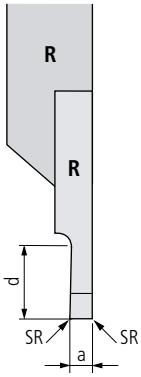
Grooving (axial)
2° obliquely installed insert



1711…

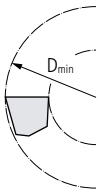






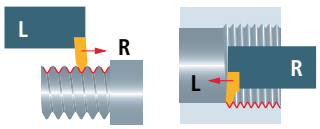
Order designation		Carbide ▯18						Dimensions							Holders ▯114…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a ±0.02	SR*	D_{min}	d	β	s		
STANDARD-LINE															
1711-0.5-1 L …	1711-0.5-1 R …				■	■	■	0.5	0.05	8	1	8°	1.2		1700…
1711-0.8-1.5 L …	1711-0.8-1.5 R …				■	■	■	0.8	0.05	8	1.5	8°	1.2		1700…
1711-1.0-2 L …	1711-1.0-2 R …				■	■	■	1	0.05	9	2	8°	1.2		1700…
1711-1.5-2.5 L …	1711-1.5-2.5 R …				■	■	■	1.5	0.05	14	2.5	8°	1.2		1700…
1711-2.0-3 L …	1711-2.0-3 R …				■	■	■	2	0.05	17	3	8°	1.2		1700…
1711-2.5-3.5 L …	1711-2.5-3.5 R …				■	■	■	2.5	0.05	18	3.5	8°	1.2		1700…

* SR: Protection radius



Attention
The groove must not be made underneath the D_{min} -position.

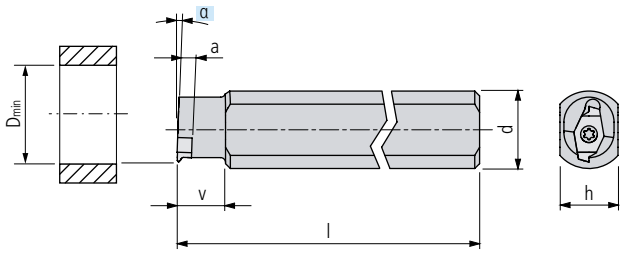
Pay attention to the "working situations" for the correct selection of the combinations of tools and inserts ▯24…



For external and internal turning
2° obliquely installed insert

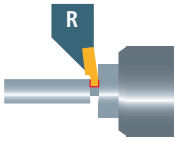


1700… WCT



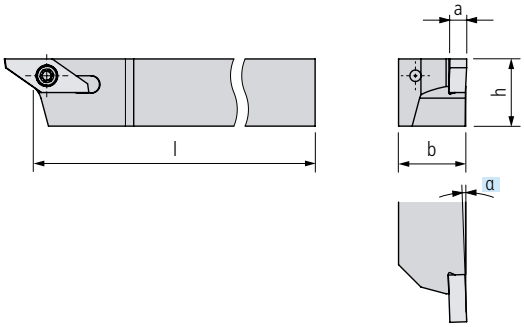
Order designation L	Order designation R	Dimensions d g6	l	h	v	D_{min}	a	α	Inserts* 109
PREMIUM-LINE									
1700-12x100 WCT CS D16 L ■	1700-12x100 WCT CS D16 R ■	16	100	12	10	14	3	2°	1706… WCT…**

Attention
* Right hand holder needs left hand insert!
** Inserts labelled "WCT" are only compatible with holders that are also labelled "WCT".



Standard (2° obliquely installed insert)





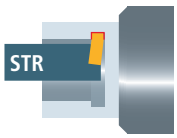
1700…

Order designation L		Order designation R		Dimensions h	b	l	a	α				Inserts* 110
STANDARD-LINE												
1700-08x80 L	■	1700-08x80 R	■	8	8	80	3	2°				17…
1700-08x100 L	■	1700-08x100 R	■	8	8	100	3	2°				17…
1700-10x80 L	■	1700-10x80 R	■	10	10	80	3	2°				17…
1700-10x100 L	■	1700-10x100 R	■	10	10	100	3	2°				17…
1700-12x100 L	■	1700-12x100 R	■	12	12	100	3	2°				17…
1700-16x125 L	■	1700-16x125 R	■	16	16	125	3	2°				17…
1700-20x125 L	■	1700-20x125 R	■	20	20	125	3	2°				17…

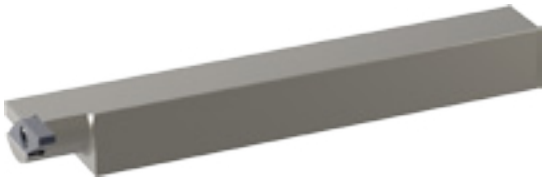
1700… INCH

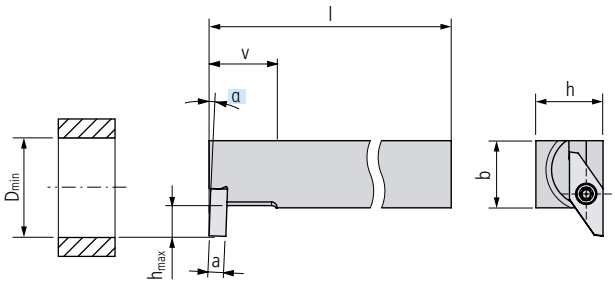
Order designation L		Order designation R		Dimensions h	b	l	a	α				Inserts* 110
STANDARD-LINE												
1700-3/8"x80 L	■	1700-3/8"x80 R	■	9.525	9.525	80	3	2°				17…
1700-3/8"x100 L	■	1700-3/8"x100 R	■	9.525	9.525	100	3	2°				17…
1700-1/2"x100 L	■	1700-1/2"x100 R	■	12.7	12.7	100	3	2°				17…
1700-5/8"x125 L	■	1700-5/8"x125 R	■	15.875	15.875	125	3	2°				17…
1700-3/4"x125 L	■	1700-3/4"x125 R	■	19.05	19.05	125	3	2°				17…

*** Attention**
Right hand holder needs left hand insert!



(2° obliquely installed insert)





1700… 92 ST

Order designation L		Order designation R		Dimensions h	b	l	v	h_{max}	a	α	D_{min}	Inserts* 110
STANDARD-LINE												
1700-08x100 92 ST L	■	1700-08x100 92 ST R	■	8	8	100	11	5	3	2°	21	17…
1700-10x100 92 ST L	■	1700-10x100 92 ST R	■	10	10	100	11	5	3	2°	21	17…
1700-12x100 92 ST L	■	1700-12x100 92 ST R	■	12	12	100	11	5	3	2°	21	17…
1700-16x125 92 ST L	■	1700-16x125 92 ST R	■	16	16	125	11	5	3	2°	21	17…
1700-20x125 92 ST L	■	1700-20x125 92 ST R	■	20	20	125	11	5	3	2°	21	17…

1700… 92 ST INCH

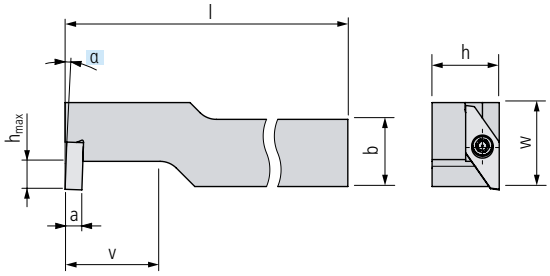
Order designation L		Order designation R		Dimensions h	b	l	v	h_{max}	a	α	D_{min}	Inserts* 110
STANDARD-LINE												
1700-3/8"x100 92 ST L	■	1700-3/8"x100 92 ST R	■	9.525	9.525	100	11	5	3	2°	21	17…
1700-1/2"x100 92 ST L	■	1700-1/2"x100 92 ST R	■	12.7	12.7	100	11	5	3	2°	21	17…
1700-5/8"x125 92 ST L	■	1700-5/8"x125 92 ST R	■	15.875	15.875	125	11	5	3	2°	21	17…
1700-3/4"x125 92 ST L	■	1700-3/4"x125 92 ST R	■	19.05	19.05	125	11	5	3	2°	21	17…

*** Attention**
Right hand holder needs left hand insert!

STR

With off-set shank (2° obliquely installed insert)





1700… 92 ST A

Order designation L		Order designation R		Dimensions h	b	l	v	w	h_{max}	a	α	Inserts* 111
STANDARD-LINE												
1700-08x80 92 ST LA	■	1700-08x80 92 ST RA	■	8	8	80	17	15	5	3	2°	1711…
1700-08x100 92 ST LA	■	1700-08x100 92 ST RA	■	8	8	100	17	15	5	3	2°	1711…
1700-10x80 92 ST LA	■	1700-10x80 92 ST RA	■	10	10	80	17	15	5	3	2°	1711…
1700-10x100 92 ST LA	■	1700-10x100 92 ST RA	■	10	10	100	17	15	5	3	2°	1711…
1700-12x100 92 ST LA	■	1700-12x100 92 ST RA	■	12	12	100	17	15	5	3	2°	1711…
1700-16x125 92 ST LA	■	1700-16x125 92 ST RA	■	16	16	125	17	16	5	3	2°	1711…
1700-20x125 92 ST LA	■	1700-20x125 92 ST RA	■	20	20	125	17	20	5	3	2°	1711…

1700… 92 ST A INCH

Order designation L		Order designation R		Dimensions h	b	l	v	w	h_{max}	a	α	Inserts* 111
STANDARD-LINE												
1700-3/8"x80 92 ST LA	■	1700-3/8"x80 92 ST RA	■	9.525	9.525	80	17	15	5	3	2°	1711…
1700-3/8"x100 92 ST LA	■	1700-3/8"x100 92 ST RA	■	9.525	9.525	100	17	15	5	3	2°	1711…
1700-1/2"x100 92 ST LA	■	1700-1/2"x100 92 ST RA	■	12.7	12.7	100	17	15	5	3	2°	1711…
1700-5/8"x125 92 ST LA	■	1700-5/8"x125 92 ST RA	■	15.875	15.875	125	17	15.875	5	3	2°	1711…
1700-3/4"x125 92 ST LA	■	1700-3/4"x125 92 ST RA	■	19.05	19.05	125	17	19.05	5	3	2°	1711…

*** Attention**
Right hand holder needs left hand insert!

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	1700…

TORX screwdriver ..... 703…

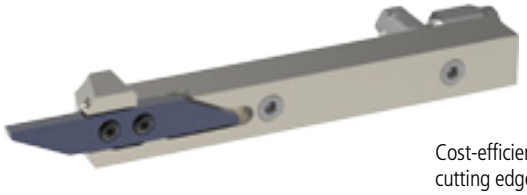
A turn and cut-off tool system for Swiss type lathes up to bar diameter 32 mm. The cutting inserts consist of two cutting edges. The insert seat, which is protected against contamination permits 100 % utilization of all cutting edges.
Even for the holders a wide range of possibilities with shank sizes between 8 and 25 mm are available. For Swiss-type automatic lathes special holders have been designed and complete the wide range of choices.







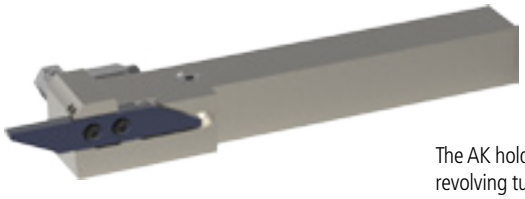
Advantages:
– Large selection of insert geometries with different chip breaker geometries
– Special chip breaker design for machining of small to mid-sized work pieces
– Perpendicularity guaranteed by two fixing screws, large support face and a genuine stop face for axial positioning
– The cutting forces are transferred directly from the insert to the holder
– 2nd edge still usable after the first has crashed



"IC" tool holder with integrated cooling

Cost-efficient processing of modern materials increasingly requires accurate control of the coolant at the cutting edge. Conveying the coolant as close as possible to the cutting edge is often a difficult task in the machine rooms of Swiss type turning lathes.
The multidec®-IC program offers a wide range of holders with integrated cooling. Because of the high precision and pressure, it is possible to discharge the chip quickly and safely from the cutting edge and the workpiece, which protects the cutting edge of the insert. This means significantly longer tool life as well as very reliable serial production.

Advantages:
– All holders feature five possible connectors for the coolant supply
– Fixed coolant exit allows for small set-up in front of the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely



"AK" holder with integrated coolant supply for machines with a revolving turret

The AK holder is ideally suitable for using the inserts of the multidec®-CUT 3000 system on lathes with a revolving turret. There are two fixed coolant outlets in the offset head section. A coolant connection with a G⅛" thread is attached to the front on the outside. There are three other M5 connections on the top, bottom and side of the holder which can be used for supplying the coolant directly, provided that the turret is appropriately designed.

Advantages:
– Use of multidec®-CUT 3000 cutting edges on machines with a revolving turret
– Several connection/delivery options for the integrated cooling
– The coolant always lands on the cutting edge precisely, with or without high pressure



Free form chip breakers for small part manufacturing and micro cutting

With a focus on high productivity, process reliability, and the longest possible too life, perfect chip control becomes a central issue in all modern production. These requirements are often difficult to fulfill with traditionally ground chip breakers because of insufficient chip break and removal.

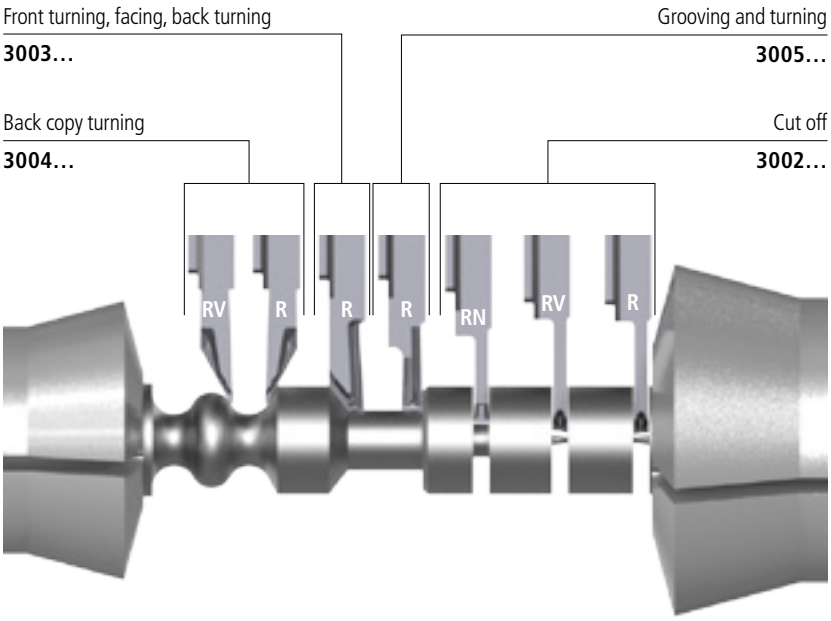
In comparison to traditional grinding technologies, new manufacturing technologies have increased the degree of design free form tremendously, providing the ability to generate any three-dimensional shape. The new G-Line from multidec® has adopted the use of this new free form design technology, resulting in well thought-out chip breaking geometries that are fitted to the well-tried multidec®-CUT 3000 serie of turning inserts, providing maximum performance.

Free form modeled chip breakers achieve significant improvements in a wide range of materials when compared to ground chip breakers. This advantage is particularly evident with difficult to machine materials such as super-alloys. In addition to significantly improved chip control, multidec®-G-Line inserts can achieve up to 30 % higher cutting values and up to 50 % longer tool life.

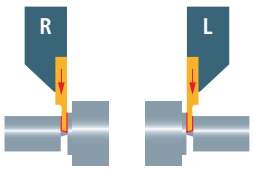


Advantages:
– improved chip control
– better cutting values
– longer tool life
– smaller chip volume
– better process reliability
– wear-resistant and tough carbide substrate with two heavy-duty coatings
– sharp and rounded cutting edges
– can be used on all multidec®-CUT 3000 holders

multidec®-CUT 3000

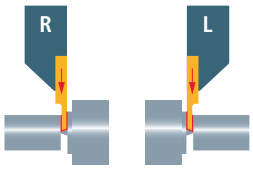




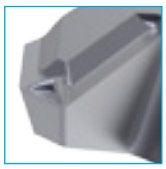


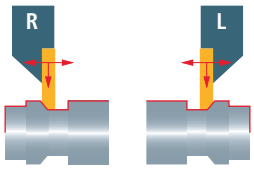
Cutting off with the GS12 chip breaker
The "GS12" geometry combines the advantages of the well-tried chip breaker of the "GS" product line with the accuracy of a ground parting-off insert. The sharp cutting edge provides excellent cutting ability. This makes it the number one choice in a wide range of applications in which a soft cut and good chip control are required, also with lower feed rates.





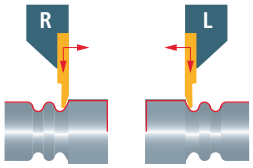
Cutting off with the GT20 chip breaker
The "GT20" geometry is another parting-off geometry which is available with a sharp and a slightly rounded cutting edge in comparison to the "GS12". The special design of this chip breaker guarantees excellent chip flow, short chips and generates smooth surfaces on the workpiece, even with higher feed rates.



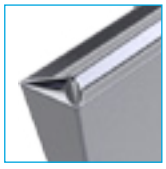


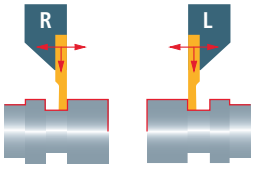
Front turning, facing and back turning with chip breaker GA20
With the "GA20" geometry, the proven chip breaker of the multidec®-TOP insert was taken as the basis and optimised. A circumferential chip breaker enables turning in three directions. Perfect chip control is guaranteed during facing, turning, grooving solid material and back turning. The cutting edge "TOP" also enables up to 100% higher feed.





Copy turning (rear) with chip breaker GB20
The "GB20" geometry provides optimum and process-reliable chip formation with both low and higher cutting depths and feed rates with an extremely sharp cutting edge in combination with multi-stage chip breakers.





Grooving and turning with chip breaker GC20
The "GC20" geometry was tailored for facing, grooving and turning operations. Turning in three directions with extremely low and high cutting depths and feed rates requires a very sophisticated chip breaker in order to achieve optimum chip control.
This geometry provides a good solution in almost any material. This geometry even achieves excellent results in lead-free brass, a material with which chip control is difficult.

Overview – multidec®-CUT 3000

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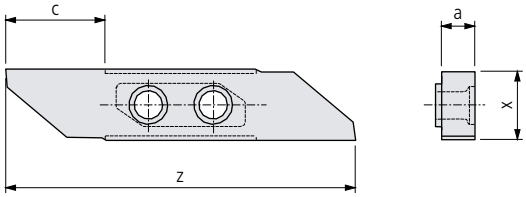


Coolant system and accessories 671

Blank



3001…



Order designation		Carbide ▯18						HSS		Dimensions					Holders
		–	–	●	○	●	●	●	●						▯172…
		–	●	●	○	●	●	○	●						
		○	●	●	○	●	●	–	○						
		●	○	–	●	○	–	●	○						
		–	–	●	–	–	–	–	–						
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	HSS	HSS HX	a	c	x	z		
PREMIUM-LINE															
3001-3.5-10 L P …*	3001-3.5-10 R P …*				■	■	■			3.5	11	8	40.5		3000…
3001-3.6-17 L P …*	3001-3.6-17 R P …*				■	■	■			3.6	17	8	51.5		3000…
STANDARD-LINE															
3001-3.5-10 L …	3001-3.5-10 R …				■	■	■	■	■	3.5	11	8	40.5		3000…
3001-3.6-17 L …	3001-3.6-17 R …				■	■	■	■	■	3.6	17	8	51.5		3000…

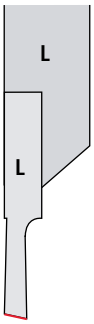
* Mirror polished

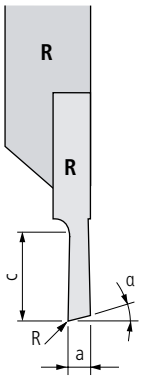
UTILIS multidec swiss type tools

CUT off









3002…

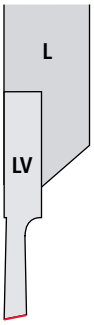
Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R				
STANDARD-LINE															
3002-0.8-6 L …	3002-0.8-6 R …				■	■	■	0.8	6	15°	–				3000…
3002-0.8-10 L …	3002-0.8-10 R …				■	■	■	0.8	10	15°	–				3000…
3002-1.0-6 L …	3002-1.0-6 R …				■	■	■	1	6	15°	–				3000…
3002-1.0-13 L …	3002-1.0-13 R …				■	■	■	1	13	15°	–				3000…
3002-1.2-6 L …	3002-1.2-6 R …				■	■	■	1.2	6	15°	–				3000…
3002-1.5-8 L …	3002-1.5-8 R …				■	■	■	1.5	8	15°	–				3000…
3002-1.5-16 L …	3002-1.5-16 R …				■	■	■	1.5	16	15°	–				3000…
3002-1.8-8 L …	3002-1.8-8 R …				■	■	■	1.8	8	15°	–				3000…
3002-2.0-10 L …	3002-2.0-10 R …				■	■	■	2	10	15°	–				3000…
3002-2.0-16 L …	3002-2.0-16 R …				■	■	■	2	16	15°	–				3000…
3002-2.5-13 L …	3002-2.5-13 R …				■	■	■	2.5	13	15°	–				3000…
3002-2.5-16 L …	3002-2.5-16 R …				■	■	■	2.5	16	15°	–				3000…
3002-3.0-16 L …	3002-3.0-16 R …				■	■	■	3	16	15°	–				3000…

CUT off

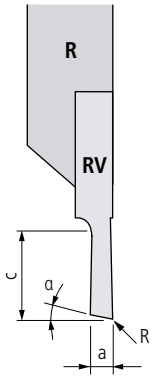




3002… V



V: offset



Order designation		Carbide ▯18						Dimensions							Holders ▯172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R				
STANDARD-LINE															
3002-0.8-6 LV …	3002-0.8-6 RV …				■	■	■	0.8	6	15°	–				3000…
3002-0.8-10 LV …	3002-0.8-10 RV …				■	■	■	0.8	10	15°	–				3000…
3002-1.0-6 LV …	3002-1.0-6 RV …				■	■	■	1	6	15°	–				3000…
3002-1.0-13 LV …	3002-1.0-13 RV …				■	■	■	1	13	15°	–				3000…
3002-1.2-6 LV …	3002-1.2-6 RV …				■	■	■	1.2	6	15°	–				3000…
3002-1.5-8 LV …	3002-1.5-8 RV …				■	■	■	1.5	8	15°	–				3000…
3002-1.5-16 LV …	3002-1.5-16 RV …				■	■	■	1.5	16	15°	–				3000…
3002-1.8-8 LV …	3002-1.8-8 RV …				■	■	■	1.8	8	15°	–				3000…
3002-2.0-10 LV …	3002-2.0-10 RV …				■	■	■	2	10	15°	–				3000…
3002-2.0-16 LV …	3002-2.0-16 RV …				■	■	■	2	16	15°	–				3000…
3002-2.5-13 LV …	3002-2.5-13 RV …				■	■	■	2.5	13	15°	–				3000…
3002-2.5-16 LV …	3002-2.5-16 RV …				■	■	■	2.5	16	15°	–				3000…
3002-3.0-16 LV …	3002-3.0-16 RV …				■	■	■	3	16	15°	–				3000…

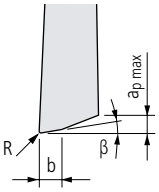


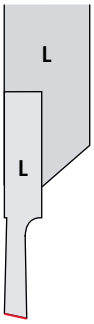
Turning and cut off

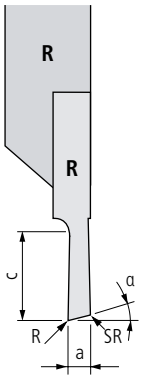


3002… TOP*

Detail TOP*







Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R / SR**	β	b	$a_{p\,max}$	
STANDARD-LINE															
3002-2.0-10 L TOP 015 …	3002-2.0-10 R TOP 015 …				■	■	■	2	10	15°	0.15	1.5°	0.3	0.45	3000…

* Description TOP 11

** SR: Protection radius

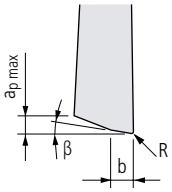


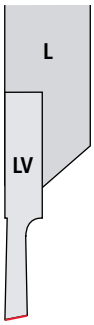
Turning and cut off



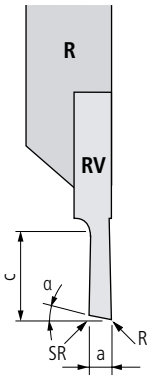
3002… V TOP*

Detail TOP*





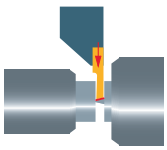
V: offset



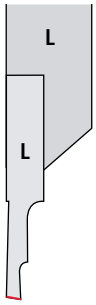
Order designation		Carbide ▯ 18						Dimensions							Holders
		–	–	●	○	●	●								▯ 172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R / SR**	β	b	$a_{p\,max}$	
STANDARD-LINE															
3002-2.0-10 LV TOP 015 …	3002-2.0-10 RV TOP 015 …				■	■	■	2	10	15°	0.15	1.5°	0.3	0.45	3000…

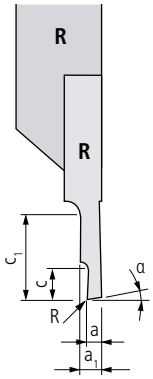
* Description TOP ▯ 11

** SR: Protection radius



CUT off with counter-spindle

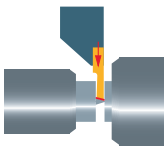






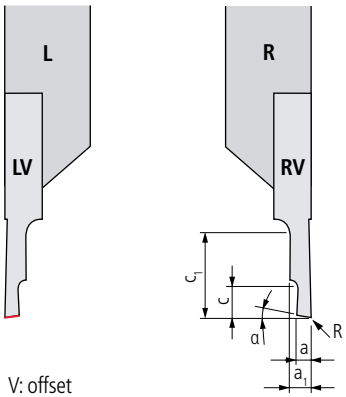
3002…16

Order designation		Carbide ▯18						Dimensions							Holders ▯172…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	a_1	c	c_1	α	R		
PREMIUM-LINE															
3002-0.5-2.5-16 L G20 …	3002-0.5-2.5-16 R G20 …							0.5	1.9	2	16	20°	–		3000…
STANDARD-LINE															
3002-0.8-6-16 L …	3002-0.8-6-16 R …				■	■	■	0.8	2	6	16	15°	–		3000…
3002-1.0-6-16 L …	3002-1.0-6-16 R …				■	■	■	1	2.2	6	16	15°	–		3000…
3002-1.2-6-16 L …	3002-1.2-6-16 R …				■	■	■	1.2	2.4	6	16	15°	–		3000…



CUT off with counter-spindle





3002…16 V

V: offset

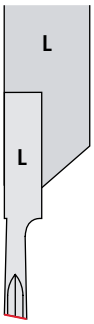
Order designation		Carbide ▯18						Dimensions							Holders ▯172…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	a_1	c	c_1	α	R		
PREMIUM-LINE															
3002-0.5-2.5-16 LV G20 …	3002-0.5-2.5-16 RV G20 …				■	■	■	0.5	1.9	2	16	20°	–		3000…
STANDARD-LINE															
3002-0.8-6-16 LV …	3002-0.8-6-16 RV …				■	■	■	0.8	2	6	16	15°	–		3000…
3002-1.0-6-16 LV …	3002-1.0-6-16 RV …				■	■	■	1	2.2	6	16	15°	–		3000…
3002-1.2-6-16 LV …	3002-1.2-6-16 RV …				■	■	■	1.2	2.4	6	16	15°	–		3000…

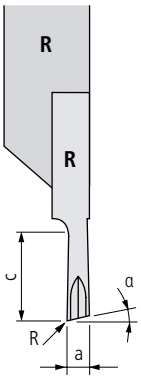
UTILIS multidec swiss type tools

CUT off









3002… SC

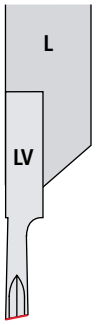
Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R				
STANDARD-LINE															
3002-1.5-8 L SC …	3002-1.5-8 R SC …				■	■	■	1.5	8	15°	–				3000…
3002-1.5-16 L SC …	3002-1.5-16 R SC …				■	■	■	1.5	16	15°	–				3000…
3002-2.0-10 L SC …	3002-2.0-10 R SC …				■	■	■	2	10	15°	–				3000…
3002-2.0-16 L SC …	3002-2.0-16 R SC …				■	■	■	2	16	15°	–				3000…
3002-2.5-13 L SC …	3002-2.5-13 R SC …				■	■	■	2.5	13	15°	–				3000…
3002-2.5-16 L SC …	3002-2.5-16 R SC …				■	■	■	2.5	16	15°	–				3000…
3002-3.0-16 L SC …	3002-3.0-16 R SC …				■	■	■	3	16	15°	–				3000…

CUT off

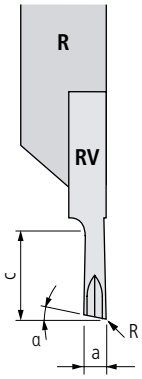




3002… V SC



V: offset



Order designation		Carbide ▯18						Dimensions							Holders ▯172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R				
STANDARD-LINE															
3002-1.5-8 LV SC …	3002-1.5-8 RV SC …				■	■	■	1.5	8	15°	–				3000…
3002-1.5-16 LV SC …	3002-1.5-16 RV SC …				■	■	■	1.5	16	15°	–				3000…
3002-2.0-10 LV SC …	3002-2.0-10 RV SC …				■	■	■	2	10	15°	–				3000…
3002-2.0-16 LV SC …	3002-2.0-16 RV SC …				■	■	■	2	16	15°	–				3000…
3002-2.5-13 LV SC …	3002-2.5-13 RV SC …				■	■	■	2.5	13	15°	–				3000…
3002-2.5-16 LV SC …	3002-2.5-16 RV SC …				■	■	■	2.5	16	15°	–				3000…
3002-3.0-16 LV SC …	3002-3.0-16 RV SC …				■	■	■	3	16	15°	–				3000…

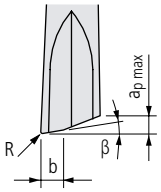


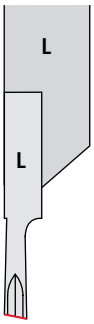
Turning and cut off

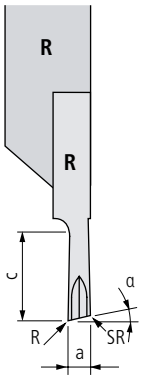


3002… SC TOP*

Detail TOP*







Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R / SR**	β	b	$a_{p\,max}$	
STANDARD-LINE															
3002-2.0-10 L SC TOP 015 …	3002-2.0-10 R SC TOP 015 …				■	■	■	2	10	15°	0.15	1.5°	0.3	0.45	3000…

* Description TOP 11

** SR: Protection radius

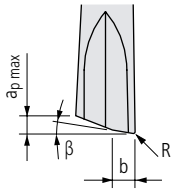


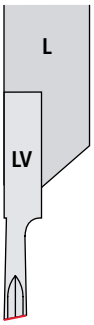
Turning and cut off



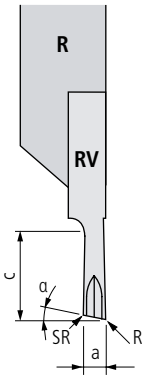
3002… V SC TOP*

Detail TOP*





V: offset



Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R / SR**	β	b	$a_{p\,max}$	
STANDARD-LINE															
3002-2.0-10 LV SC TOP 015 …	3002-2.0-10 RV SC TOP 015 …				■	■	■	2	10	15°	0.15	1.5°	0.3	0.45	3000…

* Description TOP ▯11

** SR: Protection radius

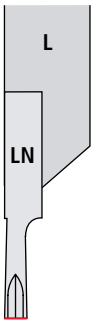
UTILIS multidec swiss type tools

CUT off

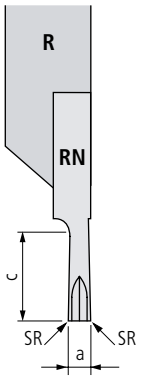




3002… N SC



N: neutral



Order designation		Carbide ▯18						Dimensions								Holders
		–	–	●	○	●	●									▯172…
		–	●	●	○	●	●									
		○	●	●	○	●	●									
		●	○	–	●	○	–									
		–	–	●	–	–	–									
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	SR*						
STANDARD-LINE																
3002-1.5-10 LN SC …	3002-1.5-10 RN SC …				■	■	■	1.5	10	0.08						3000…
3002-1.5-16 LN SC …	3002-1.5-16 RN SC …				■	■	■	1.5	16	0.08						3000…
3002-2.0-10 LN SC …	3002-2.0-10 RN SC …				■	■	■	2	10	0.08						3000…
3002-2.0-16 LN SC …	3002-2.0-16 RN SC …				■	■	■	2	16	0.08						3000…
3002-2.5-13 LN SC …	3002-2.5-13 RN SC …				■	■	■	2.5	13	0.08						3000…
3002-2.5-16 LN SC …	3002-2.5-16 RN SC …				■	■	■	2.5	16	0.08						3000…
3002-3.0-16 LN SC …	3002-3.0-16 RN SC …				■	■	■	3	16	0.08						3000…

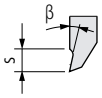
* SR: Protection radius

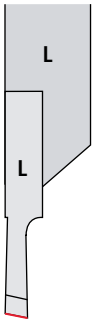
UTILIS multidec swiss type tools

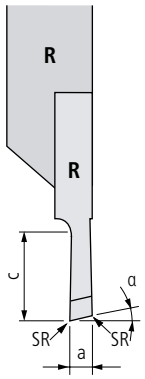
CUT off











3002… SPT

Order designation		Carbide ▯18						Dimensions							Holders ▯172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	SR*	s		
STANDARD-LINE															
3002-0.8-10 L SPT …	3002-0.8-10 R SPT …				■	■	■	0.8	10	15°	20°	–	2		3000…
3002-1.0-13 L SPT …	3002-1.0-13 R SPT …				■	■	■	1	13	15°	20°	–	2		3000…
3002-1.5-8 L SPT …	3002-1.5-8 R SPT …				■	■	■	1.5	8	15°	20°	–	2		3000…
3002-1.5-8 L SPT06 …	3002-1.5-8 R SPT06 …				■	■	■	1.5	8	15°	6°	0.05	2		3000…
3002-1.5-8 L SPT12 …	3002-1.5-8 R SPT12 …				■	■	■	1.5	8	15°	12°	0.05	2		3000…
3002-1.5-16 L SPT …	3002-1.5-16 R SPT …				■	■	■	1.5	16	15°	20°	–	2		3000…
3002-2.0-10 L SPT …	3002-2.0-10 R SPT …				■	■	■	2	10	15°	20°	–	2		3000…
3002-2.0-10 L SPT06 …	3002-2.0-10 R SPT06 …				■	■	■	2	10	15°	6°	0.05	2		3000…
3002-2.0-10 L SPT12 …	3002-2.0-10 R SPT12 …				■	■	■	2	10	15°	12°	0.05	2		3000…
3002-2.0-16 L SPT …	3002-2.0-16 R SPT …				■	■	■	2	16	15°	20°	–	2		3000…
3002-2.0-16 L SPT06 …	3002-2.0-16 R SPT06 …				■	■	■	2	16	15°	6°	0.05	2		3000…
3002-2.0-16 L SPT12 …	3002-2.0-16 R SPT12 …				■	■	■	2	16	15°	12°	0.05	2		3000…
3002-2.5-13 L SPT …	3002-2.5-13 R SPT …				■	■	■	2.5	13	15°	20°	–	2		3000…
3002-2.5-13 L SPT06 …	3002-2.5-13 R SPT06 …				■	■	■	2.5	13	15°	6°	0.05	2		3000…
3002-2.5-13 L SPT12 …	3002-2.5-13 R SPT12 …				■	■	■	2.5	13	15°	12°	0.05	2		3000…
3002-2.5-16 L SPT …	3002-2.5-16 R SPT …				■	■	■	2.5	16	15°	20°	–	2		3000…
3002-2.5-16 L SPT06 …	3002-2.5-16 R SPT06 …				■	■	■	2.5	16	15°	6°	0.05	2		3000…
3002-2.5-16 L SPT12 …	3002-2.5-16 R SPT12 …				■	■	■	2.5	16	15°	12°	0.05	2		3000…
3002-3.0-16 L SPT …	3002-3.0-16 R SPT …				■	■	■	3	16	15°	20°	–	2		3000…
3002-3.0-16 L SPT06 …	3002-3.0-16 R SPT06 …				■	■	■	3	16	15°	6°	0.05	2		3000…
3002-3.0-16 L SPT12 …	3002-3.0-16 R SPT12 …				■	■	■	3	16	15°	12°	0.05	2		3000…

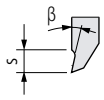
* SR: Protection radius

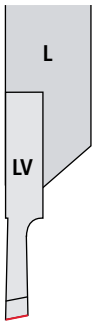
CUT off



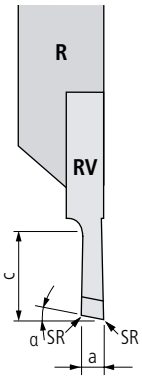


3002… V SPT





V: offset



Order designation		Carbide ▯18						Dimensions							Holders ▯172…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	SR*	s		
STANDARD-LINE															
3002-0.8-10 LV SPT …	3002-0.8-10 RV SPT …				■	■	■	0.8	10	15°	20°	–	2		3000…
3002-1.0-13 LV SPT …	3002-1.0-13 RV SPT …				■	■	■	1	13	15°	20°	–	2		3000…
3002-1.5-8 LV SPT …	3002-1.5-8 RV SPT …				■	■	■	1.5	8	15°	20°	–	2		3000…
3002-1.5-8 LV SPT06 …	3002-1.5-8 RV SPT06 …				■	■	■	1.5	8	15°	6°	0.05	2		3000…
3002-1.5-8 LV SPT12 …	3002-1.5-8 RV SPT12 …				■	■	■	1.5	8	15°	12°	0.05	2		3000…
3002-1.5-16 LV SPT …	3002-1.5-16 RV SPT …				■	■	■	1.5	16	15°	20°	–	2		3000…
3002-2.0-10 LV SPT …	3002-2.0-10 RV SPT …				■	■	■	2	10	15°	20°	–	2		3000…
3002-2.0-10 LV SPT06 …	3002-2.0-10 RV SPT06 …				■	■	■	2	10	15°	6°	0.05	2		3000…
3002-2.0-10 LV SPT12 …	3002-2.0-10 RV SPT12 …				■	■	■	2	10	15°	12°	0.05	2		3000…
3002-2.0-16 LV SPT …	3002-2.0-16 RV SPT …				■	■	■	2	16	15°	20°	–	2		3000…
3002-2.0-16 LV SPT06 …	3002-2.0-16 RV SPT06 …				■	■	■	2	16	15°	6°	0.05	2		3000…
3002-2.0-16 LV SPT12 …	3002-2.0-16 RV SPT12 …				■	■	■	2	16	15°	12°	0.05	2		3000…
3002-2.5-13 LV SPT …	3002-2.5-13 RV SPT …				■	■	■	2.5	13	15°	20°	–	2		3000…
3002-2.5-13 LV SPT06 …	3002-2.5-13 RV SPT06 …				■	■	■	2.5	13	15°	6°	0.05	2		3000…
3002-2.5-13 LV SPT12 …	3002-2.5-13 RV SPT12 …				■	■	■	2.5	13	15°	12°	0.05	2		3000…
3002-2.5-16 LV SPT …	3002-2.5-16 RV SPT …				■	■	■	2.5	16	15°	20°	–	2		3000…
3002-2.5-16 LV SPT06 …	3002-2.5-16 RV SPT06 …				■	■	■	2.5	16	15°	6°	0.05	2		3000…
3002-2.5-16 LV SPT12 …	3002-2.5-16 RV SPT12 …				■	■	■	2.5	16	15°	12°	0.05	2		3000…
3002-3.0-16 LV SPT …	3002-3.0-16 RV SPT …				■	■	■	3	16	15°	20°	–	2		3000…
3002-3.0-16 LV SPT06 …	3002-3.0-16 RV SPT06 …				■	■	■	3	16	15°	6°	0.05	2		3000…
3002-3.0-16 LV SPT12 …	3002-3.0-16 RV SPT12 …				■	■	■	3	16	15°	12°	0.05	2		3000…

* SR: Protection radius

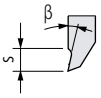
UTILIS multidec swiss type tools

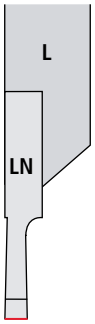
CUT off



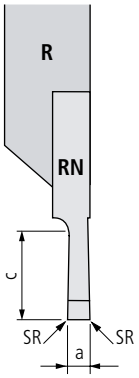


3002… N SPT





N: neutral



Order designation		Carbide ▯18						Dimensions							Holders ▯172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	SR*	s	β			
STANDARD-LINE															
3002-1.0-10 LN SPT …	3002-1.0-10 RN SPT …				■	■	■	1	10	0.05	2	20°			3000…
3002-1.5-10 LN SPT …	3002-1.5-10 RN SPT …				■	■	■	1.5	10	0.05	2	20°			3000…
3002-1.5-10 LN SPT06 …	3002-1.5-10 RN SPT06 …				■	■	■	1.5	10	0.05	2	6°			3000…
3002-1.5-10 LN SPT12 …	3002-1.5-10 RN SPT12 …				■	■	■	1.5	10	0.05	2	12°			3000…
3002-1.5-16 LN SPT …	3002-1.5-16 RN SPT …				■	■	■	1.5	16	0.05	2	20°			3000…
3002-2.0-10 LN SPT …	3002-2.0-10 RN SPT …				■	■	■	2	10	0.05	2	20°			3000…
3002-2.0-10 LN SPT06 …	3002-2.0-10 RN SPT06 …				■	■	■	2	10	0.05	2	6°			3000…
3002-2.0-10 LN SPT12 …	3002-2.0-10 RN SPT12 …				■	■	■	2	10	0.05	2	12°			3000…
3002-2.0-16 LN SPT …	3002-2.0-16 RN SPT …				■	■	■	2	16	0.05	2	20°			3000…
3002-2.0-16 LN SPT06 …	3002-2.0-16 RN SPT06 …				■	■	■	2	16	0.05	2	6°			3000…
3002-2.0-16 LN SPT12 …	3002-2.0-16 RN SPT12 …				■	■	■	2	16	0.05	2	12°			3000…
3002-2.5-13 LN SPT …	3002-2.5-13 RN SPT …				■	■	■	2.5	13	0.05	2	20°			3000…
3002-2.5-13 LN SPT06 …	3002-2.5-13 RN SPT06 …				■	■	■	2.5	13	0.05	2	6°			3000…
3002-2.5-13 LN SPT12 …	3002-2.5-13 RN SPT12 …				■	■	■	2.5	13	0.05	2	12°			3000…
3002-2.5-16 LN SPT …	3002-2.5-16 RN SPT …				■	■	■	2.5	16	0.05	2	20°			3000…
3002-2.5-16 LN SPT06 …	3002-2.5-16 RN SPT06 …				■	■	■	2.5	16	0.05	2	6°			3000…
3002-2.5-16 LN SPT12 …	3002-2.5-16 RN SPT12 …				■	■	■	2.5	16	0.05	2	12°			3000…
3002-3.0-16 LN SPT …	3002-3.0-16 RN SPT …				■	■	■	3	16	0.05	2	20°			3000…
3002-3.0-16 LN SPT06 …	3002-3.0-16 RN SPT06 …				■	■	■	3	16	0.05	2	6°			3000…
3002-3.0-16 LN SPT12 …	3002-3.0-16 RN SPT12 …				■	■	■	3	16	0.05	2	12°			3000…

* SR: Protection radius

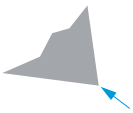


CUT off
"GS12" chip breaker

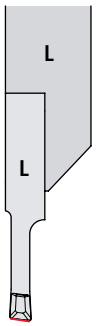


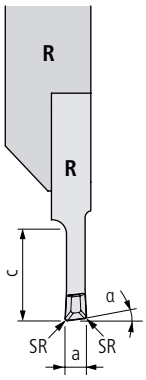


3002… F. GS12



F: Insert with sharp cutting edge





Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α		SR*			
PREMIUM-LINE															
3002-1.5-10 FL GS12 …	3002-1.5-10 FR GS12 …					■	■	1.5	10	7°		0.15			3000…
3002-1.5-16 FL GS12 …	3002-1.5-16 FR GS12 …					■	■	1.5	16	7°		0.15			3000…
3002-2.0-10 FL GS12 …	3002-2.0-10 FR GS12 …					■	■	2	10	7°		0.2			3000…
3002-2.0-16 FL GS12 …	3002-2.0-16 FR GS12 …					■	■	2	16	7°		0.2			3000…
3002-2.5-13 FL GS12 …	3002-2.5-13 FR GS12 …					■	■	2.5	13	7°		0.2			3000…
3002-2.5-16 FL GS12 …	3002-2.5-16 FR GS12 …					■	■	2.5	16	7°		0.2			3000…
3002-3.0-16 FL GS12 …	3002-3.0-16 FR GS12 …					■	■	3	16	7°		0.2			3000…

* SR: Protection radius



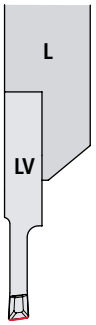
CUT off (offset)
"GS12" chip breaker



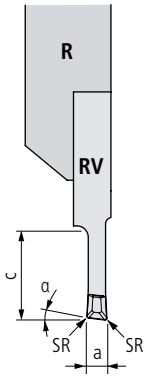
3002… F.V GS12



F: Insert with sharp cutting edge



V: offset



Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α		SR*			
PREMIUM-LINE															
3002-1.5-10 FLV GS12 …	3002-1.5-10 FRV GS12 …					■	■	1.5	10	7°		0.15			3000…
3002-1.5-16 FLV GS12 …	3002-1.5-16 FRV GS12 …					■	■	1.5	16	7°		0.15			3000…
3002-2.0-10 FLV GS12 …	3002-2.0-10 FRV GS12 …					■	■	2	10	7°		0.2			3000…
3002-2.0-16 FLV GS12 …	3002-2.0-16 FRV GS12 …					■	■	2	16	7°		0.2			3000…
3002-2.5-13 FLV GS12 …	3002-2.5-13 FRV GS12 …					■	■	2.5	13	7°		0.2			3000…
3002-2.5-16 FLV GS12 …	3002-2.5-16 FRV GS12 …					■	■	2.5	16	7°		0.2			3000…
3002-3.0-16 FLV GS12 …	3002-3.0-16 FRV GS12 …					■	■	3	16	7°		0.2			3000…

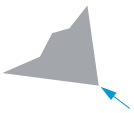
* SR: Protection radius



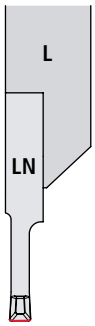
CUT off (neutral)
"GS12" chip breaker



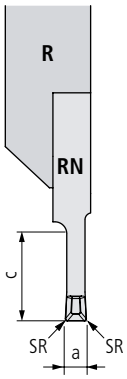
3002… F.N GS12



F: Insert with sharp cutting edge



N: neutral



Order designation		Carbide ▯18						Dimensions							Holders ▯172…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c			SR*			
PREMIUM-LINE															
3002-0.8-10 FLN GS12 …	3002-0.8-10 FRN GS12 …					■	■	0.8	10			0.05			3000…
3002-1.0-10 FLN GS12 …	3002-1.0-10 FRN GS12 …					■	■	1	10			0.05			3000…
3002-1.0-16 FLN GS12 …	3002-1.0-16 FRN GS12 …					■	■	1	16			0.05			3000…
3002-1.5-10 FLN GS12 …	3002-1.5-10 FRN GS12 …					■	■	1.5	10			0.15			3000…
3002-1.5-16 FLN GS12 …	3002-1.5-16 FRN GS12 …					■	■	1.5	16			0.15			3000…
3002-2.0-10 FLN GS12 …	3002-2.0-10 FRN GS12 …					■	■	2	10			0.2			3000…
3002-2.0-16 FLN GS12 …	3002-2.0-16 FRN GS12 …					■	■	2	16			0.2			3000…
3002-2.5-13 FLN GS12 …	3002-2.5-13 FRN GS12 …					■	■	2.5	13			0.2			3000…
3002-2.5-16 FLN GS12 …	3002-2.5-16 FRN GS12 …					■	■	2.5	16			0.2			3000…
3002-3.0-16 FLN GS12 …	3002-3.0-16 FRN GS12 …					■	■	3	16			0.2			3000…

* SR: Protection radius

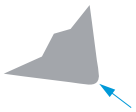


CUT off
"GT20" chip breaker

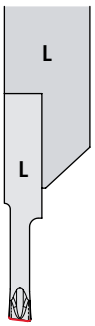


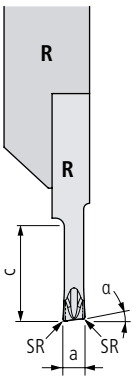


3002… E. GT20



E: Insert with rounded cutting edge





Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α		SR*			
PREMIUM-LINE															
3002-1.5-10 EL GT20 …	3002-1.5-10 ER GT20 …				■	■	■	1.5	10	7°		0.15			3000…
3002-2.0-16 EL GT20 …	3002-2.0-16 ER GT20 …				■	■	■	2	16	7°		0.2			3000…

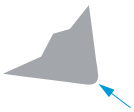
* SR: Protection radius



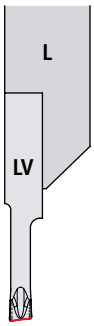
CUT off (offset)
"GT20" chip breaker



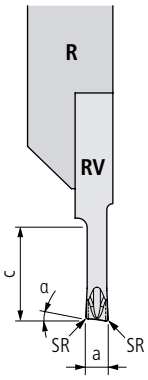
3002… E.V GT20



E: Insert with rounded cutting edge



V: offset



Order designation		Carbide ▯18						Dimensions							Holders ▯172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α		SR*			
PREMIUM-LINE															
3002-1.5-10 ELV GT20 …	3002-1.5-10 ERV GT20 …				■	■	■	1.5	10	7°		0.15			3000…
3002-2.0-16 ELV GT20 …	3002-2.0-16 ERV GT20 …				■	■	■	2	16	7°		0.2			3000…

* SR: Protection radius

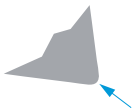


CUT off (neutral)
"GT20" chip breaker

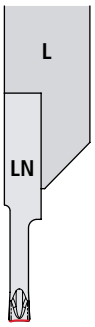




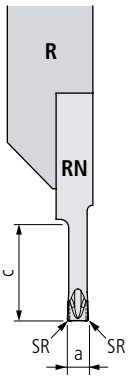
3002… E.N GT20



E: Insert with rounded cutting edge

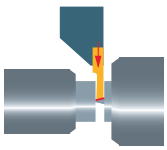


N: neutral

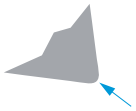


Order designation		Carbide 18						Dimensions							Holders
		– – ● ○ ● ●													172…
		– ● ● ○ ● ●													
		○ ● ● ○ ● ●													
		● ○ – ● ○ –													
		– – ● – – –													
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c			SR*			
PREMIUM-LINE															
3002-1.0-10 ELN GT20 …	3002-1.0-10 ERN GT20 …				■	■	■	1	10			0.05			3000…
3002-1.0-16 ELN GT20 …	3002-1.0-16 ERN GT20 …				■	■	■	1	16			0.05			3000…
3002-1.5-10 ELN GT20 …	3002-1.5-10 ERN GT20 …				■	■	■	1.5	10			0.15			3000…
3002-2.0-16 ELN GT20 …	3002-2.0-16 ERN GT20 …				■	■	■	2	16			0.2			3000…

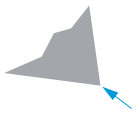
* SR: Protection radius



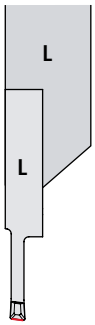
CUT off

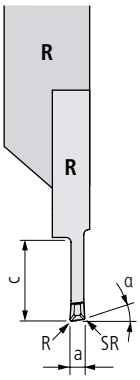


E: Insert with rounded cutting edge



F: Insert with sharp cutting edge







3002… E. GS

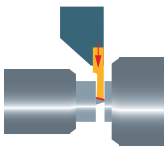
Order designation		Carbide ⬚18						Dimensions							Holders
		–	–	●	○	●	●								⬚172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R/ SR*				
VALUE-LINE															
3002-2.0-10 EL GS …	3002-2.0-10 ER GS …				■	■	■	2	10	15°	0.2				3000…

* SR: Protection radius

3002… F. GS

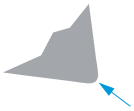
Order designation		Carbide ⬚18						Dimensions							Holders
		–	–	●	○	●	●								⬚172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R/ SR*				
VALUE-LINE															
3002-2.0-10 FL GS …	3002-2.0-10 FR GS …				■	■	■	2	10	15°	0.2				3000…

* SR: Protection radius

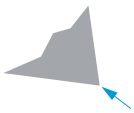


CUT off

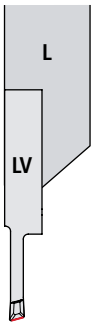




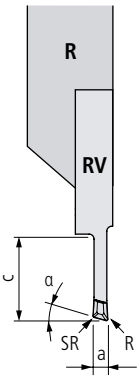
E: Insert with rounded cutting edge



F: Insert with sharp cutting edge



V: offset



3002… E.V GS

Order designation		Carbide ⬚18						Dimensions							Holders ⬚172…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R / SR*				
VALUE-LINE															
3002-2.0-10 ELV GS …	3002-2.0-10 ERV GS …				■	■	■	2	10	15°	0.2				3000…

* SR: Protection radius

3002… F.V GS

Order designation		Carbide ⬚18						Dimensions							Holders ⬚172…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R / SR*				
VALUE-LINE															
3002-2.0-10 FLV GS …	3002-2.0-10 FRV GS …				■	■	■	2	10	15°	0.2				3000…

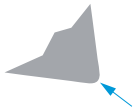
* SR: Protection radius

UTILIS multidec swiss type tools

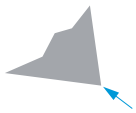
Cutting off



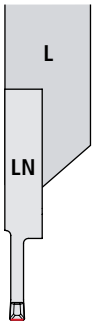




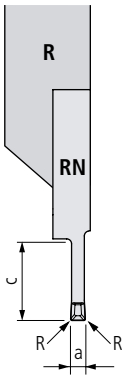
E: Insert with rounded cutting edge



F: Insert with sharp cutting edge



N: neutral

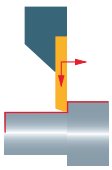


3002… E.N GS

Order designation		Carbide ⧉18						Dimensions							Holders ⧉172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R				
VALUE-LINE															
3002-2.0-10 ELN GS …	3002-2.0-10 ERN GS …				■	■	■	2	10	–	0.2				3000…

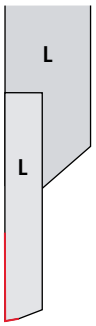
3002… F.N GS

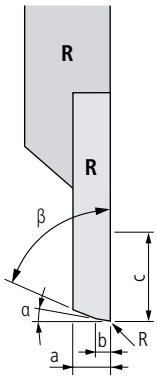
Order designation		Carbide ⧉18						Dimensions							Holders ⧉172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	R				
VALUE-LINE															
3002-2.0-10 FLN GS …	3002-2.0-10 FRN GS …				■	■	■	2	10	–	0.2				3000…



Front turning

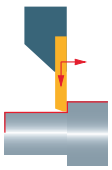






3003…

Order designation L	Order designation R	Carbide UHM 10	Carbide UHM 10 HX	Carbide UHM 10 TX+	Carbide UHM 20	Carbide UHM 20 HPX	Carbide UHM 20 TX+	Dimensions a	b	c	α	β	R		Holders
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
															172…
STANDARD-LINE															
3003-3.4-8 L …	3003-3.4-8 R …				■	■	■	3.4	1	8	3°	70°	–		3000…



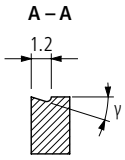
Front turning

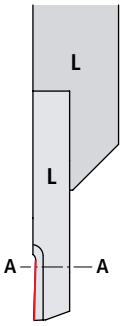


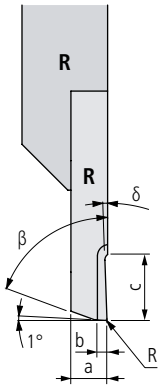
3003… SP U… TOP* ZZ …



3003… SP U …TOP* 45008 …

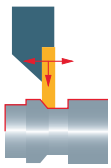






Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	b	c	β	δ	γ	R	
STANDARD-LINE															
3003-3.4-8 L SP U TOP ZZ …	3003-3.4-8 R SP U TOP ZZ …				■	■	■	3.4	0.2	8	82°	1°	12°	–	3000…
3003-3.4-8 L SP U TOP 45008 …	3003-3.4-8 R SP U TOP 45008 …				■	■	■	3.4	1.2	8	45°	1°	12°	0.08	3000…
3003-3.4-8 L SP U TOP 45015 …	3003-3.4-8 R SP U TOP 45015 …				■	■	■	3.4	1.2	8	45°	1°	12°	0.15	3000…

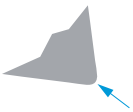
* Description TOP ▯11



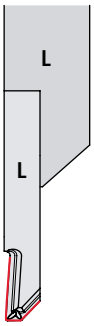
Front turning, facing, back turning chip breaker "GA20"

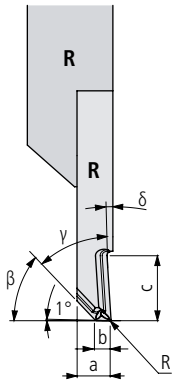


3003… E. GA20

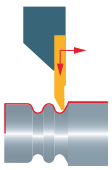


E: Insert with rounded cutting edge





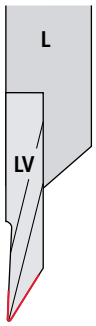
Order designation		Carbide ▯18						Dimensions							Holders ▯172…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	b	c	β	γ	δ	R	
PREMIUM-LINE															
3003-3.4-8 EL GA20 TOP ZZ …	3003-3.4-8 ER GA20 TOP ZZ …				■	■	■	3.4	1.6	8	52°	35°	3°	–	3000…
3003-3.4-8 EL GA20 TOP R08 …	3003-3.4-8 ER GA20 TOP R08 …				■	■	■	3.4	1.6	8	52°	35°	3°	0.08	3000…
3003-3.4-8 EL GA20 TOP R15 …	3003-3.4-8 ER GA20 TOP R15 …				■	■	■	3.4	1.6	8	52°	35°	3°	0.15	3000…



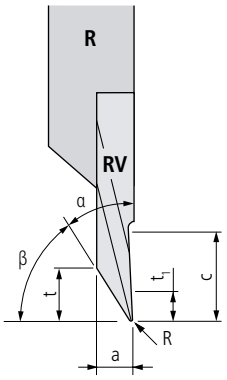
Copy turning (front)



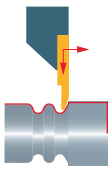
3004… V SP



V: offset



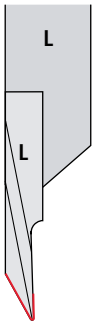
Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	R	t	t_1	
STANDARD-LINE															
3004-3.2-6 LV SP29008 …	3004-3.2-6 RV SP29008 …				■	■	■	3.2	11	29°	60°	0.08	5	2.5	3000…
3004-3.2-6 LV SP29015 …	3004-3.2-6 RV SP29015 …				■	■	■	3.2	11	29°	60°	0.15	5	2.5	3000…
3004-3.2-6 LV SP29035 …	3004-3.2-6 RV SP29035 …				■	■	■	3.2	11	29°	60°	0.35	5	2.5	3000…
3004-3.2-6 LV SP29075 …	3004-3.2-6 RV SP29075 …				■	■	■	3.2	11	29°	60°	0.75	5	2.5	3000…

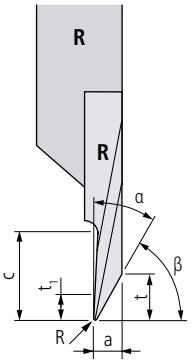


Copy turning (back)

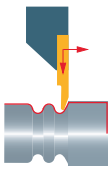


3004… SP





Order designation		Carbide ▯18						Dimensions							Holders ▯172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	R	t	t_1	
STANDARD-LINE															
3004-3.2-6 L SP29008 …	3004-3.2-6 R SP29008 …				■	■	■	3.2	11	29°	60°	0.08	5	2.5	3000…
3004-3.2-6 L SP29015 …	3004-3.2-6 R SP29015 …				■	■	■	3.2	11	29°	60°	0.15	5	2.5	3000…
3004-3.2-6 L SP29035 …	3004-3.2-6 R SP29035 …				■	■	■	3.2	11	29°	60°	0.35	5	2.5	3000…
3004-3.2-6 L SP29075 …	3004-3.2-6 R SP29075 …				■	■	■	3.2	11	29°	60°	0.75	5	2.5	3000…
3004-3.2-5 L SP35015 …	3004-3.2-5 R SP35015 …				■	■	■	3.2	11	35°	54°	0.15	4	2	3000…
3004-3.2-5 L SP35035 …	3004-3.2-5 R SP35035 …				■	■	■	3.2	11	35°	54°	0.35	4	2	3000…

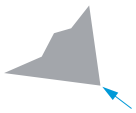


Copy turning (back)
"GB20" chip breaker

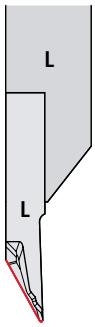


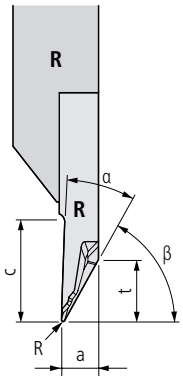


3004… F… GB20

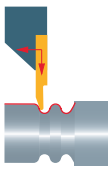


F: Insert with sharp cutting edge





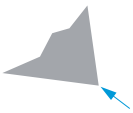
Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	R	t		
PREMIUM-LINE															
3004-3.2-6 FL 29008 GB20 …	3004-3.2-6 FR 29008 GB20 …				■	■	■	3.2	11	29°	59°	0.08	5.5		3000…
3004-3.2-6 FL 29015 GB20 …	3004-3.2-6 FR 29015 GB20 …				■	■	■	3.2	11	29°	59°	0.15	5.3		3000…
3004-3.2-6 FL 29035 GB20 …	3004-3.2-6 FR 29035 GB20 …				■	■	■	3.2	11	29°	59°	0.35	4.7		3000…



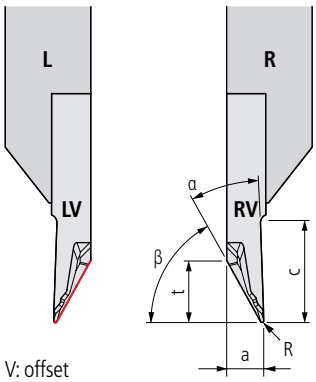
Copy turning (back, offset)
"GB20" chip breaker



3004… F.V … GB20

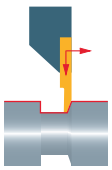


F: Insert with sharp cutting edge

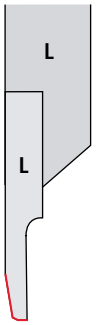


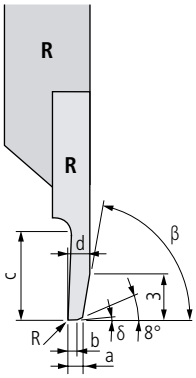
V: offset

Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	α	β	R	t		
PREMIUM-LINE															
3004-3.2-6 FLV 29008 GB20 …	3004-3.2-6 FRV 29008 GB20 …				■	■	■	3.2	11	29°	59°	0.08	5.5		3000…
3004-3.2-6 FLV 29015 GB20 …	3004-3.2-6 FRV 29015 GB20 …				■	■	■	3.2	11	29°	59°	0.15	5.3		3000…
3004-3.2-6 FLV 29035 GB20 …	3004-3.2-6 FRV 29035 GB20 …				■	■	■	3.2	11	29°	59°	0.35	4.7		3000…



Back turning



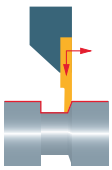




3004… TOP*

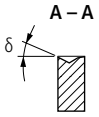
Order designation L	Order designation R	Carbide UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	b	c	d	β	R	δ	Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
STANDARD-LINE															
3004-0.8-6 L TOP ZZ …	3004-0.8-6 R TOP ZZ …				■	■	■	0.8	0.5	6	2	70°	–	1°	3000…
3004-1.0-6 L TOP ZZ …	3004-1.0-6 R TOP ZZ …				■	■	■	1	0.5	6	2.2	70°	–	1°	3000…
3004-1.2-8 L TOP ZZ …	3004-1.2-8 R TOP ZZ …				■	■	■	1.2	0.5	8	2.4	70°	–	1°	3000…
3004-1.5-8 L TOP ZZ …	3004-1.5-8 R TOP ZZ …				■	■	■	1.5	0.5	8	2.7	70°	–	1°	3000…
3004-1.8-8 L TOP ZZ …	3004-1.8-8 R TOP ZZ …				■	■	■	1.8	0.5	8	3	70°	–	1°	3000…

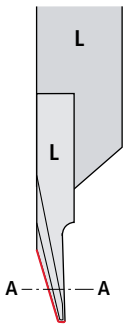
* Description TOP 11

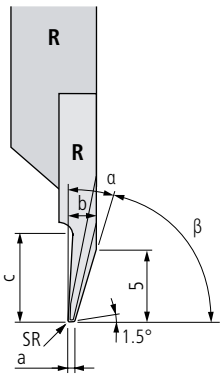


Back turning









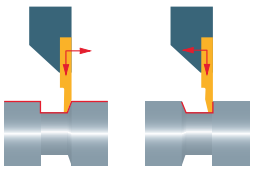
3004… SP TOP*

Order designation		Carbide ▯18						Dimensions							Holders ▯172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	b	α	β	δ	SR**	
STANDARD-LINE															
3004-2.4-6 L SP TOP 20ZZ …	3004-2.4-6 R SP TOP 20ZZ …				■	■	■	0.5	6	2.4	19°	70°	15°	–	3000…
3004-2.4-6 L SP TOP 20008 …	3004-2.4-6 R SP TOP 20008 …				■	■	■	0.5	6	2.4	19°	70°	15°	0.08	3000…
3004-2.4-6 L SP TOP 20015 …	3004-2.4-6 R SP TOP 20015 …				■	■	■	0.5	6	2.4	19°	70°	15°	0.15	3000…

* Description TOP ▯11

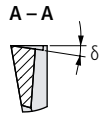
** SR: Protection radius

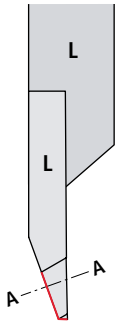
UTILIS multidec swiss type tools

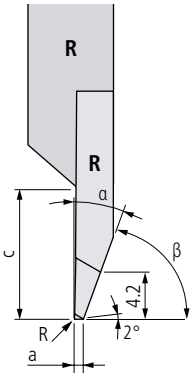


Back turning







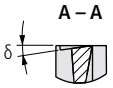


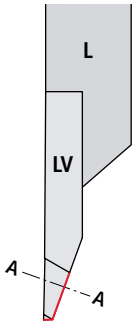
3004… CP

Order designation L	Order designation R	Carbide UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	Dimensions a	c	α	β	R	δ		Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
STANDARD-LINE															
3004-0.8-4 L CP …	3004-0.8-4 R CP …				■	■	■	0.8	11	19°	70°	–	8°		3000…

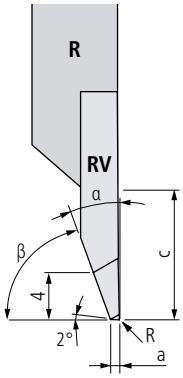


3004… V CP

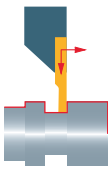




V: offset

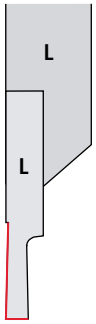


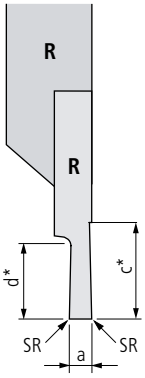
Order designation L	Order designation R	Carbide UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	Dimensions a	c	α	β	R	δ		Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
STANDARD-LINE															
3004-0.8-4 LV CP …	3004-0.8-4 RV CP …				■	■	■	0.8	11	19°	70°	–	8°		3000…



Grooving and turning



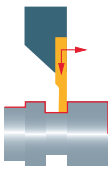




3005…

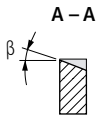
Order designation		Carbide ▯18						Dimensions							Holders
		–	–	●	○	●	●								▯172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c*	d*	SR**				
STANDARD-LINE															
3005-1.0-8 L …	3005-1.0-8 R …				■	■	■	1	8	2.5	0.05				3000…
3005-1.5-8 L …	3005-1.5-8 R …				■	■	■	1.5	8	3	0.05				3000…
3005-2.0-8 L …	3005-2.0-8 R …				■	■	■	2	8	4	0.05				3000…
3005-2.5-8 L …	3005-2.5-8 R …				■	■	■	2.5	8	5	0.05				3000…
3005-3.0-8 L …	3005-3.0-8 R …				■	■	■	3	8	6	0.05				3000…

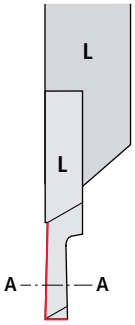
* c: maximal turning capacity
d: maximal grooving capacity
** SR: Protection radius

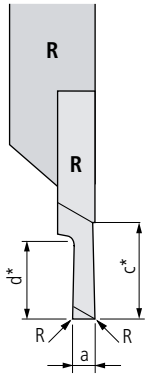


Grooving and turning





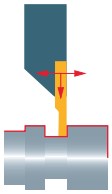




3005… CP

Order designation		Carbide ▯18						Dimensions							Holders ▯172…
		–	–	●	○	●	●								
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c*	d*	R	β			
STANDARD-LINE															
3005-0.8-8 L CP …	3005-0.8-8 R CP …				■	■	■	0.8	8	2.5	–	10°			3000…
3005-1.0-8 L CP …	3005-1.0-8 R CP …				■	■	■	1	8	3.5	–	10°			3000…
3005-1.5-8 L CP …	3005-1.5-8 R CP …				■	■	■	1.5	8	4	–	10°			3000…
3005-1.5-8 L CP R08 …	3005-1.5-8 R CP R08 …				■	■	■	1.5	8	4	0.08	10°			3000…
3005-2.0-8 L CP …	3005-2.0-8 R CP …				■	■	■	2	8	5	–	10°			3000…
3005-2.0-8 L CP R08 …	3005-2.0-8 R CP R08 …				■	■	■	2	8	5	0.08	10°			3000…
3005-2.0-8 L CP R15 …	3005-2.0-8 R CP R15 …				■	■	■	2	8	5	0.15	10°			3000…
3005-2.5-8 L CP …	3005-2.5-8 R CP …				■	■	■	2.5	8	6	–	10°			3000…
3005-2.5-8 L CP R08 …	3005-2.5-8 R CP R08 …				■	■	■	2.5	8	6	0.08	10°			3000…
3005-2.5-8 L CP R15 …	3005-2.5-8 R CP R15 …				■	■	■	2.5	8	6	0.15	10°			3000…
3005-3.0-8 L CP …	3005-3.0-8 R CP …				■	■	■	3	8	6	–	10°			3000…
3005-3.0-8 L CP R08 …	3005-3.0-8 R CP R08 …				■	■	■	3	8	6	0.08	10°			3000…
3005-3.0-8 L CP R15 …	3005-3.0-8 R CP R15 …				■	■	■	3	8	6	0.15	10°			3000…

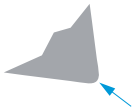
* c: maximal turning capacity
d: maximal grooving capacity



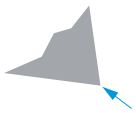
Grooving and turning "GC20" chip breaker



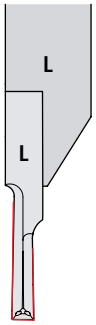
3005… F./E. GC20

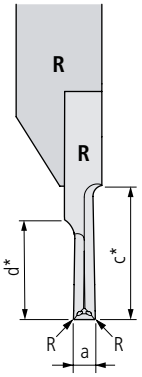


E: Insert with rounded cutting edge



F: Insert with sharp cutting edge

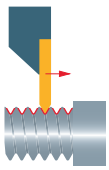




Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c*	d*		R			
PREMIUM-LINE															
3005-1.0-8 FL GC20 ZZ …	3005-1.0-8 FR GC20 ZZ …				■	■	■	1	8	3.5		–			3000…
3005-1.0-8 FL GC20 R02 …	3005-1.0-8 FR GC20 R02 …				■	■	■	1	8	3.5		0.02			3000…
3005-1.0-8 FL GC20 R05 …	3005-1.0-8 FR GC20 R05 …				■	■	■	1	8	3.5		0.05			3000…
3005-1.5-8 FL GC20 ZZ …	3005-1.5-8 FR GC20 ZZ …				■	■	■	1.5	8	4		–			3000…
3005-1.5-8 FL GC20 R02 …	3005-1.5-8 FR GC20 R02 …				■	■	■	1.5	8	4		0.02			3000…
3005-1.5-8 FL GC20 R05 …	3005-1.5-8 FR GC20 R05 …				■	■	■	1.5	8	4		0.05			3000…
3005-2.0-8 EL GC20 R05 …	3005-2.0-8 ER GC20 R05 …				■	■	■	2	8	5		0.05			3000…
3005-2.0-8 EL GC20 R15 …	3005-2.0-8 ER GC20 R15 …				■	■	■	2	8	5		0.15			3000…
3005-3.0-8 EL GC20 R15 …	3005-3.0-8 ER GC20 R15 …				■	■	■	3	8	6		0.15			3000…
3005-3.0-8 EL GC20 R35 …	3005-3.0-8 ER GC20 R35 …				■	■	■	3	8	6		0.35			3000…

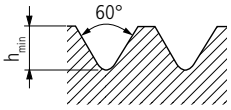
* c: maximal turning capacity
d: maximal grooving capacity

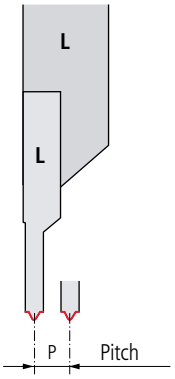
Threading (full profile metric)

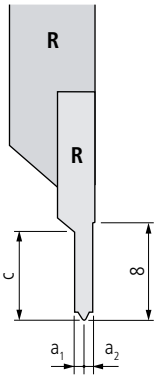




3006… VP



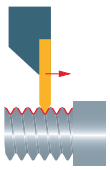




Order designation		Carbide 18						Standard			Dimensions					Holders 172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO DIN13	NIHS 06-03	NIHS 06-02	P	h_{min}	a_1	a_2	c	
PREMIUM-LINE																
3006-0.15-10-60 VP L …	3006-0.15-10-60 VP R …				■	■	■	–	–	S 0.6	0.15	0.084	0.09	0.08	–	3000…
3006-0.175-10-60 VP L …	3006-0.175-10-60 VP R …				■	■	■	–	–	S 0.7	0.175	0.098	0.11	0.1	–	3000…
3006-0.2-10-60 VP L …	3006-0.2-10-60 VP R …				■	■	■	–	–	S 0.8	0.2	0.112	0.12	0.11	–	3000…
3006-0.225-10-60 VP L …	3006-0.225-10-60 VP R …				■	■	■	–	–	S 0.9	0.225	0.126	0.14	0.12	–	3000…
3006-0.25-10-60 VP L …	3006-0.25-10-60 VP R …				■	■	■	M 1/1.2	M 1/1.2	S 1/S1.2	0.25	0.14	0.15	0.14	–	3000…
3006-0.3-10-60 VP L …	3006-0.3-10-60 VP R …				■	■	■	–	M 1.4	S 1.4	0.3	0.168	0.18	0.17	–	3000…
3006-0.35-10-60 VP L …	3006-0.35-10-60 VP R …				■	■	■	M 1.6	M 1.6/1.8	–	0.35	0.215	0.21	0.19	–	3000…
3006-0.4-10-60 VP L …	3006-0.4-10-60 VP R …				■	■	■	M 2	M 2	–	0.4	0.245	0.24	0.22	–	3000…
3006-0.45-10-60 VP L …	3006-0.45-10-60 VP R …				■	■	■	M 2.5	M 2.2/2.5	–	0.45	0.276	0.27	0.25	–	3000…
STANDARD-LINE																
3006-0.5-10-60 VP L …	3006-0.5-10-60 VP R …				■	■	■	M 3	M 3	–	0.5	0.307	0.28	0.28	1.3	3000…
3006-0.6-10-60 VP L …	3006-0.6-10-60 VP R …				■	■	■	–	M 3.5	–	0.6	0.368	0.33	0.33	1.5	3000…
3006-0.7-10-60 VP L …	3006-0.7-10-60 VP R …				■	■	■	M 4	M 4	–	0.7	0.429	0.39	0.39	1.8	3000…
3006-0.75-10-60 VP L …	3006-0.75-10-60 VP R …				■	■	■	–	M 4.5	–	0.75	0.46	0.41	0.41	1.9	3000…
3006-0.8-10-60 VP L …	3006-0.8-10-60 VP R …				■	■	■	M 5	M 5	–	0.8	0.491	0.44	0.44	2	3000…
3006-1.0-10-60 VP L …	3006-1.0-10-60 VP R …				■	■	■	M 6/7	–	–	1	0.613	0.55	0.55	2.5	3000…
3006-1.25-10-60 VP L …	3006-1.25-10-60 VP R …				■	■	■	M 8/9	–	–	1.25	0.767	0.69	0.69	3	3000…
3006-1.5-10-60 VP L …	3006-1.5-10-60 VP R …				■	■	■	M 10/11	–	–	1.5	0.92	0.83	0.83	3.8	3000…
3006-1.75-10-60 VP L …	3006-1.75-10-60 VP R …				■	■	■	M 12	–	–	1.75	1.074	0.96	0.96	4.4	3000…
3006-2.0-10-60 VP L …	3006-2.0-10-60 VP R …				■	■	■	M 14/16	–	–	2	1.227	1.1	1.1	5	3000…
3006-2.5-10-60 VP L …	3006-2.5-10-60 VP R …				■	■	■	M 18/20/22	–	–	2.5	1.534	1.38	1.38	5	3000…
3006-3.0-10-60 VP L …	3006-3.0-10-60 VP R …				■	■	■	M 24/27	–	–	3	1.84	1.65	1.65	5	3000…

Recommendations for thread cutting 194

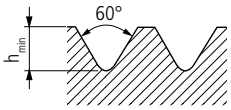
Cutting specification 190… Legend 6…

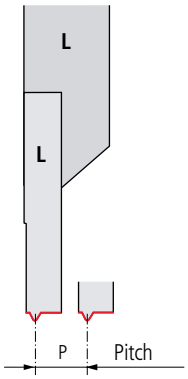


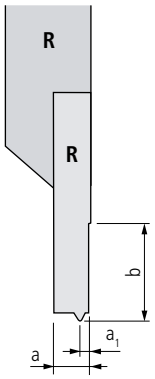
Threading (full profile metric)
Strenghten type "-S"



3006… VP-S



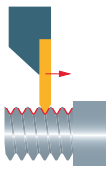




Order designation		Carbide 18						Standard			Dimensions					Holders
		–	–	●	○	●	●									172…
		–	●	●	○	●	●									
		○	●	●	○	●	●									
		●	○	–	●	○	–									
		–	–	●	–	–	–									
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO DIN13	NIHS 06-03	NIHS 06-02	P	h_{min}	a_1	a		
VALUE-LINE																
3006-0.25-60 VP-S L …	3006-0.25-60 VP-S R …				■	■	■	M 1/1.2	M 1/1.2	S1/S1.2	0.25	0.153	0.16	3.4		3000…
3006-0.3-60 VP-S L …	3006-0.3-60 VP-S R …				■	■	■	–	M1.4	S1.4	0.3	0.184	0.2	3.4		3000…
3006-0.35-60 VP-S L …	3006-0.35-60 VP-S R …				■	■	■	M1.6	M1.6/1.8	–	0.35	0.215	0.23	3.4		3000…
3006-0.4-60 VP-S L …	3006-0.4-60 VP-S R …				■	■	■	M2	M2	–	0.4	0.245	0.26	3.4		3000…
3006-0.45-60 VP-S L …	3006-0.45-60 VP-S R …				■	■	■	M2.5	M2.2/2.5	–	0.45	0.276	0.29	3.4		3000…
3006-0.5-60 VP-S L …	3006-0.5-60 VP-S R …				■	■	■	M3	M3	–	0.5	0.307	0.33	3.4		3000…
3006-0.6-60 VP-S L …	3006-0.6-60 VP-S R …				■	■	■	–	M3.5	–	0.6	0.368	0.39	3.4		3000…
3006-0.7-60 VP-S L …	3006-0.7-60 VP-S R …				■	■	■	M4	M4	–	0.7	0.429	0.46	3.4		3000…
3006-0.75-60 VP-S L …	3006-0.75-60 VP-S R …				■	■	■	–	M4.5	–	0.75	0.46	0.49	3.4		3000…
3006-0.8-60 VP-S L …	3006-0.8-60 VP-S R …				■	■	■	M5	M5	–	0.8	0.491	0.52	3.4		3000…
3006-1.0-60 VP-S L …	3006-1.0-60 VP-S R …				■	■	■	M6/7	–	–	1	0.613	0.65	3.4		3000…
3006-1.25-60 VP-S L …	3006-1.25-60 VP-S R …				■	■	■	M8/9	–	–	1.25	0.767	0.81	3.4		3000…
3006-1.5-60 VP-S L …	3006-1.5-60 VP-S R …				■	■	■	M10/11	–	–	1.5	0.92	0.98	3.4		3000…
3006-1.75-60 VP-S L …	3006-1.75-60 VP-S R …				■	■	■	M12	–	–	1.75	1.073	1.14	3.4		3000…
3006-2.0-60 VP-S L …	3006-2.0-60 VP-S R …				■	■	■	M14/16	–	–	2	1.227	1.3	3.4		3000…

Recommendations for thread cutting 194

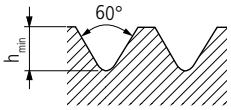
Cutting specification 190… Legend 6…

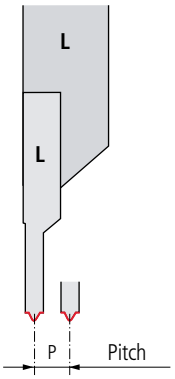


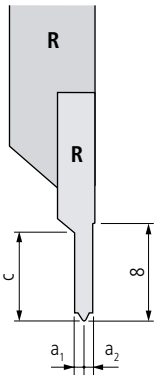
Threading (full profile UN)



3006… UN … VP



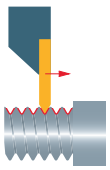




Order designation		Carbide 18						Standard / thread type						Dimensions						Holders
		–	–	●	○	●	●	ANSI / ASME B1.1 (Tolerance class 2A / 2B / 3A / 3B)												172…
		–	●	●	○	●	●													
		○	●	●	○	●	●													
		●	○	–	●	○	–													
		–	–	●	–	–	–													
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	UN	UNC	UNF	UNEF	UNS	UNR	P (T/Inch)	P	h_{min}	a_1	a_2	c	
PREMIUM-LINE																				
3006-80 UN 10-60 VP L …	3006-80 UN 10-60 VP R …				■	■	■			●				80	0.318	0.195	0.22	0.17	–	3000…
3006-72 UN 10-60 VP L …	3006-72 UN 10-60 VP R …				■	■	■			●				72	0.353	0.216	0.25	0.19	–	3000…
3006-64 UN 10-60 VP L …	3006-64 UN 10-60 VP R …				■	■	■		●	●				64	0.347	0.243	0.28	0.22	–	3000…
3006-56 UN 10-60 VP L …	3006-56 UN 10-60 VP R …				■	■	■		●	●		●		56	0.454	0.278	0.32	0.25	–	3000…
STANDARD-LINE																				
3006-48 UN 10-60 VP L …	3006-48 UN 10-60 VP R …				■	■	■		●	●		●		48	0.529	0.325	0.29	0.29	1.4	3000…
3006-44 UN 10-60 VP L …	3006-44 UN 10-60 VP R …				■	■	■			●				44	0.577	0.354	0.32	0.32	1.4	3000…
3006-40 UN 10-60 VP L …	3006-40 UN 10-60 VP R …				■	■	■		●	●		●		40	0.635	0.39	0.35	0.35	1.8	3000…
3006-36 UN 10-60 VP L …	3006-36 UN 10-60 VP R …				■	■	■			●		●		36	0.705	0.432	0.39	0.39	1.8	3000…
3006-32 UN 10-60 VP L …	3006-32 UN 10-60 VP R …				■	■	■		●	●	●		●	32	0.794	0.487	0.44	0.44	2	3000…
3006-28 UN 10-60 VP L …	3006-28 UN 10-60 VP R …				■	■	■		●	●		●	●	28	0.907	0.556	0.5	0.5	2.2	3000…
3006-24 UN 10-60 VP L …	3006-24 UN 10-60 VP R …				■	■	■		●	●	●	●		24	1.058	0.649	0.58	0.58	2.4	3000…
3006-20 UN 10-60 VP L …	3006-20 UN 10-60 VP R …				■	■	■	●	●	●	●		●	20	1.27	0.779	0.7	0.7	2.9	3000…
3006-18 UN 10-60 VP L …	3006-18 UN 10-60 VP R …				■	■	■		●	●	●	●		18	1.411	0.866	0.78	0.78	3.4	3000…
3006-16 UN 10-60 VP L …	3006-16 UN 10-60 VP R …				■	■	■	●	●	●	●	●	●	16	1.588	0.974	0.87	0.87	3.6	3000…
3006-14 UN 10-60 VP L …	3006-14 UN 10-60 VP R …				■	■	■		●	●		●		14	1.814	1.113	1	1	3.9	3000…
3006-13 UN 10-60 VP L …	3006-13 UN 10-60 VP R …				■	■	■		●					13	1.954	1.199	1.07	1.07	4.2	3000…

Recommendations for thread cutting 194

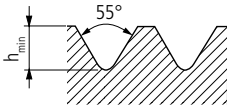
Cutting specification 190… Legend 6…

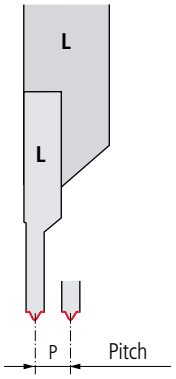


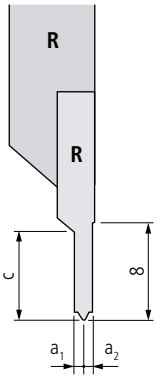
Threading (full profile pipe thread)



3006-G …VP





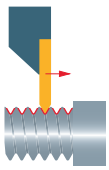


Order designation		Carbide ▯ 18						Standard	Dimensions						Holders
		–	–	●	○	●	●								▯ 172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ANSI B1.1	P (T/Inch)	P	h_{min}	a_1	a_2	c	
STANDARD-LINE															
3006-G 28 10-55 VP L …	3006-G 28 10-55 VP R …				■	■	■	⅛	28	0.907	0.581	0.5	0.5	2.3	3000…
								1/16	28	0.907	0.581	0.5	0.5	2.3	3000…
3006-G 19 10-55 VP L …	3006-G 19 10-55 VP R …				■	■	■	¼	19	1.337	0.856	0.74	0.74	3.3	3000…
								⅜	19	1.337	0.856	0.74	0.74	3.3	3000…
3006-G 14 10-55 VP L …	3006-G 14 10-55 VP R …				■	■	■	½	14	1.814	1.162	1	1	4.5	3000…
								⅝	14	1.814	1.162	1	1	4.5	3000…
								¾	14	1.814	1.162	1	1	4.5	3000…
								⅞	14	1.814	1.162	1	1	4.5	3000…
3006-G11 10-55 VP L …	3006-G11 10-55 VP R …				■	■	■	1	11	2.309	1.479	1.27	1.27	5	3000…
								1⅛	11	2.309	1.479	1.27	1.27	5	3000…
								1¼	11	2.309	1.479	1.27	1.27	5	3000…
								1½	11	2.309	1.479	1.27	1.27	5	3000…
								1¾	11	2.309	1.479	1.27	1.27	5	3000…
								2	11	2.309	1.479	1.27	1.27	5	3000…
								2¼	11	2.309	1.479	1.27	1.27	5	3000…
								2½	11	2.309	1.479	1.27	1.27	5	3000…
								2¾	11	2.309	1.479	1.27	1.27	5	3000…
								3	11	2.309	1.479	1.27	1.27	5	3000…
								3½	11	2.309	1.479	1.27	1.27	5	3000…
								4	11	2.309	1.479	1.27	1.27	5	3000…
								4½	11	2.309	1.479	1.27	1.27	5	3000…
								5	11	2.309	1.479	1.27	1.27	5	3000…
								5½	11	2.309	1.479	1.27	1.27	5	3000…
								6	11	2.309	1.479	1.27	1.27	5	3000…

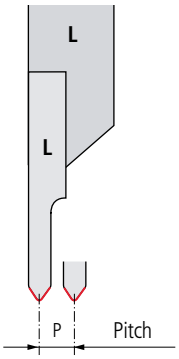
Recommendations for thread cutting ▯ 194

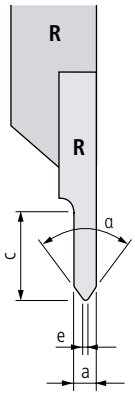
Cutting specification ▯ 190…

Legend ▯ 6…



Threading (partial profile 60°/55°)





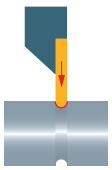


3006…

Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	P	a	c	α	e			
STANDARD-LINE															
3006-2-6-60 L …	3006-2-6-60 R …				■	■	■	0.25–2	2	6	60°	0.035			3000…
3006-2-6-55 L …	3006-2-6-55 R …				■	■	■	0.25–2	2	6	55°	0.035			3000…
3006-3-10-60 L …	3006-3-10-60 R …				■	■	■	0.25–2	3	10	60°	0.035			3000…
3006-3-10-55 L …	3006-3-10-55 R …				■	■	■	0.25–2	3	10	55°	0.035			3000…

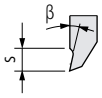
Recommendations for thread cutting 194

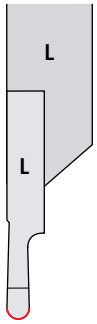
UTILIS multidec swiss type tools

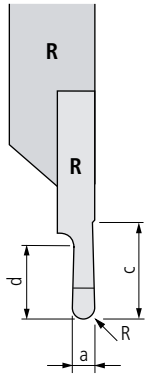


Radius-grooving









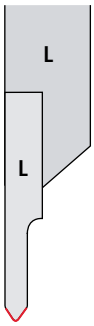
3007…

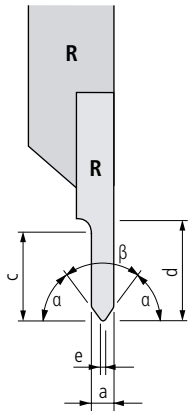
Order designation		Carbide 18						Dimensions							Holders
		–	–	●	○	●	●								172…
		–	●	●	○	●	●								
		○	●	●	○	●	●								
		●	○	–	●	○	–								
		–	–	●	–	–	–								
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	d	β	R	s		
PREMIUM-LINE															
3007-R0.25-2-10 L …	3007-R0.25-2-10 R …				■	■	■	0.5	12	2	6°	0.25	2		3000…
STANDARD-LINE															
3007-R0.5-2.5-10 L …	3007-R0.5-2.5-10 R …				■	■	■	1	12	2.5	6°	0.5	2		3000…
3007-R0.6-2.5-10 L …	3007-R0.6-2.5-10 R …				■	■	■	1.2	12	2.5	6°	0.6	2		3000…
3007-R0.75-3-10 L …	3007-R0.75-3-10 R …				■	■	■	1.5	12	3	6°	0.75	2		3000…
3007-R0.8-3-10 L …	3007-R0.8-3-10 R …				■	■	■	1.6	12	3	6°	0.8	2		3000…
3007-R1.0-10 L …	3007-R1.0-10 R …				■	■	■	2	12	10	6°	1	2		3000…
3007-R1.5-10 L …	3007-R1.5-10 R …				■	■	■	3	12	10	6°	1.5	2		3000…
3007-R1.5-16 L …	3007-R1.5-16 R …				■	■	■	3	17	16	6°	1.5	2		3000…



Chamfering

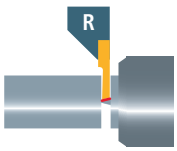






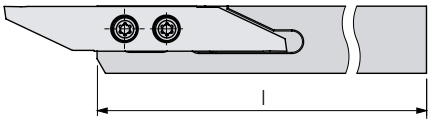
3012…

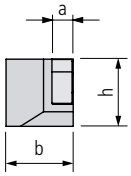
Order designation		Carbide ▯18						Dimensions							Holders ▯172…
L	R	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c	d	α	β	e		
STANDARD-LINE															
3012-2-6-60 L …	3012-2-6-60 R …				■	■	■	2	2	10	60°	60°	0.035		3000…
3012-2-10-45 L …	3012-2-10-45 R …				■	■	■	2	10	12	45°	90°	–		3000…



Standard





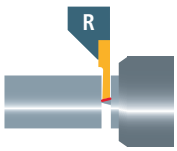


3000…

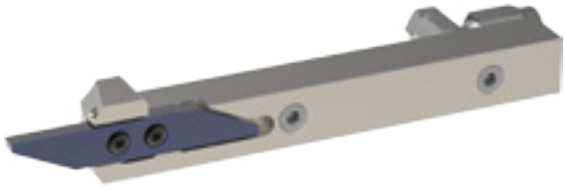
Order designation L		Order designation R		Dimensions h	b	l	a					Inserts 125…
STANDARD-LINE												
3000-08x80 L	■	3000-08x80 R	■	8	8	80	3.5					30…
3000-08x100 L	■	3000-08x100 R	■	8	8	100	3.5					30…
3000-10x80 L	■	3000-10x80 R	■	10	10	80	3.5					30…
3000-10x100 L	■	3000-10x100 R	■	10	10	100	3.5					30…
3000-12x100 L	■	3000-12x100 R	■	12	12	100	3.5					30…
3000-16x125 L	■	3000-16x125 R	■	16	16	125	3.5					30…
3000-20x125 L	■	3000-20x125 R	■	20	20	125	3.5					30…
3000-25x150 L	■	3000-25x150 R	■	25	25	150	3.5					30…
VALUE-LINE												
3000 B-10x100 L	■	3000 B-10x100 R	■	10	10	100	3					30…
3000 B-12x100 L	■	3000 B-12x100 R	■	12	12	100	3					30…
3000 B-16x125 L	■	3000 B-16x125 R	■	16	16	125	3					30…

3000… INCH

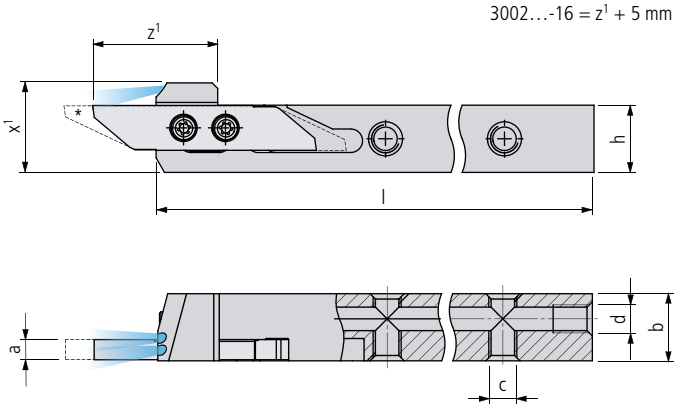
Order designation L		Order designation R		Dimensions h	b	l	a					Inserts 125…
STANDARD-LINE												
3000-3/8"x80 L	■	3000-3/8"x80 R	■	9.525	9.525	80	3.5					30…
3000-3/8"x100 L	■	3000-3/8"x100 R	■	9.525	9.525	100	3.5					30…
3000-1/2"x100 L	■	3000-1/2"x100 R	■	12.7	12.7	100	3.5					30…
3000-5/8"x125 L	■	3000-5/8"x125 R	■	15.875	15.875	125	3.5					30…
3000-3/4"x125 L	■	3000-3/4"x125 R	■	19.05	19.05	125	3.5					30…



With internal cooling



* 3002…-13 = z^1 + 5 mm
3002…-16 = z^1 + 5 mm



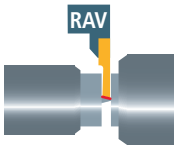
3000… IC

Order designation L		Order designation R		Dimensions h	b	l	a	z^1	x^1	c	d	Inserts 125…
PREMIUM-LINE												
3000-08x100 L IC	■	3000-08x100 R IC	■	8	12	100	3.5	21	12.2	M5	M5	30…
3000-10x100 L IC	■	3000-10x100 R IC	■	10	12	100	3.5	21	14	M5	M5	30…
3000-12x100 L IC	■	3000-12x100 R IC	■	12	12	100	3.5	21	16	M5	M5	30…
3000-16x125 L IC	■	3000-16x125 R IC	■	16	16	125	3.5	21	20	M5	G⅛"	30…
3000-20x125 L IC	■	3000-20x125 R IC	■	20	20	125	3.5	21	24	M5	G⅛"	30…
3000-25x125 L IC	■	3000-25x125 R IC	■	25	25	125	3.5	21	29	M5	G⅛"	30…

3000… IC INCH

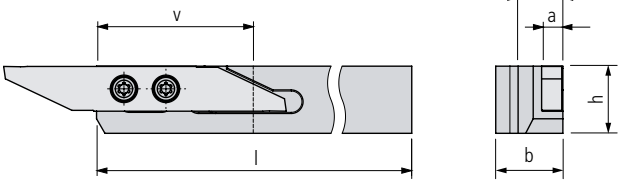
Order designation L		Order designation R		Dimensions h	b	l	a	z^1	x^1	c	d	Inserts 125…
PREMIUM-LINE												
3000-3/8"x100 L IC	■	3000-3/8"x100 R IC	■	9.525	9.525	100	3.5	21	13.5	M5	M5	30…
3000-1/2"x100 L IC	■	3000-1/2"x100 R IC	■	12.7	12.7	100	3.5	21	16.7	M5	M5	30…
3000-5/8"x125 L IC	■	3000-5/8"x125 R IC	■	15.875	15.875	125	3.5	21	19.9	M5	G⅛"	30…
3000-3/4"x125 L IC	■	3000-3/4"x125 R IC	■	19.05	19.05	125	3.5	21	23	M5	G⅛"	30…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



With off-set shank





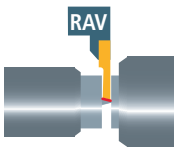
3000… AV

Order designation L		Order designation R		Dimensions h	b	l	v	w	a			Inserts 125…
STANDARD-LINE												
3000-10x80 LAV	■	3000-10x80 RAV	■	10	10	80	28	8	3.5			30…
3000-10x100 LAV	■	3000-10x100 RAV	■	10	10	100	28	8	3.5			30…
3000-12x100 LAV	■	3000-12x100 RAV	■	12	12	100	28	8	3.5			30…
3000-16x125 LAV	■	3000-16x125 RAV	■	16	16	125	28	8	3.5			30…

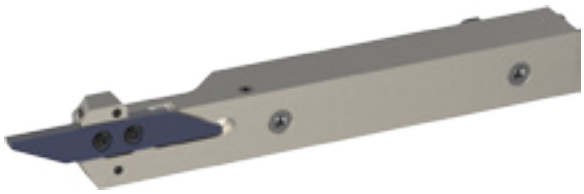
3000… AV INCH

Order designation L		Order designation R		Dimensions h	b	l	v	w	a			Inserts 125…
STANDARD-LINE												
3000-3/8"x80 LAV	■	3000-3/8"x80 RAV	■	9.525	9.525	80	28	8	3.5			30…
3000-3/8"x100 LAV	■	3000-3/8"x100 RAV	■	9.525	9.525	100	28	8	3.5			30…
3000-1/2"x100 LAV	■	3000-1/2"x100 RAV	■	12.7	12.7	100	28	8	3.5			30…
3000-5/8"x125 LAV	■	3000-5/8"x125 RAV	■	15.85	15.875	125	28	8	3.5			30…

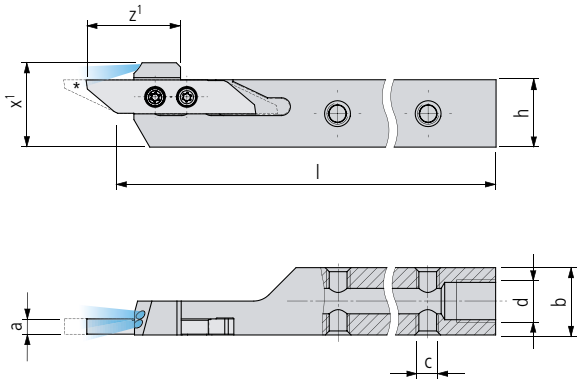
Legend ..... 6…



With off-set shank and internal cooling



* 3002…-13 = z^1 + 5 mm
3002…-16 = z^1 + 5 mm



3000… AV IC

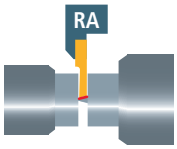
Order designation L		Order designation R		Dimensions h	b	l	a	z^1	x^1	c	d	Inserts 125…
PREMIUM-LINE												
3000-16x125 LAV IC	■	3000-16x125 RAV IC	■	16	16	125	3.5	22	20	M5	G⅛"	30…

3000… AV IC INCH

Order designation L		Order designation R		Dimensions h	b	l	a	z^1	x^1	c	d	Inserts 125…
PREMIUM-LINE												
3000-5/8"x125 LAV IC	■	3000-5/8"x125 RAV IC	■	15.875	15.875	125	3.5	22	20	M5	G⅛"	30…

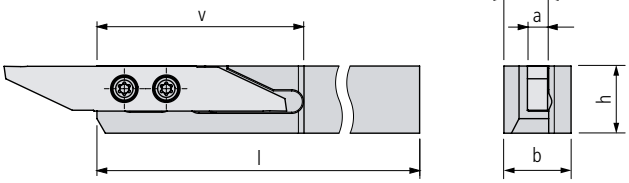
Scope of delivery: Holder without coolant connector
Coolant system ..... 671…

Note
This holder type is available with interior cooling from a shank cross section of 16 mm or ⅝" .



With off-set shank and insert seat





3000… A

Order designation L		Order designation R		Dimensions h	b	l	v	w	a			Inserts 125…
STANDARD-LINE												
3000-10x80 LA	■	3000-10x80 RA	■	10	10	80	37	8	3.5			30…
3000-10x100 LA	■	3000-10x100 RA	■	10	10	100	37	8	3.5			30…
3000-12x100 LA	■	3000-12x100 RA	■	12	12	100	37	8	3.5			30…
3000-16x125 LA	■	3000-16x125 RA	■	16	16	125	37	8	3.5			30…

3000… A INCH

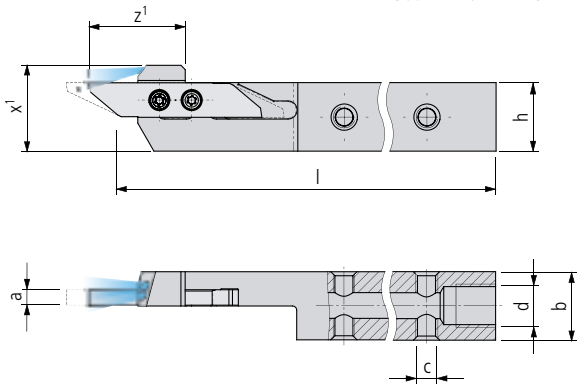
Order designation L		Order designation R		Dimensions h	b	l	v	w	a			Inserts 125…
STANDARD-LINE												
3000-3/8"x80 LA	■	3000-3/8"x80 RA	■	9.525	9.525	80	37	8	3.5			30…
3000-3/8"x100 LA	■	3000-3/8"x100 RA	■	9.525	9.525	100	37	8	3.5			30…
3000-1/2"x100 LA	■	3000-1/2"x100 RA	■	12.7	12.7	100	37	8	3.5			30…
3000-5/8"x125 LA	■	3000-5/8"x125 RA	■	15.875	15.875	125	37	8	3.5			30…

RA

With off-set shank, insert seat and internal cooling



* 3002…-13 = z^1 + 5 mm
3002…-16 = z^1 + 5 mm



3000… A IC

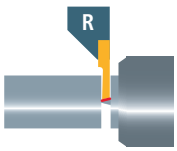
Order designation L		Order designation R		Dimensions h	b	l	a	z^1	x^1	c	d	Inserts 125…
PREMIUM-LINE												
3000-16x125 LA IC	■	3000-16x125 RA IC	■	16	16	125	3.5	22	20	M5	G⅛"	30…

3000… A IC INCH

Order designation L		Order designation R		Dimensions h	b	l	a	z^1	x^1	c	d	Inserts 125…
PREMIUM-LINE												
3000-5/8"x125 LA IC	■	3000-5/8"x125 RA IC	■	15.875	15.875	125	3.5	22	20	M5	G⅛"	30…

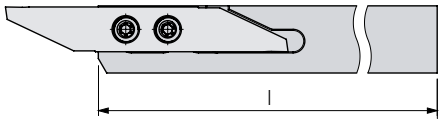
Scope of delivery: Holder without coolant connector
Coolant system ..... 671…

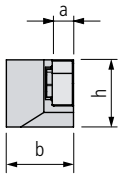
Note
This holder type is available with interior cooling from a shank cross section of 16 mm or ⅝" .



Clamping of insert from the back side







3000… C (Combi)

Order designation L		Order designation R		Dimensions h	b	l	a					Inserts 125…
STANDARD-LINE												
3000-08x100 LC	■	3000-08x100 RC	■	8	8	100	3.5					30…
3000-10x100 LC	■	3000-10x100 RC	■	10	10	100	3.5					30…
3000-12x100 LC	■	3000-12x100 RC	■	12	12	100	3.5					30…
3000-16x125 LC	■	3000-16x125 RC	■	16	16	125	3.5					30…
3000-20x125 LC	■	3000-20x125 RC	■	20	20	125	3.5					30…

3000… C (Combi) INCH

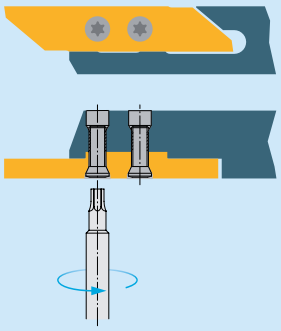
Order designation L		Order designation R		Dimensions h	b	l	a					Inserts 125…
STANDARD-LINE												
3000-3/8"x100 LC	■	3000-3/8"x100 RC	■	9.525	9.525	100	3.5					30…
3000-1/2"x100 LC	■	3000-1/2"x100 RC	■	12.7	12.7	100	3.5					30…
3000-5/8"x125 LC	■	3000-5/8"x125 RC	■	15.875	15.875	125	3.5					30…
3000-3/4"x125 LC	■	3000-3/4"x125 RC	■	19.05	19.05	125	3.5					30…

Clamping of the insert on holder 3000…C 179

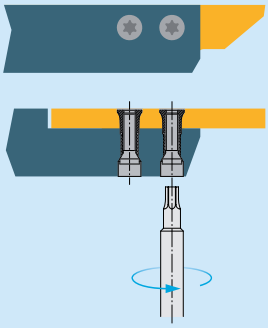
Clamping of the insert on holder 3000...C (Combi)

The regular tool holder multidec®-CUT 3000 uses the insert fixing screws from the side of the insert. The tool holder CUT 3000 C "Combi" allows in addition the insert fixing screws to be mounted from the opposite side using tapped bushings.

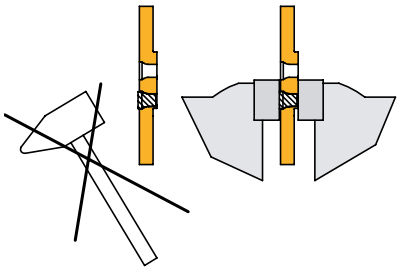
3000 (Standard)



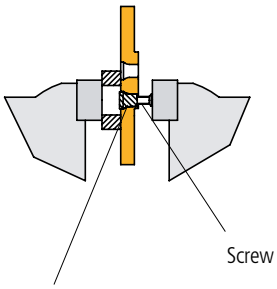
3000... C (Combi)



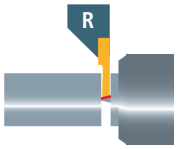
Press in



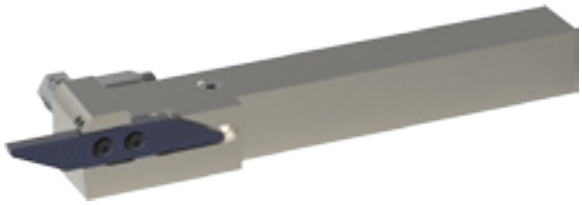
Press out



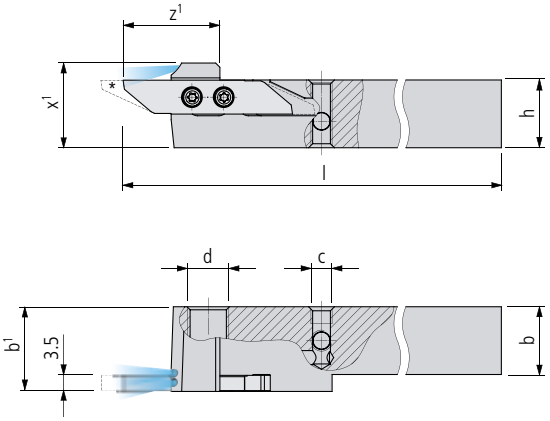
To avoid damage don't use excessive force while inserting and removing the tapped bushing.



With off-set shank for machines with a revolving turret



* 3002…-13 = z^1 + 5 mm
3002…-16 = z^1 + 5 mm



3000 AK… IC

Order designation L		Order designation R		Dimensions h	b	b_1	l	z_1	x_1	c	d	Inserts 125…
STANDARD-LINE												
3000 AK-16x125 L IC	■	3000 AK-16x125 R IC	■	16	16	20	125	23	20	M5	G⅛"	30…
3000 AK-20x125 L IC	■	3000 AK-20x125 R IC	■	20	20	25	125	23	24	M5	G⅛"	30…
3000 AK-25x125 L IC	■	3000 AK-25x125 R IC	■	25	25	32	125	23	29	M5	G⅛"	30…

3000 AK… IC INCH

Order designation L		Order designation R		Dimensions h	b	b_1	l	z_1	x_1	c	d	Inserts 125…
STANDARD-LINE												
3000 AK-5/8"x125 R IC	■	3000 AK-5/8"x125 L IC	■	15.875	15.875	20	125	23	19.875	M5	G⅛"	30…
3000 AK-3/4"x125 R IC	■	3000 AK-3/4"x125 L IC	■	19.05	19.05	25	125	23	23.05	M5	G⅛"	30…
3000 AK-1"x125 R IC	■	3000 AK-1"x125 L IC	■	25.4	25.4	32	125	23	29.4	M5	G⅛"	30…

Legend ..... 6…

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 9 T08	MSP 25090 T08	■	3000…C
		M3 × 7.3 T08	MSP 30073 T08	■	3000-08…* 3000…A
		M3 × 9 T08	MSP 30090 T08	■	3000…**
	Tapped bushing Ø 3.55	M2.5 × 4	MSP 25040 GB2	■	3000…C
	Screw plug	M5	MSP VSR M5 IB2.5	■	3000… (h ≤ –12)
		G⅛	MSP VSR G1/8 IB5	■	3000… (h ≥ –16)

C: Combi; A: offset shank
* Holder up to shank width of 8 mm
** Holder from shank width of 10 mm

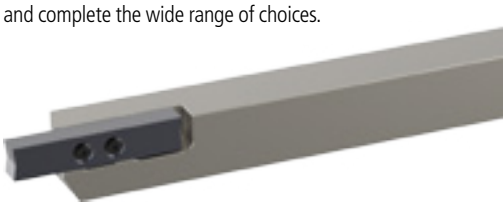
TORX screwdriver ..... 703…

multidec®-CUT 3600



A turn and cut-off tool for Swiss type lathes up to bar diameter 20 mm. The cutting inserts consist of two cutting edges. The insert seat, which is protected against contamination permits 100 % utilization of all cutting edges.
Even for holders a wide range of possibilities with shank sizes between 8 and 25 mm are available. For Swiss type automatic lathes special holders have been designed and complete the wide range of choices.





Advantages:
– System for grooving large and wide forms up to 6 mm
– The machine operator can grind his own cutting geometries



"IC" tool holder with integrated cooling

Cost-efficient processing of modern materials increasingly requires accurate control of the coolant at the cutting edge. Conveying the coolant as close as possible to the cutting edge is often a difficult task in the machine rooms of Swiss type turning lathes.
The multidec®-IC program offers a wide range of holders with integrated cooling. Because of the high precision and pressure, it is possible to discharge the chip quickly and safely from the cutting edge and the workpiece, which protects the cutting edge of the insert. This means significantly longer tool life as well as very reliable serial production.

Advantages:
– All holders feature five possible connectors for the coolant supply
– Fixed coolant exit allows for small set-up in front of the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely

Overview – multidec®-CUT 3600

Technical information 9



Inserts
3601… 184
3605… CP 185



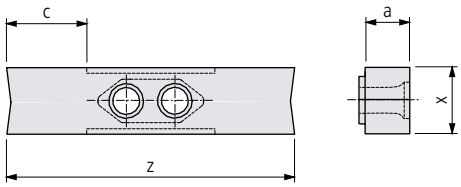
Holders
3600…, 3600… INCH 186
3600… IC, 3600… IC INCH 187



Replacement and spare parts 188

Blank

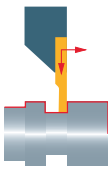




3601…

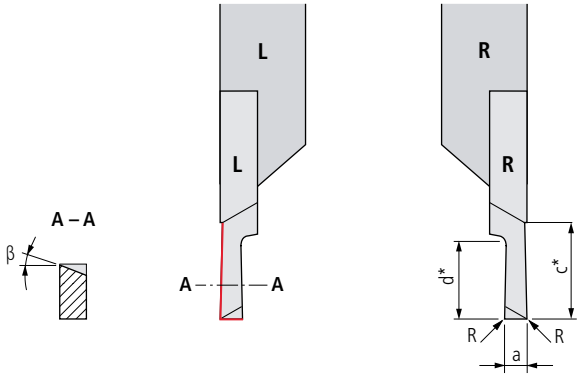
Order designation	Carbide 18			HSS		Dimensions					Holders
	○ ○ ○ ● –	● ● ● ○ –	● ● ● – –	● ○ – ● –	● ● ○ ○ –						186…
L	UHM 20	UHM 20 HPX	UHM 20 TX+	HSS	HSS HX	a	c	x	z		
PREMIUM-LINE											
3601-6-10 N P …*	■	■	■			6	11	8	40.5		3600…
STANDARD-LINE											
3601-6-10 N …	■	■	■	■	■	6	11	8	40.5		3600…

* Mirror polished



Grooving and turning

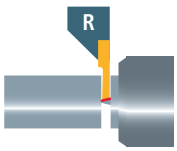




3605… CP

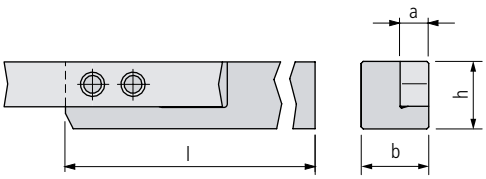
Order designation		Carbide ▯18			Dimensions							Holders ▯186…
		○	●	●								
		○	●	●								
		○	●	●								
		●	○	–								
		–	–	–								
L	R	UHM 20	UHM 20 HPX	UHM 20 TX+	a	c*	d*	R	β			
STANDARD-LINE												
3605-4.0-10 L CP …	3605-4.0-10 R CP …	■	■	■	4	10	10	–	10°			3600…
3605-4.0-10 L CP R08 …	3605-4.0-10 R CP R08 …	■	■	■	4	10	10	0.08	10°			3600…
3605-4.0-10 L CP R15 …	3605-4.0-10 R CP R15 …	■	■	■	4	10	10	0.15	10°			3600…

* c: maximal turning capacity
d: maximal grooving capacity



Standard



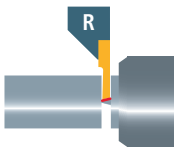


3600…

Order designation L		Order designation R		Dimensions h	b	l	a					Inserts 184…
STANDARD-LINE												
3600-10x80 L	■	3600-10x80 R	■	10	10	80	6					36…
3600-10x100 L	■	3600-10x100 R	■	10	10	100	6					36…
3600-12x100 L	■	3600-12x100 R	■	12	12	100	6					36…
3600-16x125 L	■	3600-16x125 R	■	16	16	125	6					36…
3600-20x125 L	■	3600-20x125 R	■	20	20	125	6					36…
3600-25x150 L	■	3600-25x150 R	■	25	25	150	6					36…

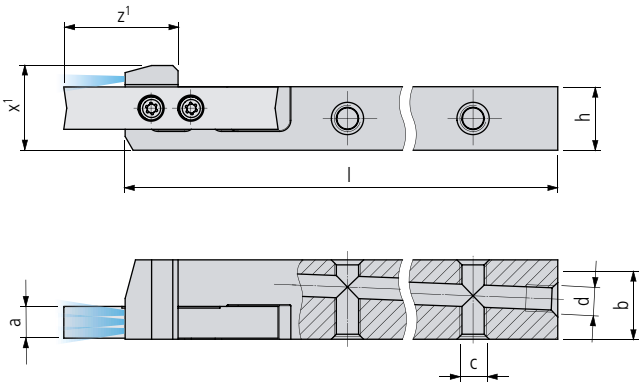
3600… INCH

Order designation L		Order designation R		Dimensions h	b	l	a					Inserts 184…
STANDARD-LINE												
3600-3/8"x80 L	■	3600-3/8"x80 R	■	9.525	9.525	80	6					36…
3600-3/8"x100 L	■	3600-3/8"x100 R	■	9.525	9.525	100	6					36…
3600-1/2"x100 L	■	3600-1/2"x100 R	■	12.7	12.7	100	6					36…
3600-5/8"x125 L	■	3600-5/8"x125 R	■	15.875	15.875	125	6					36…
3600-3/4"x125 L	■	3600-3/4"x125 R	■	19.05	19.05	125	6					36…



With internal cooling





3600… IC

Order designation L		Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 184…
PREMIUM-LINE												
3600-1215x100 L IC	■	3600-1215x100 R IC	■	12	15	100	6	21	16	M5	M5	36…
3600-16x125 L IC	■	3600-16x125 R IC	■	16	16	125	6	21	20	M5	G⅛"	36…
3600-20x125 L IC	■	3600-20x125 R IC	■	20	20	125	6	21	24	M5	G⅛"	36…
3600-25x125 L IC	■	3600-25x125 R IC	■	25	25	125	6	21	29	M5	G⅛"	36…

3600… IC INCH

Order designation L		Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 184…
PREMIUM-LINE												
3600-1/2"15x100 L IC	■	3600-1/2"15x100 R IC	■	12.7	15	100	6	21	16.7	M5	M5	36…
3600-5/8"x125 L IC	■	3600-5/8"x125 R IC	■	15.875	15.875	125	6	21	19.9	M5	G⅛"	36…
3600-3/4"x125 L IC	■	3600-3/4"x125 R IC	■	19.05	19.05	125	6	21	23	M5	G⅛"	36…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M3 × 9 T08	MSP 30090 T08	■	3600-10…/3600-3/8"…*
		M3 × 11 TP09	MSP 30110 TP09	■	3600…**
	Screw plug	M5	MSP VSR M5 IB2.5	■	3600… (h ≤ –12)
		G⅛	MSP VSR G1/8 IB5	■	3600… (h ≥ –16)

* Holder up to shank width of 10 mm
** Holder from shank width of 12 mm

TORX screwdriver ..... 703…

Cutting specification

multidec®-CUT

	Steel unalloyed			Steel low alloyed			Steel high alloyed		
Hardness value (HB) / (HRC)	125–300 HB			180–250 HB			200–350 HB		
Category	I			II			III		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Feeds	f (mm/rev)								
	0.1–0.25	0.02–0.15	0.005–0.08	0.1–0.25	0.02–0.15	0.005–0.08	0.1–0.25	0.02–0.15	0.005–0.08
Depths of cut	a_p (mm)								
	<5	<3	<2	<5	<3	<2	<4	<2.5	<1.5
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	40–110	60–120	60–140	60–100	60–120	60–130	40–90	60–110	60–120
UHM 20 HPX	150–200	180–220	200–260	80–150	100–180	160–220	70–100	90–150	120–180
UHM 20 TX+	–	–	–	80–130	100–150	160–190	70–90	90–130	120–150
Cutting material HSS									
HSS	25–30	25–35	25–40	20–30	20–35	20–35	15–20	15–25	15–30
HSS HX	30–40	35–40	35–50	25–35	25–40	25–45	20–30	20–30	20–35

	Stainless steel			Stainless steel			Titanium		
Hardness value (HB)	180–220 HB			220–330 HB			–		
Category	V			VI			IV		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Feeds	f (mm/rev)								
	0.1–0.2	0.01–0.12	0.005–0.08	0.1–0.2	0.01–0.12	0.005–0.08	0.1–0.25	0.02–0.08	0.005–0.06
Depths of cut	a_p (mm)								
	<4	<2.5	<1.5	<4	<2.5	<1.5	<4	<2.5	<1.5
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	40–100	40–110	40–120	30–70	30–80	30–80	40–60	50–70	60–80
UHM 20 HPX	90–150	110–180	160–200	70–90	90–120	110–150	50–100	60–120	60–140
UHM 20 TX+	90–130	110–160	160–180	70–90	90–120	110–150	50–100	60–120	60–140
Cutting material HSS									
HSS	15–20	15–25	15–30	10–20	15–20	15–25	10–20	15–20	15–25
HSS HX	20–30	20–30	20–35	20–30	20–30	20–35	20–30	20–30	20–35

Legend ..... 6…

Cutting specification — *multidec®-CUT*

	Aluminum			Brass / lead-free brass			Hard materials		
Hardness value (HB) / (HRC)	60–130 HB			–			45–70 HRC		
Category	VII			VIII			X		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Feeds	f (mm/rev)								
	0.1–0.3	0.02–0.25	0.005–0.20	0.1–0.3	0.02–0.15	0.005–0.10	–	–	–
Depths of cut									
	<5	<3	<2	<5	<3	<2	–	–	–
Cutting speeds									
Cutting material carbide									
UHM 20	100–1500	120–2000	160–2500	80–300	100–400	120–500	–	–	–
UHM 20 HPX	–	–	–	–	–	–	–	–	–
UHM 20 TX+	–	–	–	–	–	–	–	–	–
Cutting material HSS									
HSS	30–80	40–80	50–90	30–50	30–60	40–70	–	–	–
HSS HX	40–90	50–100	50–120	40–60	40–80	50–90	–	–	–

CUT off*

Materials (category) Hardness value (HB) / (HRC)	Carbide	Cutting speeds v_c (m/min)	Feeds f (mm/rev)
		▼	▼
Steel non-alloyed (I) 125–300 HB	UHM 20	40–120	0.03–0.1
	UHM 20 HPX	60–160	0.03–0.1
	UHM 20 TX+	60–180	0.03–0.1
Steel low alloyed (II) 180–250 HB	UHM 20	40–110	0.03–0.1
	UHM 20 HPX	60–170	0.03–0.1
	UHM 20 TX+	60–160	0.03–0.1
Steel high alloyed (III) 200–350 HB	UHM 20	40–110	0.01–0.1
	UHM 20 HPX	60–150	0.01–0.1
	UHM 20 TX+	60–140	0.01–0.1
Stainless steel (V) 180–220 HB	UHM 20	40–100	0.01–0.1
	UHM 20 HPX	80–150	0.01–0.1
	UHM 20 TX+	70–140	0.01–0.1
Stainless steel (VI) 220–330 HB	UHM 20	30–70	0.005–0.03
	UHM 20 HPX	70–90	0.005–0.03
	UHM 20 TX+	60–80	0.005–0.03
Titanium (IV) –	UHM 20	40–60	0.01–0.07
	UHM 20 HPX	50–80	0.02–0.07
	UHM 20 TX+	50–70	0.02–0.08
Aluminum (VII) 60–130 HB	UHM 20	100–1500	0.08–0.3
	UHM 20 HPX	110–1650	0.1–0.3
	UHM 20 TX+	–	0.1–0.3
Brass / lead-free brass (VIII) –	UHM 20	80–200	0.08–0.3
	UHM 20 HPX	88–220	0.1–0.3
	UHM 20 TX+	90–200	0.1–0.3
Synthetics reinforced/composits (IX) –	UHM 20	–	–
	UHM 20 HPX	–	–
	UHM 20 TX+	–	–
Hard materials (X) 45–70 HRC	UHM 20	–	–
	UHM 20 HPX	–	–
	UHM 20 TX+	–	–

* Reduce the feed rate by 30 % when feeding in until the insert fully engages and when moving out the final 0.3 mm.

Note

– In order to achieve good results, oil cooling is recommended, preferably at high pressure, with approx. 60 bar. Too much pressure can have a negative influence on chip formation.

– With stable conditions, the use of holders with integrated cooling "IC" and optimum cooling can generally increase the cutting data by up to 30 %.

Grooving and Turning / copy turning*

Materials (category) Hardness value (HB) / (HRC)	Carbide	Cutting speeds v_c (m/min)			Feeds f (mm/rev)			Depths of cut a_p (mm)		
		▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Steel non-alloyed (I) 125–300 HB	UHM 20	40–110	60–120	60–140	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 HPX	150–200	180–220	180–220	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 TX+	130–170	160–194	170–210	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
Steel low alloyed (II) 180–250 HB	UHM 20	50–110	50–120	44–132	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 HPX	90–170	90–180	176–220	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 TX+	80–150	80–160	176–198	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
Steel high alloyed (III) 200–350 HB	UHM 20	40–80	40–80	40–100	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 HPX	60–150	60–160	80–160	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 TX+	60–140	60–150	70–150	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
Stainless steel (V) 180–220 HB	UHM 20	40–100	40–110	40–120	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 HPX	80–150	100–180	120–200	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 TX+	70–130	100–160	120–180	0.03–0.1	0.03–0.15	0.01–0.15	0.5–4	0.1–2.5	0.05–1.5
Stainless steel (VI) 220–330 HB	UHM 20	30–70	30–80	30–80	0.002–0.095	0.002–0.014	0.005–0.014	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 HPX	70–90	80–120	80–150	0.002–0.095	0.002–0.014	0.005–0.014	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 TX+	60–80	70–110	70–130	0.002–0.095	0.002–0.014	0.005–0.014	0.5–4	0.1–2.5	0.05–1.5
Titanium (IV) –	UHM 20	40–60	50–70	60–80	0.002–0.095	0.002–0.014	0.005–0.014	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 HPX	50–100	60–120	60–140	0.002–0.095	0.002–0.014	0.005–0.014	0.5–4	0.1–2.5	0.05–1.5
	UHM 20 TX+	40–80	60–120	60–120	0.002–0.095	0.002–0.014	0.005–0.014	0.5–4	0.1–2.5	0.05–1.5
Aluminum (VII) 60–130 HB	UHM 20	100–500	120–500	160–500	0.1–0.3	0.02–0.25	0.005–0.20	0.5–5	0.1–3	0.05–1.5
	UHM 20 HPX	110–170	130–600	170–600	0.1–0.3	0.02–0.25	0.005–0.20	0.5–5	0.1–3	0.05–1.5
	UHM 20 TX+	100–160	130–600	160–600	0.1–0.3	0.02–0.25	0.005–0.20	0.5–5	0.1–3	0.05–1.5
Brass / lead-free brass (VIII) –	UHM 20	80–200	90–200	140–500	0.1–0.3	0.02–0.15	0.005–0.10	0.5–5	0.1–3	0.05–1.5
	UHM 20 HPX	90–220	100–250	130–600	0.1–0.3	0.02–0.15	0.005–0.10	0.5–5	0.1–3	0.05–1.5
	UHM 20 TX+	90–210	100–240	120–600	0.1–0.3	0.02–0.15	0.005–0.10	0.5–5	0.1–3	0.05–1.5
Synthetics reinforced/composits (IX) –	UHM 20	–	–	–	–	–	–	–	–	–
	UHM 20 HPX	–	–	–	–	–	–	–	–	–
	UHM 20 TX+	–	–	–	–	–	–	–	–	–
Hard materials (X) 45–70 HRC	UHM 20	–	–	–	–	–	–	–	–	–
	UHM 20 HPX	–	–	–	–	–	–	–	–	–
	UHM 20 TX+	–	–	–	–	–	–	–	–	–

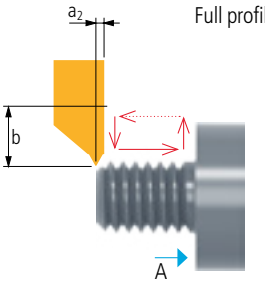
* With radial infeed, reduce the feed rate by 30–50 %.

Note

– In order to achieve good results, oil cooling is recommended, preferably at high pressure, with approx. 60 bar. Too much pressure can have a negative influence on chip formation.

– With stable conditions, the use of holders with integrated cooling "IC" and optimum cooling can generally increase the cutting data by up to 30 %.

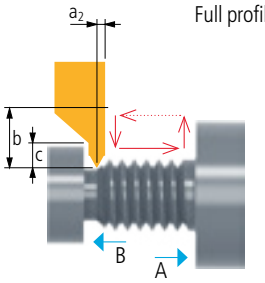
Properties and applications



Full profile threading inserts 1606… VP / 3006… VP up to pitch of 0.45 mm

Properties:
– Insert front side ground far back (b)
– At a minimum reduced distance between the thread tip and front side (a_2)

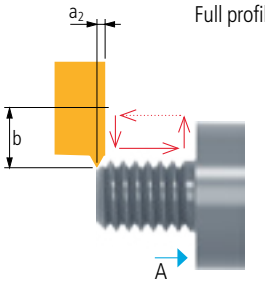
This makes it possible to move extremely close to the shoulder (A) with an extremely narrow or non-existent undercut.



Full profile threading inserts 1606… VP / 3006… VP from pitch of 0.5 mm

Properties:
– Insert front side ground far back (b)
– At a minimum reduced distance between the thread tip and front side (a_2)
– Back of insert ground free towards the rear (c)

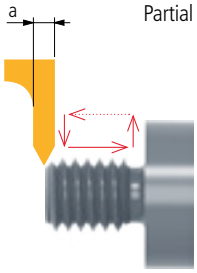
This makes it possible to move extremely close to the shoulder (A) with an extremely narrow or non-existent undercut. This version also makes it possible to manufacture a thread behind a shoulder (B).



Full profile threading inserts, reinforced 3006… VP – from pitch of 0.25 mm

Properties:
– Insert front side ground far back (b)
– At a minimum reduced distance between the thread tip and front side (a_2)
– Reinforcement of the threading profile using a special cut

The reinforcement makes it possible to reduce the number of passes by up to 20 %. It is possible to move extremely close to the shoulder (A) with an extremely narrow or non-existent undercut.



Partial profile threading inserts 1606… / 3006… with pitch of 0.25 – 2 mm

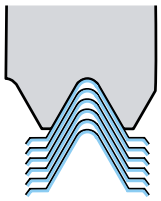
Properties:
– Front of insert with wide partial profile cut (a) for covering a bigger pitch area

This makes it possible to manufacture various pitches with the same indexable insert, but requires an undercut for smaller pitches.

Number of passes

Pitch	(mm)	0.06–0.09	0.1–0.35	0.4	0.45	0.5	0.75	0.8	1	1.25	1.5	1.75	2–2.5
	(T/Inch)	–	80/72	64	56	48/44	40/36	32	28/24	20/19	18/16	14	13/11
Steel		2–4	3–5	3–6	3–7	5–8	5–9	6–9	6–10	7–11	8–12	9–13	12–15
Stainless steel		2–4	4–6	5–6	5–7	6–9	6–10	6–11	7–12	8–13	9–14	12–15	13–18
Titanium		2–5	4–7	5–6	5–7	6–9	6–10	6–11	7–13	8–14	9–14	12–15	13–19
Non-ferrous metal		2–4	3–5	3–6	3–7	3–8	4–9	5–10	6–11	7–14	8–16	9–16	11–17
Hard materials		3–6	4–7	5–8	6–9	8–10	9–12	10–15	11–17	13–20	18–22	20–26	25–30

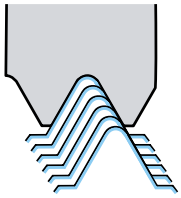
Choice of feed movement



Radial feed

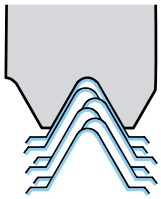
Applicability:
– for conventional lathes
– for piches < 2 mm
– short chipping materials

Disadvantage:
– poor chip control



Feed on the flanks

Applicability:
– for CNC lathes
– for piches 2 to 4 mm
– long chipping materials
– good chip control



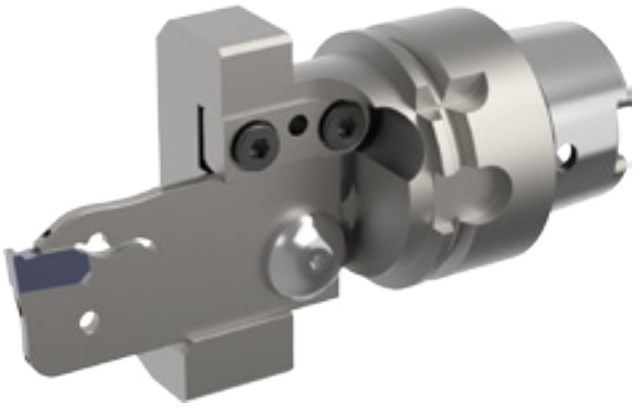
Alternated feed

Applicability:
– for piches > 4 mm
– long chipping meterials
– regular wear of insert
– high tool-life
– good chip control

Disadvantage:
– complex CNC-programming

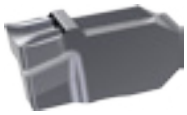
multidec®-4000

With the new «multidec®-4000» product line, UTILIS is providing a powerful range of inserts which provides an optimum solution for parting operations for any material. These inserts can be used on the new series of multidec®-4000 holders, which are used for parting off up to a diameter of 65 mm.
The range of holders includes tools for turning operations on multi-tasking machines such as the turning-milling centres from Willemin-Macodel, Bumotec and Tsugami. With the HSK-A40, HSK-T40, HSK-E40 and PSC40 (Capto® C4) interfaces, the product range also includes a wide variety of connections.
All tools are equipped with ingenious internal cooling which accurately directs the coolant onto the cutting edge, which is extremely important when parting off large diameters and can increase the tool-life and process reliability of the tool considerably.
The parting inserts are easy to fit and replace using a provided installation wrench.









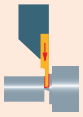
Advantages:
– Diameters up to 65 mm can be parted off
– Choice of parting inserts with several carbide grades and coatings
– Compact and solid design
– The insert is positioned on the center line (guaranteeing a very accurate cutting edge height and high repeatability while also reducing of the load on the spindle)
– All tools are equipped with integrated coolant supply
– Replaceable cut-off blade

Overview – multidec®-4000

Technical information 9



Choice of inserts 198



Application OD turning 199



Inserts

4002… EN GS PM1 201

4002… EN GS PM2 202

4002… EN GS SC1 203

4002… FN GS PA7 204



Holders

HSK-T40 / -A40 MT 4000 … (OD turning) 588

PSC 40 MT 4000 … (OD turning) 599

HSK-E40 MT 4000 … WM (OD turning for Willemin-Macodel machines) 608



Replacement and spare parts 617



Cutting specification 205

Special tools – multidec4you® 636

Choice of inserts

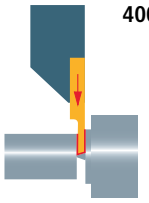
multidec®-4000

Application	Type and chip breaker		Machining Method ▼▼▼	Machining Method ▼▼	Machining Method ▼	Characteristics
		..02.. GS PM1	–	●	●	Cut off with chip breaker for steels with high tensile strength
			–	●	●	
			–	–	–	
			–	–	–	
			–	–	–	
		..02.. GS PM2	–	●	●	Cut off with all-round chip breaker for steels
			–	○	○	
			–	–	–	
			–	–	–	
			–	–	–	
		..02.. GS SC1	–	–	–	Cut off with chip breaker for stainless steel and superalloys
			–	●	●	
			–	●	●	
			–	–	–	
			–	–	–	
		..02.. GS PA7	–	–	–	Cut off with chip breaker for non-ferrous metals. With TX+ coating, conditionally also suitable for use in superalloys and for hard cutting.
			–	–	–	
			–	○	○	
			–	●	●	
			○	○	–	

Legend ..... 6…

CUT off

Inserts 201…



4002…

Holders 588…

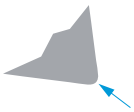
All illustrations show right hand design. Left hand design is also available.



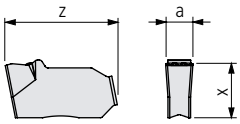
CUT off



4002… EN GS PM1



E: Insert with rounded cutting edge



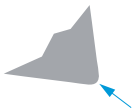
Order designation	Carbide ▯18						Dimensions							Holders
	–	○	●	●	○	●								▯588…
	–	●	●	●	●	●								
	○	●	●	●	●	–								
	●	○	–	○	○	–								
	–	–	●	–	–	–								
N	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20 HPX	UHM 30 HX	UHM 30 MZ	a	x	z					
VALUE-LINE														
4002-3.0 EN GS PM1…				■	■	■	3	6	12					…4000…



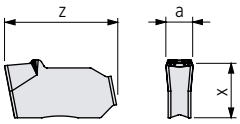
CUT off



4002… EN GS PM2



E: Insert with rounded cutting edge



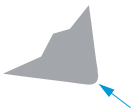
Order designation	Carbide ⬚18						Dimensions							Holders
	–	○	●	●	○	●								⬚588…
	–	●	●	●	●	●								
	○	●	●	●	●	–								
	●	○	–	○	○	–								
	–	–	●	–	–	–								
N	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20 HPX	UHM 30 HX	UHM 30 MZ	a	x	z					
VALUE-LINE														
4002-3.0 EN GS PM2…				■	■	■	3	6	12					…4000…



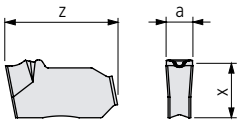
CUT off



4002… EN GS SC1



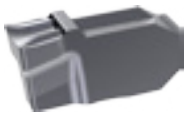
E: Insert with rounded cutting edge



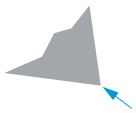
Order designation	Carbide 18						Dimensions							Holders
	–	○	●	●	○	●								588…
	–	●	●	●	●	●								
	○	●	●	●	●	–								
	●	○	–	○	○	–								
	–	–	●	–	–	–								
N	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20 HPX	UHM 30 HX	UHM 30 MZ	a	x	z					
VALUE-LINE														
4002-3.0 EN GS SC1…				■	■	■	3	6	12					…4000…



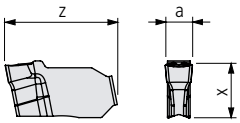
CUT off



4002… FN GS PA7



F: Insert with sharp cutting edge



Order designation	Carbide 🗋18						Dimensions							Holders
	–	○	●	●	○	●								🗋588…
	–	●	●	●	●	●								
	○	●	●	●	●	–								
	●	○	–	○	○	–								
	–	–	●	–	–	–								
N	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20 HPX	UHM 30 HX	UHM 30 MZ	a	x	z					
STANDARD-LINE														
4002-3.0 FN GS PA7…	■	■	■				3	6	12					…4000…

CUT off*

Materials (category) Hardness value (HB) / (HRC)	Carbide	Cutting speeds v_c (m/min)	Feeds f (mm/rev)			
		▼	▼ PM1	▼ PM2	▼ SC1	▼ PA7
Steel non-alloyed (I) 125–300 HB	UHM20 HPX	80–180	0.1–0.3	0.075–0.2	–	–
	UHM30 HX	80–150	0.1–0.3	0.075–0.2	–	–
	UHM30 MZ	110–190	0.1–0.3	0.075–0.2	–	–
Steel low alloyed (II) 180–250 HB	UHM20 HPX	60–150	0.1–0.3	0.075–0.2	–	–
	UHM30 HX	60–120	0.1–0.3	0.075–0.2	–	–
	UHM30 MZ	100–180	0.1–0.3	0.075–0.2	–	–
Steel high alloyed (III) 200–350 HB	UHM20 HPX	50–120	0.1–0.3	0.075–0.2	–	–
	UHM30 HX	50–100	0.1–0.3	0.075–0.2	–	–
	UHM30 MZ	70–160	0.1–0.3	0.075–0.2	–	–
Stainless steel (V) 180–220 HB	UHM20 HPX	50–180	0.1–0.3	0.075–0.2	0.075–0.18	0.05–0.1
	UHM30 HX	50–150	0.1–0.3	0.075–0.2	0.075–0.18	0.05–0.1
	UHM30 MZ	90–170	0.1–0.3	0.075–0.2	0.075–0.18	0.05–0.1
Stainless steel (VI) 220–330 HB	UHM20 HPX	60–90	0.1–0.3	0.075–0.2	0.075–0.18	0.05–0.1
	UHM30 HX	50–80	0.1–0.3	0.075–0.2	0.075–0.18	0.05–0.1
	UHM30 MZ	60–90	0.1–0.3	0.075–0.2	0.075–0.18	0.05–0.1
Titanium (IV) –	UHM20 HPX	50–120	–	–	0.075–0.18	0.05–0.1
	UHM30 HX	20–60	–	–	0.075–0.18	0.05–0.1
	UHM30 MZ	–	–	–	–	–
Aluminum (VII) 60–130 HB	UHM10	200–2000	–	–	–	0.05–0.25
	UHM10 HX	200–2000	–	–	–	0.05–0.25
	UHM10 TX+	200–2000	–	–	–	0.05–0.25
Brass / lead-free brass (VIII) –	UHM10	200–600	–	–	–	0.05–0.25
	UHM10 HX	200–600	–	–	–	0.05–0.25
	UHM10 TX+	200–600	–	–	–	0.05–0.25
Synthetics reinforced/composits (IX) –	UHM10	–	–	–	–	–
	UHM10 HX	–	–	–	–	–
	UHM10 TX+	15–50	–	–	–	0.05–0.25
Hard materials (X) 45–70 HRC	UHM 20 HPX	–	–	–	–	–
	UHM 20 HX	–	–	–	–	–
	UHM 20 TX+	15–80	–	–	–	0.03–0.15

* Reduce the feed rate by 20 % when feeding in until the insert fully engages and when moving out the final 0.3 mm.

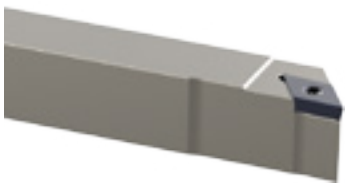
Note

– In order to achieve good results, oil cooling is recommended, preferably at high pressure, with approx. 60 bar. Too much pressure can have a negative influence on chip formation.

– With stable conditions, the use of holders with integrated cooling "IC" and optimum cooling can generally increase the cutting data by up to 30 %.

multidec®-ISO

multidec®-ISO provides a very wide range of ISO standardized inserts for Swiss type machining and precision turning. All inserts consist of two or more edges and are easily indexed or changed.
All inserts have several cutting edges and are easily replaceable. At the same time, multidec®-ISO provides sharp and rounded cutting edges with radii between 0 and 0.8 mm. Innovative solutions involving coated and uncoated inserts made of carbide, cermets and diamond tips have been designed to cut very difficult materials. For all mechanical cutting conditions a large choice of sintered and ground inserts with a wide variety of chip grooves are available.
Even for the holders a wide range of possibilities with shank sizes between 8 and 25 mm are available. For Swiss type automatic lathes special holders have been designed and complete the wide range of choices.







Advantages:
– Large range of standard ISO inserts
– Sharp cutting edges "F"
– Rounded cutting edges "E"
– Small corner radius (0–0.8 mm)
– Especially designed holders for CNC Swiss type automatic lathes (sizes 8×8 to 25×25 mm)

The versatility of the materials which are machined in a modern production facility requires suitable chip breakers and also a wider variety of cutting edge types, carbide grades and coatings.
The introduction of the new "PF05" insert has extended our ISO insert range.

New chip breaker for materials with difficult chip breaking behaviour



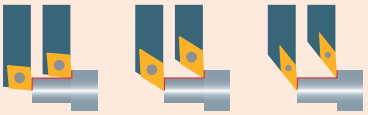
FN-PF05

The further development of the chip breaker, carbide and coating make this insert a troubleshooter when it comes to processing steel, stainless steel and superalloys.

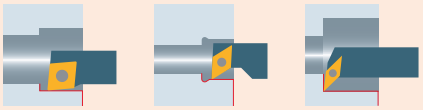
<< MAIN MENU

Overview – multidec®-ISO

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Application OD turning 208



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Overview type CC… (80°) 217



Overview type DC… (55°) 239



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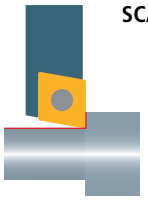
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Front turning

Holders 233

SCAC… U (90°)



Turning

Holders 233

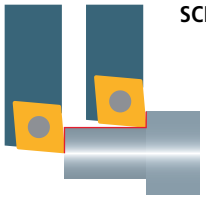
SCDC… U (45°)



Turning and facing

Holders 234

SCLC… U (95°)



Front turning

Holders 263

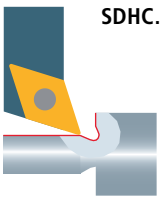
SDAC… U (90°)



Turning and undercutting

Holders 264

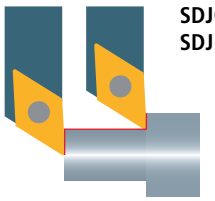
SDHC… U (107.5°)



Turning and facing

Holders 266 / 288

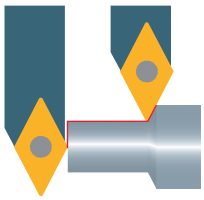
SDJC… U (93°)
SDJN… (93°)



Turning and facing

Holders 270

SDNC… U (62.5°)



Turning

Holders 272

SDNCN… U (62.5°)



Front turning

Holders 315

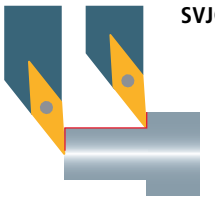
SVAC… U (90°)



Turning and facing

Holders 316

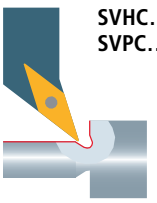
SVJC… U (93°)



Turning and undercutting

Holders 318 / 320

SVHC… U (107.5°)
SVPC… U (117.5°)



Back turning

Holders 322

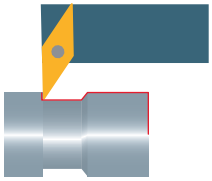
SVQC… (93°)



Turning and facing

Holders 323

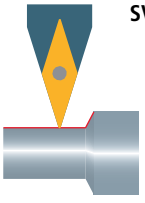
SVUC… (93°)



Turning

Holders 324

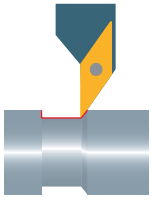
SVVCN… U (72.5°)



Back turning

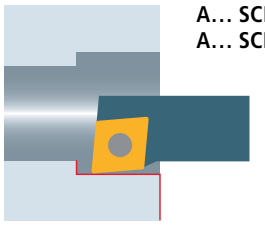
Holders 326

SVXC… U (91°)



Turning and facing

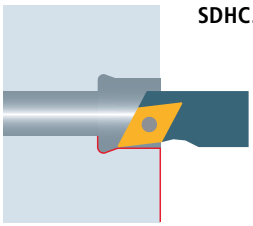
Holders 236/237



A... SCFC... (90°)
A... SCLC... (95°)

Turning and facing

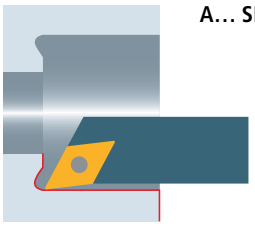
Holders 276



SDHC... (107.5°)

Turning and facing

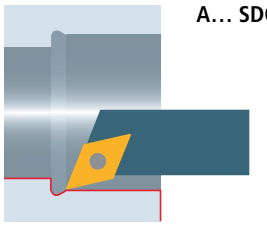
Holders 278



A... SDOC... (95°)

Turning and facing

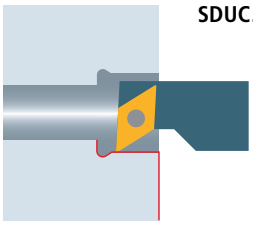
Holders 279



A... SDQC... (107.5°)

Turning and facing

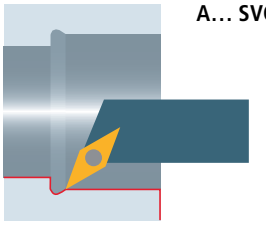
Holders 280



SDUC... (93°)

Turning and undercutting

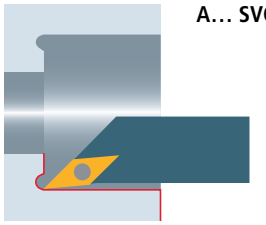
Holders 330



A... SVQC... (107.5°)

Turning and facing

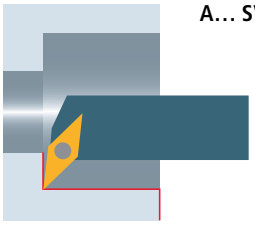
Holders 331



A... SVOC... (95°)

Turning and facing

Holders 332



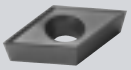
A... SVUC... (93°)

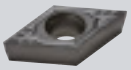
Inserts 217/239/285/295

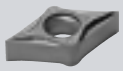
All illustrations show right hand design. Left hand design is also available.

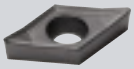
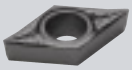
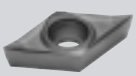
Carbide inserts

	Tolerance class	Cutting edge Design						
	E Ground circumference and chip breaker	F Sharp cutting edge						
	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Super-fine finishing	**CCET … FR -U**  218	**DCET … FR -U**  240		0.03	23°	●	–	–
				0.1		●	–	–
				0.2		●	–	–
				0.4		●	–	–
				–		○	–	–
	Very wear-resistant and temperature-resistant micrograin. Very sharp cutting edge for superfinishing small parts.							

	Tolerance class	Cutting edge Design						
	G Ground circumference	F Sharp cutting edge						
	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Micro finishing Finishing		**DCGT… FN-PF05**  241	**VCGT… FN-PF05**  296	0.05	17°	●	●	–
				0.1		●	●	–
				0.15		●	●	–
				0.2		●	○	–
				0.4		●	○	–
	Very wear-resistant and temperature-resistant micrograin. Very good chip control when micro finishing and finishing materials with difficult chip control. With TX+ coating also suitable for hard cutting.							
Micro finishing Finishing		**DCGT … FN -A3**  242	**VCGT … FN -A3**  297	0.06	24°	○	○	–
				0.08		●	●	–
				0.1		●	●	–
				0.15		○	○	–
				0.35		●	–	–
	Very wear-resistant and temperature-resistant micrograin. For the micro finishing and finishing of stainless steel and superalloys. With TX+ coating and substrate UHM10, also suitable for hard cutting. Wide range of corner radii.							
Micro finishing Finishing	**CCGT … FN -PF23**  219	**DCGT … FN -PF23**  243	**VCGT … FN -PF23**  298	0.03	10°	●	●	–
				0.05		●	●	–
				0.1		●	●	–
				0.2		○	○	–
				–		–	–	–
	Excellent chip control and surface quality during finishing and micro finishing of steel, stainless steel and in superalloys.							
Micro finishing Finishing		**DCGT … FN -PF33**  244	**VCGT … FN -PF33**  299	0.05	13°	○	○	–
				0.1		●	●	○
				0.2		●	●	○
				0.4		○	○	–
				–		–	–	–
	Excellent chip control and surface quality during finishing and micro finishing of stainless steel and in superalloys.							

	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Finishing		**DCGT … FN -PF**  245		0.1	14°	–	●	–
				0.2		–	●	–
				0.4		○	○	–
				–		–	–	–
				–		–	–	–
	Good chip control when finishing steels.							

	Type and chip breaker			Corner radius		Machining method		
		DN.. (55°)		R (mm)		▼▼▼	▼▼	▼
Micro finishing Finishing		**DNGU … FN -A4**  286		0.08	12°	●	●	–
				0.15		●	●	–
				0.35		●	●	–
				–		○	–	–
				–		○	–	–
	Tough and wear-resistant micrograin for finishing steel, stainless steel and superalloys. Best price/performance ratio due to 4 cutting edges. Clamping with Torx screws in the designated UTILIS holders or can also be used in holders with a knee-lever clamping.							

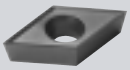
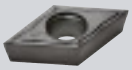
	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Finishing Roughing	**CCGT … FN -PA3**  220	**DCGT … FN -PA3**  246		0.2	28°	○	–	–
				0.4		○	–	–
				0.8		○	–	–
				–		–	●	●
				–		–	–	–
	Low adhesion tendency and good chip control with soft aluminium alloys. With coating, can also be used in steels, stainless steel and superalloys.							
Micro finishing Finishing Roughing	**CCGT … FN -PA5**  221	**DCGT … FN -PA5**  247	**VCGT … FN -PA5**  300	0.2	20°	○	○	–
				0.4		○	○	–
				0.8		○	○	–
				–		●	●	●
				–		–	–	–
	Good chip control even with larger cutting depths in aluminium alloys. With coating, can also be used in steels, stainless steel and superalloys.							
Micro finishing Finishing Roughing		**DCGT … -TOP5**  248	**VCGT … -TOP5**  301	0.4	20°	○	○	–
				0.8		○	○	–
				–		○	○	–
				–		●	●	●
				–		–	–	–
	Good chip control even with larger cutting depths in aluminium alloys. Cutting edge geometry for high feeds and high surface quality. With coating, can also be used in steels, stainless steel and superalloys.							
Micro finishing Finishing Roughing	**CCGT … FN -PA7**  222	**DCGT … FN -PA7**  249	**VCGT … FN -PA7**  302	0.05	22°	○	–	–
				0.1		○	–	–
				0.2		○	–	–
				0.4		●	●	●
				0.8		–	–	–
	Universal aluminium geometry. Low to high cutting depths and feeds possible. With coating, can also be used in steels, stainless steel and superalloys.							

Carbide inserts

Tolerance class	Cutting edge Design
X	E
Precision sintered	Slightly rounded cutting edge

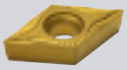
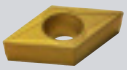
	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Finishing Roughing	**CCXT … EN -PA9**  223	**DCXT … EN -PA9**  250	**VCXT … EN -PA9**  303	0.4	21°	–	–	–
				0.8		○	–	–
				–		○	–	–
				–		○	●	●
				–		–	–	–
	Precision-sintered value-line insert for machining of aluminium alloys.							

Tolerance class	Cutting edge Design
G	E
Ground circumference	Slightly rounded cutting edge

	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Finishing Roughing		**DCGT… EN -A3**  251	**VCGT… EN -A3**  304	0.06	24°	–	○	○
				0.08		–	●	●
				0.15		–	●	●
				0.35		–	○	○
				–		○	–	–
	Wear-resistant and tough micrograin. For the finishing and roughing of stainless steel and superalloys. Longer tool life due to rounded cutting edge.							
Finishing	**CCGT … EN -PF23**  224	**DCGT … EN -PF23**  252	**VCGT … EN -PF23**  305	0.05	10°	–	●	○
				0.1		–	●	○
				0.2		–	●	○
				–		–	○	○
				–		–	–	–
	Excellent chip control and surface quality during finishing of steel, stainless steel and in superalloys. Longer tool life due to rounded cutting edge.							
Finishing		**DCGT … EN -PF33**  253	**VCGT … EN -PF33**  306	0.05	13°	–	○	–
				0.1		–	●	○
				0.2		–	●	○
				0.4		–	○	–
				–		–	–	–
	Excellent chip control and surface quality during finishing of stainless steel and in superalloys. Longer tool life due to rounded cutting edge.							

Carbide inserts

Tolerance class	Cutting edge Design
M	E
Sintered	Rounded cutting edge

	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Finishing	**CCMT … EN -PF43**  225	**DCMT … EN -PF43**  254	**VCMT … EN -PF43**  307	0.2	8°	○	●	○
				0.4		○	●	○
				0.8		–	–	–
				–		–	–	–
				–		–	–	–
	Good chip control during finishing and micro finishing of steel and stainless materials. Long tool life even at high cutting speeds.							
Roughing	**CCMT … EN -PM**  226	**DCMT … EN -PM**  255	**VCMT … EN -PM**  308	0.4	15°	–	○	●
				0.8		–	○	●
				–		–	○	○
				–		–	–	–
				–		–	–	–
	Universally applicable. For roughing and for the medium machining application range in steel and stainless steel. Very stable cutting edge.							

Cermet inserts

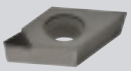
Tolerance class	Cutting edge Design
G	E
Ground circumference	Slightly rounded cutting edge

	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Micro finishing Finishing	**CCGT … EN -PF**  227	**DCGT … EN -PF**  256	**VCGT … EN -PF**  309	0.1	15°	●	●	–
				0.2		●	●	–
				0.4		–	–	–
				0.8		–	–	–
				–		–	–	–
	Cermet grade for finishing and contour turning in steel and stainless steel. Good chip control and long tool life with high cutting speeds.							

Tolerance class	Cutting edge Design
M	E
Sintered	Rounded cutting edge

	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Finishing	**CCMT … EN -PMF**  228	**DCMT… EN -PMF**  257	**VCMT… EN -PMF**  310	0.2	11°	○	●	–
				0.4		○	●	–
				0.8		–	–	–
				–		–	–	–
				–		–	–	–
	Cermet grade for the medium machining application range in steel and stainless steel. Good chip control and long tool life with high cutting speeds. Good surface quality.							

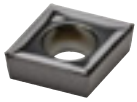
Diamond inserts

	Tolerance class	Cutting edge Design						
	G	F						
	Ground circumference	Sharp cutting edge						
	Type and chip breaker			Corner radius		Machining method		
	CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Micro finishing Finishing	**CCGT … FN**  229	**DCGT … FN**  258	**VCGT … FN**  311	0.1	7°	–	–	–
				0.2		–	–	–
				0.4		–	–	–
				0.8		●	●	○
				–		–	–	–
	PCD micrograin UPCD15 suitable for micro finishing and finishing NE materials with low quantities of abrasive fillers. PCD coarse grain UPCD20 suitable for micro finishing and finishing NE materials with low to very high quantities of abrasive fillers. 7° positively brazed segment for low cutting pressure. Especially suitable for thin-walled and unstable work pieces.							
Micro finishing Finishing		**DCGW… FN**  259	**VCGW… FN**  312	0.05	0°	–	–	–
				0.1		–	–	–
				0.2		–	–	–
				0.4		●	●	○
				0.8		–	–	–
	CVD micrograin UCVD08 suitable for micro finishing NE materials and NE composite materials with low to high quantities of abrasive fillers. PCD micrograin UPCD15 suitable for micro finishing and finishing NE materials with low quantities of abrasive fillers. PCD coarse grain UPCD20 suitable for micro finishing and finishing NE materials with low to very high quantities of abrasive fillers. Higher cutting pressure. Suitable for more stable work pieces.							
Micro finishing	**CCGT … FN -UWS**  230	**DCGT … FN -UWS**  260	**VCGT … FN -UWS**  313	0.1	7°	–	–	–
				0.2		–	–	–
				0.4		–	–	–
				0.8		●	○	○
				–		–	–	–
	CVD micrograin UCVD08 suitable for micro finishing NE materials and NE composite materials with low to high quantities of abrasive fillers. PCD micrograin UPCD15 suitable for micro finishing NE materials with low quantities of abrasive fillers. PCD coarse grain UPCD20 suitable for micro finishing NE materials with low to very high quantities of abrasive fillers. UWS chip breaker with extremely sharp cutting edge for superfinishing.							
Micro finishing Finishing	**CCGT … FN -UWN**  231	**DCGT … FN -UWN**  261	**VCGT … FN -UWN**  314	0.2	7°	–	–	–
				0.4		–	–	–
				0.8		–	–	–
				–		●	●	○
				–		–	–	–
	CVD micrograin UCVD08 suitable for micro finishing NE materials and NE composite materials with low to high quantities of abrasive fillers. PCD micrograin UPCD15 suitable for micro finishing and finishing NE materials with low quantities of abrasive fillers. PCD coarse grain UPCD20 suitable for micro finishing and finishing NE materials with low to very high quantities of abrasive fillers. UWN chip breaker with slightly negative insert geometry for semi-finishing and finishing.							
Micro finishing Finishing	**CCGT … FN TOP -UWN**  232			0.2	7°	–	–	–
				0.4		–	–	–
				–		–	–	–
				–		●	●	○
				–		–	–	–
	CVD micrograin UCVD08 suitable for micro finishing NE materials and NE composite materials with low to high quantities of abrasive fillers. PCD micrograin UPCD15 suitable for micro finishing and finishing NE materials with low quantities of abrasive fillers. PCD coarse grain UPCD20 suitable for micro finishing and finishing NE materials with low to very high quantities of abrasive fillers. UWN chip breaker with cutting edge "TOP" for ultimate surface quality.							

Notes

multidec®-ISO, type CC... (80°)

multidec®-ISO provides a well balanced range of tools for turning with rhombic 80° inserts and holders. Positive inserts with rounded cutting edges for roughing and sharp cutting edges for finishing are available.
These include a wide range of ground holders with hardened and nickel-plated surfaces for Swiss type automatic lathes with shank sizes from 8 to 20 mm and boring bars with diameters from 8 to 20 mm.





Advantages:
– High cutting volume with high feed rates
– Carbide and Cermet grades with chip breaker and coatings for all common materials
– Diamond range with CVD and PCD inserts for machining non-ferrous metals
– Cutting edge radius from 0.03 to 0.8 mm as standard
– Boring bars with steel- and carbide shank



"IC" tool holder with integrated cooling

Cost-efficient processing of modern materials increasingly requires accurate control of the coolant at the cutting edge. Conveying the coolant as close as possible to the cutting edge is often a difficult task in the machine rooms of Swiss type turning lathes.
The multidec®-IC program offers a wide range of holders with integrated cooling. Because of the high precision and pressure, it is possible to discharge the chip quickly and safely from the cutting edge and the workpiece, which protects the cutting edge of the insert. This means significantly longer tool life as well as very reliable serial production.

Advantages:
– All holders feature five possible connectors for the coolant supply
– Constant coolant discharge means low build-up at front near the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely

Overview – multidec®-ISO, type CC... (80°)

Technical information 9



Inserts (Carbide)

CCET … FR -U 218
CCGT … FN -PF23 219
CCGT … FN -PA3 220
CCGT … FN -PA5 221
CCGT … FN -PA7 222
CCXT … EN -PA9 223
CCGT … EN -PF23 224
CCMT … EN -PF43 225
CCMT … EN -PM 226



Inserts (Cermet)

CCGT … EN -PF 227
CCMT … EN -PMF 228



Inserts (Diamond)

CCGT … FN 229
CCGT … FN -UWS 230
CCGT … FN -UWN 231
CCGT … FN TOP -UWN 232



Holders (OD turning)

SCAC… U (90°) 233
SCDC… U (45°) 233
SCLC… U (95°), SCLC… U (95°) INCH 234
SCLC… U IC (95°), SCLC… U IC (95°) INCH 235



Holders (ID turning)

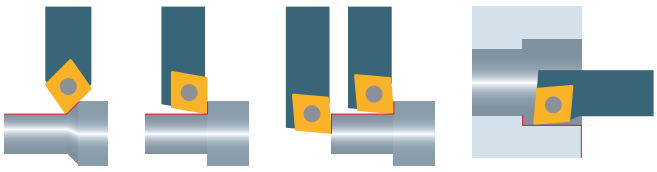
A… SCFC… (90°) 236
A… SCLC… (95°) 237



Replacement and spare parts 237

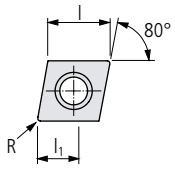


Coolant system and accessories 671



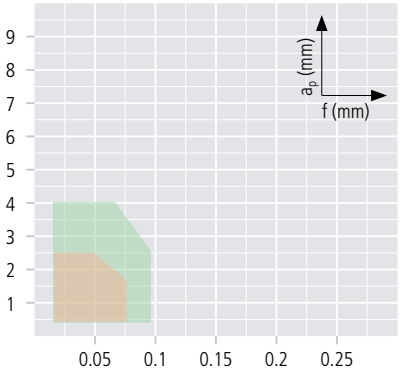


CCET … FR -U



Order designation	Carbide ▯18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		▯233…
PREMIUM-LINE																								
CCET 0602003 FR -U …	■	■	■																	6.4	0.03	2.5		SC…06…
CCET 060201 FR -U …	■	■	■																	6.4	0.1	2.5		SC…06…
CCET 060202 FR -U …	■	■	■																	6.4	0.2	2.5		SC…06…
CCET 09T3003 FR -U …	■	■	■																	9.7	0.03	4		SC…09…
CCET 09T301 FR -U …	■	■	■																	9.7	0.1	4		SC…09…
CCET 09T302 FR -U …	■	■	■																	9.7	0.2	4		SC…09…

Application range — multidec®-ISO



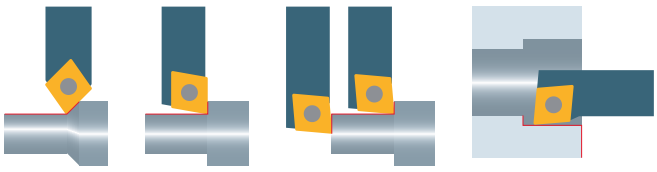
Optimal chip breaking

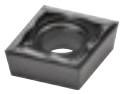
CCET 06
CCET 09

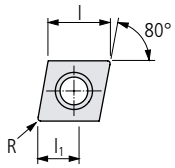
Cutting specification ▯334…
Technical information ▯9…
Legend ▯6…

Inserts (Carbide)

multidec®-ISO





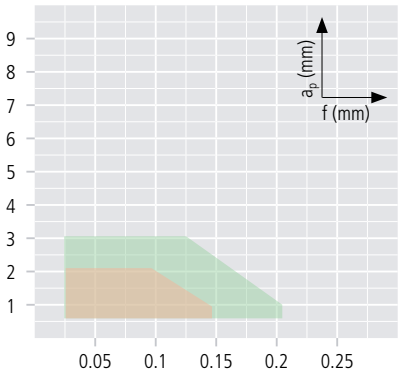


CCGT … FN -PF23

Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
–	–	●	●	○	●	●	●	○	○	●	●	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	○	○	●	●	●	●	○	●	○	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
STANDARD-LINE																								
N	CCGT 0602005 FN -PF23 …	■	■	■		■	■	■												6.4	0.05	2		SC…06…
	CCGT 060201 FN -PF23 …	■	■	■		■	■	■												6.4	0.1	2		SC…06…
	CCGT 060202 FN -PF23 …	■	■	■		■	■	■												6.4	0.2	2		SC…06…
	CCGT 09T3005 FN -PF23 …	■	■	■		■	■	■												9.7	0.05	3		SC…09…
	CCGT 09T301 FN -PF23 …	■	■	■		■	■	■												9.7	0.1	3		SC…09…
	CCGT 09T302 FN -PF23 …	■	■	■		■	■	■												9.7	0.2	3		SC…09…

Application range

multidec®-ISO



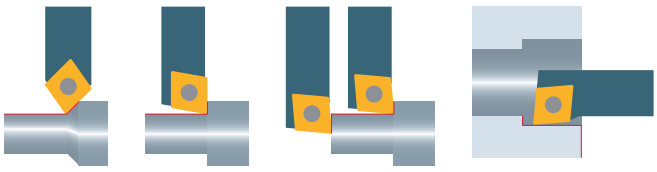
Optimal chip breaking

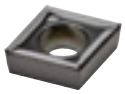
CCGT 06
CCGT 09

Cutting specification 334…
Technical information 9…

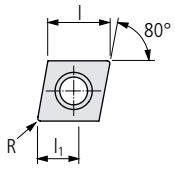
Legend 6…

Inserts (Carbide) — multidec®-ISO



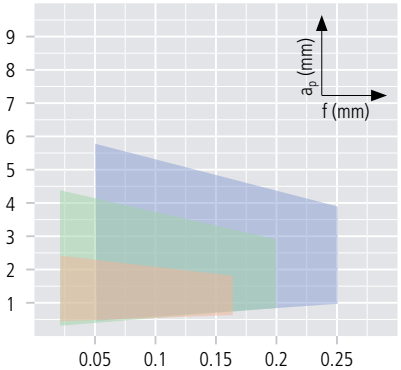


CCGT … FN -PA3



Order designation	Carbide (UHM 10 · UHM 10 HX · UHM 10 TX+ · UHM 10 MZ · UHM 20 · UHM 20 HPX · UHM 20 TX+ · UHM 20 MZ · UHM 30 · UHM 30 HX · UHM 30 TX+ · UHM 30 MZ · UHM 30 SX) 18	Cermet (UCM 10 · UCM 10 HX · UCM 10 MZ)	Diamond (UCVD 08 · UPCD 15 · UPCD 20)	Dimensions l	R	l_1		Holders 233…
STANDARD-LINE								
N CCGT 060202 FN -PA3 …	■ ■ ■			6.4	0.2	4		SC…06…
CCGT 060204 FN -PA3 …	■ ■ ■			6.4	0.4	4		SC…06…
CCGT 09T304 FN -PA3 …	■ ■ ■			9.7	0.4	4		SC…09…
CCGT 09T308 FN -PA3 …	■ ■ ■			9.7	0.8	4		SC…09…

Application range — multidec®-ISO



Optimal chip breaking

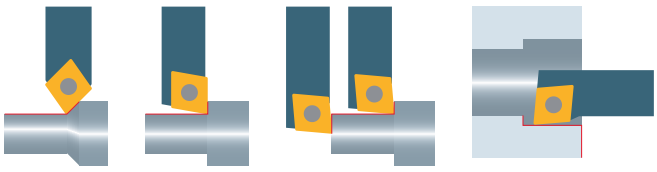
CCGT 06
CCGT 09
CCGT 12

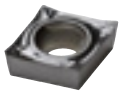
Cutting specification 334…
Technical information 9…

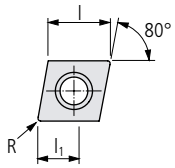
Legend 6…

Inserts (Carbide)

multidec®-ISO





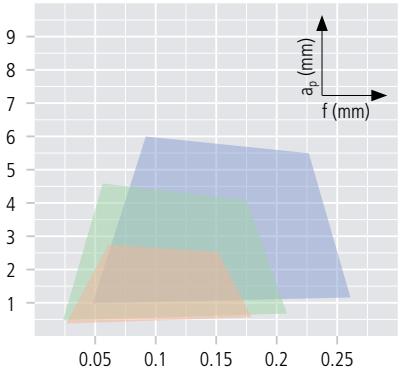


CCGT … FN -PA5

Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
STANDARD-LINE																								
N	CCGT 060202 FN -PA5 …	■	■	■																6.4	0.2	4		SC…06…
	CCGT 060204 FN -PA5 …	■	■	■																6.4	0.4	4		SC…06…
	CCGT 09T302 FN -PA5 …	■	■	■																9.7	0.2	6		SC…09…
	CCGT 09T304 FN -PA5 …	■	■	■																9.7	0.4	6		SC…09…
	CCGT 09T308 FN -PA5 …	■	■	■																9.7	0.8	6		SC…09…
	CCGT 120402 FN -PA5 …	■	■	■																12.9	0.2	8		SC…12…
	CCGT 120404 FN -PA5 …	■	■	■																12.9	0.4	8		SC…12…
	CCGT 120408 FN -PA5 …	■	■	■																12.9	0.8	8		SC…12…

Application range

multidec®-ISO



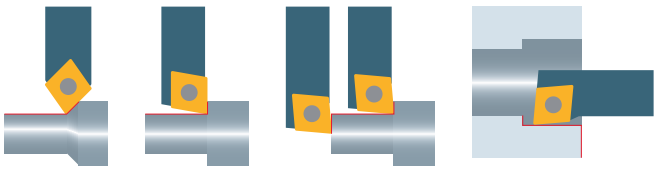
Optimal chip breaking

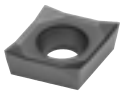
CCGT 06
CCGT 09
CCGT 12

Cutting specification 334…
Technical information 9…

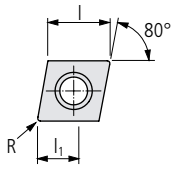
Legend 6…

Inserts (Carbide) — multidec®-ISO



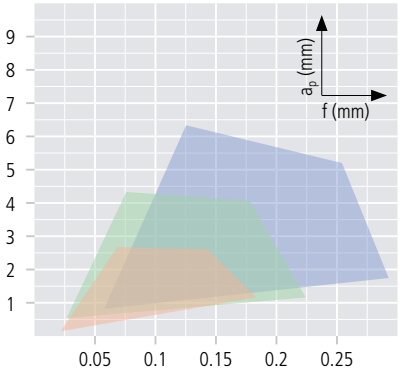


CCGT … FN -PA7



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
STANDARD-LINE																								
CCGT 060202 FN -PA7 …	■	■	■																	6.4	0.2	4		SC…06…
CCGT 060204 FN -PA7 …	■	■	■																	6.4	0.4	4		SC…06…
CCGT 09T3005 FN -PA7 …	■	■	■																	9.7	0.05	6		SC…09…
CCGT 09T301 FN -PA7 …	■	■	■																	9.7	0.1	6		SC…09…
CCGT 09T302 FN -PA7 …	■	■	■																	9.7	0.2	6		SC…09…
CCGT 09T304 FN -PA7 …	■	■	■																	9.7	0.4	6		SC…09…
CCGT 09T308 FN -PA7 …	■	■	■																	9.7	0.8	6		SC…09…
CCGT 120402 FN -PA7 …	■	■	■																	12.9	0.2	8		SC…12…
CCGT 120404 FN -PA7 …	■	■	■																	12.9	0.4	8		SC…12…
CCGT 120408 FN -PA7 …	■	■	■																	12.9	0.8	8		SC…12…

Application range — multidec®-ISO



Optimal chip breaking

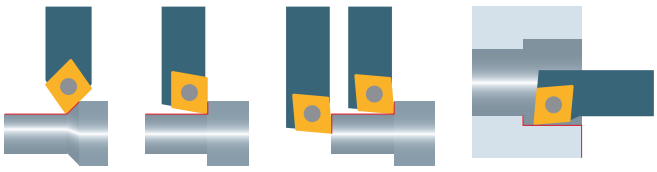
CCGT 06
CCGT 09
CCGT 12

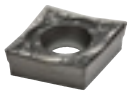
Cutting specification … 334…
Technical information … 9…

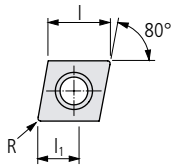
Legend … 6…

Inserts (Carbide)

multidec®-ISO





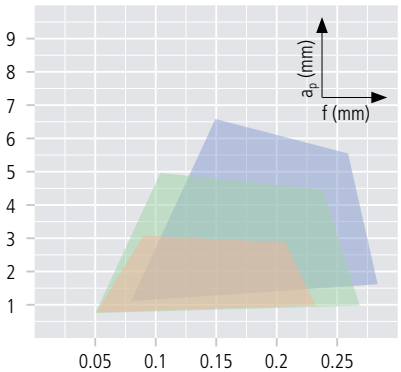


CCXT … EN -PA9

Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
VALUE-LINE																								
N CCXT 060204 EN -PA9 …	■	■	■																	6.4	0.4	4		SC…06…
CCXT 09T304 EN -PA9 …	■	■	■																	9.7	0.4	6		SC…09…
CCXT 09T308 EN -PA9 …	■	■	■																	9.7	0.8	6		SC…09…

Application range

multidec®-ISO

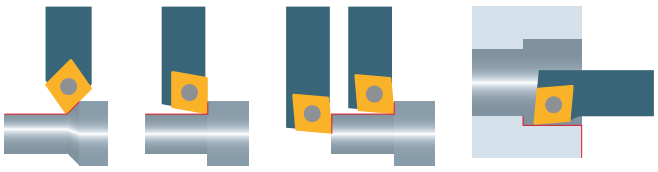


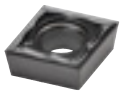
Optimal chip breaking

CCXT 06
CCXT 09
CCXT 12

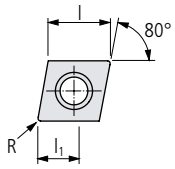
Cutting specification 334…
Technical information 9…

Legend 6…



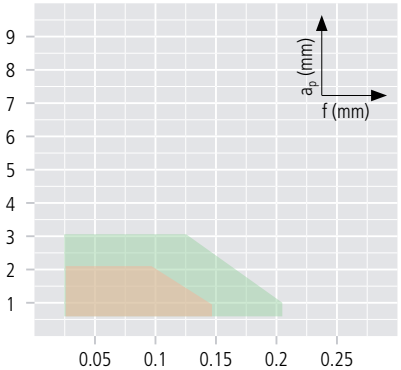


CCGT … EN -PF23



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
–	–	●	●	○	●	●	●	○	○	●	●	●	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	○	○	●	●	●	●	○	●	●	○	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
STANDARD-LINE																								
N	CCGT 0602005 EN -PF23 …				■	■	■													6.4	0.05	2		SC…06…
	CCGT 060201 EN -PF23 …				■	■	■													6.4	0.1	2		SC…06…
	CCGT 060202 EN -PF23 …				■	■	■													6.4	0.2	2		SC…06…
	CCGT 09T3005 EN -PF23 …				■	■	■													9.7	0.05	3		SC…09…
	CCGT 09T301 EN -PF23 …				■	■	■													9.7	0.1	3		SC…09…
	CCGT 09T302 EN -PF23 …				■	■	■													9.7	0.2	3		SC…09…

Application range — multidec®-ISO



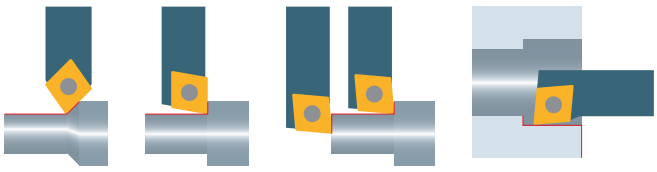
Optimal chip breaking

CCGT 06
CCGT 09

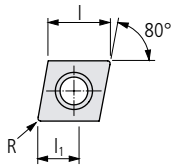
Cutting specification 334…
Technical information 9…
Legend 6…

Inserts (Carbide)

multidec®-ISO





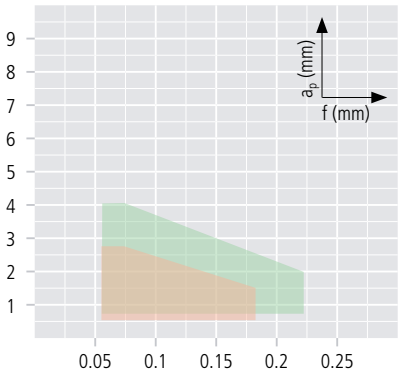


CCMT … EN -PF43

Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
–	–	●	●	○	●	●	●	○	○	●	●	○	●	●	●	–	–	–						
–	●	●	–	○	●	●	○	○	●	●	●	●	○	●	○	–	–	–						
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	●	●	●						
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
VALUE-LINE																								
N CCMT 060202 EN -PF43 …								■												6.4	0.2	2.6		SC…06…
CCMT 060204 EN -PF43 …								■												6.4	0.4	2.6		SC…06…
CCMT 09T302 EN -PF43 …								■												9.7	0.2	4		SC…09…
CCMT 09T304 EN -PF43 …								■												9.7	0.4	4		SC…09…

Application range

multidec®-ISO

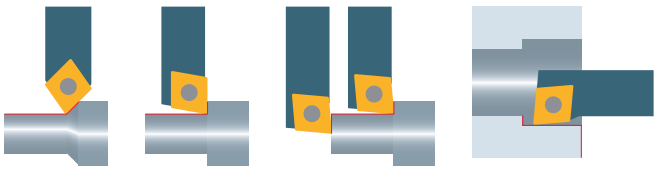


Optimal chip breaking

CCMT 06
CCMT 09

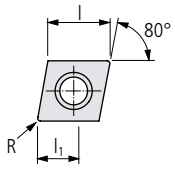
Cutting specification 334…
Technical information 9…

Legend 6…



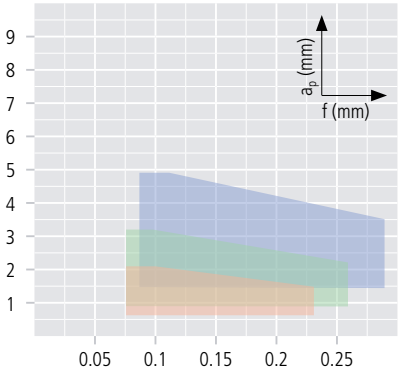


CCMT … EN -PM



Order designation	Carbide ▯18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		▯233…
VALUE-LINE																								
N CCMT 060204 EN -PM …				■				■				■								6.4	0.4	2		SC…06…
N CCMT 060208 EN -PM …				■								■								6.4	0.8	2		SC…06…
N CCMT 09T304 EN -PM …				■				■				■								9.7	0.4	3.2		SC…09…
N CCMT 09T308 EN -PM …				■				■				■								9.7	0.8	3.2		SC…09…
N CCMT 120404 EN -PM …				■				■				■								12.9	0.4	4.8		SC…12…
N CCMT 120408 EN -PM …				■				■				■								12.9	0.8	4.8		SC…12…

Application range — multidec®-ISO

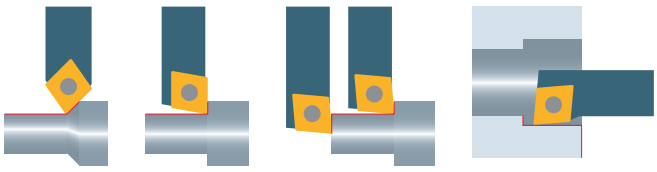


Optimal chip breaking

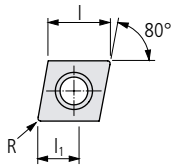
CCMT 06
CCMT 09
CCMT 12

Cutting specification ▯334…
Technical information ▯9…
Legend ▯6…

Inserts (Cermet) — multidec®-ISO



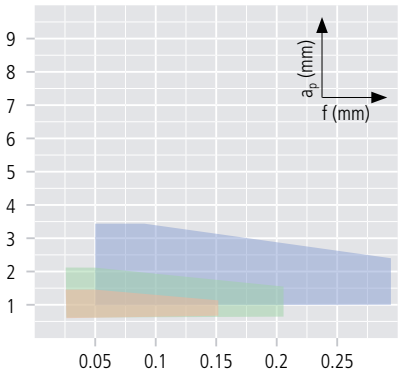




CCGT … EN -PF

Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
STANDARD-LINE																								
N																								
CCGT 060202 EN -PF …														■	■	■				6.4	0.2	1.5		SC…06…
CCGT 060204 EN -PF …														■	■	■				6.4	0.4	1.5		SC…06…
CCGT 09T302 EN -PF …														■	■	■				9.7	0.2	2		SC…09…
CCGT 09T304 EN -PF …														■	■	■				9.7	0.4	2		SC…09…
CCGT 09T308 EN -PF …																■				9.7	0.8	2		SC…09…
CCGT 120404 EN -PF …														■	■					12.9	0.4	3.2		SC…12…

Application range — multidec®-ISO

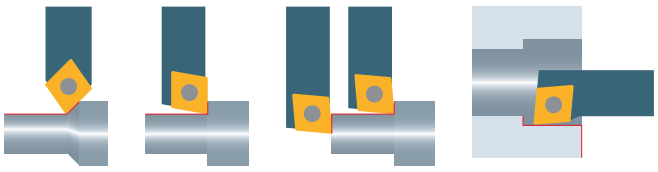


Optimal chip breaking

CCGT 06
CCGT 09
CCGT 12

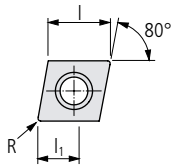
Cutting specification 334…
Technical information 9…

Legend 6…



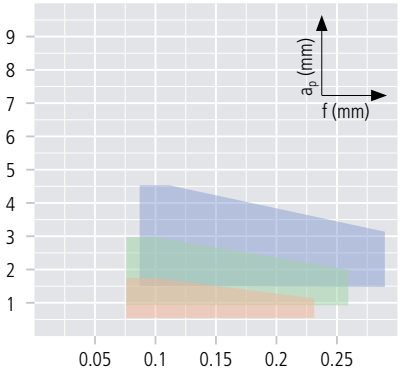


CCMT … EN -PMF



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
VALUE-LINE																								
N CCMT 060204 EN -PMF …																■				6.4	0.4	2		SC…06…
CCMT 09T304 EN -PMF …																■				9.7	0.4	3.2		SC…09…
CCMT 09T308 EN -PMF …																■				9.7	0.8	3.2		SC…09…
CCMT 120404 EN -PMF …																■				12.9	0.4	4.8		SC…12…

Application range — multidec®-ISO



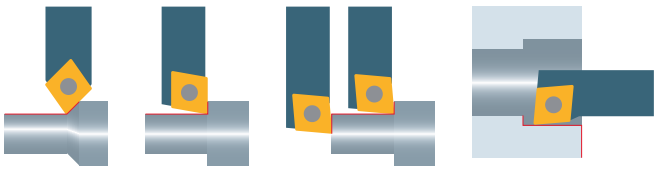
Optimal chip breaking

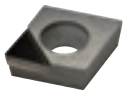
CCMT 06
CCMT 09
CCMT 12

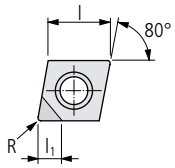
Cutting specification 334…
Technical information 9…
Legend 6…

Inserts (Diamond)

multidec®-ISO





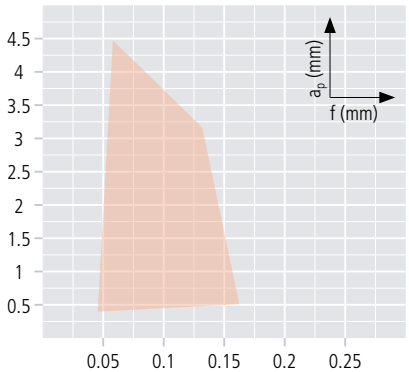


CCGT … FN

Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		
STANDARD-LINE																								
N																								
CCGT 060201 FN …																	■	■		6.4	0.1	3.5		SC…06…
CCGT 060202 FN …																	■	■		6.4	0.2	3.5		SC…06…
CCGT 060204 FN …																	■			6.4	0.4	3.5		SC…06…
CCGT 09T302 FN …																	■	■		9.7	0.2	4.5		SC…09…
CCGT 09T304 FN …																	■			9.7	0.4	4.3		SC…09…

Application range

multidec®-ISO

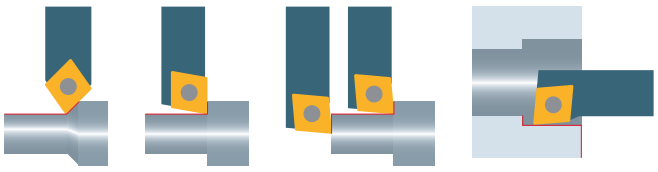


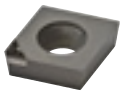
Optimal chip breaking

CCGT

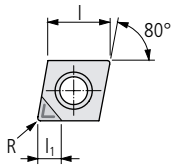
Cutting specification ..... 334…
Technical information ..... 9…

Legend ..... 6…



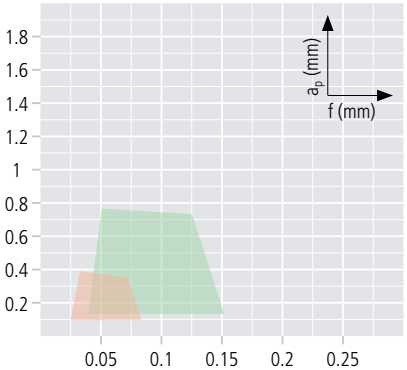


CCGT … FN -UWS



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
STANDARD-LINE																								
N CCGT 060202 FN -UWS …																	■	■		6.4	0.2	3		SC…06…
CCGT 060204 FN -UWS …																	■	■		6.4	0.4	3		SC…06…
CCGT 09T302 FN -UWS …																		■		9.7	0.2	3		SC…09…
CCGT 09T304 FN -UWS …																	■	■		9.7	0.4	3		SC…09…

Application range — multidec®-ISO



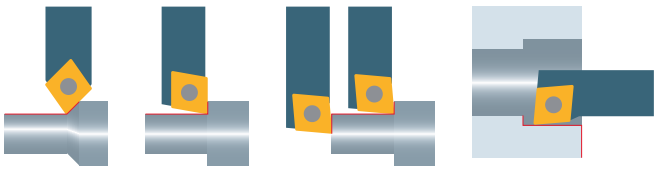
Optimal chip breaking

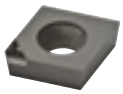
R 0.2
R 0.4

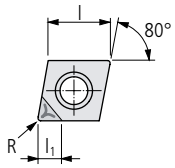
Cutting specification 334…
Technical information 9…
Legend 6…

Inserts (Diamond)

multidec®-ISO





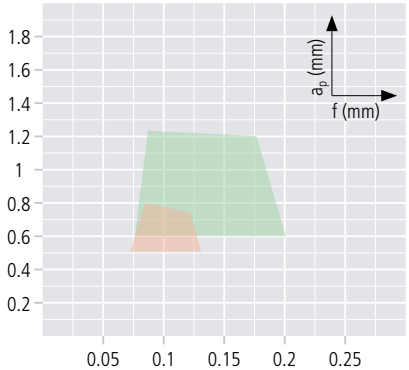


CCGT … FN -UWN

Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		(233…)
STANDARD-LINE																								
N	CCGT 060202 FN -UWN …																■		■	6.4	0.2	3		SC…06…
	CCGT 060204 FN -UWN …																■	■	■	6.4	0.4	3		SC…06…
	CCGT 09T302 FN -UWN …																■		■	9.7	0.2	3		SC…09…
	CCGT 09T304 FN -UWN …																■		■	9.7	0.4	3		SC…09…

Application range

multidec®-ISO

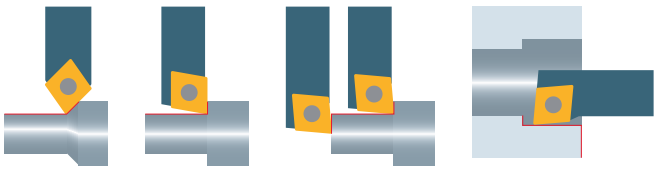


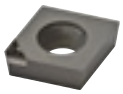
Optimal chip breaking

R 0.2
R 0.4

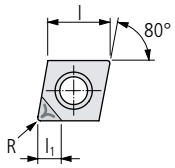
Cutting specification … 334…
Technical information … 9…

Legend … 6…





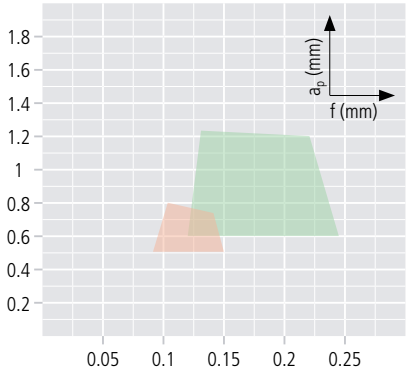
CCGT … FN TOP* -UWN



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		233…
STANDARD-LINE																								
N CCGT 060202 FN TOP -UWN …																		■	■	6.4	0.2	3		SC…06…
CCGT 060204 FN TOP -UWN …																		■	■	6.4	0.4	3		SC…06…
CCGT 09T302 FN TOP -UWN …																	■	■	■	9.7	0.2	3		SC…09…
CCGT 09T304 FN TOP -UWN …																	■	■	■	9.7	0.4	3		SC…09…

* Description TOP … 11

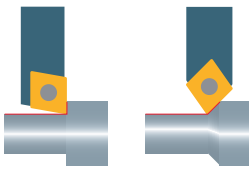
Application range — multidec®-ISO



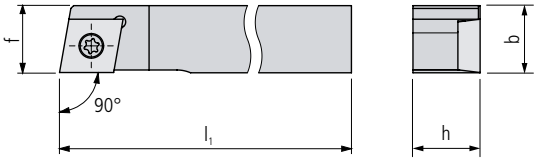
Optimal chip breaking

R 0.2
R 0.4

Cutting specification … 334…
Technical information … 9…
Legend … 6…



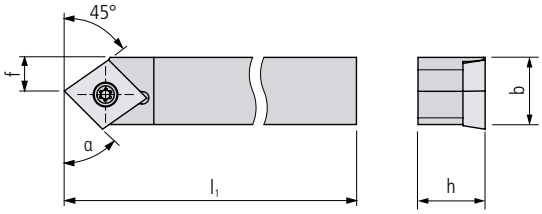




SCAC… U (90°)

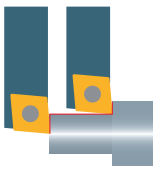
Order designation L		Order designation R		Dimensions b	h	l_1		f				Inserts 217…
STANDARD-LINE												
SCACL 0808 K06 U	■	SCACR 0808 K06 U	■	8	8	125		8				CC..0602..
SCACL 1010 M06 U	■	SCACR 1010 M06 U	■	10	10	150		10				CC..0602..
SCACL 1212 M09 U	■	SCACR 1212 M09 U	■	12	12	150		12				CC..09T3..
SCACL 1616 H09 U	■	SCACR 1616 H09 U	■	16	16	100		16				CC..09T3..
SCACL 2020 K12 U	■	SCACR 2020 K12 U	■	20	20	125		20				CC..1204..



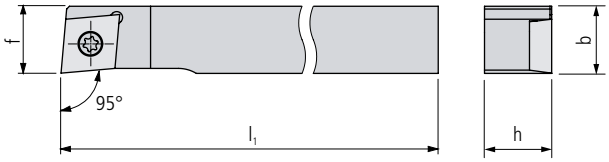


SCDC… U (45°)

Order designation L		Order designation R		Dimensions b	h	l_1		f		α		Inserts 217…
STANDARD-LINE												
SCDCL 0808 K06 U	■			8	8	125		4		55°		CC..0602..
SCDCL 1010 M06 U	■			10	10	150		5		55°		CC..0602..
SCDCL 1212 M09 U	■			12	12	150		6		55°		CC..09T3..





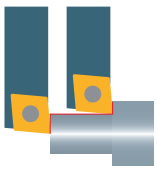


SCLC… U (95°)

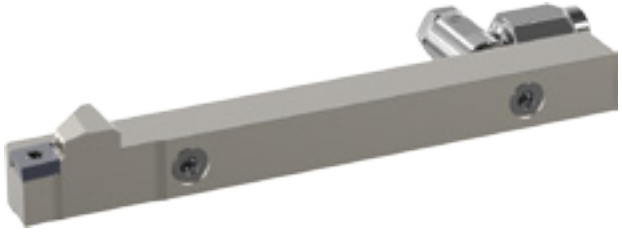
Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 217…
STANDARD-LINE												
SCLCL 0808 F06 U	■	SCLCR 0808 F06 U	■	8	8	80		7.95				CC..0602..
SCLCL 0808 H06 U	■	SCLCR 0808 H06 U	■	8	8	100		7.95				CC..0602..
SCLCL 1010 F06 U	■	SCLCR 1010 F06 U	■	10	10	80		9.95				CC..0602..
SCLCL 1010 H06 U	■	SCLCR 1010 H06 U	■	10	10	100		9.95				CC..0602..
SCLCL 1212 H09 U	■	SCLCR 1212 H09 U	■	12	12	100		11.95				CC..09T3..
SCLCL 1616 K09 U	■	SCLCR 1616 K09 U	■	16	16	125		15.95				CC..09T3..

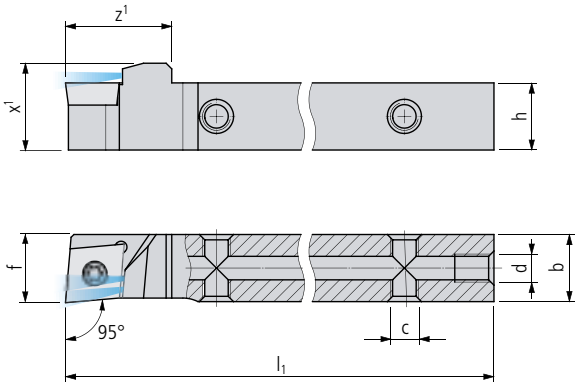
SCLC… U (95°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 217…
STANDARD-LINE												
SCLCL 3/8" H06 U	■	SCLCR 3/8" H06 U	■	9.525	9.525	100		9.475				CC..0602..
SCLCL 1/2" H09 U	■	SCLCR 1/2" H09 U	■	12.7	12.7	100		12.65				CC..09T3..
SCLCL 5/8" K09 U	■	SCLCR 5/8" K09 U	■	15.875	15.875	125		15.825				CC..09T3..



With internal cooling





SCLC… U IC (95°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 217…
PREMIUM-LINE												
SCLCL 0808 H06 U IC	■	SCLCR 0808 H06 U IC	■	8	8	100	16	11.5	M5	M5	7.95	CC.. 0602..
SCLCL 1010 H06 U IC	■	SCLCR 1010 H06 U IC	■	10	10	100	16	13.5	M5	M5	9.95	CC.. 0602..
SCLCL 1212 H09 U IC	■	SCLCR 1212 H09 U IC	■	12	12	100	19	15.5	M5	M5	11.95	CC.. 09T3..
SCLCL 1616 K09 U IC	■	SCLCR 1616 K09 U IC	■	16	16	125	19	19.5	M5	G⅛"	15.95	CC.. 09T3..

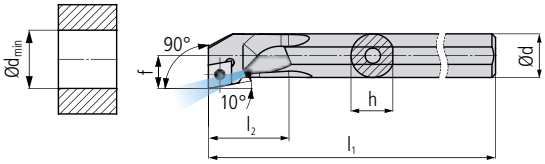
SCLC… U IC (95°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 217…
PREMIUM-LINE												
SCLCL 3/8" H06 U IC	■	SCLCR 3/8" H06 U IC	■	9.525	9.525	100	16	13	M5	M5	9.475	CC..0602...
SCLCL 1/2" H09 U IC	■	SCLCR 1/2" H09 U IC	■	12.7	12.7	100	19	16.2	M5	M5	12.65	CC..09T3..
SCLCL 5/8" K09 U IC	■	SCLCR 5/8" K09 U IC	■	15.875	15.875	125	19	19.4	M5	G⅛"	15.825	CC..09T3..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…





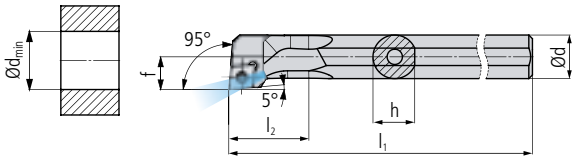


A... SCFC... (90°)

Order designation				Dimensions								Inserts
L		R		d	h	l$_1$	l$_2$	f	D$_{min}$			217...
STANDARD-LINE												
A08F SCFCL 06	■	A08F SCFCR 06	■	8	7.6	80	17	5	11			CC..0602..
A10H SCFCL 06	■	A10H SCFCR 06	■	10	9.5	100	19	7	13			CC..0602..
A12K SCFCL 06	■	A12K SCFCR 06	■	12	11.5	125	22	9	16			CC..0602..







A… SCLC… (95°)

Order designation L		Order designation R		Dimensions d	h	l_1	l_2	f	D_{min}			Inserts 217…
STANDARD-LINE												
A08F SCLCL 06	■	A08F SCLCR 06	■	8	7.5	80	17	5	11			CC..0602..
A10H SCLCL 06	■	A10H SCLCR 06	■	10	9.5	100	19	7	13			CC..0602..
A12K SCLCL 06	■	A12K SCLCR 06	■	12	11.5	125	22	9	16			CC..0602..
A16M SCLCL 09	■	A16M SCLCR 09	■	16	15.5	150	29	11	20			CC..09T3..
A20Q SCLCL 09	■	A20Q SCLCR 09	■	20	19.5	180	32	13	25			CC..09T3..

Replacement and spare parts — multidec®-ISO

For holders (SC…) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5×6 T08	MSP 25060 T08	■	SC… 06
		M3.5×11 T15	MSP 35110 T15	■	SC… 09
		M4.5×12 T15	MSP 45120 T15	■	SC… 12
	Screw plug	M5	MSP VSR M5 IB2.5	■	SC… (h≤–12)
		G⅛	MSP VSR G1/8 IB5	■	SC… (h≥–16)

For holders (… SC…) ID turning

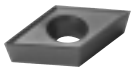
Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5×5 T08	MSP 25050 T08	■	A… SC… 06
		M3.5×7.2 T15	MSP 35072 T15	■	A16M SC…09
		M3.5×8.6 T15	MSP 35086 T15	■	A20Q SC… 09

TORX screwdriver 703…

Legend 6…

multidec®-ISO, type DC... (55°)

multidec®-ISO provides a well balanced range of tools for turning with rhombic 55° inserts and holders. Positive inserts with rounded cutting edges for roughing and sharp cutting edges for finishing are available.
These include a wide range of ground holders with hardened and nickel-plated surfaces for Swiss type automatic lathes with shank sizes from 8 to 20 mm and boring bars with diameters from 10 to 20 mm.





Advantages:
– Carbide and Cermet grades with chip breaker and coatings for all common materials
– Diamond range with CVD and PCD inserts for machining non-ferrous metals
– Cutting edge radius from 0.03 to 0.8 mm as standard
– Boring bars with steel- and carbide shanks



"IC" tool holder with integrated cooling

Cost-efficient processing of modern materials increasingly requires accurate control of the coolant at the cutting edge. Conveying the coolant as close as possible to the cutting edge is often a difficult task in the machine rooms of Swiss type turning lathes.
The multidec®-IC program offers a wide range of holders with integrated cooling. Because of the high precision and pressure, it is possible to discharge the chip quickly and safely from the cutting edge and the workpiece, which protects the cutting edge of the insert. This means significantly longer tool life as well as very reliable serial production.

Advantages:
– All holders feature five possible connectors for the coolant supply
– Constant coolant discharge means low build-up at front near the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely



"TWIN" holder with and without integrated coolant supply

The "TWIN" range allows you to work with two inserts on the same holder.
Different combinations are possible, and provide the user with a high degree of flexibility. Holders are available with shank cross-sections of 8 to 20 mm, with and without internal cooling.

Advantages:
– Twice the number of tools on the machine
– Two different turning operations are possible with a single tool holder
– All holders with an integrated coolant supply have five connecting options



"FC" holder with quick cutting edge change system (fast change)

The cutting edge can be changed without unclamping the holder using the "FC" holder. The indexable insert is mounted using a specially developed knee lever which is operated using a clamping screw on the rear of the holder.

Advantages:
– Quick indexable insert change directly in the machine
– Holder with and without integrated coolant supply

Overview – multidec®-ISO, type DC... (55°)

Technical information 9



Inserts (Carbide)

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DCGT … FN -A3, DCGT … FN -PF23 242
DCGT … FN -PF33, DCGT … FN -PF 244
DCGT … FN -PA3, DCGT … FN -PA5 246
DCGT … -TOP5, DCGT … FN -PA7 248
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Inserts (Cermet)

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Inserts (Diamond)

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SDJC… U (93°), SDJC… U (93°) INCH 266
SDJC… U IC (93°), SDJC… U IC (93°) INCH 267
SDJC… U FC (93°), SDJC… U FC (93°) INCH 268
SDJC… U FC IC (93°), SDJC… U FC IC (93°) INCH 269
SDNC… U (62.5°), SDNC… U (62.5°) INCH 270
SDNC… U IC (62.5°), SDNC… U IC (62.5°) INCH 271
SDNCN … U (62.5°), SDNCN … U (62.5°) INCH 272
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SDJC. (93°)/1600… TWIN IC, SDJC. (93°)/1600… TWIN IC INCH 275



Holders (ID turning)

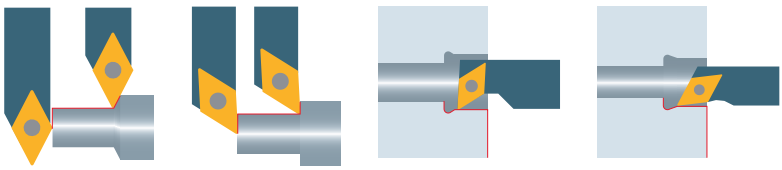
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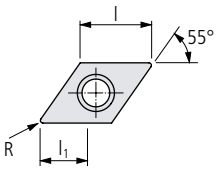


Coolant system and accessories 671



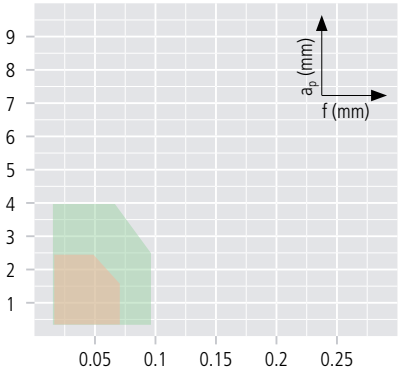


DCET … FR -U



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
PREMIUM-LINE																								
DCET 0702003 FR -U …	■	■	■																	7.75	0.03	2.5		SD…07…
DCET 070201 FR -U …	■	■	■																	7.75	0.1	2.5		SD…07…
DCET 070202 FR -U …	■	■	■																	7.75	0.2	2.5		SD…07…
DCET 11T301 FR -U …	■	■	■																	11.6	0.1	4		SD…11…
DCET 11T302 FR -U …	■	■	■																	11.6	0.2	4		SD…11…
DCET 11T304 FR -U …	■	■	■																	11.6	0.4	4		SD…11…

Application range — multidec®-ISO

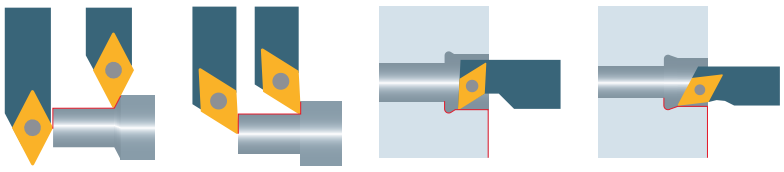


Optimal chip breaking

DCET 07
DCET 11

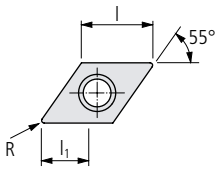
Cutting specification 334…
Technical information 9…
Legend 6…

Inserts (Carbide) — multidec®-ISO



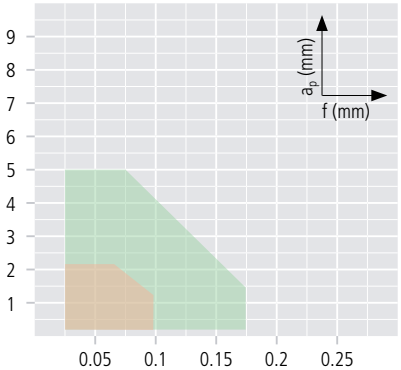


DCGT … FN -PF05



Order designation	Carbide ▯18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		▯263…
STANDARD-LINE																								
N DCGT 0702005 FN -PF05	■	■	■																	7.75	0.05	3		SD…07…
DCGT 070201 FN -PF05	■	■	■																	7.75	0.1	3		SD…07…
DCGT 0702015 FN -PF05	■	■	■																	7.75	0.15	3		SD…07…
DCGT 070202 FN -PF05	■	■	■																	7.75	0.2	3		SD…07…
DCGT 11T3005 FN -PF05	■	■	■																	11.6	0.05	6		SD…11…
DCGT 11T301 FN -PF05	■	■	■																	11.6	0.1	6		SD…11…
DCGT 11T3015 FN -PF05	■	■	■																	11.6	0.15	6		SD…11…
DCGT 11T302 FN -PF05	■	■	■																	11.6	0.2	6		SD…11…
DCGT 11T304 FN -PF05	■	■	■																	11.6	0.4	6		SD…11…

Application range — multidec®-ISO



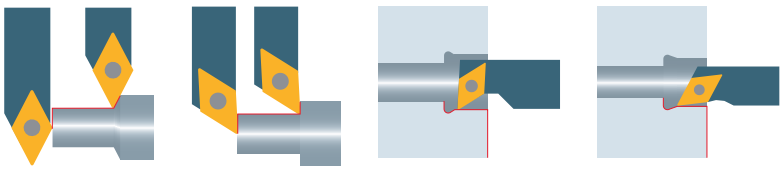
Optimal chip breaking

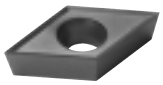
DCGT 07
DCGT 11

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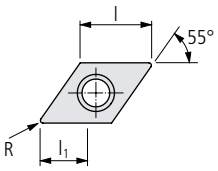
Legend ▯6…

Inserts (Carbide) — multidec®-ISO



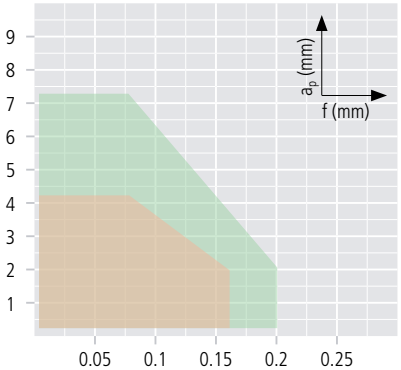


DCGT … FN -A3



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
N DCGT 0702006 FN -A3 …	■	■	■		■	■	■													7.75	0.06	4.1		SD…07…
N DCGT 0702015 FN -A3 …	■	■	■		■	■	■													7.75	0.15	4.1		SD…07…
N DCGT 0702035 FN -A3 …	■	■	■		■	■	■													7.75	0.35	4.1		SD…07…
N DCGT 11T3008 FN -A3 …	■	■	■		■	■	■													11.6	0.08	7.2		SD…11…
N DCGT 11T3015 FN -A3 …	■	■	■		■	■	■													11.6	0.15	7.2		SD…11…
N DCGT 11T3035 FN -A3 …	■	■	■		■	■	■													11.6	0.35	7.2		SD…11…

Application range — multidec®-ISO

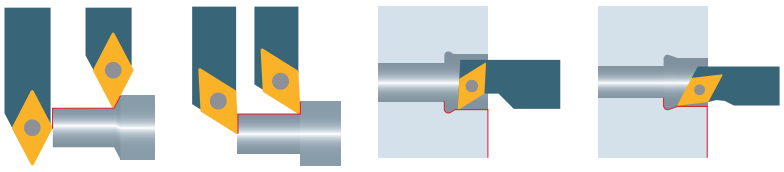


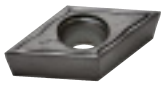
Optimal chip breaking

DCGT 07
DCGT 11

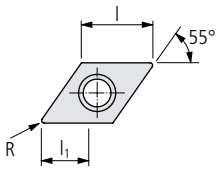
Cutting specification 334…
Technical information 9…
Legend 6…

Inserts (Carbide) — multidec®-ISO



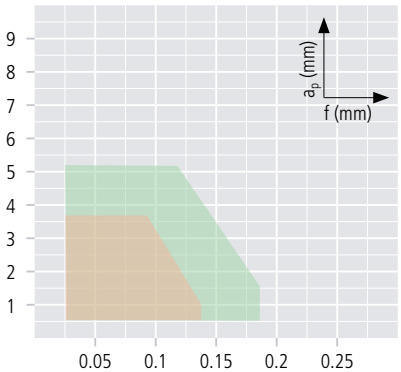


DCGT … FN -PF23



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
N DCGT 0702005 FN -PF23 …	■	■	■		■	■	■													7.75	0.05	3.6		SD…07…
N DCGT 070201 FN -PF23 …	■	■	■		■	■	■													7.75	0.1	3.6		SD…07…
N DCGT 070202 FN -PF23 …	■	■	■		■	■	■													7.75	0.2	3.6		SD…07…
N DCGT 11T3005 FN -PF23 …	■	■	■		■	■	■													11.6	0.05	5.2		SD…11…
N DCGT 11T301 FN -PF23 …	■	■	■		■	■	■													11.6	0.1	5.2		SD…11…
N DCGT 11T302 FN -PF23 …	■	■	■		■	■	■													11.6	0.2	5.2		SD…11…

Application range — multidec®-ISO

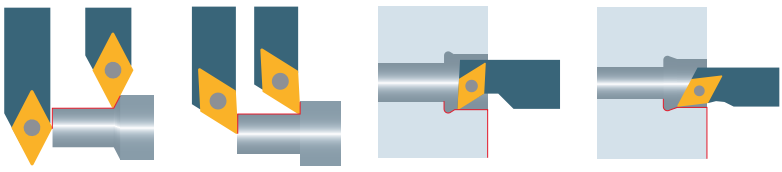


Optimal chip breaking

DCGT 07
DCGT 11

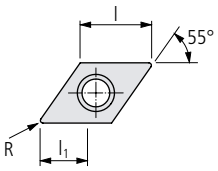
Cutting specification 334…
Technical information 9…

Legend 6…





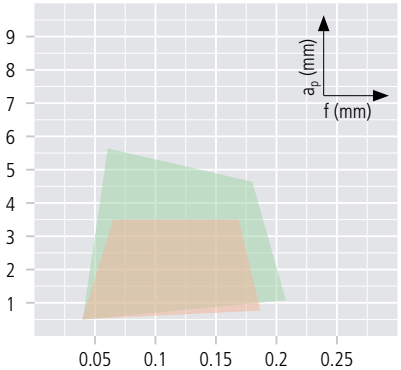
DCGT … FN -PF33



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
DCGT 0702005 FN -PF33 …	■	■	■		■	■	■													7.75	0.05	3.6		SD…07…
DCGT 070201 FN -PF33 …	■	■	■		■	■	■													7.75	0.1	3.6		SD…07…
DCGT 070202 FN -PF33 …	■	■	■		■	■	■													7.75	0.2	3.6		SD…07…
DCGT 070204 FN -PF33 …	■	■	■		■	■	■													7.75	0.4	3.6		SD…07…
DCGT 11T3005 FN -PF33 …	■	■	■		■	■	■													11.6	0.05	5.2		SD…11…
DCGT 11T301 FN -PF33 …	■	■	■		■	■	■													11.6	0.1	5.2		SD…11…
DCGT 11T302 FN -PF33 …	■	■	■		■	■	■													11.6	0.2	5.2		SD…11…
DCGT 11T304 FN -PF33 …	■	■	■		■	■	■													11.6	0.4	5.2		SD…11…

N

Application range — multidec®-ISO



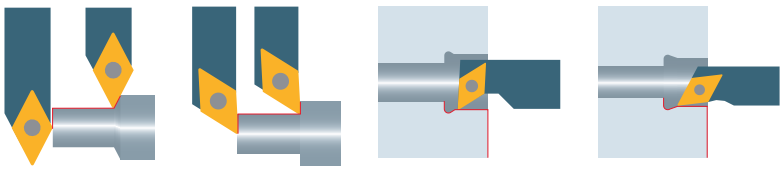
Optimal chip breaking

DCGT 07
DCGT 11

Cutting specification 334…
Technical information 9…
Legend 6…

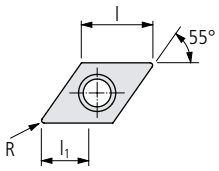
Inserts (Carbide)

multidec®-ISO





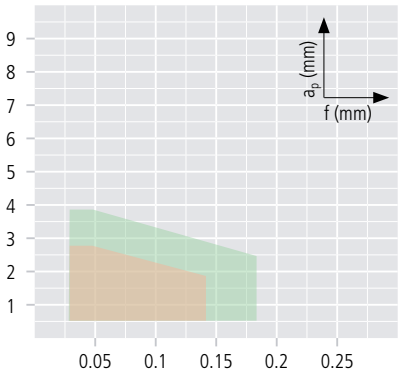
DCGT … FN -PF



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
N DCGT 070201 FN -PF …					■	■	■													7.75	0.1	2.8		SD…07…
DCGT 070202 FN -PF …					■	■	■													7.75	0.2	2.8		SD…07…
DCGT 11T302 FN -PF …					■	■	■													11.6	0.2	3.9		SD…11…
DCGT 11T304 FN -PF …					■	■	■													11.6	0.4	3.9		SD…11…

Application range

multidec®-ISO



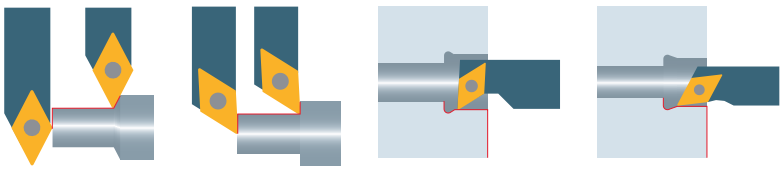
Optimal chip breaking

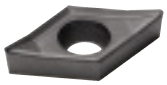
DCGT 07
DCGT 11

Cutting specification 334…
Technical information 9…

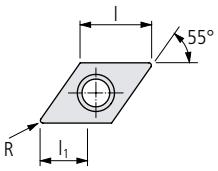
Legend 6…

Inserts (Carbide) — multidec®-ISO



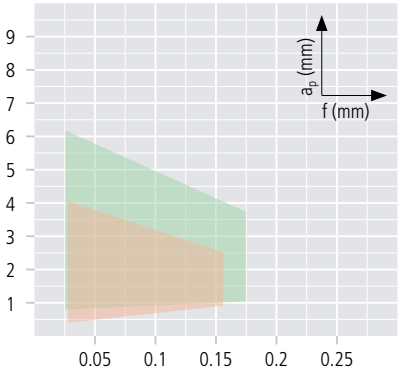


DCGT … FN -PA3



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
–	–	●	●	○	●	●	●	○	○	●	●	●	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	○	○	●	●	●	●	○	●	○	●	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
STANDARD-LINE																								
N DCGT 070204 FN -PA3 …	■	■	■																	7.75	0.4	4		SD…07…
DCGT 11T304 FN -PA3 …	■	■	■																	11.6	0.4	6.2		SD…11…
DCGT 11T308 FN -PA3 …	■	■	■																	11.6	0.8	6.2		SD…11…

Application range — multidec®-ISO



Optimal chip breaking

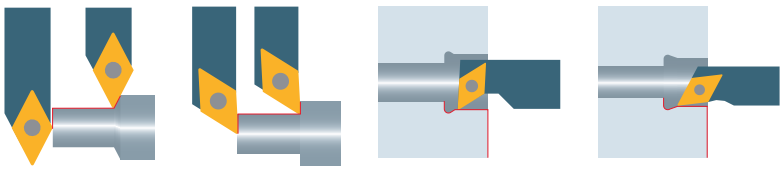
DCGT 07
DCGT 11

Cutting specification 334…
Technical information 9…

Legend 6…

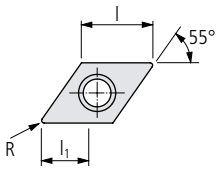
Inserts (Carbide)

multidec®-ISO





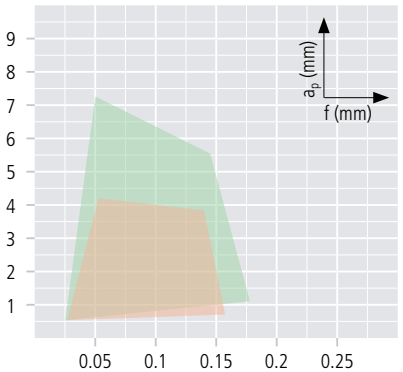
DCGT … FN -PA5



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
N DCGT 070202 FN -PA5 …	■	■	■																	7.75	0.2	4.1		SD…07…
N DCGT 070204 FN -PA5 …	■	■	■																	7.75	0.4	4.1		SD…07…
N DCGT 11T302 FN -PA5 …	■	■	■																	11.6	0.2	7.2		SD…11…
N DCGT 11T304 FN -PA5 …	■	■	■																	11.6	0.4	7.2		SD…11…
N DCGT 11T308 FN -PA5 …	■	■	■																	11.6	0.8	7.2		SD…11…

Application range

multidec®-ISO

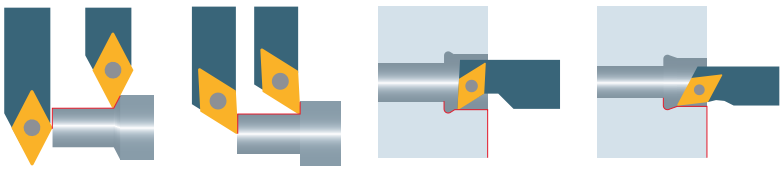


Optimal chip breaking

DCGT 07
DCGT 11

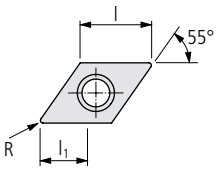
Cutting specification 334…
Technical information 9…

Legend 6…





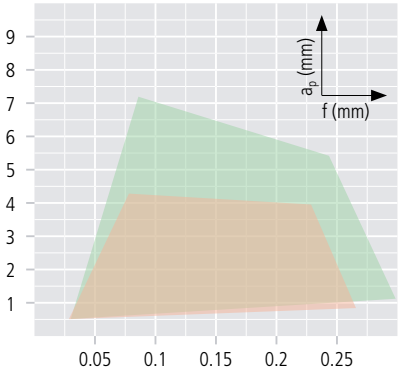
DCGT … -TOP5*



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
L	DCGT 11T304 FL -TOP5 …	■	■	■																11.6	0.4	7.2		SD…11…
	DCGT 11T308 FL -TOP5 …	■	■	■																11.6	0.8	7.2		SD…11…
N	DCGT 11T304 FN -TOP5 …	■	■	■																11.6	0.4	7.2		SD…11…
	DCGT 11T308 FN -TOP5 …	■	■	■																11.6	0.8	7.2		SD…11…
R	DCGT 11T304 FR -TOP5 …	■	■	■																11.6	0.4	7.2		SD…11…
	DCGT 11T308 FR -TOP5 …	■	■	■																11.6	0.8	7.2		SD…11…

* Description TOP … 11

Application range — multidec®-ISO



Optimal chip breaking

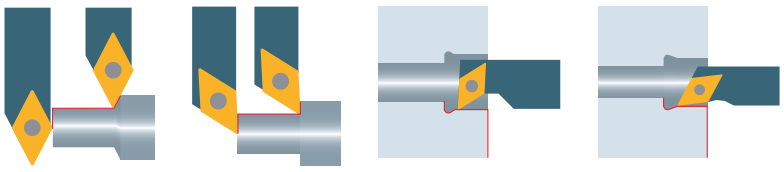
DCGT 07
DCGT 11

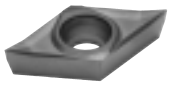
Cutting specification … 334…
Technical information … 9…

Legend … 6…

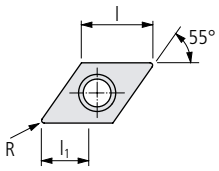
Inserts (Carbide)

multidec®-ISO





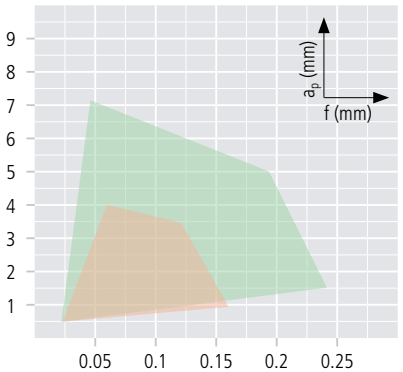
DCGT … FN -PA7



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
N DCGT 0702005 FN -PA7 …	■	■	■																	7.75	0.05	4		SD…07…
DCGT 070201 FN -PA7 …	■	■	■																	7.75	0.1	4		SD…07…
DCGT 070202 FN -PA7 …	■	■	■																	7.75	0.2	4		SD…07…
DCGT 070204 FN -PA7 …	■	■	■																	7.75	0.4	4		SD…07…
DCGT 11T3005 FN -PA7 …	■	■	■																	11.6	0.05	7.2		SD…11…
DCGT 11T301 FN -PA7 …	■	■	■																	11.6	0.1	7.2		SD…11…
DCGT 11T302 FN -PA7 …	■	■	■																	11.6	0.2	7.2		SD…11…
DCGT 11T304 FN -PA7 …	■	■	■																	11.6	0.4	7.2		SD…11…
DCGT 11T308 FN -PA7 …	■	■	■																	11.6	0.8	7.2		SD…11…

Application range

multidec®-ISO



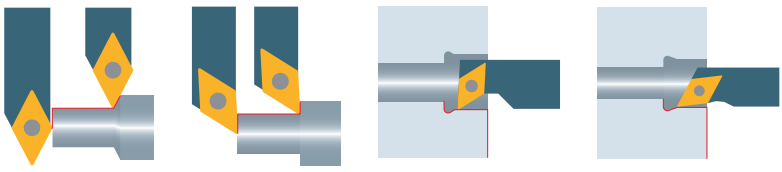
Optimal chip breaking

DCGT 07
DCGT 11

Cutting specification 334…
Technical information 9…

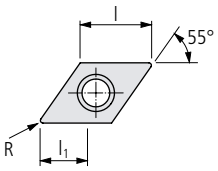
Legend 6…

Inserts (Carbide) — multidec®-ISO



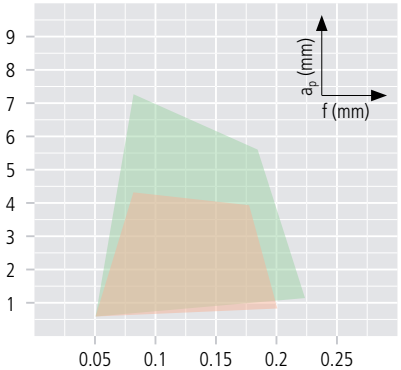


DCXT ... EN -PA9



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
VALUE-LINE																								
N DCXT 070204 EN -PA9 …	■	■	■																	7.75	0.4	4		SD…07…
DCXT 11T304 EN -PA9 …	■	■	■																	11.6	0.4	7.2		SD…11…
DCXT 11T308 EN -PA9 …	■	■	■																	11.6	0.8	7.2		SD…11…

Application range — multidec®-ISO



Optimal chip breaking

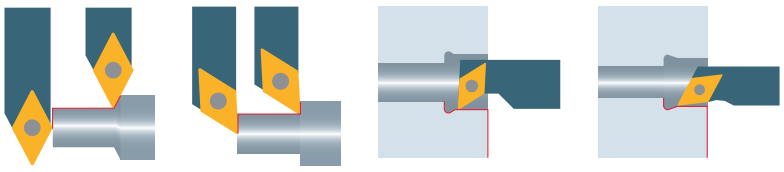
DCXT 07
DCXT 11

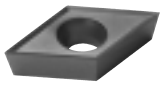
Cutting specification 334…
Technical information 9…

Legend 6…

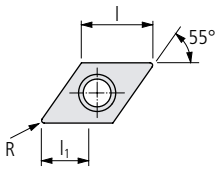
Inserts (Carbide)

multidec®-ISO





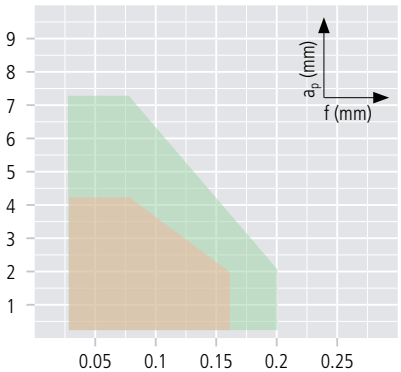
DCGT … EN -A3



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
N DCGT 0702006 EN -A3 …					■	■	■													7.75	0.06	4.1		SD…07…
DCGT 0702015 EN -A3 …					■	■	■													7.75	0.15	4.1		SD…07…
DCGT 0702035 EN -A3 …					■	■	■													7.75	0.35	4.1		SD…07…
DCGT 11T3008 EN -A3 …					■	■	■													11.6	0.08	7.2		SD…11…
DCGT 11T3015 EN -A3 …					■	■	■													11.6	0.15	7.2		SD…11…
DCGT 11T3035 EN -A3 …					■	■	■													11.6	0.35	7.2		SD…11…

Application range

multidec®-ISO



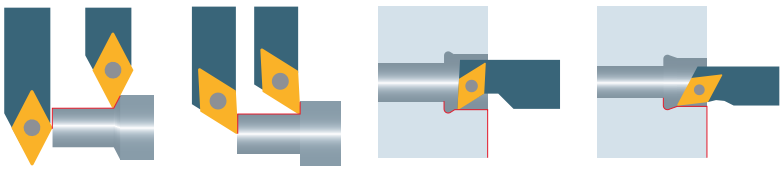
Optimal chip breaking

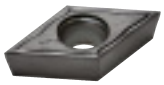
DCGT 07
DCGT 11

Cutting specification 334…
Technical information 9…

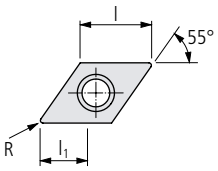
Legend 6…

Inserts (Carbide) — multidec®-ISO



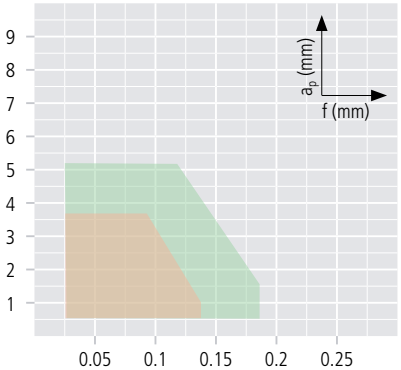


DCGT … EN -PF23



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
N DCGT 0702005 EN -PF23 …					■	■	■													7.75	0.05	3.6		SD…07…
N DCGT 070201 EN -PF23 …					■	■	■													7.75	0.1	3.6		SD…07…
N DCGT 070202 EN -PF23 …					■	■	■													7.75	0.2	3.6		SD…07…
N DCGT 11T3005 EN -PF23 …					■	■	■													11.6	0.05	5.2		SD…11…
N DCGT 11T301 EN -PF23 …					■	■	■													11.6	0.1	5.2		SD…11…
N DCGT 11T302 EN -PF23 …					■	■	■													11.6	0.2	5.2		SD…11…

Application range — multidec®-ISO



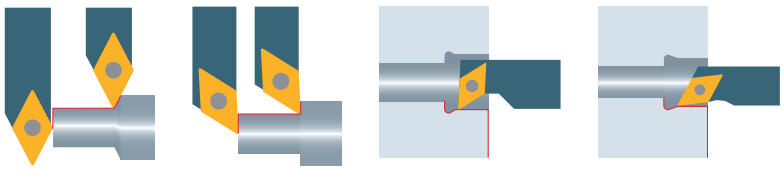
Optimal chip breaking

DCGT 07
DCGT 11

Cutting specification 334…
Technical information 9…
Legend 6…

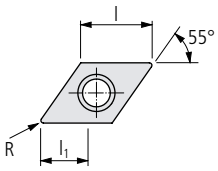
Inserts (Carbide)

multidec®-ISO





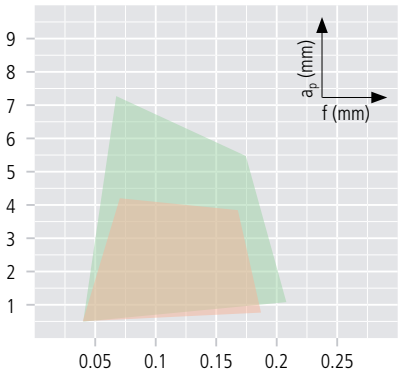
DCGT … EN -PF33



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
STANDARD-LINE																								
N DCGT 0702005 EN -PF33 …					■	■	■													7.75	0.05	3.6		SD…07…
N DCGT 070201 EN -PF33 …					■	■	■													7.75	0.1	3.6		SD…07…
N DCGT 070202 EN -PF33 …					■	■	■													7.75	0.2	3.6		SD…07…
N DCGT 070204 EN -PF33 …					■	■	■													7.75	0.4	3.6		SD…07…
N DCGT 11T3005 EN -PF33 …					■	■	■													11.6	0.05	5.2		SD…11…
N DCGT 11T301 EN -PF33 …					■	■	■													11.6	0.1	5.2		SD…11…
N DCGT 11T302 EN -PF33 …					■	■	■													11.6	0.2	5.2		SD…11…
N DCGT 11T304 EN -PF33 …					■	■	■													11.6	0.4	5.2		SD…11…

Application range

multidec®-ISO

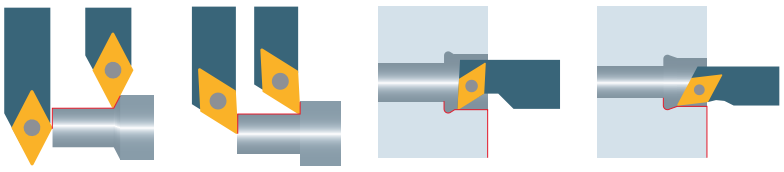


Optimal chip breaking

DCGT 07
DCGT 11

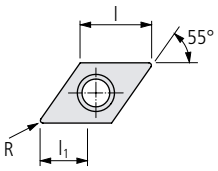
Cutting specification 334…
Technical information 9…

Legend 6…



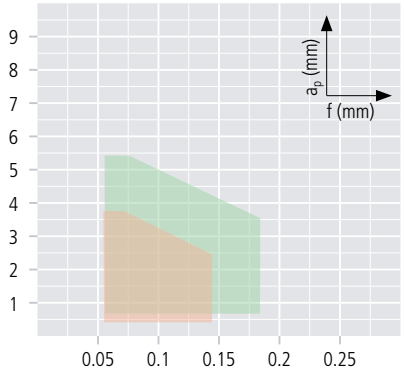


DCMT … EN -PF43



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
VALUE-LINE																								
N DCMT 070202 EN -PF43 …								■												7.75	0.2	3.8		SD…07…
DCMT 070204 EN -PF43 …								■												7.75	0.4	3.8		SD…07…
DCMT 11T302 EN -PF43 …								■												11.6	0.2	5.5		SD…11…
DCMT 11T304 EN -PF43 …								■												11.6	0.4	5.5		SD…11…

Application range — *multidec®-ISO*



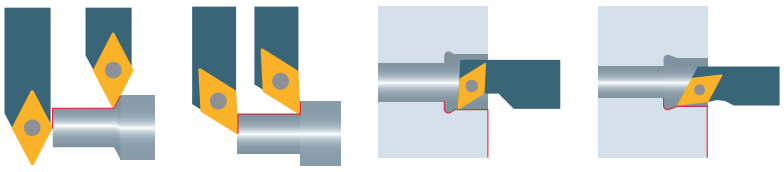
Optimal chip breaking

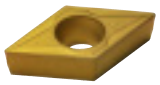
DCMT 07
DCMT 11

Cutting specification 334…
Technical information 9…

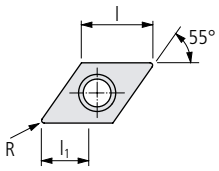
Legend 6…

Inserts (Carbide) — multidec®-ISO



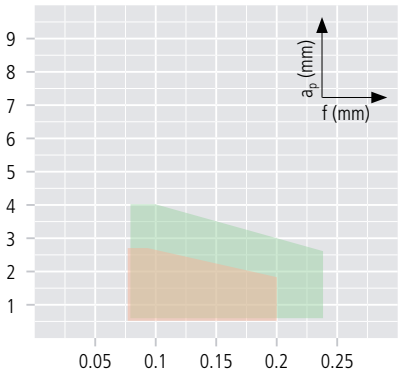


DCMT … EN -PM



Order designation	Carbide 🗋18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		🗋263…
VALUE-LINE																								
N DCMT 070204 EN -PM …				■				■				■								7.75	0.4	2.6		SD…07…
DCMT 070208 EN -PM …												■								7.75	0.8	2.6		SD…07…
DCMT 11T304 EN -PM …				■				■				■								11.6	0.4	4.1		SD…11…
DCMT 11T308 EN -PM …				■				■				■								11.6	0.8	4.1		SD…11…

Application range — multidec®-ISO

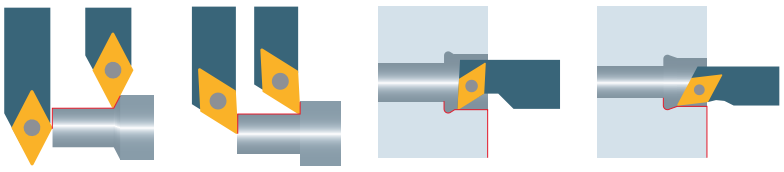


Optimal chip breaking

DCMT 07
DCMT 11

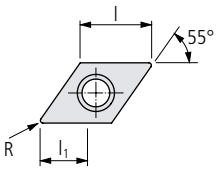
Cutting specification 🗋334…
Technical information 🗋9…

Legend 🗋6…



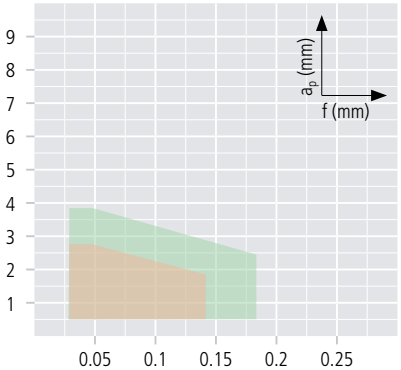


DCGT … EN -PF



Order designation	Carbide (🗋18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		🗋263…
STANDARD-LINE																								
N																								
DCGT 070201 EN -PF …														■	■					7.75	0.1	2.8		SD…07…
DCGT 070202 EN -PF …														■	■	■				7.75	0.2	2.8		SD…07…
DCGT 070204 EN -PF …														■	■	■				7.75	0.4	2.8		SD…07…
DCGT 11T302 EN -PF …														■	■	■				11.6	0.2	3.9		SD…11…
DCGT 11T304 EN -PF …														■	■	■				11.6	0.4	3.9		SD…11…
DCGT 11T308 EN -PF …														■	■	■				11.6	0.8	3.9		SD…11…

Application range — multidec®-ISO



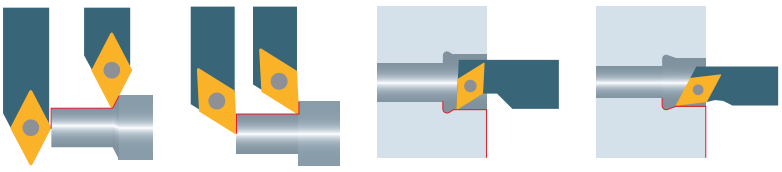
Optimal chip breaking

DCGT 07
DCGT 11

Cutting specification 🗋334…
Technical information 🗋9…

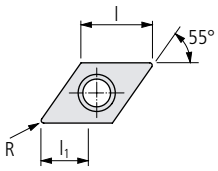
Legend 🗋6…

Inserts (Cermet) — multidec®-ISO



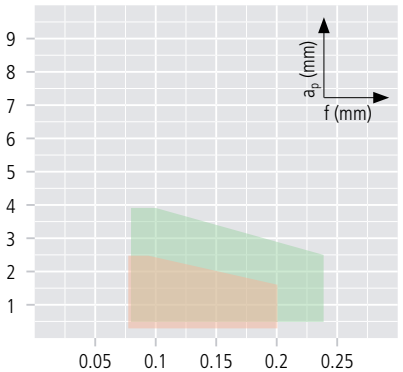


DCMT … EN -PMF



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		263…
VALUE-LINE																								
N DCMT 070202 EN -PMF																■				7.75	0.2	2.6		SD…07…
N DCMT 070204 EN -PMF																■				7.75	0.4	2.6		SD…07…
N DCMT 11T304 EN -PMF																■				11.6	0.4	4.1		SD…11…
N DCMT 11T308 EN -PMF																■				11.6	0.8	4.1		SD…11…

Application range — multidec®-ISO



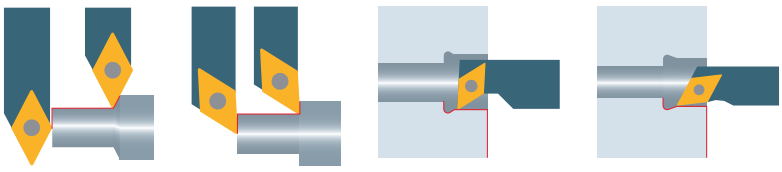
Optimal chip breaking

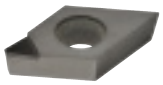
DCMT 07
DCMT 11

Cutting specification 334…
Technical information 9…

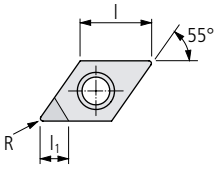
Legend 6…

Inserts (Diamond) — multidec®-ISO



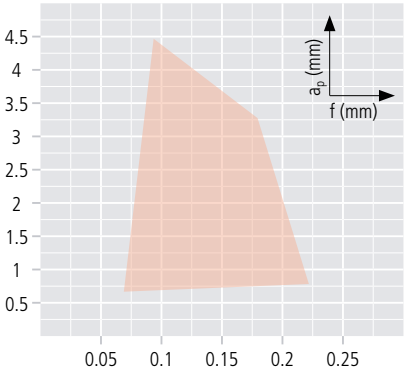


DCGT … FN



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		(263…)
STANDARD-LINE																								
N DCGT 070201 FN …																			■	7.75	0.1	3.8		SD…07…
N DCGT 070202 FN …																		■	■	7.75	0.2	3.7		SD…07…
N DCGT 070204 FN …																		■		7.75	0.4	3.4		SD…07…
N DCGT 11T302 FN …																		■	■	11.6	0.2	4.7		SD…11…
N DCGT 11T304 FN …																		■		11.6	0.4	4.3		SD…11…
N DCGT 11T308 FN …																		■		11.6	0.8	4		SD…11…

Application range — multidec®-ISO



Optimal chip breaking

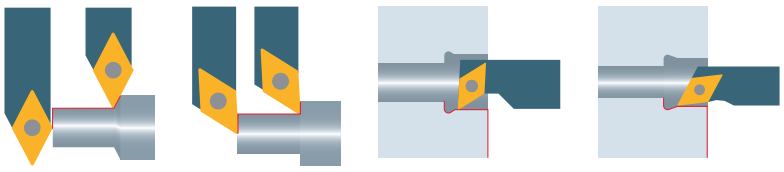
DCGT

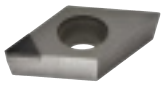
Cutting specification ..... 334…
Technical information ..... 9…

Legend ..... 6…

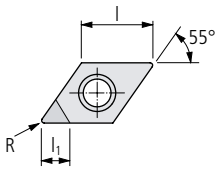
Inserts (Diamond)

multidec®-ISO





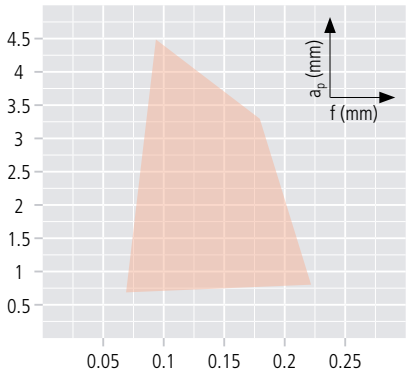
DCGW … FN



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		
STANDARD-LINE																								
N	DCGW 0702005 FN …																		■	7.75	0.05	3.5		SD…07…
	DCGW 070201 FN …																		■	7.75	0.1	3.8		SD…07…
	DCGW 070202 FN …																■	■	■	7.75	0.2	3.7		SD…07…
	DCGW 070204 FN …																■	■	■	7.75	0.4	3.4		SD…07…
	DCGW 070208 FN …																■	■	■	7.75	0.8	3		SD…07…
	DCGW 11T301 FN …																		■	11.6	0.1	4.8		SD…11…
	DCGW 11T302 FN …																■	■	■	11.6	0.2	4.7		SD…11…
	DCGW 11T304 FN …																■	■	■	11.6	0.4	4.3		SD…11…
	DCGW 11T308 FN …																■	■	■	11.6	0.8	4		SD…11…

Application range

multidec®-ISO



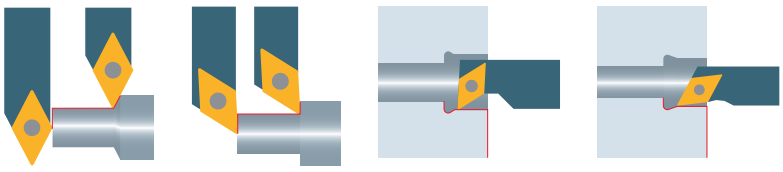
Optimal chip breaking

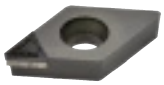
DCGW

Cutting specification 334…
Technical information 9…

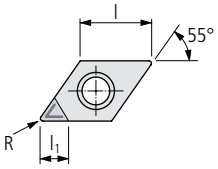
Legend 6…

Inserts (Diamond) — multidec®-ISO



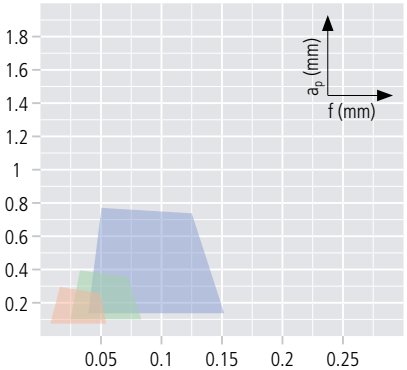


DCGT … FN -UWS



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		(263…)
STANDARD-LINE																								
N DCGT 070201 FN -UWS …																		■	■	7.75	0.1	3		SD…07…
N DCGT 070202 FN -UWS …																	■	■	■	7.75	0.2	3		SD…07…
N DCGT 070204 FN -UWS …																	■	■	■	7.75	0.4	3		SD…07…
N DCGT 11T302 FN -UWS …																	■	■	■	11.6	0.2	3		SD…11…
N DCGT 11T304 FN -UWS …																	■	■	■	11.6	0.4	3		SD…11…

Application range — multidec®-ISO



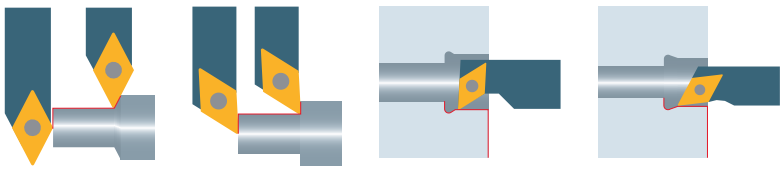
Optimal chip breaking

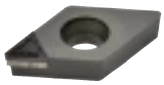
R 0.1
R 0.2
R 0.4

Cutting specification (334…)
Technical information (9…)
Legend (6…)

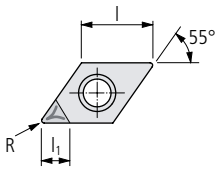
Inserts (Diamond)

multidec®-ISO





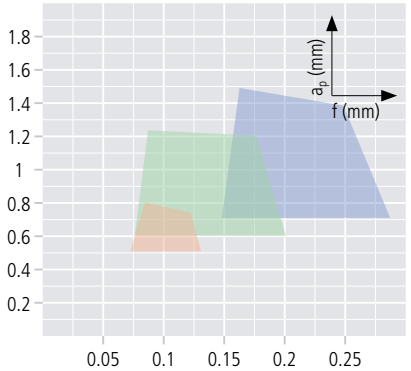
DCGT … FN -UWN



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		(263…)
STANDARD-LINE																								
N	DCGT 070202 FN -UWN …																■		■	7.75	0.2	3		SD…07…
	DCGT 070204 FN -UWN …																■		■	7.75	0.4	3		SD…07…
	DCGT 11T302 FN -UWN …																■		■	11.6	0.2	3		SD…11…
	DCGT 11T304 FN -UWN …																■		■	11.6	0.4	3		SD…11…
	DCGT 11T308 FN -UWN …																■		■	11.6	0.8	3		SD…11…

Application range

multidec®-ISO



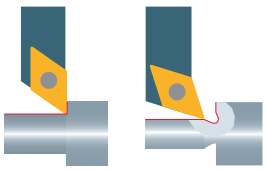
Optimal chip breaking

R 0.2
R 0.4
R 0.8

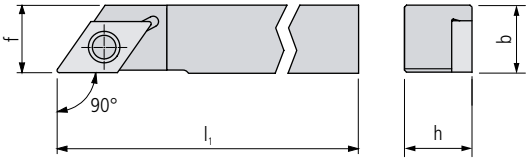
Cutting specification … 334…
Technical information … 9…

Legend … 6…

Notes *multidec®-ISO*

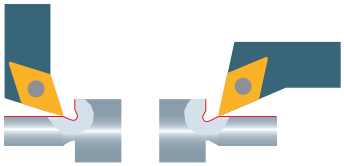




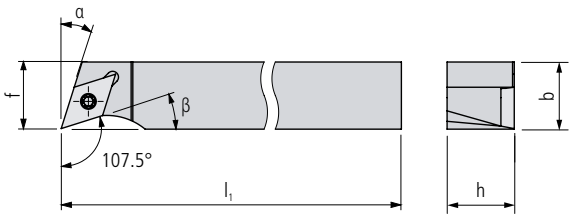


SDAC… U (90°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1		f				239…
STANDARD-LINE												
SDACL 0808 K07 U	■	SDACR 0808 K07 U	■	8	8	125		8				DC..0702..
SDACL 1010 M07 U	■	SDACR 1010 M07 U	■	10	10	150		10				DC..0702..
SDACL 1212 M07 U	■	SDACR 1212 M07 U	■	12	12	150		12				DC..0702..
SDACL 1212 M11 U	■	SDACR 1212 M11 U	■	12	12	150		12				DC..11T3..
SDACL 1616 K11 U	■	SDACR 1616 K11 U	■	16	16	125		16				DC..11T3..







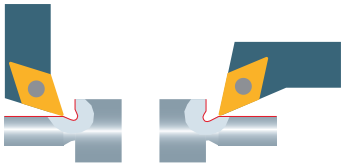
SDHC… U (107.5°)

Order designation L		Order designation R		Dimensions h	b	l_1		f		α	β	Inserts 239…
STANDARD-LINE												
SDHCL 0808 H07 U	■	SDHCR 0808 H07 U	■	8	8	100		11		17.5°	17.5°	DC..0702..
SDHCL 1010 H07 U	■	SDHCR 1010 H07 U	■	10	10	100		11		17.5°	17.5°	DC..0702..
SDHCL 1212 H07 U	■	SDHCR 1212 H07 U	■	12	12	100		12		17.5°	17.5°	DC..0702..
SDHCL 1616 K11 U	■	SDHCR 1616 K11 U	■	16	16	125		16		17.5°	17.5°	DC..11T3..

SDHC… U (107.5°) INCH

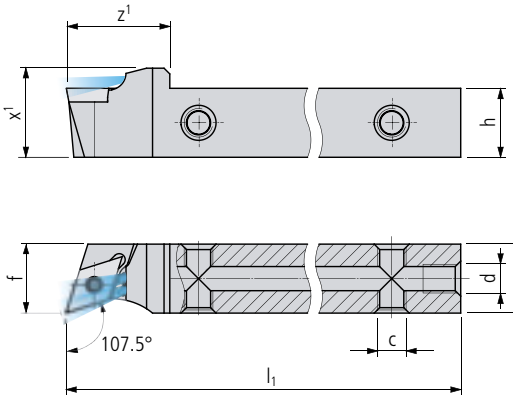
Order designation L		Order designation R		Dimensions h	b	l_1		f		α	β	Inserts 239…
STANDARD-LINE												
SDHCL 3/8" H07 U	■	SDHCR 3/8" H07 U	■	9.525	9.525	100		11		17.5°	17.5°	DC..0702..
SDHCL 1/2" H07 U	■	SDHCR 1/2" H07 U	■	12.7	12.7	100		12.7		17.5°	17.5°	DC..0702..
SDHCL 5/8" K11 U	■	SDHCR 5/8" K11 U	■	15.875	15.875	125		15.875		17.5°	17.5°	DC..11T3..

Legend ..... 6…



With internal cooling





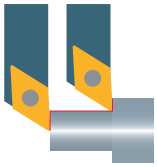
SDHC… U IC (107.5°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDHCL 0808 H07 U IC	■	SDHCR 0808 H07 U IC	■	8	8	100	18	11.5	M5	M5	11	DC..0702..
SDHCL 1010 H07 U IC	■	SDHCR 1010 H07 U IC	■	10	10	100	18	13.5	M5	M5	12	DC..0702..
SDHCL 1212 H07 U IC	■	SDHCR 1212 H07 U IC	■	12	12	100	18	15.5	M5	M5	12	DC..0702..
SDHCL 1616 K11 U IC	■	SDHCR 1616 K11 U IC	■	16	16	125	21	19.5	M5	G1⁄8"	16	DC..11T3..

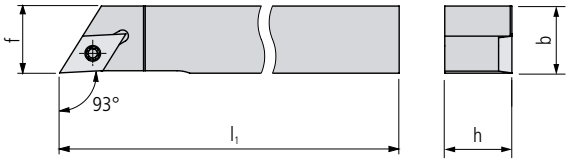
SDHC… U IC (107.5°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDHCL 3/8" H07 U IC	■	SDHCR 3/8" H07 U IC	■	9.525	9.525	100	18	13	M5	M5	12	DC..0702..
SDHCL 1/2" H07 U IC	■	SDHCR 1/2" H07 U IC	■	12.7	12.7	100	18	16.2	M5	M5	12.7	DC..0702..
SDHCL 5/8" K11 U IC	■	SDHCR 5/8" K11 U IC	■	15.875	15.875	125	21	19.4	M5	G1⁄8"	15.875	DC..11T3..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…





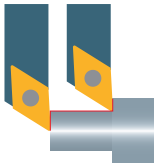


SDJC… U (93°)

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 239…
STANDARD-LINE												
SDJCL 0808 F07 U	■	SDJCR 0808 F07 U	■	8	8	80		7.95				DC..0702..
SDJCL 0808 H07 U	■	SDJCR 0808 H07 U	■	8	8	100		7.95				DC..0702..
SDJCL 1010 F07 U	■	SDJCR 1010 F07 U	■	10	10	80		9.95				DC..0702..
SDJCL 1010 H07 U	■	SDJCR 1010 H07 U	■	10	10	100		9.95				DC..0702..
SDJCL 1010 H11 U	■	SDJCR 1010 H11 U	■	10	10	100		11.95				DC..11T3..
SDJCL 1212 H07 U	■	SDJCR 1212 H07 U	■	12	12	100		11.95				DC..0702..
SDJCL 1212 H11 U	■	SDJCR 1212 H11 U	■	12	12	100		11.95				DC..11T3..
SDJCL 1616 K07 U	■	SDJCR 1616 K07 U	■	16	16	125		15.95				DC..0702..
SDJCL 1616 K11 U	■	SDJCR 1616 K11 U	■	16	16	125		15.95				DC..11T3..
SDJCL 2020 K11 U	■	SDJCR 2020 K11 U	■	20	20	125		19.95				DC..11T3..

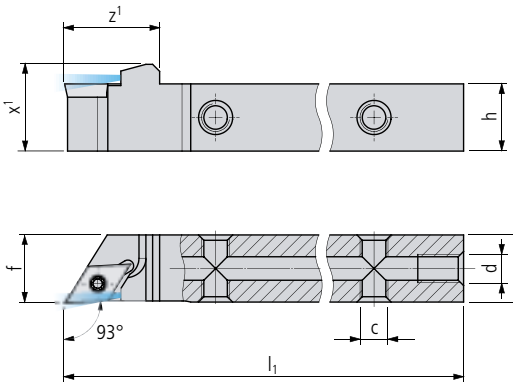
SDJC… U (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 239…
STANDARD-LINE												
SDJCL 3/8" F07 U	■	SDJCR 3/8" F07 U	■	9.525	9.525	80		9.475				DC..0702..
SDJCL 3/8" H07 U	■	SDJCR 3/8" H07 U	■	9.525	9.525	100		9.475				DC..0702..
SDJCL 3/8" F11 U	■	SDJCR 3/8" F11 U	■	9.525	9.525	80		11.95				DC..11T3..
SDJCL 3/8" H11 U	■	SDJCR 3/8" H11 U	■	9.525	9.525	100		11.95				DC..11T3..
SDJCL 1/2" H07 U	■	SDJCR 1/2" H07 U	■	12.7	12.7	100		12.65				DC..0702..
SDJCL 1/2" H11 U	■	SDJCR 1/2" H11 U	■	12.7	12.7	100		12.65				DC..11T3..
SDJCL 5/8" K11 U	■	SDJCR 5/8" K11 U	■	15.875	15.875	125		15.825				DC..11T3..
SDJCL 3/4" K11 U	■	SDJCR 3/4" K11 U	■	19.05	19.05	125		19				DC..11T3..



With internal cooling





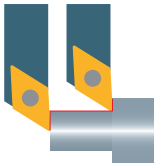
SDJC… U IC (93°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDJCL 0810 H07 U IC	■	SDJCR 0810 H07 U IC	■	8	10	100	17	11.5	M5	M5	8	DC.. 0702..
SDJCL 1010 H07 U IC	■	SDJCR 1010 H07 U IC	■	10	10	100	17	13.5	M5	M5	10	DC.. 0702..
SDJCL 1010 H11 U IC	■	SDJCR 1010 H11 U IC	■	10	10	100	22	13.5	M5	M5	10	DC.. 11T3..
SDJCL 1212 H07 U IC	■	SDJCR 1212 H07 U IC	■	12	12	100	17	15.5	M5	M5	12	DC.. 0702..
SDJCL 1212 H11 U IC	■	SDJCR 1212 H11 U IC	■	12	12	100	22	15.5	M5	M5	12	DC.. 11T3..
SDJCL 1616 K07 U IC	■	SDJCR 1616 K07 U IC	■	16	16	125	17	15.5	M5	G⅛"	16	DC.. 0702..
SDJCL 1616 K11 U IC	■	SDJCR 1616 K11 U IC	■	16	16	125	22	19.5	M5	G⅛"	16	DC.. 11T3..
SDJCL 2020 K11 U IC	■	SDJCR 2020 K11 U IC	■	20	20	125	22	23.5	M5	G⅛"	20	DC.. 11T3..

SDJC… U IC (93°) INCH

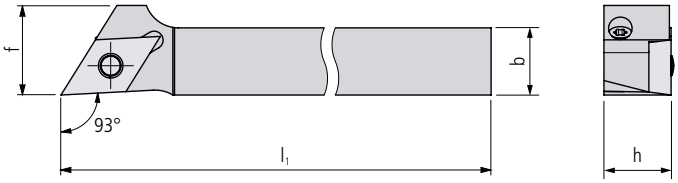
Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDJCL 3/8" H07 U IC	■	SDJCR 3/8" H07 U IC	■	9.525	9.525	100	17	13	M5	M5	9.525	DC.. 0702..
SDJCL 3/8" H11 U IC	■	SDJCR 3/8" H11 U IC	■	9.525	9.525	100	22	13	M5	M5	9.525	DC.. 11T3..
SDJCL 1/2" H07 U IC	■	SDJCR 1/2" H07 U IC	■	12.7	12.7	100	17	16.2	M5	M5	12.7	DC.. 0702..
SDJCL 1/2" H11 U IC	■	SDJCR 1/2" H11 U IC	■	12.7	12.7	100	22	16.2	M5	M5	12.7	DC.. 11T3..
SDJCL 5/8" K07 U IC	■	SDJCR 5/8" K07 U IC	■	15.875	15.875	125	17	19.5	M5	G⅛"	15.875	DC.. 0702..
SDJCL 5/8" K11 U IC	■	SDJCR 5/8" K11 U IC	■	15.875	15.875	125	22	19.5	M5	G⅛"	15.875	DC.. 11T3..
SDJCL 3/4" K11 U IC	■	SDJCR 3/4" K11 U IC	■	19.05	19.05	125	22	22.6	M5	G⅛"	19.05	DC.. 11T3..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"FC" version (fast change)





SDJC… U FC* (93°)

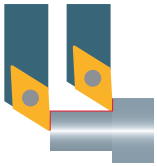
Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 239…
STANDARD-LINE												
SDJCL 1012 H11 U FC	■	SDJCR 1012 H11 U FC	■	10	12	100		16				DC..11T3..
SDJCL 1212 H11 U FC	■	SDJCR 1212 H11 U FC	■	12	12	100		16				DC..11T3..
SDJCL 1616 K11 U FC	■	SDJCR 1616 K11 U FC	■	16	16	125		16				DC..11T3..

SDJC… U FC* (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 239…
STANDARD-LINE												
SDJCL 1/2" H11 U FC	■	SDJCR 1/2" H11 U FC	■	12.7	12.7	100		16				DC..11T3..
SDJCL 5/8" K11 U FC	■	SDJCR 5/8" K11 U FC	■	15.875	15.875	125		15.875				DC..11T3..

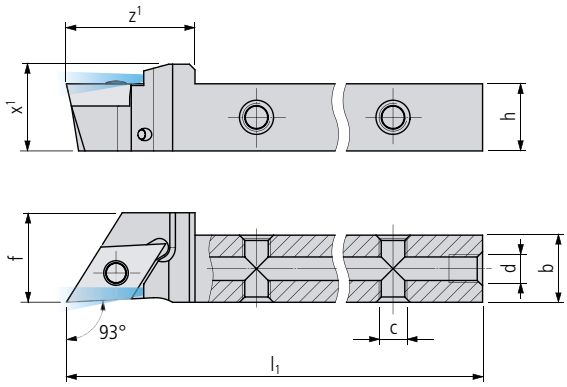
Spare parts (clamping bolts /screws) 283

*** Note**
With this holder, the indexable insert is secured with a screw using a knee lever that can be operated from behind. This means the holder does not have to be unclamped to change the cutting edge.
Tighten the clamping screw to 1.2 Nm using a torque screwdriver.



"FC" version (fast change) with internal cooling





SDJC… U FC* IC (93°)

Order designation L		Order designation R		Dimensions h	b	l_1	z_1	x_1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDJCL 1012 H11 U FC IC	■	SDJCR 1012 H11 U FC IC	■	10	12	100	23	13.5	M5	M5	16	DC..11T3..
SDJCL 1212 H11 U FC IC	■	SDJCR 1212 H11 U FC IC	■	12	12	100	23	15.5	M5	M5	16	DC..11T3..
SDJCL 1616 K11 U FC IC	■	SDJCR 1616 K11 U FC IC	■	16	16	125	23	19.5	M5	G⅛"	16	DC..11T3..

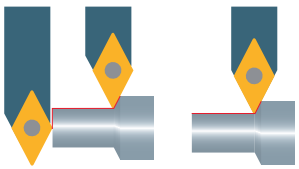
SDJC… U FC* IC (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z_1	x_1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDJCL 1/2" H11 U FC IC	■	SDJCR 1/2" H11 U FC IC	■	12.7	12.7	100	23	16.2	M5	M5	16	DC..11T3..
SDJCL 5/8" K11 U FC IC	■	SDJCR 5/8" K11 U FC IC	■	15.875	15.875	125	23	19.4	M5	G⅛"	15.875	DC..11T3..

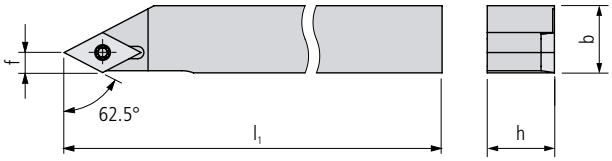
Spare parts (clamping bolts/screws) 283

*** Note**
With this holder, the indexable insert is secured with a screw using a knee lever that can be operated from behind. This means the holder does not have to be unclamped to change the cutting edge.
Tighten the clamping screw to 1.2 Nm using a torque screwdriver.

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…





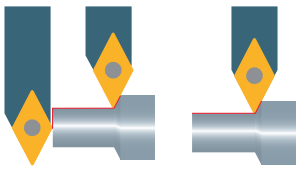


SDNC… U (62.5°)

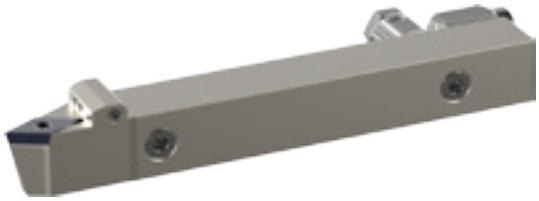
Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 239…
STANDARD-LINE												
SDNCL 0808 F07 U	■	SDNCR 0808 F07 U	■	8	8	80		3.63				DC..0702..
SDNCL 0808 H07 U	■	SDNCR 0808 H07 U	■	8	8	100		3.63				DC..0702..
SDNCL 1010 F07 U	■	SDNCR 1010 F07 U	■	10	10	80		3.63				DC..0702..
SDNCL 1010 H07 U	■	SDNCR 1010 H07 U	■	10	10	100		3.63				DC..0702..
SDNCL 1212 H07 U	■	SDNCR 1212 H07 U	■	12	12	100		3.63				DC..0702..
SDNCL 1212 H11 U	■	SDNCR 1212 H11 U	■	12	12	100		5.42				DC..11T3..
SDNCL 1616 K11 U	■	SDNCR 1616 K11 U	■	16	16	125		5.42				DC..11T3..
SDNCL 2020 K11 U	■	SDNCR 2020 K11 U	■	20	20	125		5.42				DC..11T3..

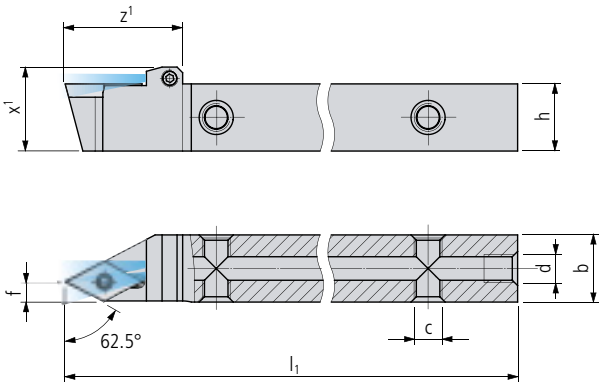
SDNC… U (62.5°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 239…
STANDARD-LINE												
SDNCL 3/8" H07 U	■	SDNCR 3/8" H07 U	■	9.525	9.525	100		3.63				DC..0702..
SDNCL 1/2" H07 U	■	SDNCR 1/2" H07 U	■	12.7	12.7	100		3.63				DC..0702..
SDNCL 1/2" H11 U	■	SDNCR 1/2" H11 U	■	12.7	12.7	100		5.42				DC..11T3..
SDNCL 5/8" K11 U	■	SDNCR 5/8" K11 U	■	15.875	15.875	125		5.42				DC..11T3..



With internal cooling





SDNC… U IC (62.5°)

Order designation L		Order designation R		Dimensions h	b	l_1	z_1	x_1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDNCL 1010 H07 U IC	■	SDNCR 1010 H07 U IC	■	10	10	100	21	13	M5	M5	3.63	DC..0702..
SDNCL 1212 H07 U IC	■	SDNCR 1212 H07 U IC	■	12	12	100	21	15	M5	M5	3.63	DC..0702..
SDNCL 1212 H11 U IC	■	SDNCR 1212 H11 U IC	■	12	12	100	25	15.5	M5	M5	5.42	DC..11T3..
SDNCL 1616 K11 U IC	■	SDNCR 1616 K11 U IC	■	16	16	125	25	19.5	M5	G⅛"	5.42	DC..11T3..

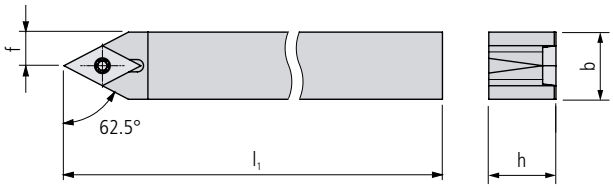
SDNC… U IC (62.5°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z_1	x_1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDNCL 3/8" H07 U IC	■	SDNCR 3/8" H07 U IC	■	9.525	9.525	100	21	12.5	M5	M5	3.63	DC..0702..
SDNCL 1/2" H07 U IC	■	SDNCR 1/2" H07 U IC	■	12.7	12.7	100	21	15.7	M5	M5	3.63	DC..0702..
SDNCL 1/2" H11 U IC	■	SDNCR 1/2" H11 U IC	■	12.7	12.7	100	25	16.2	M5	M5	5.42	DC..11T3..
SDNCL 5/8" K11 U IC	■	SDNCR 5/8" K11 U IC	■	15.875	15.875	125	25	19.4	M5	G⅛"	5.42	DC..11T3..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…







SDNCN … U (62.5°)

Order designation	N			Dimensions h	b	l_1		f				Inserts 239…
STANDARD-LINE												
SDNCN 0808 F07 U	■			8	8	80		4				DC..0702..
SDNCN 0808 K07 U	■			8	8	125		4				DC..0702..
SDNCN 1010 E07 U	■			10	10	70		5				DC..0702..
SDNCN 1010 M07 U	■			10	10	150		5				DC..0702..
SDNCN 1212 F07 U	■			12	12	80		6				DC..0702..
SDNCN 1212 M07 U	■			12	12	150		6				DC..0702..
SDNCN 1212 M11 U	■			12	12	150		6				DC..11T3..
SDNCN 1616 H11 U	■			16	16	100		8				DC..11T3..
SDNCN 2020 K11 U	■			20	20	125		10				DC..11T3..

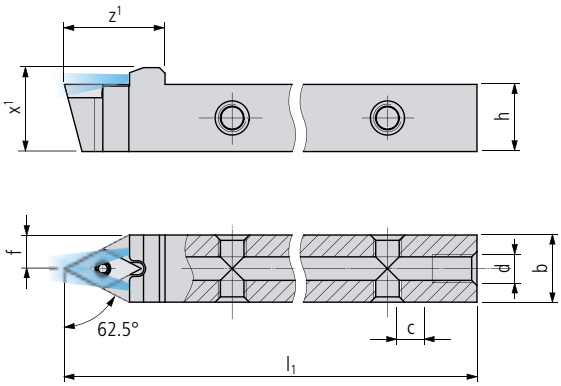
SDNCN … U (62.5°) INCH

Order designation	N			Dimensions h	b	l_1		f				Inserts 239…
STANDARD-LINE												
SDNCN 3/8"H07 U	■			9.525	9.525	100		4.76				DC..0702..
SDNCN 1/2"H07 U	■			12.7	12.7	100		6.35				DC..0702..
SDNCN 1/2"H11 U	■			12.7	12.7	100		6.35				DC..11T3..
SDNCN 5/8"K11 U	■			15.875	15.875	125		7.94				DC..11T3..



With internal cooling





SDNCN … U IC (62.5°)

Order designation	N			Dimensions h	b	l_1	z_1	x_1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDNCN 0808 H07 U IC	■			8	8	100	18	11	M5	M5	4	DC..0702..
SDNCN 1010 H07 U IC	■			10	10	100	18	13	M5	M5	5	DC..0702..
SDNCN 1212 H07 U IC	■			12	12	100	18	15	M5	M5	6	DC..0702..
SDNCN 1212 H11 U IC	■			12	12	100	24	15	M5	M5	6	DC..11T3..
SDNCN 1616 K11 U IC	■			16	16	125	24	19	M5	G⅛"	8	DC..11T3..

SDNCN … U IC (62.5°) INCH

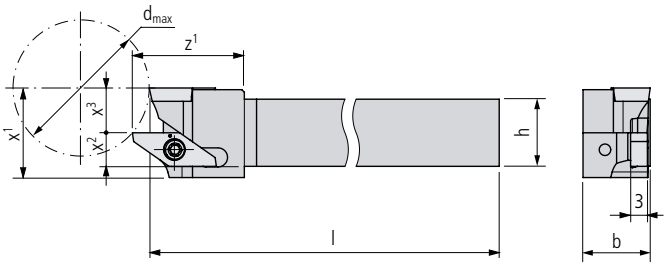
Order designation	N			Dimensions h	b	l_1	z_1	x_1	c	d	f	Inserts 239…
PREMIUM-LINE												
SDNCN 3/8"H07 U IC	■			9.525	9.525	100	18	13	M5	M5	4.76	DC..0702..
SDNCN 1/2"H07 U IC	■			12.7	12.7	100	18	15.7	M5	M5	6.35	DC..0702..
SDNCN 1/2"H11 U IC	■			12.7	12.7	100	24	15.7	M5	M5	6.35	DC..11T3..
SDNCN 5/8"K11 U IC	■			15.875	15.875	125	24	18.9	M5	G⅛"	7.94	DC..11T3..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"TWIN" version





SDJC. (93°)/1600… TWIN

Order designation		Dimensions									Inserts	
	R R	h	b	l	z^1	x^1	x^2	x^3		d_{max}	239…	51…
STANDARD-LINE												
SDJCR/1600R-0810 H07 Twin	■	8	10	100	20	16	4	8		23	DC..0702..	16…
SDJCR/1600R-1010 H07 Twin	■	10	10	100	20	16	5	8		23	DC..0702..	16…
SDJCR/1600R-1212 H07 Twin	■	12	12	100	20	16	6	8		23	DC..0702..	16…
SDJCR/1600R-1616 K11 Twin	■	16	16	125	20	20	8	10		35	DC..11T3..	16…
SDJCR/1600R-2020 K11 Twin	■	20	20	125	20	24	8	14		68	DC..11T3..	16…

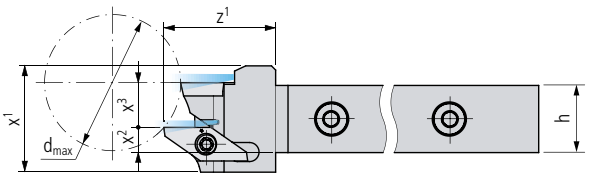
SDJC. (93°)/1600… TWIN INCH

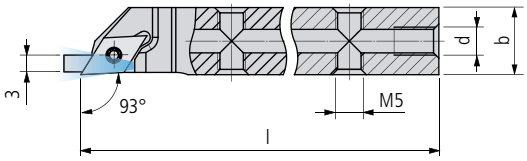
Order designation		Dimensions									Inserts	
	R R	h	b	l	z^1	x^1	x^2	x^3		d_{max}	239…	51…
STANDARD-LINE												
SDJCR/1600R-3/8" H07 Twin	■	9.525	9.525	100	20	16	4.76	8		23	DC..0702..	16…
SDJCR/1600R-1/2" H07 Twin	■	12.7	12.7	100	20	16	6.35	8		23	DC..0702..	16…
SDJCR/1600R-5/8" K11 Twin	■	15.875	15.875	125	20	20	7.94	10		35	DC..11T3..	16…
SDJCR/1600R-3/4" K11 Twin	■	19.05	19.05	125	20	24	7.53	14		68	DC..11T3..	16…



"TWIN" version with internal cooling







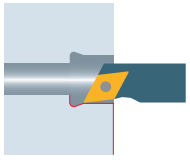
SDJC. (93°)/1600… TWIN IC

Order designation		Dimensions									Inserts	
	R R	h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	239…	51…
PREMIUM-LINE												
SDJCR/1600R-0810 H07 Twin IC	■	8	10	100	20	19	2.5	8	M5	23	DC..0702..	16…
SDJCR/1600R-1010 H07 Twin IC	■	10	10	100	20	19	3.5	8	M5	23	DC..0702..	16…
SDJCR/1600R-1212 H07 Twin IC	■	12	12	100	20	19	4.5	8	M5	23	DC..0702..	16…
SDJCR/1600R-1616 K11 Twin IC	■	16	16	125	26	23	6.5	10	G⅛"	35	DC..11T3..	16…
SDJCR/1600R-2020 K11 Twin IC	■	20	20	125	26	27	6.5	14	G⅛"	68	DC..11T3..	16…

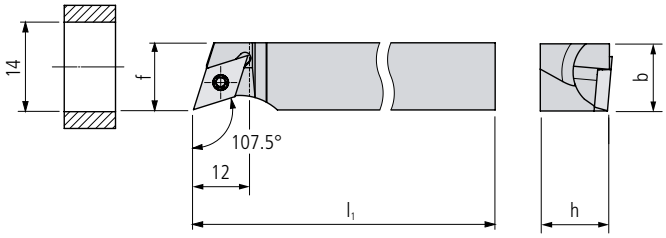
SDJC. (93°)/1600… TWIN IC INCH

Order designation		Dimensions									Inserts	
	R R	h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	239…	51…
PREMIUM-LINE												
SDJCR/1600R-3/8" H07 Twin IC	■	9.525	9.525	100	20	19	3.26	8	M5	23	DC..0702..	16…
SDJCR/1600R-1/2" H07 Twin IC	■	12.7	12.7	100	20	19	4.85	8	M5	23	DC..0702..	16…
SDJCR/1600R-5/8" K11 Twin IC	■	15.875	15.875	125	26	23	6.44	10	G⅛"	35	DC..11T3..	16…
SDJCR/1600R-3/4" K11 Twin IC	■	19.05	19.05	125	26	27	5.53	14	G⅛"	68	DC..11T3..	16…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…

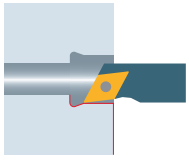






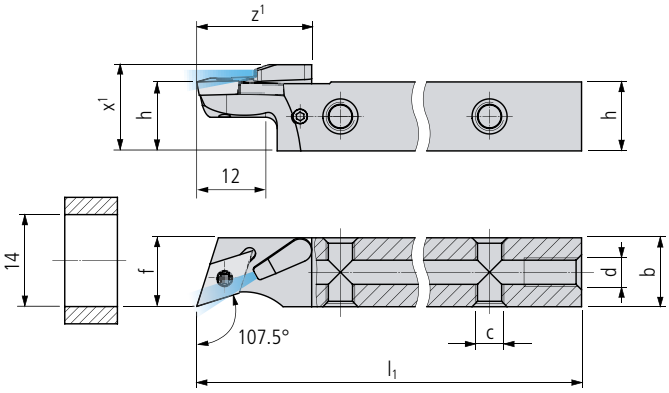
SDHC... X... (107.5°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1	f					239...
STANDARD-LINE												
SDHCL 1010 XH07	■	SDHCR 1010 XH07	■	10	10	100	11					DC..0702..
SDHCL 1212 XH07	■	SDHCR 1212 XH07	■	12	12	100	12					DC..0702..
SDHCL 1616 XK07	■	SDHCR 1616 XK07	■	16	16	125	13.5					DC..0702..



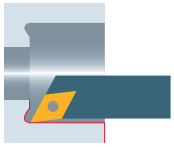
With internal cooling



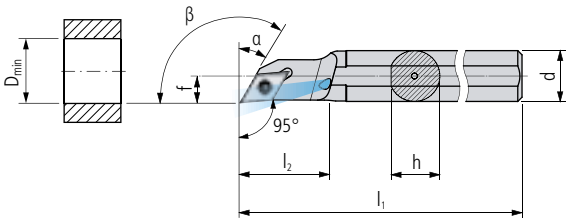


SDHC… X… IC (107.5°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1	z_1	x_1	c	d	f	239…
PREMIUM-LINE												
SDHCL 1010 XH07 IC	■	SDHCR 1010 XH07 IC	■	10	10	100	20	13	M5	M5	11	DC..0702..
SDHCL 1212 XH07 IC	■	SDHCR 1212 XH07 IC	■	12	12	100	20	15	M5	M5	12	DC..0702..
SDHCL 1616 XK07 IC	■	SDHCR 1616 XK07 IC	■	16	16	125	20	19	M5	G⅛"	13.5	DC..0702..





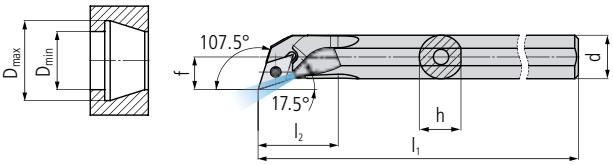


A... SDOC... (95°)

Order designation				Dimensions								Inserts
L		R		d	h	l_1	l_2	f	D_{min}	α	β	239...
STANDARD-LINE												
A12K SDOCL 07	■	A12K SDOCR 07	■	12	11.5	125	21	7	14	30°	120°	DC..0702..

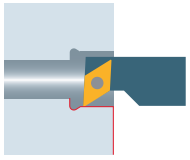




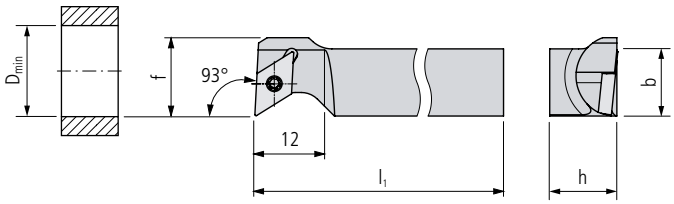


A... SDQC... (107.5°)

Order designation				Dimensions								Inserts
L		R		d	h	l_1	l_2	f	D_{min}	D_{max}		239...
STANDARD-LINE												
A12K SDQCL 07	■	A12K SDQCR 07	■	12	11.5	125	22	9	16	22		DC..0702..
A16M SDQCL 07	■	A16M SDQCR 07	■	16	15	150	25	11	20	26		DC..0702..
A20Q SDQCL 07	■	A20Q SDQCR 07	■	20	18.5	180	32	13	25	31		DC..0702..

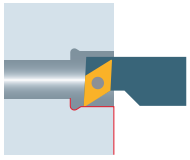






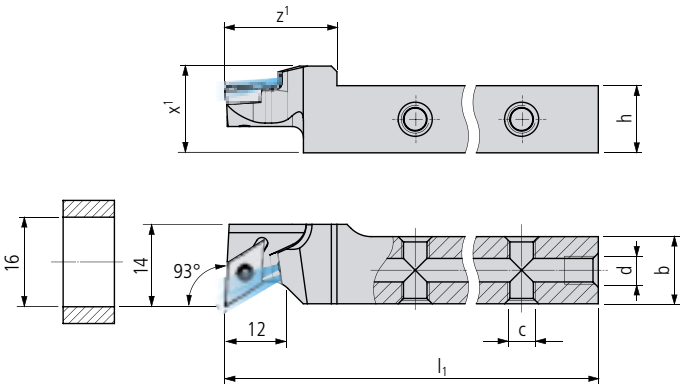
SDUC... (93°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1		f	D_{min}			239...
STANDARD-LINE												
SDUCL 1010 XH07	■	SDUCR 1010 XH07	■	10	10	100		14	16			DC..0702..
SDUCL 1212 XH07	■	SDUCR 1212 XH07	■	12	12	100		14	16			DC..0702..
SDUCL 1616 XK07	■	SDUCR 1616 XK07	■	16	16	125		14	16			DC..0702..



With internal cooling

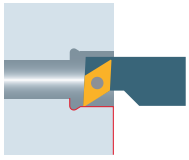




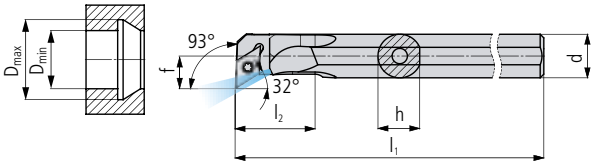
SDUC… IC (93°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1	z^1	x^1	c	d		239…
PREMIUM-LINE												
SDUCL 1010 XH07 IC	■	SDUCR 1010 XH07 IC	■	10	10	100	20	13.5	M5	M5		DC.. 0702..
SDUCL 1212 XH07 IC	■	SDUCR 1212 XH07 IC	■	12	12	100	20	15.5	M5	M5		DC.. 0702..
SDUCL 1616 XH07 IC	■	SDUCR 1616 XH07 IC	■	16	16	100	20	19.5	M5	G⅛"		DC.. 0702..
SDUCL 1616 XK07 IC	■	SDUCR 1616 XK07 IC	■	16	16	125	20	19.5	M5	G⅛"		DC.. 0702..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…







A… SDUC… (93°)

Order designation				Dimensions								Inserts
L		R		d	h	l_1	l_2	f	D_{min}	D_{max}		239…
STANDARD-LINE												
A10H SDUCL 07	■	A10H SDUCR 07	■	10	9	100	–	7	14	16		DC..0702..
A12K SDUCL 07	■	A12K SDUCR 07	■	12	11.5	125	22	9	16	22		DC..0702..
A16M SDUCL 07	■	A16M SDUCR 07	■	16	15.5	150	29	11	20	26		DC..0702..
A20Q SDUCL 07	■	A20Q SDUCR 07	■	20	19.5	180	32	13	25	31		DC..0702..
A20Q SDUCL 11	■	A20Q SDUCR 11	■	20	19.5	180	32	13	25	31		DC..11T3..

For holders (SS…) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	SD… 07
		M3.5 × 8.6 T15	MSP 35086 T15	■	SD… 11… Twin
		M3.5 × 11 T15	MSP 35110 T15	■	SD… 11
	Screw plug	M5	MSP VSR M5 IB2.5	■	SD… (h ≤ – 12)
		G⅛	MSP VSR G1/8 IB5	■	SD… (h ≥ – 16)

For holders (SD.C… FC) OD turning

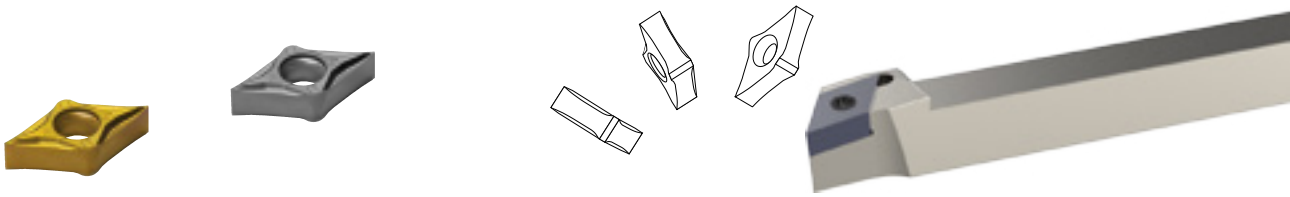
Illustration	Description	Dimensions	Order designation		Holders
	Clamping bolts	4 × 11	MSP 40110 SB FC	■	SD.C… 11 FC
	Clamping screw	M4 × 11	MSP 40110 KS FC T08	■	SD.C… 11 FC
	Screw plug	M5	MSP VSR M5 IB2.5	■	SD.C… (h ≤ – 12)
		G⅛	MSP VSR G1/8 IB5	■	SD.C… (h ≥ – 16)

For holders (… SD…) ID turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 5.5 T07	MSP 25055 T07	■	A10H SD… 07
		M2.5 × 6 T08	MSP 25060 T08	■	A12K SD… 07 A16M SD… 07 A20Q SD… 07
		M3.5 × 8.6 T15	MSP 35086 T15	■	A20Q SD… 11

TORX screwdriver ..... 703…

This further development of multidec®-ISO provides a tool system with 4 cutting edges and the finest performance-cost ratio for Swiss type machining and precision turning.
The insert consist of 4 sharp cutting edges with radius 0.08 and 0.15 mm and is easily indexed or changed. Innovative chip breakers have been designed for cutting of very difficult materials on finishing and micro-finishing applications using coated and uncoated submicrograin carbide.
Even for the hardened and nickel-plated holders a wide range of possibilities with shank sizes between 10 and 25 mm are available. For Swiss type automatic lathes special holders have been designed and complete the range of choices.



Specific features of insert DNGU:
– Negative holder fixed with screw
– 4 positive cutting edges for the price of 2
– Sharp edges with 7° clearance angle
– Small corner radius (0.08 and 0.15 mm)
– Fine grain grade carbide
– Insert DNGU also usable on holders with toggle setting device



"IC" tool holder with integrated cooling

Cost-efficient processing of modern materials increasingly requires accurate control of the coolant at the cutting edge. Conveying the coolant as close as possible to the cutting edge is often a difficult task in the machine rooms of Swiss type turning lathes.
The multidec®-IC program offers a wide range of holders with integrated cooling. Because of the high precision and pressure, it is possible to discharge the chip quickly and safely from the cutting edge and the workpiece, which protects the cutting edge of the insert. This means significantly longer tool life as well as very reliable serial production.

Advantages:
– All holders feature five possible connectors for the coolant supply
– Constant coolant discharge means low build-up at front near the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely

Overview – multidec®-ISO, type DN... (55°)

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Inserts (Carbide)

DNGU … FN -A4 286



Holders (OD turning)

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SDJN… (93°) INCH 288

SDJN… IC (93°) 289

SDJN… IC (93°) INCH 289

SDNNN … (62.5°) 290

SDNNN … (62.5°) INCH 290

SDNNN … IC (62.5°) 291

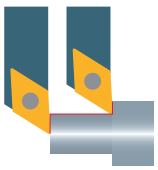
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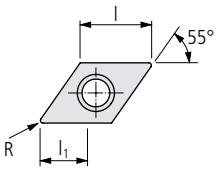


Coolant system and accessories 671



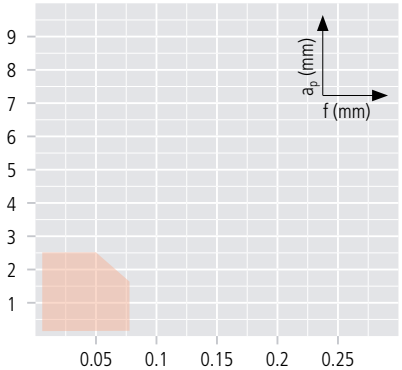


DNGU … FN -A4



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		288…
–	–	●	●	○	●	●	●	○	○	●	●	●	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	○	○	●	●	●	●	○	○	●	○	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
STANDARD-LINE																								
N DNGU 1104008 FN -A4 …					■	■	■													11.6	0.08	2.9		SDJN…11
DNGU 1104015 FN -A4 …					■	■	■													11.6	0.15	2.9		SDJN…11
DNGU 1104035 FN -A4 …					■	■	■													11.6	0.35	2.9		SDJN…11

Application range — multidec®-ISO

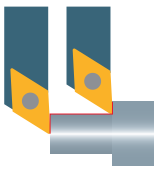


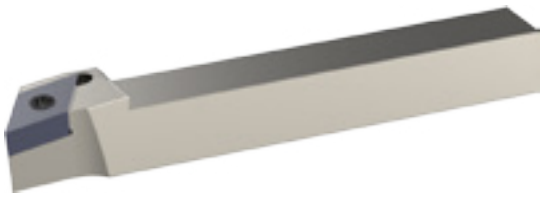
Optimal chip breaking

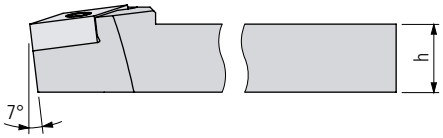
DNGU 11

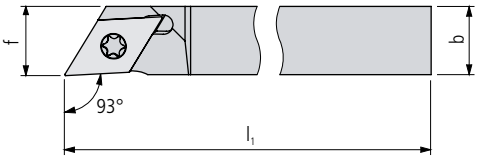
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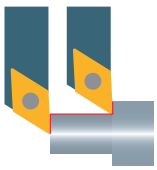


SDJN… (93°)

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 285…
STANDARD-LINE												
SDJNL 1012 F11	■	SDJNR 1012 F11	■	10	12	80		12				DN… 11…
SDJNL 1012 H11	■	SDJNR 1012 H11	■	10	12	100		12				DN… 11…
SDJNL 1212 H11	■	SDJNR 1212 H11	■	12	12	100		12				DN… 11…
SDJNL 1616 K11	■	SDJNR 1616 K11	■	16	16	125		16				DN… 11…
SDJNL 2020 K11	■	SDJNR 2020 K11	■	20	20	125		20				DN… 11…
SDJNL 2525 M11	■	SDJNR 2525 M11	■	25	25	150		25				DN… 11…

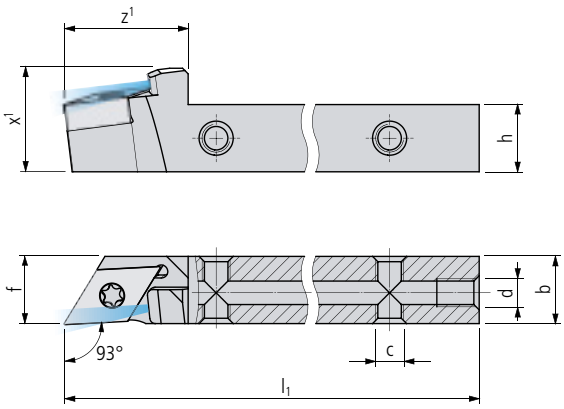
SDJN… (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 285…
STANDARD-LINE												
SDJNL 3/8" F11	■	SDJNR 3/8" F11	■	9.525	9.525	80		9.525				DN… 11…
SDJNL 3/8" H11	■	SDJNR 3/8" H11	■	9.525	9.525	100		9.525				DN… 11…
SDJNL 1/2" H11	■	SDJNR 1/2" H11	■	12.7	12.7	100		12.7				DN… 11…
SDJNL 5/8" K11	■	SDJNR 5/8" K11	■	15.875	15.875	125		15.875				DN… 11…
SDJNL 3/4" K11	■	SDJNR 3/4" K11	■	19.05	19.05	125		19.05				DN… 11…



With internal cooling





SDJN… IC (93°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 285…
PREMIUM-LINE												
SDJNL 1012 H11 IC	■	SDJNR 1012 H11 IC	■	10	12	100	22	16.5	M5	M5	12	DN.. 11…
SDJNL 1212 H11 IC	■	SDJNR 1212 H11 IC	■	12	12	100	22	18.5	M5	M5	12	DN.. 11…
SDJNL 1616 K11 IC	■	SDJNR 1616 K11 IC	■	16	16	125	22	22.5	M5	G⅛"	16	DN.. 11…
SDJNL 2020 K11 IC	■	SDJNR 2020 K11 IC	■	20	20	125	22	26.5	M5	G⅛"	20	DN.. 11…
SDJNL 2525 K11 IC	■	SDJNR 2525 K11 IC	■	25	25	125	22	31.5	M5	G⅛"	25	DN.. 11…

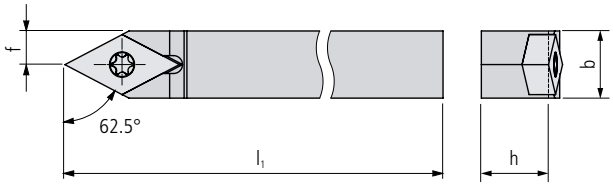
SDJN… IC (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 285…
PREMIUM-LINE												
SDJNL 3/8" H11 IC	■	SDJNR 3/8" H11 IC	■	9.525	12	100	22	16	M5	M5	12	DN.. 11…
SDJNL 1/2" H11 IC	■	SDJNR 1/2" H11 IC	■	12.7	12.7	100	22	19.2	M5	M5	12.7	DN.. 11…
SDJNL 5/8" K11 IC	■	SDJNR 5/8" K11 IC	■	15.875	15.875	125	22	22.4	M5	G⅛"	15.875	DN.. 11…
SDJNL 3/4" K11 IC	■	SDJNR 3/4" K11 IC	■	19.05	19.05	125	22	25.5	M5	G⅛"	19.05	DN.. 11…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…







SDNNN … (62.5°)

Order designation	N			Dimensions h	b	l_1		f				Inserts 285…
STANDARD-LINE												
SDNNN 1012 H11	■			10	12	100		6				DN..11..
SDNNN 1212 H11	■			12	12	100		6				DN..11..
SDNNN 1616 K11	■			16	16	125		8				DN..11..
SDNNN 2020 K11	■			20	20	125		10				DN..11..
SDNNN 2525 K11	■			25	25	125		12.5				DN..11..

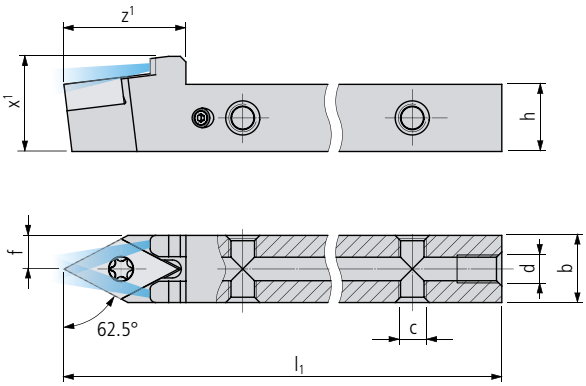
SDNNN … (62.5°) INCH

Order designation	N			Dimensions h	b	l_1		f				Inserts 285…
STANDARD-LINE												
SDNNN 3/8" H11	■			9.525	9.525	100		4.76				DN..11..
SDNNN 1/2" H11	■			12.7	12.7	100		6.35				DN..11..
SDNNN 5/8" K11	■			15.875	15.875	125		7.94				DN..11..
SDNNN 3/4" K11	■			19.05	19.05	125		9.525				DN..11..



With internal cooling





SDNNN … IC (62.5°)

Order designation				Dimensions								Inserts
N				h	b	l_1	z^1	x^1	c	d	f	285…
PREMIUM-LINE												
SDNNN 1012 H11 IC	■			10	12	100	22	15	M5	M5	6	DN..11..
SDNNN 1212 H11 IC	■			12	12	100	22	17	M5	M5	6	DN..11..
SDNNN 1616 K11 IC	■			16	16	125	22	21	M5	G⅛"	8	DN..11..
SDNNN 2020 K11 IC	■			20	20	125	22	25	M5	G⅛"	10	DN..11..
SDNNN 2525 K11 IC	■			25	25	125	25	30.5	M5	G⅛"	12.5	DN..11..

SDNNN … IC (62.5°) INCH

Order designation				Dimensions								Inserts
N				h	b	l_1	z^1	x^1	c	d	f	285…
PREMIUM-LINE												
SDNNN 3/8" H11 IC	■			9.525	9.525	100	22	14.525	M5	M5	4.76	DN..11..
SDNNN 1/2" H11 IC	■			12.7	12.7	100	22	17.7	M5	M5	6.35	DN..11..
SDNNN 5/8" K11 IC	■			15.875	15.875	125	22	20.875	M5	G⅛"	7.94	DN..11..
SDNNN 3/4" K11 IC	■			19.05	19.05	125	22	24.05	M5	G⅛"	9.525	DN..11..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…

For holders (SD.N…) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M4 × 11 TP15	MSP 40110 TP15	■	SDJN. 11
	Screw plug	M5	MSP VSR M5 IB2.5	■	SD… (h ≤ – 12)
		G⅛	MSP VSR G1/8 IB5	■	SD… (h ≥ – 16)

TORX screwdriver ..... 703…

Notes

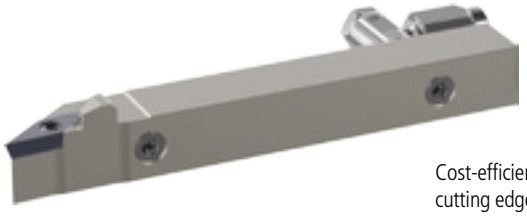
multidec®-ISO, type VC... (35°)

multidec®-ISO provides a well balanced range of tools for turning with rhombic 35° inserts and holders. Positive inserts with rounded cutting edges for roughing and sharp cutting edges for finishing are available.
These include a wide range of ground holders with hardened and nickel-plated surfaces for Swiss type automatic lathes with shank sizes from 8 to 20 mm and boring bars with diameters from 12 to 20 mm.





Advantages:
– Carbide and Cermet grades with chip breaker and coatings for all common materials
– Diamond range with CVD and PCD inserts for machining non-ferrous metals
– Cutting edge radius from 0.05 to 0.8 mm as standard
– Boring bars with steel- and carbide shanks



"IC" tool holder with integrated cooling

Cost-efficient processing of modern materials increasingly requires accurate control of the coolant at the cutting edge. Conveying the coolant as close as possible to the cutting edge is often a difficult task in the machine rooms of Swiss type turning lathes.
The multidec®-IC program offers a wide range of holders with integrated cooling. Because of the high precision and pressure, it is possible to discharge the chip quickly and safely from the cutting edge and the workpiece, which protects the cutting edge of the insert. This means significantly longer tool life as well as very reliable serial production.

Advantages:
– All holders feature five possible connectors for the coolant supply
– Constant coolant discharge means low build-up at front near the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely



"TWIN" holder with and without integrated coolant supply

The "TWIN" range allows you to work with two inserts on the same holder.
Different combinations are possible, and provide the user with a high degree of flexibility. Holders are available with shank cross-sections of 8 to 20 mm, with and without internal cooling.

Advantages:
– Twice the number of tools on the machine
– Two different turning operations are possible with a single tool holder
– All holders with an integrated coolant supply have five connecting options

Overview – multidec®-ISO, type VC... (35°)

Technical information 9



Inserts (Carbide)

VCGT … FN -PF05, VCGT … FN -A3 296
VCGT … FN -PF23, VCGT … FN -PF33 298
VCGT … FN -PA5, VCGT … -TOP5 300
VCGT … FN -PA7, VCXT … EN -PA9 302
VCGT … EN -A3, VCGT … EN -PF23 304
VCGT … EN -PF33, VCMT … EN -PF43 306
VCMT … EN -PM 308



Inserts (Cermet)

VCGT … EN -PF 309
VCMT … EN -PMF 310



Inserts (Diamond)

VCGT … FN, VCGW … FN 311, 312
VCGT … FN -UWS, VCGT … FN -UWN 313, 314



Holders (OD turning)

SVAC… U (90°) 315
SVJC… U (93°), SVJC… U (93°) INCH 316
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SVVCN … U IC (72.5°), SVVCN … U IC (72.5°) INCH 325
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SVJC. (93°)/1600… TWIN IC, SVJC. (93°)/1600… TWIN IC INCH 329



Holders (ID turning)

A… SVQC… (107.5°) 330
A… SVOC… (95°) 331
A… SVUC… (93°) 332

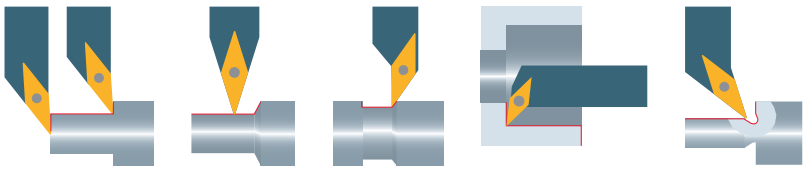


Replacement and spare parts 333



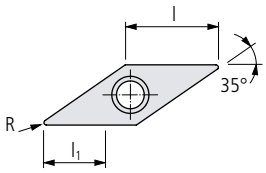
Coolant system and accessories 671

Inserts (Carbide) — multidec®-ISO



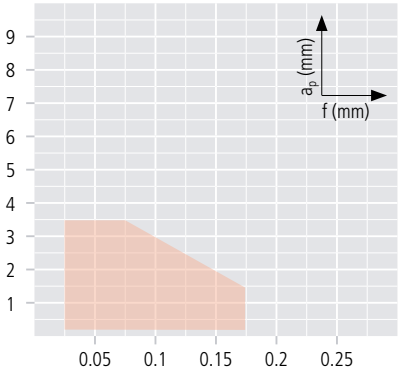


VCGT ... FN -PF05



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315...
STANDARD-LINE																								
N VCGT 1103005 FN -PF05	■	■	■																	11.1	0.05	5		SD...11...
VCGT 110301 FN -PF05	■	■	■																	11.1	0.1	5		SD...11...
VCGT 1103015 FN -PF05	■	■	■																	11.1	0.15	5		SD...11...
VCGT 110302 FN -PF05	■	■	■																	11.1	0.2	5		SD...11...
VCGT 110304 FN -PF05	■	■	■																	11.1	0.4	5		SD...11...

Application range — multidec®-ISO

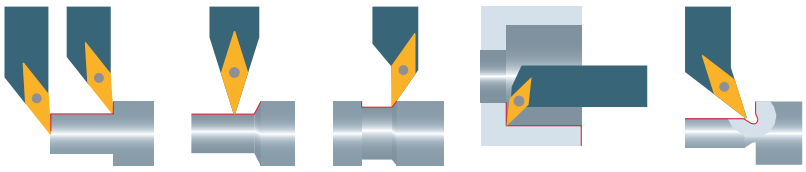


Optimal chip breaking

VCGT 11

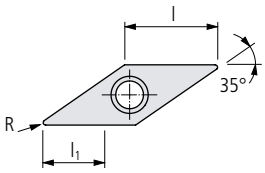
Cutting specification ... 334...
Technical information ... 9...
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Inserts (Carbide) — multidec®-ISO



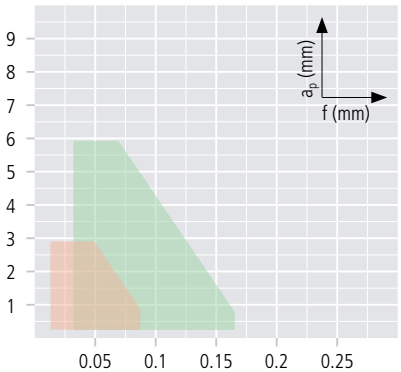


VCGT … FN -A3



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
–	–	–	●	●	○	●	●	●	○	○	●	●	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	○	○	●	●	●	●	●	○	●	○	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
STANDARD-LINE																								
N	VCGT 0702006 FN -A3 …	■	■	■																6.8	0.06	3		SV…07…
	VCGT 070201 FN-A3	■	■	■																6.8	0.1	3		SV…07…
	VCGT 0702015 FN-A3	■	■	■																6.8	0.15	3		SV…07…
	VCGT 1103008 FN -A3 …	■	■	■		■	■	■												11.1	0.08	6		SV…11…
	VCGT 1103015 FN -A3 …	■	■	■		■	■	■												11.1	0.15	6		SV…11…
	VCGT 1103035 FN -A3 …	■	■	■		■	■	■												11.1	0.35	6		SV…11…

Application range — multidec®-ISO



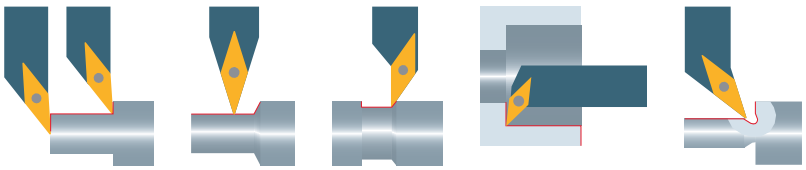
Optimal chip breaking

VCGT 07
VCGT 11

Cutting specification 334…
Technical information 9…

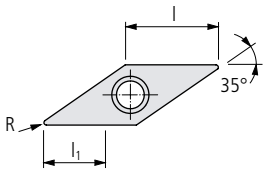
Legend 6…

Inserts (Carbide) — multidec®-ISO



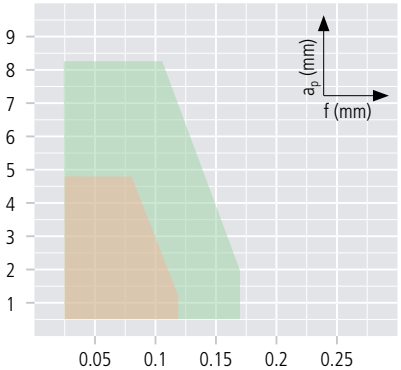


VCGT … FN -PF23



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
STANDARD-LINE																								
N VCGT 1103003 FN -PF23 …					■	■	■													11.1	0.03	4.8		SV…11…
N VCGT 1103005 FN -PF23 …	■	■	■		■	■	■													11.1	0.05	4.8		SV…11…
N VCGT 110301 FN -PF23 …	■	■	■		■	■	■													11.1	0.1	4.8		SV…11…
N VCGT 110302 FN -PF23 …	■	■	■		■	■	■													11.1	0.2	4.8		SV…11…
N VCGT 160401 FN -PF23 …	■	■	■		■	■	■													16.6	0.1	8.4		SV…16…
N VCGT 160402 FN -PF23 …	■	■	■		■	■	■													16.6	0.2	8.4		SV…16…

Application range — multidec®-ISO



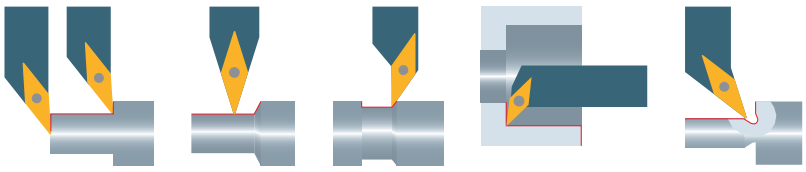
Optimal chip breaking

VCGT 11
VCGT 16

Cutting specification 334…
Technical information 9…
Legend 6…

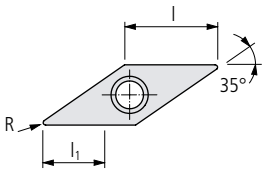
Inserts (Carbide)

multidec®-ISO





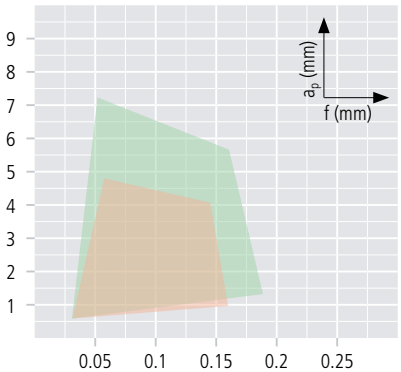
VCGT … FN -PF33



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
STANDARD-LINE																								
N	VCGT 1103005 FN -PF33 …	■	■	■		■	■	■												11.1	0.05	4.8		SV…11…
	VCGT 110301 FN -PF33 …	■	■	■		■	■	■												11.1	0.1	4.8		SV…11…
	VCGT 110302 FN -PF33 …	■	■	■		■	■	■												11.1	0.2	4.8		SV…11…
	VCGT 110304 FN -PF33 …	■	■	■		■	■	■												11.1	0.4	4.8		SV…11…
	VCGT 160401 FN -PF33 …	■	■	■		■	■	■												16.6	0.1	8.4		SV…16…
	VCGT 160402 FN -PF33 …	■	■	■		■	■	■												16.6	0.2	8.4		SV…16…
	VCGT 160404 FN -PF33 …	■	■	■		■	■	■												16.6	0.4	8.4		SV…16…

Application range

multidec®-ISO



Optimal chip breaking

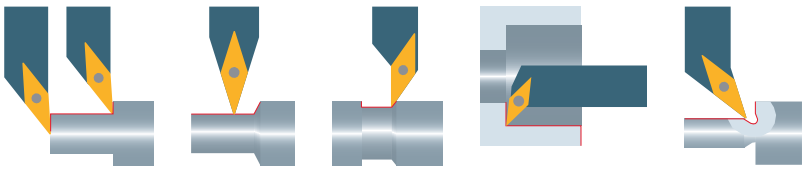
VCGT 11
VCGT 16

Cutting specification 334…
Technical information 9…

Legend 6…

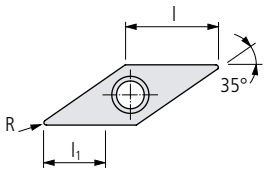
Inserts (Carbide)

multidec®-ISO





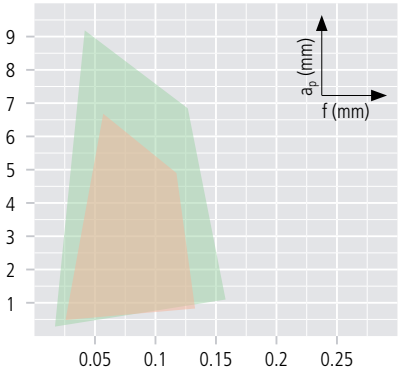
VCGT ... FN -PA5



Order designation	Carbide ▯18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		▯315...
STANDARD-LINE																								
N VCGT 110302 FN -PA5 ...	■	■	■																	11.1	0.2	6.8		SV...11...
VCGT 110304 FN -PA5 ...	■	■	■																	11.1	0.4	6.8		SV...11...
VCGT 160404 FN -PA5 ...	■	■	■																	16.6	0.4	8.9		SV...16...
VCGT 160408 FN -PA5 ...	■	■	■																	16.6	0.8	8.9		SV...16...

Application range

multidec®-ISO



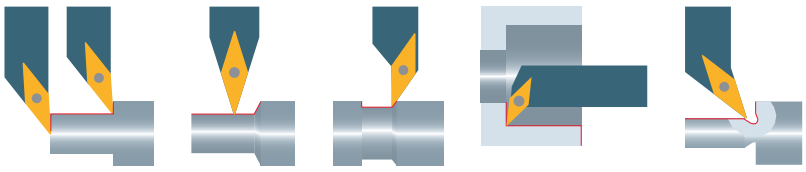
Optimal chip breaking

VCGT 11
VCGT 16

Cutting specification ▯334...
Technical information ▯9...

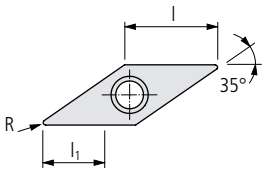
Legend ▯6...

Inserts (Carbide) — multidec®-ISO





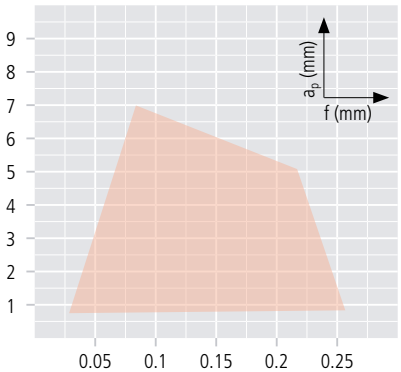
VCGT … -TOP5*



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
STANDARD-LINE																								
L VCGT 110304 FL -TOP5 …	■	■	■																	11.1	0.4	7		SV…11…
R VCGT 110304 FR -TOP5 …	■	■	■																	11.1	0.4	7		SV…11…

* Description TOP … 11

Application range — multidec®-ISO



Optimal chip breaking

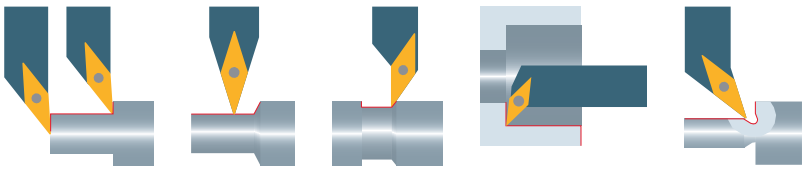
VCGT 11

Cutting specification … 334…
Technical information … 9…

Legend … 6…

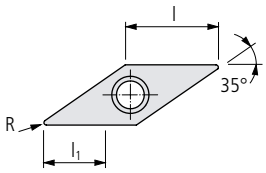
Inserts (Carbide)

multidec®-ISO





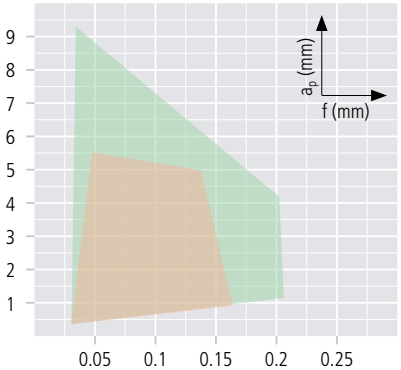
VCGT … FN -PA7



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
STANDARD-LINE																								
N	VCGT 1103005 FN -PA7 …	■	■	■																11.1	0.05	5.5		SV…11…
	VCGT 110301 FN -PA7 …	■	■	■																11.1	0.1	5.5		SV…11…
	VCGT 110302 FN -PA7 …	■	■	■																11.1	0.2	5.5		SV…11…
	VCGT 110304 FN -PA7 …	■	■	■																11.1	0.4	5.5		SV…11…
	VCGT 110308 FN -PA7 …	■	■	■																11.1	0.8	5.5		SV…11…
	VCGT 160402 FN -PA7 …	■	■	■																16.6	0.2	8.9		SV…16…
	VCGT 160404 FN -PA7 …	■	■	■																16.6	0.4	8.9		SV…16…
	VCGT 160408 FN -PA7 …	■	■	■																16.6	0.8	8.9		SV…16…

Application range

multidec®-ISO



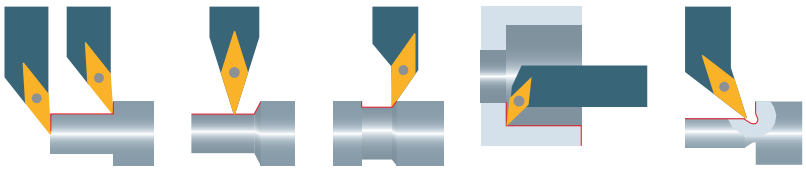
Optimal chip breaking

VCGT 11
VCGT 16

Cutting specification 334…
Technical information 9…

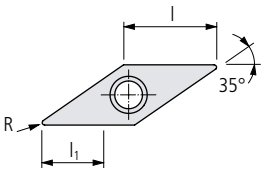
Legend 6…

Inserts (Carbide) — multidec®-ISO



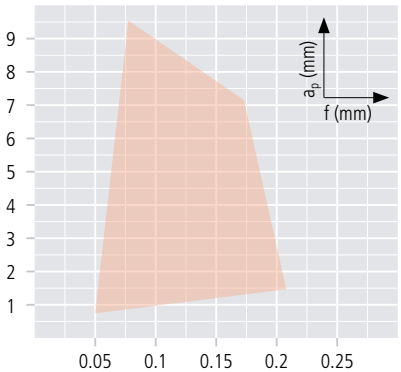


VCXT … EN -PA9



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
VALUE-LINE																								
N VCXT 160404 EN -PA9 …	■	■	■																	16.6	0.4	8.9		SV…16…
VCXT 160408 EN -PA9 …	■	■	■																	16.6	0.8	8.9		SV…16…

Application range — multidec®-ISO

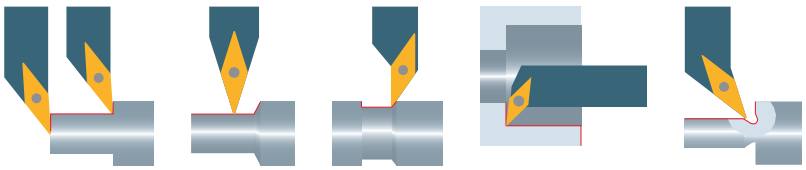


Optimal chip breaking

VCXT 16

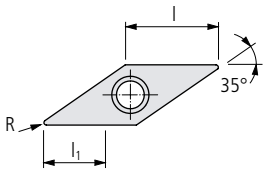
Cutting specification 334…
Technical information 9…

Legend 6…



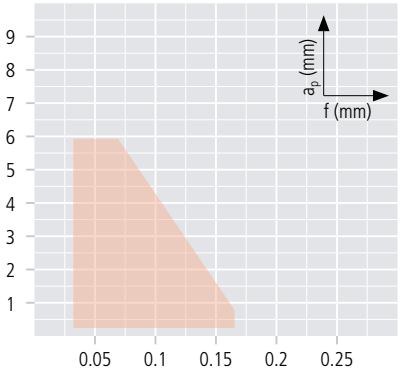


VCGT … EN -A3



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
STANDARD-LINE																								
N VCGT 1103008 EN -A3 …					■	■	■													11.1	0.08	6		SV…11…
VCGT 1103015 EN -A3 …					■	■	■													11.1	0.15	6		SV…11…
VCGT 1103035 EN -A3 …					■	■	■													11.1	0.35	6		SV…11…

Application range — multidec®-ISO

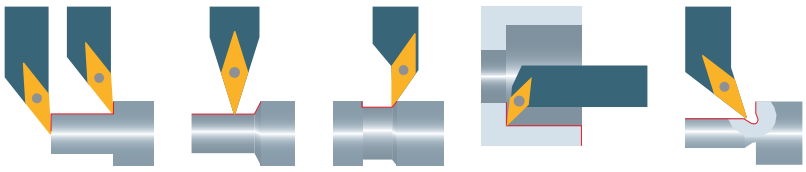


Optimal chip breaking

VCGT 11

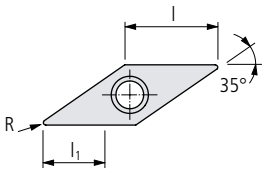
Cutting specification 334…
Technical information 9…
Legend 6…

Inserts (Carbide) — multidec®-ISO



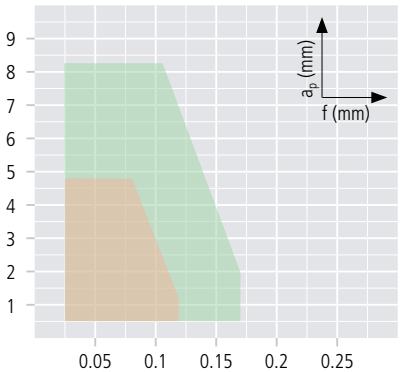


VCGT … EN -PF23



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
–	–	●	●	○	●	●	●	○	○	●	●	●	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	○	○	●	●	●	●	○	○	●	○	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
STANDARD-LINE																								
N VCGT 1103005 EN -PF23 …					■	■	■													11.1	0.05	4.8		SV…11…
VCGT 110301 EN -PF23 …					■	■	■													11.1	0.1	4.8		SV…11…
VCGT 110302 EN -PF23 …					■	■	■													11.1	0.2	4.8		SV…11…
VCGT 160401 EN -PF23 …					■	■	■													16.6	0.1	8.4		SV…16…
VCGT 160402 EN -PF23 …					■	■	■													16.6	0.2	8.4		SV…16…

Application range — multidec®-ISO

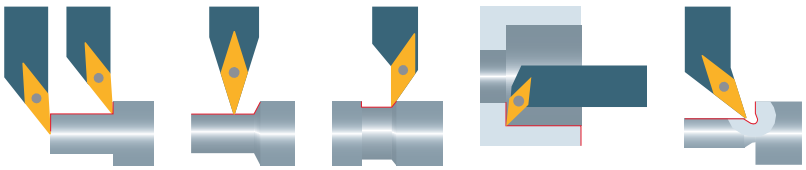


Optimal chip breaking

VCGT 11
VCGT 16

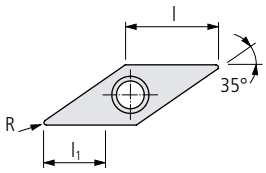
Cutting specification 334…
Technical information 9…

Legend 6…



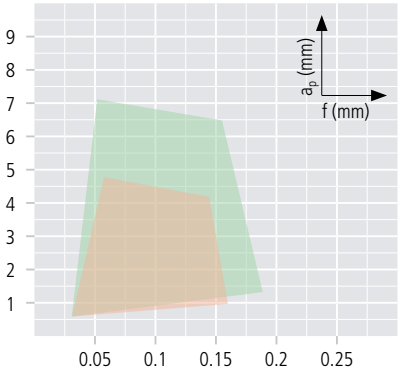


VCGT … EN -PF33



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
–	–	●	●	○	●	●	●	○	○	●	●	○	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	○	○	●	●	●	●	●	○	●	○	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
STANDARD-LINE																								
N	VCGT 1103005 EN -PF33 …					■	■	■												11.1	0.05	4.8		SV…11…
	VCGT 110301 EN -PF33 …					■	■	■												11.1	0.1	4.8		SV…11…
	VCGT 110302 EN -PF33 …					■	■	■												11.1	0.2	4.8		SV…11…
	VCGT 110304 EN -PF33 …					■	■	■												11.1	0.4	4.8		SV…11…
	VCGT 160401 EN -PF33 …					■	■	■												16.6	0.1	8.4		SV…16…
	VCGT 160402 EN -PF33 …					■	■	■												16.6	0.2	8.4		SV…16…
	VCGT 160404 EN -PF33 …					■	■	■												16.6	0.4	8.4		SV…16…

Application range — multidec®-ISO

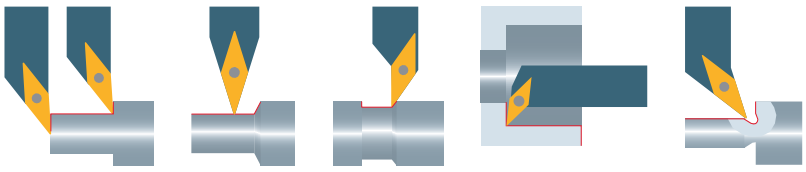


Optimal chip breaking

VCGT 11
VCGT 16

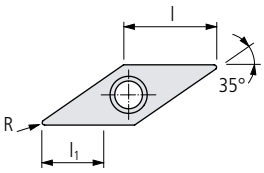
Cutting specification 334…
Technical information 9…
Legend 6…

Inserts (Carbide) — multidec®-ISO



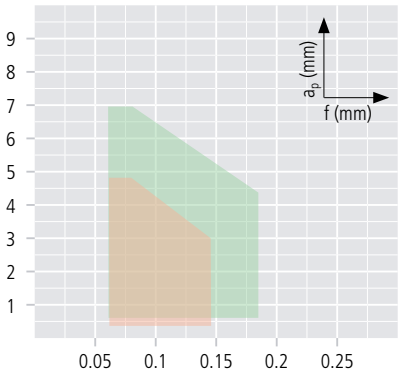


VCMT … EN -PF43



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
–	–	●	●	○	●	●	●	○	○	●	●	●	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	●	○	●	●	●	●	○	○	●	○	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
VALUE-LINE																								
N VCMT 110302 EN -PF43 …								■												11.1	0.2	4.8		SV…11…
N VCMT 110304 EN -PF43 …								■												11.1	0.4	4.8		SV…11…
N VCMT 160404 EN -PF43 …								■												16.6	0.4	7		SV…16…
N VCMT 160408 EN -PF43 …								■												16.6	0.8	7		SV…16…

Application range — multidec®-ISO

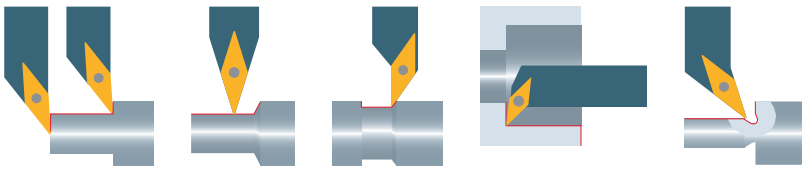


Optimal chip breaking

VCMT 11
VCMT 16

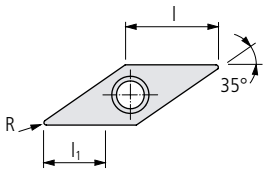
Cutting specification 334…
Technical information 9…

Legend 6…



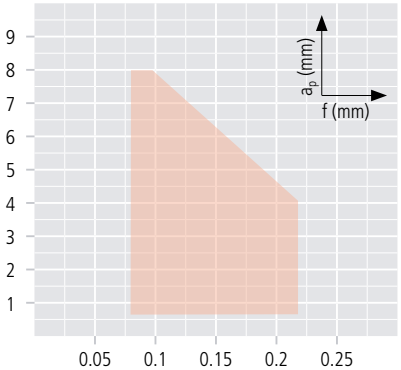


VCMT … EN -PM



Order designation	Carbide (🗋18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		🗋315…
VALUE-LINE																								
N VCMT 160404 EN -PM …				■				■				■								16.6	0.4	10		SV…16…
VCMT 160408 EN -PM …				■				■				■								16.6	0.8	10		SV…16…

Application range — multidec®-ISO

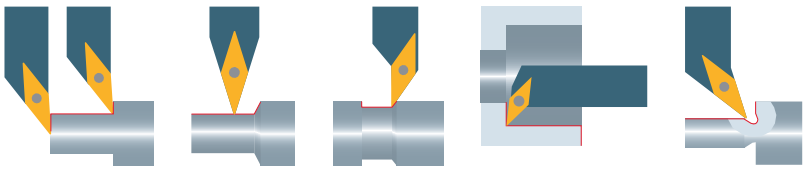


Optimal chip breaking

VCMT 16

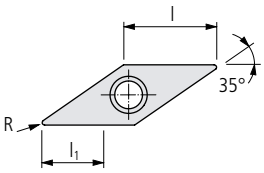
Cutting specification 🗋334…
Technical information 🗋9…
Legend 🗋6…

Inserts (Cermet) — multidec®-ISO



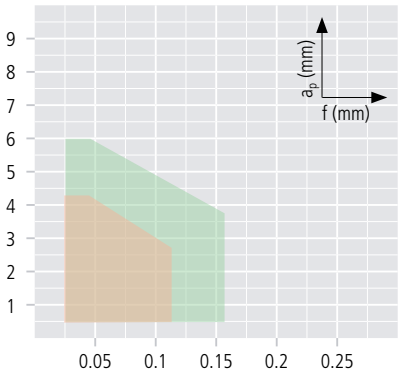


VCGT … EN -PF



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
–	–	●	●	○	●	●	●	○	○	●	●	○	●	●	●	–	–	–					
–	●	●	–	○	●	●	○	○	●	●	●	●	○	●	○	–	–	–					
○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–					
●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	●	●	●					
–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
STANDARD-LINE																								
N																								
VCGT 110302 EN -PF …														■	■	■				11.1	0.2	4.8		SV…11…
VCGT 110304 EN -PF …														■	■	■				11.1	0.4	4.8		SV…11…
VCGT 110308 EN -PF …																				11.1	0.8	4.8		SV…11…
VCGT 160404 EN -PF …														■	■	■				16.6	0.4	6		SV…16…
VCGT 160408 EN -PF …														■	■	■				16.6	0.8	6		SV…16…

Application range — multidec®-ISO

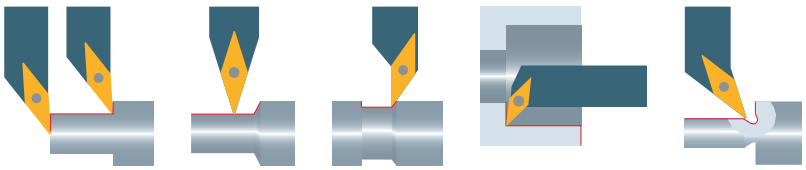


Optimal chip breaking

VCGT 11
VCGT 16

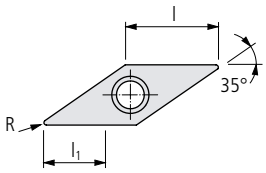
Cutting specification ..... 334…
Technical information ..... 9…

Legend ..... 6…



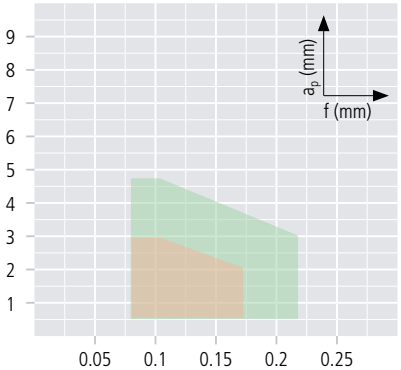


VCMT … EN -PMF



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
VALUE-LINE																								
N VCMT 110304 EN -PMF …																■				11.1	0.4	4.1		SV…11…
VCMT 160404 EN -PMF …																■				16.6	0.4	6		SV…16…
VCMT 160408 EN -PMF …																■				16.6	0.8	6		SV…16…

Application range — multidec®-ISO

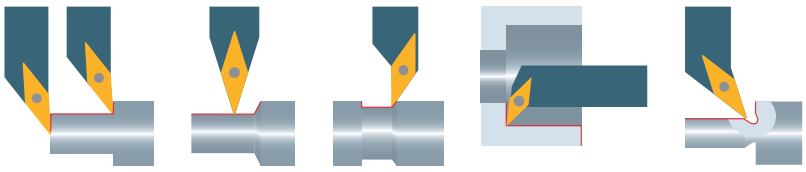


Optimal chip breaking

VCMT 11
VCMT 16

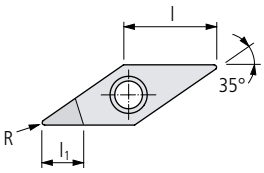
Cutting specification 334…
Technical information 9…
Legend 6…

Inserts (Diamond) — multidec®-ISO



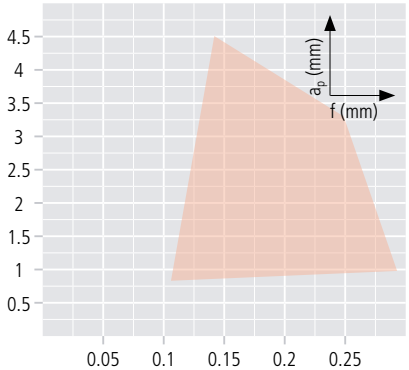


VCGT … FN



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	–	–	●	●	○	●	●	●	○	○	●	●	○	●	●	●	–	–	–					
	–	●	●	–	○	●	●	○	○	●	●	●	●	○	●	○	–	–	–					
	○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–					
	●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	●	●	●					
	–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		
STANDARD-LINE																								
N VCGT 110301 FN …																		■	■	11.1	0.1	5.4		SV…11…
VCGT 110302 FN …																		■	■	11.1	0.2	4.6		SV…11…
VCGT 160402 FN …																		■	■	16.6	0.2	5.9		SV…16…
VCGT 160404 FN …																		■	■	16.6	0.4	5.5		SV…16…

Application range — multidec®-ISO

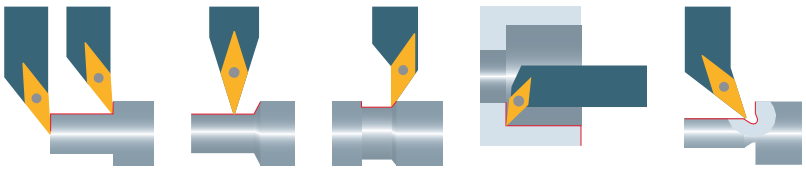


Optimal chip breaking

VCGT

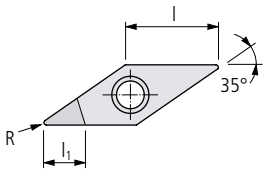
Cutting specification 334…
Technical information 9…

Legend 6…



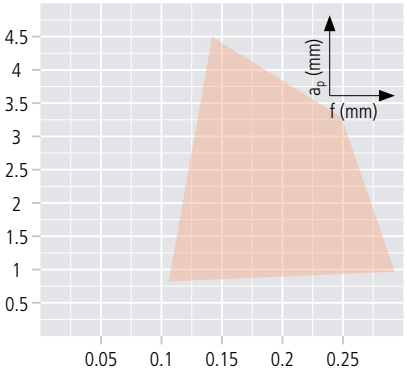


VCGW … FN



Order designation	Carbide (18)													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
STANDARD-LINE																								
N VCGW 110301 FN …																			■	11.1	0.1	4.6		SV…11…
VCGW 110302 FN …																	■	■	■	11.1	0.2	4.6		SV…11…
VCGW 110304 FN …																	■	■	■	11.1	0.4	3.9		SV…11…
VCGW 160404 FN …																	■	■	■	16.6	0.4	5.5		SV…16…
VCGW 160408 FN …																	■	■	■	16.6	0.8	5		SV…16…

Application range — multidec®-ISO



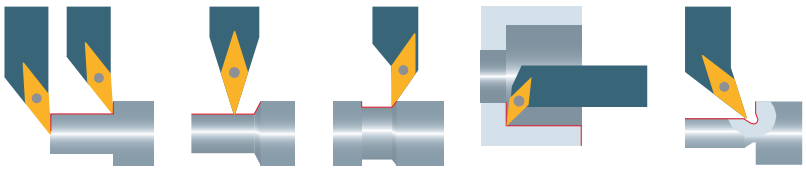
Optimal chip breaking

VCGW

Cutting specification ..... 334…
Technical information ..... 9…

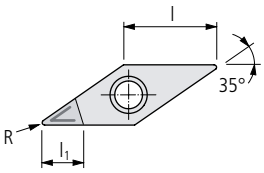
Legend ..... 6…

Inserts (Diamond) — multidec®-ISO



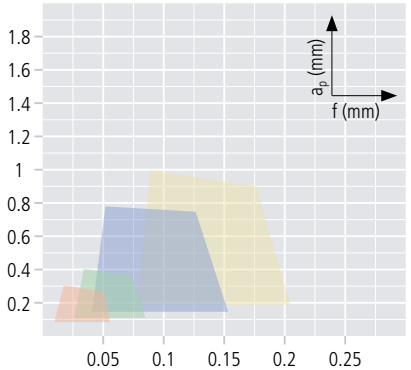


VCGT … FN -UWS



Order designation	Carbide 18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		315…
STANDARD-LINE																								
N																								
VCGT 110301 FN -UWS …																	■	■		11.1	0.1	4.6		SV…11…
VCGT 110302 FN -UWS …																	■	■	■	11.1	0.2	4.6		SV…11…
VCGT 110304 FN -UWS …																	■	■	■	11.1	0.4	3.9		SV…11…
VCGT 160402 FN -UWS …																	■	■		16.6	0.2	5.9		SV…16…
VCGT 160404 FN -UWS …																	■	■	■	16.6	0.4	5.5		SV…16…
VCGT 160408 FN -UWS …																	■	■	■	16.6	0.8	5		SV…16…

Application range — multidec®-ISO

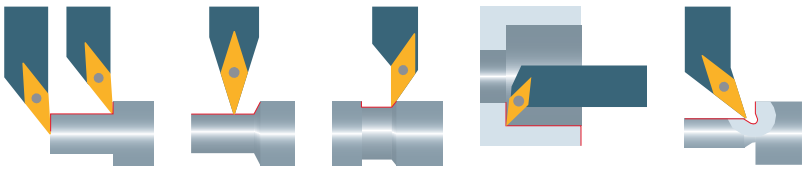


Optimal chip breaking

- R 0.1
- R 0.2
- R 0.4
- R 0.8

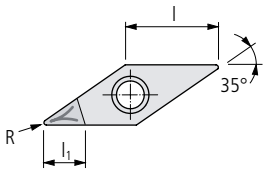
Cutting specification 334…
Technical information 9…

Legend 6…



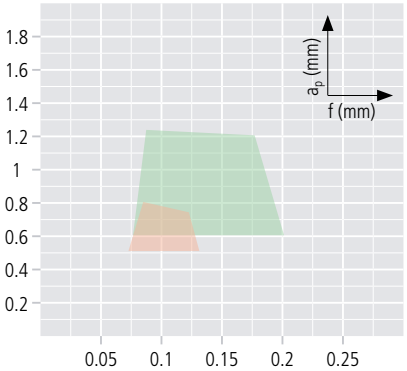


VCGT … FN -UWN



Order designation	Carbide ▯18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		▯315…
STANDARD-LINE																								
N VCGT 110302 FN -UWN …																	■		■	11.1	0.2	4.6		SV…11…
VCGT 110304 FN -UWN …																	■		■	11.1	0.4	3.9		SV…11…
VCGT 160404 FN -UWN …																	■		■	16.6	0.4	5.5		SV…16…

Application range — multidec®-ISO



Optimal chip breaking

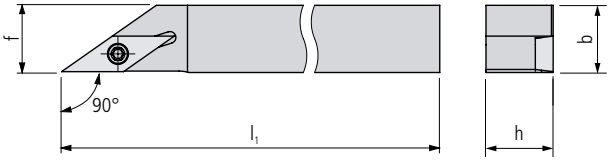
R 0.2
R 0.4

Cutting specification ▯334…
Technical information ▯9…

Legend ▯6…

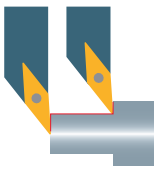




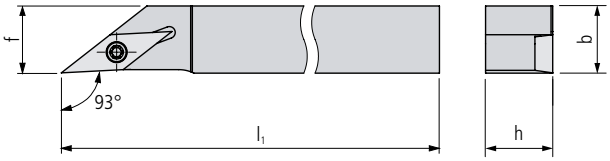


SVAC… U (90°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1		f				295…
STANDARD-LINE												
SVACL 0808 F11 U	■	SVACR 0808 F11 U	■	8	8	80		7.85				VC..1103..
SVACL 0808 H07 U	■	SVACR 0808 H07 U	■	8	8	100		7.85				VC..0702..
SVACL 0808 H11 U	■	SVACR 0808 H11 U	■	8	8	100		7.85				VC..1103..
SVACL 1010 F11 U	■	SVACR 1010 F11 U	■	10	10	80		9.85				VC..1103..
SVACL 1010 H07 U	■	SVACR 1010 H07 U	■	10	10	100		9.85				VC..0702..
SVACL 1010 H11 U	■	SVACR 1010 H11 U	■	10	10	100		9.85				VC..1103..
SVACL 1212 H07 U	■	SVACR 1212 H07 U	■	12	12	100		11.85				VC..0702..
SVACL 1212 H11 U	■	SVACR 1212 H11 U	■	12	12	100		11.85				VC..1103..





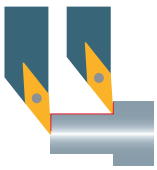


SVJC… U (93°)

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 295…
STANDARD-LINE												
SVJCL 0808 F11 U	■	SVJCR 0808 F11 U	■	8	8	80		7.95				VC..1103..
SVJCL 0808 H07 U	■	SVJCR 0808 H07 U	■	8	8	100		7.95				VC..0702..
SVJCL 0808 H11 U	■	SVJCR 0808 H11 U	■	8	8	100		7.95				VC..1103..
SVJCL 1010 F11 U	■	SVJCR 1010 F11 U	■	10	10	80		9.95				VC..1103..
SVJCL 1010 H07 U	■	SVJCR 1010 H07 U	■	10	10	100		9.95				VC..0702..
SVJCL 1010 H11 U	■	SVJCR 1010 H11 U	■	10	10	100		9.95				VC..1103..
SVJCL 1212 H07 U	■	SVJCR 1212 H07 U	■	12	12	100		11.95				VC..0702..
SVJCL 1212 H11 U	■	SVJCR 1212 H11 U	■	12	12	100		11.95				VC..1103..
SVJCL 1216 H16 U	■	SVJCR 1216 H16 U	■	12	16	100		15.95				VC..1604..
SVJCL 1616 K11 U	■	SVJCR 1616 K11 U	■	16	16	125		15.95				VC..1103..
SVJCL 1616 K16 U	■	SVJCR 1616 K16 U	■	16	16	125		15.95				VC..1604..
SVJCL 2020 K11 U	■	SVJCR 2020 K11 U	■	20	20	125		19.95				VC..1103..
SVJCL 2020 K16 U	■	SVJCR 2020 K16 U	■	20	20	125		19.95				VC..1604..

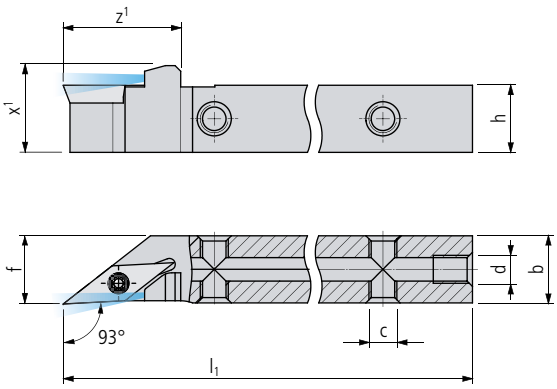
SVJC… U (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 295…
STANDARD-LINE												
SVJCL 3/8" F11 U	■	SVJCR 3/8" F11 U	■	9.525	9.525	80		9.475				VC..1103..
SVJCL 3/8" H07 U	■	SVJCR 3/8" H07 U	■	9.525	9.525	100		9.475				VC..0702..
SVJCL 3/8" H11 U	■	SVJCR 3/8" H11 U	■	9.525	9.525	100		9.475				VC..1103..
SVJCL 1/2" H07 U	■	SVJCR 1/2" H07 U	■	12.7	12.7	100		12.65				VC..0702..
SVJCL 1/2" H11 U	■	SVJCR 1/2" H11 U	■	12.7	12.7	100		12.65				VC..1103..
SVJCL 1/2"-5/8" H16 U	■	SVJCR 1/2"-5/8" H16 U	■	12.7	15.875	100		15.825				VC..1604..
SVJCL 3/4" K11 U	■	SVJCR 3/4" K11 U	■	19.05	19.05	125		19				VC..1103..
SVJCL 3/4" K16 U	■	SVJCR 3/4" K16 U	■	19.05	19.05	125		19				VC..1604..



With internal cooling





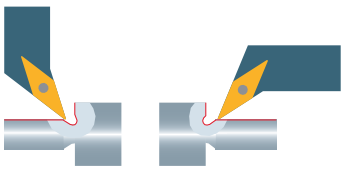
SVJC… U IC (93°)

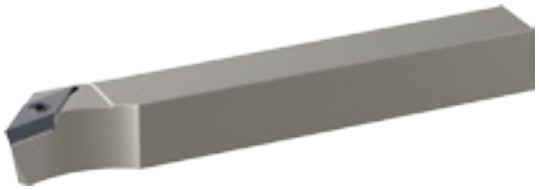
Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 295…
PREMIUM-LINE												
SVJCL 0808 H07 U IC	■	SVJCR 0808 H07 U IC	■	8	8	100	20	11.5	M5	M5	8	VC.. 0702..
SVJCL 0810 H11 U IC	■	SVJCR 0810 H11 U IC	■	8	10	100	21	11.5	M5	M5	10	VC.. 1103..
SVJCL 1010 H07 U IC	■	SVJCR 1010 H07 U IC	■	10	10	100	20	13.5	M5	M5	10	VC.. 0702..
SVJCL 1010 H11 U IC	■	SVJCR 1010 H11 U IC	■	10	10	100	21	13.5	M5	M5	10	VC.. 1103..
SVJCL 1212 H07 U IC	■	SVJCR 1212 H07 U IC	■	12	12	100	20	15.5	M5	M5	12	VC.. 0702..
SVJCL 1212 H11 U IC	■	SVJCR 1212 H11 U IC	■	12	12	100	21	15.5	M5	M5	12	VC.. 1103..
SVJCL 1216 H16 U IC	■	SVJCR 1216 H16 U IC	■	12	16	100	27	15.5	M5	M5	12	VC.. 1604..
SVJCL 1616 K11 U IC	■	SVJCR 1616 K11 U IC	■	16	16	125	21	19.5	M5	G⅛"	16	VC.. 1103..
SVJCL 1616 K16 U IC	■	SVJCR 1616 K16 U IC	■	16	16	125	27	19.5	M5	G⅛"	16	VC.. 1604..
SVJCL 2020 K11 U IC	■	SVJCR 2020 K11 U IC	■	20	20	125	21	23.5	M5	G⅛"	20	VC.. 1103..
SVJCL 2020 K16 U IC	■	SVJCR 2020 K16 U IC	■	20	20	125	27	23.5	M5	G⅛"	20	VC.. 1604..

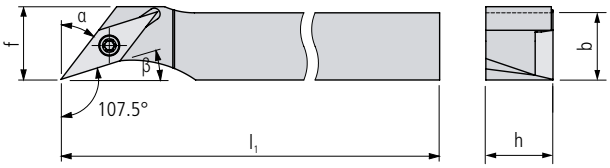
SVJC… U IC (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 295…
PREMIUM-LINE												
SVJCL 3/8" H07 U IC	■	SVJCR 3/8" H07 U IC	■	9.525	9.525	100	20	13	M5	M5	9.525	VC.. 0702..
SVJCL 3/8" H11 U IC	■	SVJCR 3/8" H11 U IC	■	9.525	9.525	100	21	13	M5	M5	9.525	VC.. 1103..
SVJCL 1/2" H07 U IC	■	SVJCR 1/2" H07 U IC	■	12.7	12.7	100	20	16.2	M5	M5	12.7	VC.. 0702..
SVJCL 1/2" H11 U IC	■	SVJCR 1/2" H11 U IC	■	12.7	12.7	100	21	16.2	M5	M5	12.7	VC.. 1103..
SVJCL 1/2"-5/8" H16 U IC	■	SVJCR 1/2"-5/8" H16 U IC	■	12.7	15.875	100	27	16.2	M5	M5	12.7	VC.. 1604..
SVJCL 5/8" K11 U IC	■	SVJCR 5/8" K11 U IC	■	15.875	15.875	125	21	19.5	M5	G⅛"	15.875	VC.. 1103..
SVJCL 5/8" K16 U IC	■	SVJCR 5/8" K16 U IC	■	15.875	15.875	125	27	19.5	M5	G⅛"	15.875	VC.. 1604..
SVJCL 3/4" K11 U IC	■	SVJCR 3/4" K11 U IC	■	19.05	19.05	125	21	22.6	M5	G⅛"	19.05	VC.. 1103..
SVJCL 3/4" K16 U IC	■	SVJCR 3/4" K16 U IC	■	19.05	19.05	125	27	22.6	M5	G⅛"	19.05	VC.. 1604..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…





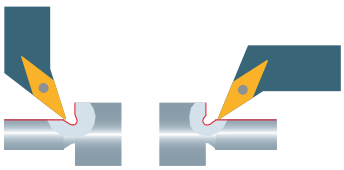


SVHC... U (107.5°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1		f		α	β	295...
STANDARD-LINE												
SVHCL 0808 H07 U	■	SVHCR 0808 H07 U	■	8	8	100		8.5		37.5°	17.5°	VC..0702..
SVHCL 1010 H07 U	■	SVHCR 1010 H07 U	■	10	10	100		10		37.5°	17.5°	VC..0702..
SVHCL 1010 H11 U	■	SVHCR 1010 H11 U	■	10	10	100		13		37.5°	17.5°	VC..1103..
SVHCL 1212 H07 U	■	SVHCR 1212 H07 U	■	12	12	100		12		37.5°	17.5°	VC..0702..
SVHCL 1212 H11 U	■	SVHCR 1212 H11 U	■	12	12	100		13		37.5°	17.5°	VC..1103..
SVHCL 1616 K11 U	■	SVHCR 1616 K11 U	■	16	16	125		16		37.5°	17.5°	VC..1103..

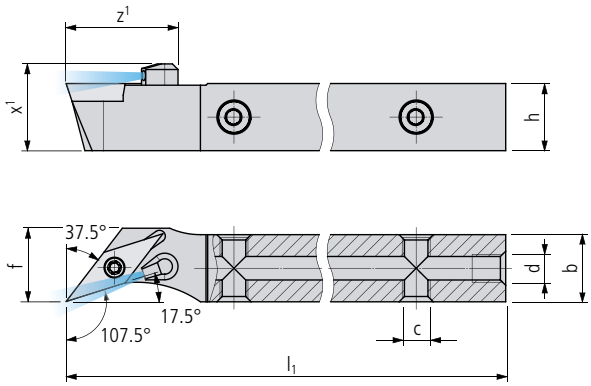
SVHC... U (107.5°) INCH

Order designation				Dimensions								Inserts
L		R		h	b	l_1		f		α	β	295...
STANDARD-LINE												
SVHCL 3/8" H07 U	■	SVHCR 3/8" H07 U	■	9.525	9.525	100		9.525		37.5°	17.5°	VC..0702..
SVHCL 3/8" H11 U	■	SVHCR 3/8" H11 U	■	9.525	9.525	100		13		37.5°	17.5°	VC..1103..
SVHCL 1/2" H07 U	■	SVHCR 1/2" H07 U	■	12.7	12.7	100		12.7		37.5°	17.5°	VC..0702..
SVHCL 1/2" H11 U	■	SVHCR 1/2" H11 U	■	12.7	12.7	100		13		37.5°	17.5°	VC..1103..
SVHCL 5/8" K11 U	■	SVHCR 5/8" K11 U	■	15.875	15.875	125		16		37.5°	17.5°	VC..1103..



With internal cooling





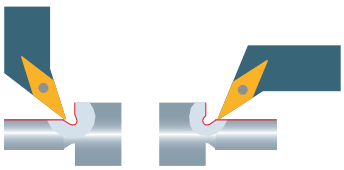
SVHC… U IC (107.5°)

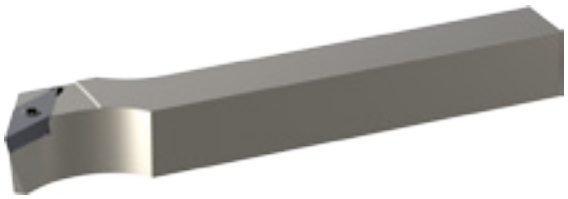
Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 295…
PREMIUM-LINE												
SVHCL 0808 H07 U IC	■	SVHCR 0808 H07 U IC	■	8	8	100	14	11.5	M5	M5	8.5	VC..0702..
SVHCL 1010 H07 U IC	■	SVHCR 1010 H07 U IC	■	10	10	100	14	13.5	M5	M5	10	VC..0702..
SVHCL 1212 H07 U IC	■	SVHCR 1212 H07 U IC	■	12	12	100	14	15.5	M5	M5	12	VC..0702..
SVHCL 1212 H11 U IC	■	SVHCR 1212 H11 U IC	■	12	12	100	20	15.5	M5	M5	13	VC..1103..
SVHCL 1616 K11 U IC	■	SVHCR 1616 K11 U IC	■	16	16	125	20	19.5	M5	G⅛"	16	VC..1103..

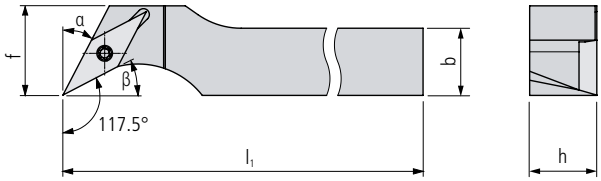
SVHC… U IC (107.5°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 295…
PREMIUM-LINE												
SVHCL 3/8" H07 U IC	■	SVHCR 3/8" H07 U IC	■	9.525	9.525	100	14	13	M5	M5	9.525	VC..0702..
SVHCL 1/2" H07 U IC	■	SVHCR 1/2" H07 U IC	■	12.7	12.7	100	14	16.2	M5	M5	12.7	VC..0702..
SVHCL 1/2" H11 U IC	■	SVHCR 1/2" H11 U IC	■	12.7	12.7	100	20	16.2	M5	M5	13	VC..1103..
SVHCL 5/8" K11 U IC	■	SVHCR 5/8" K11 U IC	■	15.875	15.875	125	20	19.4	M5	G⅛"	15.875	VC..1103..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…





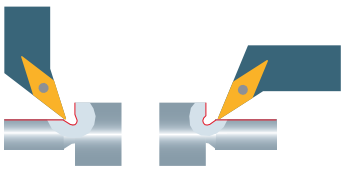


SVPC... U (117.5°)

Order designation L		Order designation R		Dimensions h	b	l_1		f		α	β	Inserts ▯295...
STANDARD-LINE												
SVPCL 0808 H07 U	■	SVPCR 0808 H07 U	■	8	8	100		10		27.5°	27.5°	VC..0702..
SVPCL 1010 H07 U	■	SVPCR 1010 H07 U	■	10	10	100		10		27.5°	27.5°	VC..0702..
SVPCL 1010 H11 U	■	SVPCR 1010 H11 U	■	10	10	100		16		27.5°	27.5°	VC..1103..
SVPCL 1212 H07 U	■	SVPCR 1212 H07 U	■	12	12	100		12		27.5°	27.5°	VC..0702..
SVPCL 1212 H11 U	■	SVPCR 1212 H11 U	■	12	12	100		16		27.5°	27.5°	VC..1103..
SVPCL 1616 K11 U	■	SVPCR 1616 K11 U	■	16	16	125		16		27.5°	27.5°	VC..1103..

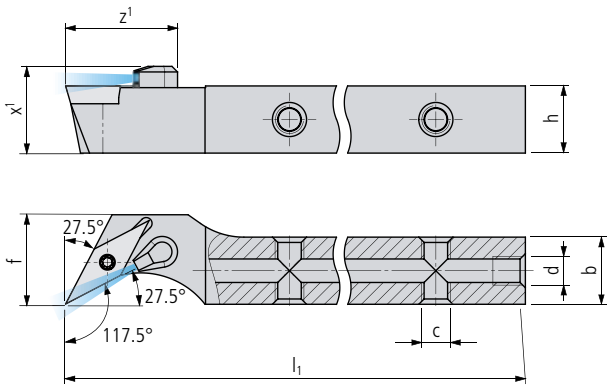
SVPC... U (117.5°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f		α	β	Inserts ▯295...
STANDARD-LINE												
SVPCL 3/8" H07 U	■	SVPCR 3/8" H07 U	■	9.525	9.525	100		9.5		27.5°	27.5°	VC..0702..
SVPCL 3/8" H11 U	■	SVPCR 3/8" H11 U	■	9.525	9.525	100		16		27.5°	27.5°	VC..1103..
SVPCL 1/2" H07 U	■	SVPCR 1/2" H07 U	■	12.7	12.7	100		12.7		27.5°	27.5°	VC..0702..
SVPCL 1/2" H11 U	■	SVPCR 1/2" H11 U	■	12.7	12.7	100		16		27.5°	27.5°	VC..1103..
SVPCL 5/8" K11 U	■	SVPCR 5/8" K11 U	■	15.875	15.875	125		16		27.5°	27.5°	VC..1103..



With internal cooling





SVPC… U IC (117.5°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 295…
PREMIUM-LINE												
SVPCL 0808 H07 U IC	■	SVPCR 0808 H07 U IC	■	8	8	100	14	11.5	M5	M5	10	VC..0702..
SVPCL 1010 H07 U IC	■	SVPCR 1010 H07 U IC	■	10	10	100	14	13.5	M5	M5	10	VC..0702..
SVPCL 1010 H11 U IC	■	SVPCR 1010 H11 U IC	■	10	10	100	20	13.5	M5	M5	16	VC..1103..
SVPCL 1212 H07 U IC	■	SVPCR 1212 H07 U IC	■	12	12	100	14	15.5	M5	M5	12	VC..0702..
SVPCL 1212 H11 U IC	■	SVPCR 1212 H11 U IC	■	12	12	100	20	15.5	M5	M5	16	VC..1103..
SVPCL 1616 K11 U IC	■	SVPCR 1616 K11 U IC	■	16	16	125	20	19.5	M5	G⅛"	16	VC..1103..

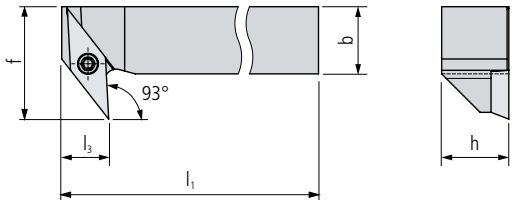
SVPC… U IC (117.5°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 295…
PREMIUM-LINE												
SVPCL 3/8" H07 U IC	■	SVPCR 3/8" H07 U IC	■	9.525	9.525	100	14	13	M5	M5	10	VC..0702..
SVPCL 3/8" H11 U IC	■	SVPCR 3/8" H11 U IC	■	9.525	9.525	100	20	13	M5	M5	16	VC..1103..
SVPCL 1/2" H07 U IC	■	SVPCR 1/2" H07 U IC	■	12.7	12.7	100	14	16.2	M5	M5	12.9	VC..0702..
SVPCL 1/2" H11 U IC	■	SVPCR 1/2" H11 U IC	■	12.7	12.7	100	20	16.2	M5	M5	16	VC..1103..
SVPCL 5/8" K11 U IC	■	SVPCR 5/8" K11 U IC	■	15.875	15.875	125	20	19.4	M5	G⅛"	15.875	VC..1103..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



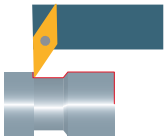


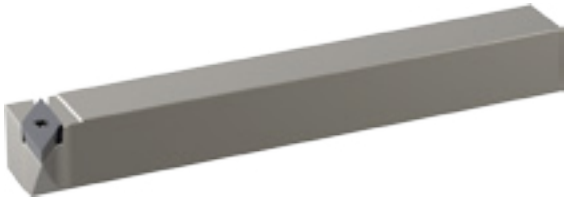


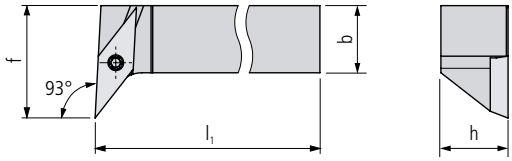
SVQC… (93°)

Order designation L		Order designation R		Dimensions h	b	l_1		f		l_3		Inserts 295…
STANDARD-LINE												
SVQCL 0808 H07	■	SVQCR 0808 H07	■	8	8	100		13.5		6		VC..0702..
SVQCL 1010 H07	■	SVQCR 1010 H07	■	10	10	100		15.5		6		VC..0702..
SVQCL 1212 H07	■	SVQCR 1212 H07	■	12	12	100		17.5		6		VC..0702..
SVQCL 1212 H11	■	SVQCR 1212 H11	■	12	12	100		20		8.5		VC..1103..
SVQCL 1616 K11	■	SVQCR 1616 K11	■	16	16	125		24		8.5		VC..1103..

Legend ..... 6…

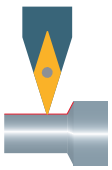




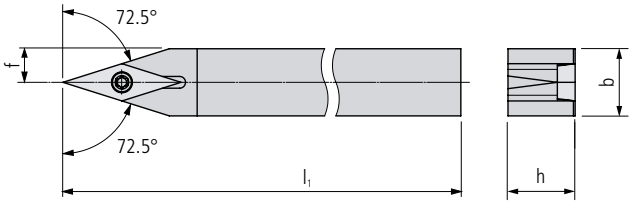


SVUC… (93°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1		f				295…
STANDARD-LINE												
SVUCL 0808 H07	■	SVUCR 0808 H07	■	8	8	100		13.5				VC..0702..
SVUCL 1010 H07	■	SVUCR 1010 H07	■	10	10	100		15.5				VC..0702..
SVUCL 1212 H07	■	SVUCR 1212 H07	■	12	12	100		17.5				VC..0702..
SVUCL 1212 H11	■	SVUCR 1212 H11	■	12	12	100		20				VC..1103..
SVUCL 1616 K11	■	SVUCR 1616 K11	■	16	16	125		24				VC..1103..
SVUCL 2020 K11	■	SVUCR 2020 K11	■	20	20	125		28				VC..1103..







SVVCN … U (72.5°)

Order designation	N	Dimensions h	b	l_1	f	Inserts 295…
STANDARD-LINE						
SVVCN 0808 F11 U	■	8	8	80	4	VC..1103..
SVVCN 0808 H07 U	■	8	8	100	4	VC..0702..
SVVCN 0808 H11 U	■	8	8	100	4	VC..1103..
SVVCN 1010 F11 U	■	10	10	80	5	VC..1103..
SVVCN 1010 H07 U	■	10	10	100	5	VC..0702..
SVVCN 1010 H11 U	■	10	10	100	5	VC..1103..
SVVCN 1212 F11 U	■	12	12	80	6	VC..1103..
SVVCN 1212 H07 U	■	12	12	100	6	VC..0702..
SVVCN 1212 H11 U	■	12	12	100	6	VC..1103..
SVVCN 1616 K11 U	■	16	16	125	8	VC..1103..
SVVCN 2020 K11 U	■	20	20	125	10	VC..1103..
SVVCN 2020 K16 U	■	20	20	125	10	VC..1604..

SVVCN … U (72.5°) INCH

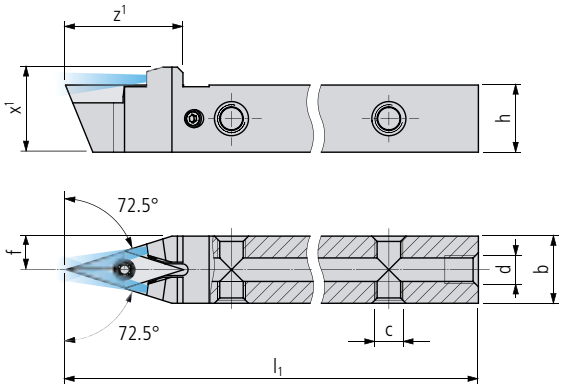
Order designation	L	R	Dimensions h	b	l_1	f	Inserts 295…
STANDARD-LINE							
SVVCN 3/8" H07 U	■		9.525	9.525	100	4.76	VC..0702..
SVVCN 3/8" H11 U	■		9.525	9.525	100	4.76	VC..1103..
SVVCN 1/2" H07 U	■		12.7	12.7	100	6.35	VC..0702..
SVVCN 1/2" H11 U	■		12.7	12.7	100	6.35	VC..1103..
SVVCN 5/8" K11 U	■		15.875	15.875	125	7.93	VC..1103..
SVVCN 3/4" K11 U	■		19.05	19.05	125	9.525	VC..1103..
SVVCN 3/4" K16 U	■		19.05	19.05	125	9.525	VC..1604..

Legend ..... 6…



With internal cooling





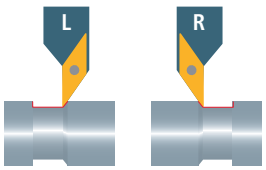
SVVCN … U IC (72.5°)

Order designation L	Order designation R	h	b	l_1	z^1	x^1	c	d	f	Inserts ▯295…
PREMIUM-LINE										
SVVCN 0808 H07 U IC	■	8	8	100	20	11.5	M5	M5	4	VC..0702..
SVVCN 0810 H11 U IC	■	8	10	100	21	13.2	M5	M5	5	VC..1103..
SVVCN 1010 H07 U IC	■	10	10	100	20	13.5	M5	M5	5	VC..0702..
SVVCN 1010 H11 U IC	■	10	10	100	21	13.2	M5	M5	5	VC..1103..
SVVCN 1212 H07 U IC	■	12	12	100	20	15.5	M5	M5	6	VC..0702..
SVVCN 1212 H11 U IC	■	12	12	100	21	15.2	M5	M5	6	VC..1103..
SVVCN 1616 K11 U IC	■	16	16	125	21	19.2	M5	G⅛"	8	VC..1103..
SVVCN 2020 K11 U IC	■	20	20	125	21	23.2	M5	G⅛"	10	VC..1103..
SVVCN 2020 K16 U IC	■	20	20	125	27	24.2	M5	G⅛"	10	VC..1604..

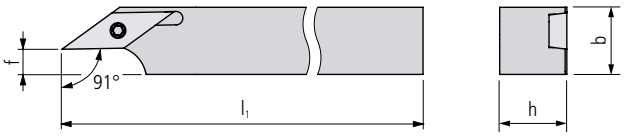
SVVCN … U IC (72.5°) INCH

Order designation L	Order designation R	h	b	l_1	z^1	x^1	c	d	f	Inserts ▯295…
PREMIUM-LINE										
SVVCN 3/8" H07 U IC	■	9.525	9.525	100	20	13	M5	M5	4.76	VC..0702..
SVVCN 3/8" H11 U IC	■	9.525	9.525	100	21	12.7	M5	M5	4.76	VC..1103..
SVVCN 1/2" H07 U IC	■	12.7	12.7	100	20	16.2	M5	M5	6.35	VC..0702..
SVVCN 1/2" H11 U IC	■	12.7	12.7	100	21	15.9	M5	M5	6.35	VC..1103..
SVVCN 5/8" K11 U IC	■	15.875	15.875	125	21	19.1	M5	G⅛"	7.94	VC..1103..
SVVCN 3/4" K11 U IC	■	19.05	19.05	125	21	22.3	M5	G⅛"	9.52	VC..1103..
SVVCN 3/4" K16 U IC	■	19.05	19.05	125	27	23.3	M5	G⅛"	9.52	VC..1604..

Scope of delivery: Holder without coolant connector
Coolant system ▯671…





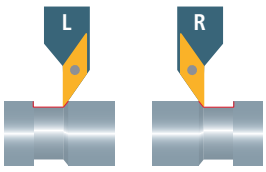


SVXC... U (91°)

Order designation L	Order designation R	Dimensions h	b	l_1	f	Inserts 295...
STANDARD-LINE						
SVXCL 0808 H07 U ■	SVXCR 0808 H07 U ■	8	8	100	2.5	VC..0702..
SVXCL 1010 F11 U ■	SVXCR 1010 F11 U ■	10	10	80	2.5	VC..1103..
SVXCL 1010 H07 U ■	SVXCR 1010 H07 U ■	10	10	100	4.5	VC..0702..
SVXCL 1010 H11 U ■	SVXCR 1010 H11 U ■	10	10	100	2.5	VC..1103..
SVXCL 1212 H07 U ■	SVXCR 1212 H07 U ■	12	12	100	6.5	VC..0702..
SVXCL 1212 H11 U ■	SVXCR 1212 H11 U ■	12	12	100	4.5	VC..1103..
SVXCL 1616 K11 U ■	SVXCR 1616 K11 U ■	16	16	125	8.5	VC..1103..
SVXCL 2020 K16 U ■	SVXCR 2020 K16 U ■	20	20	125	8.5	VC..1604..

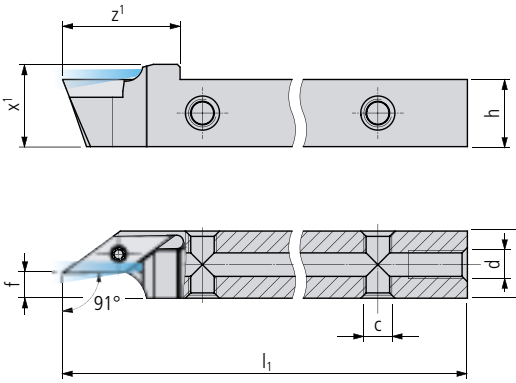
SVXC... U (91°) INCH

Order designation L	Order designation R	Dimensions h	b	l_1	f	Inserts 295...
STANDARD-LINE						
SVXCL 3/8" F11 U ■	SVXCR 3/8" F11 U ■	9.525	9.525	80	2	VC..1103..
SVXCL 3/8" H07 U ■	SVXCR 3/8" H07 U ■	9.525	9.525	100	4	VC..0702..
SVXCL 3/8" H11 U ■	SVXCR 3/8" H11 U ■	9.525	9.525	100	2	VC..1103..
SVXCL 1/2" H07 U ■	SVXCR 1/2" H07 U ■	12.7	12.7	100	7.2	VC..0702..
SVXCL 1/2" H11 U ■	SVXCR 1/2" H11 U ■	12.7	12.7	100	5.2	VC..1103..
SVXCL 5/8" K11 U ■	SVXCR 5/8" K11 U ■	15.875	15.875	125	8.4	VC..1103..
SVXCL 3/4" K16 U ■	SVXCR 3/4" K16 U ■	19.05	19.05	125	7.5	VC..1604..



With internal cooling





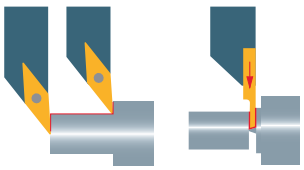
SVXC… U IC (91°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts ▯295…
PREMIUM-LINE												
SVXCL 0808 H07 U IC	■	SVXCR 0808 H07 U IC	■	8	8	100	18	11.5	M5	M5	2.5	VC..0702..
SVXCL 1010 F11 U IC	■	SVXCR 1010 F11 U IC	■	10	10	80	21	12.7	M5	M5	2.5	VC..1103..
SVXCL 1010 H07 U IC	■	SVXCR 1010 H07 U IC	■	10	10	100	18	13.5	M5	M5	4.5	VC..0702..
SVXCL 1010 H11 U IC	■	SVXCR 1010 H11 U IC	■	10	10	100	21	12.7	M5	M5	2.5	VC..1103..
SVXCL 1212 H07 U IC	■	SVXCR 1212 H07 U IC	■	12	12	100	18	15.5	M5	M5	6.5	VC..0702..
SVXCL 1212 H11 U IC	■	SVXCR 1212 H11 U IC	■	12	12	100	21	14.7	M5	M5	4.5	VC..1103..
SVXCL 1616 K11 U IC	■	SVXCR 1616 K11 U IC	■	16	16	125	21	18.7	M5	G⅛"	8.5	VC..1103..
SVXCL 2020 K16 U IC	■	SVXCR 2020 K16 U IC	■	20	20	125	27	22	M5	G⅛"	8.5	VC..1604..

SVXC… U IC (91°) INCH

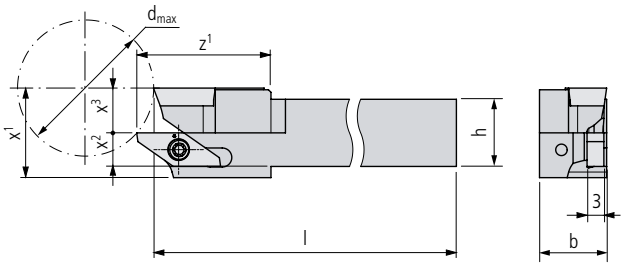
Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts ▯295…
PREMIUM-LINE												
SVXCL 3/8" F11 U IC	■	SVXCR 3/8" F11 U IC	■	9.525	9.525	80	21	12.2	M5	M5	2	VC..1103..
SVXCL 3/8" H07 U IC	■	SVXCR 3/8" H07 U IC	■	9.525	9.525	100	18	13	M5	M5	4	VC..0702..
SVXCL 3/8" H11 U IC	■	SVXCR 3/8" H11 U IC	■	9.525	9.525	100	21	12.2	M5	M5	2	VC..1103..
SVXCL 1/2" H07 U IC	■	SVXCR 1/2" H07 U IC	■	12.7	12.7	100	18	16.2	M5	M5	7.2	VC..0702..
SVXCL 1/2" H11 U IC	■	SVXCR 1/2" H11 U IC	■	12.7	12.7	100	21	15.4	M5	M5	5.2	VC..1103..
SVXCL 5/8" K11 U IC	■	SVXCR 5/8" K11 U IC	■	15.875	15.875	125	21	18.6	M5	G⅛"	8.4	VC..1103..
SVXCL 3/4" K16 U IC	■	SVXCR 3/4" K16 U IC	■	19.05	19.05	125	27	22	M5	G⅛"	7.5	VC..1604..

Scope of delivery: Holder without coolant connector
Coolant system ▯671…



"TWIN" version



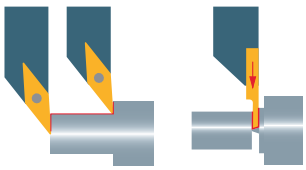


SVJC. (93°)/1600… TWIN

Order designation		Dimensions								Inserts	
R R		h	b	l	z^1	x^1	x^2	x^3	d_{max}	295…	51…
STANDARD-LINE											
SVJCR/1600R-0810 H07 Twin	■	8	10	100	24	16	4	8	24	VC..0702..	16…
SVJCR/1600R-1010 H07 Twin	■	10	10	100	24	16	5	8	24	VC..0702..	16…
SVJCR/1600R-1212 H07 Twin	■	12	12	100	24	16	6	8	24	VC..0702..	16…
SVJCR/1600R-0810 H11 Twin	■	8	10	100	24	16	4	8	24	VC..1103..	16…
SVJCR/1600R-1010 H11 Twin	■	10	10	100	24	16	5	8	24	VC..1103..	16…
SVJCR/1600R-1212 H11 Twin	■	12	12	100	24	16	6	8	24	VC..1103..	16…
SVJCR/1600R-1616 K11 Twin	■	16	16	125	24	20	8	10	36	VC..1103..	16…
SVJCR/1600R-2020 K11 Twin	■	20	20	125	24	24	8	14	68	VC..1103..	16…

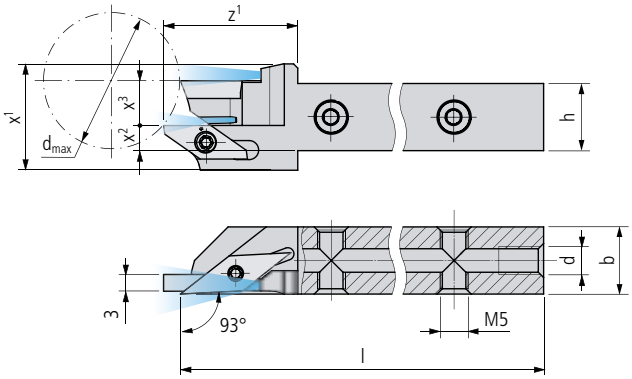
SVJC. (93°)/1600… TWIN INCH

Order designation		Dimensions								Inserts	
R R		h	b	l	z^1	x^1	x^2	x^3	d_{max}	295…	51…
STANDARD-LINE											
SVJCR/1600R-3/8" H07 Twin	■	9.525	9.525	100	24	16	4.76	8	24	VC..0702..	16…
SVJCR/1600R-1/2" H07 Twin	■	12.7	12.7	100	24	16	6.35	8	24	VC..0702..	16…
SVJCR/1600R-3/8" H11 Twin	■	9.525	9.525	100	24	16	4.76	8	24	VC..1103..	16…
SVJCR/1600R-1/2" H11 Twin	■	12.7	12.7	100	24	16	6.35	8	24	VC..1103..	16…
SVJCR/1600R-5/8" K11 Twin	■	15.875	15.875	125	24	20	7.94	10	36	VC..1103..	16…
SVJCR/1600R-3/4" K11 Twin	■	19.05	19.05	125	24	24	7.53	14	68	VC..1103..	16…



"TWIN" version with internal cooling





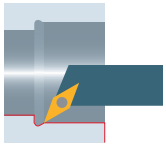
SVJC. (93°)/1600… TWIN IC

Order designation		Dimensions									Inserts	
	R R	h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	295…	51…
PREMIUM-LINE												
SVJCR/1600R-0810 H07 Twin IC	■	8	10	100	24	19	2.5	8	M5	24	VC..0702..	16…
SVJCR/1600R-1010 H07 Twin IC	■	10	10	100	24	19	3.5	8	M5	24	VC..0702..	16…
SVJCR/1600R-1212 H07 Twin IC	■	12	12	100	24	19	4.5	8	M5	24	VC..0702..	16…
SVJCR/1600R-0810 H11 Twin IC	■	8	10	100	24	19	2.5	8	M5	24	VC..1103..	16…
SVJCR/1600R-1010 H11 Twin IC	■	10	10	100	24	19	3.5	8	M5	24	VC..1103..	16…
SVJCR/1600R-1212 H11 Twin IC	■	12	12	100	24	19	4.5	8	M5	24	VC..1103..	16…
SVJCR/1600R-1616 K11 Twin IC	■	16	16	125	24	23	6.5	10	G⅛"	36	VC..1103..	16…
SVJCR/1600R-2020 K11 Twin IC	■	20	20	125	24	27	6.5	14	G⅛"	68	VC..1103..	16…

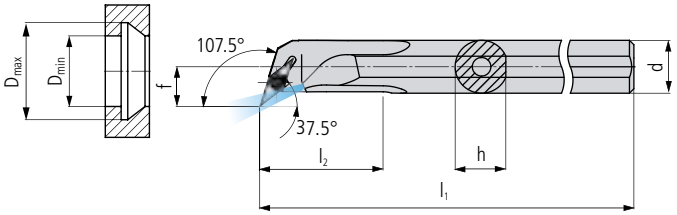
SVJC. (93°)/1600… TWIN IC INCH

Order designation		Dimensions									Inserts	
	R R	h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	295…	51…
PREMIUM-LINE												
SVJCR/1600R-3/8" H07 Twin IC	■	9.525	9.525	100	24	19	3.26	8	M5	24	VC..0702..	16…
SVJCR/1600R-1/2" H07 Twin IC	■	12.7	12.7	100	24	19	4.85	8	M5	24	VC..0702..	16…
SVJCR/1600R-3/8" H11 Twin IC	■	9.525	9.525	100	24	19	3.26	8	M5	24	VC..1103..	16…
SVJCR/1600R-1/2" H11 Twin IC	■	12.7	12.7	100	24	19	4.85	8	M5	24	VC..1103..	16…
SVJCR/1600R-5/8" K11 Twin IC	■	15.875	15.875	125	24	23	6.44	10	G⅛"	36	VC..1103..	16…
SVJCR/1600R-3/4" K11 Twin IC	■	19.05	19.05	125	24	27	6.03	14	G⅛"	68	VC..1103..	16…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…





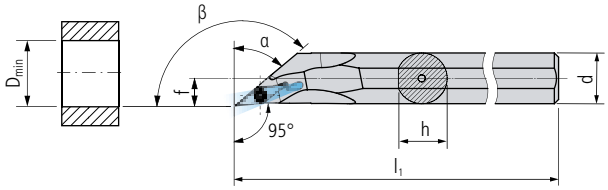


A... SVQC... (107.5°)

Order designation				Dimensions								Inserts
L		R		d	h	l_1	l_2	f	D_{min}	D_{max}	β	295...
STANDARD-LINE												
A10 H SVQCL 07	■	A10 H SVQCR 07	■	10	9.5	100	23	8	14	20	37.5°	VC..0702..
A12 K SVQCL 07	■	A12 K SVQCR 07	■	12	11.5	125	28	9	16	22	37.5°	VC..0702..
A16 M SVQCL 07	■	A16 M SVQCR 07	■	16	15.5	150	36	11	20	26	37.5°	VC..0702..
A16M SVQCL 11	■	A16M SVQCR 11	■	16	15.5	150	36	11	20	26	37.5°	VC..1103..
A20Q SVQCL 11	■	A20Q SVQCR 11	■	20	19.5	180	36	13	25	31	37.5°	VC..1103..

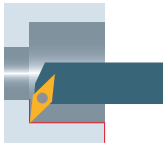




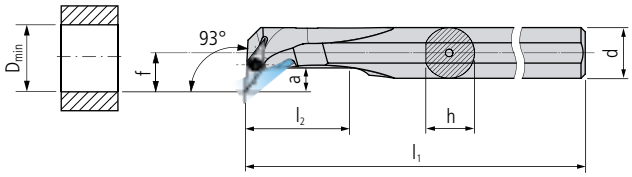


A… SVOC… (95°)

Order designation				Dimensions								Inserts
L		R		d	h	l_1		f	D_{min}	α	β	295…
STANDARD-LINE												
A10 H SVOCL 07	■	A10 H SVOCR 07	■	10	9.5	100		5.5	11	50°	140°	VC..07..
A12 K SVOCL 07	■	A12 K SVOCR 07	■	12	11.5	125		6.5	13	50°	140°	VC..07..
A12K SVOCL 11	■	A12K SVOCR 11	■	12	11.5	125		7	17	50°	140°	VC..11..
A16 M SVOCL 07	■	A16 M SVOCR 07	■	16	15.5	150		8.5	17	50°	140°	VC..07..
A16M SVOCL 11	■	A16M SVOCR 11	■	16	15.5	150		9	20	50°	140°	VC..11..







A... SVUC... (93°)

Order designation				Dimensions								Inserts
L		R		d	h	l_1	l_2	f	D_{min}	a		295...
STANDARD-LINE												
A10 H SVUCL 07	■	A10 H SVUCR 07	■	10	9.5	100	23	8.5	13.5	5		VC..0702..
A12 K SVUCL 07	■	A12 K SVUCR 07	■	12	11.5	125	25	9	17	5.5		VC..0702..
A16 M SVUCL 07	■	A16 M SVUCR 07	■	16	15.5	150	36	11	20	5.5		VC..0702..
A16 M SVUCL 11	■	A16 M SVUCR 11	■	16	15.5	150	36	13	21	8		VC..1103..
A20 Q SVUCL 11	■	A20 Q SVUCR 11	■	20	19.5	180	40	14	24	8		VC..1103..

For holders (SV…) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2 × 5.5 T06	MSP 20055 T06	■	SV… 07
		M2.5 × 6 T08	MSP 25060 T08	■	SV… 11
		M3.5 × 11 T15	MSP 35110 T15	■	SV… 16
	Screw plug	M5	MSP VSR M5 IB2.5	■	SV… (h ≤ – 12)
		G⅛	MSP VSR G1/8 IB5	■	SV… (h ≥ – 16)

For holders (… SV…) ID turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2 × 5.5 T06	MSP 20055 T06	■	A… SV… 07
		M2.5 × 6 T08	MSP 25060 T08	■	A… SV… 11

TORX screwdriver ..... 703…

Cutting specification

multidec®-ISO

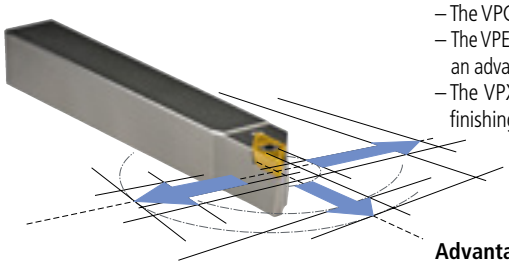
	Steel unalloyed			Steel low alloyed			Steel high alloyed		
Hardness value (HB) / (HRC)	125–300 HB			180–250 HB			200–350 HB		
Category	I			II			III		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 10	40–110	60–120	60–140	60–100	60–120	60–130	40–90	60–110	60–120
UHM 10 HX	60–180	60–220	60–260	60–170	60–200	60–240	50–160	60–180	60–220
UHM 10 TX+	–	–	–	80–150	100–180	160–220	70–100	90–150	120–180
UHM 10 MZ	180–300	220–400	250–500	150–280	200–320	250–400	120–280	180–320	180–320
UHM 20 HPX	150–200	180–220	200–260	80–150	100–180	160–220	70–100	90–150	120–180
UHM 20 TX+	–	–	–	80–130	100–150	160–190	70–90	90–130	130–150
UHM 20 MZ	130–180	160–220	180–260	100–160	110–180	130–220	70–150	110–160	130–190
UHM 30 HX	50–140	50–180	50–220	50–130	50–160	50–200	40–120	50–140	50–180
UHM 30 MZ	120–160	150–200	170–240	90–140	100–160	120–200	60–130	90–140	110–160
Cutting material cermet									
UCM 10	–	180–300	220–350	–	140–250	180–300	–	140–180	160–200
UCM 10 HX	–	250–350	300–450	–	200–300	220–380	–	240–300	260–350
UCM 10 MZ	–	260–360	300–450	–	210–320	230–400	–	250–320	270–360
Cutting material diamond									
UCVD 08	–	–	–	–	–	–	–	–	–
UPCD 15	–	–	–	–	–	–	–	–	–
UPCD 20	–	–	–	–	–	–	–	–	–

	Stainless steel			Stainless steel			Titanium		
Hardness value (HB) / (HRC)	180–220 HB			220 –330 HB			–		
Category	V			VI			IV		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 10	40–100	40–110	40–120	30–70	30–80	30–80	40–60	50–70	60–80
UHM 10 HX	50–140	50–180	50–220	40–100	50–110	50–130	40–120	50–130	50–150
UHM 10 TX+	90–150	110–180	160–200	70–90	90–120	110–150	50–100	60–120	60–140
UHM 10 MZ	100–180	180–250	220–300	–	–	–	–	–	–
UHM 20 HPX	90–150	110–180	160–200	70–90	90–120	110–150	50–100	60–120	60–140
UHM 20 TX+	90–130	110–160	160–180	70–90	90–120	110–150	50–100	60–120	60–140
UHM 20 MZ	90–150	110–160	130–180	50–80	30–50	40–70	–	–	–
UHM 30 HX	40–100	40–140	40–180	30–60	40–70	40–90	30–90	40–100	40–120
UHM 30 MZ	80–130	100–140	110–160	40–80	50–90	90–110	–	–	–
Cutting material cermet									
UCM 10	–	140–180	150–220	–	70–90	70–110	–	–	–
UCM 10 HX	–	170–230	220–280	–	80–110	110–140	–	–	–
UCM 10 MZ	–	170–250	220–290	–	80–120	110–150	–	–	–
Cutting material diamond									
UCVD 08	–	–	–	–	–	–	–	–	–
UPCD 15	–	–	–	–	–	–	–	–	–
UPCD 20	–	–	–	–	–	–	–	–	–

	Aluminum			Brass / lead-free brass			Hard materials		
Hardness value (HB) / (HRC)	60–130 HB			–			45–70 HRC		
Category	VII			VIII			X		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 10	100–1500	120–2000	160–2500	80–300	100–400	120–500	–	–	–
UHM 10 HX	140–2500	160–3000	200–3000	100–450	100–600	100–750	–	–	–
UHM 10 TX+	–	–	–	–	–	–	15–30	15–40	20–60
UHM 10 MZ	–	–	–	–	–	–	–	–	–
UHM 20 HPX	–	–	–	–	–	–	–	–	–
UHM 20 TX+	–	–	–	–	–	–	–	–	–
UHM 20 MZ	–	–	–	–	–	–	–	–	–
UHM 30 HX	70–1500	80–2000	100–3000	50–150	50–200	50–250	–	–	–
UHM 30 MZ	–	–	–	–	–	–	–	–	–
Cutting material cermet									
UCM 10	–	–	–	–	–	–	–	–	–
UCM 10 HX	–	–	–	–	–	–	–	–	–
UCM 10 MZ	–	–	–	–	–	–	–	–	–
Cutting material diamond									
UCVD 08	–	300–2000	300–3000	–	250–1000	300–1500	–	–	–
UPCD 15	–	300–2000	300–3000	–	250–1000	300–1500	–	–	–
UPCD 20	–	300–2000	300–3000	–	250–1000	300–1500	–	–	–

Feed (f) and depths of cut (a_p) ... 220…

Legend ... 6…



The "TOP" system with drag-cut permits an increase of the feed rate of up to 100 % compared to conventional ISO inserts.
– The VPGT 1003… F provides a sharp cutting edge for semi-finishing, finishing and micro-finishing.
– The VPET 1003… F provides a sharp cutting edge and the tolerance of its insert height is more precise. This is an advantage as the height does not have to be reset when changing the insert.
– The VPXT 1003… E is a directly pressed insert with rounded cutting edge for roughing and semi-finishing.





Advantages:
– Front turning, back turning and facing with one insert
– Carbide micrograin grades and coatings for steel, INOX and superalloys
– Cutting edge radius from 0 to 0.35 mm available as standard
– Heat-treated holders and boring bars
– Reinforced "V" type holders for front turning with high depths of cut



"IC" tool holder with integrated cooling

Cost-efficient processing of modern materials increasingly requires accurate control of the coolant at the cutting edge. Conveying the coolant as close as possible to the cutting edge is often a difficult task in the machine rooms of Swiss type turning lathes.
The multidec®-IC program offers a wide range of holders with integrated cooling. Because of the high precision and pressure, it is possible to discharge the chip quickly and safely from the cutting edge and the workpiece, which protects the cutting edge of the insert. This means significantly longer tool life as well as very reliable serial production.

Advantages:
– All holders feature five possible connectors for the coolant supply
– Constant coolant discharge means low build-up at front near the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely



"TWIN" holder with and without integrated coolant supply

The "TWIN" range allows you to work with two inserts on the same holder.
Different combinations are possible, and provide the user with a high degree of flexibility. Holders are available with shank cross-sections of 8 to 20 mm, with and without internal cooling.

Advantages:
– Twice the number of tools on the machine
– Two different turning operations are possible with a single tool holder
– All holders with an integrated coolant supply have five connecting options



"Y-AXIS" holder with and without integrated coolant supply

Y-AXIS holders solve the chip control problems that can occur when cutting long-chip materials. With the Y-AXIS holder, the cutting edge is offset by 90° compared to the standard holder, whereby the chips fall in the bed of the machine. This prevents troublesome tumbling and flowing chips that can become caught on the cutting edge and damage it.

Benefits:
– Suitable for long chipping materials
– The problem of chip control is solved
– Holders with internal cooling
– All holders feature five possible connectors for the coolant supply



"FC" holder with quick cutting edge change system (fast change)

The cutting edge can be changed without unclamping the holder using the "FC" holder. The indexable insert is mounted using a specially developed knee lever which is operated using a clamping screw on the rear of the holder.

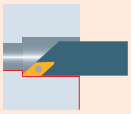
Advantages:
– Quick indexable insert change directly in the machine
– Holder with and without integrated coolant supply

<< MAIN MENU

Overview – multidec®-TOP, type VP... (35°)

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Application ID turning  338

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VPXT … -TOP 342

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SVJP… (93°), SVJP… (93°) INCH 344

SVJP… IC (93°), SVJP… IC (93°) INCH 345

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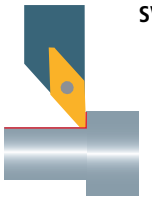
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Application OD turning

multidec®-TOP

Front turning

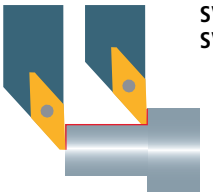
Holders 343



SVAP… (90°)

Turning and facing

Holders 344/346



SVJP… (93°)
SVJP… V (93°)

Back turning

Holders 352



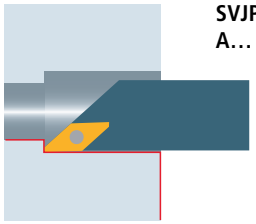
SVXP… (91°)

Application ID turning

multidec®-TOP

Turning and facing

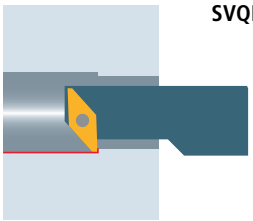
Holders 359/360



SVJP… (92°)
A… SVJP… (92°)

Back turning

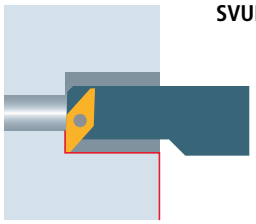
Holders 361



SVQP… (92°)

Turning and facing

Holders 362



SVUP… (92°)

Inserts 340

All illustrations show right hand design. Left hand design is also available.

Carbide inserts

Tolerance class	Cutting edge Design
E	F
Ground circumference	Sharp cutting edge

Type and chip breaker			Corner radius		Machining method		
CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Micro finishing Finishing		VPET... -TOP  340	0	10°	●	●	○
			0.08		●	●	○
			0.15		●	●	○
			–		●	●	○
			–		●	○	–

Premium-line insert for machining steel, stainless steel, superalloys and non-ferrous metals.
Up to 100% higher feed through cutting edge "TOP".
Tolerance class "E" for ultimate repeat accuracy at the height of the cutting edge when changing the insert.

Tolerance class	Cutting edge Design
G	F
Ground circumference	Sharp cutting edge

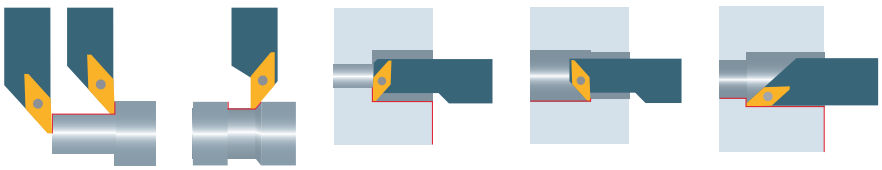
Type and chip breaker			Corner radius		Machining method		
CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Micro finishing Finishing		VPGT... -TOP  341	0	10°	●	●	○
			0.08		●	●	○
			0.15		●	●	○
			–		●	●	○
			–		●	○	–

Standard-line insert for machining steel, stainless steel, superalloys and non-ferrous metals.
Up to 100% higher feed through cutting edge "TOP".

Tolerance class	Cutting edge Design
X	E
Precision sintered	Rounded cutting edge

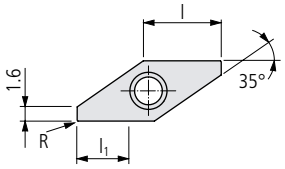
Type and chip breaker			Corner radius		Machining method		
CC.. (80°)	DC.. (55°)	VC.. (35°)	R (mm)		▼▼▼	▼▼	▼
Roughing Finishing		VPXT ... -TOP  342	0.15	10°	–	●	●
			0.35		○	●	●
			–		○	●	●
			–		–	○	○
			–		–	–	–

Precision sintered value-line insert For machining steel, stainless steel and superalloys.
Up to 100% higher feed through cutting edge "TOP".
Very good price/performance ratio.
Rounded cutting edge for long tool life.





VPET … -TOP*

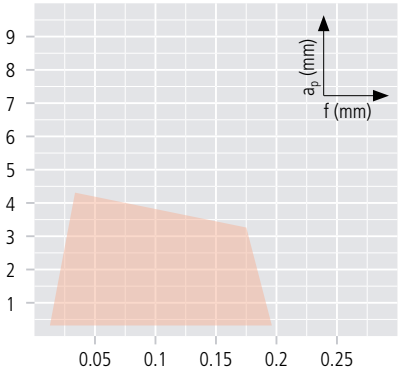


Order designation	Carbide ⬚18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		⬚343…
PREMIUM-LINE																								
L VPET 1003ZZ FL -TOP …	■	■	■		■	■	■													8.9	0	4.5		SV… …
VPET 1003008 FL -TOP …	■	■	■		■	■	■													8.9	0.08	4.5		SV… …
VPET 1003015 FL - TOP …	■	■	■		■	■	■													8.9	0.15	4.5		SV… …
R VPET 1003ZZ FR -TOP …	■	■	■		■	■	■													8.9	0	4.5		SV… …
VPET 1003008 FR -TOP …	■	■	■		■	■	■													8.9	0.08	4.5		SV… …
VPET 1003015 FR -TOP …	■	■	■		■	■	■													8.9	0.15	4.5		SV… …

* Description TOP ⬚11

Application range

multidec®-TOP

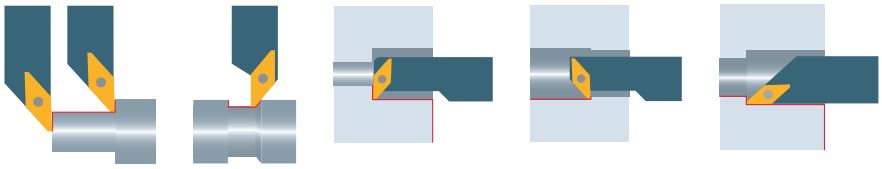


Optimal chip breaking

VPET 10

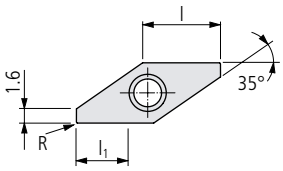
Cutting specification ⬚364…
Technical information ⬚9…

Legend ⬚6…





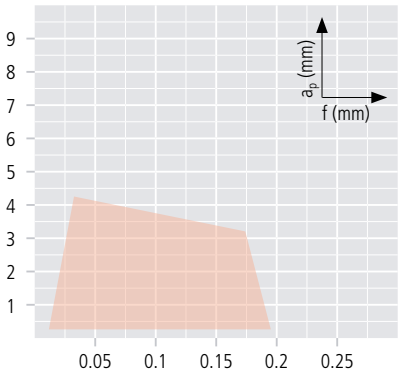
VPGT … -TOP*



Order designation	Carbide ▯18													Cermet			Diamond			Dimensions				Holders
	–	–	●	●	○	●	●	●	○	○	●	●	○	●	●	●	–	–	–					▯343…
	–	●	●	–	○	●	●	○	○	●	●	●	●	○	●	○	–	–	–					
	○	●	●	–	○	●	●	–	○	●	●	–	–	–	–	–	–	–	–					
	●	○	–	–	●	○	–	–	○	○	–	–	○	–	–	–	●	●	●					
	–	–	●	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		
STANDARD-LINE																								
L VPGT 1003ZZ FL -TOP …	■	■	■		■	■	■													8.9	0	4.5		SV… …
VPGT 1003008 FL -TOP …	■	■	■		■	■	■													8.9	0.08	4.5		SV… …
VPGT 1003015 FL -TOP …	■	■	■		■	■	■													8.9	0.15	4.5		SV… …
R VPGT 1003ZZ FR -TOP …	■	■	■		■	■	■													8.9	0	4.5		SV… …
VPGT 1003008 FR -TOP …	■	■	■		■	■	■													8.9	0.08	4.5		SV… …
VPGT 1003015 FR -TOP …	■	■	■		■	■	■													8.9	0.15	4.5		SV… …

* Description TOP ▯11

Application range multidec®-TOP



Optimal chip breaking

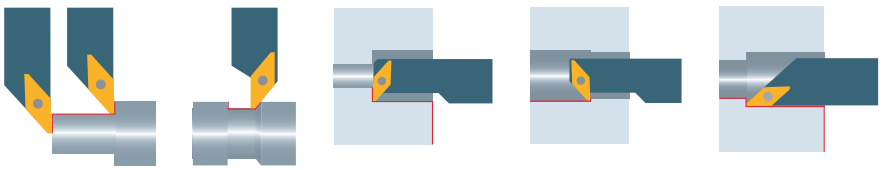
VPGT 10

Cutting specification ▯364…
Technical information ▯9…

Legend ▯6…

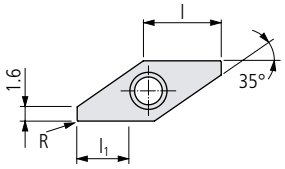
Inserts (Carbide)

multidec®-TOP





VPXT … -TOP*

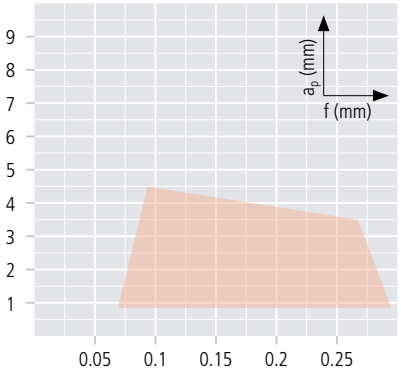


Order designation	Carbide ⬚18													Cermet			Diamond			Dimensions				Holders
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 10 MZ	UHM 20	UHM 20 HPX	UHM 20 TX+	UHM 20 MZ	UHM 30	UHM 30 HX	UHM 30 TX+	UHM 30 MZ	UHM 30 SX	UCM 10	UCM 10 HX	UCM 10 MZ	UCVD 08	UPCD 15	UPCD 20	l	R	l_1		⬚343…
VALUE-LINE																								
L VPXT 1003015 EL -TOP …						■														8.9	0.15	4.5		SV… …
L VPXT 1003035 EL -TOP …						■														8.9	0.35	4.5		SV… …
R VPXT 1003015 ER -TOP …						■														8.9	0.15	4.5		SV… …
R VPXT 1003035 ER -TOP …						■														8.9	0.35	4.5		SV… …

* Description TOP ⬚11

Application range

multidec®-TOP



Optimal chip breaking

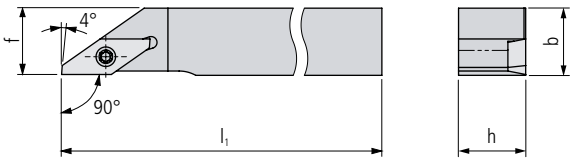
VPXT 10

Cutting specification ⬚364…
Technical information ⬚9…

Legend ⬚6…





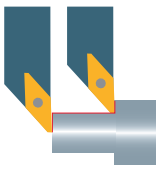


SVAP… (90°)

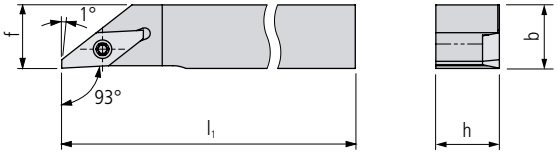
Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337…
STANDARD-LINE												
SVAPL 0707 H10	■	SVAPR 0707 H10	■	7	7	100		7				VP..1003..
SVAPL 0708 H10	■	SVAPR 0708 H10	■	7	8	100		8				VP..1003..
SVAPL 0808 F10	■	SVAPR 0808 F10	■	8	8	80		8				VP..1003..
SVAPL 0808 H10	■	SVAPR 0808 H10	■	8	8	100		8				VP..1003..
SVAPL 1010 F10	■	SVAPR 1010 F10	■	10	10	80		10				VP..1003..
SVAPL 1010 H10	■	SVAPR 1010 H10	■	10	10	100		10				VP..1003..
SVAPL 1212 H10	■	SVAPR 1212 H10	■	12	12	100		12				VP..1003..

SVAP… (90°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337…
STANDARD-LINE												
SVAPL 3/8" F10	■	SVAPR 3/8" F10	■	9.525	9.525	80		9.525				VP..1003..
SVAPL 3/8" H10	■	SVAPR 3/8" H10	■	9.525	9.525	100		9.525				VP..1003..
SVAPL 1/2" H10	■	SVAPR 1/2" H10	■	12.7	12.7	100		12.7				VP..1003..





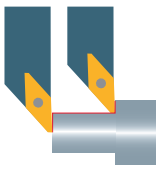


SVJP… (93°)

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337…
STANDARD-LINE												
SVJPL 0708 H10	■	SVJPR 0708 H10	■	7	8	100		8				VP..1003..
SVJPL 0808 F10	■	SVJPR 0808 F10	■	8	8	80		8				VP..1003..
SVJPL 0808 H10	■	SVJPR 0808 H10	■	8	8	100		8				VP..1003..
SVJPL 1010 F10	■	SVJPR 1010 F10	■	10	10	80		10				VP..1003..
SVJPL 1010 H10	■	SVJPR 1010 H10	■	10	10	100		10				VP..1003..
SVJPL 1212 H10	■	SVJPR 1212 H10	■	12	12	100		12				VP..1003..
SVJPL 1616 K10	■	SVJPR 1616 K10	■	16	16	125		16				VP..1003..
SVJPL 2020 K10	■	SVJPR 2020 K10	■	20	20	125		20				VP..1003..

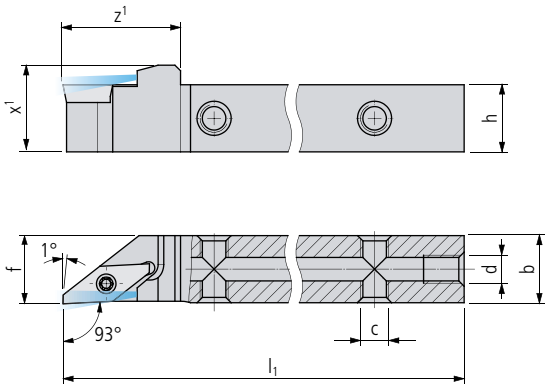
SVJP… (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337…
STANDARD-LINE												
SVJPL 3/8" F10	■	SVJPR 3/8" F10	■	9.525	9.525	80		9.525				VP..1003..
SVJPL 3/8" H10	■	SVJPR 3/8" H10	■	9.525	9.525	100		9.525				VP..1003..
SVJPL 1/2" H10	■	SVJPR 1/2" H10	■	12.7	12.7	100		12.7				VP..1003..
SVJPL 5/8" K10	■	SVJPR 5/8" K10	■	15.875	15.875	125		15.875				VP..1003..
SVJPL 3/4" K10	■	SVJPR 3/4" K10	■	19.05	19.05	125		19.05				VP..1003..



With internal cooling





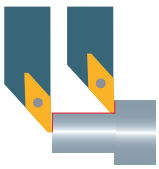
SVJP… IC (93°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVJPL 0810 H10 IC	■	SVJPR 0810 H10 IC	■	8	10	100	21	11.5	M5	M5	10	VP..1003..
SVJPL 1010 H10 IC	■	SVJPR 1010 H10 IC	■	10	10	100	21	13.5	M5	M5	10	VP..1003..
SVJPL 1212 H10 IC	■	SVJPR 1212 H10 IC	■	12	12	100	21	15.5	M5	M5	12	VP..1003..
SVJPL 1616 K10 IC	■	SVJPR 1616 K10 IC	■	16	16	125	21	19.5	M5	G⅛"	16	VP..1003..
SVJPL 2020 K10 IC	■	SVJPR 2020 K10 IC	■	20	20	125	21	23.5	M5	G⅛"	20	VP..1003..

SVJP… IC (93°) INCH

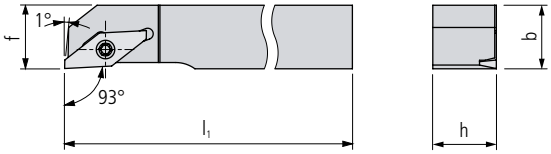
Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVJPL 3/8" H10 IC	■	SVJPR 3/8" H10 IC	■	9.525	9.525	100	21	13	M5	M5	9.525	VP..1003..
SVJPL 1/2" H10 IC	■	SVJPR 1/2" H10 IC	■	12.7	12.7	100	21	16.2	M5	M5	12.7	VP..1003..
SVJPL 5/8" K10 IC	■	SVJPR 5/8" K10 IC	■	15.875	15.875	125	21	19.4	M5	G⅛"	15.875	VP..1003..
SVJPL 3/4" K10 IC	■	SVJPR 3/4" K10 IC	■	19.05	19.05	125	21	22.6	M5	G⅛"	19.05	VP..1003..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



Strenghten type V



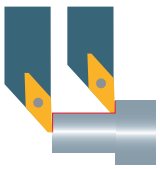


SVJP… V (93°)

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337…
STANDARD-LINE												
SVJPL 0810 F10 V	■	SVJPR 0810 F10 V	■	8	10	80		10				VP..1003..
SVJPL 0810 H10 V	■	SVJPR 0810 H10 V	■	8	10	100		10				VP..1003..
SVJPL 1010 F10 V	■	SVJPR 1010 F10 V	■	10	10	80		10				VP..1003..
SVJPL 1010 H10 V	■	SVJPR 1010 H10 V	■	10	10	100		10				VP..1003..
SVJPL 1212 H10 V	■	SVJPR 1212 H10 V	■	12	12	100		12				VP..1003..
SVJPL 1616 K10 V	■	SVJPR 1616 K10 V	■	16	16	125		16				VP..1003..
SVJPL 2020 K10 V	■	SVJPR 2020 K10 V	■	20	20	125		20				VP..1003..

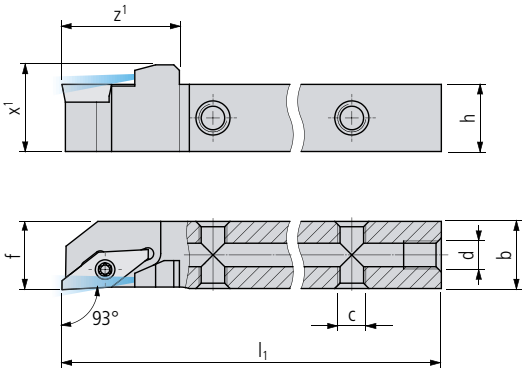
SVJP… V (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337…
STANDARD-LINE												
SVJPL 3/8" F10 V	■	SVJPR 3/8" F10 V	■	9.525	9.525	80		9.525				VP..1003..
SVJPL 3/8" H10 V	■	SVJPR 3/8" H10 V	■	9.525	9.525	100		9.525				VP..1003..
SVJPL 1/2" H10 V	■	SVJPR 1/2" H10 V	■	12.7	12.7	100		12.7				VP..1003..
SVJPL 5/8" K10 V	■	SVJPL 5/8" K10 V	■	15.875	15.875	125		15.875				VP..1003..
SVJPL 3/4" K10 V	■	SVJPL 3/4" K10 V	■	19.05	19.05	125		19.05				VP..1003..



Strenghten type V with internal cooling





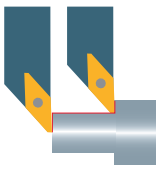
SVJP… V IC (93°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVJPL 0810 H10 V IC	■	SVJPR 0810 H10 V IC	■	8	10	100	21	11.5	M5	M5	10	VP..1003..
SVJPL 1010 H10 V IC	■	SVJPR 1010 H10 V IC	■	10	10	100	21	13.5	M5	M5	10	VP..1003..
SVJPL 1212 H10 V IC	■	SVJPR 1212 H10 V IC	■	12	12	100	21	15.5	M5	M5	12	VP..1003..
SVJPL 1616 K10 V IC	■	SVJPR 1616 K10 V IC	■	16	16	125	21	19.5	M5	G⅛"	16	VP..1003..
SVJPL 2020 K10 V IC	■	SVJPR 2020 K10 V IC	■	20	20	125	21	23.5	M5	G⅛"	20	VP..1003..

SVJP… V IC (93°) INCH

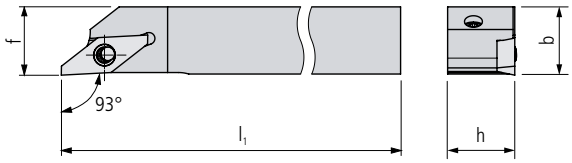
Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVJPL 3/8" H10 V IC	■	SVJPR 3/8" H10 V IC	■	9.525	9.525	100	21	13	M5	M5	9.525	VP..1003..
SVJPL 1/2" H10 V IC	■	SVJPR 1/2" H10 V IC	■	12.7	12.7	100	21	16.2	M5	M5	12.7	VP..1003..
SVJPL 5/8" K10 V IC	■	SVJPR 5/8" K10 V IC	■	15.875	15.875	125	21	19.4	M5	G⅛"	15.875	VP..1003..
SVJPL 3/4" K10 V IC	■	SVJPR 3/4" K10 V IC	■	19.05	19.05	125	21	22.6	M5	G⅛"	19.05	VP..1003..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"FC" version (fast change)





SVJP... FC* (93°)

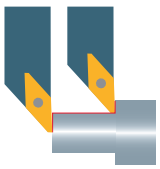
Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337...
STANDARD-LINE												
SVJPL 1212 H10 FC	■	SVJPR 1212 H10 FC	■	12	12	100		12				VP..1003..
SVJPL 1616 K10 FC	■	SVJPR 1616 K10 FC	■	16	16	125		16				VP..1003..

SVJP... FC* (93°) INCH

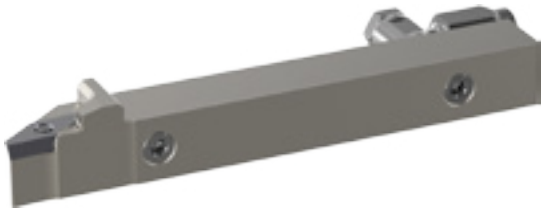
Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337...
STANDARD-LINE												
SVJPL 1/2" H10 FC	■	SVJPR 1/2" H10 FC	■	12.7	12.7	100		12.7				VP..1003..
SVJPL 5/8" K10 FC	■	SVJPR 5/8" K10 FC	■	15.875	15.875	125		15.875				VP..1003..

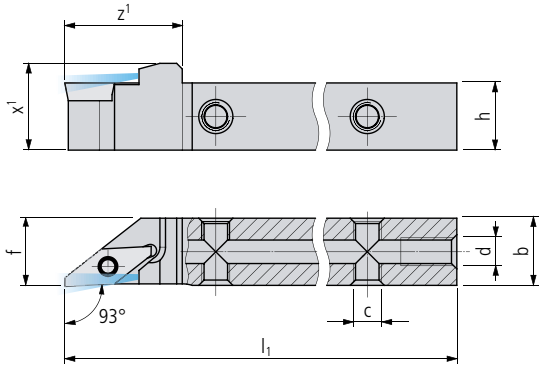
Spare parts (clamping bolts /screws) 363

*** Note**
With this holder, the indexable insert is secured with a screw using a knee lever that can be operated from behind. This means the holder does not have to be unclamped to change the cutting edge.
Tighten the clamping screw to 1.2 Nm using a torque screwdriver.



"FC" version (fast change) with internal cooling





SVJP… FC* IC (93°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVJPL 1212 H10 FC IC	■	SVJPR 1212 H10 FC IC	■	12	12	100	21	15.5	M5	M5	12	VP..1003..
SVJPL 1616 K10 FC IC	■	SVJPR 1616 K10 FC IC	■	16	16	125	21	19.5	M5	G⅛"	16	VP..1003..

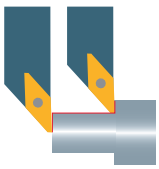
SVJP… FC* IC (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVJPL 1/2" H10 FC IC	■	SVJPR 1/2" H10 FC IC	■	12.7	12.7	100	21	16.2	M5	M5	12.7	VP..1003..
SVJPL 5/8" K10 FC IC	■	SVJPR 5/8" K10 FC IC	■	15.875	15.875	125	21	19.4	M5	G⅛"	15.875	VP..1003..

Spare parts (clamping bolts/screws) 363

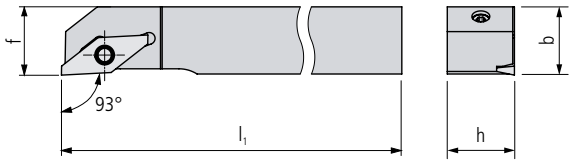
*** Note**
With this holder, the indexable insert is secured with a screw using a knee lever that can be operated from behind. This means the holder does not have to be unclamped to change the cutting edge.
Tighten the clamping screw to 1.2 Nm using a torque screwdriver.

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



Reinforced version V and version "FC" (fast change)





SVJP… V FC* (93°)

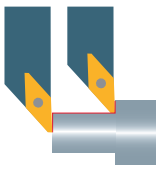
Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337…
STANDARD-LINE												
SVJPL 1212 H10 V FC	■	SVJPR 1212 H10 V FC	■	12	12	100		12				VP..1003..
SVJPL 1616 K10 V FC	■	SVJPR 1616 K10 V FC	■	16	16	125		16				VP..1003..

SVJP… V FC* (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1		f				Inserts 337…
STANDARD-LINE												
SVJPL 1/2" H10 V FC	■	SVJPR 1/2" H10 V FC	■	12.7	12.7	100		12.7				VP..1003..
SVJPL 5/8" K10 V FC	■	SVJPR 5/8" K10 V FC	■	15.875	15.875	125		15.875				VP..1003..

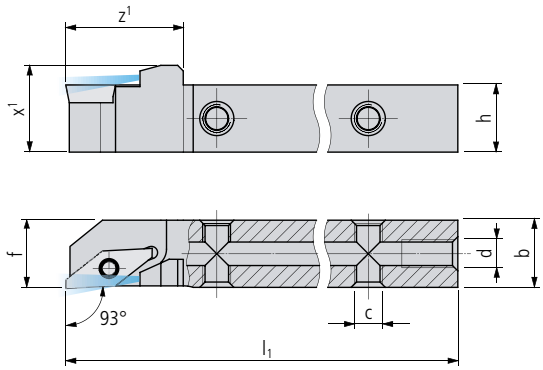
Spare parts (clamping bolts /screws) 363

*** Note**
With this holder, the indexable insert is secured with a screw using a knee lever that can be operated from behind. This means the holder does not have to be unclamped to change the cutting edge.
Tighten the clamping screw to 1.2 Nm using a torque screwdriver.



Reinforced version V and version "FC" (fast change) with internal cooling





SVJP… V FC* IC (93°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVJPL 1212 H10 V FC IC	■	SVJPR 1212 H10 V FC IC	■	12	12	100	21	15.5	M5	M5	12	VP..1003..
SVJPL 1616 K10 V FC IC	■	SVJPR 1616 K10 V FC IC	■	16	16	125	21	19.5	M5	G⅛"	16	VP..1003..

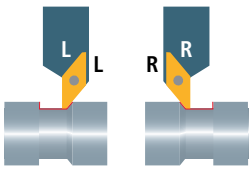
SVJP… V FC* IC (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVJPL 1/2" H10 V FC IC	■	SVJPR 1/2" H10 V FC IC	■	12.7	12.7	100	21	15.5	M5	M5	12.7	VP..1003..
SVJPL 5/8" K10 V FC IC	■	SVJPR 5/8" K10 V FC IC	■	15.875	15.875	125	21	19.5	M5	G⅛"	15.875	VP..1003..

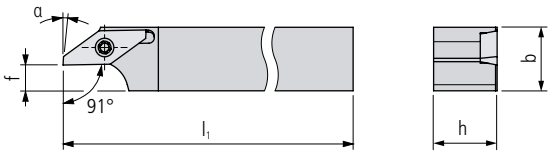
Spare parts (clamping bolts/screws) 363

*** Note**
With this holder, the indexable insert is secured with a screw using a knee lever that can be operated from behind. This means the holder does not have to be unclamped to change the cutting edge.
Tighten the clamping screw to 1.2 Nm using a torque screwdriver.

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…





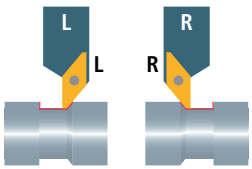


SVXP… (91°)

Order designation L		Order designation R		Dimensions h	b	l_1	f	α	Inserts 337…
STANDARD-LINE									
SVXPL 0808 F10	■	SVXPR 0808 F10	■	8	8	80	1	3°	VP..1003..
SVXPL 0808 H10	■	SVXPR 0808 H10	■	8	8	100	1	3°	VP..1003..
SVXPL 1010 F10	■	SVXPR 1010 F10	■	10	10	80	3	3°	VP..1003..
SVXPL 1010 H10	■	SVXPR 1010 H10	■	10	10	100	3	3°	VP..1003..
SVXPL 1212 H10	■	SVXPR 1212 H10	■	12	12	100	5	3°	VP..1003..
SVXPL 1616 K10	■	SVXPR 1616 K10	■	16	16	125	9	3°	VP..1003..
SVXPL 2020 K10	■	SVXPR 2020 K10	■	20	20	125	13	3°	VP..1003..

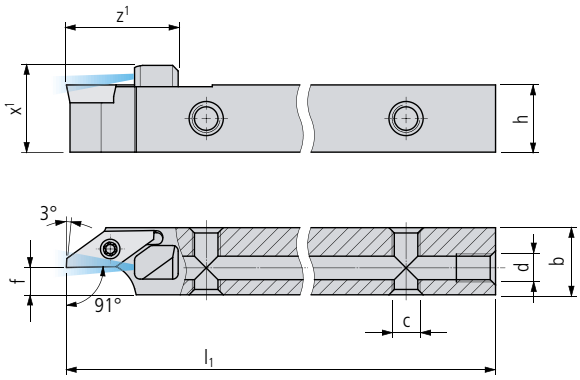
SVXP… (91°) INCH

Order designation L		Order designation R		Dimensions h	b	l_1	f	α	Inserts 337…
STANDARD-LINE									
SVXPL 3/8" F10	■	SVXPR 3/8" F10	■	9.525	9.525	80	2.5	3°	VP..1003..
SVXPL 3/8" H10	■	SVXPR 3/8" H10	■	9.525	9.525	100	2.5	3°	VP..1003..
SVXPL 1/2" H10	■	SVXPR 1/2" H10	■	12.7	12.7	100	5.7	3°	VP..1003..
SVXPL 5/8" K10	■	SVXPR 5/8" K10	■	15.875	15.875	125	8.8	3°	VP..1003..
SVXPL 3/4" K10	■	SVXPR 3/4" K10	■	19.05	19.05	125	12	3°	VP..1003..



With internal cooling





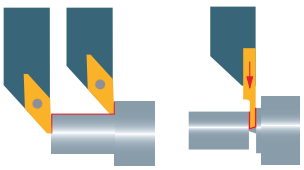
SVXP… IC (91°)

Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVXPL 0808 H10 IC	■	SVXPR 0808 H10 IC	■	8	8	100	20	11.5	M5	M5	1	VP..1003..
SVXPL 1010 H10 IC	■	SVXPR 1010 H10 IC	■	10	10	100	20	13.5	M5	M5	3	VP..1003..
SVXPL 1212 H10 IC	■	SVXPR 1212 H10 IC	■	12	12	100	20	15.5	M5	M5	5	VP..1003..
SVXPL 1616 K10 IC	■	SVXPR 1616 K10 IC	■	16	16	125	20	19.5	M5	G⅛"	9	VP..1003..
SVXPL 2020 K10 IC	■	SVXPR 2020 K10 IC	■	20	20	125	20	23.5	M5	G⅛"	13	VP..1003..

SVXP… IC (91°) INCH

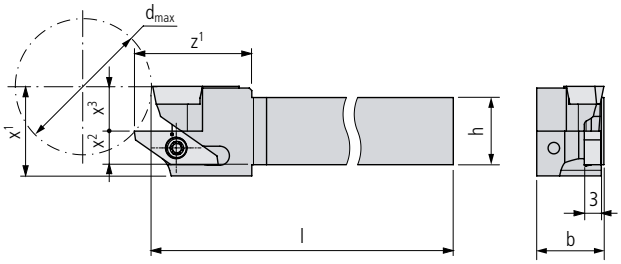
Order designation L		Order designation R		Dimensions h	b	l_1	z^1	x^1	c	d	f	Inserts 337…
PREMIUM-LINE												
SVXPL 3/8" H10 IC	■	SVXPR 3/8" H10 IC	■	9.525	9.525	100	20	13	M5	M5	2.5	VP..1003..
SVXPL 1/2" H10 IC	■	SVXPR 1/2" H10 IC	■	12.7	12.7	100	20	16.2	M5	M5	5.7	VP..1003..
SVXPL 5/8" K10 IC	■	SVXPR 5/8" K10 IC	■	15.875	15.875	125	20	19.4	M5	G⅛"	8.8	VP..1003..
SVXPL 3/4" K10 IC	■	SVXPR 3/4" K10 IC	■	19.05	19.05	125	20	22.6	M5	G⅛"	12	VP..1003..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"TWIN" version



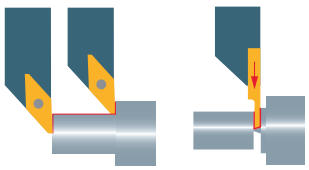


SVJP. (93°)/1600… TWIN (R-R)

Order designation		Dimensions								Inserts	
R R		h	b	l	z^1	x^1	x^2	x^3	d_{max}	337…	51…
STANDARD-LINE											
SVJPR/1600R-0810 H10 Twin	■	8	10	100	21	16	4	8	23	VP..1003..	16…
SVJPR/1600R-1010 H10 Twin	■	10	10	100	21	16	5	8	23	VP..1003..	16…
SVJPR/1600R-1212 H10 Twin	■	12	12	100	21	16	6	8	23	VP..1003..	16…
SVJPR/1600R-1616 K10 Twin	■	16	16	125	21	20	8	10	34	VP..1003..	16…
SVJPR/1600R-2020 K10 Twin	■	20	20	125	21	24	8	14	63	VP..1003..	16…

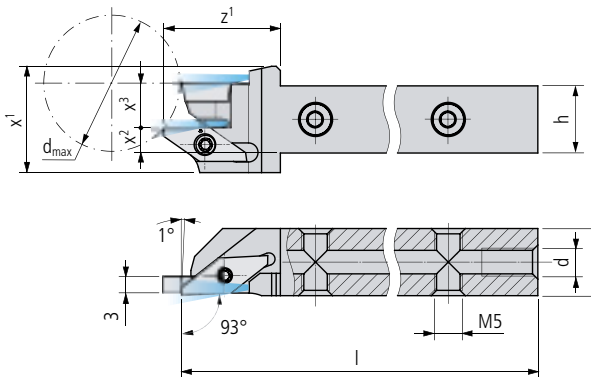
SVJP. (93°)/1600… TWIN INCH (R-R)

Order designation		Dimensions								Inserts	
R R		h	b	l	z^1	x^1	x^2	x^3	d_{max}	337…	51…
STANDARD-LINE											
SVJPR/1600R-3/8" H10 Twin	■	9.525	9.525	100	21	16	4.76	8	23	VP..1003..	16…
SVJPR/1600R-1/2" H10 Twin	■	12.7	12.7	100	21	16	6.35	8	23	VP..1003..	16…
SVJPR/1600R-5/8" K10 Twin	■	15.875	15.875	125	21	20	7.94	10	34	VP..1003..	16…
SVJPR/1600R-3/4" K10 Twin	■	19.05	19.05	125	21	24	7.53	14	63	VP..1003..	16…



"TWIN" version with internal cooling





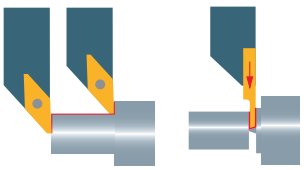
SVJP. (93°)/1600… TWIN IC (R-R)

Order designation			Dimensions									Inserts	
	R R		h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	337…	51…
PREMIUM-LINE													
	SVJPR/1600R-0810 H10 Twin IC	■	8	10	100	21	19	2.5	8	M5	23	VP..1003..	16…
	SVJPR/1600R-1010 H10 Twin IC	■	10	10	100	21	19	3.5	8	M5	23	VP..1003..	16…
	SVJPR/1600R-1212 H10 Twin IC	■	12	12	100	21	19	4.5	8	M5	23	VP..1003..	16…
	SVJPR/1600R-1616 K10 Twin IC	■	16	16	125	21	23	6.5	10	G⅛"	34	VP..1003..	16…
	SVJPR/1600R-2020 K10 Twin IC	■	20	20	125	21	27	6.5	14	G⅛"	63	VP..1003..	16…

SVJP. (93°)/1600… TWIN IC INCH (R-R)

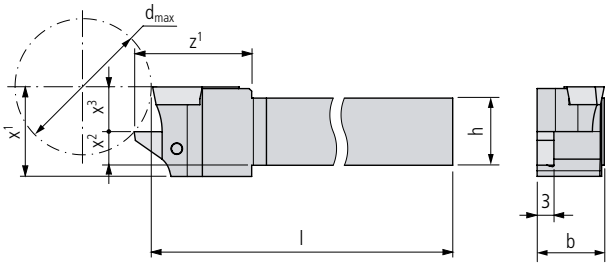
Order designation			Dimensions									Inserts	
	R R		h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	337…	51…
PREMIUM-LINE													
	SVJPR/1600R-3/8" H10 Twin IC	■	9.525	9.525	100	21	19	3.26	8	M5	23	VP..1003..	16…
	SVJPR/1600R-1/2" H10 Twin IC	■	12.7	12.7	100	21	19	4.85	8	M5	23	VP..1003..	16…
	SVJPR/1600R-5/8" K10 Twin IC	■	15.875	15.875	125	21	23	6.44	10	G⅛"	34	VP..1003..	16…
	SVJPR/1600R-3/4" K10 Twin IC	■	19.05	19.05	125	21	27	6.03	14	G⅛"	63	VP..1003..	16…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"TWIN" version



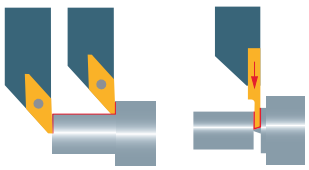


SVJP. (93°)/1600… TWIN (R-L)

Order designation	R	L		h	b	l	z^1	x^1	x^2	x^3		d_{max}	Inserts 337…	Inserts 51…
STANDARD-LINE														
SVJPR/1600L-0810 H10 Twin			■	8	10	100	21	16	4	8		23	VP..1003..	16…
SVJPR/1600L-1010 H10 Twin			■	10	10	100	21	16	5	8		23	VP..1003..	16…
SVJPR/1600L-1212 H10 Twin			■	12	12	100	21	16	6	8		23	VP..1003..	16…
SVJPR/1600L-1616 K10 Twin			■	16	16	125	21	20	8	10		33	VP..1003..	16…
SVJPR/1600L-2020 K10 Twin			■	20	20	125	21	24	8	12		63	VP..1003..	16…

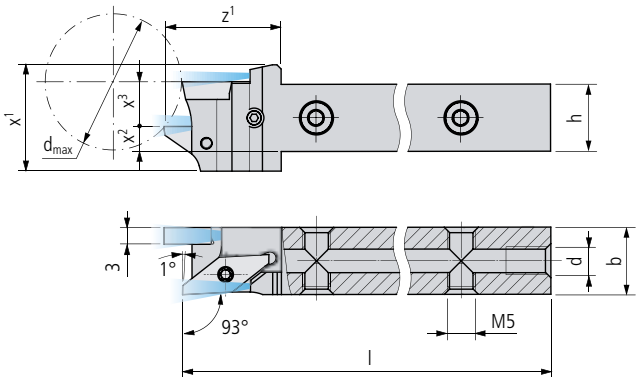
SVJP. (93°)/1600… TWIN INCH (R-L)

Order designation	R	L		h	b	l	z^1	x^1	x^2	x^3		d_{max}	Inserts 337…	Inserts 51…
STANDARD-LINE														
SVJPR/1600L-3/8" H10 Twin			■	9.525	9.525	100	21	16	4.76	8		23	VP..1003..	16…
SVJPR/1600L-1/2" H10 Twin			■	12.7	12.7	100	21	16	6.35	8		23	VP..1003..	16…
SVJPR/1600L-5/8" K10 Twin			■	15.875	15.875	125	21	20	7.94	10		33	VP..1003..	16…
SVJPR/1600L-3/4" K10 Twin			■	19.05	19.05	125	21	24	7.53	14		63	VP..1003..	16…



"TWIN" version with internal cooling





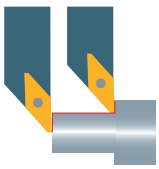
SVJP. (93°)/1600… TWIN IC (R-L)

Order designation	R	L		h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	Inserts 337…	Inserts 51…
PREMIUM-LINE														
	SVJPR/1600L-0810 H10 Twin IC		■	8	10	100	21	19	2.5	8	M5	23	VP..1003..	16…
	SVJPR/1600L-1010 H10 Twin IC		■	10	10	100	21	19	3.5	8	M5	23	VP..1003..	16…
	SVJPR/1600L-1212 H10 Twin IC		■	12	12	100	21	19	4.5	8	M5	23	VP..1003..	16…
	SVJPR/1600L-1616 K10 Twin IC		■	16	16	125	21	23	6.5	10	G⅛"	33	VP..1003..	16…
	SVJPR/1600L-2020 K10 Twin IC		■	20	20	125	21	27	6.5	14	G⅛"	63	VP..1003..	16…

SVJP. (93°)/1600… TWIN IC INCH (R-L)

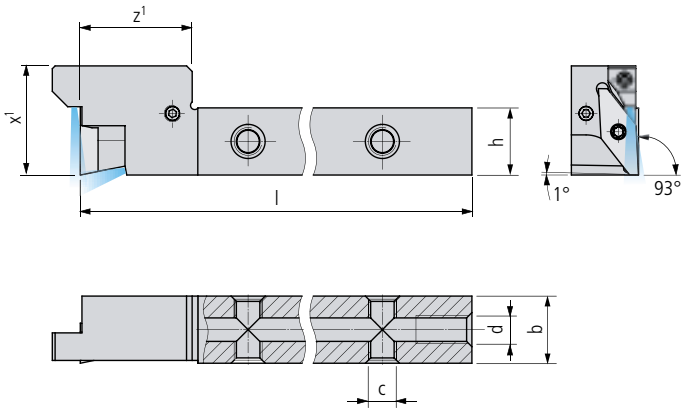
Order designation	R	L		h	b	l	z^1	x^1	x^2	x^3	d	d_{max}	Inserts 337…	Inserts 51…
PREMIUM-LINE														
	SVJPR/1600L-3/8" H10 Twin IC		■	9.525	9.525	100	21	19	3.26	8	M5	23	VP..1003..	16…
	SVJPR/1600L-1/2" H10 Twin IC		■	12.7	12.7	100	21	19	4.85	8	M5	23	VP..1003..	16…
	SVJPR/1600L-5/8" K10 Twin IC		■	15.875	15.875	125	21	23	6.44	10	G⅛"	33	VP..1003..	16…
	SVJPR/1600L-3/4" K10 Twin IC		■	19.05	19.05	125	21	27	6.03	14	G⅛"	63	VP..1003..	16…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"Y-AXIS" version with internal cooling





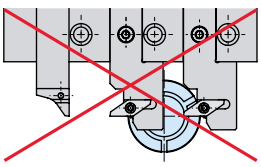
SVJP. YA… IC (93°)

Order designation L	Order designation R		h	b	l_1	z^1	x^1	c	d		Inserts 337…
PREMIUM-LINE											
	SVJPR YA-1212 H10-20 IC	■	12	12	100	20	19.5	M5	M5		VP.. 1003…
	SVJPR YA-1212 H10-25 IC	■	12	12	100	25	19.5	M5	M5		VP.. 1003…
	SVJPR YA-1212 H10-30 IC	■	12	12	100	30	19.5	M5	M5		VP.. 1003…
	SVJPR YA-1616 K10-20 IC	■	16	16	125	20	19.5	M5	G⅛		VP.. 1003…
	SVJPR YA-1616 K10-25 IC	■	16	16	125	25	19.5	M5	G⅛		VP.. 1003…
	SVJPR YA-1616 K10-30 IC	■	16	16	125	30	19.5	M5	G⅛		VP.. 1003…

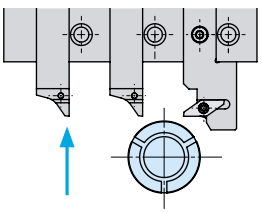
SVJP. YA… IC (93°) INCH

Order designation L	Order designation R		h	b	l_1	z^1	x^1	c	d		Inserts 337…
PREMIUM-LINE											
	SVJPR YA-1/2" H10-20 IC	■	12.7	12.7	100	20	19.5	M5	M5		VP.. 1003…
	SVJPR YA-1/2" H10-25 IC	■	12.7	12.7	100	25	19.5	M5	M5		VP.. 1003…
	SVJPR YA-1/2" H10-30 IC	■	12.7	12.7	100	30	19.5	M5	M5		VP.. 1003…
	SVJPR YA-5/8" K10-20 IC	■	15.875	15.875	125	20	19.5	M5	G⅛		VP.. 1003…
	SVJPR YA-5/8" K10-25 IC	■	15.875	15.875	125	25	19.5	M5	G⅛		VP.. 1003…
	SVJPR YA-5/8" K10-30 IC	■	15.875	15.875	125	30	19.5	M5	G⅛		VP.. 1003…

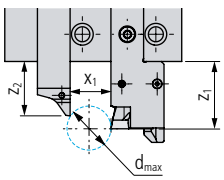
Usage notes:



To avoid problems, two Y-AXIS holders must not be mounted directly next to each other.
Mount a standard tool holder between the Y-AXIS holders.



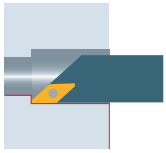
To prevent collisions, move back the holder in accordance with the overhanging length before changing the tool position.

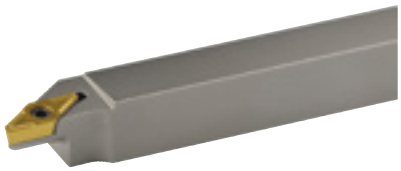


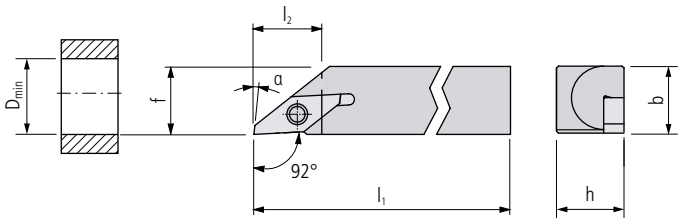
$$d_{max} = \frac{(z_1 - z_2)^2 + x_1^2}{x_1}$$

Scope of delivery: Holder without coolant connector
Coolant system 671…

Legend 6…

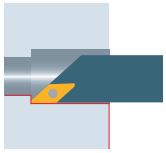




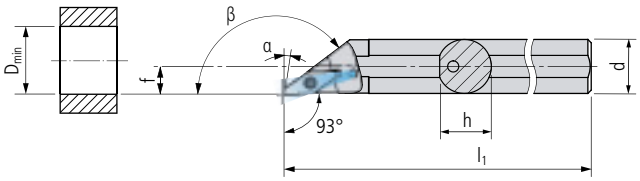


SVJP… (92°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1	l_2	f	D_{min}	α		337…
STANDARD-LINE												
SVJPL 1212 XH10	■	SVJPR 1212 XH10	■	12	12	100	12	12.2	16	2°		VP..1003..
SVJPL 1616 XK10	■	SVJPR 1616 XK10	■	16	16	125	12	16.2	16	2°		VP..1003..

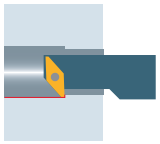




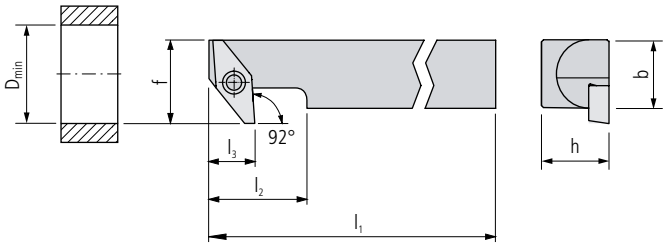


A... SVJP... (92°)

Order designation				Dimensions								Inserts
L		R		d	h	l_1		f	D_{min}	α	β	337...
STANDARD-LINE												
A16M SVJPL 10	■	A16M SVJPR 10	■	16	15.3	150		8.3	20	1°	142°	VP..1003..

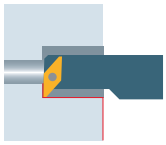




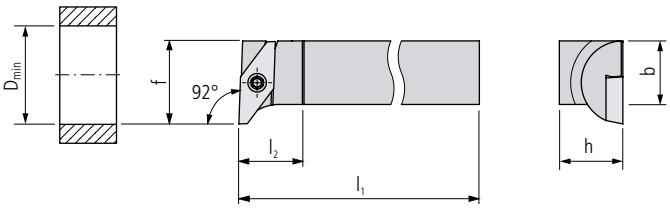


SVQP… (92°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1	l_2	f	D_{min}	l_3		337…
STANDARD-LINE												
SVQPL 1212 XH10	■	SVQPR 1212 XH10	■	12	12	100	12	15.7	16	7.7		VP..1003..
SVQPL 1616 XK10	■	SVQPR 1616 XK10	■	16	16	125	12	15.7	16	7.7		VP..1003..







SVUP… (92°)

Order designation				Dimensions								Inserts
L		R		h	b	l_1	l_2	f	D_{min}			337…
STANDARD-LINE												
SVUPL 1212 XH10	■	SVUPR 1212 XH10	■	12	12	100	12	15.7	17			VP..1003..
SVUPL 1616 XK10	■	SVUPR 1616 XK10	■	16	16	125	12	15.7	17			VP..1003..

*** Attention**
Right hand holder needs left hand insert!

For holders (SV.P…) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	SV.P… 10
	Screw plug	M5	MSP VSR M5 IB2.5	■	SV.P… (h ≤ – 12)
		G⅛	MSP VSR G1/8 IB5	■	SV.P… (h ≥ – 16)

For holders (SV.P… FC) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	Clamping bolts	3 × 10	MSP 35080 SB FC	■	SV.P… 10 FC
	Clamping screw	M3 × 10	MSP 30080 KS FC T06	■	SV.P… 10 FC
	Screw plug	M5	MSP VSR M5 IB2.5	■	SV.P… (h ≤ – 12)
		G⅛	MSP VSR G1/8 IB5	■	SV.P… (h ≥ – 16)

For holders (… SV.P…) ID turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	A… SV.P… 10

TORX screwdriver ..... 703…

Cutting specification

multidec®-TOP

	Steel unalloyed			Steel low alloyed			Steel high alloyed		
Hardness value (HB) / (HRC)	125–300 HB			180–250 HB			200–350 HB		
Category	I			II			III		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 10	40–110	60–120	60–140	60–100	60–120	60–130	40–90	60–110	60–120
UHM 10 HX	60–180	60–220	60–260	60–170	60–200	60–240	50–160	60–180	60–220
UHM 10 TX+	–	–	–	80–150	100–180	160–220	70–100	90–150	120–180
UHM 20	40–110	60–120	60–140	60–100	60–120	60–130	40–90	60–110	60–120
UHM 20 HPX	150–200	180–220	200–260	80–150	100–180	160–220	70–100	90–150	120–180
UHM 20 TX+	–	–	–	80–130	100–150	160–190	70–90	90–130	120–150

	Stainless steel			Stainless steel			Titanium		
Hardness value (HB) / (HRC)	180–220 HB			220 –330 HB			–		
Category	V			VI			IV		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 10	40–100	40–110	40–120	30–70	30–80	30–80	40–60	50–70	60–80
UHM 10 HX	50–140	50–180	50–220	40–100	50–110	50–130	40–120	50–130	50–150
UHM 10 TX+	90–150	110–180	160–200	70–90	90–120	110–150	50–100	60–120	60–140
UHM 20	40–100	40–110	40–120	30–70	30–80	30–80	40–60	50–70	60–80
UHM 20 HPX	90–150	110–180	160–200	70–90	90–120	110–150	50–100	60–120	60–140
UHM 20 TX+	90–130	110–160	160–180	70–90	90–120	110–150	50–100	60–120	60–140

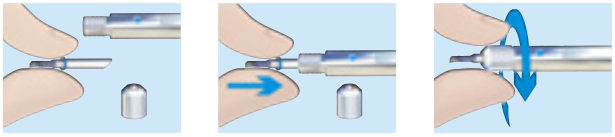
	Aluminum			Brass / lead-free brass			Hard materials		
Hardness value (HB) / (HRC)	60–130 HB			–			45–70 HRC		
Category	VII			VIII			X		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 10	100–1500	120–2000	160–2500	80–300	100–400	120–500	–	–	–
UHM 10 HX	140–2500	160–3000	200–3000	100–450	100–600	100–750	–	–	–
UHM 10 TX+	–	–	–	–	–	–	15–30	15–40	20–80
UHM 20	100–1500	120–2000	160–2500	80–300	100–400	120–500	–	–	–
UHM 20 HPX	–	–	–	–	–	–	–	–	–
UHM 20 TX+	–	–	–	–	–	–	–	–	–

Feed (f) and depths of cut (a_p) ... 340…

Legend ... 6…

multidec®-BORE MICRO provides a wide range of inserts for miniaturized ID-turning (diameter between 0.5 and 8 mm). Sharp edges, small radii and ground surfaces guarantee accurate cutting. multidec-BORE MICRO is excellent for machining of common materials as well as exotic alloys.
multidec®-BORE MICRO carbide tools are available with wear-resistant coatings as well as uncoated.
The heat-treated tool-holder SDA … can be fixed in a usual chuck or ID tool station. The inserts can be replaced by hand without any measuring or adjusting of axial and radial position. The unique clamping nut ensures accurate location of the boring tool and prevents vibration.



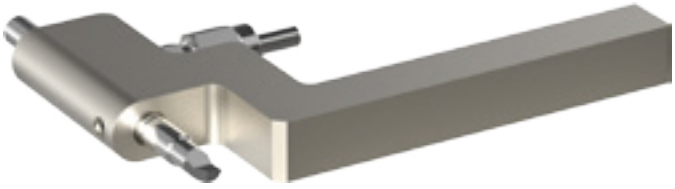


Advantages:
– For internal machining methods with small diameters:
  – high positioning accuracy
  – internal cooling system and
  – smallest internal diameter of 0.5 mm
– Sharp cutting edges
– Different coatings are available
  – tenacious carbide grade
  – coated and uncoated

The Superclamp holder offers higher holding forces and better stability, needed especially for broaching, hard cutting with CBN and machining of finest surfaces with PCD, CVD-Diamond and MCD, in non-ferrous materials.



AKR-Mono is a holder for use on the outside turning position when no more inside holder fixing space is available.



Overview – multidec®-BORE MICRO

Technical information 9



Application ID turning 368



Inserts

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SXG …, SDI … 372

SXI …, SDF … 374

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SDY …, SDZ … 388

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Holders Superclamp

SDA … SC 394



Holders AKR-Mono

AKR M… 395



Replacement and spare parts 396



Cutting specification / Feed and depths of cut 398

Special tools – multidec4you® 636

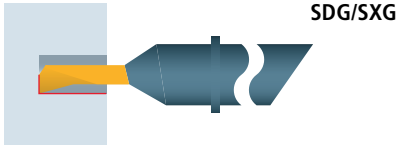


Accessories 703

Drilling and Turning

Inserts 371…

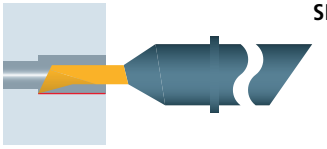
SDG/SXG



Front turning

Inserts 377…

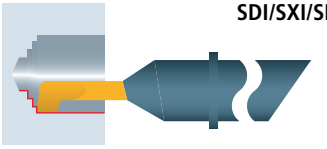
SDH



Turning and facing

Inserts 373…

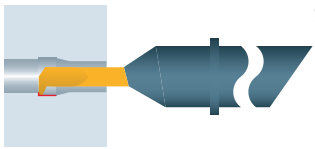
SDI/SXI/SDF/SXF



Turning and front turning

Inserts 378…

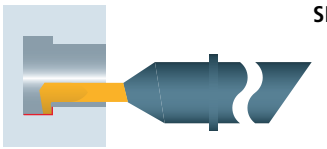
SDK



Back turning

Inserts 379…

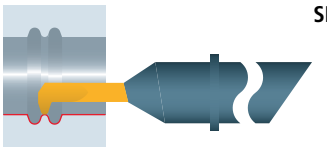
SDM



Turning

Inserts 380…

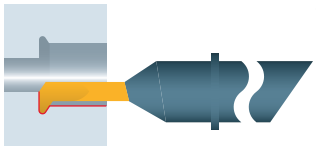
SDO



Turning

Inserts 381…

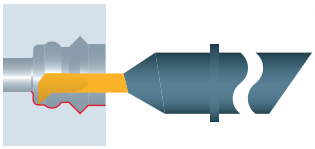
SDQ



Longitudinal turning and chamfering

Inserts 382…

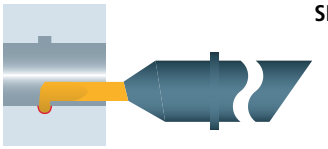
SDW



Radius-grooving

Inserts 383…

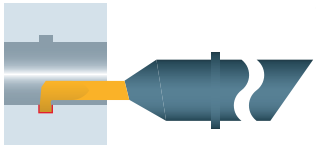
SDR



Grooving

Inserts 384…

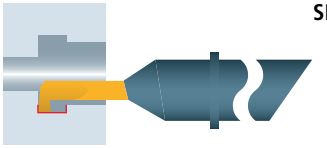
SDS



Grooving and Turning

Inserts 385…

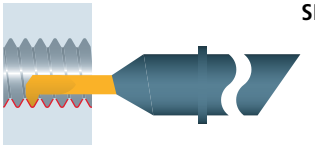
SDT



Threading (partial profile)

Inserts 386…

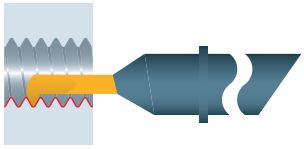
SDU



Threading (full profile)

Inserts 387…

SDV



Chamfering

Inserts 388…

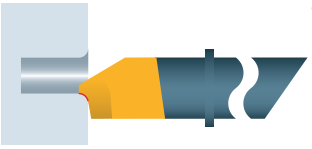
SDY



Radius

Inserts 389…

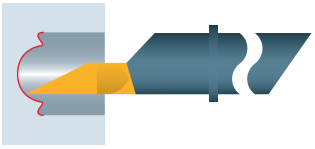
SDZ



Copy turning (axial)

Inserts 390…

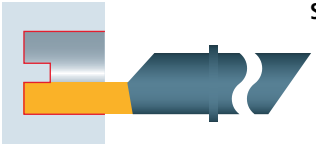
SXJ



Grooving (axial)

Inserts 391…

SXP



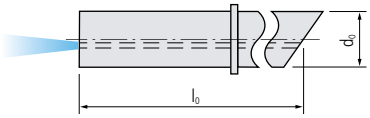
Holders 392…

All illustrations show right hand design. Left hand design is also available.



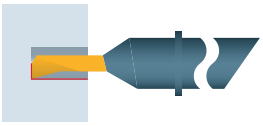
Blank





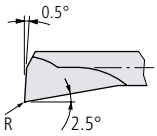
SD …

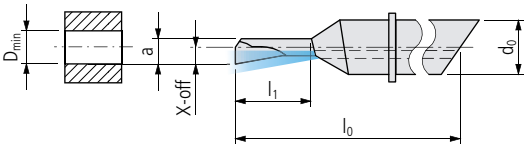
Order designation	Carbide 18	Dimensions		Holders
	○ ○ ○ ● –			392…
R	UHM 20	d_0	l_0	
PREMIUM-LINE				
SD 448 R …	■	4	48	SDA 4…
SD 668 R …	■	6	68	SDA 6…
SD 882 R …	■	8	82	SDA 8…



Drilling and turning







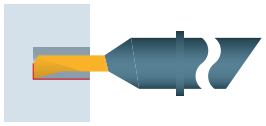
SDG …

Order designation	Carbide 18			Dimensions													Holders
	○ ● ●																392…
	○ ● ●																
	○ ● ●																
	● ○ –																
	– – ○																
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	l_0	R							
PREMIUM-LINE																	
SDG 435 042 R …	■	■	■	0.42	1.5	4	0.38	0.21	35	0.02							SDA 4…
SDG 435 052 R …	■	■	■	0.52	1.8	4	0.47	0.26	35	0.02							SDA 4…
SDG 435 072 R …	■	■	■	0.72	2.4	4	0.65	0.36	35	0.03							SDA 4…
SDG 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	35	0.03							SDA 4…
SDG 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	40	0.03							SDA 4…
SDG 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	48	0.03							SDA 4…
SDG 435 122 R …	■	■	■	1.22	3.9	4	1.10	0.61	35	0.03							SDA 4…
SDG 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	35	0.03							SDA 4…
SDG 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	40	0.03							SDA 4…
SDG 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	48	0.03							SDA 4…
SDG 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	35	0.04							SDA 4…
SDG 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	40	0.04							SDA 4…
SDG 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	48	0.04							SDA 4…
SDG 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	35	0.04							SDA 4…
SDG 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	40	0.04							SDA 4…
SDG 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	48	0.04							SDA 4…
SDG 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	40	0.05							SDA 4…
SDG 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	48	0.05							SDA 4…
SDG 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	40	0.05							SDA 4…
SDG 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	48	0.05							SDA 4…
SDG 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	40	0.06							SDA 4…
SDG 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	48	0.06							SDA 4…
SDG 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	44	0.06							SDA 6…
SDG 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	56	0.06							SDA 6…
SDG 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	68	0.06							SDA 6…
SDG 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	44	0.07							SDA 6…
SDG 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	56	0.07							SDA 6…
SDG 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	68	0.07							SDA 6…
SDG 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	44	0.07							SDA 6…
SDG 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	56	0.07							SDA 6…
SDG 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	68	0.07							SDA 6…
SDG 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	44	0.08							SDA 6…
SDG 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	56	0.08							SDA 6…
SDG 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	68	0.08							SDA 6…
SDG 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	50	0.09							SDA 8…
SDG 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	66	0.09							SDA 8…
SDG 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	82	0.09							SDA 8…
SDG 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	50	0.1							SDA 8…
SDG 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	66	0.1							SDA 8…
SDG 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	82	0.1							SDA 8…

* Left execution and other coatings on demand

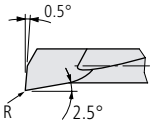
Cutting specification 398…

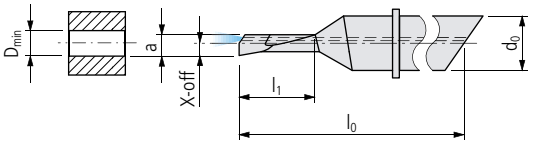
Legend 6…



Drilling and turning
Strenghten type (for blind holes)



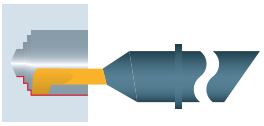




SXG …

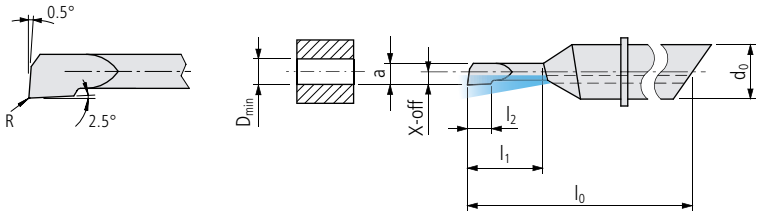
Order designation	Carbide 18			Dimensions							Holders
	○ ● ●										392…
	○ ● ●										
	○ ● ●										
	● ○ –										
	– – ○										
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	l_0	R	
PREMIUM-LINE											
SXG 435 042 R …	■	■	■	0.42	1.5	4	0.38	0.21	35	0.02	SDA 4…
SXG 435 052 R …	■	■	■	0.52	2	4	0.47	0.26	35	0.02	SDA 4…
SXG 435 072 R …	■	■	■	0.72	2.5	4	0.65	0.36	35	0.02	SDA 4…
SXG 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	35	0.02	SDA 4…
SXG 440 092 R …	■	■	■	0.92	5	4	0.83	0.46	40	0.02	SDA 4…
SXG 435 122 R …	■	■	■	1.22	4	4	1.1	0.61	35	0.02	SDA 4…
SXG 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	35	0.02	SDA 4…
SXG 440 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	40	0.02	SDA 4…
SXG 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	35	0.02	SDA 4…
SXG 440 192 R …	■	■	■	1.92	10	4	1.73	0.96	40	0.02	SDA 4…
SXG 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	35	0.02	SDA 4…
SXG 440 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	40	0.02	SDA 4…
SXG 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	40	0.02	SDA 4…
SXG 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	48	0.02	SDA 4…
SXG 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	40	0.02	SDA 4…
SXG 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	48	0.02	SDA 4…
SXG 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	40	0.02	SDA 4…
SXG 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	48	0.02	SDA 4…
SXG 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	44	0.02	SDA 6…
SXG 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	56	0.02	SDA 6…
SXG 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	68	0.02	SDA 6…
SXG 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	44	0.02	SDA 6…
SXG 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	56	0.02	SDA 6…
SXG 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	68	0.02	SDA 6…
SXG 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	44	0.02	SDA 6…
SXG 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	56	0.02	SDA 6…
SXG 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	68	0.02	SDA 6…
SXG 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	44	0.02	SDA 6…
SXG 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	56	0.02	SDA 6…
SXG 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	68	0.02	SDA 6…
SXG 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	50	0.02	SDA 8…
SXG 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	66	0.02	SDA 8…
SXG 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	82	0.02	SDA 8…
SXG 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	50	0.02	SDA 8…
SXG 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	66	0.02	SDA 8…
SXG 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	82	0.02	SDA 8…

* Left execution and other coatings on demand



Turning and facing





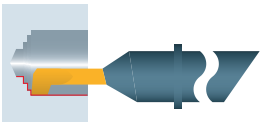
SDI …

Order designation	Carbide 18			Dimensions													Holders
	○ ● ●																392…
	○ ● ●																
	○ ● ●																
	● ○ –																
	– – ○																
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	l_0	l_2	R						
PREMIUM-LINE																	
SDI 435 042 R …	■	■	■	0.42	1.5	4	0.38	0.21	35	0.5	0.02						SDA 4…
SDI 435 052 R …	■	■	■	0.52	1.8	4	0.47	0.26	35	0.6	0.02						SDA 4…
SDI 435 072 R …	■	■	■	0.72	2.4	4	0.65	0.36	35	0.8	0.02						SDA 4…
SDI 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	35	1	0.02						SDA 4…
SDI 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	40	1	0.02						SDA 4…
SDI 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	48	1	0.02						SDA 4…
SDI 435 122 R …	■	■	■	1.22	3.9	4	1.10	0.61	35	1.3	0.02						SDA 4…
SDI 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	35	1.5	0.02						SDA 4…
SDI 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	40	1.5	0.02						SDA 4…
SDI 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	48	1.5	0.02						SDA 4…
SDI 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	35	2	0.02						SDA 4…
SDI 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	40	2	0.02						SDA 4…
SDI 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	48	2	0.02						SDA 4…
SDI 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	35	2.5	0.02						SDA 4…
SDI 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	40	2.5	0.02						SDA 4…
SDI 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	48	2.5	0.02						SDA 4…
SDI 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	40	3	0.02						SDA 4…
SDI 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	48	3	0.02						SDA 4…
SDI 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	40	3.5	0.02						SDA 4…
SDI 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	48	3.5	0.02						SDA 4…
SDI 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	40	4	0.02						SDA 4…
SDI 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	48	4	0.02						SDA 4…
SDI 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	44	4.5	0.02						SDA 6…
SDI 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	56	4.5	0.02						SDA 6…
SDI 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	68	4.5	0.02						SDA 6…
SDI 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	44	5	0.02						SDA 6…
SDI 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	56	5	0.02						SDA 6…
SDI 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	68	5	0.02						SDA 6…
SDI 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	44	5.5	0.02						SDA 6…
SDI 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	56	5.5	0.02						SDA 6…
SDI 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	68	5.5	0.02						SDA 6…
SDI 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	44	6	0.02						SDA 6…
SDI 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	56	6	0.02						SDA 6…
SDI 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	68	6	0.02						SDA 6…
SDI 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	50	7	0.02						SDA 8…
SDI 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	66	7	0.02						SDA 8…
SDI 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	82	7	0.02						SDA 8…
SDI 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	50	8	0.02						SDA 8…
SDI 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	66	8	0.02						SDA 8…
SDI 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	82	8	0.02						SDA 8…

* Left execution and other coatings on demand

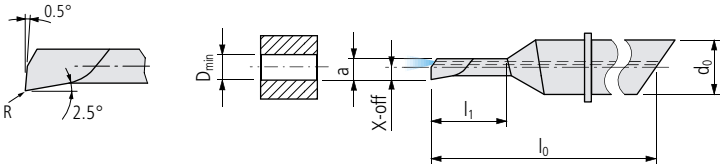
Cutting specification 398…

Legend 6…



Turning and facing
Strenghten type (for blind holes)

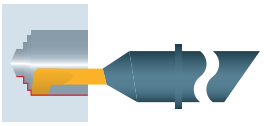




SXI …

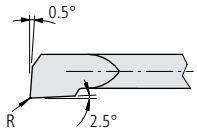
Order designation	Carbide 18			Dimensions							Holders
	○ ● ●										392…
	○ ● ●										
	○ ● ●										
	● ○ –										
	– – ○										
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	l_0	R	
PREMIUM-LINE											
SXI 435 042 R …	■	■	■	0.42	1.5	4	0.38	0.21	35	0.02	SDA 4…
SXI 435 052 R …	■	■	■	0.52	2	4	0.47	0.26	35	0.02	SDA 4…
SXI 435 072 R …	■	■	■	0.72	2.5	4	0.65	0.36	35	0.02	SDA 4…
SXI 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	35	0.02	SDA 4…
SXI 440 092 R …	■	■	■	0.92	5	4	0.83	0.46	40	0.02	SDA 4…
SXI 435 122 R …	■	■	■	1.22	4	4	1.1	0.61	35	0.02	SDA 4…
SXI 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	35	0.02	SDA 4…
SXI 440 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	40	0.02	SDA 4…
SXI 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	35	0.02	SDA 4…
SXI 440 192 R …	■	■	■	1.92	10	4	1.73	0.96	40	0.02	SDA 4…
SXI 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	35	0.02	SDA 4…
SXI 440 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	40	0.02	SDA 4…
SXI 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	40	0.02	SDA 4…
SXI 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	48	0.02	SDA 4…
SXI 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	40	0.02	SDA 4…
SXI 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	48	0.02	SDA 4…
SXI 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	40	0.02	SDA 4…
SXI 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	48	0.02	SDA 4…
SXI 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	44	0.02	SDA 6…
SXI 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	56	0.02	SDA 6…
SXI 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	68	0.02	SDA 6…
SXI 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	44	0.02	SDA 6…
SXI 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	56	0.02	SDA 6…
SXI 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	68	0.02	SDA 6…
SXI 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	44	0.02	SDA 6…
SXI 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	56	0.02	SDA 6…
SXI 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	68	0.02	SDA 6…
SXI 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	44	0.02	SDA 6…
SXI 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	56	0.02	SDA 6…
SXI 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	68	0.02	SDA 6…
SXI 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	50	0.02	SDA 8…
SXI 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	66	0.02	SDA 8…
SXI 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	82	0.02	SDA 8…
SXI 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	50	0.02	SDA 8…
SXI 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	66	0.02	SDA 8…
SXI 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	82	0.02	SDA 8…

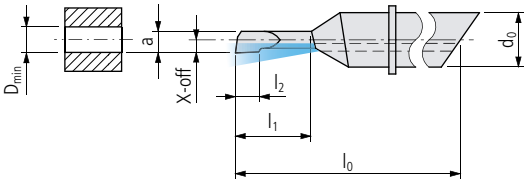
* Left execution and other coatings on demand



Turning and facing



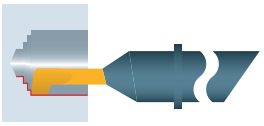




SDF …

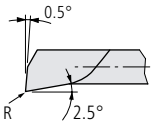
Order designation	Carbide			Dimensions													Holders
	○ ○ ○ ● –	● ● ● ○ –	● ● ● – ○														392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	l_0	l_2	R						
PREMIUM-LINE																	
SDF 435 042 R …	■	■	■	0.42	1.5	4	0.38	0.21	35	0.5	0.06						SDA 4…
SDF 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	35	1	0.06						SDA 4…
SDF 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	40	1	0.06						SDA 4…
SDF 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	48	1	0.06						SDA 4…
SDF 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	35	1.5	0.06						SDA 4…
SDF 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	40	1.5	0.06						SDA 4…
SDF 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	48	1.5	0.06						SDA 4…
SDF 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	35	2	0.06						SDA 4…
SDF 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	40	2	0.06						SDA 4…
SDF 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	48	2	0.06						SDA 4…
SDF 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	35	2.5	0.06						SDA 4…
SDF 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	40	2.5	0.06						SDA 4…
SDF 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	48	2.5	0.06						SDA 4…
SDF 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	40	3	0.06						SDA 4…
SDF 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	48	3	0.06						SDA 4…
SDF 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	40	3.5	0.06						SDA 4…
SDF 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	48	3.5	0.06						SDA 4…
SDF 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	40	4	0.06						SDA 4…
SDF 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	48	4	0.06						SDA 4…
SDF 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	44	4.5	0.08						SDA 6…
SDF 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	56	4.5	0.08						SDA 6…
SDF 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	68	4.5	0.08						SDA 6…
SDF 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	44	5	0.08						SDA 6…
SDF 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	56	5	0.08						SDA 6…
SDF 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	68	5	0.08						SDA 6…
SDF 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	44	5.5	0.08						SDA 6…
SDF 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	56	5.5	0.08						SDA 6…
SDF 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	68	5.5	0.08						SDA 6…
SDF 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	44	6	0.08						SDA 6…
SDF 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	56	6	0.08						SDA 6…
SDF 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	68	6	0.08						SDA 6…
SDF 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	50	7	0.12						SDA 8…
SDF 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	66	7	0.12						SDA 8…
SDF 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	82	7	0.12						SDA 8…
SDF 850 792 R …	■	■	■	7.92	16	8	3.96	3.96	50	8	0.12						SDA 8…
SDF 866 792 R …	■	■	■	7.92	32	8	3.96	3.96	66	8	0.12						SDA 8…
SDF 882 792 R …	■	■	■	7.92	48	8	3.96	3.96	82	8	0.12						SDA 8…

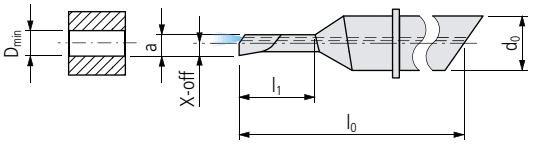
* Left execution and other coatings on demand



Turning and facing
Strenghten type (for blind holes)



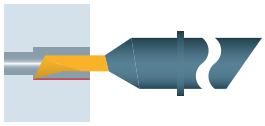




SXF …

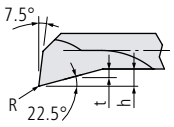
Order designation	Carbide 18			Dimensions							Holders
	○ ● ●										392…
	○ ● ●										
	○ ● ●										
	● ○ –										
	– – ○										
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	l_0	R	
PREMIUM-LINE											
SXF 435 042 R …	■	■	■	0.42	1.5	4	0.38	0.21	35	0.06	SDA 4…
SXF 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	35	0.06	SDA 4…
SXF 440 092 R …	■	■	■	0.92	5	4	0.83	0.46	40	0.06	SDA 4…
SXF 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	35	0.06	SDA 4…
SXF 440 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	40	0.06	SDA 4…
SXF 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	35	0.06	SDA 4…
SXF 440 192 R …	■	■	■	1.92	10	4	1.73	0.96	40	0.06	SDA 4…
SXF 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	35	0.06	SDA 4…
SXF 440 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	40	0.06	SDA 4…
SXF 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	40	0.06	SDA 4…
SXF 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	48	0.06	SDA 4…
SXF 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	40	0.06	SDA 4…
SXF 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	48	0.06	SDA 4…
SXF 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	40	0.06	SDA 4…
SXF 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	48	0.06	SDA 4…
SXF 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	44	0.08	SDA 6…
SXF 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	56	0.08	SDA 6…
SXF 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	68	0.08	SDA 6…
SXF 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	44	0.08	SDA 6…
SXF 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	56	0.08	SDA 6…
SXF 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	68	0.08	SDA 6…
SXF 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	44	0.08	SDA 6…
SXF 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	56	0.08	SDA 6…
SXF 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	68	0.08	SDA 6…
SXF 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	44	0.08	SDA 6…
SXF 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	56	0.08	SDA 6…
SXF 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	68	0.08	SDA 6…
SXF 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	50	0.12	SDA 8…
SXF 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	66	0.12	SDA 8…
SXF 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	82	0.12	SDA 8…
SXF 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	50	0.12	SDA 8…
SXF 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	66	0.12	SDA 8…
SXF 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	82	0.12	SDA 8…

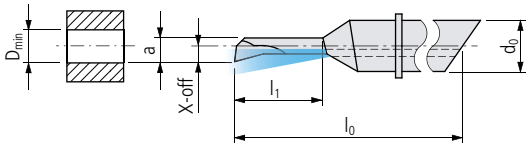
* Left execution and other coatings on demand



Front turning



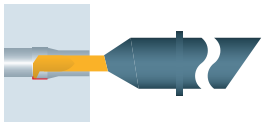




SDH …

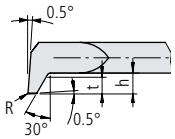
Order designation	Carbide 18			Dimensions									Holders
													392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	R	
PREMIUM-LINE													
SDH 435 042 R …	■	■	■	0.42	1.5	4	0.38	0.21	0.09	0.07	35	0.05	SDA 4…
SDH 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.19	0.15	35	0.05	SDA 4…
SDH 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.19	0.15	40	0.05	SDA 4…
SDH 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	0.19	0.15	48	0.05	SDA 4…
SDH 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.3	0.23	35	0.05	SDA 4…
SDH 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.3	0.23	40	0.05	SDA 4…
SDH 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	0.3	0.23	48	0.05	SDA 4…
SDH 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.4	0.31	35	0.05	SDA 4…
SDH 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.4	0.31	40	0.05	SDA 4…
SDH 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	0.4	0.31	48	0.05	SDA 4…
SDH 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.51	0.39	35	0.05	SDA 4…
SDH 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.51	0.39	40	0.05	SDA 4…
SDH 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	0.51	0.39	48	0.05	SDA 4…
SDH 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	0.61	0.47	40	0.05	SDA 4…
SDH 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	0.61	0.47	48	0.05	SDA 4…
SDH 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	0.72	0.55	40	0.05	SDA 4…
SDH 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	0.72	0.55	48	0.05	SDA 4…
SDH 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	0.82	0.63	40	0.05	SDA 4…
SDH 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	0.82	0.63	48	0.05	SDA 4…
SDH 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	0.93	0.71	44	0.05	SDA 6…
SDH 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	0.93	0.71	56	0.05	SDA 6…
SDH 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	0.93	0.71	68	0.05	SDA 6…
SDH 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	1.03	0.79	44	0.05	SDA 6…
SDH 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	1.03	0.79	56	0.05	SDA 6…
SDH 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	1.03	0.79	68	0.05	SDA 6…
SDH 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	1.14	0.87	44	0.05	SDA 6…
SDH 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	1.14	0.87	56	0.05	SDA 6…
SDH 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	1.14	0.87	68	0.05	SDA 6…
SDH 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	1.24	0.95	44	0.05	SDA 6…
SDH 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	1.24	0.95	56	0.05	SDA 6…
SDH 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	1.24	0.95	68	0.05	SDA 6…
SDH 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	1.45	1.11	50	0.05	SDA 8…
SDH 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	1.45	1.11	66	0.05	SDA 8…
SDH 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	1.45	1.11	82	0.05	SDA 8…
SDH 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	1.66	1.27	50	0.05	SDA 8…
SDH 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	1.66	1.27	66	0.05	SDA 8…
SDH 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	1.66	1.27	82	0.05	SDA 8…

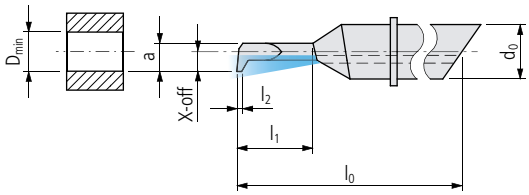
* Left execution and other coatings on demand



Turning and front turning



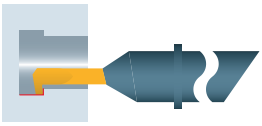




SDK …

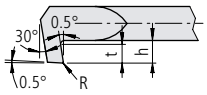
Order designation	Carbide 18			Dimensions										Holders
	○ ● ●													392…
	○ ● ●													
	○ ● ●													
	● ○ –													
	– – ○													
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	l_2	R				
PREMIUM-LINE																	
SDK 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.23	0.15	35	0.5	0.02				SDA 4…
SDK 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.23	0.15	40	0.5	0.02				SDA 4…
SDK 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	0.23	0.15	48	0.5	0.02				SDA 4…
SDK 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.36	0.23	35	0.75	0.02				SDA 4…
SDK 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.36	0.23	40	0.75	0.02				SDA 4…
SDK 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	0.36	0.23	48	0.75	0.02				SDA 4…
SDK 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.48	0.32	35	1	0.02				SDA 4…
SDK 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.48	0.32	40	1	0.02				SDA 4…
SDK 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	0.48	0.32	48	1	0.02				SDA 4…
SDK 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.61	0.4	35	1.25	0.02				SDA 4…
SDK 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.61	0.4	40	1.25	0.02				SDA 4…
SDK 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	0.61	0.4	48	1.25	0.02				SDA 4…
SDK 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	0.73	0.49	40	1.5	0.02				SDA 4…
SDK 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	0.73	0.49	48	1.5	0.02				SDA 4…
SDK 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	0.86	0.57	40	1.75	0.02				SDA 4…
SDK 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	0.86	0.57	48	1.75	0.02				SDA 4…
SDK 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	0.98	0.66	40	2	0.02				SDA 4…
SDK 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	0.98	0.66	48	2	0.02				SDA 4…
SDK 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	1.11	0.74	44	2.25	0.02				SDA 6…
SDK 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	1.11	0.74	56	2.25	0.02				SDA 6…
SDK 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	1.11	0.74	68	2.25	0.02				SDA 6…
SDK 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	1.23	0.82	44	2.5	0.02				SDA 6…
SDK 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	1.23	0.82	56	2.5	0.02				SDA 6…
SDK 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	1.23	0.82	68	2.5	0.02				SDA 6…
SDK 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	1.36	0.9	44	2.75	0.02				SDA 6…
SDK 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	1.36	0.9	56	2.75	0.02				SDA 6…
SDK 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	1.36	0.9	68	2.75	0.02				SDA 6…
SDK 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	1.48	0.99	44	3	0.02				SDA 6…
SDK 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	1.48	0.99	56	3	0.02				SDA 6…
SDK 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	1.48	0.99	68	3	0.02				SDA 6…
SDK 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	1.73	1.15	50	3.5	0.02				SDA 8…
SDK 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	1.73	1.15	66	3.5	0.02				SDA 8…
SDK 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	1.73	1.15	82	3.5	0.02				SDA 8…
SDK 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	1.98	1.32	50	4	0.02				SDA 8…
SDK 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	1.98	1.32	66	4	0.02				SDA 8…
SDK 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	1.98	1.32	82	4	0.02				SDA 8…

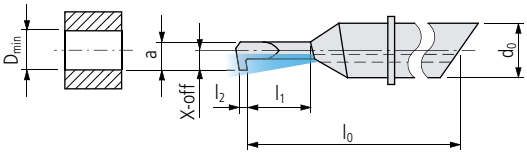
* Left execution and other coatings on demand



Back turning



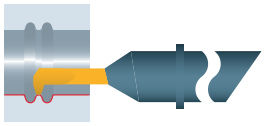




SDM …

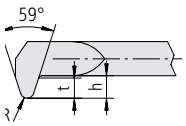
Order designation	Carbide 18			Dimensions										Holders
	○ ● ●													392…
	○ ● ●													
	○ ● ●													
	● ○ –													
	– – ○													
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	l_2	R				
PREMIUM-LINE																	
SDM 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.23	0.15	35	0.5	0.01				SDA 4…
SDM 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.23	0.15	40	0.5	0.01				SDA 4…
SDM 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	0.23	0.15	48	0.5	0.01				SDA 4…
SDM 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.36	0.23	35	0.75	0.01				SDA 4…
SDM 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.36	0.23	40	0.75	0.01				SDA 4…
SDM 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	0.36	0.23	48	0.75	0.01				SDA 4…
SDM 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.48	0.32	35	1	0.01				SDA 4…
SDM 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.48	0.33	40	1	0.01				SDA 4…
SDM 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	0.48	0.33	48	1	0.01				SDA 4…
SDM 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.61	0.4	35	1.25	0.02				SDA 4…
SDM 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.61	0.4	40	1.25	0.02				SDA 4…
SDM 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	0.61	0.4	48	1.25	0.02				SDA 4…
SDM 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	0.73	0.49	40	1.5	0.02				SDA 4…
SDM 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	0.73	0.49	48	1.5	0.02				SDA 4…
SDM 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	0.86	0.57	40	1.75	0.02				SDA 4…
SDM 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	0.86	0.57	48	1.75	0.02				SDA 4…
SDM 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	0.98	0.66	40	2	0.02				SDA 4…
SDM 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	0.98	0.66	48	2	0.02				SDA 4…
SDM 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	1.11	0.74	44	2.25	0.03				SDA 6…
SDM 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	1.11	0.74	56	2.25	0.03				SDA 6…
SDM 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	1.11	0.74	68	2.25	0.03				SDA 6…
SDM 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	1.23	0.82	44	2.5	0.03				SDA 6…
SDM 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	1.23	0.82	56	2.5	0.03				SDA 6…
SDM 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	1.23	0.82	68	2.5	0.03				SDA 6…
SDM 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	1.36	0.9	44	2.75	0.03				SDA 6…
SDM 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	1.36	0.9	56	2.75	0.03				SDA 6…
SDM 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	1.36	0.9	68	2.75	0.03				SDA 6…
SDM 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	1.48	0.99	44	3	0.03				SDA 6…
SDM 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	1.48	0.99	56	3	0.03				SDA 6…
SDM 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	1.48	0.99	68	3	0.03				SDA 6…
SDM 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	1.73	1.15	50	3.5	0.04				SDA 8…
SDM 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	1.73	1.15	66	3.5	0.04				SDA 8…
SDM 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	1.73	1.15	82	3.5	0.04				SDA 8…
SDM 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	1.98	1.32	50	4	0.04				SDA 8…
SDM 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	1.98	1.32	66	4	0.04				SDA 8…
SDM 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	1.98	1.32	82	4	0.04				SDA 8…

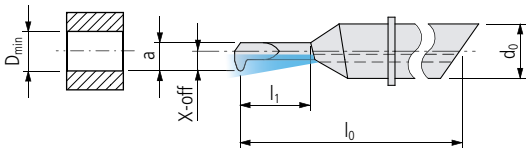
* Left execution and other coatings on demand



Turning



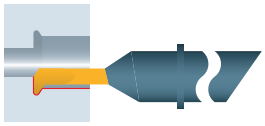




SDO …

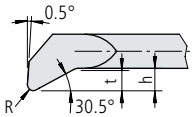
Order designation	Carbide			Dimensions									Holders
	○ ○ ○ ● –	● ● ● ○ –	● ● ● – ○										▯392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	R	
PREMIUM-LINE													
SDO 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.31	0.23	35	0.05	SDA 4…
SDO 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.31	0.23	40	0.05	SDA 4…
SDO 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	0.31	0.23	48	0.05	SDA 4…
SDO 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.47	0.36	35	0.075	SDA 4…
SDO 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.47	0.36	40	0.075	SDA 4…
SDO 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	0.47	0.36	48	0.075	SDA 4…
SDO 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.64	0.48	35	0.1	SDA 4…
SDO 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.64	0.48	40	0.1	SDA 4…
SDO 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	0.64	0.48	48	0.1	SDA 4…
SDO 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.81	0.61	35	0.125	SDA 4…
SDO 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.81	0.61	40	0.125	SDA 4…
SDO 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	0.81	0.61	48	0.125	SDA 4…
SDO 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	0.97	0.73	40	0.15	SDA 4…
SDO 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	0.97	0.73	48	0.15	SDA 4…
SDO 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	1.14	0.86	40	0.175	SDA 4…
SDO 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	1.14	0.86	48	0.175	SDA 4…
SDO 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	1.31	0.98	40	0.2	SDA 4…
SDO 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	1.31	0.98	48	0.2	SDA 4…
SDO 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	1.47	1.11	44	0.225	SDA 6…
SDO 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	1.47	1.11	56	0.225	SDA 6…
SDO 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	1.47	1.11	68	0.225	SDA 6…
SDO 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	1.64	1.23	44	0.25	SDA 6…
SDO 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	1.64	1.23	56	0.25	SDA 6…
SDO 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	1.64	1.23	68	0.25	SDA 6…
SDO 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	1.8	1.36	44	0.275	SDA 6…
SDO 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	1.8	1.36	56	0.275	SDA 6…
SDO 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	1.8	1.36	68	0.275	SDA 6…
SDO 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	1.97	1.48	44	0.3	SDA 6…
SDO 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	1.97	1.48	56	0.3	SDA 6…
SDO 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	1.97	1.48	68	0.3	SDA 6…
SDO 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	2.3	1.73	50	0.35	SDA 8…
SDO 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	2.3	1.73	66	0.35	SDA 8…
SDO 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	2.3	1.73	82	0.35	SDA 8…
SDO 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	2.64	1.98	50	0.4	SDA 8…
SDO 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	2.64	1.98	66	0.4	SDA 8…
SDO 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	2.64	1.98	82	0.4	SDA 8…

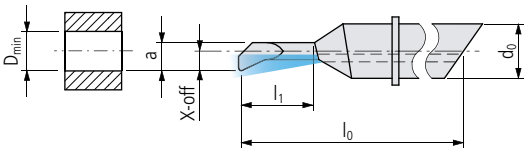
* Left execution and other coatings on demand



Turning



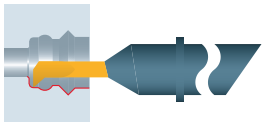




SDQ …

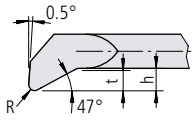
Order designation	Carbide 18			Dimensions												Holders
	○ ○ ○ ● –	● ● ● ○ –	● ● ● – ○													392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	R				
PREMIUM-LINE																
SDQ 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.31	0.23	35	0.05				SDA 4…
SDQ 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.31	0.23	40	0.05				SDA 4…
SDQ 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	0.31	0.23	48	0.05				SDA 4…
SDQ 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.47	0.36	35	0.075				SDA 4…
SDQ 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.47	0.36	40	0.075				SDA 4…
SDQ 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	0.47	0.36	48	0.075				SDA 4…
SDQ 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.64	0.47	35	0.1				SDA 4…
SDQ 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.64	0.47	40	0.1				SDA 4…
SDQ 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	0.64	0.47	48	0.1				SDA 4…
SDQ 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.81	0.61	35	0.125				SDA 4…
SDQ 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.81	0.61	40	0.125				SDA 4…
SDQ 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	0.81	0.61	48	0.125				SDA 4…
SDQ 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	0.97	0.73	40	0.15				SDA 4…
SDQ 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	0.97	0.73	48	0.15				SDA 4…
SDQ 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	1.14	0.86	40	0.175				SDA 4…
SDQ 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	1.14	0.86	48	0.175				SDA 4…
SDQ 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	1.31	0.98	40	0.2				SDA 4…
SDQ 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	1.31	0.98	48	0.2				SDA 4…
SDQ 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	1.47	1.11	44	0.225				SDA 6…
SDQ 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	1.47	1.11	56	0.225				SDA 6…
SDQ 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	1.47	1.11	68	0.225				SDA 6…
SDQ 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	1.64	1.23	44	0.25				SDA 6…
SDQ 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	1.64	1.23	56	0.25				SDA 6…
SDQ 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	1.64	1.23	68	0.25				SDA 6…
SDQ 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	1.8	1.36	44	0.275				SDA 6…
SDQ 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	1.8	1.36	56	0.275				SDA 6…
SDQ 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	1.8	1.36	68	0.275				SDA 6…
SDQ 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	1.97	1.48	44	0.3				SDA 6…
SDQ 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	1.97	1.48	56	0.3				SDA 6…
SDQ 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	1.97	1.48	68	0.3				SDA 6…
SDQ 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	2.3	1.73	50	0.35				SDA 8…
SDQ 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	2.3	1.73	66	0.35				SDA 8…
SDQ 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	2.3	1.73	82	0.35				SDA 8…
SDQ 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	2.64	1.98	50	0.4				SDA 8…
SDQ 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	2.64	1.98	66	0.4				SDA 8…
SDQ 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	2.64	1.98	82	0.4				SDA 8…

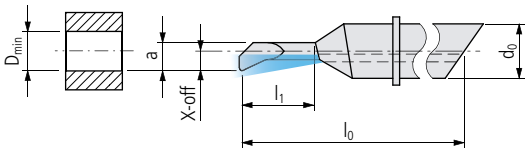
* Left execution and other coatings on demand



Longitudinal turning and chamfering





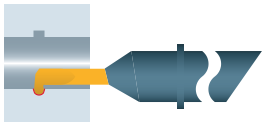


UTILIS multidec® swiss type tools

SDW …

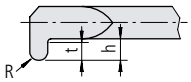
Order designation	Carbide 18			Dimensions												Holders
	○ ○ ○ ● –	● ● ● ○ –	● ● ● – ○													392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	R				
PREMIUM-LINE																
SDW 435 092 R…	■	■	■	0.92	3	4	0.83	0.46	0.31	0.23	35	0.050				SDA 4…
SDW 440 092 R…	■	■	■	0.92	3	4	0.83	0.46	0.31	0.23	40	0.050				SDA 4…
SDW 448 092 R…	■	■	■	0.92	5	4	0.83	0.46	0.31	0.23	48	0.050				SDA 4…
SDW 435 142 R…	■	■	■	1.42	4.5	4	1.28	0.71	0.47	0.36	35	0.075				SDA 4…
SDW 440 142 R…	■	■	■	1.42	4.5	4	1.28	0.71	0.47	0.36	40	0.075				SDA 4…
SDW 448 142 R…	■	■	■	1.42	7.5	4	1.28	0.71	0.47	0.36	48	0.075				SDA 4…
SDW 435 192 R…	■	■	■	1.92	6	4	1.73	0.96	0.64	0.48	35	0.100				SDA 4…
SDW 440 192 R…	■	■	■	1.92	6	4	1.73	0.96	0.64	0.48	40	0.100				SDA 4…
SDW 448 192 R…	■	■	■	1.92	10	4	1.73	0.96	0.64	0.48	48	0.100				SDA 4…
SDW 435 242 R…	■	■	■	2.42	7.5	4	2.18	1.21	0.81	0.61	35	0.125				SDA 4…
SDW 440 242 R…	■	■	■	2.42	7.5	4	2.18	1.21	0.81	0.61	40	0.125				SDA 4…
SDW 448 242 R…	■	■	■	2.42	12.5	4	2.18	1.21	0.81	0.61	48	0.125				SDA 4…
SDW 440 292 R…	■	■	■	2.92	9	4	2.63	1.46	0.97	0.73	40	0.150				SDA 4…
SDW 448 292 R…	■	■	■	2.92	15	4	2.63	1.46	0.97	0.73	48	0.150				SDA 4…
SDW 440 342 R…	■	■	■	3.42	10.5	4	3.08	1.71	1.14	0.86	40	0.175				SDA 4…
SDW 448 342 R…	■	■	■	3.42	17.5	4	3.08	1.71	1.14	0.86	48	0.175				SDA 4…
SDW 440 392 R…	■	■	■	3.92	12	4	3.53	1.96	1.31	0.98	40	0.200				SDA 4…
SDW 448 392 R…	■	■	■	3.92	20	4	3.53	1.96	1.31	0.98	48	0.200				SDA 4…
SDW 644 442 R…	■	■	■	4.42	9	6	3.98	2.21	1.47	1.11	44	0.225				SDA 6…
SDW 656 442 R…	■	■	■	4.42	18	6	3.98	2.21	1.47	1.11	56	0.225				SDA 6…
SDW 668 442 R…	■	■	■	4.42	27	6	3.98	2.21	1.47	1.11	68	0.225				SDA 6…
SDW 644 492 R…	■	■	■	4.92	10	6	4.43	2.46	1.64	1.23	44	0.250				SDA 6…
SDW 656 492 R…	■	■	■	4.92	20	6	4.43	2.46	1.64	1.23	56	0.250				SDA 6…
SDW 668 492 R…	■	■	■	4.92	30	6	4.43	2.46	1.64	1.23	68	0.250				SDA 6…
SDW 644 542 R…	■	■	■	5.42	11	6	4.88	2.71	1.8	1.36	44	0.275				SDA 6…
SDW 656 542 R…	■	■	■	5.42	22	6	4.88	2.71	1.8	1.36	56	0.275				SDA 6…
SDW 668 542 R…	■	■	■	5.42	33	6	4.88	2.71	1.8	1.36	68	0.275				SDA 6…
SDW 644 592 R…	■	■	■	5.92	12	6	5.33	2.96	1.97	1.458	44	0.300				SDA 6…
SDW 656 592 R…	■	■	■	5.92	24	6	5.33	2.96	1.97	1.48	56	0.300				SDA 6…
SDW 668 592 R…	■	■	■	5.92	36	6	5.33	2.96	1.97	1.48	68	0.300				SDA 6…
SDW 850 692 R…	■	■	■	6.92	14	8	6.23	3.46	2.3	1.73	50	0.350				SDA 8…
SDW 866 692 R…	■	■	■	6.92	28	8	6.23	3.46	2.3	1.73	66	0.350				SDA 8…
SDW 882 692 R…	■	■	■	6.92	42	8	6.23	3.46	2.3	1.73	82	0.350				SDA 8…
SDW 850 792 R…	■	■	■	7.92	16	8	7.13	3.96	2.64	1.98	50	0.400				SDA 8…
SDW 866 792 R…	■	■	■	7.92	32	8	7.13	3.96	2.64	1.98	66	0.400				SDA 8…
SDW 882 792 R…	■	■	■	7.92	48	8	7.13	3.96	2.64	1.98	82	0.400				SDA 8…

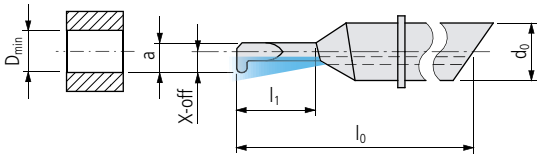
* Left execution and other coatings on demand



Radius-grooving



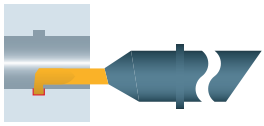




SDR …

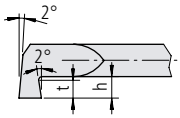
Order designation	Carbide ▯18			Dimensions												Holders ▯392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	R				
PREMIUM-LINE																
SDR 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.3	0.2	35	0.1				SDA 4…
SDR 440 092 R …	■	■	■	0.92	5	4	0.83	0.46	0.3	0.2	40	0.1				SDA 4…
SDR 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.38	0.25	35	0.125				SDA 4…
SDR 440 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	0.38	0.25	40	0.125				SDA 4…
SDR 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.45	0.3	35	0.15				SDA 4…
SDR 440 192 R …	■	■	■	1.92	10	4	1.73	0.96	0.45	0.3	40	0.15				SDA 4…
SDR 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.53	0.35	35	0.175				SDA 4…
SDR 440 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	0.53	0.35	40	0.175				SDA 4…
SDR 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	0.6	0.4	40	0.2				SDA 4…
SDR 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	0.6	0.4	48	0.2				SDA 4…
SDR 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	0.68	0.45	40	0.225				SDA 4…
SDR 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	0.68	0.45	48	0.225				SDA 4…
SDR 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	0.75	0.5	40	0.25				SDA 4…
SDR 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	0.75	0.5	48	0.25				SDA 4…
SDR 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	0.98	0.65	44	0.275				SDA 6…
SDR 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	0.98	0.65	56	0.275				SDA 6…
SDR 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	0.98	0.65	68	0.275				SDA 6…
SDR 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	1.05	0.7	44	0.3				SDA 6…
SDR 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	1.05	0.7	56	0.3				SDA 6…
SDR 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	1.05	0.7	68	0.3				SDA 6…
SDR 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	1.13	0.75	44	0.325				SDA 6…
SDR 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	1.13	0.75	56	0.325				SDA 6…
SDR 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	1.13	0.75	68	0.325				SDA 6…
SDR 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	1.2	0.8	44	0.35				SDA 6…
SDR 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	1.2	0.8	56	0.35				SDA 6…
SDR 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	1.2	0.8	68	0.35				SDA 6…

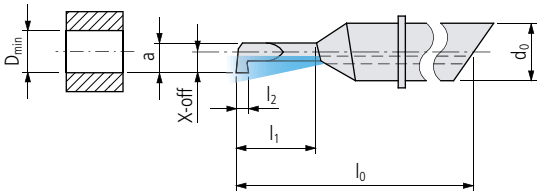
* Left execution and other coatings on demand



Grooving





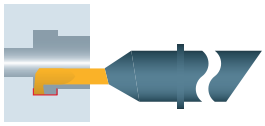


UTILIS multidec swiss type tools

SDS …

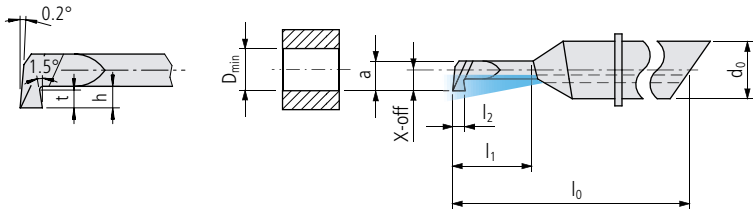
Order designation	Carbide			Dimensions									Holders
	○ ○ ○ ● –	● ● ● ○ –	● ● ● – ○										▯ 392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	l_2	
PREMIUM-LINE													
SDS 435 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.31	0.23	35	0.2	SDA 4…
SDS 440 092 R …	■	■	■	0.92	3	4	0.83	0.46	0.31	0.23	40	0.2	SDA 4…
SDS 448 092 R …	■	■	■	0.92	5	4	0.83	0.46	0.31	0.23	48	0.2	SDA 4…
SDS 435 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.47	0.36	35	0.25	SDA 4…
SDS 440 142 R …	■	■	■	1.42	4.5	4	1.28	0.71	0.47	0.36	40	0.25	SDA 4…
SDS 448 142 R …	■	■	■	1.42	7.5	4	1.28	0.71	0.47	0.36	48	0.25	SDA 4…
SDS 435 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.64	0.48	35	0.3	SDA 4…
SDS 440 192 R …	■	■	■	1.92	6	4	1.73	0.96	0.64	0.48	40	0.3	SDA 4…
SDS 448 192 R …	■	■	■	1.92	10	4	1.73	0.96	0.64	0.48	48	0.3	SDA 4…
SDS 435 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.81	0.61	35	0.35	SDA 4…
SDS 440 242 R …	■	■	■	2.42	7.5	4	2.18	1.21	0.81	0.61	40	0.35	SDA 4…
SDS 448 242 R …	■	■	■	2.42	12.5	4	2.18	1.21	0.81	0.61	48	0.35	SDA 4…
SDS 440 292 R …	■	■	■	2.92	9	4	2.63	1.46	0.97	0.73	40	0.4	SDA 4…
SDS 448 292 R …	■	■	■	2.92	15	4	2.63	1.46	0.97	0.73	48	0.4	SDA 4…
SDS 440 342 R …	■	■	■	3.42	10.5	4	3.08	1.71	1.14	0.86	40	0.45	SDA 4…
SDS 448 342 R …	■	■	■	3.42	17.5	4	3.08	1.71	1.14	0.86	48	0.45	SDA 4…
SDS 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	1.31	0.98	40	0.5	SDA 4…
SDS 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	1.31	0.98	48	0.5	SDA 4…
SDS 644 442 R …	■	■	■	4.42	9	6	3.98	2.21	1.47	1.11	44	1	SDA 6…
SDS 656 442 R …	■	■	■	4.42	18	6	3.98	2.21	1.47	1.11	56	1	SDA 6…
SDS 668 442 R …	■	■	■	4.42	27	6	3.98	2.21	1.47	1.11	68	1	SDA 6…
SDS 644 492 R …	■	■	■	4.92	10	6	4.43	2.46	1.64	1.23	44	1.5	SDA 6…
SDS 656 492 R …	■	■	■	4.92	20	6	4.43	2.46	1.64	1.23	56	1.5	SDA 6…
SDS 668 492 R …	■	■	■	4.92	30	6	4.43	2.46	1.64	1.23	68	1.5	SDA 6…
SDS 644 542 R …	■	■	■	5.42	11	6	4.88	2.71	1.8	1.36	44	1	SDA 6…
SDS 656 542 R …	■	■	■	5.42	22	6	4.88	2.71	1.8	1.36	56	1	SDA 6…
SDS 668 542 R …	■	■	■	5.42	33	6	4.88	2.71	1.8	1.36	68	1	SDA 6…
SDS 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	1.97	1.48	44	1.5	SDA 6…
SDS 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	1.97	1.48	56	1.5	SDA 6…
SDS 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	1.97	1.48	68	1.5	SDA 6…
SDS 850 692 R …	■	■	■	6.92	14	8	6.23	3.46	2.3	1.73	50	1.5	SDA 8…
SDS 866 692 R …	■	■	■	6.92	28	8	6.23	3.46	2.3	1.73	66	1.5	SDA 8…
SDS 882 692 R …	■	■	■	6.92	42	8	6.23	3.46	2.3	1.73	82	1.5	SDA 8…
SDS 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	2.64	1.98	50	2	SDA 8…
SDS 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	2.64	1.98	66	2	SDA 8…
SDS 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	2.64	1.98	82	2	SDA 8…

* Left execution and other coatings on demand



Grooving and turning

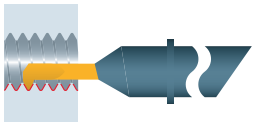




SDT …

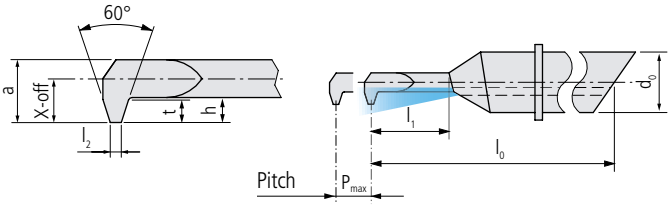
Order designation	Carbide 18			Dimensions										Holders
	○ ● ●													392…
	○ ● ●													
	○ ● ●													
	● ○ –													
	– – ○													
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	a	X-off	h	t	l_0	l_2					
PREMIUM-LINE																	
SDT 440 392 R …	■	■	■	3.92	12	4	3.53	1.96	1.31	1	40	1					SDA 4…
SDT 448 392 R …	■	■	■	3.92	20	4	3.53	1.96	1.31	1	48	1					SDA 4…
SDT 644 592 R …	■	■	■	5.92	12	6	5.33	2.96	1.97	1.5	44	1.25					SDA 6…
SDT 656 592 R …	■	■	■	5.92	24	6	5.33	2.96	1.97	1.5	56	1.25					SDA 6…
SDT 668 592 R …	■	■	■	5.92	36	6	5.33	2.96	1.97	1.5	68	1.25					SDA 6…
SDT 850 792 R …	■	■	■	7.92	16	8	7.13	3.96	2.64	2	50	1.5					SDA 8…
SDT 866 792 R …	■	■	■	7.92	32	8	7.13	3.96	2.64	2	66	1.5					SDA 8…
SDT 882 792 R …	■	■	■	7.92	48	8	7.13	3.96	2.64	2	82	1.5					SDA 8…

* Left execution and other coatings on demand



Threading (partial profile 60°)





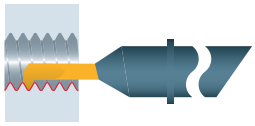
UTILIS multidec® swiss type tools

SDU …

Order designation	Carbide 18			Standard	Dimensions									Holders
	○ ● ●													392…
	○ ● ●													
	● ○ –													
	– – ○													
R *	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P_{max}	l_1	d_0	a	X-off	h	t	l_0	l_2	
PREMIUM-LINE														
SDU 435 160 R …	■	■	■	M2	0.4	3	4	1.1	0.8	0.5	0.35	35	0.02	SDA 4…
SDU 440 160 R …	■	■	■	M2	0.4	4.8	4	1.1	0.8	0.5	0.35	40	0.02	SDA 4…
SDU 435 200 R …	■	■	■	M3	0.5	4.5	4	1.3	1	0.6	0.45	35	0.03	SDA 4…
SDU 440 200 R …	■	■	■	M3	0.5	6	4	1.3	1	0.6	0.45	40	0.03	SDA 4…
SDU 435 300 R …	■	■	■	M4	0.7	6	4	2	1.5	0.9	0.6	35	0.04	SDA 4…
SDU 440 300 R …	■	■	■	M4	0.7	9	4	2	1.5	0.9	0.6	40	0.04	SDA 4…
SDU 435 400 R …	■	■	■	M5	0.8	7.5	4	2.7	2	1.2	0.8	35	0.05	SDA 4…
SDU 440 400 R …	■	■	■	M5	0.8	12	4	2.7	2	1.2	0.8	40	0.05	SDA 4…
SDU 656 500 R …	■	■	■	M6/7	1	15	6	3.8	2.05	1.2	0.9	56	0.06	SDA 6…
SDU 656 600 R …	■	■	■	M6/7	1	18	6	4.6	2.45	1.2	0.9	56	0.07	SDA 6…
SDU 656 700 R …	■	■	■	M8/9	1.25	21	6	5.6	2.95	1.4	1.1	56	0.08	SDA 6…

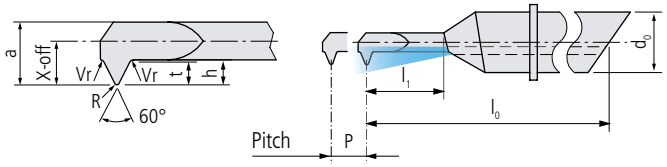
* Left execution and other coatings on demand

Recommendations for thread cutting 194



Threading (full profile metric)





SDV …

Order designation	Carbide ▯18			Standard	Dimensions										Holders ▯392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_0	a	X-off	h	t	l_0	R	Vr	
PREMIUM-LINE															
SDV 435 100 R …	■	■	■	M1	0.25	3	4	0.56	0.5	0.25	0.15	35	0.02	0.04	SDA 4…
SDV 440 100 R …	■	■	■	M1	0.25	5	4	0.56	0.5	0.25	0.15	40	0.02	0.04	SDA 4…
SDV 435 120 R …	■	■	■	M1.2	0.25	3.6	4	0.75	0.6	0.25	0.15	35	0.02	0.04	SDA 4…
SDV 440 120 R …	■	■	■	M1.2	0.25	6	4	0.75	0.6	0.25	0.15	40	0.02	0.04	SDA 4…
SDV 435 140 R …	■	■	■	M1.4	0.3	4.2	4	0.88	0.7	0.29	0.18	35	0.02	0.05	SDA 4…
SDV 440 140 R …	■	■	■	M1.4	0.3	7	4	0.88	0.7	0.29	0.18	40	0.02	0.05	SDA 4…
SDV 435 160 R …	■	■	■	M1.6	0.35	4.8	4	1.01	0.8	0.32	0.21	35	0.02	0.05	SDA 4…
SDV 440 160 R …	■	■	■	M1.6	0.35	8	4	1.01	0.8	0.32	0.21	40	0.02	0.05	SDA 4…
SDV 435 180 R …	■	■	■	M1.8	0.35	5.4	4	1.2	0.9	0.32	0.21	35	0.02	0.05	SDA 4…
SDV 440 180 R …	■	■	■	M1.8	0.35	9	4	1.2	0.9	0.32	0.21	40	0.02	0.05	SDA 4…
SDV 435 200 R …	■	■	■	M2	0.4	6	4	1.33	1	0.36	0.23	35	0.02	0.05	SDA 4…
SDV 440 200 R …	■	■	■	M2	0.4	10	4	1.33	1	0.36	0.23	40	0.02	0.05	SDA 4…
SDV 435 220 R …	■	■	■	M2.2	0.45	6.6	4	1.46	1.1	0.4	0.26	35	0.02	0.05	SDA 4…
SDV 440 220 R …	■	■	■	M2.2	0.45	11	4	1.46	1.1	0.4	0.26	40	0.02	0.05	SDA 4…
SDV 435 250 R …	■	■	■	M2.5	0.45	7.5	4	1.74	1.25	0.4	0.26	35	0.02	0.05	SDA 4…
SDV 440 250 R …	■	■	■	M2.5	0.45	12.5	4	1.74	1.25	0.4	0.26	40	0.02	0.05	SDA 4…
SDV 440 300 R …	■	■	■	M3	0.5	9	4	2.16	1.5	0.43	0.29	40	0.02	0.05	SDA 4…
SDV 448 300 R …	■	■	■	M3	0.5	15	4	2.16	1.5	0.43	0.29	48	0.02	0.05	SDA 4…
SDV 440 350 R …	■	■	■	M3.5	0.6	10.5	4	2.51	1.75	0.51	0.35	40	0.03	0.05	SDA 4…
SDV 448 350 R …	■	■	■	M3.5	0.6	17.5	4	2.51	1.75	0.51	0.35	48	0.03	0.05	SDA 4…
SDV 440 400 R …	■	■	■	M4	0.7	12	4	2.86	2	0.58	0.41	40	0.03	0.05	SDA 4…
SDV 448 400 R …	■	■	■	M4	0.7	20	4	2.86	2	0.58	0.41	48	0.03	0.05	SDA 4…
SDV 644 500 R …	■	■	■	M5	0.8	10	6	3.69	2.48	0.63	0.47	44	0.04	0.05	SDA 6…
SDV 656 500 R …	■	■	■	M5	0.8	20	6	3.69	2.48	0.63	0.47	56	0.04	0.05	SDA 6…
SDV 668 500 R …	■	■	■	M5	0.8	30	6	3.69	2.48	0.63	0.47	68	0.04	0.05	SDA 6…
SDV 644 600 R …	■	■	■	M6/7	1	12	6	4.39	2.98	0.8	0.59	44	0.05	0.05	SDA 6…
SDV 656 600 R …	■	■	■	M6/7	1	24	6	4.39	2.98	0.8	0.59	56	0.05	0.05	SDA 6…
SDV 668 600 R …	■	■	■	M6/7	1	36	6	4.39	2.98	0.8	0.59	68	0.05	0.05	SDA 6…
SDV 644 800 R …	■	■	■	M8	1.25	12	6	5.99	2.98	0.98	0.73	44	0.06	0.05	SDA 6…
SDV 656 800 R …	■	■	■	M8	1.25	24	6	5.99	2.98	0.98	0.73	56	0.06	0.05	SDA 6…
SDV 668 800 R …	■	■	■	M8	1.25	36	6	5.99	2.98	0.98	0.73	68	0.06	0.05	SDA 6…

* Left execution and other coatings on demand

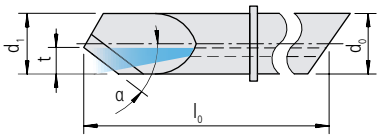
Recommendations for thread cutting ▯194

Cutting specification ▯398… Legend ▯6…



Chamfering

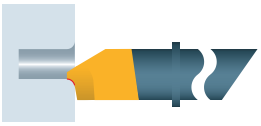




SDY …

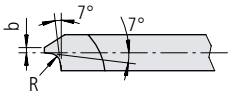
Order designation	Carbide ▯18			Dimensions													Holders
	○	●	●														▯392…
	○	●	●														
	○	●	●														
	●	○	–														
	–	–	○														
R *	UHM 20	UHM 20 HX	UHM 20 TX+	d_0	d_1	t	l_0	α									
PREMIUM-LINE																	
SDY 440 400-30 R …	■	■	■	4	3.5	1.35	40	30°									SDA 4…
SDY 440 400-45 R …	■	■	■	4	3.5	1.35	40	45°									SDA 4…
SDY 440 400-60 R …	■	■	■	4	3.5	1.35	40	60°									SDA 4…
SDY 644 600-30 R …	■	■	■	6	5.5	2.35	44	30°									SDA 6…
SDY 644 600-45 R …	■	■	■	6	5.5	2.35	44	45°									SDA 6…
SDY 644 600-60 R …	■	■	■	6	5.5	2.35	44	60°									SDA 6…

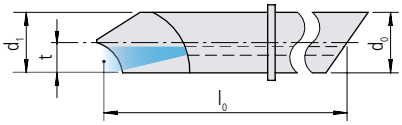
* Left execution and other coatings on demand



Radius



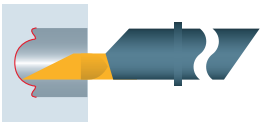




SDZ …

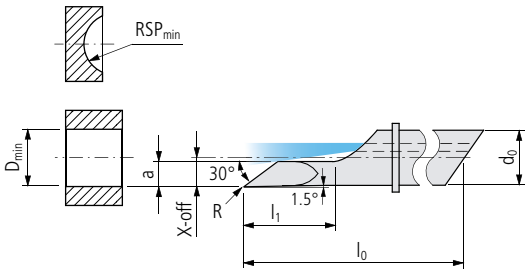
Order designation	Carbide ▯18			Dimensions							Holders
	○ ● ●										▯392…
	○ ● ●										
	○ ● ●										
	● ○ –										
	– – ○										
R *	UHM 20	UHM 20 HX	UHM 20 TX+	d_0	d_1	b	t	l_0	R		
PREMIUM-LINE											
SDZ 440 400-03 R …	■	■	■	4	3.5	0.4	1.75	40	0.3		SDA 4…
SDZ 440 400-05 R …	■	■	■	4	3.5	0.4	1.75	40	0.5		SDA 4…
SDZ 440 400-10 R …	■	■	■	4	3.5	0.4	1.75	40	1		SDA 4…
SDZ 644 600-05 R …	■	■	■	6	5.5	0.6	2.75	44	0.5		SDA 6…
SDZ 644 600-10 R …	■	■	■	6	5.5	0.6	2.75	44	1.		SDA 6…
SDZ 644 600-15 R …	■	■	■	6	5.5	0.6	2.75	44	1.5		SDA 6…

* Left execution and other coatings on demand



Copy turning (axial)

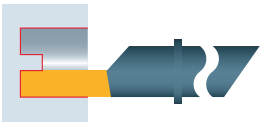




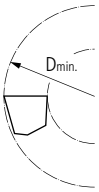
SXJ …

Order designation	Carbide 18			Dimensions								Holders
	○ ○ ○ ● –	● ● ● ○ –	● ● ● – ○									392…
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D$_{min}$	l$_1$	d$_0$	a	X-off	RSP$_{min}$	R	l$_0$	
PREMIUM-LINE												
SXJ 435 042 R …	■	■	■	0.42	1.5	4	0.19	0.13	0.45	0.08	35	SDA 4…
SXJ 435 092 R …	■	■	■	0.92	3	4	0.41	0.38	0.95	0.08	35	SDA 4…
SXJ 440 092 R …	■	■	■	0.92	5	4	0.41	0.38	0.95	0.08	40	SDA 4…
SXJ 435 142 R …	■	■	■	1.42	4.5	4	0.64	0.63	1.45	0.08	35	SDA 4…
SXJ 440 142 R …	■	■	■	1.42	7.5	4	0.64	0.63	1.45	0.08	40	SDA 4…
SXJ 435 192 R …	■	■	■	1.92	6	4	0.86	0.88	1.95	0.08	35	SDA 4…
SXJ 440 192 R …	■	■	■	1.92	10	4	0.86	0.88	1.95	0.08	40	SDA 4…
SXJ 435 242 R …	■	■	■	2.42	7.5	4	1.09	1.13	2.45	0.08	35	SDA 4…
SXJ 440 242 R …	■	■	■	2.42	12.5	4	1.09	1.13	2.45	0.08	40	SDA 4…
SXJ 440 292 R …	■	■	■	2.92	9	4	1.31	1.38	2.95	0.08	40	SDA 4…
SXJ 448 292 R …	■	■	■	2.92	15	4	1.31	1.38	2.95	0.08	48	SDA 4…
SXJ 440 342 R …	■	■	■	3.42	10.5	4	1.54	1.63	3.45	0.08	40	SDA 4…
SXJ 448 342 R…	■	■	■	3.42	17.5	4	1.54	1.63	3.45	0.08	48	SDA 4…
SXJ 440 392 R …	■	■	■	3.92	12	4	1.76	1.88	3.95	0.08	40	SDA 4…
SXJ 448 392 R …	■	■	■	3.92	20	4	1.76	1.88	3.95	0.08	48	SDA 4…
SXJ 644 442 R …	■	■	■	4.42	9	6	1.99	2.09	4.45	0.12	44	SDA 6…
SXJ 656 442 R …	■	■	■	4.42	18	6	1.99	2.09	4.45	0.12	56	SDA 6…
SXJ 668 442 R …	■	■	■	4.42	27	6	1.99	2.09	4.45	0.12	68	SDA 6…
SXJ 644 492 R …	■	■	■	4.92	10	6	2.21	2.34	4.95	0.12	44	SDA 6…
SXJ 656 492 R …	■	■	■	4.92	20	6	2.21	2.34	4.95	0.12	56	SDA 6…
SXJ 668 492 R …	■	■	■	4.92	30	6	2.21	2.34	4.95	0.12	68	SDA 6…
SXJ 644 542 R …	■	■	■	5.42	11	6	2.44	2.59	5.45	0.12	44	SDA 6…
SXJ 656 542 R …	■	■	■	5.42	22	6	2.44	2.59	5.45	0.12	56	SDA 6…
SXJ 668 542 R …	■	■	■	5.42	33	6	2.44	2.59	5.45	0.12	68	SDA 6…
SXJ 644 592 R …	■	■	■	5.92	12	6	2.66	2.84	5.95	0.12	44	SDA 6…
SXJ 656 592 R …	■	■	■	5.92	24	6	2.66	2.84	5.95	0.12	56	SDA 6…
SXJ 668 592 R …	■	■	■	5.92	36	6	2.66	2.84	5.95	0.12	68	SDA 6…
SXJ 850 692 R …	■	■	■	6.92	14	8	3.11	3.3	6.95	0.16	50	SDA 8…
SXJ 866 692 R …	■	■	■	6.92	28	8	3.11	3.3	6.95	0.16	66	SDA 8…
SXJ 882 692 R …	■	■	■	6.92	42	8	3.11	3.3	6.95	0.16	82	SDA 8…
SXJ 850 792 R …	■	■	■	7.92	16	8	3.56	3.8	7.95	0.16	50	SDA 8…
SXJ 866 792 R …	■	■	■	7.92	32	8	3.56	3.8	7.95	0.16	66	SDA 8…
SXJ 882 792 R …	■	■	■	7.92	48	8	3.56	3.8	7.95	0.16	82	SDA 8…

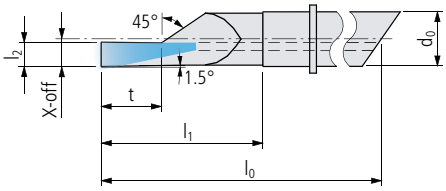
* Left execution and other coatings on demand



Grooving (axial)







SXP …

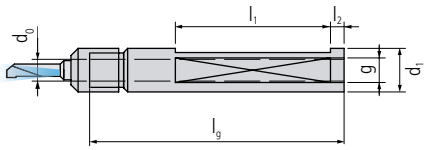
Order designation	Carbide			Dimensions													Holders
	○	●	●														392…
	○	●	●														
	○	●	●														
	●	○	–														
	–	–	○														
R *	UHM 20	UHM 20 HX	UHM 20 TX+	D_{min}	l_1	d_0	l_2	X-off	t	l_0							
PREMIUM-LINE																	
SXP 435 142 R …	■	■	■	1.42	4.5	4	0.35	0.71	0.8	35							SDA 4…
SXP 440 142 R …	■	■	■	1.42	7.5	4	0.35	0.71	0.8	40							SDA 4…
SXP 435 192 R …	■	■	■	1.92	6	4	0.35	0.96	0.8	35							SDA 4…
SXP 440 192 R …	■	■	■	1.92	10	4	0.35	0.96	0.8	40							SDA 4…
SXP 435 242 R …	■	■	■	2.42	7.5	4	0.35	1.21	0.8	35							SDA 4…
SXP 440 242 R …	■	■	■	2.42	12.5	4	0.35	1.21	0.8	40							SDA 4…
SXP 440 292 R …	■	■	■	2.92	9	4	0.35	1.46	0.8	40							SDA 4…
SXP 448 292 R …	■	■	■	2.92	15	4	0.35	1.46	0.8	48							SDA 4…
SXP 440 342 R …	■	■	■	3.42	10.5	4	0.35	1.71	0.8	40							SDA 4…
SXP 448 342 R …	■	■	■	3.42	17.5	4	0.35	1.71	0.8	48							SDA 4…
SXP 440 392 R …	■	■	■	3.92	12	4	0.35	1.96	0.8	40							SDA 4…
SXP 448 392 R …	■	■	■	3.92	20	4	0.35	1.96	0.8	48							SDA 4…
SXP 644 442 R …	■	■	■	4.42	9	6	0.5	2.21	1.2	44							SDA 6…
SXP 656 442 R …	■	■	■	4.42	18	6	0.5	2.21	1.2	56							SDA 6…
SXP 668 442 R …	■	■	■	4.42	27	6	0.5	2.21	1.2	68							SDA 6…
SXP 644 492 R …	■	■	■	4.92	10	6	0.5	2.46	1.2	44							SDA 6…
SXP 656 492 R …	■	■	■	4.92	20	6	0.5	2.46	1.2	56							SDA 6…
SXP 668 492 R …	■	■	■	4.92	30	6	0.5	2.46	1.2	68							SDA 6…
SXP 644 542 R …	■	■	■	5.42	11	6	0.5	2.71	1.2	44							SDA 6…
SXP 656 542 R …	■	■	■	5.42	22	6	0.5	2.71	1.2	56							SDA 6…
SXP 668 542 R …	■	■	■	5.42	33	6	0.5	2.71	1.2	68							SDA 6…
SXP 644 592 R …	■	■	■	5.92	12	6	0.5	2.96	1.2	44							SDA 6…
SXP 656 592 R …	■	■	■	5.92	24	6	0.5	2.96	1.2	56							SDA 6…
SXP 668 592 R …	■	■	■	5.92	36	6	0.5	2.96	1.2	68							SDA 6…
SXP 850 692 R …	■	■	■	6.92	14	8	0.75	3.46	1.6	50							SDA 8…
SXP 866 692 R …	■	■	■	6.92	28	8	0.75	3.46	1.6	66							SDA 8…
SXP 882 692 R …	■	■	■	6.92	42	8	0.75	3.46	1.6	82							SDA 8…
SXP 850 792 R …	■	■	■	7.92	16	8	0.75	3.96	1.6	50							SDA 8…
SXP 866 792 R …	■	■	■	7.92	32	8	0.75	3.96	1.6	66							SDA 8…
SXP 882 792 R …	■	■	■	7.92	48	8	0.75	3.96	1.6	82							SDA 8…

* Left execution and other coatings on demand

Pay attention to the "working situations" for the correct selection of the combinations of tools and inserts 24…

Attention
The groove must not be made underneath the D_{min}-position.

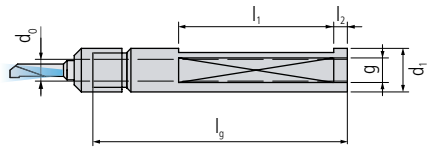




SDA …

Order designation		Dimensions										Inserts
N		d_0	d_1	l_g	l_1	l_2	g					370…
PREMIUM-LINE												
SDA 4 060 07	■	4	7	60	–	–	M5					SD.4… / SX.4…
SDA 4 060 08	■	4	8	60	27	5	M5					SD.4… / SX.4…
SDA 4 100 08	■	4	8	100	59	5	R⅛"					SD.4… / SX.4…
SDA 4 060 10	■	4	10	60	27	5	M5					SD.4… / SX.4…
SDA 4 100 10	■	4	10	100	59	5	R⅛"					SD.4… / SX.4…
SDA 4 060 12	■	4	12	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 12	■	4	12	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 12.7	■	4	12.7	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 12.7	■	4	12.7	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 14	■	4	14	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 14	■	4	14	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 16	■	4	16	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 16	■	4	16	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 18	■	4	18	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 18	■	4	18	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 19.05	■	4	19.05	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 19.05	■	4	19.05	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 20	■	4	20	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 20	■	4	20	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 22	■	4	22	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 22	■	4	22	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 25	■	4	25	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 25	■	4	25	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 25.4	■	4	25.4	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 25.4	■	4	25.4	120	75	5	R⅛"					SD.4… / SX.4…
SDA 4 060 28	■	4	28	60	27	5	R⅛"					SD.4… / SX.4…
SDA 4 120 28	■	4	28	120	75	5	R⅛"					SD.4… / SX.4…
SDA 6 065 12	■	6	12	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 100 12	■	6	12	100	59	5	R⅛"					SD.6… / SX.6…
SDA 6 065 12.7	■	6	12.7	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 12.7	■	6	12.7	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 14	■	6	14	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 14	■	6	14	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 16	■	6	16	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 16	■	6	16	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 18	■	6	18	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 18	■	6	18	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 19.05	■	6	19.05	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 19.05	■	6	19.05	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 20	■	6	20	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 20	■	6	20	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 22	■	6	22	65	27	5	R⅛"					SD.6… / SX.6…

Continuation



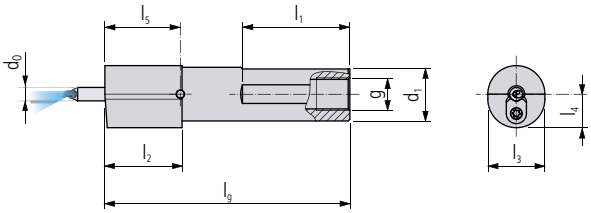
SDA …

Order designation		Dimensions										Inserts
N		d_0	d_1	l_g	l_1	l_2	g					370…
PREMIUM-LINE												
SDA 6 120 22	■	6	22	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 25	■	6	25	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 25	■	6	25	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 25.4	■	6	25.4	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 25.4	■	6	25.4	120	75	5	R⅛"					SD.6… / SX.6…
SDA 6 065 28	■	6	28	65	27	5	R⅛"					SD.6… / SX.6…
SDA 6 120 28	■	6	28	120	75	5	R⅛"					SD.6… / SX.6…
SDA 8 070 14	■	8	14	70	27	5	R⅛"					SD.8… / SX.8…
SDA 8 100 14	■	8	14	100	59	5	R⅛"					SD.8… / SX.8…
SDA 8 070 16	■	8	16	70	27	5	R⅛"					SD.8… / SX.8…
SDA 8 120 16	■	8	16	120	75	5	R⅛"					SD.8… / SX.8…
SDA 8 120 18	■	8	18	120	75	5	R⅛"					SD.8… / SX.8…
SDA 8 070 19.05	■	8	19.05	70	27	5	R⅛"					SD.8… / SX.8…
SDA 8 120 19.05	■	8	19.05	120	75	5	R⅛"					SD.8… / SX.8…
SDA 8 070 20	■	8	20	70	27	5	R⅛"					SD.8… / SX.8…
SDA 8 120 20	■	8	20	120	75	5	R⅛"					SD.8… / SX.8…
SDA 8 070 22	■	8	22	70	27	5	R⅛"					SD.8… / SX.8…
SDA 8 120 22	■	8	22	120	75	5	R⅛"					SD.8… / SX.8…
SDA 8 070 25	■	8	25	70	27	5	R⅛"					SD.8… / SX.8…
SDA 8 120 25	■	8	25	120	75	5	R⅛"					SD.8… / SX.8…
SDA 8 070 25.4	■	8	25.4	70	27	5	R⅛"					SD.8… / SX.8…
SDA 8 120 25.4	■	8	25.4	120	75	5	R⅛"					SD.8… / SX.8…
SDA 8 070 28	■	8	28	70	27	5	R⅛"					SD.8… / SX.8…
SDA 8 120 28	■	8	28	120	75	5	R⅛"					SD.8… / SX.8…

Reduction sleeve 707

Legend ..... 6…





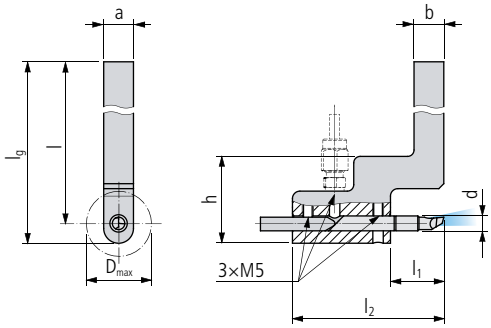
SDA … SC

Order designation		Dimensions										Inserts
N		d_0	d_1	l_g	l_1	l_2	l_3	l_4	l_5	g		370…
PREMIUM-LINE												
SDA 4 073 050 07 SC	■	4	7	73	32	23	9	10	22.5	M5		SD.4… / SX.4…
SDA 4 073 050 08 SC	■	4	8	73	32	23	9	10	22.5	M5		SD.4… / SX.4…
SDA 4 073 050 10 SC	■	4	10	73	32	23	11	10	22.5	M5		SD.4… / SX.4…
SDA 4 073 050 12 SC	■	4	12	73	32	23	13	10	22.5	G⅛"		SD.4… / SX.4…
SDA 4 073 050 12.7 SC	■	4	12.7	73	32	23	13	10	22.5	G⅛"		SD.4… / SX.4…
SDA 4 073 050 16 SC	■	4	16	73	32	23	17	10	22.5	G⅛"		SD.4… / SX.4…
SDA 4 073 050 19.05 SC	■	4	19.05	73	–	–	19.05	10	22.5	G⅛"		SD.4… / SX.4…
SDA 4 133 110 19.05 SC	■	4	19.05	133	–	–	19.05	10	22.5	G⅛"		SD.4… / SX.4…
SDA 4 073 000 20 SC	■	4	20	73	–	–	20	10	22.5	G⅛"		SD.4… / SX.4…
SDA 4 073 000 22 SC	■	4	22	73	–	–	22	11	22.5	G⅛"		SD.4… / SX.4…
SDA 4 133 000 25 SC	■	4	25	133	–	–	25	12.5	22.5	G⅛"		SD.4… / SX.4…
SDA 4 133 000 25.40 SC	■	4	25.4	133	–	–	25.4	12.7	22.5	G⅛"		SD.4… / SX.4…
SDA 4 073 000 28 SC	■	4	28	73	–	–	25	14	22.5	G⅛"		SD.4… / SX.4…
SDA 6 078 055 10 SC	■	6	10	78	32	23	13	11.2	26.2	M5		SD.6… / SX.6…
SDA 6 078 055 12 SC	■	6	12	78	32	23	13	11.2	26.2	G⅛"		SD.6… / SX.6…
SDA 6 078 055 12.7 SC	■	6	12.7	78	32	23	13	11.2	26.2	G⅛"		SD.6… / SX.6…
SDA 6 078 055 16 SC	■	6	16	78	32	23	17	11.2	26.2	G⅛"		SD.6… / SX.6…
SDA 6 078 055 19.05 SC	■	6	19.05	78	32	23	20	11.2	26.2	G⅛"		SD.6… / SX.6…
SDA 6 133 110 19.05 SC	■	6	19.05	133	64	23	20	11.2	26.2	G⅛"		SD.6… / SX.6…
SDA 6 078 055 20 SC	■	6	20	78	32	23	20	11.2	26.2	G⅛"		SD.6… / SX.6…
SDA 6 133 000 22 SC	■	6	22	133	–	–	22	11.5	26.2	G⅛"		SD.6… / SX.6…
SDA 6 078 000 28 SC	■	6	28	78	–	–	25	14	26.2	G⅛"		SD.6… / SX.6…
SDA 8 083 060 14 SC	■	8	14	83	32	23	17	12.3	27.9	G⅛"		SD.8… / SX.8…
SDA 8 083 060 16 SC	■	8	16	83	32	23	17	12.3	27.9	G⅛"		SD.8… / SX.8…
SDA 8 083 060 19.05 SC	■	8	19.05	83	32	23	20	12.3	27.9	G⅛"		SD.8… / SX.8…
SDA 8 083 060 20 SC	■	8	20	83	32	23	20	12.3	27.9	G⅛"		SD.8… / SX.8…
SDA 8 083 000 28 SC	■	8	28	83	–	–	25	14	27.9	G⅛"		SD.8… / SX.8…

Reduction sleeve 707

Legend ..... 6…





AKR M…

Order designation		Dimensions										Inserts
R		d	a	b	l	l_g	l_1	l_2	h	D_{max}		370…
PREMIUM-LINE												
AKR M 0808x100 D4-3540	■	4	8	8	100	106.5	20	55	32.5	26		SD.4…/SX.4…
AKR M 0808x100 D4-48	■	4	8	8	100	106.5	30	65	32.5	26		SD.448…/SX.448…
AKR M 1010x100 D4-3540	■	4	10	10	100	106.5	20	55	32.5	26		SD.4…/SX.4…
AKR M 1010x100 D4-48	■	4	10	10	100	106.5	30	65	32.5	26		SD.448…/SX.448…
AKR M 1212x100 D4-3540	■	4	12	12	100	106.5	20	55	32.5	26		SD.4…/SX.4…
AKR M 1212x100 D4-48	■	4	12	12	100	106.5	30	65	32.5	26		SD.448…/SX.448…
AKR M 1/2"x100 D4-3540	■	4	12.7	12.7	100	106.85	20	55	32.85	26		SD.4…/SX.4…
AKR M 1/2"x100 D4-48	■	4	12.7	12.7	100	106.85	30	65	32.85	26		SD.448…/SX.448…
AKR M 1616x125 D4-3540	■	4	16	16	125	133	20	55	34	26		SD.4…/SX.4…
AKR M 1616x125 D4-48	■	4	16	16	125	133	30	65	34	26		SD.448…/SX.448…
AKR M 1010x100 D6-44	■	6	10	10	100	107.5	21.5	61	34.5	26		SD.644…/SX.644…
AKR M 1010x100 D6-56	■	6	10	10	100	107.5	33.5	73	34.5	26		SD.656…/SX.656…
AKR M 1010x100 D6-68	■	6	10	10	100	107.5	45.5	85	34.5	26		SD.668…/SX.668…
AKR M 1212x100 D6-44	■	6	12	12	100	108	21.5	61	35	26		SD.644…/SX.644…
AKR M 1212x100 D6-56	■	6	12	12	100	108	33.5	73	35	26		SD.656…/SX.656…
AKR M 1212x100 D6-68	■	6	12	12	100	108	45.5	85	35	26		SD.668…/SX.668…
AKR M 1/2"x100 D6-44	■	6	12.7	12.7	100	107.35	21.5	61	34.35	26		SD.644…/SX.644…
AKR M 1/2"x100 D6-56	■	6	12.7	12.7	100	107.35	33.5	73	34.35	26		SD.656…/SX.656…
AKR M 1/2"x100 D6-68	■	6	12.7	12.7	100	107.35	45.5	85	34.35	26		SD.668…/SX.668…
AKR M 1616x125 D6-44	■	6	16	16	125	133	21.5	61	35	26		SD.644…/SX.644…
AKR M 1616x125 D6-56	■	6	16	16	125	133	33.5	73	35	26		SD.656…/SX.656…
AKR M 1616x125 D6-68	■	6	16	16	125	133	45.5	85	35	26		SD.668…/SX.668…

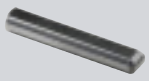
For holders (SDA …)

Illustration	Description	Dimensions	Order designation		Inserts	Holders
	Nut	M8 × 0.5	MSP SDA 4M	■		SDA 4…
		M12 × 0.6	MSP SDA 6M	■		SDA 6…
		M14 × 0.75	MSP SDA 8M	■		SDA 8…
	Aligning device		SDA 4X	■		SDA 4…
			SDA 6X	■		SDA 6…
			SDA 8X	■		SDA 8…
	Retaining ring		MSP SDA 4S	■	SD. 4…	
			MSP SDA 6S	■	SD. 6…	
			MSP SDA 8S	■	SD. 8…	

For holders (SDA …SC)

Illustration	Description	Dimensions	Order designation		Holders
	Grub screw	M4 × 15.5 L/R	MSP 40155 GST SW2	■	SDA …SC
	Thrust piece		MSP SDA DS	■	SDA …SC
	Allen key	SW 2	MSP IB2	■	SDA …SC

For holders (AKR M…)

Illustration	Description	Dimensions	Order designation		Holders
	Clamping screw	M5 × 10	MSP 50100 IB2.5	■	AKR M…
	Allen key	SW 2.5	MSP IB2.5	■	AKR M…
	Stop-Pin	4 × 25	MSP 40250 AN D4	■	AKR M…D4
		6 × 30	MSP 60300 AN D6	■	AKR M…D6

Legend 6…

	Steel unalloyed			Steel low alloyed			Steel high alloyed		
Hardness value (HB) / (HRC)	125–300 HB			180–250 HB			200–350 HB		
Category	I			II			III		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	20–120	–	–	20–100	–	–	20–90
UHM 20 HX	–	–	30–160	–	–	30–140	–	–	30–130
UHM 20 TX+	–	–	–	–	–	–	–	–	30–100

	Stainless steel			Stainless steel			Titanium		
Hardness value (HB) / (HRC)	180–220 HB			220–330 HB			–		
Category	V			VI			IV		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	20–80	–	–	20–60	–	–	20–70
UHM 20 HX	–	–	30–120	–	–	30–100	–	–	30–100
UHM 20 TX+	–	–	30–100	–	–	30–80	–	–	30–80

	Aluminum			Brass / Lead-free brass			Hard materials		
Hardness value (HB) / (HRC)	60–130 HB			–			45–70 HRC		
Category	VII			VIII			X		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	50–220	–	–	30–110	–	–	–
UHM 20 HX	–	–	60–350	–	–	50–180	–	–	–
UHM 20 TX+	–	–	–	–	–	–	–	–	15–40

Feed (f) and depths of cut (a_p) 399

Legend ..... 6…

SDG – SXG – SDH – SDI – SXI – SDY – SDZ

	Steel unalloyed		Steel low alloyed		Steel high alloyed		Stainless steel		Titanium		Aluminum / Brass / Lead-free brass		Hard materials	
D (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)
≤1	0.01–0.02	0.1–0.2	0.01–0.017	0.1–0.17	0.007–0.017	0.07–0.17	0.007–0.017	0.07–0.17	0.006–0.02	0.06–0.2	0.01–0.025	0.1–0.25	0.006–0.02	0.06–0.2
2	0.012–0.022	0.12–0.22	0.012–0.02	0.12–0.2	0.008–0.018	0.08–0.18	0.008–0.018	0.08–0.18	0.008–0.02	0.08–0.2	0.015–0.03	0.15–0.3	0.008–0.02	0.08–0.2
3	0.015–0.025	0.15–0.25	0.014–0.024	0.14–0.24	0.009–0.019	0.09–0.19	0.009–0.019	0.09–0.19	0.01–0.02	0.1–0.2	0.015–0.035	0.15–0.35	0.01–0.02	0.1–0.2
4	0.015–0.027	0.15–0.27	0.015–0.025	0.15–0.25	0.01–0.02	0.1–0.2	0.01–0.02	0.1–0.2	0.01–0.02	0.1–0.2	0.015–0.035	0.15–0.35	0.01–0.02	0.1–0.2
6	0.015–0.03	0.15–0.3	0.015–0.025	0.15–0.25	0.01–0.02	0.1–0.2	0.01–0.02	0.1–0.2	0.01–0.025	0.1–0.25	0.015–0.04	0.15–0.4	0.01–0.025	0.1–0.25
8	0.015–0.03	0.15–0.3	0.015–0.025	0.15–0.25	0.01–0.02	0.1–0.2	0.01–0.02	0.1–0.2	0.01–0.025	0.1–0.25	0.015–0.05	0.15–0.5	0.01–0.025	0.1–0.25

SDK – SDM – SDO – SDQ – SDW – SDT – SXJ – SXP

	Steel unalloyed		Steel low alloyed		Steel high alloyed		Stainless steel		Titanium		Aluminum / Brass / Lead-free brass		Hard materials	
D (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)	f (mm)	a_p (mm)
≤1	0.01–0.02	0.1–0.2	0.01–0.017	0.1–0.17	0.007–0.015	0.07–0.15	0.007–0.015	0.07–0.15	0.006–0.012	0.06–0.12	0.007–0.012	0.07–0.12	0.006–0.012	0.06–0.12
2	0.01–0.022	0.1–0.22	0.01–0.02	0.1–0.2	0.008–0.017	0.08–0.17	0.008–0.017	0.08–0.17	0.008–0.015	0.08–0.15	0.01–0.015	0.1–0.15	0.008–0.015	0.08–0.15
3	0.01–0.025	0.1–0.25	0.01–0.022	0.1–0.22	0.009–0.02	0.09–0.2	0.009–0.02	0.09–0.2	0.008–0.017	0.08–0.17	0.01–0.02	0.1–0.2	0.008–0.017	0.08–0.17
4	0.01–0.025	0.1–0.25	0.01–0.025	0.1–0.25	0.01–0.022	0.1–0.22	0.01–0.022	0.1–0.22	0.008–0.02	0.08–0.2	0.01–0.025	0.1–0.25	0.008–0.02	0.08–0.2
6	0.01–0.025	0.1–0.25	0.01–0.025	0.1–0.25	0.01–0.025	0.1–0.25	0.01–0.025	0.1–0.25	0.008–0.02	0.08–0.2	0.01–0.03	0.1–0.3	0.008–0.02	0.08–0.2
8	0.01–0.025	0.1–0.25	0.01–0.025	0.1–0.25	0.01–0.025	0.1–0.25	0.01–0.025	0.1–0.25	0.008–0.02	0.08–0.2	0.01–0.035	0.1–0.35	0.008–0.02	0.08–0.2

SDR – SDS

Steel unalloyed	Steel low alloyed	Steel high alloyed	Stainless steel	Titanium	Aluminum / Brass / Lead-free brass	Hard materials
f (mm)	f (mm)	f (mm)	f (mm)	f (mm)	f (mm)	f (mm)
0.007–0.020	0.005–0.015	0.005–0.015	0.005–0.015	0.005–0.015	0.007–0.020	0.005–0.015

SDU – SDV (Threading)

Recommendations for thread cutting ... 194

multidec®-BROACH

Polygonal punching is a chip-removing procedure for manufacturing of inside profiles in holes which are usually not continuous. During this procedure, the tool is pushed into a hole in several so-called strokes, and the outline of the broaching tool is introduced into the workpiece.
We can supply square, hexagonal and TORX broaching tools made from carbide from our standard product range. We can also manufacture customised shapes and intermediate sizes on request.







Advantages of the full profile:
– Short machining times
– Complex geometries with sharp edges are possible
– Full profile tools reduce the number of strokes
– Reliable process with long tool life

SD-BRM polygonal punching hexagonal, partial profile



Several widths across flats can be achieved here with a single tool. This increases flexibility whilst lowering your tool requirement. In addition to significantly reduced process force, it also gives you the option of performing mass corrections.
The absolute positioning orientation provided by our multidec®-BROACH shank system makes changing tools considerably easier. The possible higher feed rates compared to full profiles mean that process times are only marginally extended.

Advantages partial profile:
– Several widths across flats can be realised with one tool
– Dimensional corrections possible (single edge profile)
– Complex geometries can be realized
– Lower process forces
– Absolute position orientation in the µ range due to multidec®-BROACH system shank
– significantly higher feed rates than with solid profile

Overview – multidec®-BROACH

Technical information 9



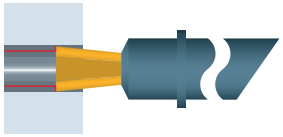

Broaching tools
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SD-BRH … 403
SD-BRM … 404
SD-BRT … 405

Process data 406

Special tools – multidec4you® 636

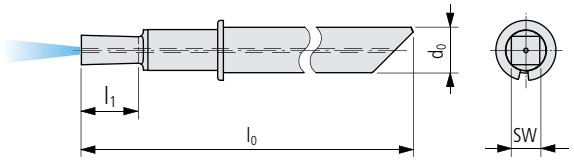


Accessories 703



Polygonal punching square



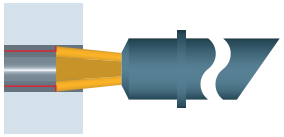


SD-BRS …

UTILIS multidec® swiss type tools

PREMIUM-LINE

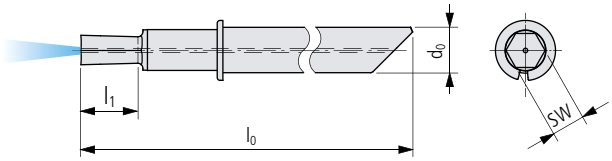
Order designation	Carbide		18	Dimensions										Holders
	○	●												392…
	○	●												
	○	●												
	●	–												
	–	○												
	UHM 20	UHM 20 TX+		SW	l_1	d_0	l_0							
SD-BRS 435 100 …	■	■		1	2	4	35							SDA 4…
SD-BRS 435 150 …	■	■		1.5	2	4	35							SDA 4…
SD-BRS 435 200 …	■	■		2	3	4	35							SDA 4…
SD-BRS 644 300 …	■	■		3	4	6	44							SDA 6…
SD-BRS 644 400 …	■	■		4	6	6	44							SDA 6…
SD-BRS 850 500 …	■	■		5	7	8	50							SDA 8…



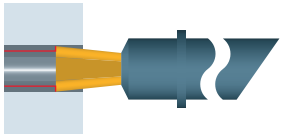
Polygonalpunching hexagonal



SD-BRH …

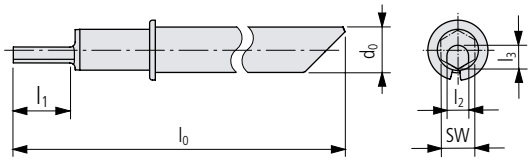


Order designation	Carbide 18		Dimensions									Holders
	○ ● ○ ● ○ ● ● – – ○											392…
	UHM 20	UHM 20 TX+	SW	l_1	d_0	l_0						
PREMIUM-LINE												
SD-BRH 435 100 …	■	■	1	1.5	4	35						SDA 4…
SD-BRH 435 150 …	■	■	1.5	2	4	35						SDA 4…
SD-BRH 435 200 …	■	■	2	2.5	4	35						SDA 4…
SD-BRH 435 250 …	■	■	2.5	4	4	35						SDA 4…
SD-BRH 435 300 …	■	■	3	3.5	4	35						SDA 4…
SD-BRH 644 350 …	■	■	3.5	6	6	35						SDA 6…
SD-BRH 644 400 …	■	■	4	6	6	44						SDA 6…
SD-BRH 850 500 …	■	■	5	7	8	50						SDA 8…
SD-BRH 850 600 …	■	■	6	8	8	50						SDA 8…



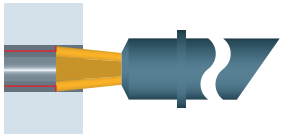
Polygonal punching hexagonal, partial profile





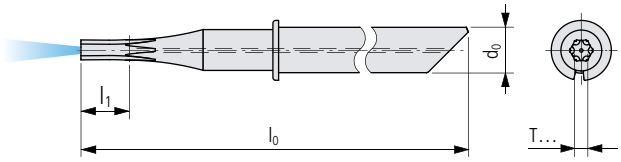
SD-BRM …

Order designation	Carbide		18	Dimensions									Holders
	○	●											392…
	○	●											
	○	●											
	●	–											
	–	○											
	UHM 20	UHM 20 TX+		SW	l_1	l_2	l_3	d_0	l_0				
PREMIUM-LINE													
SD-BRM 435 100 …	■	■		1–1.3	2	0.71	0.93	4	35				SDA 4…
SD-BRM 435 130 …	■	■		1.3–1.7	3	0.93	1.22	4	35				SDA 4…
SD-BRM 435 170 …	■	■		1.7–2.2	3.5	1.21	1.58	4	35				SDA 4…
SD-BRM 435 220 …	■	■		2.2–2.9	4	1.59	2.08	4	35				SDA 4…
SD-BRM 435 290 …	■	■		2.9–3.8	6	2.08	2.73	4	35				SDA 4…
SD-BRM 644 380 …	■	■		3.8–4.9	7	2.69	3.52	6	44				SDA 6…
SD-BRM 644 490 …	■	■		4.9–6.4	8	3.51	4.6	6	44				SDA 6…



Polygonalpunching TORX

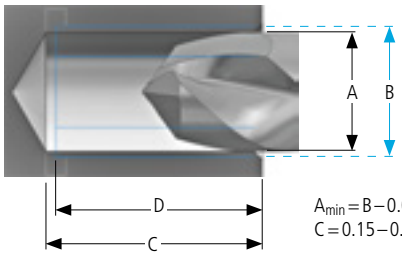




SD-BRT ...

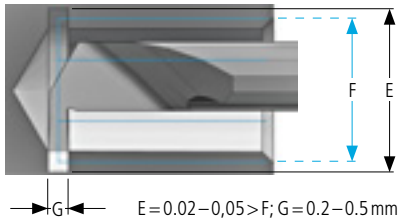
Order designation	Carbide		18	Standard	Dimensions								Holders
	○	●											392...
	○	●											
	○	●											
	●	–											
	–	○											
	UHM 20	UHM 20 TX+		ISO 10664	l_1	d_0	l_0						
PREMIUM-LINE													
SD-BRT 440 002 ...	■	■		T2	1.5	4	40						SDA 4...
SD-BRT 440 003 ...	■	■		T3	1.5	4	40						SDA 4...
SD-BRT 440 005 ...	■	■		T5	2	4	40						SDA 4...
SD-BRT 440 006 ...	■	■		T6	2.5	4	40						SDA 4...
SD-BRT 440 008 ...	■	■		T8	3.5	4	40						SDA 4...
SD-BRT 440 010 ...	■	■		T10	4.5	4	40						SDA 4...
SD-BRT 440 015 ...	■	■		T15	5	4	40						SDA 4...
SD-BRT 440 020 ...	■	■		T20	6	6	44						SDA 6...
SD-BRT 644 025 ...	■	■		T25	6	6	44						SDA 6...
SD-BRT 644 030 ...	■	■		T30	8	6	44						SDA 6...
SD-BRT 850 040 ...	■	■		T40	9	8	50						SDA 8...

Process recommendation for the broaching of multi edge profiles with multi-range broaching tools



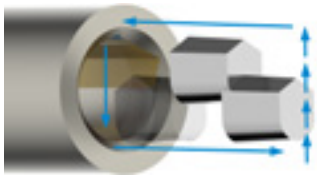
$A_{min} = B - 0.02$ mm; $A_{max} = B - 0.05$ mm
$C = 0.15 - 0.2$ mm $> D$

1. Create a tap hole (A) Ø 0.02 – 0.05 mm < than the width across flats (B), with a chamfer size of 0.02 – 0.05 > than the width across flats. Chamfer angle 90 – 120°.
2. Drilling depth of tap hole (C) 0.15 – 0.2 mm deeper than the multi-edged profile (D).

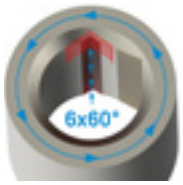


$E = 0.02 - 0{,}05 > F$; $G = 0.2 - 0.5$ mm

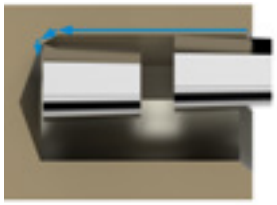
3. To avoid chip adhesion in the blind hole, radial undercut (E) Ø 0.02 – 0.05 > than the radius of the broaching tool (F). Recess width (G) 0.2 – 0.5 mm.



4. Broach with a feed rate of 600 – 1000 mm/min for titanium and stainless steel up to 1400 mm/min for materials with lower strength (brass, low alloyed steel).
5. Cut distribution: Radial distribution of the cuts from the core hole diameter to the finished dimension with a radial infeed of at least 0.02 – 0.05 mm per longitudinal stroke. This value can be increased to 0.1 mm per stroke or, in the case of materials with lower strength, up to 0.3 mm per stroke.
6. Each longitudinal stroke is carried out 100% to the finished usable depth or into the undercut without interruption and ideally retracted radially before the next longitudinal stroke takes place after another radial infeed.



7. Rotate the C-axis by 60°.
8. Repeat steps 4. to 7. five times.



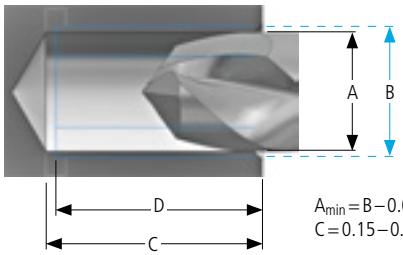
9. If no undercut is permitted, we recommend leaving the broaching contour in the form of an extension radius or an extension bevel at the end of each longitudinal stroke. In this case it may be necessary to drill the core hole a little deeper.

Attention
The suggested values are standard values. These must be adapted to the environment (machine, material, lubrication, tension etc.) and may vary by up to 25%.

Drilling preparation

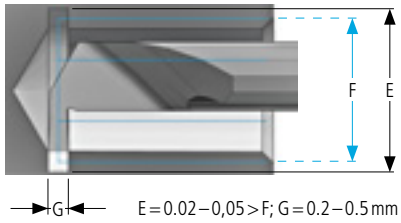
Broaching tool		Width across flats / size	Interior profile Ø	External profile Ø	pre-drill	ID turning
Hexagonal	SD-BRM 435 100	1.035 +0.01	–	–	DRS 338 095	SDG 435 092
	SD-BRM 435 150	1.535 +0.01	–	–	DRS 338 145	SDG 435 142
	SD-BRM 435 200	2.035 +0.01	–	–	DRS 338 175	SDG 435 142
	SD-BRM 435 250	2.55 +0.01	–	–	DRS 338 250	SDG 435 242
	SD-BRM 435 300	3.07 +0.01	–	–	DRS 442 300	SDG 440 292
	SD-BRM 644 350	3.57 +0.01	–	–	DRS 442 350	SDG 440 342
	SD-BRM 644 400	4.085 +0.01	–	–	DRS 650 400	SDG 440 392
	SD-BRM 850 500	5.085 +0.01	–	–	DRS 650 500	SDG 644 492
	SD-BRM 850 600	6.085 +0.01	–	–	DRS 650 500	SDG 644 492

Procedure recommendation for broaching of polygonal profiles



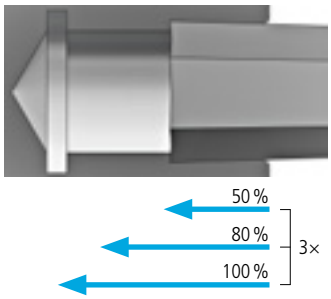
$A_{min} = B - 0.02$ mm; $A_{max} = B - 0.05$ mm
$C = 0.15 - 0.2$ mm $> D$

1. Create a tap hole (A) Ø 0.02 – 0.05 mm < than the width across flats (B), with a chamfer size of 0.02 – 0.05 > than the width across flats. Chamfer angle 90 – 120°.
2. Drilling depth of tap hole (C) 0.15 – 0.2 mm deeper than the multi-edged profile (D).



$E = 0.02 - 0{,}05 > F$; $G = 0.2 - 0.5$ mm

3. To avoid chip adhesion in the blind hole, radial undercut (E) Ø 0.02 – 0.05 > than the radius of the broaching tool (F). Recess width (G) 0.2 – 0.5 mm.



4. Feed: 25 – 30 mm / min for titanium and stainless steel, up to 150 mm / min for materials with less strength (brass and low alloyed steels).
5. Cut distribution: 50 %, 80 % and 100 % of cutting depth in three strokes (remove chips after each stroke).

Drilling preparation

Broaching tool		Width across flats / size	Interior profile Ø	External profile Ø	pre-drill	ID turning
Square	SD-BRS 435 100	1.035 +0.01	–	–	DRS 338 095	SDG 435 092
	SD-BRS 435 150	1.535 +0.01	–	–	DRS 338 145	SDG 435 142
	SD-BRS 435 200	2.035 +0.01	–	–	DRS 338 175	SDG 435 142
	SD-BRS 644 300	3.07 +0.01	–	–	DRS 442 300	SDG 440 292
	SD-BRS 644 400	4.085 +0.01	–	–	DRS 650 400	SDG 440 392
	SD-BRS 850 500	5.085 +0.01	–	–	DRS 650 500	SDG 644 492
Hexagonal	SD-BRH 435 100	1.035 +0.01	–	–	DRS 338 095	SDG 435 092
	SD-BRH 435 150	1.535 +0.01	–	–	DRS 338 145	SDG 435 142
	SD-BRH 435 200	2.035 +0.01	–	–	DRS 338 175	SDG 435 142
	SD-BRH 435 250	2.55 +0.01	–	–	DRS 338 250	SDG 435 242
	SD-BRH 435 300	3.07 +0.01	–	–	DRS 442 300	SDG 440 292
	SD-BRH 644 350	3.57 +0.01	–	–	DRS 442 350	SDG 440 342
	SD-BRH 644 400	4.085 +0.01	–	–	DRS 650 400	SDG 440 392
	SD-BRH 850 500	5.085 +0.01	–	–	DRS 650 500	SDG 644 492
	SD-BRH 850 600	6.085 +0.01	–	–	DRS 650 500	SDG 644 492
TORX	SD-BRT 440 002	T2	0.697	0.995	DRS 338 050	SDG 435 042
	SD-BRT 440 003	T3	0.824	1.198	DRS 338 075	SDG 435 072
	SD-BRT 440 005	T5	1.038	1.482	DRS 338 100	SDG 435 092
	SD-BRT 440 006	T6	1.233	1.762	DRS 338 110	SDG 435 092
	SD-BRT 440 008	T8	1.695	2.402	DRS 338 160	SDG 435 142
	SD-BRT 440 010	T10	2.004	2.828	DRS 338 175	SDG 435 142
	SD-BRT 440 015	T15	2.377	3.362	DRS 338 205	SDG 435 192
	SD-BRT 440 020	T20	2.789	3.947	DRS 338 250	SDG 435 242
	SD-BRT 644 025	T25	3.194	4.543	DRS 442 300	SDG 440 292
	SD-BRT 644 030	T30	3.982	5.635	DRS 442 350	SDG 440 342
	SD-BRT 850 040	T40	4.789	6.79	DRS 650 450	SDG 644 442

multidec®-DRILL

multidec®-DRILL contains of a wide range of high-precision solid carbide drills and centre drills. This includes the range from Ø 0.5 to 6 mm and centre drills with tip angles of 90°, 120° or 140°. multidec®-DRILL is characterised by its high stability and precision, and makes a decisive contribution to achieving high quality because of its excellent positioning capability and self-centering characteristic, and makes the work easier. The design also provides good chip removal and the tool life is increased significantly because of the HX and TX+ coatings.





Advantages:
– High degree of accuracy and stability
– Self-centering
– Excellent positioning capability
– Good chip removal
– Complete range of solid carbide twist drills from Ø 0.5 – 6 mm
– Centre drills with tip angle of 90°, 120° or 140°
– HX and TX+ coatings for longer tool life
– Diameter coordinated to metric thread sizes
– Intermediate sizes possible on request

Overview – multidec®-DRILL

Technical information 9



Center drills

DRP … 410



Drills

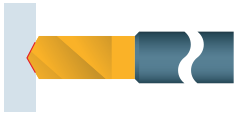
DRS … 411

DRL … 412



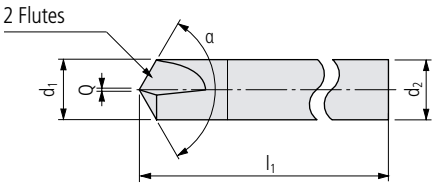
Cutting specification / Feeds 413

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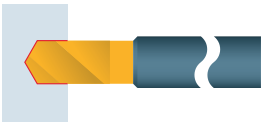
Center drilling





DRP …

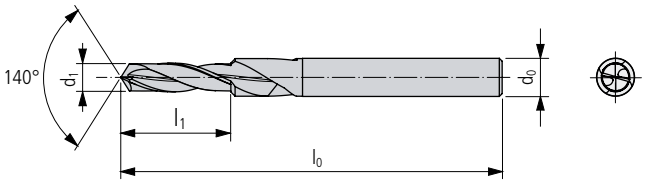
Order designation	Carbide			Dimensions														
	○	●	●															
	○	●	●															
	○	●	●															
	●	○	–															
	–	–	○															
R	UHM 20	UHM 20 HX	UHM 20 TX+	d_1	d_2 (h5)	l_1	Q	α										
PREMIUM-LINE																		
DRP 338 090 R …	■	■	■	3	3	38	0.04	90°										
DRP 338 120 R …	■	■	■	3	3	38	0.04	120°										
DRP 338 140 R …	■	■	■	3	3	38	0.04	140°										
DRP 442 090 R …	■	■	■	4	4	42	0.05	90°										
DRP 442 120 R …	■	■	■	4	4	42	0.05	120°										
DRP 442 140 R …	■	■	■	4	4	42	0.05	140°										
DRP 650 090 R …	■	■	■	6	6	50	0.06	90°										
DRP 650 120 R …	■	■	■	6	6	50	0.06	120°										
DRP 650 140 R …	■	■	■	6	6	50	0.06	140°										



Drilling



DRS …



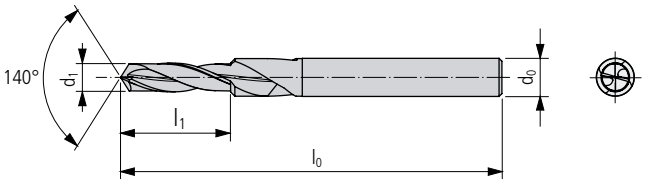
Order designation	Carbide 18			Dimensions								Core hole drills for
	○ ○ ○ ● –	● ● ● ○ –	● ● ● – ○									
	UHM 20	UHM 20 HX	UHM 20 TX+	d_1	l_1	d_0 (h5)	l_0					
PREMIUM-LINE												
DRS 338 050 …	■	■	■	0.5	1.5	3	38					–
DRS 338 065 …	■	■	■	0.65	2	3	38					T2
DRS 338 075 …	■	■	■	0.75	2.3	3	38					M1 | T3
DRS 338 085 …	■	■	■	0.85	2.6	3	38					M1.1
DRS 338 095 …	■	■	■	0.95	2.9	3	38					M1.2
DRS 338 100 …	■	■	■	1	3	3	38					SW1 | T5
DRS 338 110 …	■	■	■	1.1	3.3	3	38					M1.4
DRS 338 120 …	■	■	■	1.2	3.6	3	38					T6
DRS 338 125 …	■	■	■	1.25	3.8	3	38					M1.6 | 0-80 UNF
DRS 338 145 …	■	■	■	1.45	4.4	3	38					M1.8
DRS 338 150 …	■	■	■	1.5	4.5	3	38					1-64 UNC | 1-72 UNF | SW1.5
DRS 338 160 …	■	■	■	1.6	4.8	3	38					M2.0
DRS 338 165 …	■	■	■	1.65	5	3	38					T8
DRS 338 175 …	■	■	■	1.75	5.3	3	38					M2.2 | 2-56 UNC
DRS 338 190 …	■	■	■	1.9	5.7	3	38					M2.3 | 2-64 UNF
DRS 338 195 …	■	■	■	1.95	5.9	3	38					T10
DRS 338 200 …	■	■	■	2	6	3	38					SW2
DRS 338 205 …	■	■	■	2.05	6.2	3	38					M2.5 | 3-48 UNC
DRS 338 215 …	■	■	■	2.15	6.5	3	38					3-56 UNF
DRS 338 230 …	■	■	■	2.3	6.9	3	38					4-40 UNC | T15
DRS 338 240 …	■	■	■	2.4	7.2	3	38					4-48 UNF
DRS 338 250 …	■	■	■	2.5	7.5	3	38					M3 | SW2.5
DRS 338 260 …	■	■	■	2.6	7.8	3	38					5-40 UNC
DRS 338 270 …	■	■	■	2.7	8.1	3	38					5-44 UNF
DRS 338 275 …	■	■	■	2.75	8.3	3	38					6-32 UNC | T20
DRS 338 280 …	■	■	■	2.8	8.4	3	38					–
DRS 442 290 …	■	■	■	2.9	8.7	4	42					M3.5 | 6-40 UNF
DRS 442 300 …	■	■	■	3	9	4	42					SW3
DRS 442 315 …	■	■	■	3.15	9.5	4	42					T25
DRS 442 330 …	■	■	■	3.3	9.9	4	42					M4
DRS 442 340 …	■	■	■	3.4	10.2	4	42					8-32 UNC
DRS 442 350 …	■	■	■	3.5	10.5	4	42					8-36 UNF | SW3.5
DRS 442 370 …	■	■	■	3.7	11.1	4	42					M4.5
DRS 650 390 …	■	■	■	3.9	11.7	6	50					T30
DRS 650 400 …	■	■	■	4	12	6	50					SW4
DRS 650 410 …	■	■	■	4.1	12.3	6	50					10-32 UNF
DRS 650 425 …	■	■	■	4.25	12.8	6	50					M5
DRS 650 450 …	■	■	■	4.5	13.5	6	50					–
DRS 650 470 …	■	■	■	4.7	14.1	6	50					T40
DRS 650 500 …	■	■	■	5	15	6	50					M6 | SW5
DRS 650 600 …	■	■	■	6	18	6	50					M7 | SW6



Drilling



DRL …



Order designation	Carbide			Dimensions								Core hole drills for
	UHM 20	UHM 20 HX	UHM 20 TX+	d_1	l_1	d_0 (h5)	l_0					
PREMIUM-LINE												
DRL 338 050 …	■	■	■	0.5	3	3	38					–
DRL 338 065 …	■	■	■	0.65	3.9	3	38					T2
DRL 338 075 …	■	■	■	0.75	4.5	3	38					M1 | T3
DRL 338 085 …	■	■	■	0.85	5.1	3	38					M1.1
DRL 338 095 …	■	■	■	0.95	5.7	3	38					M1.2
DRL 338 100 …	■	■	■	1	6	3	38					SW1 | T5
DRL 338 110 …	■	■	■	1.1	6.6	3	38					M1.4
DRL 338 120 …	■	■	■	1.2	7.2	3	38					T6
DRL 338 125 …	■	■	■	1.25	7.5	3	38					M1.6 | 0-80 UNF
DRL 338 145 …	■	■	■	1.45	8.7	3	38					M1.8
DRL 338 150 …	■	■	■	1.5	9	3	38					1-64 UNC | 1-72 UNF | SW1.5
DRL 338 160 …	■	■	■	1.6	9.6	3	38					M2
DRL 338 165 …	■	■	■	1.65	9.9	3	38					T8
DRL 338 175 …	■	■	■	1.75	10.5	3	38					M2.2 | 2-056 UNC
DRL 338 190 …	■	■	■	1.9	11.4	3	38					M2.3 | 2-64 UNF
DRL 338 195 …	■	■	■	1.95	11.7	3	38					T10
DRL 338 200 …	■	■	■	2	12	3	38					SW2
DRL 338 205 …	■	■	■	2.05	12.3	3	38					M2.5 | 3-48 UNC
DRL 338 215 …	■	■	■	2.15	12.9	3	38					3-56 UNF
DRL 338 230 …	■	■	■	2.3	13.8	3	38					4-40 UNC | T15
DRL 338 240 …	■	■	■	2.4	14.4	3	38					4-48 UNF
DRL 338 250 …	■	■	■	2.5	15	3	38					M3 | SW2.5
DRL 338 260 …	■	■	■	2.6	15.6	3	38					5-40 UNC
DRL 338 270 …	■	■	■	2.7	16.2	3	38					5-44 UNF
DRL 338 275 …	■	■	■	2.75	16.5	3	38					6-32 UNC | T20
DRL 338 280 …	■	■	■	2.8	16.8	3	38					–
DRL 442 290 …	■	■	■	2.9	17.4	4	42					M3.5 | 6-40 UNF
DRL 442 300 …	■	■	■	3	18	4	42					SW3
DRL 442 315 …	■	■	■	3.15	18.9	4	42					T25
DRL 442 330 …	■	■	■	3.3	19.8	4	42					M4
DRL 442 340…	■	■	■	3.4	20.4	4	42					8-32 UNC
DRL 442 350 …	■	■	■	3.5	21	4	42					8-36 UNF | SW3.5
DRL 442 370 …	■	■	■	3.7	22.2	4	42					M4.5
DRL 650 390 …	■	■	■	3.9	23.4	6	50					T30
DRL 650 400 …	■	■	■	4	24	6	50					SW4
DRL 650 410 …	■	■	■	4.1	24.6	6	50					10-32 UNF
DRL 650 425 …	■	■	■	4.25	25.5	6	50					M5
DRL 650 450 …	■	■	■	4.5	27	6	50					–
DRL 650 470 …	■	■	■	4.7	28.2	6	50					T40
DRL 650 500 …	■	■	■	5	30	6	50					M6 | SW5
DRL 660 600 …	■	■	■	6	36	6	60					M7 | SW6

Cutting specification 413…

Legend 6…

Cutting specification

multidec®-DRILL

	Steel unalloyed			Steel low alloyed			Steel high alloyed		
Hardness value (HB) / (HRC)	125–300 HB			180–250 HB			200–350 HB		
Category	I			II			III		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	35–50	–	–	35–50	–	–	20–45
UHM 20 HX	–	–	60–110	–	–	50–90	–	–	50–80
UHM 20 TX+	–	–	–	–	–	–	–	–	40–70

	Stainless steel			Stainless steel			Titanium		
Hardness value (HB) / (HRC)	180–220 HB			220–330 HB			–		
Category	V			VI			IV		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	20–30	–	–	20–30	–	–	10–40
UHM 20 HX	–	–	60–70	–	–	60–70	–	–	20–40
UHM 20 TX+	–	–	40–70	–	–	40–60	–	–	20–40

	Aluminum			Brass / Lead-free brass			Hard materials		
Hardness value (HB) / (HRC)	60–130 HB			–			45–70 HRC		
Category	VII			VIII			X		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	60–100	–	–	30–80	–	–	–
UHM 20 HX	–	–	50–135	–	–	50–100	–	–	–
UHM 20 TX+	–	–	–	–	–	–	–	–	15–40

Feeds

multidec®-DRILL

DRP – DRS – DRL

	Steel unalloyed	Steel low alloyed	Steel high alloyed	Stainless steel	Titanium	Aluminum / Brass / Lead-free brass	Hard materials
D (mm)	f (mm/U)	f (mm/U)	f (mm/U)	f (mm/U)	f (mm/U)	f (mm/U)	f (mm/U)
≤1	0.03-0.07	0.03-0.07	0.03-0.07	0.03-0.07	0.03-0.07	0.03-0.08	0.03-0.07
2	0.03-0.08	0.03-0.08	0.03-0.08	0.03-0.08	0.03-0.08	0.04-0.09	0.03-0.08
3	0.04-0.10	0.04-0.10	0.04-0.10	0.04-0.10	0.04-0.10	0.05-0.11	0.04-0.10
4	0.05-0.11	0.05-0.11	0.05-0.11	0.05-0.11	0.05-0.11	0.06-0.12	0.05-0.11
5	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.12	0.07-0.14	0.06-0.12
6	0.07-0.14	0.07-0.14	0.07-0.14	0.07-0.14	0.07-0.14	0.09-0.16	0.07-0.14

Legend ..... 6…

multidec®-THREADMILL

In thread milling, the thread is produced by helical interpolation. The cutting process makes it possible to manufacture full profile and partial profile threads from a nominal diameter of 1 mm with thread milling cutters with one or two rows of teeth.



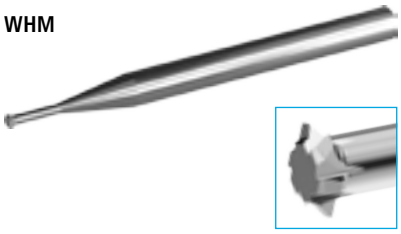
Advantages:
– The thread depth is equal to the drill depth
– Lower torque than with tapping and roll form tapping
– Short milling chips avoid chip problems
– High Speed Cutting (HSC) possible
– Reliable process with longer life time
– Long tool life through improved geometry
– Increased feed through large number of teeth



The use of a tool with just one row of teeth is needed in the following situations:
– If there is not enough room in the bottom of the blind hole.
– If the cutting pressure with a tool with two rows of teeth is too great.
– If the tool is also used for deviating pitches.

New thread milling tool, full profile and partial profile, multi-tooth

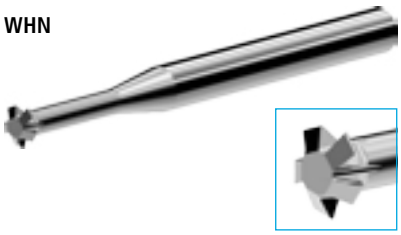
WHM



The multidec®-THREADMILL product line has been expanded with the new WHM and WHN thread milling tools. These are rotating solid carbide tools that are used for manufacturing a metric thread as a full profile (with WHM) and as a partial profile (with WHN) with one row of teeth and a large number of teeth.

Advantages of a full profile:
– For threads from M1 to M5 (pitches 0.25–0.80)
– Long tool life through improved geometry
– Increased feed through large number of teeth (4 to 6 teeth)
– Working direction from the inside out (axial)
– Flat cone transition for increased stability
– Burr-free through full profile

WHN



Advantages of a partial profile:
– For threads from M1 to M5 (pitches 0.25–0.80)
– Long tool life through improved geometry
– Increased feed through large number of teeth (4 to 6 teeth)
– Variable thread pitch possible
– Working direction from the inside out (axial)
– Flat cone transition for increased stability

Overview – multidec®-THREADMILL

Technical information 9



Thread milling tools

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WHL … 417

WHA … 418

WHB … 419

WHC … 420

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WHD … 422

WHD … UNC … (INCH), WHD … UNF … (INCH) 423

WHM … 424

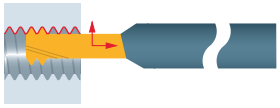
WHN … 425



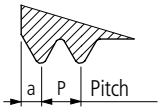
Cutting specification / Feed per tooth 426

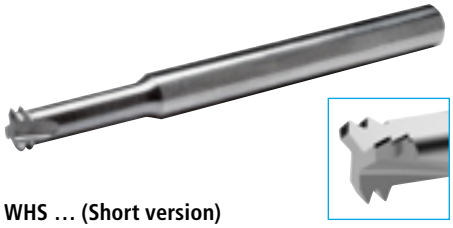
Application recommendation 428

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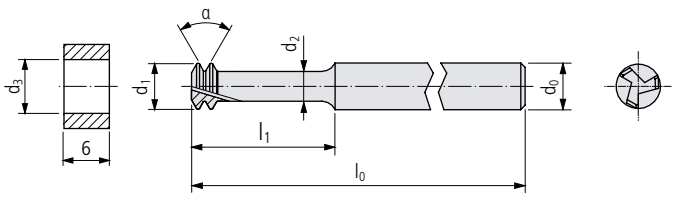


3 flutes, 2 teeth (full profile metric)



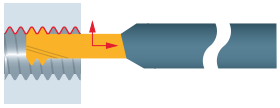


WHS … (Short version)

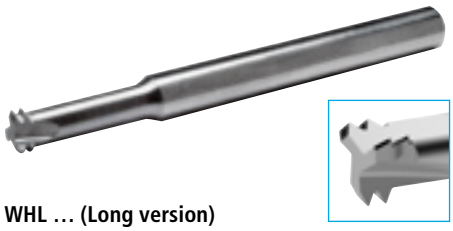


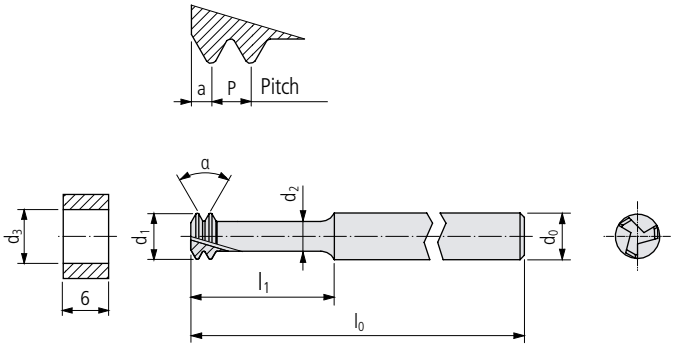
Order designation	Carbide			Standard	Dimensions								Core hole	
	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_1	d_2	a	d_0	l_0	α	d_3	
PREMIUM-LINE														
WHS 338 010 025 …	■	■	■	M1	0.25	2.3	0.64	0.24	0.155	3	38	60°	0.75	0/+0.03
WHS 338 012 025 …	■	■	■	M1.2	0.25	2.8	0.84	0.44	0.155	3	38	60°	0.95	0/+0.03
WHS 338 014 030 …	■	■	■	M1.4	0.3	3.2	0.98	0.53	0.18	3	38	60°	1.1	0/+0.04
WHS 338 016 035 …	■	■	■	M1.6	0.35	3.7	1.12	0.61	0.205	3	38	60°	1.25	0/+0.04
WHS 338 018 035 …	■	■	■	M1.8	0.35	4.1	1.32	0.81	0.205	3	38	60°	1.45	0/+0.04
WHS 338 020 040 …	■	■	■	M2	0.4	4.6	1.46	0.9	0.23	3	38	60°	1.6	0/+0.05
WHS 338 022 045 …	■	■	■	M2.2	0.45	5.1	1.6	0.98	0.255	3	38	60°	1.75	0/+0.05
WHS 338 023 040 …	■	■	■	M2.3	0.4	5.2	1.76	1.2	0.23	3	38	60°	1.9	0/+0.05
WHS 338 025 045 …	■	■	■	M2.5	0.45	5.8	1.9	1.28	0.255	3	38	60°	2.05	0/+0.05
WHS 338 030 050 …	■	■	■	M3	0.5	6.9	2.34	1.67	0.28	3	38	60°	2.5	0/+0.05
WHS 338 035 060 …	■	■	■	M3.5	0.6	8.1	2.71	1.93	0.33	3	38	60°	2.9	0/+0.06
WHS 442 040 070 …	■	■	■	M4	0.7	9.2	3.09	2.2	0.38	4	42	60°	3.3	0/+0.06
WHS 442 045 075 …	■	■	■	M4.5	0.75	10.4	3.53	2.56	0.405	4	42	60°	3.75	0/+0.07
WHS 442 050 080 …	■	■	■	M5	0.8	11.5	3.97	2.95	0.43	4	42	60°	4.2	0/+0.07

Application recommendation 428



3 flutes, 2 teeth (full profile metric)

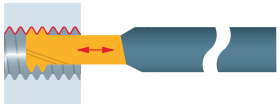




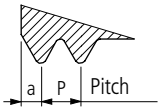
WHL … (Long version)

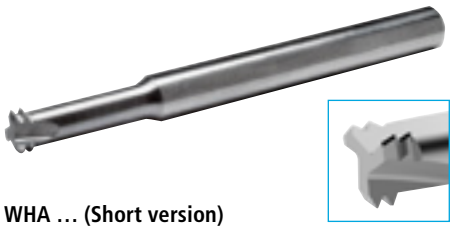
Order designation	Carbide 🗋18			Standard	Dimensions								Core hole	
	○ ● ●													
	○ ● ●													
	○ ● ●													
	● ○ –													
	– – ○													
	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_1	d_2	a	d_0	l_0	α	d_3	
PREMIUM-LINE														
WHL 338 010 025 …	■	■	■	M1	0.25	4.6	0.64	0.24	0.155	3	38	60°	0.75	0/+0.03
WHL 338 012 025 …	■	■	■	M1.2	0.25	5.5	0.84	0.44	0.155	3	38	60°	0.95	0/+0.03
WHL 338 014 030 …	■	■	■	M1.4	0.3	6.4	0.98	0.53	0.18	3	38	60°	1.1	0/+0.04
WHL 338 016 035 …	■	■	■	M1.6	0.35	7.4	1.12	0.61	0.205	3	38	60°	1.25	0/+0.04
WHL 338 018 035 …	■	■	■	M1.8	0.35	8.3	1.32	0.81	0.205	3	38	60°	1.45	0/+0.04
WHL 338 020 040 …	■	■	■	M2	0.4	9.2	1.46	0.9	0.23	3	38	60°	1.6	0/+0.05
WHL 338 022 045 …	■	■	■	M2.2	0.45	10.1	1.6	0.98	0.255	3	38	60°	1.75	0/+0.05
WHL 338 023 040 …	■	■	■	M2.3	0.4	10.4	1.76	1.2	0.23	3	38	60°	1.9	0/+0.05
WHL 338 025 045 …	■	■	■	M2.5	0.45	11.5	1.9	1.28	0.255	3	38	60°	2.05	0/+0.05
WHL 338 030 050 …	■	■	■	M3	0.5	13.8	2.34	1.67	0.28	3	38	60°	2.5	0/+0.05
WHL 338 035 060 …	■	■	■	M3.5	0.6	16.1	2.71	1.93	0.33	3	38	60°	2.9	0/+0.06
WHL 442 040 070 …	■	■	■	M4	0.7	18.4	3.09	2.2	0.38	4	42	60°	3.3	0/+0.06
WHL 442 045 075 …	■	■	■	M4.5	0.75	20.7	3.53	2.56	0.405	4	42	60°	3.75	0/+0.07
WHL 442 050 080 …	■	■	■	M5	0.8	23	3.97	2.95	0.43	4	42	60°	4.2	0/+0.07

Application recommendation 🗋428

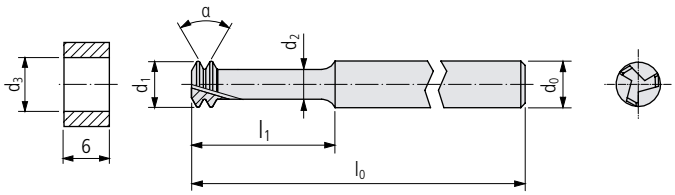


3 flutes, 2 teeth (full profile metric)
Strenghten type



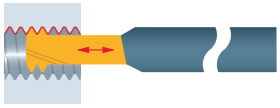


WHA … (Short version)

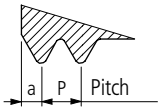


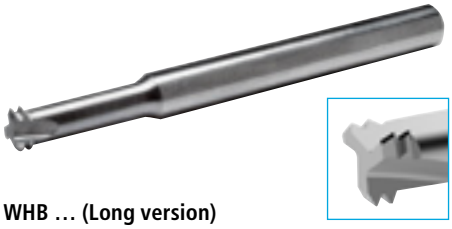
Order designation	Carbide			Standard	Dimensions								Core hole	
	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_1	d_2	a	d_0	l_0	α	d_3	
PREMIUM-LINE														
WHA 338 010 025 …	■	■	■	M1.0	0.25	2.3	0.83	0.41	0.155	3	38	60°	0.75	0/+0.03
WHA 338 012 025 …	■	■	■	M1.2	0.25	2.8	1.03	0.61	0.155	3	38	60°	0.95	0/+0.03
WHA 338 014 030 …	■	■	■	M1.4	0.3	3.2	1.21	0.74	0.18	3	38	60°	1.1	0/+0.04
WHA 338 016 035 …	■	■	■	M1.6	0.35	3.7	1.39	0.88	0.205	3	38	60°	1.25	0/+0.04
WHA 338 018 035 …	■	■	■	M1.8	0.35	4.1	1.59	1.08	0.205	3	38	60°	1.45	0/+0.04
WHA 338 020 040 …	■	■	■	M2.0	0.4	4.6	1.76	1.19	0.23	3	38	60°	1.6	0/+0.05
WHA 338 022 045 …	■	■	■	M2.2	0.45	5.1	1.94	1.31	0.255	3	38	60°	1.75	0/+0.05
WHA 338 023 040 …	■	■	■	M2.3	0.4	5.2	2.06	1.49	0.23	3	38	60°	1.9	0/+0.05

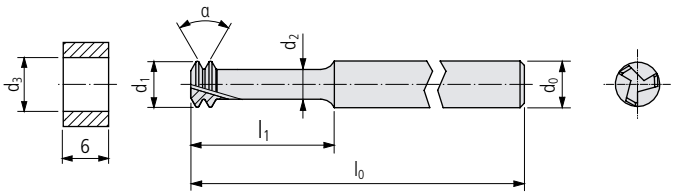
Application recommendation 428



3 flutes, 2 teeth (full profile metric)
Strenghten type



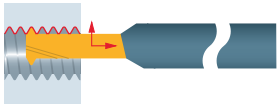




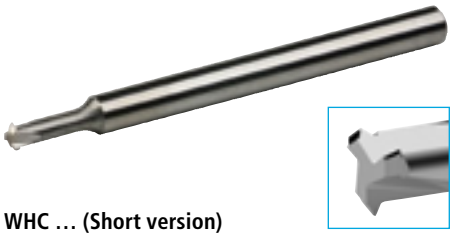
WHB … (Long version)

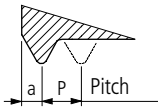
Order designation	Carbide ⧉18			Standard	Dimensions								Core hole	
	○ ● ●													
	○ ● ●													
	○ ● ●													
	● ○ –													
	– – ○													
	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_1	d_2	a	d_0	l_0	α	d_3	
PREMIUM-LINE														
WHB 338 010 025 …	■	■	■	M1.0	0.25	4.6	0.83	0.41	0.155	3	38	60°	0.75	0/+0.03
WHB 338 012 025 …	■	■	■	M1.2	0.25	5.6	1.03	0.61	0.155	3	38	60°	0.95	0/+0.03
WHB 338 014 030 …	■	■	■	M1.4	0.3	6.4	1.21	0.74	0.18	3	38	60°	1.1	0/+0.04
WHB 338 016 035 …	■	■	■	M1.6	0.35	7.4	1.39	0.88	0.205	3	38	60°	1.25	0/+0.04
WHB 338 018 035 …	■	■	■	M1.8	0.35	8.2	1.59	1.08	0.205	3	38	60°	1.45	0/+0.04
WHB 338 020 040 …	■	■	■	M2.0	0.4	9.2	1.76	1.19	0.23	3	38	60°	1.6	0/+0.05
WHB 338 022 045 …	■	■	■	M2.2	0.45	10.2	1.94	1.31	0.255	3	38	60°	1.75	0/+0.05
WHB 338 023 040 …	■	■	■	M2.3	0.4	10.4	2.06	1.49	0.23	3	38	60°	1.9	0/+0.05

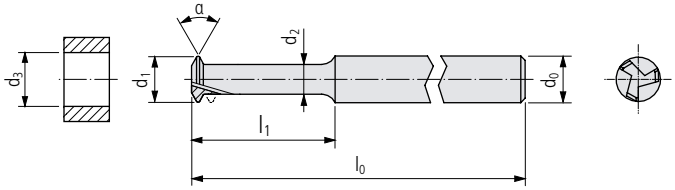
Application recommendation ⧉428



3 flutes, 1 tooth (full profile metric)







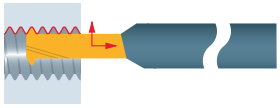
WHC … (Short version)

Order designation	Carbide			Standard	Dimensions								Core hole	
	○ ● ●													
	○ ● ●													
	○ ● ●													
	● ○ –													
	– – ○													
	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_1	d_2	a	d_0	l_0	α	d_3	
PREMIUM-LINE														
WHC 338 010 025 …	■	■	■	M1.0	0.25	2.5	0.68	0.3	0.155	3	38	60°	0.75	0/+0.03
WHC 338 012 025 …	■	■	■	M1.2	0.25	2.7	0.88	0.5	0.155	3	38	60°	0.95	0/+0.03
WHC 338 014 025 …	■	■	■	M1.4	0.25	2.9	1.08	0.7	0.155	3	38	60°	1.15	0/+0.03
WHC 338 016 025 …	■	■	■	M1.6	0.25	3.1	1.28	0.9	0.155	3	38	60°	1.35	0/+0.03
WHC 338 018 025 …	■	■	■	M1.8	0.25	3.3	1.48	1.1	0.155	3	38	60°	1.55	0/+0.03
WHC 338 020 025 …	■	■	■	M2.0	0.25	3.5	1.68	1.3	0.155	3	38	60°	1.75	0/+0.03
WHC 338 014 030 …	■	■	■	M1.4	0.3	3.2	1.02	0.58	0.18	3	38	60°	1.1	0/+0.04
WHC 338 016 030 …	■	■	■	M1.6	0.3	3.4	1.22	0.78	0.18	3	38	60°	1.3	0/+0.04
WHC 338 018 030 …	■	■	■	M1.8	0.3	3.6	1.42	0.98	0.18	3	38	60°	1.5	0/+0.04
WHC 338 020 030 …	■	■	■	M2.0	0.3	3.8	1.62	1.18	0.18	3	38	60°	1.7	0/+0.04
WHC 338 022 030 …	■	■	■	M2.2	0.3	4	1.82	1.38	0.18	3	38	60°	1.9	0/+0.04
WHC 338 016 035 …	■	■	■	M1.6	0.35	3.7	1.16	0.65	0.205	3	38	60°	1.25	0/+0.04
WHC 338 018 035 …	■	■	■	M1.8	0.35	3.9	1.36	0.85	0.205	3	38	60°	1.45	0/+0.04
WHC 338 020 035 …	■	■	■	M2.0	0.35	4.1	1.56	1.05	0.205	3	38	60°	1.65	0/+0.04
WHC 338 022 035 …	■	■	■	M2.2	0.35	4.3	1.76	1.25	0.205	3	38	60°	1.85	0/+0.04
WHC 338 025 035 …	■	■	■	M2.5	0.35	4.6	2.06	1.55	0.205	3	38	60°	2.15	0/+0.04
WHC 338 030 035 …	■	■	■	M3.0	0.35	5.1	2.56	2.05	0.205	3	38	60°	2.65	0/+0.04
WHC 338 035 035 …	■	■	■	M3.5	0.35	5.6	3.06	2.55	0.205	3	38	60°	3.15	0/+0.04
WHC 338 020 040 …	■	■	■	M2.0	0.4	4.4	1.50	0.92	0.23	3	38	60°	1.6	0/+0.05
WHC 338 022 040 …	■	■	■	M2.2	0.4	4.6	1.70	1.12	0.23	3	38	60°	1.8	0/+0.05
WHC 338 025 040 …	■	■	■	M2.5	0.4	4.9	2.00	1.42	0.23	3	38	60°	2.1	0/+0.05
WHC 338 030 040 …	■	■	■	M3	0.4	5.4	2.50	1.92	0.23	3	38	60°	2.6	0/+0.05
WHC 338 035 040 …	■	■	■	M3.5	0.4	5.9	2.98	2.4	0.23	3	38	60°	3.1	0/+0.05
WHC 338 022 045 …	■	■	■	M2.2	0.45	4.9	1.64	1	0.255	3	38	60°	1.75	0/+0.05
WHC 338 025 045 …	■	■	■	M2.5	0.45	5.2	1.94	1.3	0.255	3	38	60°	2.05	0/+0.05
WHC 338 030 045 …	■	■	■	M3	0.45	5.7	2.44	1.8	0.255	3	38	60°	2.55	0/+0.05
WHC 338 035 045 …	■	■	■	M3.5	0.45	6.2	2.94	2.3	0.255	3	38	60°	3.05	0/+0.05
WHC 442 040 045 …	■	■	■	M4	0.45	6.7	3.44	2.8	0.255	3	38	60°	3.55	0/+0.05
WHC 338 030 050 …	■	■	■	M3	0.5	6	2.38	1.68	0.28	3	38	60°	2.5	0/+0.05
WHC 338 035 050 …	■	■	■	M3.5	0.5	6.5	2.88	2.18	0.28	3	38	60°	3	0/+0.05
WHC 442 040 050 …	■	■	■	M4	0.5	7	3.38	2.68	0.28	4	42	60°	3.5	0/+0.05
WHC 442 045 050 …	■	■	■	M4.5	0.5	7.5	3.88	3.18	0.28	4	42	60°	4	0/+0.05
WHC 442 035 060 …	■	■	■	M3.5	0.6	7.1	2.75	1.95	0.33	4	42	60°	2.9	0/+0.06
WHC 442 040 060 …	■	■	■	M4	0.6	7.6	3.25	2.45	0.33	4	42	60°	3.4	0/+0.06
WHC 442 045 060 …	■	■	■	M4.5	0.6	8.1	3.75	2.95	0.33	4	42	60°	3.9	0/+0.06
WHC 442 040 070 …	■	■	■	M4	0.7	8.2	3.13	2.19	0.38	4	42	60°	3.3	0/+0.06
WHC 442 045 070 …	■	■	■	M4.5	0.7	8.7	3.63	2.71	0.38	4	42	60°	3.8	0/+0.06
WHC 442 045 075 …	■	■	■	M4.5	0.75	9	3.57	2.57	0.405	4	42	60°	3.75	0/+0.07
WHC 442 050 075 …	■	■	■	M5	0.75	9.5	3.98	2.98	0.405	4	42	60°	4.25	0/+0.07
WHC 442 050 080 …	■	■	■	M5	0.8	9.8	3.98	2.92	0.43	4	42	60°	4.2	0/+0.07

Cutting specification 426…
Application recommendation 428

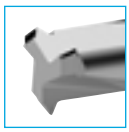
Legend 6…

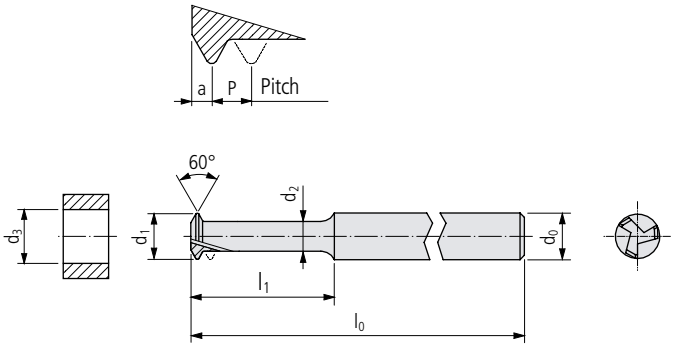
UTILIS multidec® swiss type tools



3 flutes, 1 tooth (full profile UNC/UNF)







WHC … UNC … (INCH) (Short version)

Order designation	Carbide			18	Standard	Dimensions								Core hole	
	○	●	●												
	○	●	●												
	○	●	●												
	●	○	–												
	–	–	○												
	UHM 20	UHM 20 HX	UHM 20 TX+		ANSI B1.1	P (T/Inch)	P	l_1	d_1	d_2	a	d_0	l_0	d_3	
PREMIUM-LINE															
WHC 338-01-64 UNC …	■	■	■		1-64	64	0.397	4.2	1.36	0.81	0.228	3	38	1.5	0/+0.04
WHC 338-02-56 UNC …	■	■	■		2-56	56	0.454	4.9	1.62	1	0.257	3	38	1.78	0/+0.05
WHC 338-03-48 UNC …	■	■	■		3-48	48	0.529	5.7	1.86	1.15	0.294	3	38	2.05	0/+0.05
WHC 442-04-40 UNC …	■	■	■		4-40	40	0.635	6.7	2.06	1.22	0.347	4	42	2.27	0/+0.06
WHC 442-05-40 UNC …	■	■	■		5-40	40	0.635	7	2.39	1.55	0.347	4	42	2.59	0/+0.06
WHC 442-06-32 UNC …	■	■	■		6-32	32	0.794	8.3	2.52	1.49	0.427	4	42	2.77	0/+0.07
WHC 442-08-32 UNC …	■	■	■		8-32	32	0.794	8.9	3.18	2.16	0.427	4	42	3.42	0/+0.07

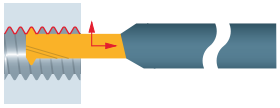
WHC … UNF … (INCH) (Short version)

Order designation	Carbide			18	Standard	Dimensions								Core hole	
	○	●	●												
	○	●	●												
	○	●	●												
	●	○	–												
	–	–	○												
	UHM 20	UHM 20 HX	UHM 20 TX+		ANSI B1.1	P (T/Inch)	P	l_1	d_1	d_2	a	d_0	l_0	d_3	
PREMIUM-LINE															
WHC 338-00-80 UNF …	■	■	■		0-80	80	0.317	3.4	1.12	0.67	0.188	3	38	1.25	0/+0.04
WHC 338-01-72 UNF …	■	■	■		1-72	72	0.353	4	1.41	0.91	0.206	3	38	1.55	0/+0.04
WHC 338-02-64 UNF …	■	■	■		2-64	64	0.396	4.1	1.69	1.14	0.228	3	38	1.9	0/+0.04
WHC 338-03-56 UNF …	■	■	■		3-56	56	0.453	5.2	1.95	1.32	0.257	3	38	2.15	0/+0.05
WHC 338-04-48 UNF …	■	■	■		4-48	48	0.529	6	2.19	1.46	0.294	3	38	2.4	0/+0.05
WHC 338-05-44 UNF …	■	■	■		5-44	44	0.577	6.6	2.46	1.68	0.318	3	38	2.7	0/+0.05
WHC 442-06-40 UNF …	■	■	■		6-40	40	0.635	7.3	2.72	1.87	0.347	4	42	2.95	0/+0.06
WHC 442-08-36 UNF …	■	■	■		8-36	36	0.705	8.4	3.29	2.37	0.382	4	42	3.5	0/+0.06
WHC 442-10-32 UNF …	■	■	■		10-32	32	0.794	9.6	3.84	2.82	0.427	4	42	4.1	0/+0.07

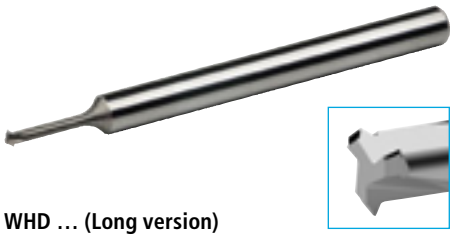
Application recommendation 428

Cutting specification ..... 426…

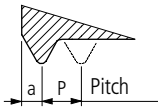
Legend ..... 6…

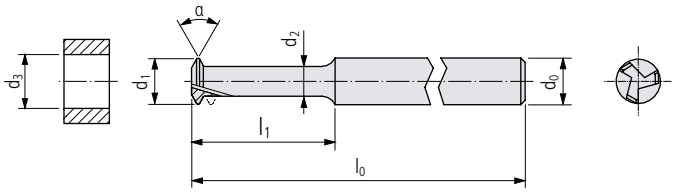


3 flutes, 1 tooth (full profile metric)



WHD … (Long version)



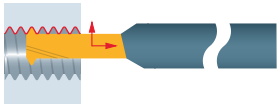


Order designation	Carbide			Standard	Dimensions								Core hole	
	○ ● ●	○ ● ●	○ ● ●											
	● ○ –	● ○ –	● – ○											
	– – ○	– – ○	– ○ –											
	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_1	d_2	a	d_0	l_0	α	d_3	
PREMIUM-LINE														
WHD 338 010 025 …	■	■	■	M1.0	0.25	3.5	0.68	0.3	0.155	3	38	60°	0.75	0/+0.03
WHD 338 012 025 …	■	■	■	M1.2	0.25	3.9	0.88	0.5	0.155	3	38	60°	0.95	0/+0.03
WHD 338 014 025 …	■	■	■	M1.4	0.25	4.3	1.08	0.7	0.155	3	38	60°	1.15	0/+0.03
WHD 338 016 025 …	■	■	■	M1.6	0.25	4.7	1.28	0.9	0.155	3	38	60°	1.35	0/+0.03
WHD 338 018 025 …	■	■	■	M1.8	0.25	5.1	1.48	1.1	0.155	3	38	60°	1.55	0/+0.03
WHD 338 020 025 …	■	■	■	M2.0	0.25	5.5	1.68	1.3	0.155	3	38	60°	1.75	0/+0.03
WHD 338 014 030 …	■	■	■	M1.4	0.3	4.6	1.02	0.58	0.18	3	38	60°	1.1	0/+0.04
WHD 338 016 030 …	■	■	■	M1.6	0.3	5	1.22	0.78	0.18	3	38	60°	1.3	0/+0.04
WHD 338 018 030 …	■	■	■	M1.8	0.3	5.4	1.42	0.98	0.18	3	38	60°	1.5	0/+0.04
WHD 338 020 030 …	■	■	■	M2.0	0.3	5.8	1.62	1.18	0.18	3	38	60°	1.7	0/+0.04
WHD 338 022 030 …	■	■	■	M2.2	0.3	6.2	1.82	1.38	0.18	3	38	60°	1.9	0/+0.04
WHD 338 016 035 …	■	■	■	M1.6	0.35	5.3	1.16	0.65	0.205	3	38	60°	1.25	0/+0.04
WHD 338 018 035 …	■	■	■	M1.8	0.35	5.7	1.36	0.85	0.205	3	38	60°	1.45	0/+0.04
WHD 338 020 035 …	■	■	■	M2.0	0.35	6.1	1.56	1.05	0.205	3	38	60°	1.65	0/+0.04
WHD 338 022 035 …	■	■	■	M2.2	0.35	6.5	1.76	1.25	0.205	3	38	60°	1.85	0/+0.04
WHD 338 025 035 …	■	■	■	M2.5	0.35	7.1	2.06	1.55	0.205	3	38	60°	2.15	0/+0.04
WHD 338 030 035 …	■	■	■	M3.0	0.35	8.1	2.56	2.05	0.205	3	38	60°	2.65	0/+0.04
WHD 338 035 035 …	■	■	■	M3.5	0.35	9.1	3.06	2.55	0.205	3	38	60°	3.15	0/+0.04
WHD 338 020 040 …	■	■	■	M2.0	0.4	6.4	1.50	0.93	0.23	3	38	60°	1.6	0/+0.05
WHD 338 022 040 …	■	■	■	M2.2	0.4	6.8	1.70	1.13	0.23	3	38	60°	1.8	0/+0.05
WHD 338 025 040 …	■	■	■	M2.5	0.4	7.4	2.00	1.43	0.23	3	38	60°	2.1	0/+0.05
WHD 338 030 040 …	■	■	■	M3	0.4	8.4	2.50	1.93	0.23	3	38	60°	2.6	0/+0.05
WHD 338 035 040 …	■	■	■	M3.5	0.4	9.4	2.98	2.41	0.23	3	38	60°	3.1	0/+0.05
WHD 338 022 045 …	■	■	■	M2.2	0.45	7.1	1.64	1.01	0.255	3	38	60°	1.75	0/+0.05
WHD 338 025 045 …	■	■	■	M2.5	0.45	7.7	1.94	1.31	0.255	3	38	60°	2.05	0/+0.05
WHD 338 030 045 …	■	■	■	M3	0.45	8.7	2.44	1.81	0.255	3	38	60°	2.55	0/+0.05
WHD 338 035 045 …	■	■	■	M3.5	0.45	9.7	2.94	2.31	0.255	3	38	60°	3.05	0/+0.05
WHD 442 040 045 …	■	■	■	M4	0.45	10.7	3.44	2.81	0.255	3	38	60°	3.55	0/+0.05
WHD 338 030 050 …	■	■	■	M3	0.5	9	2.38	1.69	0.28	3	38	60°	2.5	0/+0.05
WHD 338 035 050 …	■	■	■	M3.5	0.5	10	2.88	2.19	0.28	3	38	60°	3	0/+0.05
WHD 442 040 050 …	■	■	■	M4	0.5	11	3.38	2.69	0.28	4	42	60°	3.5	0/+0.05
WHD 442 045 050 …	■	■	■	M4.5	0.5	12	3.88	3.19	0.28	4	42	60°	4	0/+0.05
WHD 442 035 060 …	■	■	■	M3.5	0.6	10.6	2.75	1.95	0.33	4	42	60°	2.9	0/+0.06
WHD 442 040 060 …	■	■	■	M4	0.6	11.6	3.25	2.45	0.33	4	42	60°	3.4	0/+0.06
WHD 442 045 060 …	■	■	■	M4.5	0.6	12.6	3.75	2.95	0.33	4	42	60°	3.9	0/+0.06
WHD 442 040 070 …	■	■	■	M4	0.7	12.2	3.13	2.21	0.38	4	42	60°	3.3	0/+0.06
WHD 442 045 070 …	■	■	■	M4.5	0.7	13.2	3.63	2.71	0.38	4	42	60°	3.8	0/+0.06
WHD 442 045 075 …	■	■	■	M4.5	0.75	13.5	3.57	2.59	0.405	4	42	60°	3.75	0/+0.07
WHD 442 050 075 …	■	■	■	M5	0.75	14.5	3.98	3.00	0.405	4	42	60°	4.25	0/+0.07
WHD 442 050 080 …	■	■	■	M5	0.8	14.8	3.98	2.94	0.43	4	42	60°	4.2	0/+0.07

Cutting specification 426…
Application recommendation 428

Legend 6…

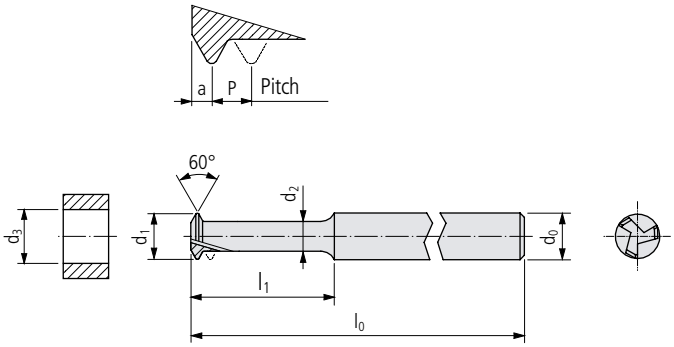
UTILIS multidec® swiss type tools



3 flutes, 1 tooth (full profile UNC/UNF)







WHD … UNC … (INCH) (Long version)

Order designation	Carbide			Standard	Dimensions								Core hole	
	UHM 20	UHM 20 HX	UHM 20 TX+	ANSI B1.1	P (T/Inch)	P	l_1	d_1	d_2	a	d_0	l_0	d_3	
PREMIUM-LINE														
WHD 338-01-64 UNC …	■	■	■	1-64	64	0.397	6.1	1.36	0.81	0.228	3	38	1.5	0/+0.04
WHD 338-02-56 UNC …	■	■	■	2-56	56	0.454	7.1	1.62	1	0.257	3	38	1.78	0/+0.05
WHD 338-03-48 UNC …	■	■	■	3-48	48	0.529	8.2	1.86	1.15	0.294	3	38	2.05	0/+0.05
WHD 442-04-40 UNC …	■	■	■	4-40	40	0.635	9.5	2.06	1.22	0.347	4	42	2.27	0/+0.06
WHD 442-05-40 UNC …	■	■	■	5-40	40	0.635	10.2	2.39	1.55	0.347	4	42	2.59	0/+0.06
WHD 442-06-32 UNC …	■	■	■	6-32	32	0.794	11.8	2.52	1.49	0.427	4	42	2.77	0/+0.07
WHD 442-08-32 UNC …	■	■	■	8-32	32	0.794	13.1	3.18	2.16	0.427	4	42	3.42	0/+0.07

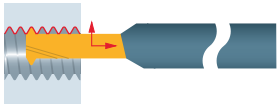
WHD … UNF … (INCH) (Long version)

Order designation	Carbide			Standard	Dimensions								Core hole	
	UHM 20	UHM 20 HX	UHM 20 TX+	ANSI B1.1	P (T/Inch)	P	l_1	d_1	d_2	a	d_0	l_0	d_3	
PREMIUM-LINE														
WHD 338-00-80 UNF …	■	■	■	0-80	80	0.317	5	1.12	0.67	0.188	3	38	1.25	0/+0.04
WHD 338-01-72 UNF …	■	■	■	1-72	72	0.353	5.8	1.41	0.91	0.206	3	38	1.55	0/+0.04
WHD 338-02-64 UNF …	■	■	■	2-64	64	0.396	6.8	1.69	1.14	0.228	3	38	1.9	0/+0.04
WHD 338-03-56 UNF …	■	■	■	3-56	56	0.453	7.8	1.95	1.32	0.257	3	38	2.15	0/+0.05
WHD 338-04-48 UNF …	■	■	■	4-48	48	0.529	8.9	2.19	1.46	0.294	3	38	2.4	0/+0.05
WHD 338-05-44 UNF …	■	■	■	5-44	44	0.577	9.8	2.46	1.68	0.318	3	38	2.7	0/+0.05
WHD 442-06-40 UNF …	■	■	■	6-40	40	0.635	10.8	2.72	1.87	0.347	4	42	2.95	0/+0.06
WHD 442-08-36 UNF …	■	■	■	8-36	36	0.705	12.6	3.29	2.37	0.382	4	42	3.5	0/+0.06
WHD 442-10-32 UNF …	■	■	■	10-32	32	0.794	14.4	3.84	2.82	0.427	4	42	4.1	0/+0.07

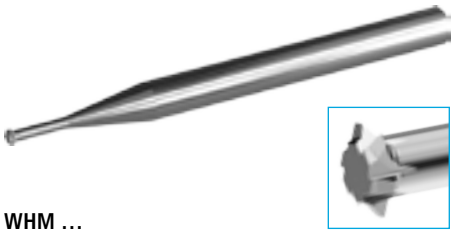
Application recommendation 428

Cutting specification ..... 426…

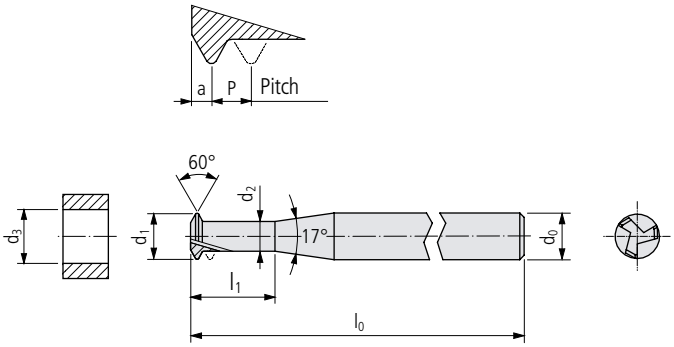
Legend ..... 6…



Multi-tooth, 1 row of teeth (full profile metric)



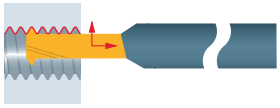
WHM …



Order designation	Carbide 18			Standard	Dimensions								Core hole	
	○ ● ●													
	○ ● ●													
	○ ● ●													
	● ○ –													
	– – ○													
	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_1	d_2	a	d_0	l_0	z*	d_3	
PREMIUM-LINE														
WHM 338 010 025 …	■	■	■	M1	0.25	2.5	0.68	0.3	0.03	3	38	4	0.75	0/+0.03
WHM 338 012 025 …	■	■	■	M1.2	0.25	2.8	0.88	0.5	0.03	3	38	4	0.95	0/+0.03
WHM 338 014 030 …	■	■	■	M1.4	0.3	3.2	1.02	0.59	0.03	3	38	4	1.1	0/+0.04
WHM 338 016 035 …	■	■	■	M1.6	0.35	3.7	1.16	0.67	0.03	3	38	5	1.25	0/+0.04
WHM 338 018 035 …	■	■	■	M1.8	0.35	4.1	1.36	0.87	0.03	3	38	5	1.45	0/+0.04
WHM 338 020 040 …	■	■	■	M2	0.4	4.6	1.5	0.92	0.03	3	38	6	1.6	0/+0.05
WHM 338 025 045 …	■	■	■	M2.5	0.45	5.8	1.94	1.3	0.03	3	38	6	2.05	0/+0.05
WHM 338 030 050 …	■	■	■	M3	0.5	6.9	2.38	1.68	0.03	3	38	6	2.5	0/+0.05
WHM 442 040 070 …	■	■	■	M4	0.7	9.2	3.13	2.19	0.03	4	42	6	3.3	0/+0.06
WHM 442 050 080 …	■	■	■	M5	0.8	11.5	3.98	2.92	0.03	4	42	6	4.2	0/+0.07

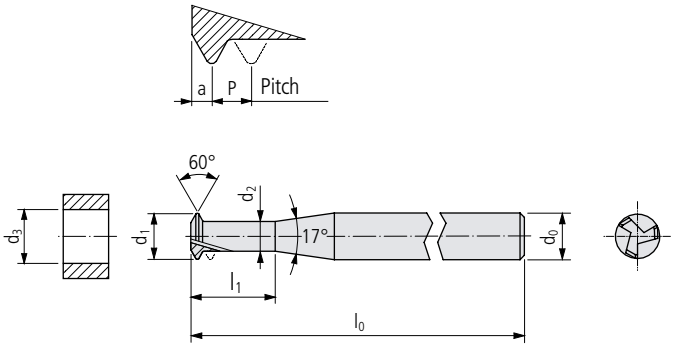
* z: Number of teeth

Application recommendation 428



Multi-tooth, 1 teeth row (partial profile)





WHN …

Order designation	Carbide 18			Standard	Dimensions								Core hole	
	○ ● ●													
	○ ● ●													
	○ ● ●													
	● ○ –													
	– – ○													
	UHM 20	UHM 20 HX	UHM 20 TX+	ISO DIN13	P	l_1	d_1	d_2	a	d_0	l_0	z*	d_3	
PREMIUM-LINE														
WHN 338 010 025 …	■	■	■	M1	0.25	2.5	0.68	0.3	0.03	3	38	4	0.75	0/+0.03
WHN 338 012 025 …	■	■	■	M1.2	0.25	2.8	0.88	0.5	0.03	3	38	4	0.95	0/+0.03
WHN 338 014 030 …	■	■	■	M1.4	0.3	3.2	1.02	0.59	0.03	3	38	4	1.1	0/+0.04
WHN 338 016 035 …	■	■	■	M1.6	0.35	3.7	1.16	0.67	0.03	3	38	5	1.25	0/+0.04
WHN 338 018 035 …	■	■	■	M1.8	0.35	4.1	1.36	0.87	0.03	3	38	5	1.45	0/+0.04
WHN 338 020 040 …	■	■	■	M2	0.4	4.6	1.5	0.92	0.03	3	38	6	1.6	0/+0.05
WHN 338 025 045 …	■	■	■	M2.5	0.45	5.8	1.94	1.3	0.03	3	38	6	2.05	0/+0.05
WHN 338 030 050 …	■	■	■	M3	0.5	6.9	2.38	1.68	0.03	3	38	6	2.5	0/+0.05
WHN 442 040 070 …	■	■	■	M4	0.7	9.2	3.13	2.19	0.03	4	42	6	3.3	0/+0.06
WHN 442 050 080 …	■	■	■	M5	0.8	11.5	3.98	2.92	0.03	4	42	6	4.2	0/+0.07

* z: Number of teeth

Application recommendation 428

	Steel unalloyed			Steel low alloyed			Steel high alloyed		
Hardness value (HB) / (HRC)	125–300 HB			180–250 HB			200–350 HB		
Category	I			II			III		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	20–120	–	–	20–100	–	–	20–90
UHM 20 HX	–	–	30–160	–	–	30–140	–	–	30–130
UHM 20 TX+	–	–	–	–	–	–	–	–	30–100

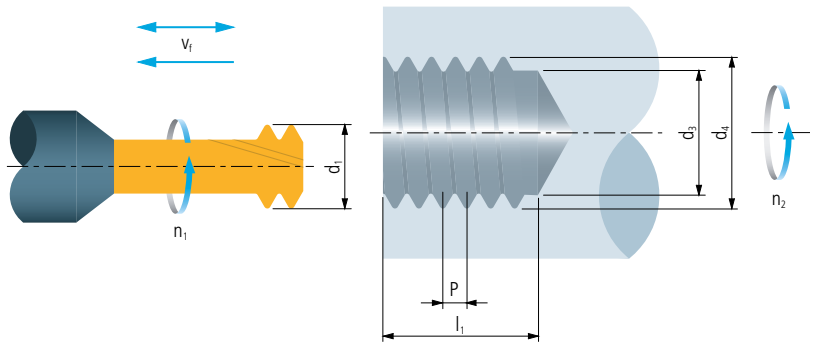
	Stainless steel			Stainless steel			Titanium		
Hardness value (HB) / (HRC)	180–220 HB			220–330 HB			–		
Category	V			VI			IV		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	20–80	–	–	20–60	–	–	20–70
UHM 20 HX	–	–	30–120	–	–	30–100	–	–	30–100
UHM 20 TX+	–	–	30–100	–	–	30–80	–	–	30–80

	Aluminum			Brass / Lead-free brass			Hard materials		
Hardness value (HB) / (HRC)	60–130 HB			–			45–70 HRC		
Category	VII			VIII			X		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 20	–	–	50–220	–	–	30–110	–	–	–
UHM 20 HX	–	–	60–350	–	–	50–180	–	–	–
UHM 20 TX+	–	–	–	–	–	–	–	–	15–40

Legend ..... 6…

Designation		Steel unalloyed	Steel low alloyed	Steel high alloyed	Stainless steel	Titanium	Aluminum / Synthetics	Brass / Lead-free brass	Hard materials
	P	f_z (mm)	f_z (mm)	f_z (mm)	f_z (mm)	f_z (mm)	f_z (mm)	f_z (mm)	f_z (mm)
WHS …	0.25	0.004–0.008	0.004–0.008	0.003–0.006	0.003–0.006	0.003–0.006	0.004–0.011	0.004–0.008	0.003–0.006
	0.3	0.004–0.010	0.004–0.010	0.003–0.007	0.003–0.007	0.003–0.007	0.005–0.013	0.004–0.010	0.003–0.007
	0.35	0.004–0.011	0.004–0.011	0.004–0.008	0.004–0.008	0.004–0.008	0.006–0.015	0.004–0.011	0.004–0.008
	0.4	0.005–0.013	0.005–0.013	0.004–0.010	0.004–0.010	0.004–0.010	0.007–0.021	0.005–0.013	0.004–0.010
	0.45	0.006–0.015	0.006–0.015	0.004–0.011	0.004–0.011	0.004–0.011	0.008–0.026	0.006–0.015	0.004–0.011
	0.5	0.007–0.021	0.007–0.021	0.005–0.013	0.005–0.013	0.005–0.013	0.010–0.030	0.007–0.021	0.005–0.013
	0.6	0.008–0.026	0.008–0.026	0.006–0.015	0.006–0.015	0.006–0.015	0.012–0.033	0.008–0.026	0.006–0.015
	0.7	0.010–0.030	0.010–0.030	0.007–0.021	0.007–0.021	0.007–0.021	0.015–0.035	0.010–0.030	0.007–0.021
	0.75	0.012–0.033	0.012–0.033	0.010–0.026	0.010–0.026	0.010–0.026	0.018–0.040	0.012–0.033	0.010–0.026
	0.8	0.015–0.035	0.015–0.035	0.012–0.030	0.012–0.030	0.012–0.030	0.020–0.045	0.015–0.035	0.012–0.030
WHL …	0.25	0.003–0.006	0.003–0.006	0.002–0.004	0.002–0.004	0.002–0.004	0.004–0.008	0.003–0.006	0.002–0.004
	0.3	0.003–0.007	0.003–0.007	0.002–0.005	0.002–0.005	0.002–0.005	0.004–0.010	0.003–0.007	0.002–0.005
	0.35	0.004–0.008	0.004–0.008	0.003–0.006	0.003–0.006	0.003–0.006	0.004–0.011	0.004–0.008	0.003–0.006
	0.4	0.004–0.010	0.004–0.010	0.003–0.007	0.003–0.007	0.003–0.007	0.005–0.013	0.004–0.010	0.003–0.007
	0.45	0.004–0.011	0.004–0.011	0.004–0.008	0.004–0.008	0.004–0.008	0.006–0.015	0.004–0.011	0.004–0.008
	0.5	0.005–0.013	0.005–0.013	0.004–0.010	0.004–0.010	0.004–0.010	0.007–0.021	0.005–0.013	0.004–0.010
	0.6	0.006–0.015	0.006–0.015	0.004–0.011	0.004–0.011	0.004–0.011	0.008–0.026	0.006–0.015	0.004–0.011
	0.7	0.007–0.021	0.007–0.021	0.005–0.013	0.005–0.013	0.005–0.013	0.010–0.030	0.007–0.021	0.005–0.013
	0.75	0.008–0.026	0.008–0.026	0.006–0.015	0.006–0.015	0.006–0.015	0.012–0.033	0.008–0.026	0.006–0.015
	0.8	0.010–0.030	0.010–0.030	0.007–0.021	0.007–0.021	0.007–0.021	0.015–0.035	0.010–0.030	0.007–0.021
WHA …	0.25	0.004–0.011	0.004–0.011	0.004–0.008	0.004–0.008	0.004–0.008	0.006–0.015	0.004–0.011	0.004–0.008
	0.3	0.005–0.013	0.005–0.013	0.004–0.010	0.004–0.010	0.004–0.010	0.007–0.021	0.005–0.013	0.004–0.010
	0.35	0.006–0.015	0.006–0.015	0.004–0.011	0.004–0.011	0.004–0.011	0.008–0.026	0.006–0.015	0.004–0.011
	0.4	0.007–0.021	0.007–0.021	0.005–0.013	0.005–0.013	0.005–0.013	0.010–0.030	0.007–0.021	0.005–0.013
	0.45	0.008–0.026	0.008–0.026	0.006–0.015	0.006–0.015	0.006–0.015	0.012–0.033	0.008–0.026	0.006–0.015
	0.5	0.010–0.030	0.010–0.030	0.007–0.021	0.007–0.021	0.007–0.021	0.015–0.035	0.010–0.030	0.007–0.021
	0.6	0.012–0.033	0.012–0.033	0.008–0.026	0.008–0.026	0.008–0.026	0.018–0.040	0.012–0.033	0.008–0.026
	0.7	0.015–0.035	0.015–0.035	0.010–0.030	0.010–0.030	0.010–0.030	0.020–0.045	0.015–0.035	0.010–0.030
	0.75	0.018–0.040	0.018–0.040	0.012–0.033	0.012–0.033	0.012–0.033	0.025–0.050	0.018–0.040	0.012–0.033
	0.8	0.020–0.045	0.020–0.045	0.015–0.035	0.015–0.035	0.015–0.035	0.030–0.060	0.020–0.045	0.015–0.035
WHB …	0.25	0.004–0.008	0.004–0.008	0.003–0.006	0.003–0.006	0.003–0.006	0.004–0.011	0.004–0.008	0.003–0.006
	0.3	0.004–0.010	0.004–0.010	0.003–0.007	0.003–0.007	0.003–0.007	0.005–0.013	0.004–0.010	0.003–0.007
	0.35	0.004–0.011	0.004–0.011	0.004–0.008	0.004–0.008	0.004–0.008	0.006–0.015	0.004–0.011	0.004–0.008
	0.4	0.005–0.013	0.005–0.013	0.004–0.010	0.004–0.010	0.004–0.010	0.007–0.021	0.005–0.013	0.004–0.010
	0.45	0.006–0.015	0.006–0.015	0.004–0.011	0.004–0.011	0.004–0.011	0.008–0.026	0.006–0.015	0.004–0.011
	0.5	0.007–0.021	0.007–0.021	0.005–0.013	0.005–0.013	0.005–0.013	0.010–0.030	0.007–0.021	0.005–0.013
	0.6	0.008–0.026	0.008–0.026	0.006–0.015	0.006–0.015	0.006–0.015	0.012–0.033	0.008–0.026	0.006–0.015
	0.7	0.010–0.030	0.010–0.030	0.007–0.021	0.007–0.021	0.007–0.021	0.015–0.035	0.010–0.030	0.007–0.021
	0.75	0.012–0.033	0.012–0.033	0.008–0.026	0.008–0.026	0.008–0.026	0.018–0.040	0.012–0.033	0.008–0.026
	0.8	0.015–0.035	0.015–0.035	0.010–0.030	0.010–0.030	0.010–0.030	0.020–0.045	0.015–0.035	0.010–0.030
WHC … **WHM …** **WHN …**	0.25	0.003–0.006	0.003–0.006	0.002–0.004	0.002–0.004	0.002–0.004	0.004–0.008	0.003–0.006	0.002–0.004
	0.3	0.003–0.007	0.003–0.007	0.002–0.005	0.002–0.005	0.002–0.005	0.004–0.010	0.003–0.007	0.002–0.005
	0.35	0.004–0.008	0.004–0.008	0.003–0.006	0.003–0.006	0.003–0.006	0.004–0.011	0.004–0.008	0.003–0.006
	0.4	0.004–0.010	0.004–0.010	0.003–0.007	0.003–0.007	0.003–0.007	0.005–0.013	0.004–0.010	0.003–0.007
	0.45	0.004–0.011	0.004–0.011	0.004–0.008	0.004–0.008	0.004–0.008	0.006–0.015	0.004–0.011	0.004–0.008
	0.5	0.005–0.013	0.005–0.013	0.004–0.010	0.004–0.010	0.004–0.010	0.007–0.021	0.005–0.013	0.004–0.010
	0.6	0.006–0.015	0.006–0.015	0.004–0.011	0.004–0.011	0.004–0.011	0.008–0.026	0.006–0.015	0.004–0.011
	0.7	0.007–0.021	0.007–0.021	0.005–0.013	0.005–0.013	0.005–0.013	0.010–0.030	0.007–0.021	0.005–0.013
	0.75	0.010–0.026	0.010–0.026	0.006–0.015	0.006–0.015	0.006–0.015	0.012–0.033	0.010–0.026	0.006–0.015
	0.8	0.012–0.030	0.012–0.030	0.007–0.021	0.007–0.021	0.007–0.021	0.015–0.035	0.012–0.030	0.007–0.021
WHD …	0.25	0.002–0.004	0.002–0.004	0.002–0.004	0.002–0.004	0.002–0.004	0.003–0.006	0.002–0.004	0.002–0.004
	0.3	0.002–0.005	0.002–0.005	0.002–0.004	0.002–0.004	0.002–0.004	0.003–0.007	0.002–0.005	0.002–0.004
	0.35	0.003–0.006	0.003–0.006	0.002–0.005	0.002–0.005	0.002–0.005	0.004–0.008	0.003–0.006	0.002–0.005
	0.4	0.003–0.007	0.003–0.007	0.002–0.005	0.002–0.005	0.002–0.005	0.004–0.010	0.003–0.007	0.002–0.005
	0.45	0.004–0.008	0.004–0.008	0.003–0.006	0.003–0.006	0.003–0.006	0.004–0.011	0.004–0.008	0.003–0.006
	0.5	0.004–0.010	0.004–0.010	0.003–0.007	0.003–0.007	0.003–0.007	0.005–0.013	0.004–0.010	0.003–0.007
	0.6	0.004–0.011	0.004–0.011	0.004–0.008	0.004–0.008	0.004–0.008	0.006–0.015	0.004–0.011	0.004–0.008
	0.7	0.005–0.013	0.005–0.013	0.004–0.010	0.004–0.010	0.004–0.010	0.007–0.021	0.005–0.013	0.004–0.010
	0.75	0.006–0.015	0.006–0.015	0.004–0.011	0.004–0.011	0.004–0.011	0.008–0.026	0.006–0.015	0.004–0.011
	0.8	0.007–0.021	0.007–0.021	0.005–0.013	0.005–0.013	0.005–0.013	0.010–0.030	0.007–0.021	0.005–0.013

Legend ..... 6…



$$v_f = z \cdot f_z \cdot n_1$$

$$n_1 = \frac{v_c \cdot 1000}{\pi \cdot d_1}$$

$$n_2 = \frac{v_f}{\pi \cdot d_1}$$

Explanation

v_f	Feed (mm/min)
d_1	Tool diameter (mm)
n_1	Tool revolutions (rev/min)
d_4	Work piece diameter (mm)
n_2	Revolutions (rev/min)
v_c	Cutting speed (m/min)
P	Pitch (mm)
l_1	Length of one milling pass (mm)
z	Number of teeth
d_3	Drilling diameter (mm)
f_z	Feed per tooth (mm)

Determine the drilling diameter

For the preparation of drilling before thread whirling, it is necessary to know at first the tolerance of the desired thread. To avoid overload of the tool the diameter must not exceed the max. diameter as mentioned in the following table.

Example: M 1.4, pitch 0.3, tolerance desired of the thread 6H on high level (1.11)
Diameter of the hole to be drilled min = 1.11 – (2 × 0.04) 1.03 mm minimum

multidec®-GRAVER

Engraving is a chip-removing procedure for which ornaments, text and decorations are cut into the material. The removal of the material creates a surface structure which visually stands out against the background. Engravings manufactured in this way have the advantage of greater durability than other procedures.
The product range includes standardised, finished-ground carbide gravers which provide extremely good performance in all materials and also pre-ground semifinished products for grinding yourself.



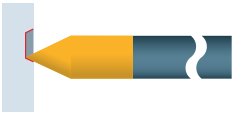
Advantages:
– Standardised tools with point angle of 30° for engraving from 0.2 to 2 mm
– Pre-ground blanks, with lapped chip surface, available for individually grindable tools
– Sharp cutting edges
– Reliable process with long tool life

Overview – multidec®-GRAVER

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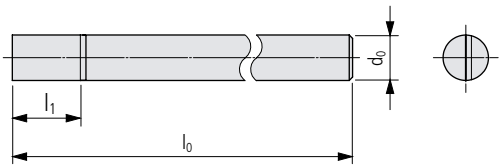


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Blank



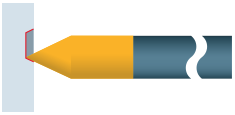


FGA …

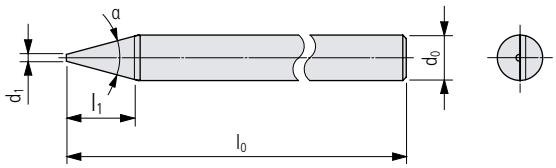
Order designation	Carbide		18 Dimensions									
	○	●										
	○	●										
	○	●										
	●	–										
	–	○										
	UHM 20	UHM 20 TX+	l_1	l_0	d_0							
PREMIUM-LINE												
FGA 020 032 …	■		3	32	2							
FGA 025 032 …	■		4	32	2.5							
FGA 030 036 …	■		5	36	3							
FGA 040 042 …	■		6	42	4							
FGA 050 050 …	■		8	50	5							
FGA 060 060 …	■		10	60	6							
FGA 080 060 …	■		12	60	8							
FGA 100 060 …	■		15	60	10							

FGB …

Order designation	Carbide		18 Dimensions									
	○	●										
	○	●										
	○	●										
	●	–										
	–	○										
	UHM 20	UHM 20 TX+	l_1	l_0	d_0							
PREMIUM-LINE												
FGB 020 042 …	■		4	42	2							
FGB 025 042 …	■		5	42	2.5							
FGB 030 050 …	■		6	50	3							
FGB 040 060 …	■		8	60	4							
FGB 050 075 …	■		10	75	5							
FGB 060 100 …	■		12	100	6							
FGB 080 100 …	■		16	100	8							
FGB 100 100 …	■		20	100	10							







FGQ …

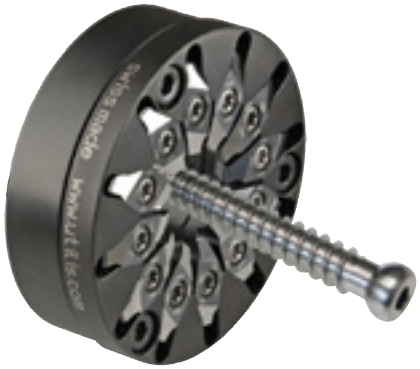
Order designation	Carbide		Dimensions									
	○	●										
	○	●										
	○	●										
	●	–										
	–	○										
	UHM 20	UHM 20 TX+	d_1	α	l_1	l_0	d_0					
PREMIUM-LINE												
FGQ 020 032 …	■	■	0.2	30°	3	32	2					
FGQ 025 032 …	■	■	0.4	30°	4	32	2.5					
FGQ 030 036 …	■	■	0.5	30°	5	36	3					
FGQ 040 042 …	■	■	0.6	30°	6	42	4					
FGQ 050 050 …	■	■	0.8	30°	8	50	5					
FGQ 060 060 …	■	■	1	30°	10	60	6					
FGQ 080 060 …	■	■	1.5	30°	12	60	8					
FGQ 100 060 …	■	■	2	30°	15	60	10					

FGR …

Order designation	Carbide		Dimensions									
	○	●										
	○	●										
	○	●										
	●	–										
	–	○										
	UHM 20	UHM 20 TX+	d_1	α	l_1	l_0	d_0					
PREMIUM-LINE												
FGR 020 042 …	■	■	0.2	30°	4	42	2					
FGR 025 042 …	■	■	0.4	30°	5	42	2.5					
FGR 030 050 …	■	■	0.5	30°	6	50	3					
FGR 040 060 …	■	■	0.6	30°	8	60	4					
FGR 050 075 …	■	■	0.8	30°	10	75	5					
FGR 060 100 …	■	■	1	30°	12	100	6					
FGR 080 100 …	■	■	1.5	30°	16	100	8					
FGR 100 100 …	■	■	2	30°	20	100	10					

multidec®-WHIRLING

multidec®-WHIRLING is a multiple cutter thread whirling tool system designed to significantly improve productivity – essential in today's mass production. Unlike single point threading which requires multiple passes, thread whirling produces a finished thread free from burr in a single pass. The use of up to 12 cutting inserts greatly reduces machining time.
For optimized use, UTILIS supplies variants for specific machines with different cutting diameters and lengths.

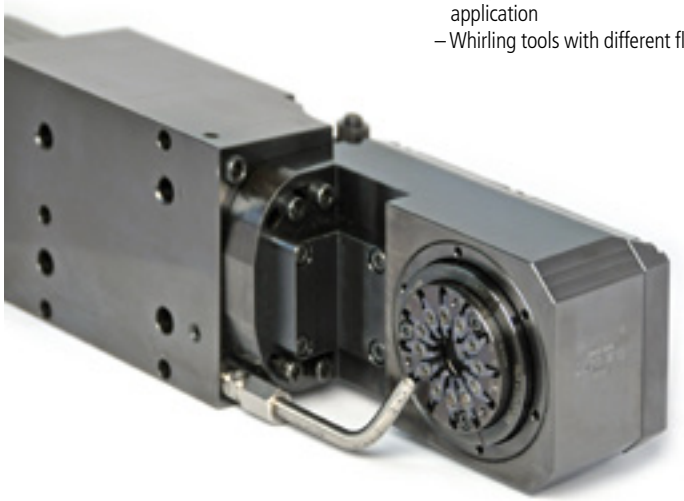


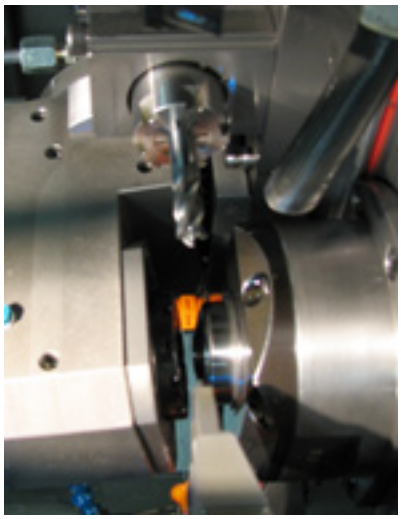




The inserts used in multidec®-WHIRLING are based on those in multidec®-CUT. This groove/lathe tool system is ideal for Swiss type turning machines with a maximum bar passage diameter of 10 mm. The inserts have two cutting edges that are screwed onto the holders with a repeat accuracy of < 0.01 mm.

Specialities and advantage:
– Up to 12 inserts increase productivity and reduce vibration considerably
– Little concentricity tolerance and high exchange accuracy of inserts < ±0.005 mm guarantee threads of high-quality
– Quick and simple change of the Whirling tool reduces set up time
– Threads without cutting ridge decrease re-machining of parts
– Using UTILIS standard blanks allows short delivery time and best possible coating for demanded application
– Whirling tools with different flight circles and multi start threads available





Overview – multidec®-WHIRLING

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Whirling tools

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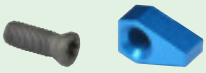
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MWT… (Type A)



xModular-System
Flexible, two-part system, which reduces set-up time with the fast change whirling ring (the adapter remains in the whirling device); guaranteed concentricity of ±0.005mm.

MWT… (Type B)

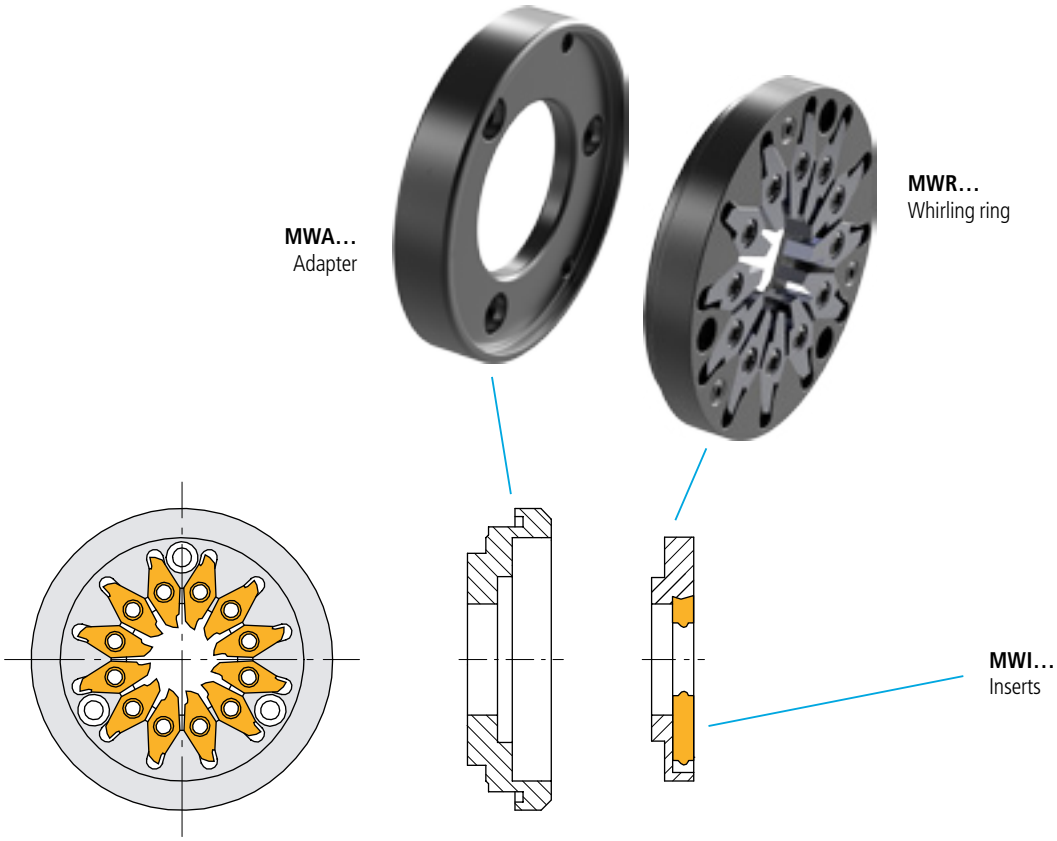


Mono-system
Highly compact single component system. This enables high concentricity of ±0.005mm to be achieved.

MWT… (Type C)



QuickChange-System
Unlike the xModular-System the whirling ring is removed or inserted by rotation. Here too, the guaranteed concentricity of ±0.005mm is maintained.





MWT… (HSK…)



MWT… (PSC…)



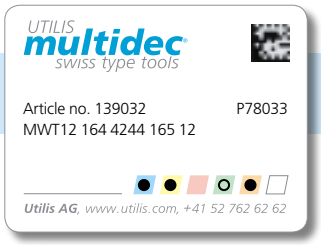
MWT… (ER…)

The designation of every part includes all important information according to the follwing system:

Whirling head

MWT12 164 4244 165 12

- Number of inserts (z)
- Length (L_T) (e.g. 16.5 mm)
- Maximum outer diameter (D_M)
- Diameter of whirling unit connection (D_A)
- Insert width (mm)
- Insert type
- Flight circle (D_F)
- Product line

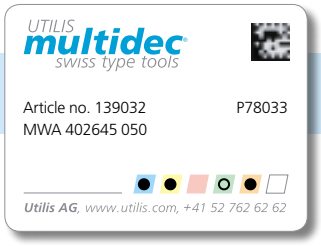


*

Adapter

MWA 402645 050

- Length (L_A) (e.g. 5 mm)
- Maximum outer diameter (D_K)
- Diameter of whirling ring connection
- Diameter of whirling unit side ($D_{A)}$
- Product line

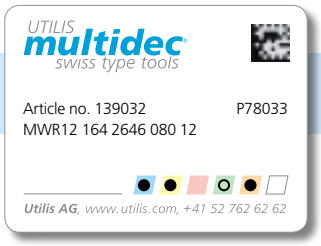


*

Whirling ring

MWR12 164 2646 080 12

- Number of inserts (z)
- Length (L_T) (e.g. 8 mm)
- Maximum outer diameter (D_M)
- Diameter of adapter connection
- Insert width (mm)
- Insert type
- Flight circle (D_F)
- Product line

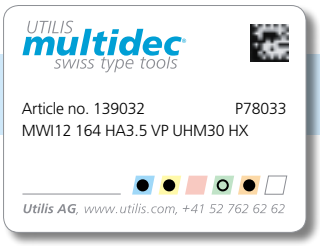


*

Inserts

MWI12 164 HA3.5 VP UHM10 HX

- MWI12 — Product line
- 164 — Flight circle
- HA3.5 — Insert type
- VP — Insert width (mm)
- UHM10 — Geometry
- HX — Cutting material
- Coating

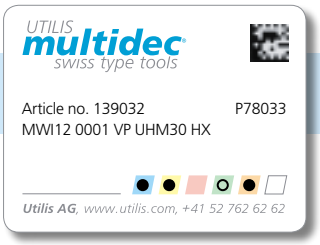


*

Special inserts

MWI12 0001 VP UHM10 HX

- MWI12 — Product line
- 0001 — Flight circle
- VP — Special execution
- UHM10 — Geometry
- HX — Cutting material
- Coating



*

* Packaging Information 6

Machine		Driven tool holder			
Manufacturer	Type	Manufacturer	Type		
			A	B	C
			442 …	468 …	474 …
BENZINGER	TNI	WTO		■	
CITIZEN	A 20	CITIZEN		■	
		PCM	■		
	A 2 20	CITIZEN		■	
	A 3 20	CITIZEN		■	
	A 32	CITIZEN		■	
	A 2 32	CITIZEN		■	
	C 12	JARVIS	■		
	C 16	JARVIS	■		
		MADAULA	■		
		PCM	■		■
		W & F		■	
	C 20	PCM	■	■	
	C 32	CITIZEN		■	
		PCM	■	■	
	K 12	MADAULA		■	
		PCM		■	
	K 16	MADAULA		■	
		PCM		■	
	L 12 VII	PCM			■
	L 12	PCM	■	■	
	L 16	MADAULA	■		
		PCM	■	■	
		WTO		■	
	L 20	CITIZEN		■	
	L 2 20	CITIZEN		■	
	L 7 20	CITIZEN		■	
		JARVIS	■		
		MADAULA	■		
		PCM	■		
		WTO		■	
		W & F		■	
	L 25	JARVIS	■		
		MADAULA	■		
		PCM	■	■	
	L 32	CITIZEN		■	
		JARVIS	■		
		MADAULA	■		
		PCM	■	■	
	M 12	JARVIS	■		
		MADAULA	■		
		PCM	■		■
	M 16	JARVIS	■		
		MADAULA	■		
		PCM	■		■
		PCM	■		■
	M 4 16	CITIZEN		■	
	M 3 20	CITIZEN		■	
	M 4 20	CITIZEN		■	
	M 20	JARVIS	■		
		MADAULA	■		
		MT	■		
		PCM	■	■	
	M 3 32	CITIZEN		■	
	M 4 32	CITIZEN		■	
	M 32	JARVIS	■		
		MADAULA	■		
		MT	■		
		PCM	■	■	
DAESUNG NOMURA	NN 20	WTO		■	

Machine		Driven tool holder			
Manufacturer	Type	Manufacturer	Type		
			A	B	C
			442 …	468 …	474 …
DMG MORI	NLX 2500	WTO		■	
	SPEED 12|7	PCM	■	■	
	SPEED 20|8	DMG		■	
	SPEED 20|11	DMG		■	
		PCM	■	■	
	SPRINT 20|8	DMG		■	
		MT	■		
	SPRINT 42|10	DMG		■	
DOOSAN	BMT 55	WTO		■	
	PUMA ST 20 G/GS	WTO		■	
	PUMA ST 20	WTO		■	
	PUMA ST 26 G/GS	WTO		■	
	PUMA ST 26	WTO		■	
	PUMA ST 32 G/GS	WTO		■	
	PUMA ST 32	WTO		■	
	PUMA ST 35 G/GS	WTO		■	
	PUMA ST 35	WTO		■	
	PUMA TT 1500	WTO		■	
	PUMA TT 1800 MS	WTO		■	
	PUMA TT 1800 SY	WTO		■	
	PUMA TT MS	WTO		■	
	PUMA TT SY	WTO		■	
	PUMA TT	WTO		■	
	BMT 45	WTO		■	
EMCO	BMT 55	WTO		■	
	Hyperturn 65	WTO		■	
	Maxxturn 65	WTO		■	
GANESH	SL 20	WTO		■	
GOODWAY	SW 20	WTO		■	
	SW 32	WTO		■	
	SW 42	WTO		■	
HANWHA	STL 32	MADAULA	■		
		WTO		■	
	STL 35	MADAULA	■		
		WTO		■	
	STL 38	MADAULA	■		
		WTO		■	
	STL 45	WTO		■	
	XD 12	MADAULA	■		
		WTO		■	
	XD 16	MADAULA	■		
		WTO		■	
	XD 20	MADAULA	■		
		WTO		■	
		W & F		■	
	XD 26	MADAULA	■		
		WTO	■	■	
	XD 32	ALPSTOOL	■		
		WTO		■	
	XD 35	WTO		■	
	XD 38	WTO		■	
	XDI 20	WTO		■	
	XE 20	WTO		■	
	XE 26	WTO		■	
HASEGAWA	JS 1 W	HASEGAWA	■		
JINN FA	JSL 20	JINN FA	■		
LEISTRITZ	LWN 90	LEISTRITZ	■		
MAIER	BASIC ML 20	MAIER	■		

Machine		Driven tool holder			
Manufacturer	Type	Manufacturer	Type		
			A	B	C
			442 …	468 …	474 …
MANURHIN	KMK 426	WTO		■	
	KMK 432	WTO		■	
	KMK 526	WTO		■	
	KMK 532	WTO		■	
	KMK 626	WTO		■	
	KMK 632	WTO		■	
MAZAK	QTN 200 MS	WTO		■	
	QTN 200 MSY	WTO		■	
	QTN 200 M	WTO		■	
	QTN 200 MY	WTO		■	
	QTN 200	WTO		■	
	QTN 250 MS	WTO		■	
	QTN 250 MSY	WTO		■	
	QTN 250 M	WTO		■	
	QTN 250 MY	WTO		■	
	QTN 250	WTO		■	
	SQ 200 M	WTO		■	
	SQ 200	WTO		■	
	SQ 250 M	WTO		■	
	SQ 250	WTO		■	
	SQT 200 MS	WTO		■	
	SQT 200 MSY	WTO		■	
	SQT 200 M	WTO		■	
	SQT 200 MY	WTO		■	
	SQT 200	WTO		■	
	SQT 250 MS	WTO		■	
	SQT 250 MSY	WTO		■	
	SQT 250 M	WTO		■	
	SQT 250 MY	WTO		■	
	SQT 250	WTO		■	
MONNIER+ZAHNER	M 600	MONNIER+ZAHNER	■		
	M 621	MONNIER+ZAHNER	■		
NEXTURN	SA 20	PCM	■		
		WTO		■	
	SA 26	WTO		■	
	SA 32	PCM	■		
		WTO		■	
NOMURA	NN 16	PCM	■		
		MT	■		
		PCM	■		
	NN 20 UB 8	WTO		■	
	NN 32 YB 2	MT	■		

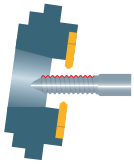
Machine		Driven tool holder			
Manufacturer	Type	Manufacturer	Type		
			A	B	C
			442 …	468 …	474 …
STAR	ECAS 12	AERPIZ	■		
		MADAULA	■		
		STAR	■		
		WTO		■	
	ECAS 20	MADAULA	■		
		PCM		■	
		STAR	■		
		SU-matic	■		
		WTO	■	■	
	ECAS 32	STAR	■		
		WTO	■	■	
	SB 12	STAR	■		
		WTO		■	
	SB 16	WTO		■	
	SB 20	PCH	■		
		STAR	■		
		WTO		■	
	SR 10	MADAULA	■		
		PCM			■
		STAR	■		
		SU-matic	■		
	SR 16	MADAULA	■		
		STAR	■		
		SU-matic	■		
		WTO		■	
	SR 20	alpha ant	■		
		MADAULA	■		
		PCM	■		
		STAR	■		
		SU-matic	■		
		WTO		■	
		W & F		■	
	SR 32	MADAULA	■		
		STAR	■		
		SU-matic	■		
		WTO		■	
	SR 38	STAR	■		
	ST 20	STAR	■		
		WTO	■	■	
	ST 38	WTO	■	■	
		STAR	■		
	SV 12	MADAULA	■		
		STAR	■		
		WTO	■	■	
	SV 20	MADAULA	■		
		PCM	■		
		STAR	■		
		WTO	■	■	
	SV 32	MADAULA	■		
		STAR	■		
		WTO	■	■	
	SV 38	WTO	■	■	
	SW 12 R II	PCM			■
	SW 12	STAR	■		
		WTO		■	
		STAR	■		
		WTO		■	
TAKISAWA	TCY 160	WTO		■	
	TCY 200	WTO		■	

Legend ..... 6…

Machine		Driven tool holder			
Manufacturer	Type	Manufacturer	Type		
			A	B	C
			442 …	468 …	474 …
TORNOS	CT 20	W & F		■	
	DECO 7	TORNOS	■		
	DECO 10	PCM	■		
		TORNOS	■		
		W & F	■		
	DECO 13	MADAULA	■		
		PCM	■		
		TORNOS	■		■
		W & F	■		
	DECO 16	W & F	■		
	DECO 20	ALBERTI UMBERTO	■		
		MADAULA	■		
		PCM	■		
		PIBOMULTI	■		
		TORNOS	■		
		W & F	■		
	DECO 26	MADAULA	■		
		PCM	■		
		PIBOMULTI	■		
		TORNOS	■		■
		W & F	■		
	DECO	WTO		■	
	EvoDECO 10	TORNOS	■		
	EvoDECO 16	MADAULA	■		
		PCM	■		
		TORNOS	■		■
		W & F	■		
	EvoDECO 20	TORNOS	■		■
	EvoDECO 32	TORNOS	■		■
	Gamma 20/6	MADAULA	■		
		TORNOS	■		
		W & F		■	
	MultiALPHA 6x32	TORNOS	■		
	MultiALPHA 8x20	TORNOS	■		
	MultiALPHA 8x28	TORNOS	■		
	MultiDECO 20/6	PIBOMULTI	■		
	MultiSIGMA 8x24	TORNOS	■		
	MultiSIGMA 8x28	TORNOS	■		
	MultiSWISS 6x14	TORNOS	■		
	SIGMA 20	MADAULA	■		
		TORNOS	■		
	SIGMA 32	TORNOS	■		
	SWISS GT 13	TORNOS	■		
	SWISS GT 26	TORNOS		■	
	SWISS ST 26	TORNOS	■		
TRAUB	TNK 36	TRAUB		■	
	TNL 12	TRAUB		■	
	TNL 18	TRAUB		■	
	TNL 26	TRAUB	■	■	
	TNL 32	TRAUB		■	

Machine		Driven tool holder			
Manufacturer	Type	Manufacturer	Type		
			A	B	C
			442 …	468 …	474 …
TSUGAMI	B 0265	WTO		■	
	B 0266	WTO		■	
	B 0325	TSUGAMI	■		
		WTO		■	
	B 0326	TSUGAMI	■		
		WTO		■	
	B 0385	TSUGAMI	■		
		WTO		■	
	BH 20	TSUGAMI	■		
	BH 207	TSUGAMI	■		
	BH 38	TSUGAMI	■		
	HS 207	MADAULA	■		
	NP 16	PCM	■	■	
	S 205	MADAULA	■		
		TSUGAMI	■		
		WTO		■	
	S 206	SONGGIA	■		
		MADAULA	■		
		TSUGAMI	■		
		WTO		■	
	SS 20	TSUGAMI	■		
		WTO		■	
	SS 26	WTO		■	
	SS 32	TSUGAMI	■		
		WTO		■	
		UTILIS		■	

Legend 6…

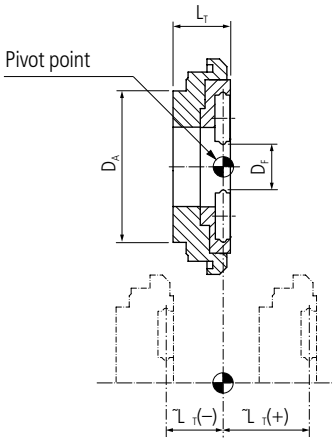


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…

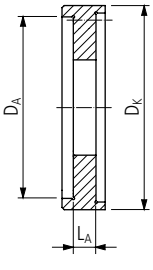


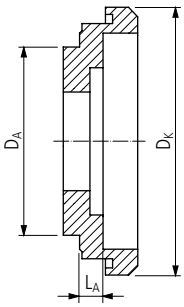
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
AERPIZ	0M171-00	■	MWT06 164 4040 111 09	■	6	40	40	40	9	4	11.1	0
			MWT06 164 4040 116 09	■	6	40	40	40	9	4.5	11.6	0.4
			MWT12 164 4045 120 09	■	12	40	45	46	9	4	12	0
			MWT12 164 4045 153 09	■	12	40	45	46	9	7.3	15.3	3.3
			MWT12 164 4045 163 09	■	12	40	45	46	9	8.3	16.3	4.3
			MWT12 164 4045 170 09	■	12	40	45	46	9	9	17	5
			MWT12 164 4045 190 09	■	12	40	45	46	9	11	19	7
			MWT12 164 4045 205 09	■	12	40	45	46	9	12.5	20.5	8.5
			MWT12 164 4045 240 09	■	12	40	45	46	9	16	24	12
			MWT12 164 4045 120 12	■	12	40	45	46	12	4	12	0
			MWT12 164 4045 153 12	■	12	40	45	46	12	7.3	15.3	3.3
			MWT12 164 4045 170 12	■	12	40	45	46	12	9	17	5
			MWT12 164 4045 205 12	■	12	40	45	46	12	12.5	20.5	8.5
			MWT12 164 4045 240 12	■	12	40	45	46	12	16	24	12
			MWT15 164 4045 120 09	■	15	40	45	46	9	4	12	0
			MWT15 164 4045 190 09	■	15	40	45	46	9	11	19	7
ALBERTI UMBERTO	ATO.DE.20.0800	■	MWT12 164 4055 103 09	■	12	40	55	55	9	2.3	10.3	0
			MWT12 164 4055 115 09	■	12	40	55	55	9	3.5	11.5	1.2
			MWT12 164 4055 153 09	■	12	40	55	55	9	7.3	15.3	5
			MWT12 164 4055 103 12	■	12	40	55	55	12	2.3	10.3	0
			MWT12 164 4055 115 12	■	12	40	55	55	12	3.5	11.5	1.2
			MWT12 164 4055 153 12	■	12	40	55	55	12	7.3	15.3	5
ALPSTOOL	ZZA08-13000	■	MWT12 164 4546 145 09	■	12	45	45	46	9	6.5	14.5	1
BECHLER	3281-Y691	■	MWT06 164 4057 105 09	■	6	40	57	46	9	2.5	10.5	0
			MWT06 164 4057 155 09	■	6	40	57	46	9	7.5	15.5	5
			MWT06 164 4057 205 09	■	6	40	57	46	9	12.5	20.5	10
			MWT12 164 4057 105 09	■	12	40	57	46	9	2.5	10.5	0
			MWT12 164 4057 175 09	■	12	40	57	46	9	9.5	17.5	7
			MWT12 164 4057 205 09	■	12	40	57	46	9	12.5	20.5	10
			MWT12 164 4057 105 12	■	12	40	57	46	12	2.5	10.5	0
			MWT12 164 4057 175 12	■	12	40	57	46	12	9.5	17.5	7
			MWT12 164 4057 205 12	■	12	40	57	46	12	12.5	20.5	10
			MWT12 164 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
			MWT12 166 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
			MWT15 164 4057 105 09	■	15	40	57	46	9	2.5	10.5	0
			MWT15 164 4057 105 12	■	15	40	57	46	12	2.5	10.5	0
			MWT15 164 4057 175 12	■	15	40	57	46	12	9.5	17.5	7

* z: Number of teeth

Other versions on request

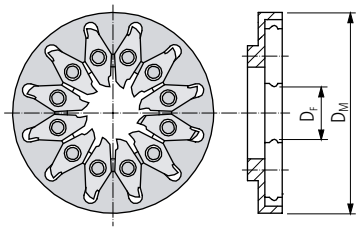






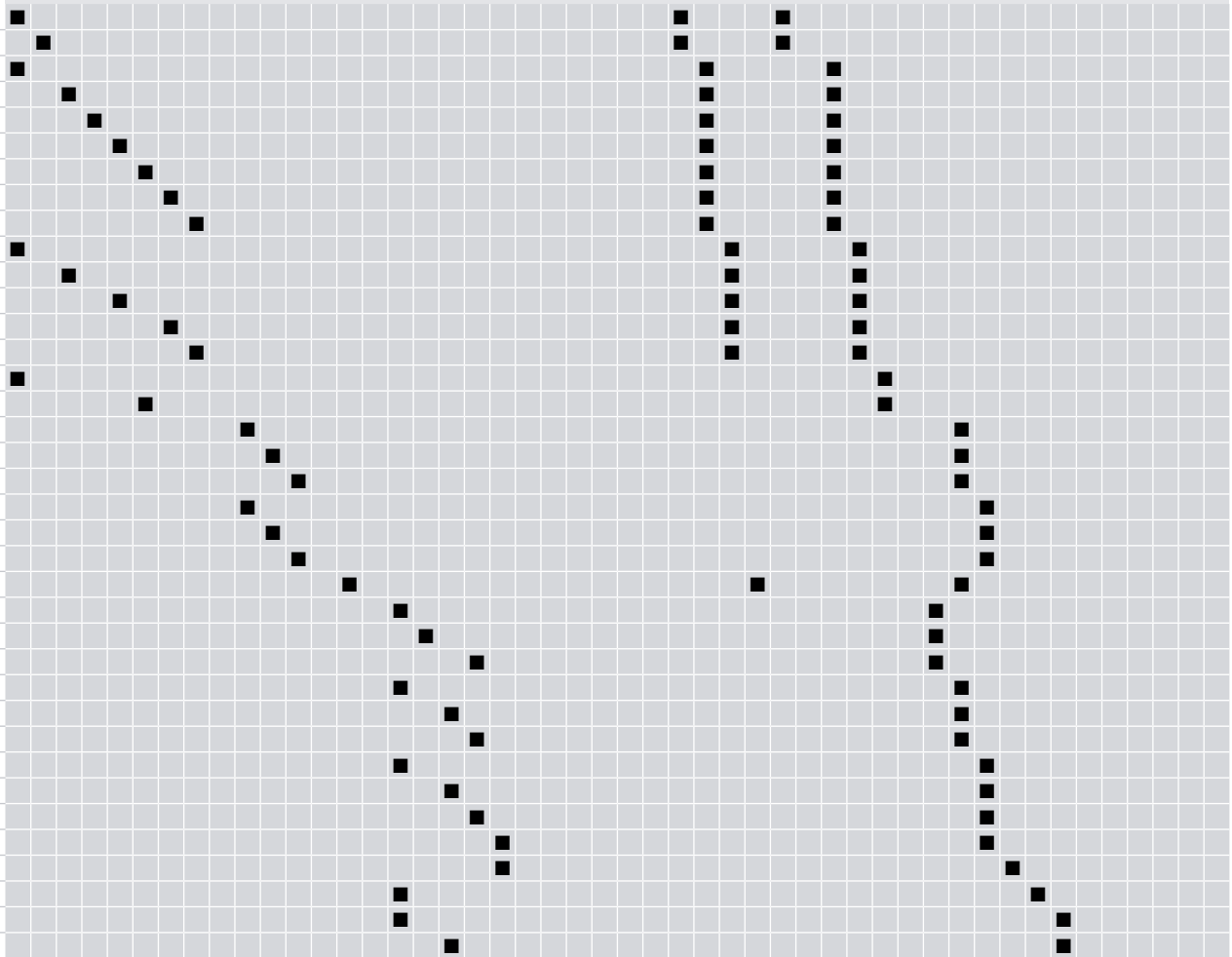
MWA…

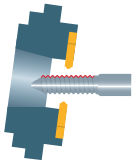




MWR…

Adapter	Whirling ring
MWA 402540 040	MWR06 164 2540 091 09
MWA 402540 045	MWR12 164 2540 091 09
MWA 402540 073	MWR12 164 2540 091 12
MWA 402540 083	MWR06 164 2546 080 09
MWA 402540 090	MWR08 164 2546 080 09
MWA 402540 110	MWR12 164 2546 080 09
MWA 402540 125	MWR12 164 2546 080 12
MWA 402540 160	MWR15 164 2546 080 09
MWA 402655 023	MWR06 164 2646 080 09
MWA 402655 035	MWR12 164 2646 080 09
MWA 402655 073	MWR12 164 2646 080 12
MWA452645 065	MWR12 166 2646 090 12
MWA 402657 025	MWR15 164 2646 080 09
MWA 402657 075	MWR15 164 2646 080 12
MWA 402657 095	
MWA 402657 125	
MWA 402657 155	



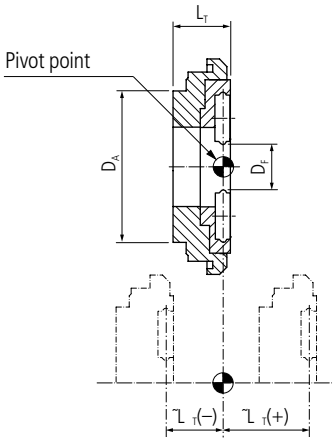


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



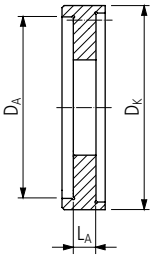
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
BeWell	SMSW - 120 BT	■	MWT08 164 4046 160 09	■	0	0	0	0	0	0	0	0
			MWT12 164 4046 115 09	■	12	40	46	46	9	3.5	11.5	0
			MWT12 164 4046 130 09	■	12	40	46	46	9	5	13	1.5
			MWT12 164 4046 240 09	■	12	40	46	46	9	16	24	12.5
			MWT12 164 4046 280 09	■	12	40	46	46	9	20	28	16.5
			MWT12 164 4046 115 12	■	12	40	46	46	12	3.5	11.5	0
			MWT12 164 4046 130 12	■	12	40	46	46	12	5	13	1.5
			MWT12 164 4046 190 12	■	12	40	46	46	12	11	19	7.5
			MWT12 164 4046 240 12	■	12	40	46	46	12	16	24	12.5
			MWT12 164 4046 280 12	■	12	40	46	46	12	20	28	16.5
			MWT15 164 4046 130 09	■	15	40	46	46	9	5	13	1.5
			MWT15 164 4046 240 09	■	15	40	46	46	9	16	24	12.5
			MWT15 164 4046 240 12	■	15	40	46	46	12	16	24	12.5
DMG	45x15	■	MWT12 164 4046 115 09	■	12	40	46	46	9	3.5	11.5	0
			MWT12 164 4046 115 12	■	12	40	46	46	12	3.5	11.5	0
HASEGAWA	JS-1W	■	MWT12 164 9494 250 09	■	12	94	94	94	9	22.5	25	0
JARVIS	LTR0128	■	MWT12 164 4053 121 09	■	12	40	53	46	9	4.3	12.1	0
	LTR0132	■	MWT12 164 4053 131 09	■	12	40	53	46	9	5.3	13.1	1
	LTR0139	■	MWT12 164 4053 121 12	■	12	40	53	46	12	4.3	12.1	0
	LTR0168	■	MWT12 164 4053 131 12	■	12	40	53	46	12	5.3	13.1	1
	LTR0183	■	MWT15 164 4053 121 09	■	15	40	53	46	9	4.3	12.1	0
	CHS-1B6	■										
JARVIS	LTR0131	■	MWT12 164 3746 121 09	■	12	37	46	46	9	4.1	12.1	0
	LTR0169	■	MWT12 164 3746 221 09	■	12	37	46	46	9	14.1	22.1	10
	LTR0170	■	MWT12 164 3746 121 12	■	12	37	46	46	12	4.1	12.1	0
	CHS-2B6	■	MWT12 164 3746 221 12	■	12	37	46	46	12	14.1	22.1	10
			MWT12 166 3746 131 12	■	12	37	46	46	12	4.1	13.1	0
			MWT12 166 3746 231 12	■	12	37	46	46	12	4.1	23.1	0
JINN FA	STR 260100	■	MWT12 164 4244 155 09	■	12	42	42	44	9	7.5	15.5	0
			MWT12 164 4244 155 12	■	12	42	42	44	12	7.5	15.5	0
LEISTRITZ	WR796	■	MWT15 164 4294 250 09	■	15	42	94	94	9	22	25	0
	WR 926	■	MWT25 164 152170 200 12	■	25	152	170	58	12	10	20	-

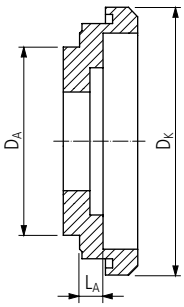
* z: Number of teeth

Other versions on request

Continuation

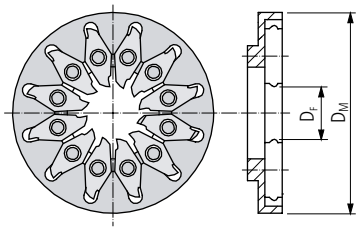






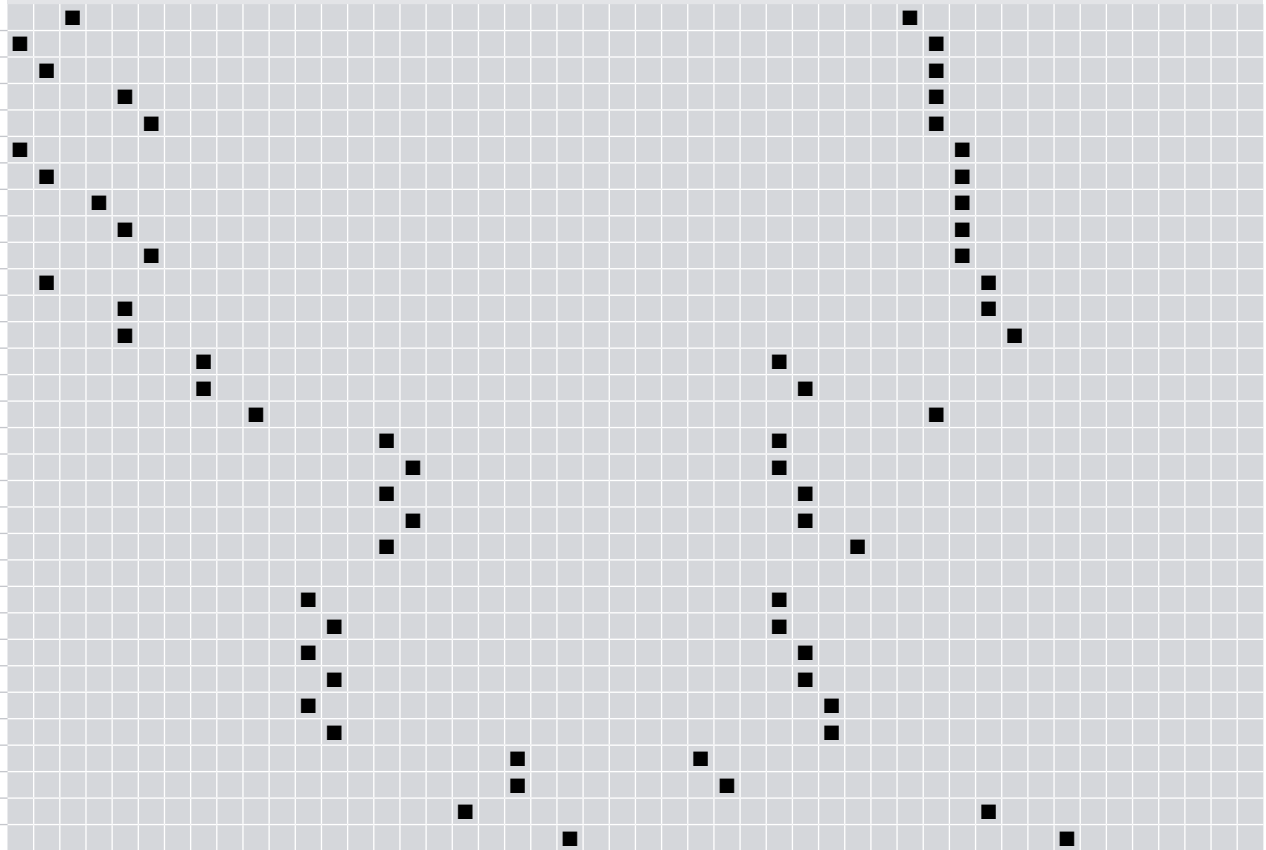
MWA…

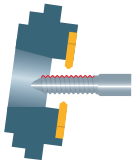




MWR…

Adapter	Whirling ring
MWA 404245 035	MWR12 164 2644 080 09
MWA 404245 050	MWR12 164 2644 080 12
MWA 404245 080	MWR12 164 2646 080 09
MWA 404245 110	MWR12 164 2646 080 12
MWA 404245 160	MWR12 166 2646 090 12
MWA 404245 200	MWR15 164 2646 080 09
MWA 402645 035	MWR08 164 4246 055 09
MWA 944294 225	MWR12 164 4246 055 09
MWA 372646 041	MWR12 164 4246 055 12
MWA 372646 141	MWR15 164 4246 055 09
MWA 402652 043	MWR15 164 4246 055 12
MWA 402652 053	MWR25 164 3958 100 12
MWA 423294 220	
MWA 422642 075	
MWA 152391 70 100	



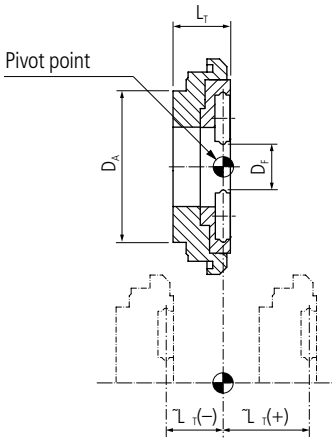


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



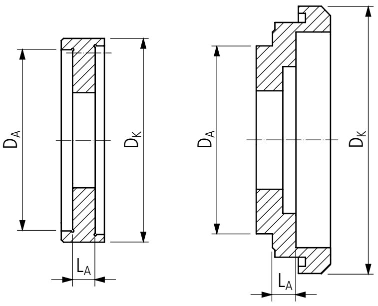
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
	1110.00055	■	MWT08 164 4046 160 09	■	0	0	0	0	0	0	0	0
	CZ.035.M12/M16	■	MWT12 164 4046 115 09	■	12	40	46	46	9	3.5	11.5	0
	CZ.035.M12/M16T	■	MWT12 164 4046 130 09	■	12	40	46	46	9	5	13	1.5
	CZ.035.M12/M16T-15	■	MWT12 164 4046 240 09	■	12	40	46	46	9	16	24	12.5
	CZ.035.M20/M32T	■	MWT12 164 4046 280 09	■	12	40	46	46	9	20	28	16.5
	CZ.035.M20/M32T	■	MWT12 164 4046 115 12	■	12	40	46	46	12	3.5	11.5	0
	P.035.00063	■	MWT12 164 4046 130 12	■	12	40	46	46	12	5	13	1.5
			MWT12 164 4046 190 12	■	12	40	46	46	12	11	19	7.5
			MWT12 164 4046 240 12	■	12	40	46	46	12	16	24	12.5
			MWT12 164 4046 280 12	■	12	40	46	46	12	20	28	16.5
			MWT15 164 4046 130 09	■	15	40	46	46	9	5	13	1.5
			MWT15 164 4046 240 09	■	15	40	46	46	9	16	24	12.5
			MWT15 164 4046 240 12	■	15	40	46	46	12	16	24	12.5
MADAULA	1110.00065	■	MWT12 164 4055 103 09	■	12	40	55	55	9	2.3	10.3	0
	9999.00444	■	MWT12 164 4055 115 09	■	12	40	55	55	9	3.5	11.5	1.2
	CZ.035.L16/L20	■	MWT12 164 4055 153 09	■	12	40	55	55	9	7.3	15.3	5
	CZ.035.L20N-15	■	MWT12 164 4055 103 12	■	12	40	55	55	12	2.3	10.3	0
	CZ.035.L20X-15	■	MWT12 164 4055 115 12	■	12	40	55	55	12	3.5	11.5	1.2
	CZ.035.L25/L35	■	MWT12 164 4055 153 12	■	12	40	55	55	12	7.3	15.3	5
	DE.035.13/15	■										
	HW.035.XD2-15	■										
	P.035.00002	■										
	P.035.00004	■										
	P.035.00010	■										
	P.035.00014	■										
	P.035.00023	■										
	P.035.00062	■										
	P.035.00066	■										
	P.035.00067	■										
	P.035.00122	■										
	TS.035.S205-15	■										

* z: Number of teeth

Other versions on request

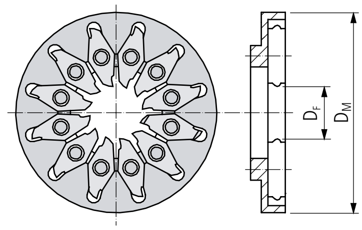
Continuation





MWA…



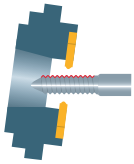


MWR…

	Adapter									Whirling ring						
	MWA 404245 035	MWA 404245 050	MWA 404245 080	MWA 404245 110	MWA 404245 160	MWA 404245 200	MWA 402655 023	MWA 402655 035	MWA 402655 073	MWR12 164 2646 080 09	MWR12 164 2646 080 12	MWR08 164 4246 055 09	MWR12 164 4246 055 09	MWR12 164 4246 055 12	MWR15 164 4246 055 09	MWR15 164 4246 055 12
			■									■				
	■												■			
		■											■			
					■								■			
						■							■			
	■													■		
		■												■		
				■										■		
					■									■		
						■								■		
		■													■	
					■										■	
					■											■
							■			■						
								■		■						
									■	■						
							■				■					
								■			■					
									■		■					

UTILIS multidec® swiss type tools

Legend 6…

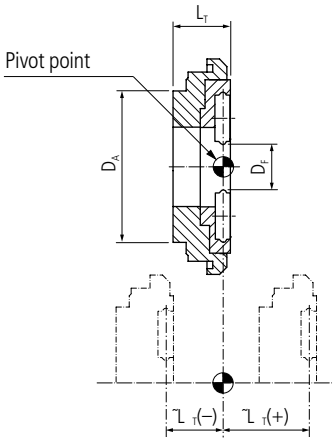


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



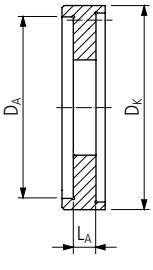
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
MADAULA	CZ.035.C16	■	MWT12 164 3546 169 03	■	12	35	46	46	3	8.9	16.9	0
			MWT12 164 3546 169 09	■	12	35	46	46	9	8.9	16.9	0
			MWT12 164 3546 219 09	■	12	35	46	46	9	13.9	21.9	5
			MWT12 164 3546 169 12	■	12	35	46	46	12	8.9	16.9	0
	DE.035.S20 HW.035.STL HW.035.XD2 P.035.00010 P.035.00014	■ ■ ■ ■ ■	MWT12 164 4548 145 09	■	12	45	48	48	9	6.5	14.5	0
			MWT12 164 4548 240 09	■	12	45	48	48	9	16	24	9.5
			MWT12 164 4548 145 12	■	12	45	48	48	12	6.5	14.5	0
			MWT12 164 4548 240 12	■	12	45	48	48	12	16	24	9.5
			MWT15 164 4548 145 09	■	15	45	48	48	9	6.5	14.5	0
			MWT15 164 4548 145 12	■	15	45	48	48	12	6.5	14.5	0
	P.035.00022	■	MWT12 164 5067 120 09	■	12	50	67	46	9	4	12	0
			MWT12 164 5067 220 09	■	12	50	67	46	9	14	22	10
			MWT12 164 5067 120 12	■	12	50	67	46	12	4	12	0
			MWT12 164 5067 260 12	■	12	50	67	46	12	18	26	14
			MWT15 164 5067 260 09	■	15	50	67	46	9	18	26	14
	P.035.00040 9997.00562	■ ■	MWT12 164 4057 175 09	■	12	40	57	46	9	9.5	17.5	7
			MWT12 164 4057 175 12	■	12	40	57	46	12	9.5	17.5	7
			MWT15 164 4057 175 12	■	15	40	57	46	12	9.5	17.5	7
	P.035.00049 ST.035.34	■ ■	MWT06 164 4040 111 09	■	6	40	40	40	9	4	11.1	0
			MWT06 164 4040 116 09	■	6	40	40	40	9	4.5	11.6	0.4
	1110.00037	■	MWT12 164 4045 120 09	■	12	40	45	46	9	4	12	0
			MWT12 164 4045 153 09	■	12	40	45	46	9	7.3	15.3	3.3
			MWT12 164 4045 163 09	■	12	40	45	46	9	8.3	16.3	4.3
			MWT12 164 4045 170 09	■	12	40	45	46	9	9	17	5
			MWT12 164 4045 190 09	■	12	40	45	46	9	11	19	7
			MWT12 164 4045 205 09	■	12	40	45	46	9	12.5	20.5	8.5
			MWT12 164 4045 240 09	■	12	40	45	46	9	16	24	12
			MWT12 164 4045 120 12	■	12	40	45	46	12	4	12	0
			MWT12 164 4045 153 12	■	12	40	45	46	12	7.3	15.3	3.3
			MWT12 164 4045 170 12	■	12	40	45	46	12	9	17	5
			MWT12 164 4045 205 12	■	12	40	45	46	12	12.5	20.5	8.5
			MWT12 164 4045 240 12	■	12	40	45	46	12	16	24	12
			MWT15 164 4045 120 09	■	15	40	45	46	9	4	12	0
			MWT15 164 4045 190 09	■	15	40	45	46	9	11	19	7

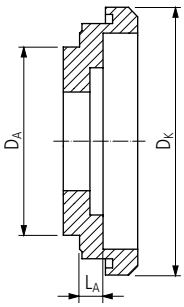
* z: Number of teeth

Other versions on request

Continuation

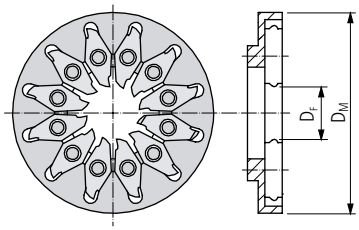






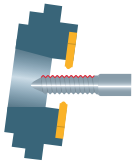
MWA…





MWR…

Adapter	Whirling ring
MWA 354246 089	MWR06 164 2540 091 09
MWA 354246 139	MWR12 164 2540 091 09
	MWR12 164 2540 091 12
MWA 4226 065	MWR06 164 2546 080 09
MWA 4226 160	MWR12 164 2546 080 09
	MWR12 164 2546 080 12
MWA 502667 040	MWR15 164 2546 080 09
MWA 502667 140	
MWA 502667 180	MWR12 164 2646 080 09
	MWR12 164 2646 080 12
MWA 403657 095	MWR15 164 2646 080 09
	MWR12 164 2648 080 09
MWA 402540 040	MWR12 164 2648 080 12
MWA 402540 045	MWR15 164 2648 080 09
MWA 402540 073	MWR15 164 2648 080 12
MWA 402540 083	
MWA 402540 090	MWR12 164 3654 080 09
MWA 402540 110	MWR12 164 3654 080 12
MWA 402540 125	MWR15 164 3654 080 12
MWA 402540 160	MWR12 164 4246 055 03
	MWR12 164 4246 055 09
	MWR12 164 4246 055 12

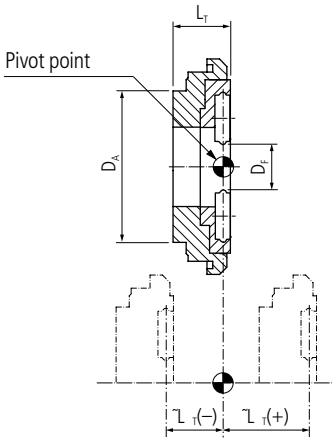


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



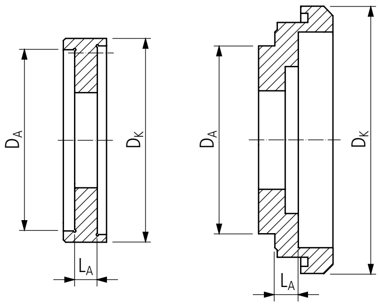
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
MADAULA	P.035.00064	■	MWT12 164 4050 135 12	■	12	40	50	46	12	5.5	13.5	0
	1110.00054	■	MWT12 164 4050 191 12	■	12	40	50	46	12	11.1	19.1	5.6
MAIER	2-020-W15-2000	■	MWT12 164 4046 240 09	■	12	40	46	46	9	16	24	12.5
			MWT12 164 4046 240 12	■	12	40	46	46	12	16	24	12.5
	2-020-W35-1001	■	MWT15 164 4046 240 09	■	15	40	46	46	9	16	24	12.5
			MWT15 164 4046 240 12	■	15	40	46	46	12	16	24	12.5
MONNIER+ZAHNER	N92-00.00	■	MWT06 164 85128 295 09	■	6	85	128	128	9	2.1	29.5	0
			MWT12 164 85128 295 09	■	12	85	128	128	9	2.1	29.5	0
			MWT12 164 85128 295 12	■	12	85	128	128	12	2.1	29.5	0
			MWT15 164 85128 295 12	■	15	85	128	128	12	2.1	29.5	0
MT	CTZ0040112	■	MWT08 164 4046 160 09	■	0	0	0	0	0	0	0	0
	NMR0010112	■	MWT12 164 4046 115 09	■	12	40	46	46	9	3.5	11.5	0
	NMR0070112	■	MWT12 164 4046 130 09	■	12	40	46	46	9	5	13	1.5
	SPC19210000	■	MWT12 164 4046 240 09	■	12	40	46	46	9	16	24	12.5
			MWT12 164 4046 280 09	■	12	40	46	46	9	20	28	16.5
			MWT12 164 4046 115 12	■	12	40	46	46	12	3.5	11.5	0
			MWT12 164 4046 130 12	■	12	40	46	46	12	5	13	1.5
			MWT12 164 4046 190 12	■	12	40	46	46	12	11	19	7.5
			MWT12 164 4046 240 12	■	12	40	46	46	12	16	24	12.5
			MWT12 164 4046 280 12	■	12	40	46	46	12	20	28	16.5
			MWT15 164 4046 130 09	■	15	40	46	46	9	5	13	1.5
			MWT15 164 4046 240 09	■	15	40	46	46	9	16	24	12.5
			MWT15 164 4046 240 12	■	15	40	46	46	12	16	24	12.5

* z: Number of teeth

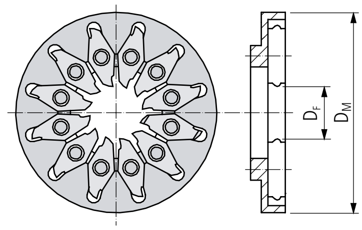
Other versions on request

Continuation







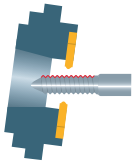


MWA…

MWR…

	Adapter										Whirling ring									
	MWA 402644 160	MWA 402650 055	MWA 402650 111	MWA 8526128 215	MWA 404245 035	MWA 404245 050	MWA 404245 080	MWA 404245 110	MWA 404245 160	MWA 404245 200	MWR06 164 2646 080 09	MWR12 164 2646 080 09	MWR12 164 2646 080 12	MWR15 164 2646 080 09	MWR15 164 2646 080 12	MWR08 164 4246 055 09	MWR12 164 4246 055 09	MWR12 164 4246 055 12	MWR15 164 4246 055 09	MWR15 164 4246 055 12
		■											■							
			■										■							
	■											■								
	■												■							
	■													■						
	■														■					
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					■													■		
						■												■		
								■										■		
									■									■		
										■								■		
						■													■	
									■										■	
									■											■

Legend ………… 6…

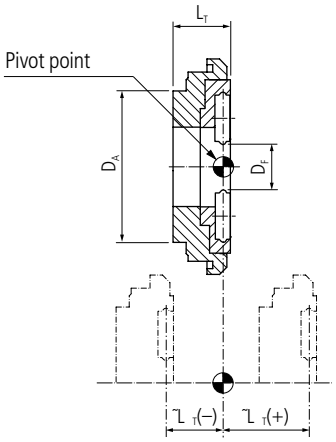


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



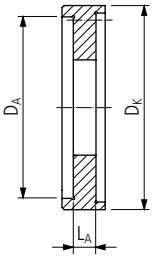
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
PCH	HP-681-72	■	MWT06 164 4040 111 09	■	6	40	40	40	9	4	11.1	0
			MWT06 164 4040 116 09	■	6	40	40	40	9	4.5	11.6	0.4
			MWT12 164 4045 120 09	■	12	40	45	46	9	4	12	0
			MWT12 164 4045 153 09	■	12	40	45	46	9	7.3	15.3	3.3
			MWT12 164 4045 163 09	■	12	40	45	46	9	8.3	16.3	4.3
			MWT12 164 4045 170 09	■	12	40	45	46	9	9	17	5
			MWT12 164 4045 190 09	■	12	40	45	46	9	11	19	7
			MWT12 164 4045 205 09	■	12	40	45	46	9	12.5	20.5	8.5
			MWT12 164 4045 240 09	■	12	40	45	46	9	16	24	12
			MWT12 164 4045 120 12	■	12	40	45	46	12	4	12	0
			MWT12 164 4045 153 12	■	12	40	45	46	12	7.3	15.3	3.3
			MWT12 164 4045 170 12	■	12	40	45	46	12	9	17	5
			MWT12 164 4045 205 12	■	12	40	45	46	12	12.5	20.5	8.5
			MWT12 164 4045 240 12	■	12	40	45	46	12	16	24	12
			MWT15 164 4045 120 09	■	15	40	45	46	9	4	12	0
			MWT15 164 4045 190 09	■	15	40	45	46	9	11	19	7
PCM	DE10-W15	■	MWT06 164 4242 115 07	■	6	42	42	42	7	3.5	11.5	0
			MWT06 164 4242 135 07	■	6	42	42	42	7	5.5	13.5	2
			MWT06 164 4242 115 09	■	6	42	42	42	9	3.5	11.5	0
			MWT06 164 4242 135 09	■	6	42	42	42	9	5.5	13.5	2
			MWT06 164 4242 115 07	■	6	42	42	42	7	3.5	11.5	0
			MWT06 164 4242 115 09	■	6	42	42	42	9	3.5	11.5	0
	DE13-W15 DE20-W15 GW-TDM-D13 LSW-101 GSW-261-000	■ ■ ■ ■ ■	MWT12 164 4055 103 09	■	12	40	55	55	9	2.3	10.3	0
			MWT12 164 4055 115 09	■	12	40	55	55	9	3.5	11.5	1.2
			MWT12 164 4055 153 09	■	12	40	55	55	9	7.3	15.3	5
			MWT12 164 4055 103 12	■	12	40	55	55	12	2.3	10.3	0
			MWT12 164 4055 115 12	■	12	40	55	55	12	3.5	11.5	1.2
			MWT12 164 4055 153 12	■	12	40	55	55	12	7.3	15.3	5

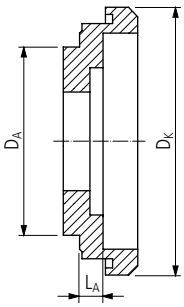
* z: Number of teeth

Other versions on request

Continuation

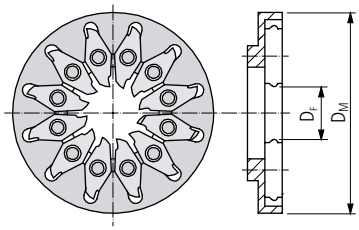






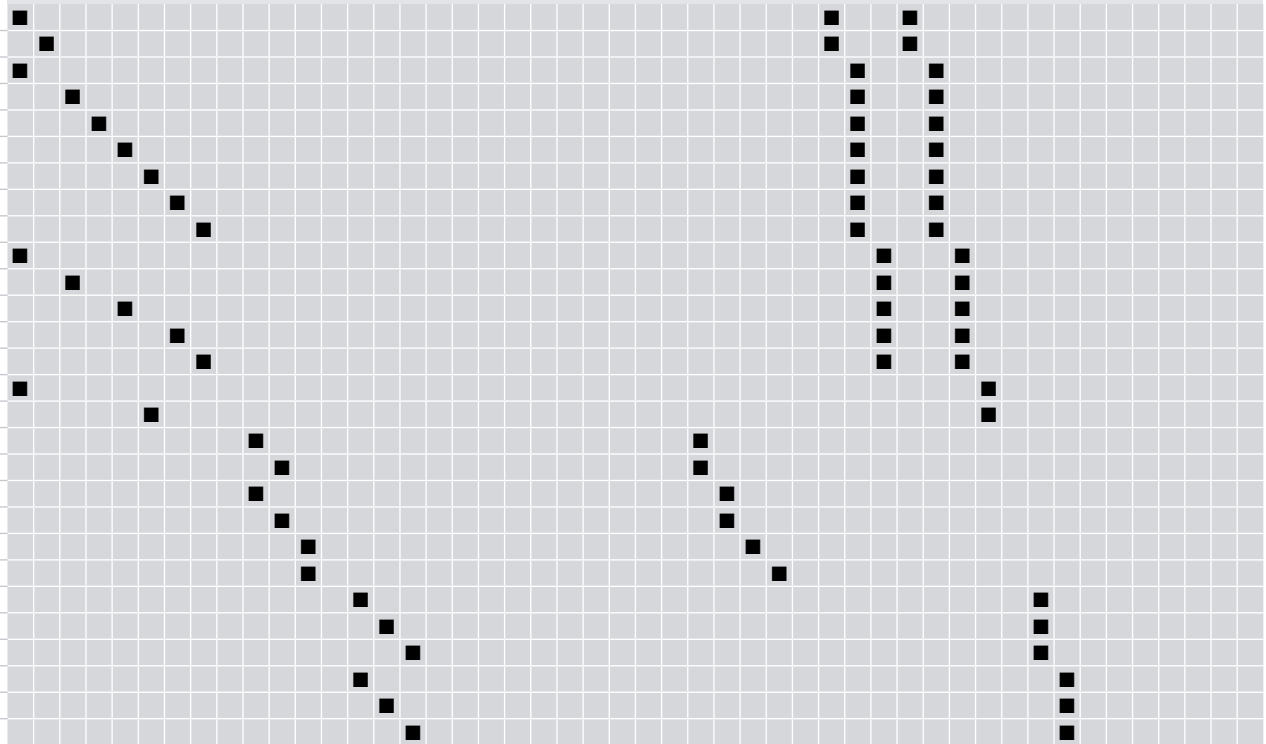
MWA…

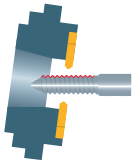




MWR…

Adapter	Whirling ring
MWA 402540 040	MWR06 164 2042 080 07
MWA 402540 045	MWR06 164 2042 080 09
MWA 402540 073	MWR06 164 2542 080 07
MWA 402540 083	MWR06 164 2542 080 09
MWA 402540 090	MWR06 164 2540 091 09
MWA 402540 110	MWR12 164 2540 091 09
MWA 402540 125	MWR12 164 2540 091 12
MWA 402540 160	MWR06 164 2546 080 09
MWA 422042 035	MWR12 164 2546 080 09
MWA 422042 055	MWR12 164 2546 080 12
MWA 422542 035	MWR15 164 2546 080 09
MWA 402655 023	MWR12 164 2646 080 09
MWA 402655 035	MWR12 164 2646 080 12
MWA 402655 073	



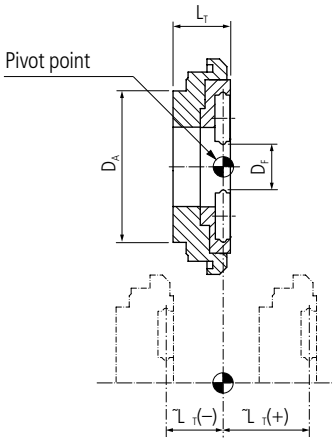


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
PCM	DE20-W15-II	■	MWT06 164 4057 105 09	■	6	40	57	46	9	2.5	10.5	0
			MWT06 164 4057 155 09	■	6	40	57	46	9	7.5	15.5	5
			MWT06 164 4057 205 09	■	6	40	57	46	9	12.5	20.5	10
			MWT12 164 4057 105 09	■	12	40	57	46	9	2.5	10.5	0
			MWT12 164 4057 175 09	■	12	40	57	46	9	9.5	17.5	7
			MWT12 164 4057 205 09	■	12	40	57	46	9	12.5	20.5	10
			MWT12 164 4057 105 12	■	12	40	57	46	12	2.5	10.5	0
			MWT12 164 4057 175 12	■	12	40	57	46	12	9.5	17.5	7
			MWT12 164 4057 205 12	■	12	40	57	46	12	12.5	20.5	10
			MWT12 164 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
			MWT12 164 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
			MWT15 164 4057 105 09	■	15	40	57	46	9	2.5	10.5	0
			MWT15 164 4057 105 12	■	15	40	57	46	12	2.5	10.5	0
			MWT15 164 4057 175 12	■	15	40	57	46	12	9.5	17.5	7
	KSW-101-000 LSW-101-L20-000 LSW-215-000 LSW-424-15 LSW-424-II MSW-101-000 NN20-W15 SPW-1220 MSW-102	■ ■ ■ ■ ■ ■ ■ ■ ■	MWT08 164 4046 160 09	■	0	0	0	0	0	0	0	0
			MWT12 164 4046 115 09	■	12	40	46	46	9	3.5	11.5	0
			MWT12 164 4046 130 09	■	12	40	46	46	9	5	13	1.5
			MWT12 164 4046 240 09	■	12	40	46	46	9	16	24	12.5
			MWT12 164 4046 280 09	■	12	40	46	46	9	20	28	16.5
			MWT12 164 4046 115 12	■	12	40	46	46	12	3.5	11.5	0
			MWT12 164 4046 130 12	■	12	40	46	46	12	5	13	1.5
			MWT12 164 4046 190 12	■	12	40	46	46	12	11	19	7.5
			MWT12 164 4046 240 12	■	12	40	46	46	12	16	24	12.5
			MWT12 164 4046 280 12	■	12	40	46	46	12	20	28	16.5
			MWT15 164 4046 130 09	■	15	40	46	46	9	5	13	1.5
			MWT15 164 4046 240 09	■	15	40	46	46	9	16	24	12.5
			MWT15 164 4046 240 12	■	15	40	46	46	12	16	24	12.5

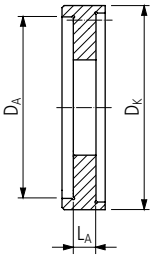
* z: Number of teeth

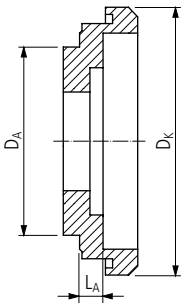
Other versions on request

UTILIS multidec® swiss type tools

Continuation

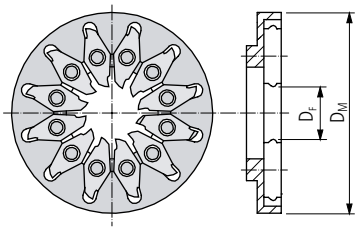






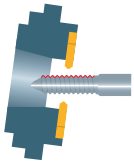
MWA…





MWR…

Adapter	Whirling ring
MWA 402657 025	MWR06 164 2646 080 09
MWA 402657 075	MWR12 164 2646 080 09
MWA 402657 095	MWR12 164 2646 080 12
MWA 402657 125	MWR12 166 2646 090 12
MWA 402657 155	MWR15 164 2646 080 09
	MWR15 164 2646 080 12
MWA 404245 035	
MWA 404245 050	MWR08 164 4246 055 09
MWA 404245 080	MWR12 164 4246 055 09
MWA 404245 110	MWR12 164 4246 055 12
MWA 404245 160	MWR15 164 4246 055 09
MWA 404245 200	MWR15 164 4246 055 12

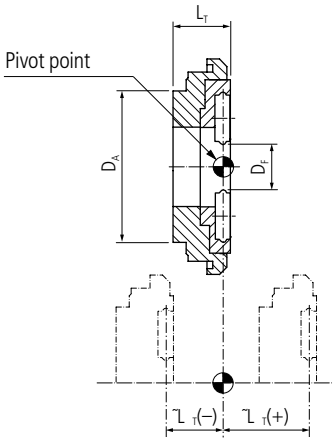


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



Driven tool holder			Whirling tool									
Manufacturer	Type		Order designation		Dimensions							
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE												
PCM	GSW-251-PR- 1-A	■	MWT06 164 4040 111 09	■	6	40	40	40	9	4	11.1	0
	SR20J-W20-3D	■	MWT06 164 4040 116 09	■	6	40	40	40	9	4.5	11.6	0.4
			MWT12 164 4045 120 09	■	12	40	45	46	9	4	12	0
			MWT12 164 4045 153 09	■	12	40	45	46	9	7.3	15.3	3.3
			MWT12 164 4045 163 09	■	12	40	45	46	9	8.3	16.3	4.3
			MWT12 164 4045 170 09	■	12	40	45	46	9	9	17	5
			MWT12 164 4045 190 09	■	12	40	45	46	9	11	19	7
			MWT12 164 4045 205 09	■	12	40	45	46	9	12.5	20.5	8.5
			MWT12 164 4045 240 09	■	12	40	45	46	9	16	24	12
			MWT12 164 4045 120 12	■	12	40	45	46	12	4	12	0
			MWT12 164 4045 153 12	■	12	40	45	46	12	7.3	15.3	3.3
			MWT12 164 4045 170 12	■	12	40	45	46	12	9	17	5
			MWT12 164 4045 205 12	■	12	40	45	46	12	12.5	20.5	8.5
			MWT12 164 4045 240 12	■	12	40	45	46	12	16	24	12
			MWT15 164 4045 120 09	■	15	40	45	46	9	4	12	0
			MWT15 164 4045 190 09	■	15	40	45	46	9	11	19	7
	BSW-215 NESA-32-000	■ ■	MWT12 164 4046 172 09	■	12	40	45	46	9	9.2	17.2	0
			MWT12 164 4046 172 12	■	12	40	45	46	12	9.2	17.2	0
			MWT15 164 4046 172 09	■	15	40	45	46	9	9.2	17.2	0
	LSW-420	■	MWT12 164 4546 155 03	■	12	45	45	46	3	10	15.5	0
	LSW-424-000	■	MWT12 164 3546 169 03	■	12	35	46	46	3	8.9	16.9	0
			MWT12 164 3546 169 09	■	12	35	46	46	9	8.9	16.9	0
			MWT12 164 3546 219 09	■	12	35	46	46	9	13.9	21.9	5
			MWT12 164 3546 169 12	■	12	35	46	46	12	8.9	16.9	0
	SV20-W15	■	MWT08 164 4555 130 09	■	8	45	55	46	9	5	13	0
			MWT12 164 4555 130 09	■	12	45	55	46	9	5	13	0
			MWT12 164 4555 130 12	■	12	45	55	46	12	5	13	0
			MWT15 164 4555 130 09	■	15	45	55	46	9	5	13	0

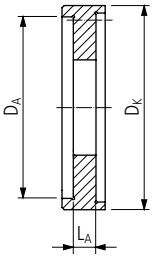
* z: Number of teeth

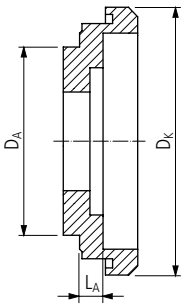
UTILIS multidec® swiss type tools

Other versions on request

Continuation

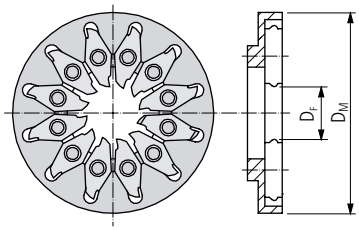






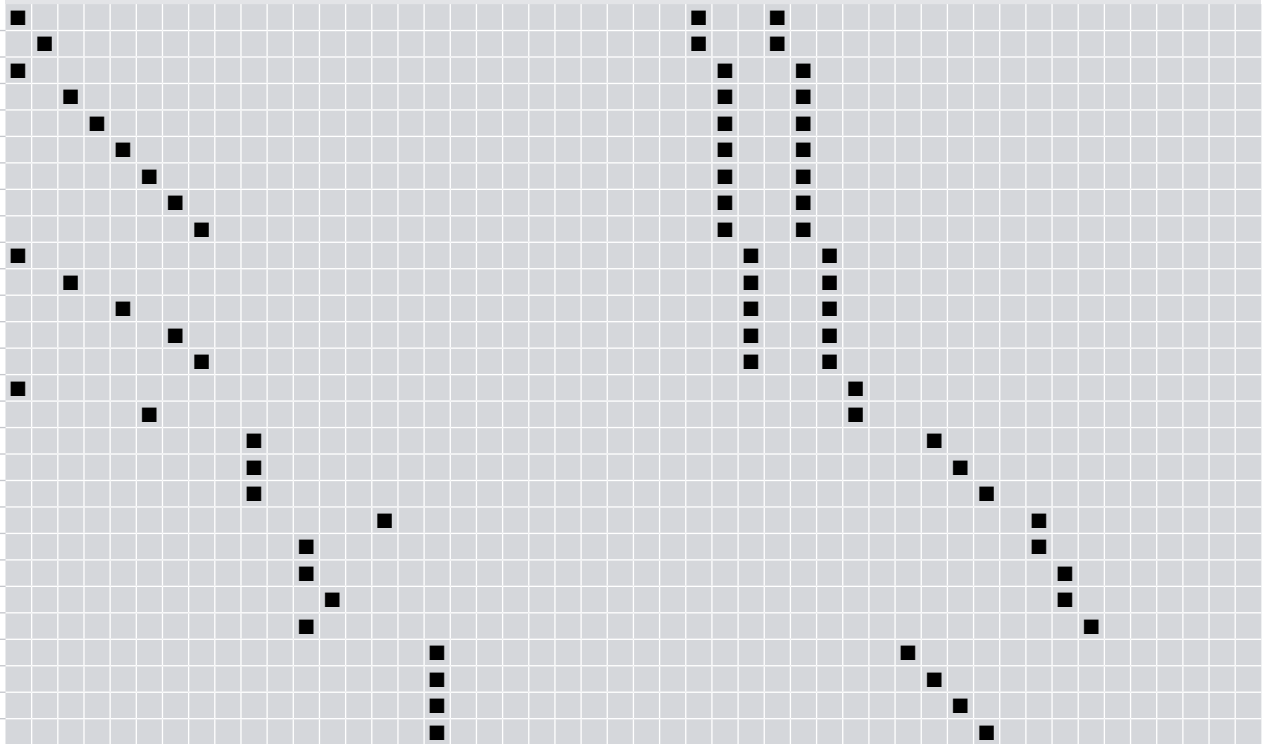
MWA…

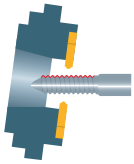




MWR…

Adapter	Whirling ring
MWA 402540 040	MWR06 164 2540 091 09
MWA 402540 045	MWR12 164 2540 091 09
MWA 402540 073	MWR12 164 2540 091 12
MWA 402540 083	MWR06 164 2546 080 09
MWA 402540 090	MWR12 164 2546 080 09
MWA 402540 110	MWR12 164 2546 080 12
MWA 402540 125	MWR15 164 2546 080 09
MWA 402540 160	MWR08 164 2646 080 09
MWA 402645 092	MWR12 164 2646 080 09
MWA 354246 089	MWR12 164 2646 080 12
MWA 354246 139	MWR15 164 2646 080 09
MWA 454245 100	MWR12 164 4246 055 03
MWA 452655 050	MWR12 164 4246 055 09
	MWR12 164 4246 055 12



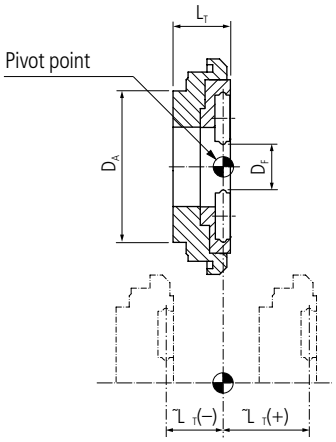


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



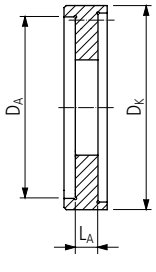
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
PIBOMULTI	TOR-D20-TB24-000	■	MWT06 164 4057 105 09	■	6	40	57	46	9	2.5	10.5	0
	TOR-D20-TB24-100	■	MWT06 164 4057 155 09	■	6	40	57	46	9	7.5	15.5	5
			MWT06 164 4057 205 09	■	6	40	57	46	9	12.5	20.5	10
			MWT12 164 4057 105 09	■	12	40	57	46	9	2.5	10.5	0
			MWT12 164 4057 175 09	■	12	40	57	46	9	9.5	17.5	7
			MWT12 164 4057 205 09	■	12	40	57	46	9	12.5	20.5	10
			MWT12 164 4057 105 12	■	12	40	57	46	12	2.5	10.5	0
			MWT12 164 4057 175 12	■	12	40	57	46	12	9.5	17.5	7
			MWT12 164 4057 205 12	■	12	40	57	46	12	12.5	20.5	10
			MWT12 164 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
			MWT12 164 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
			MWT15 164 4057 105 09	■	15	40	57	46	9	2.5	10.5	0
			MWT15 164 4057 105 12	■	15	40	57	46	12	2.5	10.5	0
			MWT15 164 4057 175 12	■	15	40	57	46	12	9.5	17.5	7
SONGGIA	TSS260100	■	MWT12 164 4548 145 09	■	12	45	48	48	9	6.5	14.5	0
			MWT12 164 4548 240 09	■	12	45	48	48	9	16	24	9.5
			MWT12 164 4548 145 12	■	12	45	48	48	12	6.5	14.5	0
			MWT12 164 4548 240 12	■	12	45	48	48	12	16	24	9.5
			MWT15 164 4548 145 09	■	15	45	48	48	9	6.5	14.5	0
			MWT15 164 4548 145 12	■	15	45	48	48	12	6.5	14.5	0
STAR	10159-00	■	MWT12 164 3346 165 09	■	12	33	46	46	9	8.5	16.5	0
			MWT12 164 3346 165 12	■	12	33	46	46	12	8.5	16.5	0
	0M171-00	■	MWT06 164 4040 111 09	■	6	40	40	40	9	4	11.1	0
	101-72-00	■	MWT06 164 4040 116 09	■	6	40	40	40	9	4.5	11.6	0.4
	421-73-00	■	MWT12 164 4045 120 09	■	12	40	45	46	9	4	12	0
	431-72-00	■	MWT12 164 4045 153 09	■	12	40	45	46	9	7.3	15.3	3.3
	541-78-00	■	MWT12 164 4045 163 09	■	12	40	45	46	9	8.3	16.3	4.3
	581-71	■	MWT12 164 4045 170 09	■	12	40	45	46	9	9	17	5
	591-72-00	■	MWT12 164 4045 190 09	■	12	40	45	46	9	11	19	7
	661-72-00	■	MWT12 164 4045 205 09	■	12	40	45	46	9	12.5	20.5	8.5
	681-72-00	■	MWT12 164 4045 240 09	■	12	40	45	46	9	16	24	12
	7.074.191	■	MWT12 164 4045 120 12	■	12	40	45	46	12	4	12	0
	7.076.225	■	MWT12 164 4045 153 12	■	12	40	45	46	12	7.3	15.3	3.3
	7.170.882	■	MWT12 164 4045 170 12	■	12	40	45	46	12	9	17	5
			MWT12 164 4045 205 12	■	12	40	45	46	12	12.5	20.5	8.5
			MWT12 164 4045 240 12	■	12	40	45	46	12	16	24	12
			MWT15 164 4045 120 09	■	15	40	45	46	9	4	12	0
			MWT15 164 4045 190 09	■	15	40	45	46	9	11	19	7

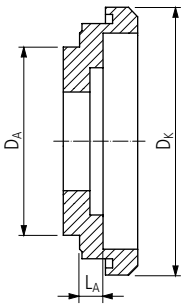
* z: Number of teeth

Other versions on request

Continuation

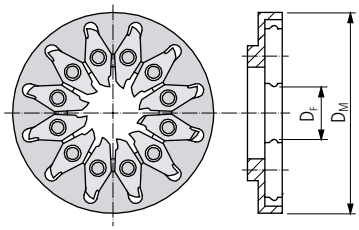






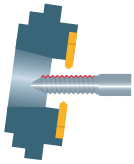
MWA…





MWR…

Adapter	Whirling ring
MWA 402657 025	MWR06 164 2540 091 09
MWA 402657 075	MWR12 164 2540 091 09
MWA 402657 095	MWR12 164 2540 091 12
MWA 402657 125	MWR06 164 2546 080 09
MWA 402657 155	MWR12 164 2546 080 09
MWA 332646 085	MWR12 164 2546 080 12
MWA 4226 065	MWR15 164 2546 080 09
MWA 4226 160	MWR06 164 2646 080 09
MWA 402540 040	MWR12 164 2646 080 09
MWA 402540 045	MWR12 164 2646 080 12
MWA 402540 073	MWR12 166 2646 090 12
MWA 402540 083	MWR15 164 2646 080 09
MWA 402540 090	MWR15 164 2646 080 12
MWA 402540 110	MWR12 164 2648 080 09
MWA 402540 125	MWR12 164 2648 080 12
MWA 402540 160	MWR15 164 2648 080 09
	MWR15 164 2648 080 12

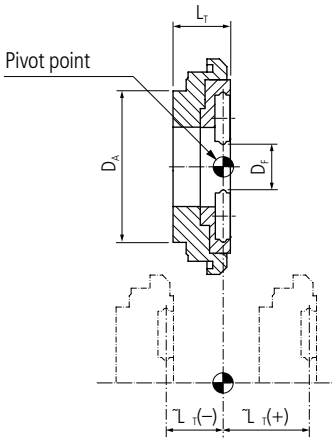


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



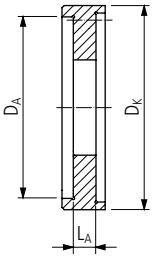
Driven tool holder			Whirling tool									
Manufacturer	Type		Order designation		Dimensions							
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE												
STAR	7.073.586	■	MWT12 164 4044 250 09	■	12	40	44	44	9	17	25	11.5
	7.073.590	■	MWT12 164 4044 135 12	■	12	40	44	44	12	5.5	13.5	0
	7.073.670	■	MWT12 164 4044 200 12	■	12	40	44	44	12	12	20	6.5
	7.073.671	■	MWT12 164 4044 250 12	■	12	40	44	44	12	17	25	11.5
	7.073.765	■	MWT15 164 4044 135 12	■	15	40	44	44	12	5.5	13.5	0
SU-matic	AWS 1:1	■	MWT06 164 4040 111 09	■	6	40	40	40	9	4	11.1	0
			MWT06 164 4040 116 09	■	6	40	40	40	9	4.5	11.6	0.4
			MWT12 164 4045 120 09	■	12	40	45	46	9	4	12	0
			MWT12 164 4045 153 09	■	12	40	45	46	9	7.3	15.3	3.3
			MWT12 164 4045 163 09	■	12	40	45	46	9	8.3	16.3	4.3
			MWT12 164 4045 170 09	■	12	40	45	46	9	9	17	5
			MWT12 164 4045 190 09	■	12	40	45	46	9	11	19	7
			MWT12 164 4045 205 09	■	12	40	45	46	9	12.5	20.5	8.5
			MWT12 164 4045 240 09	■	12	40	45	46	9	16	24	12
			MWT12 164 4045 120 12	■	12	40	45	46	12	4	12	0
			MWT12 164 4045 153 12	■	12	40	45	46	12	7.3	15.3	3.3
			MWT12 164 4045 170 12	■	12	40	45	46	12	9	17	5
			MWT12 164 4045 205 12	■	12	40	45	46	12	12.5	20.5	8.5
			MWT12 164 4045 240 12	■	12	40	45	46	12	16	24	12
			MWT15 164 4045 120 09	■	15	40	45	46	9	4	12	0
			MWT15 164 4045 190 09	■	15	40	45	46	9	11	19	7
TORNOS	260448	■	MWT12 164 44M50 120 12	■	12	44	M50	46	12	3	12	0
	305217	■	MWT06 164 4242 115 07	■	6	42	42	42	7	3.5	11.5	0
	305218	■	MWT06 164 4242 135 07	■	6	42	42	42	7	5.5	13.5	2
	217-9510	■	MWT06 164 4242 115 09	■	6	42	42	42	9	3.5	11.5	0
	21-3130	■	MWT06 164 4242 135 09	■	6	42	42	42	9	5.5	13.5	2
	7.172.410	■	MWT06 164 4242 115 07	■	6	42	42	42	7	3.5	11.5	0
			MWT06 164 4242 115 09	■	6	42	42	42	9	3.5	11.5	0

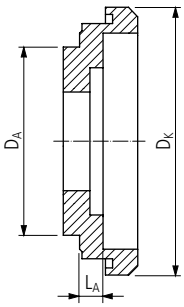
* z: Number of teeth

Other versions on request

Continuation

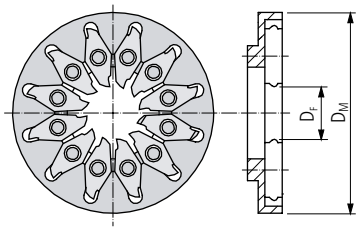






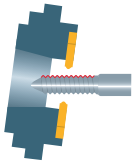
MWA…





MWR…

Adapter	Whirling ring
MWA 402640 055	MWR06 164 2042 080 07
MWA 402640 120	MWR06 164 2042 080 09
MWA 402640 170	MWR06 164 2542 080 07
MWA 402540 040	MWR06 164 2542 080 09
MWA 402540 045	MWR06 164 2540 091 09
MWA 402540 073	MWR12 164 2540 091 09
MWA 402540 083	MWR12 164 2540 091 12
MWA 402540 090	MWR06 164 2546 080 09
MWA 402540 110	MWR12 164 2546 080 09
MWA 402540 125	MWR12 164 2546 080 12
MWA 402540 160	MWR15 164 2546 080 09
MWA 422042 035	MWR12 164 2644 080 09
MWA 422042 055	MWR12 164 2644 080 12
MWA 422542 035	MWR15 164 2644 080 12
MWA 462M50 030	MWR12 164 4446 090 12

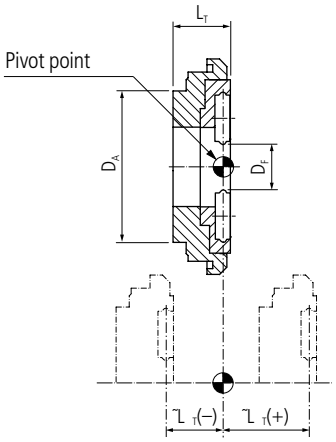


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



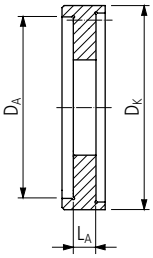
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
TORNOS	226-1900	■	MWT06 164 4057 105 09	■	6	40	57	46	9	2.5	10.5	0
	199223	■	MWT06 164 4057 155 09	■	6	40	57	46	9	7.5	15.5	5
	306101	■	MWT06 164 4057 205 09	■	6	40	57	46	9	12.5	20.5	10
	306432	■	MWT12 164 4057 105 09	■	12	40	57	46	9	2.5	10.5	0
	307087	■	MWT12 164 4057 175 09	■	12	40	57	46	9	9.5	17.5	7
	307180	■	MWT12 164 4057 205 09	■	12	40	57	46	9	12.5	20.5	10
	398541	■	MWT12 164 4057 105 12	■	12	40	57	46	12	2.5	10.5	0
	418302	■	MWT12 164 4057 175 12	■	12	40	57	46	12	9.5	17.5	7
	472088	■	MWT12 164 4057 205 12	■	12	40	57	46	12	12.5	20.5	10
	992381	■	MWT12 164 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
	1013013	■	MWT12 164 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
	3281-Y691	■	MWT15 164 4057 105 09	■	15	40	57	46	9	2.5	10.5	0
	462-2365	■	MWT15 164 4057 105 12	■	15	40	57	46	12	2.5	10.5	0
	462-2370	■	MWT15 164 4057 175 12	■	15	40	57	46	12	9.5	17.5	7
	306279	■	MWT12 164 5067 120 09	■	12	50	67	46	9	4	12	0
	306281	■	MWT12 164 5067 220 09	■	12	50	67	46	9	14	22	10
	417627	■	MWT12 164 5067 120 12	■	12	50	67	46	12	4	12	0
	462-2360	■	MWT12 164 5067 260 12	■	12	50	67	46	12	18	26	14
			MWT15 164 5067 260 09	■	15	50	67	46	9	18	26	14
			MWT12 164 4050 105 09	■	12	40	50	50	9	2.5	10.5	0
			MWT12 164 4050 175 09	■	12	40	50	50	9	9.5	17.5	7
			MWT12 164 4050 205 09	■	12	40	50	50	9	12.5	20.5	10
			MWT12 164 4050 105 12	■	12	40	50	50	12	2.5	10.5	0
			MWT12 164 4050 175 12	■	12	40	50	50	12	9.5	17.5	7
			MWT12 164 4050 205 12	■	12	40	50	50	12	12.5	20.5	10
			MWT15 164 4050 105 09	■	15	40	50	50	9	2.5	10.5	0
			MWT15 164 4050 105 12	■	15	40	50	50	12	2.5	10.5	0

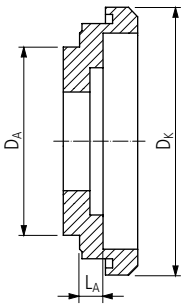
* z: Number of teeth

Other versions on request

Continuation

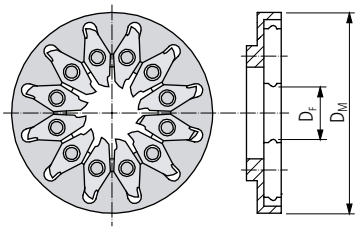






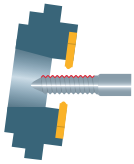
MWA…





MWR…

Adapter	Whirling ring
MWA 402657 025	MWR06 164 2646 080 09
MWA 402657 075	MWR12 164 2646 080 09
MWA 402657 095	MWR12 164 2646 080 12
MWA 402657 125	MWR12 166 2646 090 12
MWA 402657 155	MWR15 164 2646 080 09
MWA 502667 040	MWR15 164 2646 080 12
MWA 502667 140	
MWA 502667 180	
MWA 402650 025	
MWA 402650 095	
MWA 402650 125	

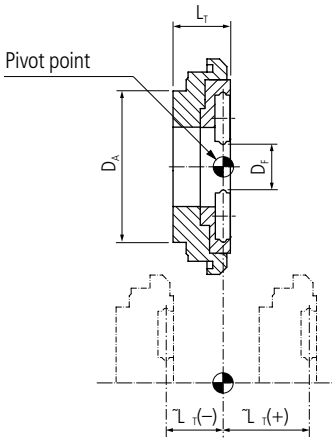


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



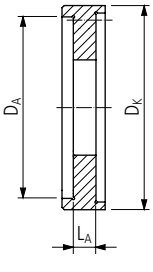
Driven tool holder			Whirling tool									
Manufacturer	Type		Order designation		Dimensions							
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE												
TRAUB	836461	■	MWT12 164 54106 120 09	■	12	54	106	46	9	4	12	0
	836046	■	MWT12 164 54106 120 12	■	12	54	106	46	12	4	12	0
			MWT15 164 54106 120 09	■	15	54	106	46	9	4	12	0
			MWT15 164 54106 120 12	■	15	54	106	46	12	4	12	0
	987510	■	MWT06 164 2842 179 07	■	6	28	42	42	7	6.9	17.9	0
	987910	■	MWT06 164 2842 179 09	■	6	28	42	42	9	6.9	17.9	0
	989520	■	MWT06 164 M3442 194 07	■	6	M34	42	42	7	-	19.4	0
			MWT06 164 M3442 194 09	■	6	M34	42	42	9	-	19.4	0
TSUGAMI	3268-Y271	■	MWT12 164 5265 166 09	■	12	52	46	65	9	8.7	16.6	0
	3263-Y480	■	MWT12 164 5265 220 09	■	12	52	46	65	9	14	22	5.3
	3263-Y481	■	MWT12 164 5265 166 12	■	12	52	46	65	12	8.7	16.6	0
	3234-Y340	■	MWT12 164 5265 220 12	■	12	52	46	65	12	14	22	5.3
	3234-Y342 UZ.	■	MWT15 164 5265 220 09	■	15	52	46	65	9	14	22	5.3
	3234-Y343 GUZ.	■										
	3281-Y450	■	MWT12 164 5252 160 09	■	12	52	52	46	9	8	16	0
	3281-Y451	■	MWT12 164 5252 220 09	■	12	52	52	46	9	14	22	6
	3268-Y452	■	MWT12 164 5252 160 12	■	12	52	52	46	12	8	16	0
	3268-Y453	■	MWT12 164 5252 190 12	■	12	52	52	46	12	11	19	3
	3268-Y454	■	MWT12 164 5252 220 12	■	12	52	52	46	12	14	22	6
	3268-Y455	■	MWT15 164 5252 160 09	■	15	52	52	46	9	8	16	0
			MWT15 164 5252 220 09	■	15	52	52	46	9	14	22	6

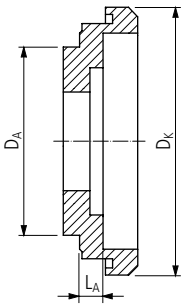
* z: Number of teeth

Other versions on request

Continuation

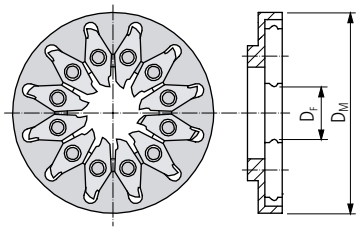






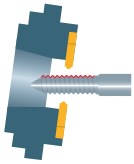
MWA…





MWR…

Adapter	Whirling ring
MWA 5426 106 040	MWR06 164 2042 080 07
MWA 282042 069	MWR06 164 2042 080 09
MWA M342042 114	MWR12 164 2646 080 09
MWA 522665 087	MWR12 164 2646 080 12
MWA 522665 140	MWR15 164 2646 080 09
MWA 5226 080	MWR15 164 2646 080 12
MWA 5226 110	
MWA 5226 140	

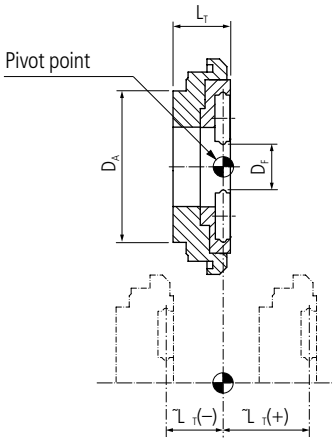


Type A

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



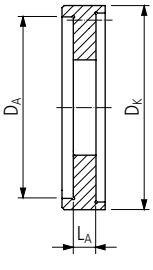
Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
WTO	419900001-44	■	MWT12 164 4044 250 09	■	12	40	44	44	9	17	25	11.5
	419900001-80	■	MWT12 164 4044 135 12	■	12	40	44	44	12	5.5	13.5	0
	419900002-44	■	MWT12 164 4044 200 12	■	12	40	44	44	12	12	20	6.5
	419900005-44_67969	■	MWT12 164 4044 250 12	■	12	40	44	44	12	17	25	11.5
	TN762002	■	MWT15 164 4044 135 12	■	15	40	44	44	12	5.5	13.5	0
	419900001-44	■	MWT12 164 4046 240 09	■	12	40	46	46	9	16	24	12.5
	419900001-80	■	MWT12 164 4046 240 12	■	12	40	46	46	12	16	24	12.5
			MWT15 164 4046 240 09	■	15	40	46	46	9	16	24	12.5
			MWT15 164 4046 240 12	■	15	40	46	46	12	16	24	12.5
W & F	AG.SPI.Z35.0800.002	■	MWT12 164 4055 103 09	■	12	40	55	55	9	2.3	10.3	0
	MPU.Z35.0800.GA	■	MWT12 164 4055 115 09	■	12	40	55	55	9	3.5	11.5	1.2
	MPU.Z35.0800.TS	■	MWT12 164 4055 153 09	■	12	40	55	55	9	7.3	15.3	5
	MPU.TO.0800.DE20	■	MWT12 164 4055 103 12	■	12	40	55	55	12	2.3	10.3	0
			MWT12 164 4055 115 12	■	12	40	55	55	12	3.5	11.5	1.2
			MWT12 164 4055 153 12	■	12	40	55	55	12	7.3	15.3	5
	MPU.TO.0800.DE10	■	MWT06 164 4242 115 07	■	6	42	42	42	7	3.5	11.5	0
			MWT06 164 4242 135 07	■	6	42	42	42	7	5.5	13.5	2
			MWT06 164 4242 115 09	■	6	42	42	42	9	3.5	11.5	0
			MWT06 164 4242 135 09	■	6	42	42	42	9	5.5	13.5	2
			MWT06 164 4242 115 07	■	6	42	42	42	7	3.5	11.5	0
			MWT06 164 4242 115 09	■	6	42	42	42	9	3.5	11.5	0
	MPU.TO.0800.DE13	■	MWT06 164 4057 105 09	■	6	40	57	46	9	2.5	10.5	0
	MPU.TO.0800.DE20	■	MWT06 164 4057 155 09	■	6	40	57	46	9	7.5	15.5	5
	MPU.TO.0800.DE20S	■	MWT06 164 4057 205 09	■	6	40	57	46	9	12.5	20.5	10
	MPU.TO.M800.DE20	■	MWT12 164 4057 105 09	■	12	40	57	46	9	2.5	10.5	0
			MWT12 164 4057 175 09	■	12	40	57	46	9	9.5	17.5	7
			MWT12 164 4057 205 09	■	12	40	57	46	9	12.5	20.5	10
			MWT12 164 4057 105 12	■	12	40	57	46	12	2.5	10.5	0
			MWT12 164 4057 175 12	■	12	40	57	46	12	9.5	17.5	7
			MWT12 164 4057 205 12	■	12	40	57	46	12	12.5	20.5	10
			MWT12 164 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
			MWT12 166 4057 235 12	■	12	40	57	46	12	12.5	23.5	10
			MWT15 164 4057 105 09	■	15	40	57	46	9	2.5	10.5	0
			MWT15 164 4057 105 12	■	15	40	57	46	12	2.5	10.5	0
			MWT15 164 4057 175 12	■	15	40	57	46	12	9.5	17.5	7

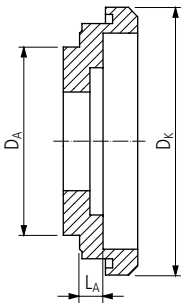
* z: Number of teeth

Other versions on request

Continuation

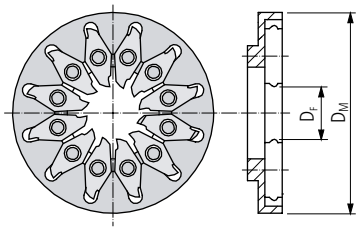






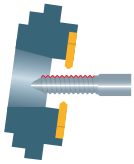
MWA…





MWR…

Adapter	Whirling ring
MWA 402644 160	MWR06 164 2042 080 07
MWA 402640 055	MWR06 164 2042 080 09
MWA 402640 120	MWR06 164 2542 080 07
MWA 402640 170	MWR06 164 2542 080 09
MWA 402655 023	MWR12 164 2644 080 09
MWA 402655 035	MWR12 164 2644 080 12
MWA 402655 073	MWR15 164 2644 080 12
MWA 422042 035	MWR06 164 2646 080 09
MWA 422042 055	MWR12 164 2646 080 09
MWA 422542 035	MWR12 164 2646 080 12
MWA 402657 025	MWR12 166 2646 090 12
MWA 402657 075	MWR15 164 2646 080 09
MWA 402657 095	MWR15 164 2646 080 12
MWA 402657 125	
MWA 402657 155	

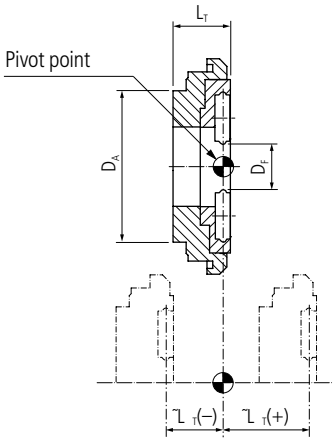


Type B

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



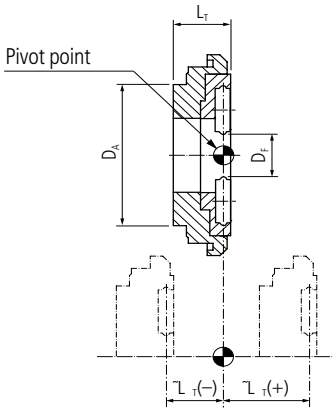
MWT…



Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
CITIZEN	BTW-1000	■	MWT12 164 3347 145 09	■	12	33	47	–	9	–	14.5	0
	BTW-2000	■	MWT12 164 3347 145 12	■	12	33	47	–	12	–	14.5	0
	BTW-5000	■	MWT12 164 3347 170 09	■	12	33	47	–	9	–	17	7
	BTW-6000	■	MWT12 164 3347 170 12	■	12	33	47	–	12	–	17	7
			MWT12 166 3347 145 09	■	12	33	47	–	9	–	14.5	0
			MWT12 166 3347 145 12	■	12	33	47	–	12	–	14.5	0
			MWT12 166 3347 170 09	■	12	33	47	–	9	–	17	7
			MWT12 166 3347 170 12	■	12	33	47	–	12	–	17	7
			MWT12 168 3347 145 09	■	12	33	47	–	9	–	14.5	0
	BTW-3000	■	MWT12 164 2546 070 09	■	12	25	46	–	9	–	7	0
	BTW-3100	■	MWT12 164 2546 070 12	■	12	25	46	–	12	–	7	0
	BTW-4000	■										
DMG	2123031	■	MWT12 164 4249 120 09	■	12	42	49	49	9	–	12	0
	2647002	■										
	2723028	■										
	2858071	■										
	2646709	■										
MADAULA	CZ.035.K12/K16	■	MWT06 164 2035 165 07	■	6	20	35	35	7	–	16.5	0
	CZ.035.K12/K16-15	■	MWT06 164 2035 165 09	■	6	20	35	35	9	–	16.5	0
	CZ.035.M12/M16	■	MWT06 164 2035 225 07	■	6	20	35	35	7	–	22.5	4
	CZ.035.M12/M16T-15	■	MWT06 164 2035 225 09	■	6	20	35	35	9	–	22.5	4
	CZ.035.M20/M32T	■	MWT06 164 2035 240 09	■	6	20	35	35	9	–	24	7.5
	CZ.035.M20/M32T	■	MWT08 164 2038 185 09	■	8	20	38	38	9	–	18.5	2
	P.035.00063	■	MWT08 164 2038 200 09	■	8	20	38	38	9	–	20	3.5
	1110.00055	■	MWT08 164 2038 225 09	■	8	20	38	38	9	–	22.5	4
			MWT12 164 4045 100 09	■	12	40	45	–	9	–	10	0
	P.035.00083	■	MWT06 164 4253 388 09	■	6	42	53	53	9	–	38.8	0
			MWT06 164 4253 415 09	■	6	42	53	53	9	–	41.5	2.7
			MWT06 164 4253 428 09	■	6	42	53	53	9	–	42.8	4
			MWT06 164 4253 460 09	■	6	42	53	53	9	–	46	7.2
			MWT08 164 4253 388 09	■	8	42	53	53	9	–	38.8	0
MAIER	MAIER MLK	■	MWT06 164 3333 180 07	■	6	33	33	–	7	–	18	0
			MWT06 164 3333 180 08	■	6	33	33	–	8	–	18	0
MT	CTZ0040112	■	MWT12 164 4045 100 09	■	12	40	45	–	9	–	10	0
	NMR0010112	■										
	NMR0070112	■										
	SPC1921000	■										

* z: Number of teeth

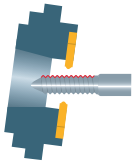
Continuation



MWT…

Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
PCM	E20-WI-000	■	MWT06 164 2035 165 07	■	6	20	35	35	7	–	16.5	0
	GSW-101-000	■	MWT06 164 2035 165 09	■	6	20	35	35	9	–	16.5	0
	LSW-515-000	■	MWT06 164 2035 225 07	■	6	20	35	35	7	–	22.5	6
	LSW-515-PR	■	MWT06 164 2035 225 09	■	6	20	35	35	9	–	22.5	6
	KSW-101-000	■	MWT06 164 2035 240 09	■	6	20	35	35	9	–	24	7.5
	LSW-101-L20-000	■	MWT08 164 2038 185 09	■	8	20	38	38	9	–	18.5	2
	LSW-215-000	■	MWT08 164 2038 200 09	■	8	20	38	38	9	–	20	3.5
	LSW-424-15	■	MWT08 164 2038 225 09	■	8	20	38	38	9	–	22.5	4
	MSW-101-000	■										
	NN20-W15	■										
	SPW-1220	■										
STAR	7.073.590	■	MWT12 164 4044 100 09	■	12	40	44	–	9	–	10	0
			MWT12 164 4044 100 12	■	12	40	44	–	12	–	10	0
	7.074.260	■	MWT12 164 4253 310 09	■	12	42	53	53	9	–	31	0
			MWT12 164 4253 335 09	■	12	42	53	53	9	–	33.5	2.5
			MWT12 164 4253 385 09	■	12	42	53	53	9	–	38.5	7.5
			MWT12 164 4253 405 09	■	12	42	53	53	9	–	40.5	9.5
	7.079.555	■	MWT12 164 4253 310 12	■	12	42	53	53	12	–	31	0
			MWT12 164 4253 335 12	■	12	42	53	53	12	–	33.5	2.5
			MWT12 164 4253 385 12	■	12	42	53	53	12	–	38.5	7.5
			MWT12 164 4253 405 12	■	12	42	53	53	12	–	40.5	9.5
TORNOS	307232	■	MWT06 164 3151 200 07	■	6	31	51	–	7	–	20	0
	386251	■	MWT06 164 3151 200 09	■	6	31	51	–	9	–	20	0
	398856	■										
	417165	■										
	417174	■										
TRAUB	836461	■	MWT06 164 54106 130 09	■	6	54	106	46	9	5	13	1
			MWT12 164 54106 130 09	■	12	54	106	46	9	5	13	1
			MWT12 164 54106 130 12	■	12	54	106	46	12	5	13	1
	836046	■	MWT15 164 54106 130 09	■	15	54	106	46	9	5	13	1
			MWT15 164 54106 130 12	■	15	54	106	46	12	5	13	1
			MWT25 166 54106 140 12	■	25	54	106	–	12	–	14	0

* z: Number of teeth

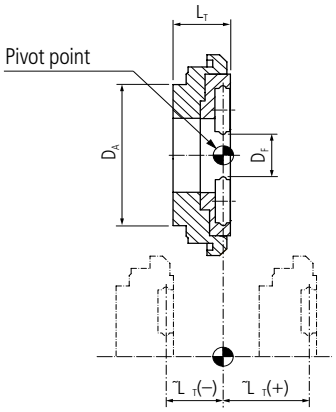


Type B

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…



Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
TRAUB	900884	■	MWT12 164 4158 065 12	■	12	41	–	58	12	–	6.5	0
	984769	■	MWT12 164 4158 080 12	■	12	41	–	58	12	–	8	1.5
	984770	■	MWT15 164 4158 065 12	■	15	41	–	58	12	–	6.5	0
	W7045009	■	MWT25 164 4158 065 09	■	25	41	–	58	9	–	6.5	0
	W7045012	■	MWT25 164 4158 080 09	■	25	41	–	58	9	–	8	1.5
	W7045055	■	MWT15 164 4158 115 12	■	15	41	–	58	12	–	11.5	5
	987320	■	MWT06 164 3776 068 09	■	6	37	76	–	9	–	6.8	0
			MWT06 164 3776 078 09	■	6	37	76	–	9	–	7.8	0
			MWT12 164 3776 068 03	■	12	37	76	–	3	–	6.8	0
			MWT12 164 3776 068 09	■	12	37	76	–	9	–	6.8	0
			MWT12 164 3776 068 12	■	12	37	76	–	12	–	6.8	0
TRAUB	989520	■	MWT06 164 M3442 171 09	■	6	M34	42	–	9	–	17.1	–
WTO	419900000-00, -25, -32, -35, -39, -40, -46, -50, -55	■	MWT06 164 4244 165 09	■	6	42	44	44	9	–	16.5	6
			MWT06 164 4244 195 09	■	6	42	44	44	9	–	19.5	9
	419900001-00, -32, -35	■	MWT12 164 4244 105 09	■	12	42	44	44	9	–	10.5	0
	419900002-30, -32, -34, -55	■	MWT12 164 4244 105 12	■	12	42	44	44	12	–	10.5	0
	419900003-30, -32, -55	■	MWT12 164 4244 165 09	■	12	42	44	44	9	–	16.5	6
	419900004-30, -32	■	MWT12 164 4244 165 12	■	12	42	44	44	12	–	16.5	6
	419900005-30, -44	■	MWT12 164 4244 205 09	■	12	42	44	44	9	–	20.5	10
	419900006-30	■	MWT12 164 4244 205 12	■	12	42	44	44	12	–	20.5	10
	419900007-30, -44	■	MWT12 164 4244 305 09	■	12	42	44	44	9	–	30.5	20
	419900008-44	■	MWT12 164 4244 305 12	■	12	42	44	44	12	–	30.5	20
	419900009-30	■	MWT15 164 4244 140 09	■	15	42	44	44	9	–	14	3.5
	419942000-31, -32, -35, -39, -46, -50	■	MWT15 164 4244 185 09	■	15	42	44	44	9	–	18.5	8
	419942000-00, -25, -40, -55	■	MWT15 164 4244 205 09	■	15	42	44	44	9	–	20.5	10
	419942001-35	■	MWT15 164 4244 205 12	■	15	42	44	44	12	–	20.5	10
	419942001-00, -32	■										
	419942002-30, -32, -34	■										
	419942002-55	■										
	419942003-32	■										
	419942003-30, -55	■										
	419942004-30, -32	■										
	419942005-30, -34, -44	■										
	419942006-30	■										
	419942007-30, -44	■										
	419942008-44	■										
	419942009-30	■										
	419954004-34	■										
	TN762004	■										

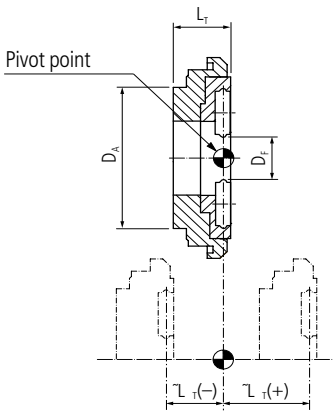
* z: Number of teeth

Other versions on request

Legend 6…

UTILIS multidec® swiss type tools

Continuation

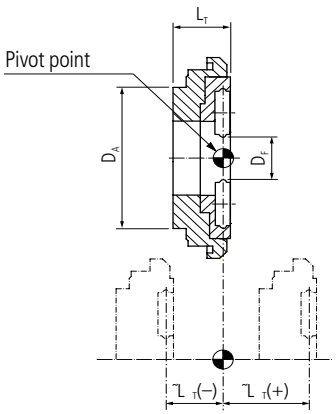


MWT…

Driven tool holder			Whirling tool									
Manufacturer	Type		Order designation		Dimensions							
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE												
WTO	419900000-45	■	MWT06 164 5456 125 07	■	6	54	56	56	7	–	12.5	0
	419900001-46, -60	■	MWT06 164 5456 125 09	■	6	54	56	56	9	–	12.5	0
	419900002-35	■	MWT12 164 5456 125 09	■	12	54	56	56	9	–	12.5	0
	419900003-34, -35	■	MWT12 164 5456 125 12	■	12	54	56	56	12	–	12.5	0
	419900004-34	■	MWT15 164 5456 125 09	■	15	54	56	56	9	–	12.5	0
	419900005-32	■	MWT15 164 5456 125 12	■	15	54	56	56	12	–	12.5	0
	419900006-32	■	MWT25 164 5456 125 09	■	25	54	56	56	9	–	12.5	0
	419900007-32	■	MWT25 164 5456 125 12	■	25	54	56	56	12	–	12.5	0
	419900010-30, -44	■	MWT12 164 5456 175 09	■	12	54	56	56	9	–	17.5	5
	419900011-30, -44	■	MWT12 164 5456 175 12	■	12	54	56	56	12	–	17.5	5
	419900012-30	■	MWT15 164 5456 175 09	■	15	54	56	56	9	–	17.5	5
	419900013-30	■	MWT25 164 5456 175 09	■	25	54	56	56	9	–	17.5	5
	419954000-45	■	MWT25 164 5456 175 12	■	25	54	56	56	12	–	17.5	5
	419954001-39, -46	■										
	419954002-35	■										
	419954003-34, -35	■										
	419954005-32	■										
	419954006-32	■										
	419954007-32	■										
	419954010-30, -44	■										
	419954011-30, -44	■										
	419954012-30	■										
	419954013-30	■										
	TN762006	■										

* z: Number of teeth

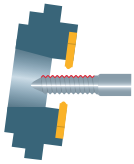
Continuation



MWT…

Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
W & F	MPU.M0800.C16	■	MWT06 164 WF55 093 07	■	6	WF	55	55	7	–	9.3	0
	MPU.TO.0800.DE20S	■	MWT06 164 WF55 143 07	■	6	WF	55	55	7	–	14.3	5
	MPU.TO.M0800.CT20	■	MWT06 164 WF55 173 07	■	6	WF	55	55	7	–	17.3	8
	MPU.TO.M800.DE20	■	MWT06 164 WF55 093 09	■	6	WF	55	55	9	–	9.3	0
	MPU.Z30.M0800.XD20	■	MWT06 164 WF55 143 09	■	6	WF	55	55	9	–	14.3	5
	MPU.Z31.M0800.L20	■	MWT06 164 WF55 173 09	■	6	WF	55	55	9	–	17.3	8
	MPU.Z34.M0800.SR20	■	MWT12 164 WF55 093 09	■	12	WF	55	55	9	–	9.3	0
	MPU.Z35.M0800.GA	■	MWT12 164 WF55 143 09	■	12	WF	55	55	9	–	14.3	5
	MPU.LSW.101.M0800.L20N	■	MWT12 164 WF55 173 09	■	12	WF	55	55	9	–	17.3	8
	WFW.M0800.R-K HSK	■	MWT12 164 WF55 093 12	■	12	WF	55	55	12	–	9.3	0
			MWT12 164 WF55 143 12	■	12	WF	55	55	12	–	14.3	5
			MWT12 164 WF55 173 12	■	12	WF	55	55	12	–	17.3	8
			MWT15 164 WF55 093 09	■	15	WF	55	55	9	–	9.3	0
			MWT15 164 WF55 093 12	■	15	WF	55	55	12	–	9.3	0
	MPU.TO.MA800.Nano	■	MWT06 164 WF37 503 07	■	6	WF	37	37	7	–	50.3	0
			MWT06 164 WF37 503 09	■	6	WF	37	37	9	–	50.3	0
			MWT06 164 WF37 573 07	■	6	WF	37	37	7	–	57.3	5
			MWT06 164 WF37 573 09	■	6	WF	37	37	9	–	57.3	5
			MWT06 164 WF37 573 07	■	6	WF	37	37	7	–	57.3	7
			MWT06 164 WF37 573 09	■	6	WF	37	37	9	–	57.3	7

* z: Number of teeth

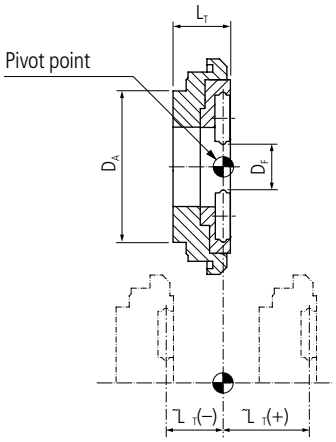


Type C

Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



MWT…

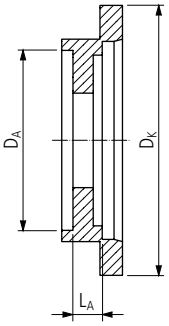


Driven tool holder			Whirling tool										
Manufacturer	Type		Order designation		Dimensions								
					D_F	D_A	D_K	D_M	z*	L_A	L_T	ΔL_T ±
PREMIUM-LINE													
MADAULA	CZ.035.C16	■	MWT12 164 3546 169 03 QC	■	12	42	46	46	3	8.9	16.9	0
PCM	LSW-215-000	■	MWT12 164 4060 130 09 QC	■	12	40	60	60	9	11	13	0
	NN20-W15	■	MWT12 164 4060 130 12 QC	■	12	40	60	60	12	11	13	0
	LSW-424-000	■	MWT12 164 3546 169 03 QC	■	12	42	46	46	3	8.9	16.9	0
	GSW-210	■	MWT06 164 252838 120 07	■	6	25	38	28	7	6.5	12	0
			MWT06 164 252838 120 09	■	6	25	38	28	9	6.5	12	0
	SR-10J-GSW-010	■	MWT06 164 2536 126 07	■	6	28	36	36	7	6.6	12.6	0
			MWT06 164 2536 126 09	■	6	28	36	36	9	6.6	12.6	0
TORNOS	306101	■	MWT06 164 4057 105 07 QC	■	6	40	57	57	7	2	10.5	0
			MWT06 164 4057 155 07 QC	■	6	40	57	57	7	7	15.5	5
			MWT06 164 4057 185 07 QC	■	6	40	57	57	7	10	18.5	8
			MWT06 164 4057 205 07 QC	■	6	40	57	57	7	12	20.5	10
			MWT06 164 4057 105 09 QC	■	6	40	57	57	9	2	10.5	0
			MWT06 164 4057 155 09 QC	■	6	40	57	57	9	7	15.5	5
			MWT06 164 4057 185 09 QC	■	6	40	57	57	9	10	18.5	8
			MWT06 164 4057 205 09 QC	■	6	40	57	57	9	12	20.5	10
			MWT08 164 4057 105 09 QC	■	8	40	57	57	9	2	10.5	0
			MWT08 164 4057 155 09 QC	■	8	40	57	57	9	7	15.5	5
			MWT08 164 4057 185 09 QC	■	8	40	57	57	9	10	18.5	8
			MWT08 164 4057 205 09 QC	■	8	40	57	57	9	12	20.5	10
			MWT12 164 4057 105 09 QC	■	12	40	57	57	9	2	10.5	0
			MWT12 164 4057 155 09 QC	■	12	40	57	57	9	7	15.5	5
			MWT12 164 4057 185 09 QC	■	12	40	57	57	9	10	18.5	8
			MWT12 164 4057 205 09 QC	■	12	40	57	57	9	12	20.5	10
			MWT12 164 4057 105 12 QC	■	12	40	57	57	12	2	10.5	0
			MWT12 164 4057 155 12 QC	■	12	40	57	57	12	7	15.5	5
			MWT12 164 4057 185 12 QC	■	12	40	57	57	12	10	18.5	8
			MWT12 164 4057 205 12 QC	■	12	40	57	57	12	12	20.5	10
			MWT15 164 4057 105 09 QC	■	15	40	57	57	9	2	10.5	0
			MWT15 164 4057 155 09 QC	■	15	40	57	57	9	7	15.5	5
			MWT15 164 4057 185 09 QC	■	15	40	57	57	9	10	18.5	8
			MWT15 164 4057 205 09 QC	■	15	40	57	57	9	12	20.5	10
			MWT15 164 4057 105 12 QC	■	15	40	57	57	12	2	10.5	0
			MWT15 164 4057 155 12 QC	■	15	40	57	57	12	7	15.5	5
			MWT15 164 4057 185 12 QC	■	15	40	57	57	12	10	18.5	8
			MWT15 164 4057 205 12 QC	■	15	40	57	57	12	12	20.5	10

* z: Number of teeth

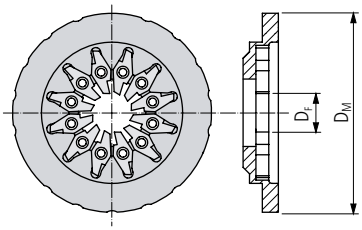
Other versions on request





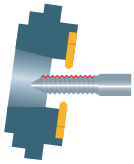
MWA…





MWR…

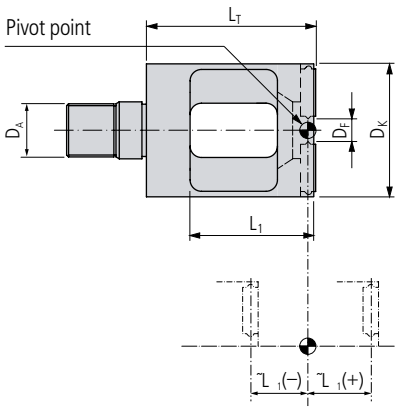
Adapter	Whirling ring
MWA 25M2438 065	MWR06 164 4646 085 07 QC
MWA 252836 066	MWR06 164 4646 085 09 QC
MWA 354046 089 QC	MWR08 164 4646 085 09 QC
MWA 404460 110 QC	MWR12 164 4646 085 09 QC
MWA 404657 020 QC	MWR12 164 4646 085 12 QC
MWA 404657 070 QC	MWR15 164 4646 085 09 QC
MWA 404657 100 QC	MWR15 164 4646 085 12 QC
MWA 404657 120 QC	MWR06 164 M2435 055 07
	MWR06 164 M2435 055 09
	MWR06 164 2536 060 07 QC
	MWR06 164 2536 060 09 QC
	MWR12 164 4046 080 03 QC
	MWR12 164 4460 020 09 QC
	MWR12 164 4460 020 12 QC



Attention
Only valid for inserts with 4 mm thickness (ΔL_T)



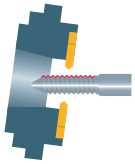
MWT… (TORNOS)



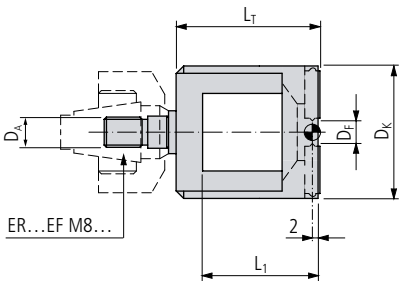
Driven tool holder			Whirling tool									
Manufacturer	Type		Order designation		Dimensions							
					D_F	D_A	D_K	z*	L_T	L_1		ΔL_T ±
PREMIUM-LINE												
TORNOS	305115	■	MWT06 164 M1435 440 07	■	6	M14	35	7	44	32.5		0

* z: Number of teeth

Note
Maximum speed of tool (nt) 6000 rpm.
Tool must be balanced at faster speeds.







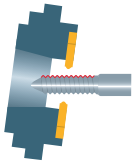
MWT… (ER)

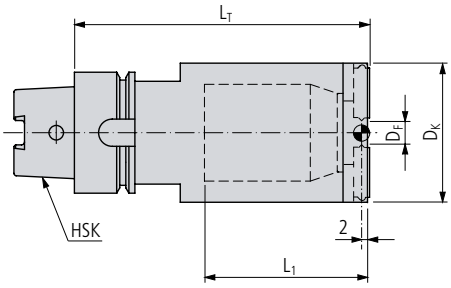
Driven tool holder			Whirling tool									
Manufacturer	Type		Order designation		Dimensions							
					D_F	D_A	D_K	z*	L_T	L_1		
PREMIUM-LINE												
TORNOS	305115 418212 570952	■ ■ ■	MWT06 164 M1435 440 07	■	6	M14	35	7	44	32.5		
			MWT06 164 M835 240 07	■	12	M14	41	9	44	32.5		
			MWT12 164 M1441 440 09	■	6	M8	35	7	24	16		
			MWT12 164 M841 240 12	■	12	M8	41	12	24	16		
UTILIS	ER…EF…	■	MWT06 164 0400 07	■	6	M8	35	7	40	32.5		

* z: Number of teeth

Collets 706

Note
Maximum speed of tool (nt) 6000 rpm.
Tool must be balanced at faster speeds.







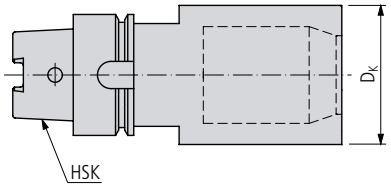
MWT… HSK…

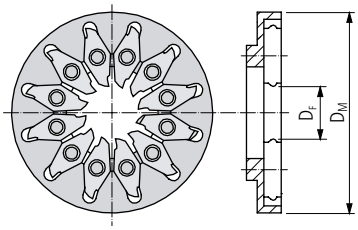
Driven tool holder			Whirling tool									
Manufacturer	Type		Order designation		Dimensions							
					D_F	D_A	D_K	D_M	z*	L_T	L_1	
PREMIUM-LINE												
UTILIS	A 40	■	MWT06 164 2646 0950 09 HSK40 A	■	6	HSK40 A	46	46	9	89	95	
			MWT08 164 2646 0950 09 HSK40 A	■	8	HSK40 A	46	46	9	89	95	
			MWT12 164 2646 0950 09 HSK40 A	■	12	HSK40 A	46	46	9	89	95	
			MWT12 164 2646 0950 12 HSK40 A	■	12	HSK40 A	46	46	12	89	95	
			MWT15 164 2646 0950 09 HSK40 A	■	15	HSK40 A	46	46	9	89	95	
			MWT15 164 2646 0950 12 HSK40 A	■	15	HSK40 A	46	46	12	89	95	
	C 40	■	MWT25 164 3958 0710 09 HSK40 C	■	25	HSK40 C	58	58	9	61	71	
			MWT25 164 3958 0710 12 HSK40 C	■	25	HSK40 C	58	58	12	61	71	
	E 40	■	MWT06 164 2646 0920 09 HSK40 E	■	6	HSK40 E	46	46	9	86	92	
			MWT06 164 2646 0950 09 HSK40 E	■	6	HSK40 E	46	46	9	89	95	
			MWT08 164 2646 0920 09 HSK40 E	■	8	HSK40 E	46	46	9	86	92	
			MWT08 164 2646 0950 09 HSK40 E	■	8	HSK40 E	46	46	9	89	95	
			MWT12 164 2646 0920 09 HSK40 E	■	12	HSK40 E	46	46	9	86	92	
			MWT12 164 2646 0950 09 HSK40 E	■	12	HSK40 E	46	46	9	89	95	
			MWT12 164 2646 0920 12 HSK40 E	■	12	HSK40 E	46	46	12	86	92	
			MWT12 164 2646 0950 12 HSK40 E	■	12	HSK40 E	46	46	12	89	95	
			MWT15 164 2646 0920 09 HSK40 E	■	15	HSK40 E	46	46	9	86	92	
			MWT15 164 2646 0950 09 HSK40 E	■	15	HSK40 E	46	46	9	89	95	
			MWT15 164 2646 0920 12 HSK40 E	■	15	HSK40 E	46	46	12	86	92	
			MWT15 164 2646 0950 12 HSK40 E	■	15	HSK40 E	46	46	12	89	95	

* z: Number of teeth

Note
Maximum speed of tool (nt) 6000 rpm.
Tool must be balanced at faster speeds.

Other versions on request





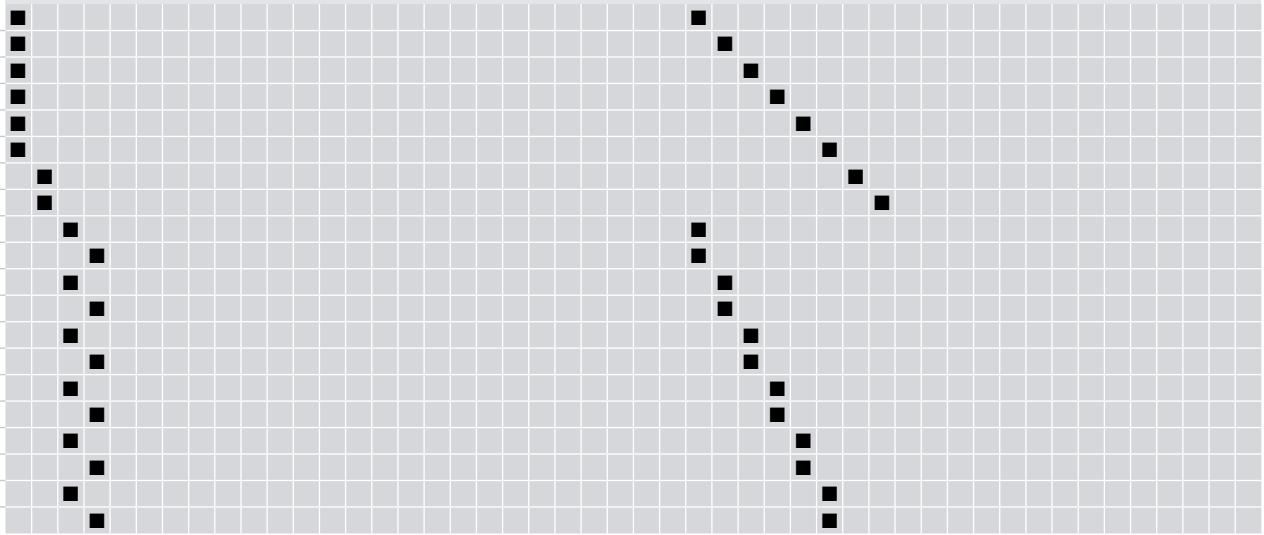


MWA HSK…

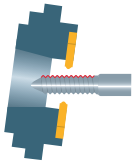


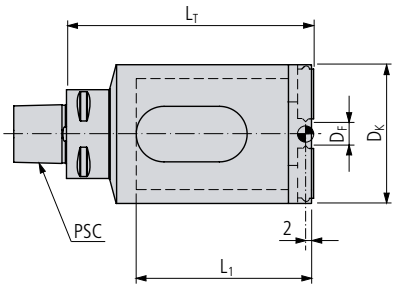
MWR…

Adapter	Whirling ring
MWA HSK40A 890	MWR06 164 2646 080 09
MWA HSK40C 610	MWR08 164 2646 080 09
MWA HSK40E 860	MWR12 164 2646 080 09
MWA HSK40E 890	MWR12 164 2646 080 12
	MWR15 164 2646 080 09
	MWR15 164 2646 080 12
	MWR25 164 3958 100 09
	MWR25 164 3958 100 12



Note
Maximum speed of tool (nt) 6000 rpm.
Tool must be balanced at faster speeds.







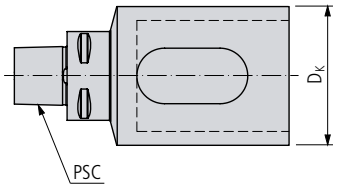
MWT… PSC…

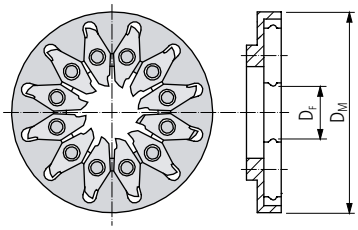
Driven tool holder			Whirling tool									
Manufacturer	Type		Order designation		Dimensions							
					D_F	D_A	D_K	D_M	z*	L_T	L_1	
PREMIUM-LINE												
UTILIS	PSC	■	MWT06 164 PSC3250 0880 09	■	6	PSC32	50	46	9	80	88	
			MWT08 164 PSC3250 0880 09	■	8	PSC32	50	46	9	80	88	
			MWT12 164 PSC3250 0880 09	■	12	PSC32	50	46	9	80	88	
			MWT12 164 PSC3250 0880 12	■	12	PSC32	50	46	12	80	88	
			MWT15 164 PSC3250 0880 09	■	15	PSC32	50	46	9	80	88	
			MWT15 164 PSC3250 0880 12	■	15	PSC32	50	46	12	80	88	

* z: Number of teeth

Note
Maximum speed of tool (nt) 6000 rpm.
Tool must be balanced at faster speeds.

Other versions on request







MWA PSC…



MWR…

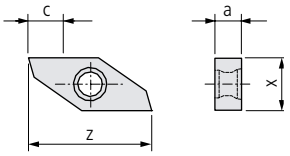
Adapter	Whirling ring					
MWA PSC3250 800	MWR06 164 2646 080 09	MWR08 164 2646 080 09	MWR12 164 2646 080 09	MWR12 164 2646 080 12	MWR15 164 2646 080 09	MWR15 164 2646 080 12
■	■					
■		■				
■			■			
■				■		
■					■	
■						■

Note
Maximum speed of tool (nt) 6000 rpm.
Tool must be balanced at faster speeds.

Blank

1601-4…/-6…/-8…

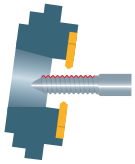




1601…

Order designation	Carbide ▯18				Dimensions						Holders
	UHM10	UHM 10 HX	UHM 20	UHM 20 HPX	a	c	x	z			
STANDARD-LINE											
1601-4-5 N …	■	■	■	■	4	5	6	16			MWR… / MWT…
1601-6-5 N …	■	■	■	■	6	5	6	16			MWR… / MWT…
1601-8-5 N …	■	■	■	■	8	5	6	16			MWR… / MWT…

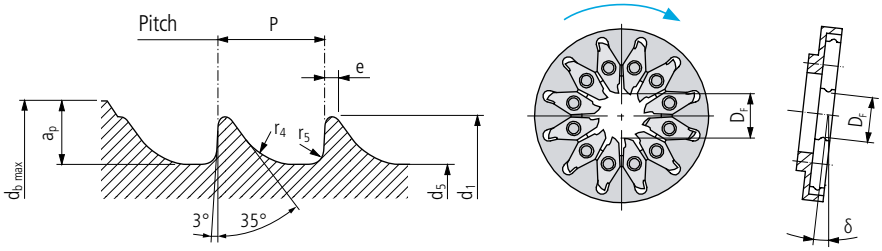
Execution of special thread profil ▯500



Threadwhirling full profile



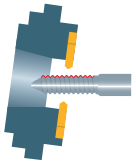
MWI… HA… VP



Order designation	Carbide						Standard	Dimensions												
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO 5835	D_F*	d_1 0/-0.15	d_5	Tolerance	P	δ	e	r_4	r_5		a_p	$d_{b\,max}$
STANDARD-LINE																			
MWI06 164 HA1.5 VP …	■	■	■	■	■	■	HA1.5	6	1.5	1.1	0/-0.1	0.5	7.33°	0.1	0.3	0.1		3.5	7.5
MWI06 164 HA2.0 VP …	■	■	■	■	■	■	HA2.0	6	2	1.3	0/-0.1	0.6	6.86°	0.1	0.4	0.1		3.5	7.5
MWI06 164 HA2.7 VP …	■	■	■	■	■	■	HA2.7	6	2.7	1.9	0/-0.15	1	8.14°	0.1	0.6	0.2		3.5	8
MWI08 164 HA1.5 VP …	■	■		■	■		HA1.5	8	1.5	1.1	0/-0.1	0.5	6.37°	0.1	0.3	0.1		4	8.5
MWI08 164 HA2.0 VP …	■	■		■	■		HA2.0	8	2	1.3	0/-0.1	0.6	5.67°	0.1	0.4	0.1		4	8.5
MWI08 164 HA2.7 VP …	■	■		■	■		HA2.7	8	2.7	1.9	0/-0.15	1	6.91°	0.1	0.6	0.2		4	9
MWI08 164 HA3.5 VP …	■	■		■	■		HA3.5	8	3.5	2.4	0/-0.15	1.25	6.63°	0.1	0.8	0.2		4	9.5
MWI08 164 HA4.0 VP …	■	■		■	■		HA4.0	8	4	2.9	0/-0.15	1.5	6.94°	0.1	0.8	0.2		4	10
MWI08 164 HA4.5 VP …	■	■		■	■		HA4.5	8	4.5	3.0	0/-0.15	1.75	7.17°	0.1	1	0.3		4	10
MWI08 164 HA5.0 VP …	■	■		■	■		HA5.0	8	5	3.5	0/-0.15	1.75	6.45°	0.1	1	0.3		4	10.5
MWI12 164 HA1.5 VP …	■	■	■	■	■	■	HA1.5	12	1.5	1.1	0/-0.1	0.5	7.33°	0.1	0.3	0.1		4	8.5
MWI12 164 HA2.0 VP …	■	■	■	■	■	■	HA2.0	12	2	1.3	0/-0.1	0.6	6.86°	0.1	0.4	0.1		4	8.5
MWI12 164 HA2.7 VP …	■	■	■	■	■	■	HA2.7	12	2.7	1.9	0/-0.15	1	8.14°	0.1	0.6	0.2		4	9
MWI12 164 HA3.5 VP …	■	■	■	■	■	■	HA3.5	12	3.5	2.4	0/-0.15	1.25	7.88°	0.1	0.8	0.2		4	9.5
MWI12 164 HA4.0 VP …	■	■	■	■	■	■	HA4.0	12	4	2.9	0/-0.15	1.5	8.05°	0.1	0.8	0.2		4	10
MWI12 164 HA4.5 VP …	■	■	■	■	■	■	HA4.5	12	4.5	3	0/-0.15	1.75	8.62°	0.1	1	0.3		4	10
MWI12 164 HA5.0 VP …	■	■	■	■	■	■	HA5.0	12	5	3.5	0/-0.15	1.75	7.6°	0.1	1	0.3		4	10.5

Execution of special thread profil 500

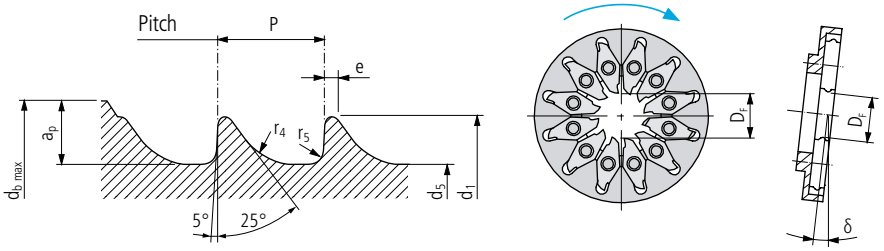
*** Note**
The flight circle (D_F) of the insert must match that of the whirling head.



Threadwhirling full profile



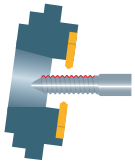
MWI... HB... VP



Order designation	Carbide						Standard	Dimensions											
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO 5835	D_F*	d_1 0/-0.15	d_5	Tolerance	P	δ	e	r_4	r_5		a_p	$d_{b\,max}$
STANDARD-LINE																			
MWI08 164 HB4.0 VP ...	■	■		■	■		HB4.0	8	4	1.9	0/-0.15	1.75	8.08°	0.1	0.8	0.3		4	9
MWI08 164 HB6.5 VP ...	■	■		■	■		HB6.5	8	6.5	3	0/-0.15	2.75	7.76°	0.2	1.2	0.8		4	10
MWI12 164 HB4.0 VP ...	■	■	■	■	■	■	HB4.0	12	4	1.9	0/-0.15	1.75	10.97°	0.1	0.8	0.3		4	9
MWI12 164 HB6.5 VP ...	■	■	■	■	■	■	HB6.5	12	6.5	3	0/-0.15	2.75	10.61°	0.2	1.2	0.8		4	10

Execution of special thread profil 500

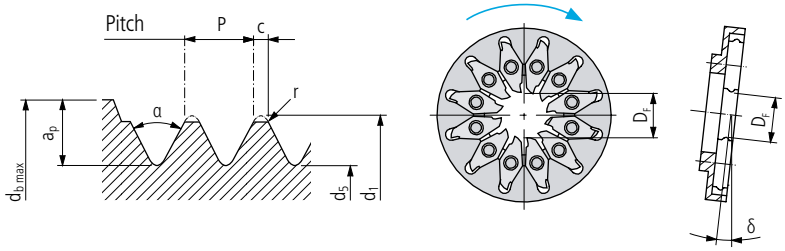
*** Note**
The flight circle (D_F) of the insert must match that of the whirling head.



Threadwhirling full profile



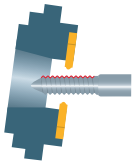
MWI… HC… VP



Order designation	Carbide						Standard	Dimensions												
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO 9268	D_F*	d_1 min.	d_1 max.	d_5 min.	d_5 max.	P	δ	c	r	α	a_p	$d_{b\,max}$
–	–	●	○	●	●														
–	●	●	○	●	●														
○	●	●	○	●	●														
●	○	–	●	○	–														
–	–	●	–	–	–														
STANDARD-LINE																			
MWI06 164 HC2.9 VP …	■	■	■	■	■	■	HC2.9	6	2.8	2.9	2	2.18	1.06	7.76°	0.1	0.05	60°	3.5	8.5
MWI06 164 HC3.5 VP …	■	■	■	■	■	■	HC3.5	6	3.4	3.53	2.5	2.64	1.27	7.61°	0.1	0.05	60°	3.5	9
MWI06 164 HC3.9 VP …	■	■	■	■	■	■	HC3.9	6	3.8	3.91	2.8	2.92	1.27	6.89°	0.1	0.05	60°	3.5	9
MWI06 164 HC4.2 VP …	■	■	■	■	■	■	HC4.2	6	4.1	4.22	3	3.25	1.27	6.36°	0.1	0.05	60°	3.5	9.5
MWI08 164 HC2.9 VP …	■	■	■	■	■	■	HC2.9	8	2.8	2.9	2	2.18	1.06	7.76°	0.1	0.05	60°	4	9.5
MWI08 164 HC3.5 VP …	■	■	■	■	■	■	HC3.5	8	3.4	3.53	2.5	2.64	1.27	7.61°	0.1	0.05	60°	4	10
MWI08 164 HC3.9 VP …	■	■	■	■	■	■	HC3.9	8	3.8	3.91	2.8	2.92	1.27	6.89°	0.1	0.05	60°	4	10
MWI08 164 HC4.2 VP …	■	■	■	■	■	■	HC4.2	8	4.1	4.22	3	3.25	1.27	6.36°	0.1	0.05	60°	4	10.5
MWI12 164 HC2.9 VP …	■	■	■	■	■	■	HC2.9	12	2.8	2.9	2	2.18	1.06	7.76°	0.1	0.05	60°	4	9.5
MWI12 164 HC3.5 VP …	■	■	■	■	■	■	HC3.5	12	3.4	3.53	2.5	2.64	1.27	7.61°	0.1	0.05	60°	4	10
MWI12 164 HC3.9 VP …	■	■	■	■	■	■	HC3.9	12	3.8	3.91	2.8	2.92	1.27	6.89°	0.1	0.05	60°	4	10
MWI12 164 HC4.2 VP …	■	■	■	■	■	■	HC4.2	12	4.1	4.22	3	3.25	1.27	6.36°	0.1	0.05	60°	4	10.5
MWI15 164 HC2.9 VP …	■	■	■	■	■	■	HC2.9	15	2.8	2.9	2	2.18	1.06	7.76°	0.1	0.05	60°	4	9.5
MWI15 164 HC3.5 VP …	■	■	■	■	■	■	HC3.5	15	3.4	3.53	2.5	2.64	1.27	7.61°	0.1	0.05	60°	4	10
MWI15 164 HC3.9 VP …	■	■	■	■	■	■	HC3.9	15	3.8	3.91	2.8	2.92	1.27	6.89°	0.1	0.05	60°	4	10
MWI15 164 HC4.2 VP …	■	■	■	■	■	■	HC4.2	15	4.1	4.22	3	3.25	1.27	6.36°	0.1	0.05	60°	4	10.5
MWI25 164 HC2.9 VP …	■	■	■	■	■	■	HC2.9	25	2.8	2.9	2	2.18	1.06	7.76°	0.1	0.05	60°	4	9.5
MWI25 164 HC3.5 VP …	■	■	■	■	■	■	HC3.5	25	3.4	3.53	2.5	2.64	1.27	7.61°	0.1	0.05	60°	4	10
MWI25 164 HC3.9 VP …	■	■	■	■	■	■	HC3.9	25	3.8	3.91	2.8	2.92	1.27	6.89°	0.1	0.05	60°	4	10
MWI25 164 HC4.2 VP …	■	■	■	■	■	■	HC4.2	25	4.1	4.22	3	3.25	1.27	6.36°	0.1	0.05	60°	4	10.5

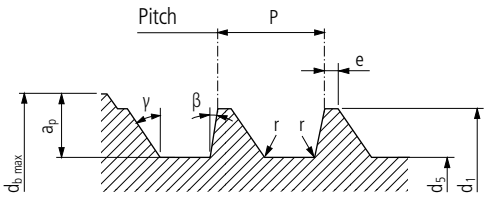
Execution of special thread profil 500

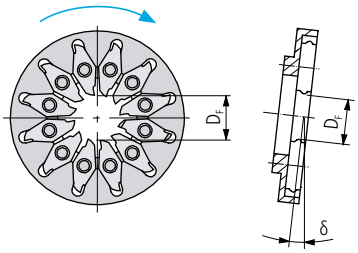
*** Note**
The flight circle (D_F) of the insert must match that of the whirling head.



Threadwhirling full profile





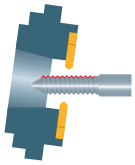


MWI… HD… VP

Order designation	Carbide (18)						Standard	Dimensions											
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO 9268	D_F*	d_1 ±0.03	d_5 ±0.03		P	δ	e	r	γ	β	a_p	$d_{b\ max}$
STANDARD-LINE																			
MWI06 164 HD4.0 VP …	■	■	■	■	■	■	HD4.0	6	4	2.9		1.59	8.32°	0.1	0.01	45°	10°	3.5	9
MWI06 164 HD4.5 VP …	■	■	■	■	■	■	HD4.5	6	4.5	2.9		2.18	10.59°	0.1	0.01	45°	10°	3.5	9
MWI08 164 HD4.0 VP …	■	■	■	■	■	■	HD4.0	8	4	2.9		1.59	8.32°	0.1	0.01	45°	10°	4	10
MWI08 164 HD4.5 VP …	■	■	■	■	■	■	HD4.5	8	4.5	2.9		2.18	10.59°	0.1	0.01	45°	10°	4	10
MWI12 164 HD4.0 VP …	■	■	■	■	■	■	HD4.0	12	4	2.9		1.59	8.32°	0.1	0.01	45°	10°	4	10
MWI12 164 HD4.5 VP …	■	■	■	■	■	■	HD4.5	12	4.5	2.9		2.18	10.59°	0.1	0.01	45°	10°	4	10
MWI15 164 HD4.0 VP …	■	■	■	■	■	■	HD4.0	15	4	2.9		1.59	8.32°	0.1	0.01	45°	10°	4	10
MWI15 164 HD4.5 VP …	■	■	■	■	■	■	HD4.5	15	4.5	2.9		2.18	10.59°	0.1	0.01	45°	10°	4	10
MWI25 164 HD4.0 VP …	■	■	■	■	■	■	HD4.0	25	4	2.9		1.59	8.32°	0.1	0.01	45°	10°	4	10
MWI25 164 HD4.5 VP …	■	■	■	■	■	■	HD4.5	25	4.5	2.9		2.18	10.59°	0.1	0.01	45°	10°	4	10

Execution of special thread profil 500

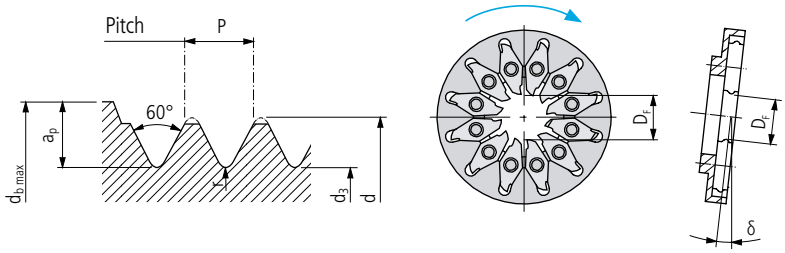
*** Note**
The flight circle (D_F) of the insert must match that of the whirling head.



Threadwhirling full profile



MWI… M… VP



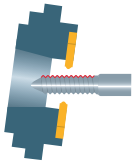
Order designation	Carbide (18)						Standard	Dimensions											
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ISO DIN13	D_F*	d	d_3		P	δ				r	a_p	$d_{b\,max}$
PREMIUM-LINE																			
MWI06 164 M1.4 VP …	■	■	■	■	■	■	M1.4	6	1.4	1.012		0.3	4.53°				0.033	3	6.5
MWI06 164 M1.6 VP …	■	■	■	■	■	■	M1.6	6	1.6	1.151		0.35	4.63°				0.041	3	7
MWI06 164 M2x0.25 VP …	■	■	■	■	■	■	M2×0.25	6	2	1.693		0.25	2.5°				0.036	3	7.5
MWI06 164 M2 VP …	■	■	■	■	■	■	M2	6	2	1.509		0.4	4.17°				0.048	3	7
MWI06 164 M3x0.35 VP …	■	■	■	■	■	■	M3×0.35	6	3	2.571		0.35	2.3°				0.051	3	8.5
MWI06 164 M3 VP …	■	■	■	■	■	■	M3	6	3	2.387		0.5	3.39°				0.062	3	8
MWI12 164 M1.6 VP …	■	■	■	■	■	■	M1.6	12	1.6	1.151		0.35	4.63°				0.041	4	9
MWI12 164 M2x0.25 VP …	■	■	■	■	■	■	M2×0.25	12	2	1.693		0.25	2.5°				0.036	4	9.5
MWI12 164 M2 VP …	■	■	■	■	■	■	M2	12	2	1.509		0.4	4.17°				0.048	4	9
MWI12 164 M2.5 VP …	■	■	■	■	■	■	M2.5	12	2.5	1.928		0.45	3.7°				0.055	4	9.5
MWI12 164 M3x0.35 VP …	■	■	■	■	■	■	M3×0.35	12	3	2.571		0.35	2.3°				0.051	4	10.5
STANDARD-LINE																			
MWI12 164 M3 VP …	■	■	■	■	■	■	M3	12	3	2.387		0.5	3.39°				0.062	4	10
MWI12 164 M3.5 VP …	■	■	■	■	■	■	M3.5	12	3.5	2.744		0.6	3.5°				0.077	4	8.5
MWI12 164 M4x0.5 VP …	■	■	■	■	■	■	M4×0.5	12	4	3.387		0.5	2.5°				0.072	4	11
MWI12 164 M4 VP …	■	■	■	■	■	■	M4	12	4	3.141		0.7	3.58°				0.091	4	11
MWI12 164 M5x0.5 VP …	■	■	■	■	■	■	M5×0.5	12	5	4.387		0.5	1.9°				0.072	4	12
MWI12 164 M5 VP …	■	■	■	■	■	■	M5	12	5	4.019		0.8	3.24°				0.105	4	11.5
MWI12 164 M6x0.75 VP …	■	■	■	■	■	■	M6×0.75	12	6	5.08		0.75	2.5°				0.108	4	13
MWI12 164 M6 VP …	■	■	■	■	■	■	M6	12	6	4.773		1	3.39°				0.134	4	12.5
MWI12 164 M7 VP …	■	■	■	■	■	■	M7	12	7	5.753		1	2.86°				0.134	4	13.5
MWI12 164 M8x0.75 VP …	■	■	■	■	■	■	M8×0.75	12	8	7.08		0.75	1.8°				0.108	4	15
MWI12 164 M8 VP …	■	■	■	■	■	■	M8	12	8	6.466		1.25	3.15°				0.17	4	14
MWI12 164 M8x1.0 VP …	■	■	■	■	■	■	M8×1	12	8	6.773		1	2.5°				0.144	4	14.5
MWI12 164 M10x0.75 VP …	■	■	■	■	■	■	M10×0.75	12	10	9.08		0.75	1.4°				0.108	4	17
MWI12 164 M10x1.0 VP …	■	■	■	■	■	■	M10×1	12	10	8.773		1	1.9°				0.144	4	16.5
MWI12 164 M10x1.25 VP …	■	■	■	■	■	■	M10×1.25	12	10	8.466		1.25	2.5°				0.18	4	16
MWI12 164 M10 VP …	■	■	■	■	■	■	M10	12	10	8.16		1.5	3.01°				0.207	4	16

Execution of special thread profil 500

*** Note**
The flight circle (D_F) of the insert must match that of the whirling head.

Cutting specification ..... 498…

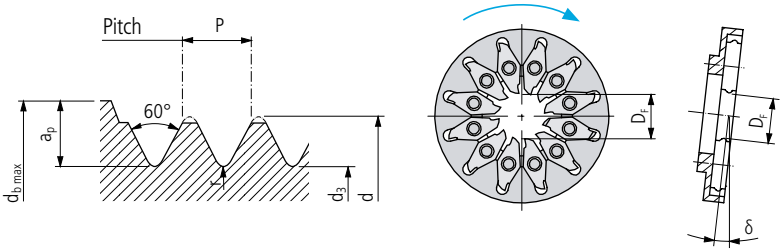
Legend ..... 6…



Threadwhirling full profile



MWI…UNC VP

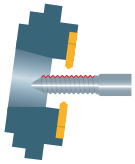


Order designation	Carbide ▯18						Standard**	Dimensions											
	–	–	●	○	●	●													
	–	●	●	○	●	●													
	○	●	●	○	●	●													
	●	○	–	●	○	–													
	–	–	●	–	–	–													
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ANSI B1.1	D_F*	d	d_3		P	δ				r	a_p	$d_{b\,max}$
PREMIUM-LINE																			
MWI12 164 01-64UNC VP …	■	■	■	■	■	■	01-64	12	1.854	1.347		0.397	4.51°				0.047	4	9.5
MWI12 164 02-56UNC VP …	■	■	■	■	■	■	02-56	12	2.184	1.608		0.454	4.35°				0.055	4	10
STANDARD-LINE																			
MWI12 164 03-48UNC VP …	■	■	■	■	■	■	03-48	12	2.515	1.845		0.529	4.42°				0.066	4	10
MWI12 164 04-40UNC VP …	■	■	■	■	■	■	04-40	12	2.845	2.046		0.635	4.73°				0.082	4	10.5
MWI12 164 05-40UNC VP …	■	■	■	■	■	■	05-40	12	3.175	2.376		0.635	4.17°				0.082	4	11
MWI12 164 06-32UNC VP …	■	■	■	■	■	■	06-32	12	3.505	2.511		0.794	4.8°				0.105	4	11
MWI12 164 08-32UNC VP …	■	■	■	■	■	■	08-32	12	4.166	3.172		0.794	3.94°				0.105	4	12
MWI12 164 10-24UNC VP …	■	■	■	■	■	■	10-24	12	4.826	3.508		1.058	4.62°				0.143	4	12.5
MWI12 164 12-24UNC VP …	■	■	■	■	■	■	12-24	12	5.486	4.168		1.058	3.99°				0.143	4	13
MWI12 164 1/4-20UNC VP …	■	■	■	■	■	■	1/4-20	12	6.35	4.772		1.27	4.16°				0.173	4	14
MWI12 164 5/16-18UNC VP …	■	■	■	■	■	■	5/16-18	12	7.95	6.199		1.411	3.63°				0.194	4	15.5
MWI12 164 3/8-16UNC VP …	■	■	■	■	■	■	3/8-16	12	9.525	7.557		1.588	3.39°				0.219	4	17

** Tolerance class 2A and 3A on customer request

Execution of special thread profil ▯500

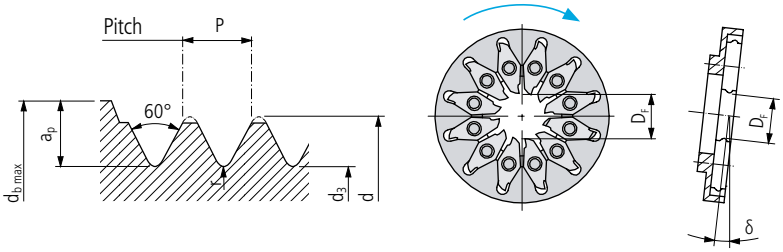
*** Note**
The flight circle (D_F) of the insert must match that of the whirling head.



Threadwhirling full profile



MWI…UNF VP

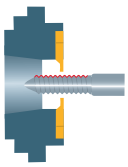


Order designation	Carbide ▯ 18						Standard**	Dimensions											
	–	–	●	○	●	●													
	–	●	●	○	●	●													
	○	●	●	○	●	●													
	●	○	–	●	○	–													
	–	–	●	–	–	–													
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+	ANSI B1.1	D_F*	d	d_3		P	δ				r	a_p	$d_{b\,max}$
PREMIUM-LINE																			
MWI12 164 00-80UNF VP …	■	■	■	■	■	■	00-80	12	1.524	1.114		0.318	4.38°				0.036	4	9
MWI12 164 01-72UNF VP …	■	■	■	■	■	■	01-72	12	1.854	1.401		0.353	3.95°				0.041	4	9.5
MWI12 164 02-64UNF VP …	■	■	■	■	■	■	02-64	12	1.727	1.22		0.397	4.90°				0.047	4	9.5
MWI12 164 03-56UNF VP …	■	■	■	■	■	■	03-56	12	2.515	1.938		0.454	3.71°				0.055	4	10
STANDARD-LINE																			
MWI12 164 04-48UNF VP …	■	■	■	■	■	■	04-48	12	2.845	2.176		0.529	3.84°				0.066	4	10.5
MWI12 164 05-44UNF VP …	■	■	■	■	■	■	05-44	12	3.175	2.447		0.577	3.74°				0.073	4	11
MWI12 164 06-40UNF VP …	■	■	■	■	■	■	06-40	12	3.505	2.706		0.635	3.72°				0.082	4	11
MWI12 164 08-36UNF VP …	■	■	■	■	■	■	08-36	12	4.166	3.28		0.706	3.45°				0.092	4	12
MWI12 164 10-32UNF VP …	■	■	■	■	■	■	10-32	12	4.826	3.832		0.794	3.34°				0.105	4	10.5
MWI12 164 12-28UNF VP …	■	■	■	■	■	■	12-28	12	5.486	4.354		0.907	3.36°				0.121	4	11
MWI12 164 1/4-28UNF VP …	■	■	■	■	■	■	1/4-28	12	6.35	5.217		0.907	2.86°				0.121	4	14
MWI12 164 5/16-24UNF VP …	■	■	■	■	■	■	5/16-24	12	7.95	6.632		1.058	2.65°				0.143	4	15.5
MWI12 164 3/8-24UNF VP …	■	■	■	■	■	■	3/8-24	12	9.525	8.207		1.058	2.18°				0.143	4	17.5

** Tolerance class 2A and 3A on customer request

Execution of special thread profil ▯ 500

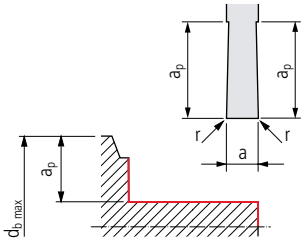
*** Note**
The flight circle (D_F) of the insert must match that of the whirling head.

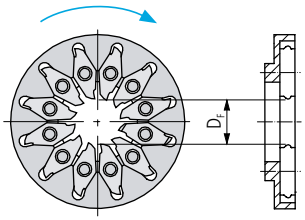


Cylindrical whirling



MWI… 1603…





Order designation	Carbide							Dimensions									
	UHM 10	UHM 10 HX	UHM 10 TX+	UHM 20	UHM 20 HPX	UHM 20 TX+		D_F*	a						r	a_p	$d_{b\,max}$
STANDARD-LINE																	
MWI12 1603-0.4-3.5 …	■	■	■	■	■	■		12	4						0.05	4	d+(2 × a_p)
MWI12 1605-3.5-3.5 …	■	■	■	■	■	■		12	3.5						0.05	4	d+(2 × a_p)

* **Note**
The flight circle (D_F) of the insert must match that of the whirling head.

The multidec®-WHIRLING box contains tools for daily use on the machine. The protective foam inlay ensures that the parts are always located at the same place in the case.
Spaces are provided for the whirling head for specific applications and the matching whirling plates (4 unmounted sets in all). Dummies can be supplied optionally to protect vacant plate positions.



Illustration with whirling head and plates (these have to be ordered separately)

Contents:
– Handle for torque screwdriver 1.2 Nm
– Alternative torque screwdriver blade for Torx screws
– Allen key
– High performance grease
– Spare screws for the whirling adapter and whirling ring
– Spare Torx screws for the indexing plates

STARTER-SET

Order designation	
Starter-Set	■

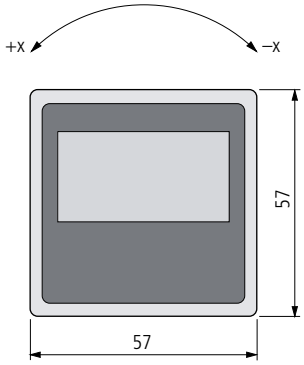
The digital inclinometer gives you more flexibility in machine set-up and adjusting the thread pitch angle. The calculation and complicated movement by a certain distance are not required, particularly since the space situation in machines is not always the best.
The UMI DI-490 (MEMS principle = Micro-Electro-Mechanical System) consists of a compact housing. Three magnets on the underside makes the attachment in the machine compartment easier. The zero point can be calibrated and stored internally, in order to change between relative and absolute measurement at any time.

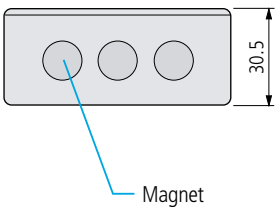


UMI …

Order designation	
UMI DI-490	■

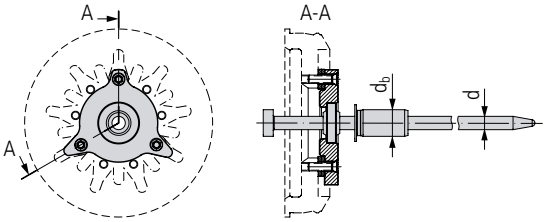
Technical data:
– Measuring accuracy 0.2°
– Measuring range (X) 4 × 90°
– Display resolution 0.05°
– Temperature range 0 to 40 °C
– Weight 200 g
– Protection class IP54





Centering device for manual adjustment of the point height compensation with 3 different sizes of centering adapter for the guide bushing.





MWV…

Order designation		Dimensions			
		D_F	d	d_b	z
MWV06 07 402000	■	6	4	6, 8, 10	7
MWV06 00 402000	■	6	4	6, 8, 10	9, 12
MWV12 00 402000	■	12	4	6, 8, 10	9, 12
MWV15 00 402000	■	15	4	6, 8, 10	9, 12
MWV25 00 402000	■	25	4	6, 8, 10	9, 12

TORX screwdriver ..... 703…

Explanation:

D_F Cutting edge flying circle
d Needle diameter
d_b Bar diameter of guide bushing
z Number of whirling tool teeth

For inserts

Illustration	Description	Dimensions	Order designation		Inserts
	TORX screw	M2.5 × 6	MSP 25060 T08	■	MWI…
		M2.5 × 7	MSP 25070 T08	■	
		M2.5 × 9	MSP 25090 T08	■	
	UTILIS MWI-Dummy		MWI DUMMY	■	

For whirling tool/adapter

Illustration	Description	Dimensions	Order designation		Holders
	Flat-head socket screw	M3 × 8	MSP 30080 SKS IB2.5	■	MWR… MWT…
		M3 × 12	MSP 30120 SKS IB2.5	■	
		M4 × 6	MSP 40060 SKS IB2.5	■	
		M4 × 10	MSP 40100 SKS IB2.5	■	
		M4 × 12	MSP 40120 SKS IB2.5	■	
		M4 × 14	MSP 40140 SKS IB2.5	■	
	Socket head screw	M3 × 4	MSP 30040 ZKS IB2.5	■	MWA… MWR… MWT…
		M3 × 6	MSP 30060 ZKS IB2.5	■	
		M3 × 7	MSP 30070 ZKS IB2.5	■	
		M3 × 8	MSP 30080 ZKS IB2.5	■	
		M3 × 10	MSP 30100 ZKS IB2.5	■	
		M3 × 12	MSP 30120 ZKS IB2.5	■	
		M3 × 16	MSP 30160 ZKS IB2.5	■	
		M3 × 20	MSP 30200 ZKS IB2.5	■	
		M3 × 25	MSP 30250 ZKS IB2.5	■	
		M4 × 8	MSP 40080 ZKS IB3	■	
		M4 × 10	MSP 40100 ZKS IB3	■	
		M4 × 12	MSP 40120 ZKS IB3	■	
		M4 × 14	MSP 40140 ZKS IB3	■	
		M4 × 16	MSP 40160 ZKS IB3	■	
	Socket head screw DIN 7984	M3 × 8	MSP 30080 ZKNS IB2.5	■	
		M3 × 16	MSP 30160 ZKNS IB2.5	■	
	Butt head screw	M4 × 6	MSP 40060 LKS IB2.5	■	MWA… MWT…
		M4 × 10	MSP 40100 LKS IB2.5	■	
		M4 × 16	MSP 40160 LKS IB2.5	■	
	TORX screw	M3 × 7.3	MSP 30073 T08	■	MWA… MWR… MWT…
		M3 × 9	MSP 30090 T08	■	
		M3 × 11	MSP 30110 TP09 Torx Plus	■	
		M3 × 16	MSP 30160 TP08 Torx Plus	■	
		M3 × 7.3	MSP 30073 T10	■	
		M4 × 9	MSP 40090 T15	■	
		M4 × 11	MSP 40110 TP15 Torx Plus	■	
		M4 × 14.4	MSP 40144 TP15 Torx Plus	■	
	Set screw / grub srew	M3 × 5	MSP 30050 GST IB1.5	■	MWR… MWT…
	Allen key	SW 1.5	MSP IB1.5	■	MWT… MWR… MWA…
		SW 2	MSP IB2	■	
		SW 2.5	MSP IB2.5	■	
		SW 3	MSP IB3	■	
		SW 4	MSP IB4	■	
		SW 5	MSP IB5	■	
		SW 6	MSP IB6	■	
		SW 8	MSP IB8	■	
		SW 10	MSP IB10	■	
	TORX screwdriver	T08	MSP TX-S08	■	MWT… MWR… MWA…
		T09	MSP TX-S09	■	
		T10	MSP TX-S10	■	
		T15	MSP TX-S15	■	
		TP08	MSP TXP-S08 Torx Plus	■	
		TP09	MSP TXP-S09 Torx Plus	■	
		TP10	MSP TXP-S10 Torx Plus	■	
		TP15	MSP TXP-S15 Torx Plus	■	

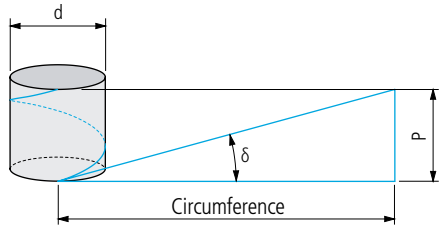
TORX screwdriver ..... 703…

Legend ..... 6…

Application recommendation — *multidec®-WHIRLING*

$$\tan \delta = \frac{P}{\pi \cdot d}$$

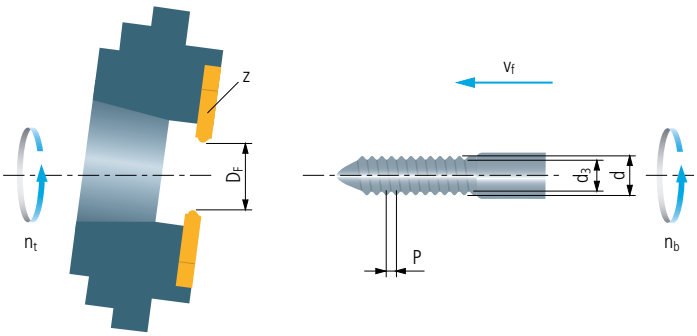
$$\delta = \frac{\arctan \cdot P}{\pi \cdot d}$$



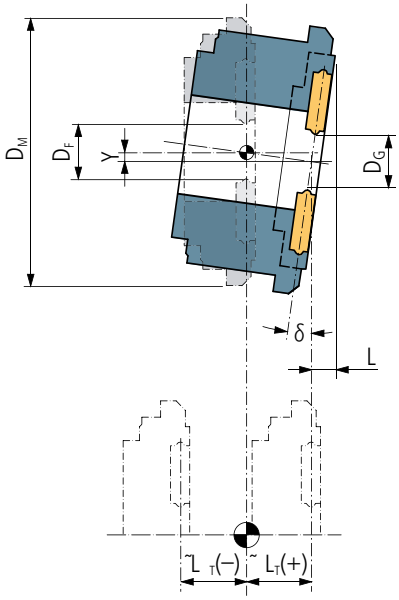
$$v_f = z \cdot f_z \cdot n_t$$

$$n_t = \frac{v_c \cdot 1000}{\pi \cdot D_F}$$

$$n_b = \frac{v_f}{\pi \cdot d_3}$$



$$Y = \sin \delta \cdot \Delta L_T$$



Please visit our website **www.utilis.com** for further thread whirling calculations.

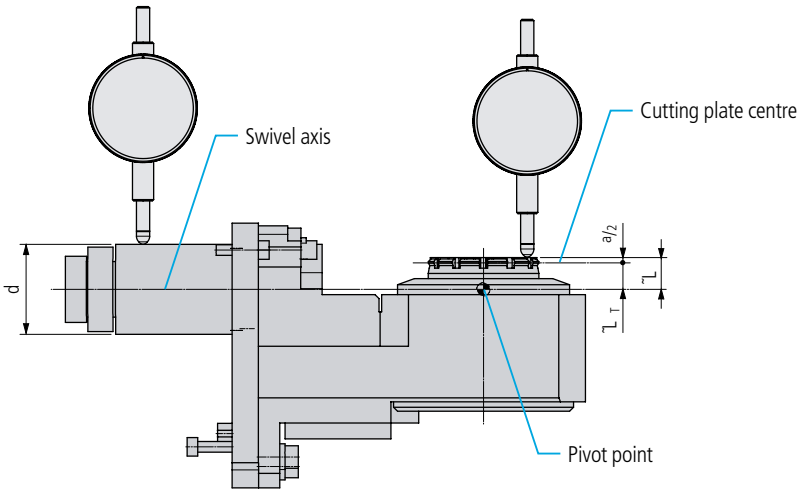
Explanation

d_3	Core diameter (mm)
d_4	Thread diameter of work piece (mm)
D_F	Flight circle (mm)
D_G	Max. bar passage diameter (mm)
D_M	Ring diameter outside (mm)
f_z	Feed per tooth (mm)
L	Overhang length (mm)
ΔL_T	Positioning relative to the pivot point (mm)
n_t	Tool revolutions (rev/min)
n_b	Work piece revolutions (rev/min)
P	Pitch (mm)
v_f	Work piece feed (mm/min)
v_c	Cutting speed (m/min)
Y	Tip height adjustment
z	Number of teeth
δ	Lead angle (°)

UTILIS multidec® swiss type tools

The measurement of the length difference ΔL_T is appropriate for determination when the following situations exist:
– new whirling tool or holder
– checking the ΔL_T
– after a machine collision
– point height compensation

Outside the machine the length difference ΔL_T must be determined using the height measuring device for calculating the point height and correcting it if necessary using the following procedure:



1. The swivel axis is usually the centre axis of the arbor. In order to do this, the diameter d must be measured and halved. This position must be zeroed and used as a reference for further measurement.

2. We take the uppermost surface of the cutting edge as the second measuring point. The difference results in ΔL

3. Use dimension a/2 (half the cutting edge width) in accordance with the whirling tool designation for the remaining calculation. The length difference ΔL_T is calculated from this, whereby the exact point height compensation can be adjusted.

See usage examples 495

Whirling tool designation	a/2	ΔL	$\Delta L_T = \Delta L - a/2$
MWT.. 164 … … …	2		
MWT.. 166 … … …	3		
MWT.. 168 … … …	4		

Overhang length

Angle	Distance (Ring diameter outside)						
δ	L (D_M = 25)	L (D_M = 42)	L (D_M = 44)	L (D_M = 45)	L (D_M = 46)	L (D_M = 48)	L (D_M = 58)
0°	2	2	2	2	2	2	2
1°	2.4	2.7	2.8	2.8	2.8	2.8	3
2°	2.9	3.5	3.5	3.6	3.6	3.7	4
3°	3.3	4.2	4.3	4.4	4.4	4.5	5
4°	3.7	4.9	5.1	5.1	5.2	5.4	6.1
5°	4.2	5.7	5.8	5.9	6	6.2	7.1
6°	4.6	6.4	6.6	6.7	6.8	7	8.1
7°	5.1	7.2	7.4	7.5	7.6	7.9	9.1
8°	5.5	7.9	8.2	8.3	8.5	8.7	10.2
9°	6	8.7	9	9.1	9.3	9.6	11.2
10°	6.4	9.4	9.8	9.9	10.1	10.5	12.2
11°	6.9	10.2	10.6	10.7	10.9	11.3	13.3
12°	7.3	10.9	11.4	11.6	11.8	12.2	14.3
13°	7.8	11.7	12.2	12.4	12.6	13.1	15.4
14°	8.2	12.5	13	13.2	13.5	14	16.5
15°	8.7	13.3	13.8	14.1	14.3	14.9	17.5
16°	9.2	14	14.6	14.9	15.2	15.8	18.6
17°	9.6	14.8	15.5	15.8	16.1	16.7	19.7
18°	10.1	15.6	16.3	16.6	16.9	17.6	20.8
19°	10.6	16.5	17.2	17.5	17.8	18.5	22
20°	11.1	17.3	18	18.4	18.7	19.5	23.1
21°	11.6	18.1	18.9	19.3	19.7	20.4	24.3
22°	12.1	19	19.8	20.2	20.6	21.4	25.4
23°	12.6	19.8	20.7	21.1	21.5	22.4	26.6
24°	13.1	20.7	21.6	22	22.5	23.4	27.8
25°	13.7	21.6	22.5	23	23.5	24.4	29

Max. bar passage diameter

Angle	Distance			
δ	D_G	D_G	D_G	D_G
0° (D_F = D_G)	**6**	**12**	**15**	**25**
1°	6	12	15	25
2°	6	11.99	14.99	24.98
3°	5.99	11.98	14.98	24.97
4°	5.99	11.97	14.96	24.94
5°	5.98	11.95	14.94	24.9
6°	5.97	11.93	14.92	24.86
7°	5.96	11.91	14.89	24.81
8°	5.94	11.88	14.85	24.76
9°	5.93	11.85	14.82	24.69
10°	5.91	11.82	14.77	24.62
11°	5.89	11.78	14.72	24.54
12°	5.87	11.74	14.67	24.45
13°	5.85	11.69	14.62	24.36
14°	5.82	11.64	14.55	24.26
15°	5.8	11.59	14.49	24.15
16°	5.77	11.54	14.42	24.03
17°	5.74	11.48	14.34	23.91
18°	5.71	11.41	14.27	23.78
19°	5.67	11.35	14.18	23.64
20°	5.64	11.28	14.1	23.49
21°	5.6	11.2	14	23.34
22°	5.56	11.13	13.91	23.18
23°	5.52	11.05	13.81	23.01
24°	5.48	10.96	13.7	22.84
25°	5.44	10.88	13.59	22.66

	Steel unalloyed			Steel low alloyed			Steel high alloyed		
Hardness value (HB) / (HRC)	125–300 HB			180–250 HB			200–350 HB		
Category	I			II			III		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Feed per tooth	f_z (mm)								
	–	0.02–0.15	0.005–0.08	–	0.02–0.15	0.005–0.08	–	0.02–0.15	0.005–0.08
Depths of cut	a_p (mm)								
MWI06	3								
MWI12/15/25	4								
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 10	–	50–80	50–100	–	40–80	40–90	–	30–70	30–80
UHM 10 HPX	–	80–180	120–220	–	50–140	100–180	–	50–120	80–160
UHM 10 TX+	–	–	–	–	–	–	–	60–130	80–180
UHM 20	–	40–70	40–90	–	30–70	30–80	–	20–60	20–70
UHM 20 HX	–	70–160	110–200	–	40–130	90–170	–	40–110	70–150
UHM 20 TX+	–	–	–	–	–	–	–	–	–

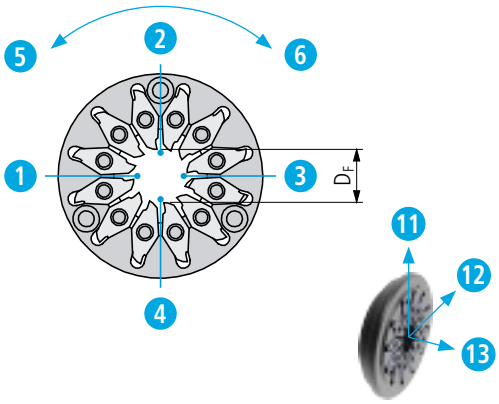
	Stainless steel			Stainless steel			Titanium		
Hardness value (HB) / (HRC)	180–220 HB			220–330 HB			–		
Category	V			VI			IV		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Feed per tooth	f_z (mm)								
	–	0.01–0.1	0.005–0.05	–	0.01–0.1	0.005–0.05	–	0.01–0.08	0.005–0.05
Depths of cut	a_p (mm)								
MWI06	3								
MWI12/15/25	4								
Cutting speeds	v_c (m/min)								
Cutting material carbide									
UHM 10	–	50–100	50–120	–	30–70	40–80	–	30–70	40–80
UHM 10 HPX	–	80–150	100–160	–	50–100	70–120	–	50–100	70–120
UHM 10 TX+	–	80–160	100–170	–	50–120	70–140	–	50–120	70–140
UHM 20	–	40–90	40–100	–	20–60	30–70	–	20–60	30–70
UHM 20 HX	–	70–140	90–150	–	40–90	60–110	–	40–90	60–110
UHM 20 TX+	–	–	–	–	–	–	–	–	–

Legend ..... 6…

	Aluminum			Brass / Lead-free brass			Hard materials		
Hardness value (HB) / (HRC)	60–130 HB			–			45–70 HRC		
Category	VII			VIII			X		
Machining method	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼	▼	▼▼	▼▼▼
Feed per tooth					f_z (mm)				
	–	–	–	–	0.02–0.15	0.005–0.1	–	0.01–0.08	0.005–0.05
Depths of cut					a_p (mm)				
MWI06					3				
MWI12/15/25					4				
Cutting speeds					v_c (m/min)				
Cutting material carbide									
UHM 10	–	–	–	–	50–140	50–160	–	–	–
UHM 10 HPX	–	–	–	–	–	–	–	–	–
UHM 10 TX+	–	–	–	–	–	–	–	15–40	20–80
UHM 20	–	–	–	–	40–130	40–150	–	–	–
UHM 20 HX	–	–	–	–	–	–	–	–	–
UHM 20 TX+	–	–	–	–	–	–	–	–	–

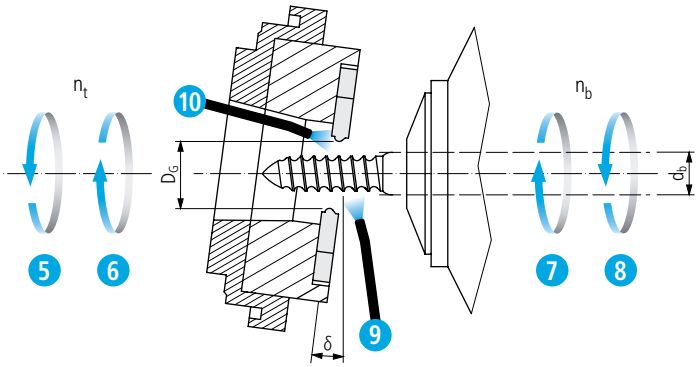
Order guideline for execution of special thread profils — *multidec®-WHIRLING*

Cutting position



Turning direction of whirling unit

Turning direction of the bar



Machine specifications					
Manufacturer					
Type					
Manufacturer of driven tool					
Type of driven tool					
Flight circle D_F	(mm)	☐ 6	☐ 12	☐ 15	☐ 25
Mounting place (turret, gang rack, elsewhere)					
Enter axes (X, Y, Z)		☐ 11	☐ 12	☐ 13	
High pressure cooling?	(bar)	☐ ≤30	☐ >30	☐ No	
Cooling direction		☐ 9		☐ 10	
Turning direction of whirling unit	(n_t)	☐		☐	
	$n_t = n_b$	5		6	

Material					
Designation	(DIN)				
Bar diameter	(d_b)				
Turning direction of the bar	(n_b)	☐		☐	
	$n_b = n_t$	7		8	
Cutting position		☐ 1	☐ 2	☐ 3	☐ 4

Insert					
Thread drawing	(No.)				
Full profile		☐ Yes		☐ No	
Number of thread starts		☐ 1	☐ 2	☐ 3	
Coating		☐ Yes		☐ No	

Company _____

Responsible person _____

Road _____

Postal code, City _____

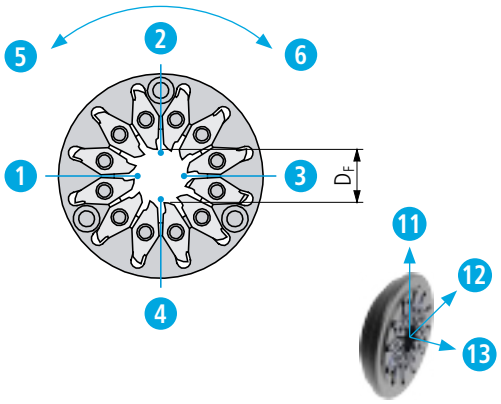
Phone _____

Fax _____

E-mail _____

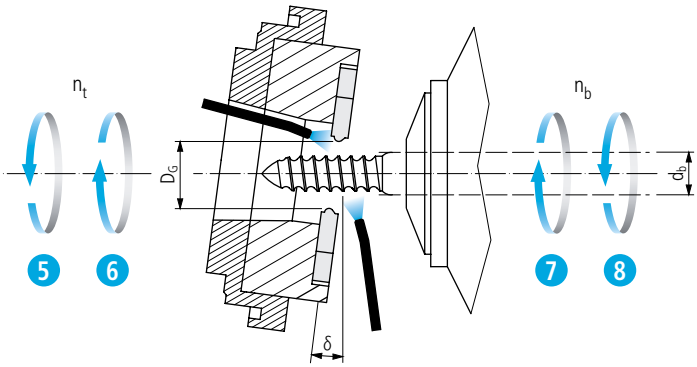
Utilis AG, Precision Tools
Kreuzlingerstrasse 22, CH-8555 Müllheim, Switzerland
Phone +41 52 762 62 62, Fax +41 52 762 62 00
info@utilis.com, www.utilis.com

Cutting position



Turning direction of whirling unit

Turning direction of the bar



Machine specifications				
Turning direction of whirling unit	(n_t)	☐		☐
	$n_t = n_b$	5		6
High-pressure cooling in place?	(bar)	☐	☐	☐
		≤30	>30	No
Is the guide bush set flush?		☐		☐
		Yes		No
Distance to the guide bush	(<d_b)			

Driven tool				
Manufacturer				
Type				
Has the gradient angle been set?	(°)	☐		☐
		Yes		No
Enter axes (X, Y, Z)		☐	☐	☐
		11	12	13
Center height corrected?		☐		☐
		Yes		No
Type of whirling head				
Concentricity set to max. 5 µm?		☐		☐
		Yes		No
Condition of whirling head	(MWT…)			

Material					
Bar diameter	(d_b)				
Turning direction of the bar	(n_b)	☐		☐	
	$n_b = n_t$	7		8	
Cutting position		☐	☐	☐	☐
		1	2	3	4
Cutting speed / feed	(v_f / f_z)				
Problem with chips?		☐		☐	
		Yes		No	
Vibrations?		☐		☐	
		Yes		No	

Insert			
Order designation			
Cutting edge screwed tight with 1.2 Nm?	☐		☐
	Yes		No
Centre of profile at point of rotation?	☐		☐
	Yes		No
Distance to point of rotation	(mm)		
Cutting from the same production batch?	☐		☐
	Yes		No
Are cutting edges evenly worn?	☐		☐
	Yes		No
Cutting edges cleaned prior to fitting/change?	☐		☐
	Yes		No

UTILIS multidec swiss type tools

multidec®-SHORT is a range of holders with short holders multidec®-CUT, -ISO and -TOP indexable inserts. All holders are equipped with internal cooling.



Advantages:
– All holders feature three connecting options for the coolant supply
– Fixed coolant discharge, therefore low build-up at front at the holder
– With or without high pressure, the coolant medium always hits the cutting edge precisely

Compatibility with QS quick tool change system:
multidec®-SHORT holders can also be used in the QS quick tool change system from Sandvik Coromant. The coolant transfer tube can be screwed into the holder at the rear fur using the internal coolant supply.



Overview – multidec®-SHORT

Technical information 9



Holders

1600… IC-S, 1600… IC-S INCH 504

3000… IC-S, 3000… IC-S INCH 505

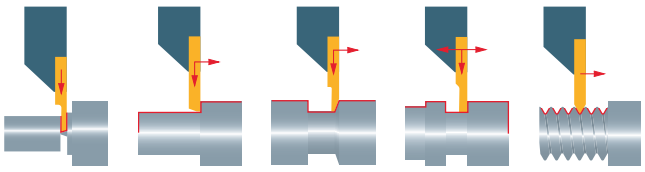
SVJP… IC-S (93°), SVJP… IC-S (93°) INCH 506

SVJP… V IC-S (93°), SVJP… V IC-S (93°) INCH 507

SVJC… IC-S (93°), SVJC… IC-S (93°) INCH 508

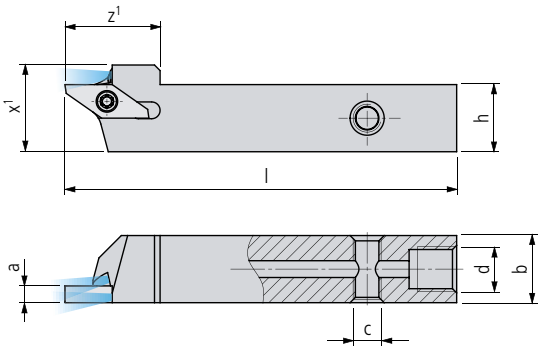


Replacement and spare parts 509





"SHORT" version with internal cooling



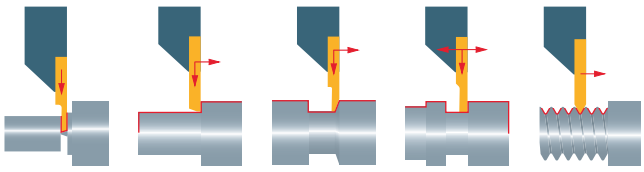
1600… IC-S

Order designation L		Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 51…
PREMIUM-LINE												
1600-12x70 L IC-S	■	1600-12x70 R IC-S	■	12	12	70	3	17	15.5	M5	M8×1	16…
1600-16x70 L IC-S	■	1600-16x70 R IC-S	■	16	16	70	3	17	19.5	M5	M8×1	16…

1600… IC-S INCH

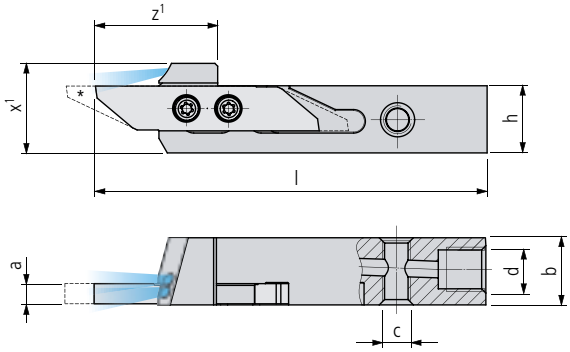
Order designation L		Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 51…
PREMIUM-LINE												
1600-1/2"x70 L IC-S	■	1600-1/2"x70 R IC-S	■	12.7	12.7	70	3	17	16.2	M5	M8×1	16…
1600-5/8"x70 L IC-S	■	1600-5/8"x70 R IC-S	■	15.875	15.875	70	3	17	19.375	M5	M8×1	16…

Scope of delivery: Holder without coolant connector
Coolant system ..... 671…





"SHORT" version with internal cooling



3000… IC-S

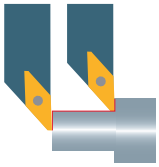
Order designation L		Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 123…
PREMIUM-LINE												
3000-12x70 L IC-S	■	3000-12x70 R IC-S	■	12	12	70	3	22	16	M5	M8 × 1	30…
3000-16x70 L IC-S	■	3000-16x70 R IC-S	■	16	16	70	3	22	20	M5	M8 × 1	30…

3000… IC-S INCH

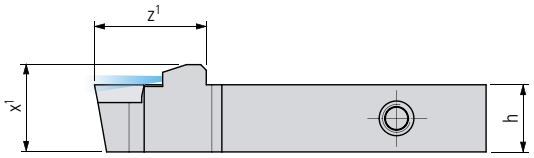
Order designation L		Order designation R		Dimensions h	b	l	a	z1	x1	c	d	Inserts 123…
PREMIUM-LINE												
3000-1/2"x70 L IC-S	■	3000-1/2"x70 R IC-S	■	12.7	12.7	70	3	22	16.7	M5	M8 × 1	30…
3000-5/8"x70 L IC-S	■	3000-5/8"x70 R IC-S	■	15.875	15.875	70	3	22	19.875	M5	M8 × 1	30…

• Long insert $z^1 + 5$ mm

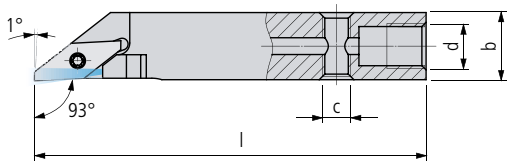
Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"SHORT" version with internal cooling







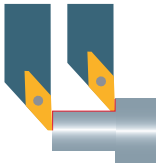
SVJP… IC-S (93°)

Order designation L		Order designation R		Dimensions h	b	l	z1	x1	c	d		Inserts 337…
PREMIUM-LINE												
SVJPL 12 E10 IC-S	■	SVJPR 12 E10 IC-S	■	12	12	70	20	15.6	M5	M8 × 1		VP..1003..
SVJPL 16 E10 IC-S	■	SVJPR 16 E10 IC-S	■	16	16	70	20	19.6	M5	M8 × 1		VP..1003..

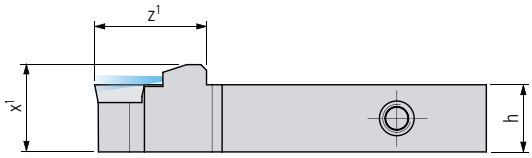
SVJP… IC-S (93°) INCH

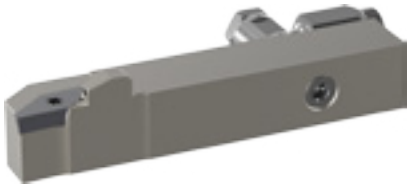
Order designation L		Order designation R		Dimensions h	b	l	z1	x1	c	d		Inserts 337…
PREMIUM-LINE												
SVJPL 1/2" E10 IC-S	■	SVJPR 1/2" E10 IC-S	■	12.7	12.7	70	20	16.3	M5	M8 × 1		VP..1003..
SVJPL 5/8" E10 IC-S	■	SVJPR 5/8" E10 IC-S	■	15.875	15.875	70	20	19.475	M5	M8 × 1		VP..1003..

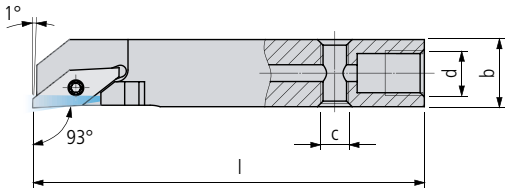
Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



Reinforced version V "SHORT" with internal cooling







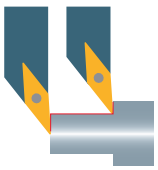
SVJP… V IC-S (93°)

Order designation L		Order designation R		Dimensions h	b	l	z1	x1	c	d		Inserts 337…
PREMIUM-LINE												
SVJPL 12 E10 V IC-S	■	SVJPR 12 E10 V IC-S	■	12	12	70	20	15.6	M5	M8 × 1		VP..1003..
SVJPL 16 E10 V IC-S	■	SVJPR 16 E10 V IC-S	■	16	16	70	20	19.6	M5	M8 × 1		VP..1003..

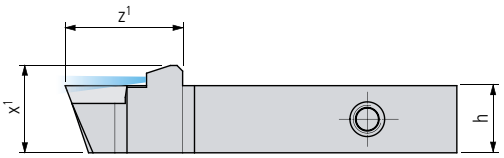
SVJP… V IC-S (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l	z1	x1	c	d		Inserts 337…
PREMIUM-LINE												
SVJPL 1/2" E10 V IC-S	■	SVJPR 1/2" E10 V IC-S	■	12.7	12.7	70	20	16.3	M5	M8 × 1		VP..1003..
SVJPL 5/8" E10 V IC-S	■	SVJPR 5/8" E10 V IC-S	■	15.875	15.875	70	20	19.475	M5	M8 × 1		VP..1003..

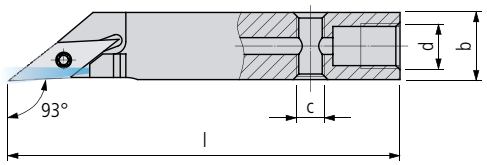
Scope of delivery: Holder without coolant connector
Coolant system ..... 671…



"SHORT" version with internal cooling







SVJC... IC-S (93°)

Order designation L		Order designation R		Dimensions h	b	l	z1	x1	c	d		Inserts 295...
PREMIUM-LINE												
SVJCL 12 E07 IC-S	■	SVJCR 12 E07 IC-S	■	12	12	70	20	15.6	M5	M8 × 1		VC..0702..
SVJCL 12 E11 IC-S	■	SVJCR 12 E11 IC-S	■	12	12	70	21	15.6	M5	M8 × 1		VC..1103..
SVJCL 16 E11 IC-S	■	SVJCR 16 E11 IC-S	■	16	16	70	21	19.6	M5	M8 × 1		VC..1103..

SVJC... IC-S (93°) INCH

Order designation L		Order designation R		Dimensions h	b	l	z1	x1	c	d		Inserts 295...
PREMIUM-LINE												
SVJCL 1/2" E07 IC-S	■	SVJCR 1/2" E07 IC-S	■	12.7	12.7	70	20	16.3	M5	M8 × 1		VC..0702..
SVJCL 1/2" E11 IC-S	■	SVJCR 1/2" E11 IC-S	■	12.7	12.7	70	21	16.3	M5	M8 × 1		VC..1103..
SVJCL 5/8" E11 IC-S	■	SVJCR 5/8" E11 IC-S	■	15.875	15.875	70	21	19.475	M5	M8 × 1		VC..1103..

Scope of delivery: Holder without coolant connector
Coolant system ..... 671...

Illustration	Description	Dimensions	Order designation		Holders
	Coolant Pipe	M8 × 1	MSP CT-S M8x1	■	
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	1600… SV.P.10 SV… 11
		M3 × 9 T08	MSP 30090 T08	■	3000…
		M2 × 5.5	MSP 20055 T06	■	SV… 07

TORX screwdriver ..... 703…

multidec®-BACKTOOLS

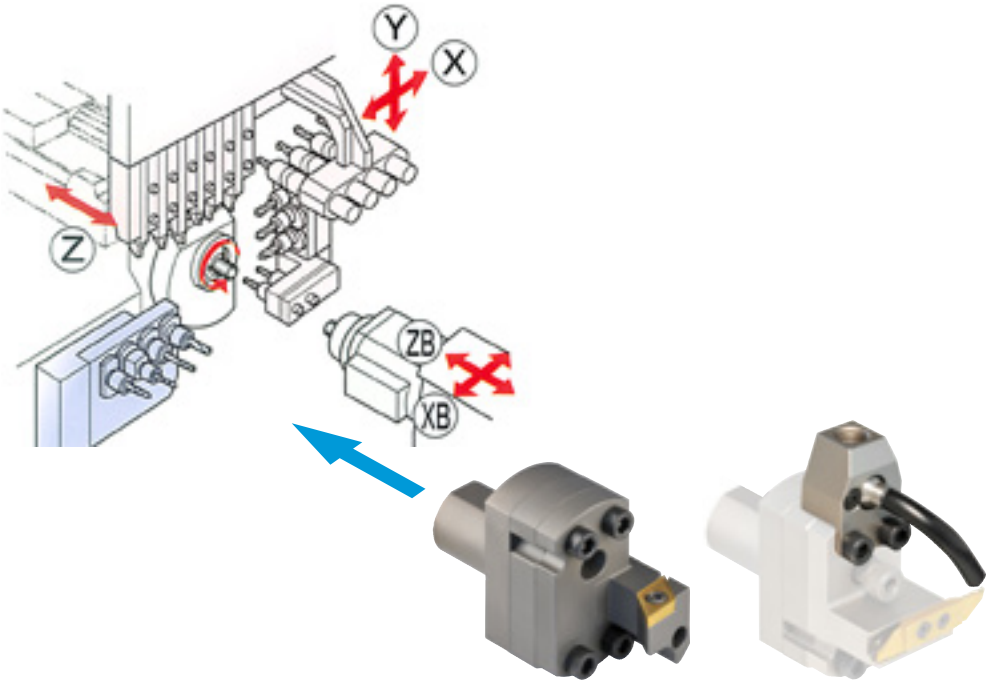
multidec®-BACKTOOLS is a product range used for reverse-side machining on Swiss type turning machines with counter spindles. The tool enables a part to be fully machined in a single operation.

This modular system is characterized by outstanding stability and versatility.



Advantages:
– Complete machining in a single operation is possible
– High stability
– Modular design
  – Basic tool holder
  – Spacer
  – Insert holder
– Precise and convenient center height adjustment by means of an excentric screw for machines without Y-axis (±0.5 mm)
– Internal cooling possible
– Basic tool holder for common machines

UTILIS multidec® swiss type tools



Overview – multidec®-BACKTOOLS

Technical information 9



Mounting 512

Basic tool holders – Search help 513



Basic tool holders / Double basic tool holders 515 / 529



Basic tool holders for PCM broaching tool holders 530



Special combination holders and collet holders 531



Direct combination holders 533



Holders for inserts 534



Holders for OD turning tools / Insert for holder for OD turning tools 545



Collet holders / Extension attachment to collet holder 546



Holders for ID turning tools of multidec®-BORE MICRO 547



Holders for ID turning tools 548



Reduction sleeves 549



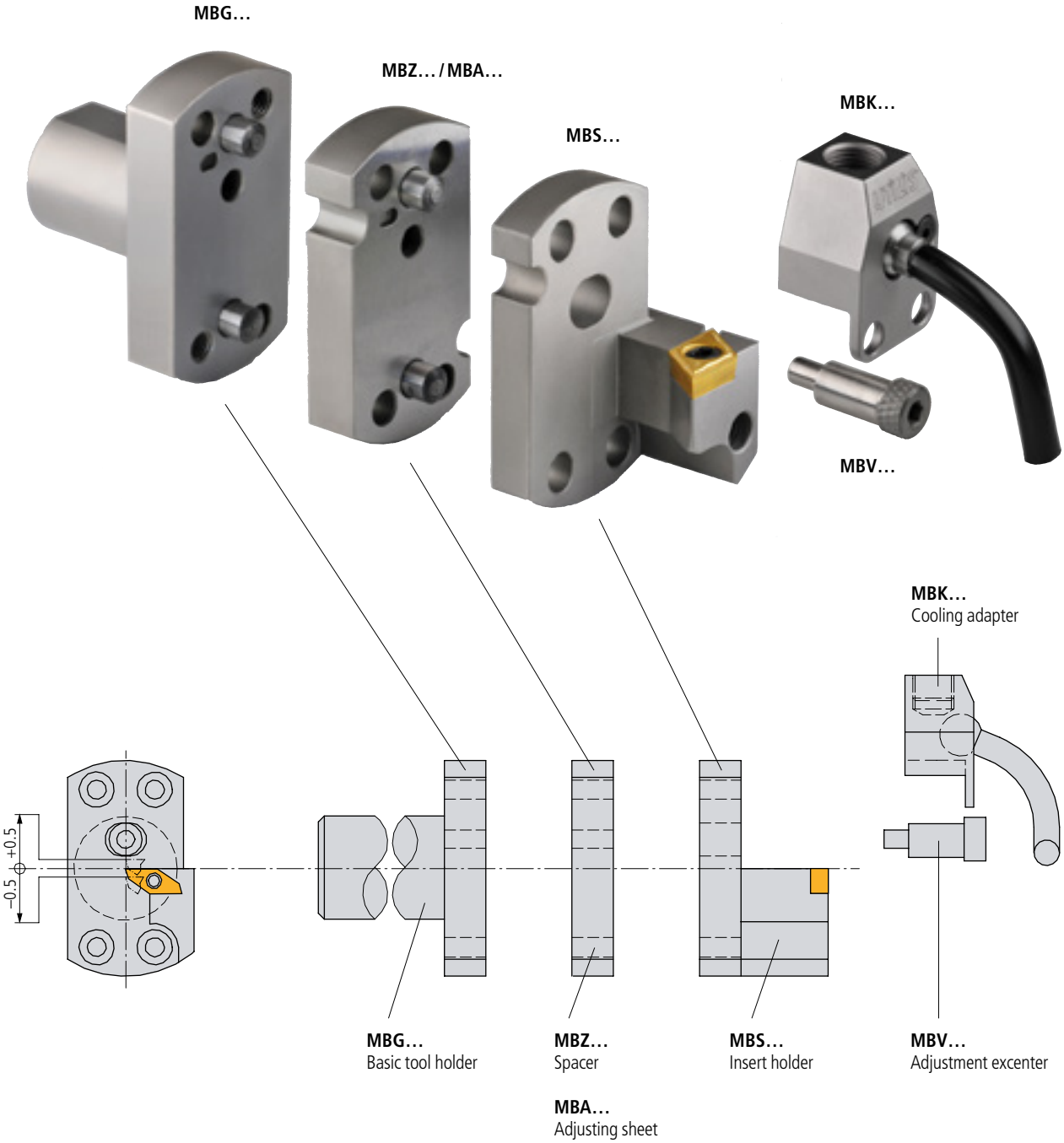
Spacers and adjusting sheets 550



Cooling adapter 552



Replacement and spare parts 553



Compatibility overview

Basic tool holder	Spacer (optional)	Insert holder, collet holders and tool holders
MBG … B02	MBZ ST 02-…	MBS …02
MBG … B05	MBZ ST 05-…	MBS …05
MBG … B06	MBZ ST 06-…	MBS …06
MBG … B90*	MBZ ST 90-…	MBS …90

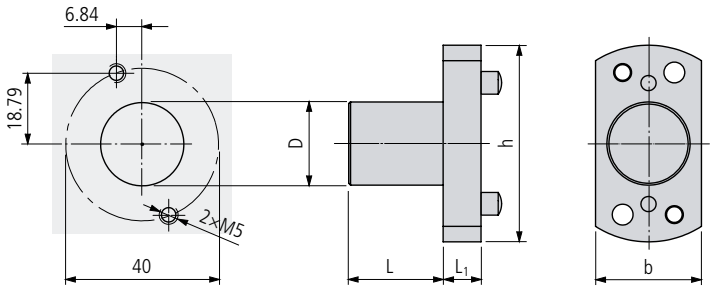
* Height not adjustable (only for machines with Y axis)

Type of machine		Page	Order designation
CITIZEN	R07	516	MBG 02 1587 040 B02
CITIZEN	C16, L20, M16	516	MBG 02 1905 060B02
CITIZEN	K16	516	MBG 02 2000 100 B02
CITIZEN	L20	516	MBG 02 2500 060 B02
CITIZEN	C32, L32, M32	516	MBG 02 2540 070 B02
GILDEMEISTER	Sprint20	516	MBG 02 2000 040 B02
HANWHA	XD 12H	515	MBG 01 2300 019 B02
HANWHA	XD32	515	MBG 01 3200 025 B90
CITIZEN	A32-VII	519	MBG 03 3100 015 B02
CITIZEN	L32	524	MBG 11 3100 032 B02
CITIZEN	L-12	528	MBG 20 2500 025 B90
CITIZEN	L720VII	529	MBG 02 1905 040 B02 05
CITIZEN	L720VII	529	MBG 02 2000 040 B02 05
HANWHA	SL 12H	516	MBG 02 2000 040 B02
HANWHA	STL32, STL35H, STL33J, STL35J, XD26HJ	516	MBG 02 2500 060 B02
HANWHA	SL26HPD, SL35HPD	516	MBG 02 2800 006 B02
HANWHA	XD32	516	MBG 02 3200 025 B02
HANWHA	XD20H, XD32H, XD20J, XD32J	516	MBG 02 3300 040 B02
HANWHA	SL20HPII, SL26HPII, SL35HPII	516	MBG 02 3400 044 B02
MAIER	MLK DY36	520	MBG 04 3400 018 B02 IC
MAIER	ML 12C, ML 16C, ML 16D, ML 20/26/32	520	MBG 04 3400 030 B02 IC
HANWHA	XD12H	521	MBG 05 1500 010 B05
HANWHA	XDI 20	523	MBG 09 2500 050 B90
HANWHA	XD 38H	526	MBG 15 3200 025 B02
HANWHA	XD 38II Y2	526	MBG 15 3200 025 B90
HANWHA	XD 12II	528	MBG 22 2500 020 B02
MANURHIN	EVO7	517	MBG 02 2500 050 B02
MANURHIN	EVO7	517	MBG 02 2200 070 B02
MANURHIN	KMX 4/13	517	MBG 02 1600 019 B02
MANURHIN	KMX 5/20, KMX 5/26, KMX 5/32, Swing 7/20, Swing 7/26	517	MBG 02 2500 100 B02
MANURHIN	Swing 7-13	517	MBG 02 2000 100 B02
MANURHIN	Swing 10-20, Swing 10-26, Swing 10-32	517	MBG 02 2500 050 B02
TCM	Series 20s/26s/32s/38s	527	MBG 17 3600 035 B02

Type of machine																																	Order designation
NEXTURN	STAR										TORNOS							TRAUB		TSUGAMI														
SA 20XII	SR20R, ECAS 12/20, SR32J	RNC16B	SA16, SB16, SB20-R	SR10J	SR32, SR32J	SV-38R, SR-38A/B	SR16, SR20	SW-20, SR-20W	SR20R, SR20 RiV, SR32J	Deco 7/10, Deco 13, Deco 20	Delta 20, Gamma 20, DT26	Delta 38-5a	Gamma 20	CT20	GT13, GT26, GT32	TNL12	TNL/C 12, TNL/C 12K	B012, B020, S205	BS12, BS20	BS20B	Piastra	S205	B0 326 EII	B0 266, B0 326	HS38MH-5AX									
■																																	MBG 14 2500 040 B90
■																																	MBG 14 2500 040 B90-30
	■			■																													MBG 01 2200 025 B02
	■			■																													MBG 01 2200 025 B02 IC
		■																															MBG 02 1600 020 B02
			■																														MBG 02 2200 070 B02
				■																													MBG 02 2200 015 B02
					■																												MBG 03 2200 025 B02
						■																											MBG 04 3400 025 B90
				■																													MBG 05 1600 010 B05
				■																													MBG 06 2200 015 B06
							■																										MBG 07 1600 021 B02
								■																									MBG 09 2200 025 B90
				■																													MBG 10 2000 015 B02
									■																								MBG 02 2200 025 B02 05
									■																								MBG 02 2540 025 B02 05
																■																	MBG 02 2800 040 B02
																	■																MBG 02 2800 078 B02
										■																							MBG 02 2000 100 B02
										■																							MBG 02 2500 100 B02
											■																							MBG 02 2200 070 B02
												■																						MBG 02 3200 070 B02
													■																					MBG 02 2000 070 B02
																		■																MBG 02 2000 040 B02
																			■															MBG 02 2000 060 B02
																				■														MBG 02 1587 040 B02
																					■													MBG 02 2500 035 B02
																						■												MBG 02 2000 030 B02
															■																			MBG 08 2800 028 B02
																							■											MBG 09 2500 015 B90
																																		MBG 13 2000 025 B90
																								■										MBG 12 2500 015 B90
																									■									MBG 18 4200 008 B90
526	515	517	517	515/517/521/524	519	520	522	523	529	517	517	517	517	522	525	518	518	518	518	518	518	518	523	523	527								

UTILIS multidec swiss type tools





MBG 01 … (HANWHA)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
XD 12H	MBG 01 2300 019 B02	■	23	19	28	49	16	
XD 32	MBG 01 3200 025 B90*	■	32	25	32.5	49	8	

* Height not adjustable

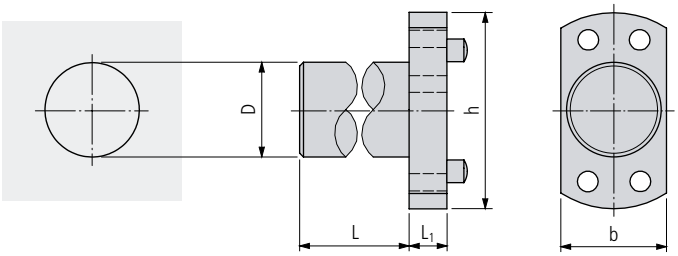
MBG 01 … (STAR)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
SR10J/SR20R, ECAS 12/20, SR32J*	MBG 01 2200 025 B02	■	22	25	28	52	10	
	MBG 01 2200 025 B02 IC**	■	22	25	28	52	10	

* Valid from machine number …161
** With internal cooling

Insert holder MBS … 02/90 534
Spacer MBZ ST 02/90-… 550





MBG 02 … (CITIZEN)

Type of machine	Order designation		Dimensions D	L	b	h	L1		Shape
R07	MBG 02 1587 040 B02	■	⅝" (15.875)	40	28	52	10		
C16, L20, M16	MBG 02 1905 060 B02	■	¾" (19.05)	60	28	52	10		
K16	MBG 02 2000 100 B02	■	20	100	28	52	10		
L20	MBG 02 2500 060 B02	■	25	60	28	52	10		
C32, L32, M32	MBG 02 2540 070 B02	■	1" (25.4)	70	28	52	10		

MBG 02 … (GILDEMEISTER)

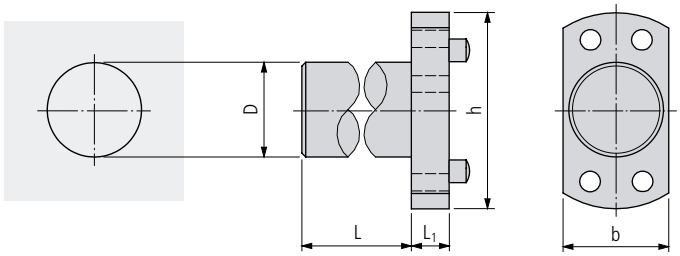
Type of machine	Order designation		Dimensions D	L	b	h	L1		Shape
Sprint20	MBG 02 2000 040 B02	■	20	40	28	52	10		

MBG 02 … (HANWHA)

Type of machine	Order designation		Dimensions D	L	b	h	L1		Shape
SL12H	MBG 02 2000 040 B02	■	20	40	28	52	10		
STL32, STL35H, STL33J, STL35J, XD 26 HJ	MBG 02 2500 060 B02	■	25	60	28	52	10		
SL26HPD, SL35HPD	MBG 02 2800 006 B02	■	28	6	28	52	10		
XD32	MBG 02 3200 025 B02	■	32	25	28	52	10		
XD20H. XD32H, XD20J, XD32J	MBG 02 3300 040 B02	■	33	40	35	52	10		
SL20HPII, SL26HPII, SL35HPII	MBG 02 3400 044 B02	■	34	44	35	52	10		

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550

Continuation



MBG 02 … (MANURHIN)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
EVO 7	MBG 02 2500 050 B02	■	25	50	28	52	10	
EVO 7*	MBG 02 2200 070 B02	■	22	70	28	52	10	
KMX 4/13	MBG 02 1600 019 B02	■	16	19	28	52	10	
KMX 5/20, KMX 5/26, KMX 5/32, Swing 7/20, Swing 7/26	MBG 02 2500 100 B02	■	25	100	28	52	10	
Swing 7-13	MBG 02 2000 100 B02	■	20	100	28	52	10	
Swing 10-20, Swing 10-26, Swing 10-32	MBG 02 2500 050 B02	■	25	50	28	52	10	

* Driven tool

MBG 02 … (STAR)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
RNC16B	MBG 02 1600 020 B02	■	16	20	28	52	10	
SA16, SB16, SB20-R	MBG 02 2200 070 B02	■	22	70	28	52	10	
SR10J	MBG 02 2200 015 B02	■	22	15	28	52	10	

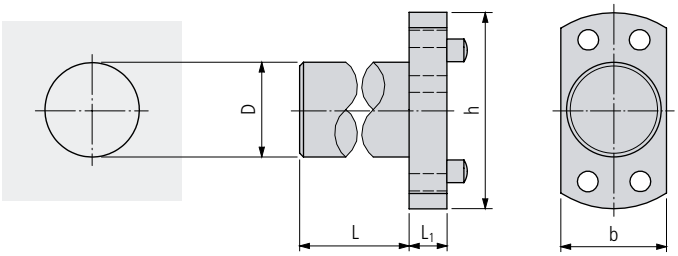
MBG 02 … (TORNOS)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
DECO 7/10, DECO 13, DECO 20	MBG 02 2000 100 B02	■	20	100	28	52	10	
	MBG 02 2500 100 B02	■	25	100	28	52	10	
Delta 20, Gamma 20, DT26	MBG 02 2200 070 B02	■	22	70	28	52	10	
Delta 38-5a	MBG 02 3200 070 B02	■	32	70	32	52	10	
Gamma 20	MBG 02 2000 070 B02	■	20	70	28	52	10	

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550

Legend ..... 6…

Continuation



MBG 02 … (TRAUB)

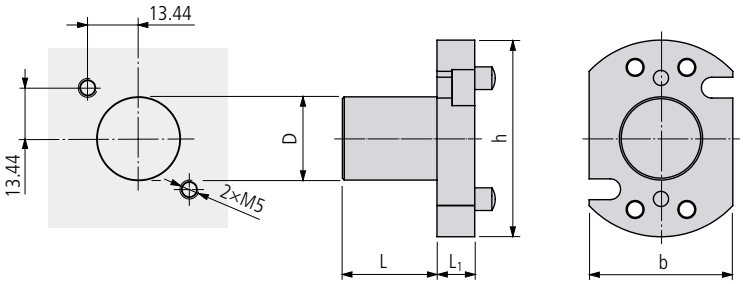
Type of machine	Order designation		Dimensions D	L	b	h	L_1		Shape
TNL12	MBG 02 2800 040 B02	■	28	40	28	52	10		
TNL/C 12, TNL/C 12K	MBG 02 2800 078 B02	■	28	78	28	52	10		

MBG 02 … (TSUGAMI)

Type of machine	Order designation		Dimensions D	L	b	h	L_1		Shape
B012, B020, S205	MBG 02 2000 040 B02	■	20	40	28	52	10		
BS12, BS20	MBG 02 2000 060 B02	■	20	60	28	52	10		
BS20B	MBG 02 1587 040 B02	■	5/8" (15.875)	40	28	52	10		
Piastra	MBG 02 2500 035 B02	■	25	35	28	52	10		
S205	MBG 02 2000 030 B02	■	20	30	28	52	10		

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550





MBG 03 … (CITIZEN)

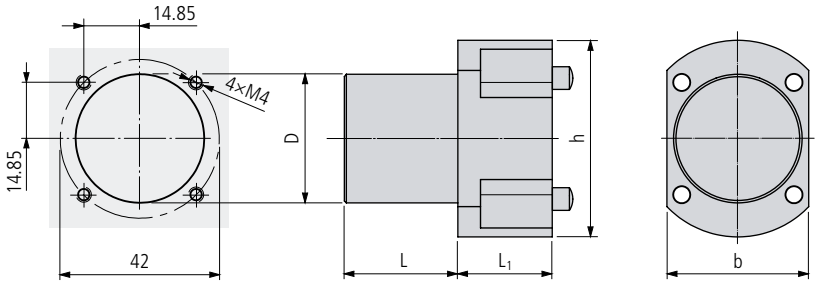
Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
A32-VII	MBG 03 3100 015 B02	■	31	15	38	52	10	●

MBG 03 … (STAR)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
SR32, SR32J	MBG 03 2200 025 B02	■	22	25	38	52	10	●

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550





MBG 04 … IC* (MAIER)

Type of machine	Order designation		Dimensions D	L	b	h	L_1		Shape
MLK DY36	MBG 04 3400 018 B02 IC*	■	34	18	38	52	25		
ML12C, ML16C, ML16D, ML20/26/32	MBG 04 3400 030 B02 IC*	■	34	30	38	52	25		

* With internal cooling

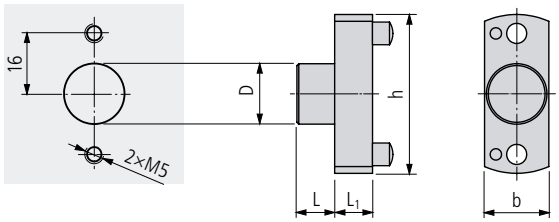
MBG 04 … (STAR)

Type of machine	Order designation		Dimensions D	L	b	h	L_1		Shape
SV-38R, SR-38A/B	MBG 04 3400 025 B90*	■	34	25	37.5	50	8		

* Height not adjustable

Insert holder MBS … 02/90 534
Spacer MBZ ST 02/90-… 550





MBG 05 … (HANWHA)

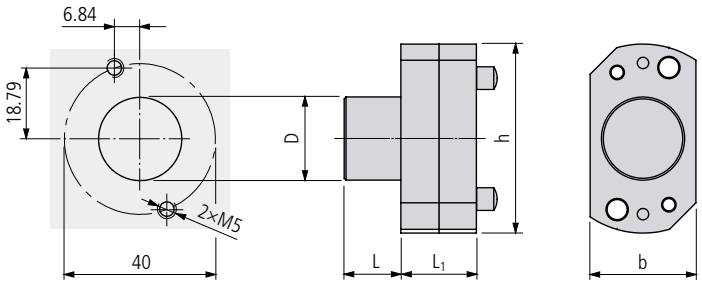
Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
XD12H	MBG 05 1500 010 B05	■	15	10	17	51	10	●

MBG 05 … (STAR)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
SR10J	MBG 05 1600 010 B05	■	16	10	17	51	10	●

Insert holder MBS … 05 534
Spacer MBZ ST 05-… 550





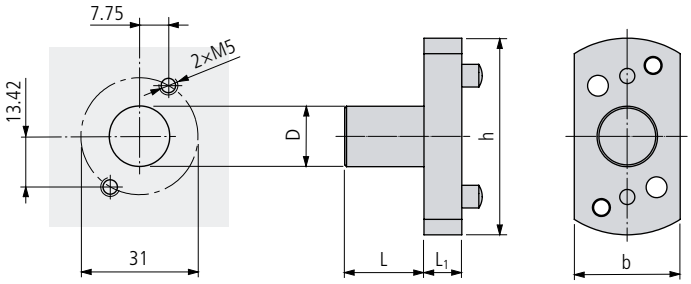
MBG 06 … (STAR)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
SR10J	MBG 06 2200 015 B06*	■	22	15	28	50	20	●

* With adjusting sheet

Insert holder MBS … 06 534
Spacer MBZ ST 06-… 550



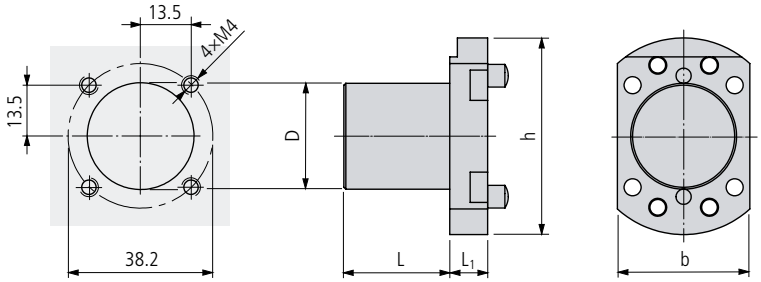


MBG 07 … (STAR)

Type of machine	Order designation		Dimensions						Shape
			D	L	b	h	L_1		
SR16, SR20	MBG 07 1600 021 B02	■	16	21	28	52	10		

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550



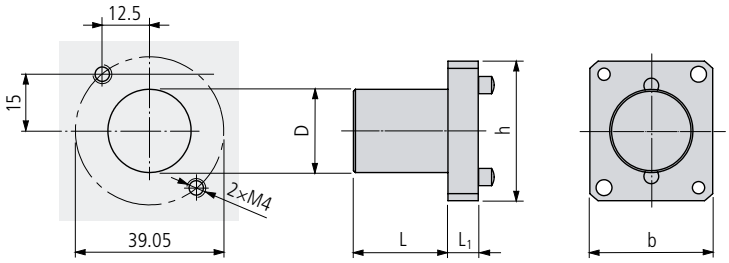


MBG 08 … (TORNOS)

Type of machine	Order designation		Dimensions						Shape
			D	L	b	h	L_1		
CT20	MBG 08 2800 028 B02	■	28	28	35	52	10		

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550





MBG 09 … (HANWHA)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
XDI 20	MBG 09 2500 050 B90*	■	25	50	32.5	37	8	

* Height not adjustable

MBG 09 … (STAR)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
SW-20, SR-20W	MBG 09 2200 025 B90*	■	22	25	32.5	37	8	

* Height not adjustable

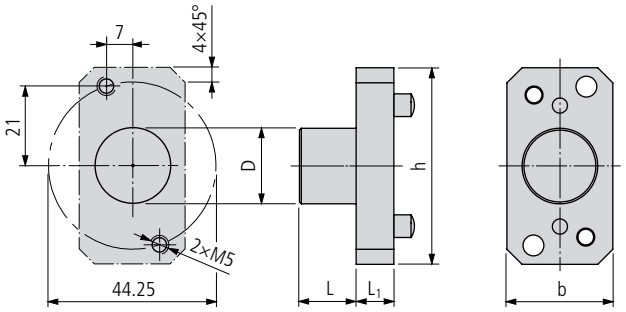
MBG 09 … (TSUGAMI)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
BO 326 EII	MBG 09 2500 015 B90*	■	25	15	32.5	37	8	

* Height not adjustable

Insert holder MBS … 90 534
Spacer MBZ ST 90-… 550



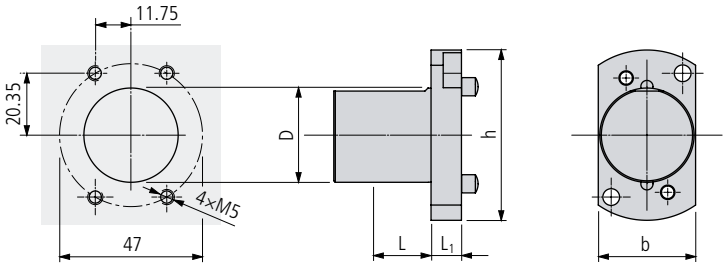


MBG 10 … (STAR)

Type of machine	Order designation		Dimensions						Shape
			D	L	b	h	L_1		
SR10J	MBG 10 2000 015 B02	■	20	15	28	52	10		

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550



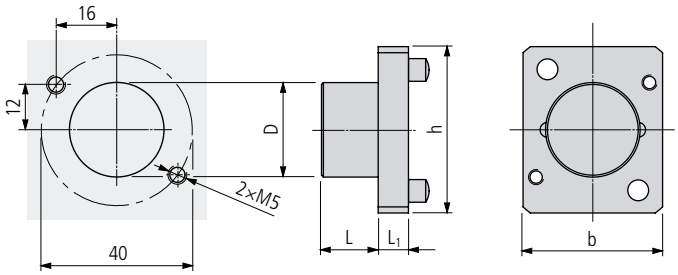


MBG 11 … (CITIZEN)

Type of machine	Order designation		Dimensions						Shape
			D	L	b	h	L_1		
L32	MBG 11 3100 032 B02	■	31	32	32	56	10		

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550





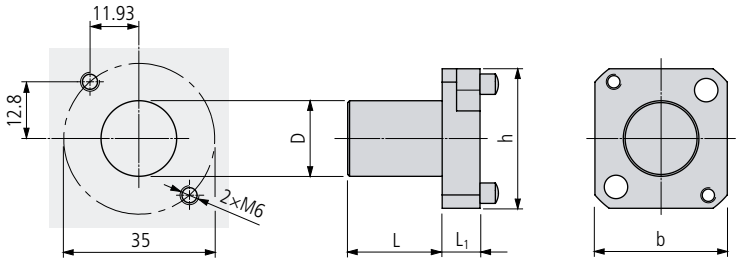
MBG 12 … (TSUGAMI)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
BO 266, BO 326	MBG 12 2500 015 B90*	■	25	15	44	36.9	8	●

* Height not adjustable

Insert holder MBS … 90 534
Spacer MBZ ST 90-… 550





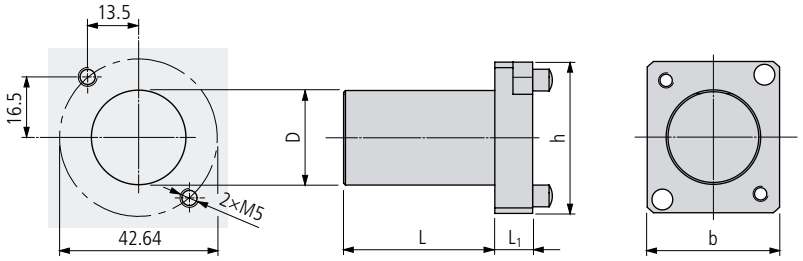
MBG 13 … (TORNOS)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
GT13, GT26, GT32	MBG 13 2000 025 B90*	■	20	25	36.9	36.9	20	●

* Height not adjustable

Insert holder MBS … 90 534
Spacer MBZ ST 90-… 550





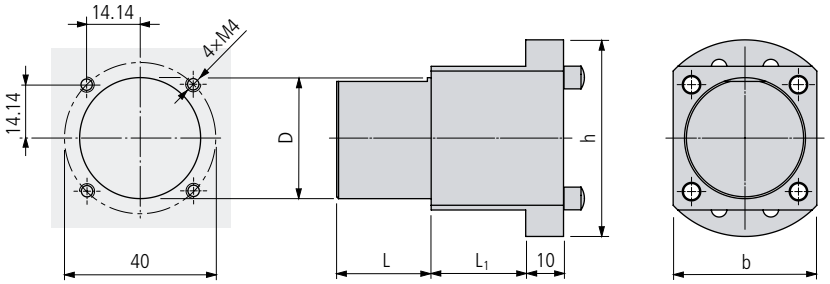
MBG 14 … (NEXTURN)

Type of machine	Order designation		Dimensions D	L	b	h	L_1		Shape
SA 20XII	MBG 14 2500 040 B90*	■	25	40	35	40	10		
	MBG 14 2500 040 B90-30*	■	25	40	35	40	30		

* Height not adjustable

Insert holder MBS … 90 534
Spacer MBZ ST 90-… 550





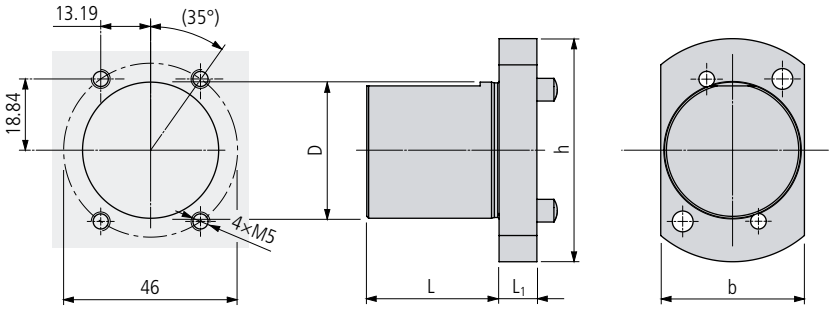
MBG 15 … (HANWHA)

Type of machine	Order designation		Dimensions D	L	b	h	L_1		Shape
XD 38 H	MBG 15 3200 025 B02	■	32	25	38	52	35		
XD 38II Y2	MBG 15 3200 025 B90*	■	32	25	37.5	52	8		

* Height not adjustable

Insert holder MBS … 02/90 534
Spacer MBZ ST 02/90-… 550



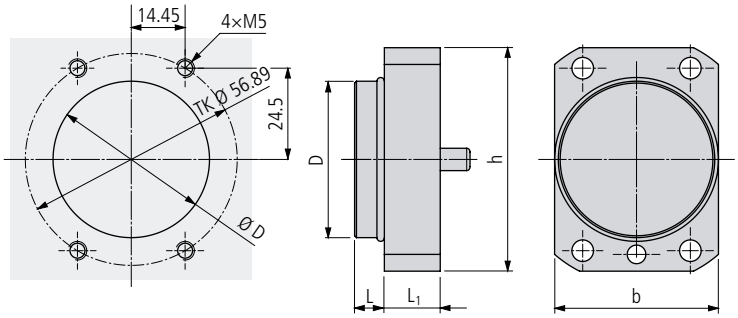


MBG 17 … (TCM)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
Series 20s / 26s / 32s / 38s	MBG 17 3600 035 B02	■	36	35	38	59	10	

Insert holder MBS … 02 534
Spacer MBZ ST 02-… 550

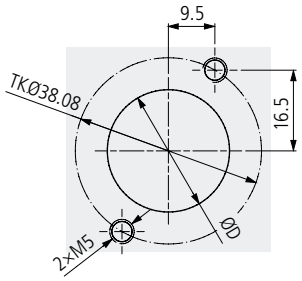


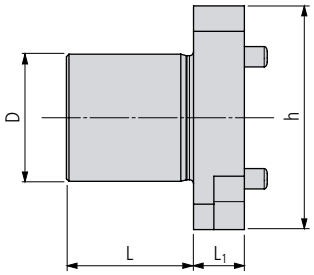


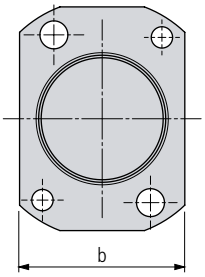
MBG 18 … (TSUGAMI)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
HS38MH-5AX	MBG 18 4200 008 B90	■	42	8	60	44	15	





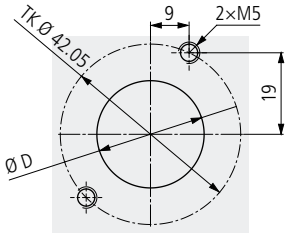


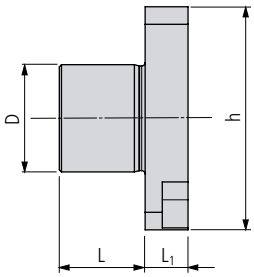


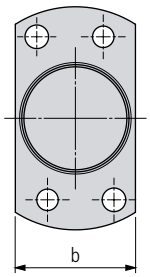
MBG 20 … (CITIZEN)

Type of machine	Order designation		Dimensions D	L	b	h	L_1		Shape
L-12	MBG 20 2500 025 B90	■	25	25	32.5	44	10		●





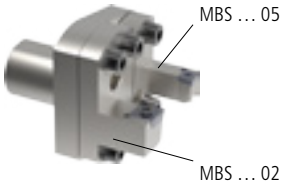


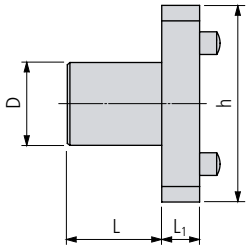


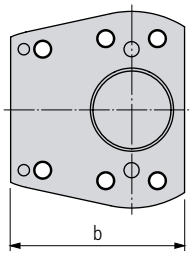
MBG 22 … (HANWHA)

Type of machine	Order designation		Dimensions D	L	b	h	L_1		Shape
XD12 II	MBG 22 2500 020 B02	■	25	20	28	52	10		●









MBG 02 … B02 05 (CITIZEN)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
L720VII	MBG 02 1905 040 B02 05	■	¾" (19.05)	40	46	52	10	
	MBG 02 2000 040 B02 05	■	20	40	46	52	10	

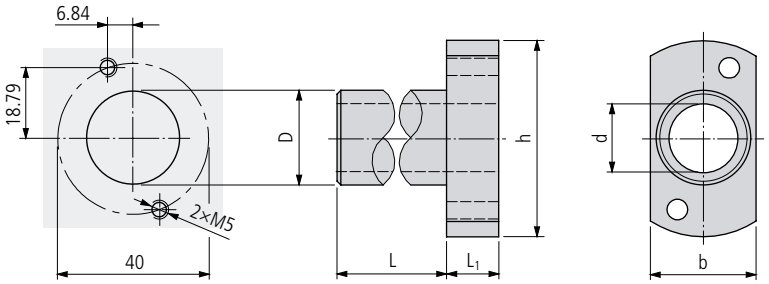
MBG 02 … B02 05 (STAR)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	Shape
SR20R, SR20 RiV, SR32J*	MBG 02 2200 025 B02 05	■	22	25	46	52	10	
	MBG 02 2540 025 B02 05	■	1" (25.4)	25	46	52	10	

* Valid from machine number …161

Insert holder MBS … 02/05 534
Spacer MBZ ST 02/05-… 550

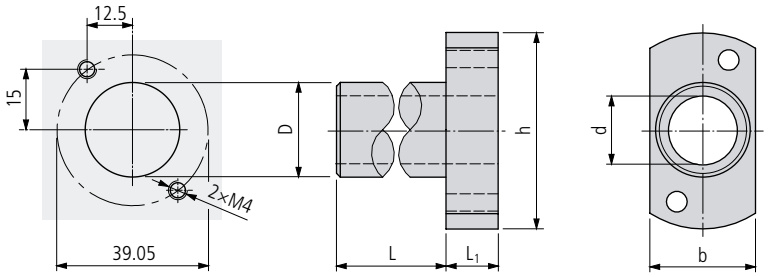




MBG-T … (STAR)

Type of machine	Order designation		Dimensions						Shape
			D	L	b	h	L_1	d	
SA 16, SB 16, SR10J	MBG-T 10 2200 025 B01	■	22	25	28	52	15	10	
	MBG-T 16 2200 025 B01	■	22	25	28	52	15	16	

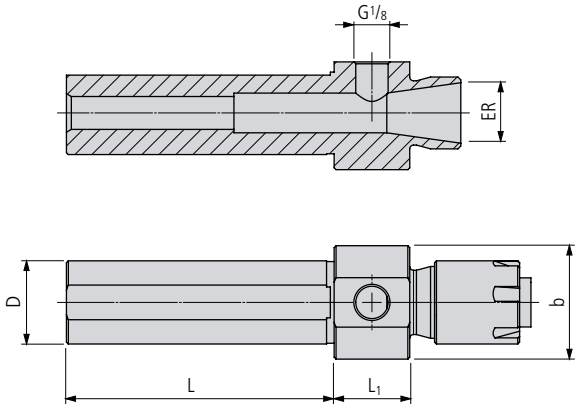




MBG-T … (STAR)

Type of machine	Order designation		Dimensions						Shape
			D	L	b	h	L_1	d	
SA 16, SB 16, SR10J	MBG-T 16 2200 025 B09	■	22	25	33	52	15	16	



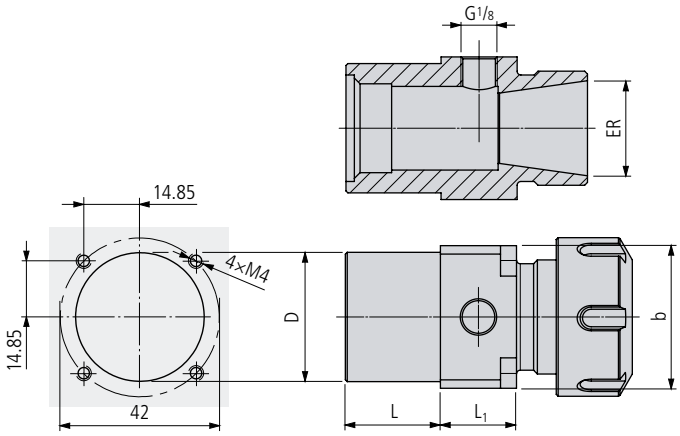


MBD 02 …

Type of machine	Order designation		Dimensions D	L	b		L_1	ER	Shape
Miscellaneous	MBD 02 2200 080 E16 IC*	■	22	80	30		20	16	
	MBD 02 2200 080 E20 IC*	■	22	80	30		20	20	
	MBD 02 3200 080 E25 IC*	■	32	80	30		20	25	

* With internal cooling



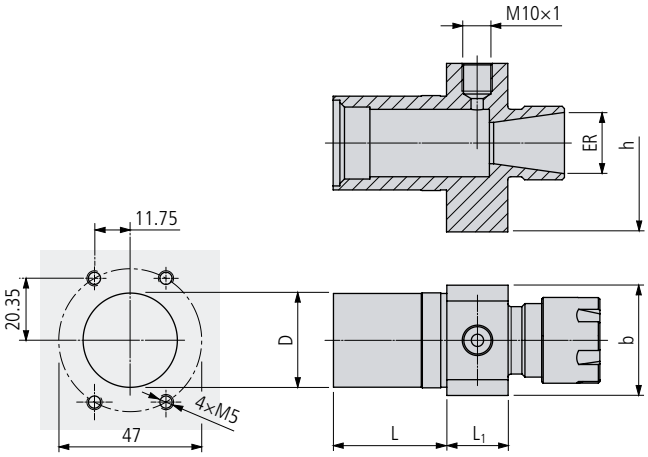


MBD … E.. (STAR)

Type of machine	Order designation		Dimensions D	L	b		L_1	ER	Shape
SV-38R, SR-38A / B	MBD 04 3400 025 E25 IC*	■	34	25	37.5		20	25	●

* With internal cooling



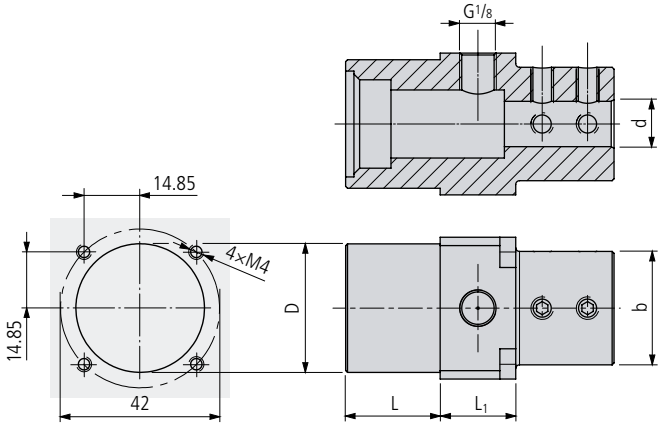


MBD … E.. (CITIZEN)

Type of machine	Order designation		Dimensions D	L	b	h	L_1	ER	Shape
A32	MBD 11 3100 037 E20 IC*	■	31	37	36	58	20	20	●
	MBD 11 3100 037 E25 IC*	■	31	37	36	58	20	25	●

* With internal cooling



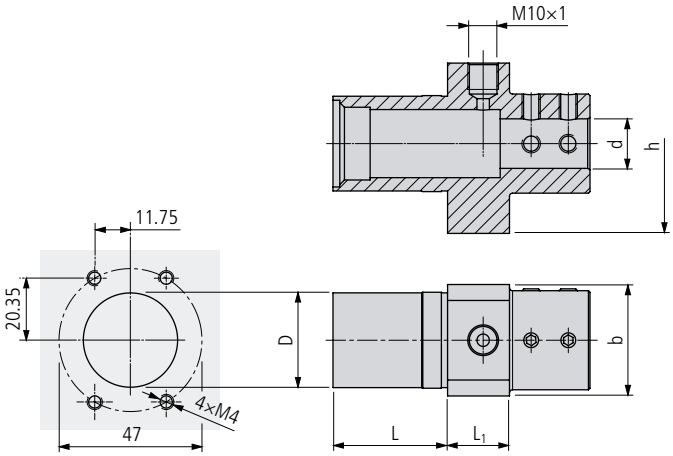


MBD 04 … (STAR)

Type of machine	Order designation		Dimensions						Shape
			D	L	b	h	L_1	d	
SV-38R, SR-38A / B	MBD 04 3400 025 D12 IC*	■	34	25	37.5	37.5	20	12	
	MBD 04 3400 025 D14 IC*	■	34	25	37.5	37.5	20	14	
	MBD 04 3400 025 D16 IC*	■	34	25	37.5	37.5	20	16	

* With internal cooling

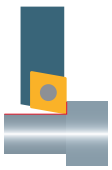




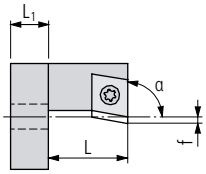
MBD 11 … (CITIZEN)

Type of machine	Order designation		Dimensions						Shape
			D	L	b	h	L_1	d	
A32	MBD 11 3100 037 D12*	■	31	37	36	58	20	12	
	MBD 11 3100 037 D14*	■	31	37	36	58	20	14	
	MBD 11 3100 037 D16*	■	31	37	36	58	20	16	
	MBD 11 3100 037 D20*	■	31	37	36	58	20	20	
	MBD 11 3100 037 D25*	■	31	37	36	58	20	25	

* With internal cooling





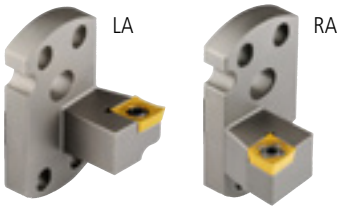


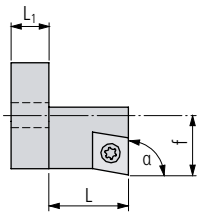
MBS …-CC

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 217…
MBS 090-CC L 06 I02*	■	MBS 090-CC R 06 I02*	■	90°	–	20	8	MBG … B02	MBZ ST 02-…	CC.. 0602…
MBS 093-CC L 06 I02*	■	MBS 093-CC R 06 I02*	■	93°	–	20	8	MBG … B02	MBZ ST 02-…	CC.. 0602…
		MBS 093-CC R 06 I02-30*	■	93°	–	30	8	MBG … B02	MBZ ST 02-…	CC.. 0602…
MBS 090-CC L 09 I02*	■	MBS 090-CC R 09 I02*	■	90°	–	20	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
		MBS 090-CC R 09 I02 IC*/**	■	90°	–	20	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
MBS 093-CC L 09 I02*	■	MBS 093-CC R 09 I02*	■	93°	–	20	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
MBS 093-CC L 09 I02-30*	■	MBS 093-CC R 09 I02-30*	■	93°	–	30	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
MBS 095-CC L 09 I02*	■	MBS 095-CC R 09 I02*	■	95°	–	20	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
MBS 093-CC L 06 I05*	■	MBS 093-CC R 06 I05*	■	93°	–	20	8	MBG … B05	MBZ ST 05-…	CC.. 0602…
MBS 095-CC L 09 I05*	■	MBS 095-CC R 09 I05*	■	95°	–	20	8	MBG … B05	MBZ ST 05-…	CC.. 09T3…
		MBS 090-CC R 06 I90	■	90°	-5	20	7	MBG … B90	MBZ ST 90-…	CC.. 0602…
		MBS 090-CC R 09 I90	■	90°	–	20	7	MBG … B90	MBZ ST 90-…	CC.. 09T3…
		MBS 090-CC R 09 I90-30	■	90°	–	30	7	MBG … B90	MBZ ST 90-…	CC.. 09T3…

* Setting the centre height with adjustment excenter MBV E04
** With internal cooling

UTILIS multidec swiss type tools



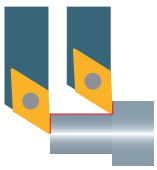


MBS …-CC .A

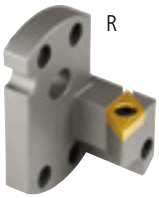
Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 217…
MBS 090-CC LA 06 I02*	■	MBS 090-CC RA 06 I02*	■	90°	18	20	8	MBG … B02	MBZ ST 02-…	CC.. 0602…
MBS 090-CC LA 09 I02*	■	MBS 090-CC RA 09 I02*	■	90°	18	20	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
MBS 093-CC LA 06 I02*	■	MBS 093-CC RA 06 I02*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	CC.. 0602…
MBS 093-CC LA 09 I02*	■	MBS 093-CC RA 09 I02*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
MBS 093-CC LA 09 I02-30*	■	MBS 093-CC RA 09 I02-30*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
MBS 095-CC LA 09 I02*	■	MBS 095-CC RA 09 I02*	■	95°	18	20	8	MBG … B02	MBZ ST 02-…	CC.. 09T3…
MBS 093-CC LA 06 I05*	■	MBS 093-CC RA 06 I05*	■	93°	12.5	20	8	MBG … B05	MBZ ST 05-…	CC.. 0602…
MBS 095-CC LA 09 I05*	■	MBS 095-CC RA 09 I05*	■	95°	12.5	20	8	MBG … B05	MBZ ST 05-…	CC.. 09T3…
		MBS 090-CC RA 09 I90	■	90°	17	20	7	MBG … B90	MBZ ST 90-…	CC.. 09T3…
MBS 095-CC LA 09 I90	■			95°	16.25	20	7	MBG … B90	MBZ ST 90-…	CC.. 09T3…

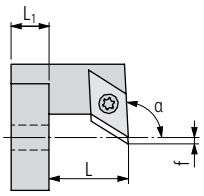
* Setting the centre height with adjustment excenter MBV E04

Legend 6…









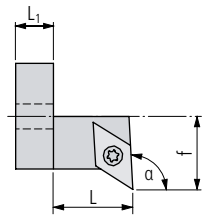
MBS …-DC

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 239…
MBS 093-DC L 07 I02*	■	MBS 093-DC R 07 I02*	■	93°	–	20	8	MBG … B02	MBZ ST 02-…	DC.. 0702…
MBS 093-DC L 0703 I02*	■	MBS 093-DC R 0703 I02*	■	93°	–	20	8	MBG … B02	MBZ ST 02-…	DC.. 0703…
MBS 093-DC L 11 I02*	■	MBS 093-DC R 11 I02*	■	93°	–	20	8	MBG … B02	MBZ ST 02-…	DC.. 11T3…
		MBS 093-DC R 11 I02 IC*/**	■	93°	–	20	8	MBG … B02 IC	MBZ ST 02-… IC	DC.. 11T3…
MBS 093-DC L 11 I02-30*	■	MBS 093-DC R 11 I02-30*	■	93°	–	30	8	MBG … B02	MBZ ST 02-…	DC.. 11T3…
MBS 093-DC L 11 I02-40*	■	MBS 093-DC R 11 I02-40*	■	93°	–	40	8	MBG … B02	MBZ ST 02-…	DC.. 11T3…
MBS 093-DC L 07 I05*	■	MBS 093-DC R 07 I05*	■	93°	–	20	8	MBG … B05	MBZ ST 05-…	DC.. 0702…
MBS 093-DC L 11 I06*	■	MBS 093-DC R 11 I06*	■	93°	–	20	8	MBG … B06	MBZ ST 06-…	DC.. 11T3…
MBS 093-DC L 07 I90	■	MBS 093-DC R 07 I90	■	93°	-2.25	20	7	MBG … B90	MBZ ST 90-…	DC.. 0702…
MBS 093-DC L 11 I90	■	MBS 093-DC R 11 I90	■	93°	–	20	7	MBG … B90	MBZ ST 90-…	DC.. 11T3…
MBS 093-DC L 11 I90-30	■	MBS 093-DC R 11 I90-30	■	93°	–	30	7	MBG … B90	MBZ ST 90-…	DC.. 11T3…
		MBS 093-DC R 11 I90-40	■	93°	–	40	7	MBG … B90	MBZ ST 90-…	DC.. 11T3…

* Setting the centre height with adjustment excenter MBV E04
** With internal cooling



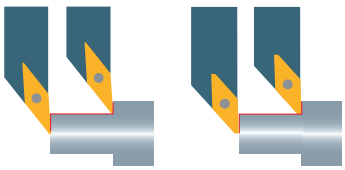


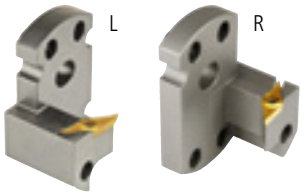


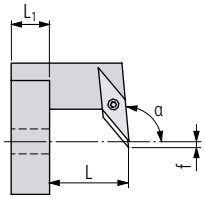
MBS …-DC .A

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 239…
MBS 093-DC LA 07 I02*	■	MBS 093-DC RA 07 I02*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	DC.. 0702…
MBS 093-DC LA 0703 I02*	■	MBS 093-DC RA 0703 I02*	■	93°	18	20	8	MBG … B03	MBZ ST 02-…	DC.. 0703…
MBS 093-DC LA 11 I02*	■	MBS 093-DC RA 11 I02*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	DC.. 11T3…
MBS 093-DC LA 11 I02-30*	■	MBS 093-DC RA 11 I02-30*	■	93°	18	30	8	MBG … B02	MBZ ST 02-…	DC.. 11T3…
MBS 093-DC LA 11 I02-40*	■	MBS 093-DC RA 11 I02-40*	■	93°	18	40	8	MBG … B02	MBZ ST 02-…	DC.. 11T3…
MBS 095-DC LA 11 I02*	■			95°	18	20	8	MBG … B02	MBZ ST 02-…	DC.. 11T3…
MBS 093-DC LA 07 I05*	■	MBS 093-DC RA 07 I05*	■	93°	8.5	20	8	MBG … B05	MBZ ST 05-…	DC.. 0702…
MBS 093-DC LA 11 I06*	■	MBS 093-DC RA 11 I06*	■	93°	18	20	8	MBG … B06	MBZ ST 06-…	DC.. 11T3…
MBS 093-DC LA 07 I90	■	MBS 093-DC RA 07 I90	■	93°	17	20	7	MBG … B90	MBZ ST 90-…	DC.. 0702…
MBS 093-DC LA 07 I90-30	■	MBS 093-DC RA 07 I90-30	■	93°	17	30	7	MBG … B90	MBZ ST 90-…	DC.. 0702…
MBS 093-DC LA 11 I90	■	MBS 093-DC RA 11 I90	■	93°	17	20	7	MBG … B90	MBZ ST 90-…	DC.. 11T3…
MBS 093-DC LA 11 I90-30	■	MBS 093-DC RA 11 I90-30	■	93°	17	30	7	MBG … B90	MBZ ST 90-…	DC.. 11T3…
		MBS 093-DC RA 11 I90-40	■	93°	17	40	7	MBG … B90	MBZ ST 90-…	DC.. 11T3…

* Setting the centre height with adjustment excenter MBV E04



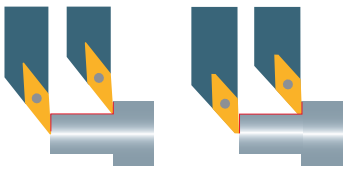


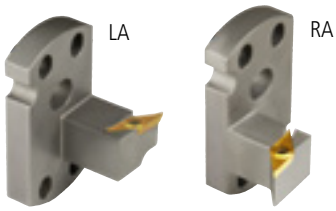


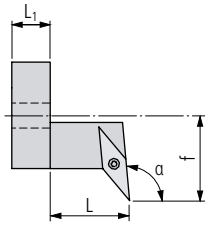
MBS …-VC

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 295…
MBS 110-VB L 11 I02*	■	MBS 110-VB R 11 I02*	■	110°	–	20	8	MBG … B02	MBZ ST 02-…	VB.. 1102…
MBS 0725-VC L 11 I02*	■	MBS 0725-VC R 11 I02*	■	72.5°	–	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC L 07 I02*	■	MBS 093-VC R 07 I02*	■	93°	–	20	8	MBG … B02	MBZ ST 02-…	VC.. 0702…
MBS 093-VC L 11 I02*	■	MBS 093-VC R 11 I02*	■	93°	–	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC L 11 I02-30*	■	MBS 093-VC R 11 I02-30*	■	93°	–	30	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
		MBS 093-VC R 11 I02-40*	■	93°	–	40	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC L 13 I02*	■	MBS 093-VC R 13 I02*	■	93°	–	20	8	MBG … B02	MBZ ST 02-…	VC.. 1303…
MBS 095-VC L 07 I02*	■	MBS 095-VC R 07 I02*	■	95°	–	20	8	MBG … B02	MBZ ST 02-…	VC.. 0702…
MBS 095-VC L 11 I02*	■	MBS 095-VC R 11 I02*	■	95°	–	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 095-VC L 11 I02-40*	■	MBS 095-VC R 11 I02-40*	■	95°	–	40	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 110-VC L 11 I02*	■	MBS 110-VC R 11 I02*	■	110°	–	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 1175-VC L 11 I02*	■	MBS 1175-VC R 11 I02*	■	117.5°	–	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 1175-VC L 13 I02*	■	MBS 1175-VC R 13 I02*	■	117.5°	–	23	8	MBG … B02	MBZ ST 02-…	VC.. 1303…
MBS 140-VC L 11 I02*	■	MBS 140-VC R 11 I02*	■	140°	–	23	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
		MBS 1625-VC N 11 I02*	■	162.5°	–	25	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC L 07 I05*	■	MBS 093-VC R 07 I05*	■	93°	–	20	8	MBG … B05	MBZ ST 05-…	VC.. 0702…
MBS 093-VC L 07 I90	■	MBS 093-VC R 07 I90	■	93°	–	20	7	MBG … B90	MBZ ST 90-…	VC.. 0702…
MBS 093-VC L 11 I90	■	MBS 093-VC R 11 I90	■	93°	2.25	20	8	MBG … B90	MBZ ST 90-…	VC.. 1103…
MBS 095-VC L 11 I90	■	MBS 095-VC R 11 I90	■	95°	2.25	20	7	MBG … B90	MBZ ST 90-…	VC.. 1103…
MBS 095-VC L 11 I90-30	■	MBS 095-VC R 11 I90-30	■	95°	–	30	7	MBG … B90	MBZ ST 90-…	VC.. 1103…
MBS 095-VC L 11 I90 IC**	■	MBS 095-VC R 11 I90 IC**	■	95°	2.25	20	7	MBG … B90	MBZ ST 90-…	VC.. 1103…
		MBS 110-VC R 11 I90	■	110°	–	20	7	MBG … B90	MBZ ST 90-…	VC.. 1103…
		MBS 1625-VC N 11 I90	■	162.5°	–	24	7	MBG … B90	MBZ ST 90-…	VC.. 1103…

* Setting the centre height with adjustment excenter MBV E04
** With internal cooling



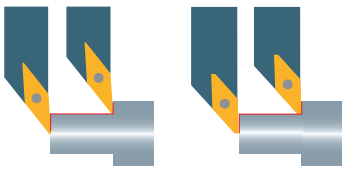


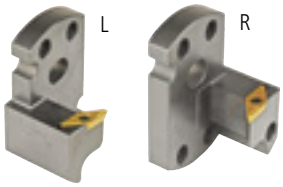


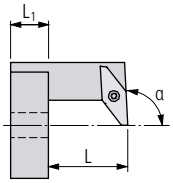
MBS …-VC .A

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 295…
MBS 110-VB LA 11 I02*	■	MBS 110-VB RA 11 I02*	■	110°	18	20	8	MBG … B02	MBZ ST 02-…	VB.. 1102…
MBS 0725-VC LA 11 I02*	■	MBS 0725-VC RA 11 I02*	■	72.5°	18	25	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC LA 11 I02*	■	MBS 093-VC RA 11 I02*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC LA 11 I02-30*	■	MBS 093-VC RA 11 I02-30*	■	93°	18	30	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC LA 11 I02-40*	■			93°	18	40	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC LA 12 I02*	■	MBS 093-VC RA 12 I02*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	VC.. 1203…
MBS 093-VC LA 13 I02*	■	MBS 093-VC RA 13 I02*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	VC.. 1203…
MBS 095-VC LA 07 I02*	■			95°	18	20	8	MBG … B02	MBZ ST 02-…	VC.. 0702…
MBS 095-VC LA 11 I02*	■	MBS 095-VC RA 11 I02*	■	95°	18	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 095-VC LA 11 I02-40*	■	MBS 095-VC RA 11 I02-40*	■	95°	18	40	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 110-VC LA 11 I02*	■	MBS 110-VC RA 11 I02*	■	110°	18	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 1175-VC LA 11 I02*	■	MBS 1175-VC RA 11 I02*	■	117.5°	18	20	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 1175-VC LA 12 I02*	■	MBS 1175-VC RA 12 I02*	■	117.5°	18	20	8	MBG … B02	MBZ ST 02-…	VC.. 1203…
MBS 1175-VC LA 13 I02*	■	MBS 1175-VC RA 13 I02*	■	117.5°	18	23	8	MBG … B02	MBZ ST 02-…	VC.. 1303…
MBS 140-VC LA 11 I02*	■	MBS 140-VC RA 11 I02*	■	140°	18	23	8	MBG … B02	MBZ ST 02-…	VC.. 1103…
MBS 093-VC LA 07 I90	■	MBS 093-VC RA 07 I90	■	93°	17	20	7	MBG … B90	MBZ ST 90-…	VC.. 0702…
MBS 093-VC LA 11 I90	■	MBS 093-VC RA 11 I90	■	93°	17	20	7	MBG … B90	MBZ ST 90-…	VC.. 1103…
MBS 093-VC LA 13 I90	■			93°	17	20	7	MBG … B90	MBZ ST 90-…	VC.. 1303…

* Setting the centre height with adjustment excenter MBV E04



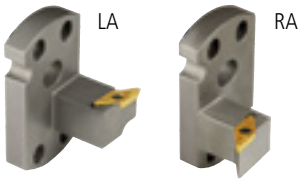


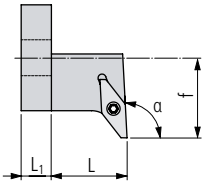


MBS …-VP

Order designation L		Order designation R		Dimensions α		L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 337…
MBS 093-VP L 10 I02*	■	MBS 093-VP R 10 I02*	■	93°		20	8	MBG … B02	MBZ ST 02- …	VP.. 1003…
MBS 093-VP L 10 I90	■	MBS 093-VP R 10 I90	■	93°		20	7	MBG … B90	MBZ ST 90- …	VP.. 1003…

* Setting the centre height with adjustment excenter MBV E04





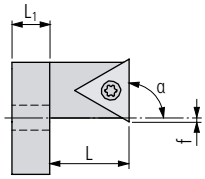
MBS …-VP .A

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 337…
MBS 093-VP LA 10 I02*	■	MBS 093-VP RA 10 I02*	■	93°	28	20	8	MBG … B02	MBZ ST 02- …	VP.. 1003…
MBS 093-VP LA 10 I90	■	MBS 093-VP RA 10 I90	■	93°	17	20	7	MBG … B90	MBZ ST 90- …	VP.. 1003…

* Setting the centre height with adjustment excenter MBV E04



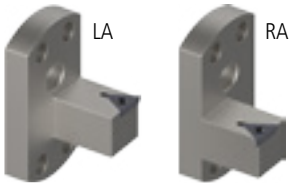


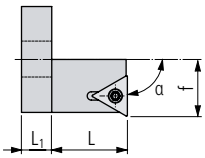


MBS …-TC

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts
MBS 090-TC L 11 I02*	■	MBS 090-TC R 11 I02*	■	90°	–	20	8	MBG … B02	MBZ ST 02-…	TC.. 1102…
MBS 090-TP L 11 I02*	■	MBS 090-TP R 11 I02*	■	90°	–	20	8	MBG … B02	MBZ ST 02-…	TP.. 1102…
		MBS 093-TC R 11 I02*	■	93°	15	20	8	MBG … B02	MBZ ST 02-…	TC.. 1102…
		MBS 090-TC R 11 I90	■	90°	–	20	7	MBG … B90	MBZ ST 90-…	TC.. 1102…

* Setting the centre height with adjustment excenter MBV E04





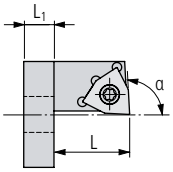
MBS …-TC .A

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts
MBS 090-TC LA 11 I02*	■	MBS 090-TC RA 11 I02*	■	90°	15	20	8	MBG … B02	MBZ ST 02-…	TC.. 1102…
MBS 090-TP LA 11 I02*	■	MBS 090-TP RA 11 I02*	■	90°	15	20	8	MBG … B02	MBZ ST 02-…	TP.. 1102…

* Setting the centre height with adjustment excenter MBV E04







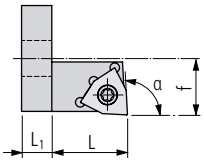
MBS …-W0134

Order designation L		Order designation R		Dimensions α		L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts
MBS 093-W0134 L I02*	■	MBS 093-W0134 R I02*	■	93°		20	8	MBG … B02	MBZ ST 02-…	W0134…
		MBS 093-W0134 R I02 IC*/**	■	93°		20	8	MBG … B02	MBZ ST 02-…	W0134…

* Setting the centre height with adjustment excenter MBV E04
** With internal cooling





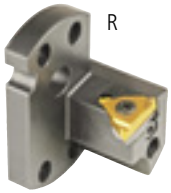


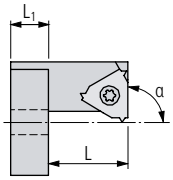
MBS …-W0134 .A

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts
MBS 093-W0134 LA I02*	■	MBS 093-W0134 RA I02*	■	93°	18	20	8	MBG … B02	MBZ ST 02-…	W0134…

* Setting the centre height with adjustment excenter MBV E04





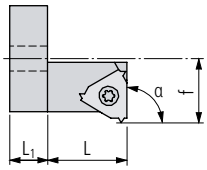


MBS …-16 ER (VARGUS / ISCAR)

Order designation L		Order designation R		Dimensions α		L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts
MBS 090-16 EL L I02*	■			90°		20	8	MBG … B02	MBZ ST 02-…	16EL
MBS 090-16 EL L I02-30*	■			90°		30	8	MBG … B02	MBZ ST 02-…	16EL
MBS 090-16 EL L I02-40*	■			90°		40	8	MBG … B02	MBZ ST 02-…	16EL
MBS 090-16 EL L I90-30	■			90°		30	7	MBG … B90	MBZ ST 90-…	16EL
		MBS 090-16 ER R I02*	■	90°		20	8	MBG … B02	MBZ ST 02-…	16ER
		MBS 090-16 ER R I02-30*	■	90°		30	8	MBG … B02	MBZ ST 02-…	16ER
		MBS 090-16 ER R I02-40*	■	90°		40	8	MBG … B02	MBZ ST 02-…	16ER
		MBS 090-16 ER R I90	■	90°		20	7	MBG … B90	MBZ ST 90-…	16ER
MBS 090-16 EL L I90-30	■	MBS 090-16 ER R I90-30	■	90°		30	7	MBG … B90	MBZ ST 90-…	16ER

* Setting the centre height with adjustment excenter MBV E04

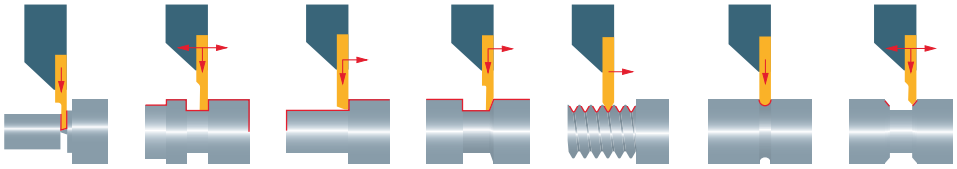


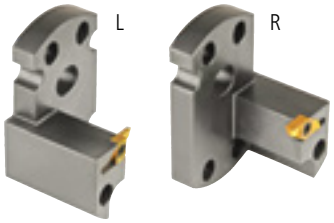


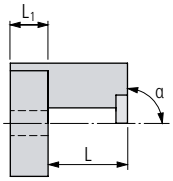
MBS …-16 ER .A (VARGUS / ISCAR)

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts
MBS 090-16 EL LA I02*	■			90°	17.66	20	8	MBG … B02	MBZ ST 02-…	16EL
MBS 090-16 EL LA I02-30*	■			90°	17.66	30	8	MBG … B02	MBZ ST 02-…	16EL
MBS 090-16 EL LA I02-40*	■			90°	17.66	40	8	MBG … B02	MBZ ST 02-…	16EL
		MBS 090-16 ER RA I02*	■	90°	17.66	20	8	MBG … B02	MBZ ST 02-…	16ER
		MBS 090-16 ER RA I02-30*	■	90°	17.66	30	8	MBG … B02	MBZ ST 02-…	16ER
		MBS 090-16 ER RA I02-40*	■	90°	17.66	40	8	MBG … B02	MBZ ST 02-…	16ER
		MBS 090-16 ER RA I90-30	■	90°	18.75	30	7	MBG … B90	MBZ ST 90-…	16ER
		MBS 090-16 ER RA I90-40	■	90°	18.75	40	7	MBG … B90	MBZ ST 90-…	16ER

* Setting the centre height with adjustment excenter MBV E04



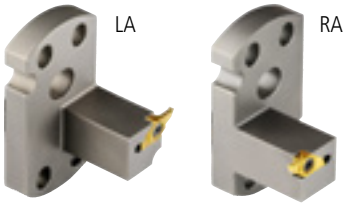


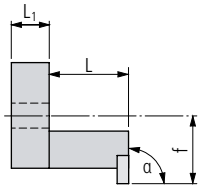


MBS …-Cut …

Order designation L		Order designation R		Dimensions α		L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 51…
MBS 090-Cut L 16 I02*	■	MBS 090-Cut R 16 I02*	■	90°		23	8	MBG … B02	MBZ ST 02- …	16…
MBS 135-Cut L 16 I02*	■	MBS 135-Cut R 16 I02*	■	135°		23	8	MBG … B02	MBZ ST 02- …	16…
MBS 090-Cut L 16 I05*	■	MBS 090-Cut R 16 I05*	■	90°		23	8	MBG … B05	MBZ ST 05- …	16…
MBS 090-Cut L 16 I90	■	MBS 090-Cut R 16 I90	■	90°		23	7	MBG … B90	MBZ ST 90- …	16…

* Setting the centre height with adjustment excenter MBV E04

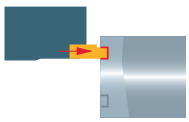




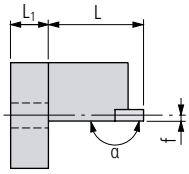
MBS …-Cut .A …

Order designation L		Order designation R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 51…
MBS 090-Cut LA 16 I02*	■	MBS 090-Cut RA 16 I02*	■	90°	18.6	23	8	MBG … B02	MBZ ST 02- …	16…
MBS 135-Cut LA 16 I02*	■	MBS 135-Cut RA 16 I02*	■	135°	18.5	23	8	MBG … B02	MBZ ST 02- …	16…
MBS 090-Cut LA 16 I05*	■	MBS 090-Cut RA 16 I05*	■	90°	13	23	8	MBG … B05	MBZ ST 05- …	16…
MBS 090-Cut LA 16 I90	■	MBS 090-Cut RA 16 I90	■	90°	20.75	23	7	MBG … B90	MBZ ST 90- …	16…

* Setting the centre height with adjustment excenter MBV E04





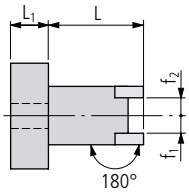


MBS 180-CUT …

Order designation L		R		Dimensions α	f	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 51…
		MBS 180-CUT 16 I02*	■	180°	1.5	20	8	MBG … B02	MBZ ST 02- …	16…
		MBS 180-CUT 16 I05*	■	180°	1.5	20	8	MBG … B05	MBZ ST 05- …	16…
		MBS 180-CUT 16 I90	■	180°	1.5	20	7	MBG … B90	MBZ ST 90- …	16…

* Setting the centre height with adjustment excenter MBV E04

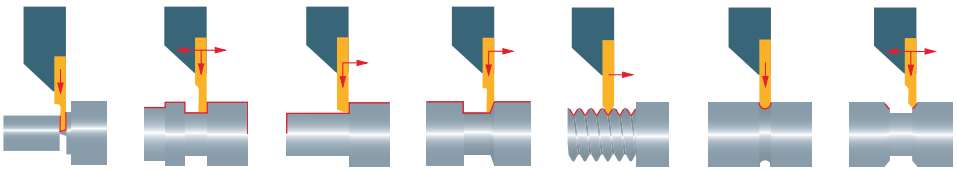


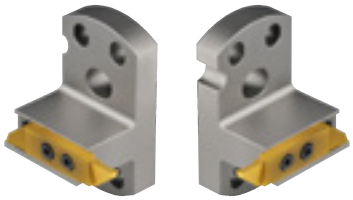


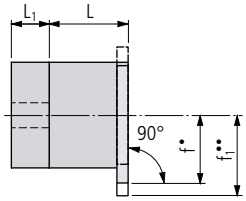
MBS 180-CUT … twin .

Order designation N				Dimensions f_1	f_2	L	L_1	Basic tool holders MBG…	Spacers MBZ…	Inserts 51…
MBS 180-CUT 16 I02 twin N*	■			-4.5	4.5	20	8	MBG … B02	MBZ ST 02- …	16…
MBS 180-CUT 16 I02 twin R*	■			3	11	20	8	MBG … B02	MBZ ST 02- …	16…

* Setting the centre height with adjustment excenter MBV E04





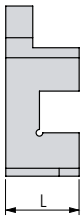


MBS 090-CUT N 30 …

Order designation			Dimensions				Basic tool holders	Spacers	Inserts
N			f	f_1	L	L_1	MBG…	MBZ…	123…
MBS 090-CUT N 30 I02*	■		27	33	20	8	MBG … B02	MBZ ST 02- …	30…
MBS 090-CUT N 30 I90	■		29	35	20	7	MBG … B90	MBZ ST 90- …	30…

• Short insert; •• Long insert
* Setting the centre height with adjustment excenter MBV E04

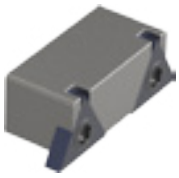


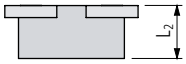


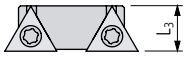
MBS 090 1212 …

Order designation		Dimensions	Basic tool holders	Spacers	Holders
L		L	MBG…	MBZ…	
MBS 090 1212 T02*	■	22	MBG … B02	MBZ ST 02- …	12 × 12
MBS 090 1212 T90	■	22	MBG … B90	MBZ ST 90- …	12 × 12

* Setting the centre height with adjustment excenter MBV E04



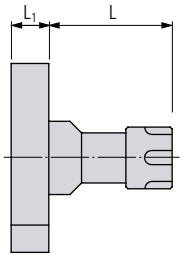




MBS TNMG …

Order designation		Dimensions		Basic tool holders		Inserts
N		L_2	L_3	MBG…		
MBS TNMG 0803	■	14	12	MBS 090 1212 …		TNMG 0803



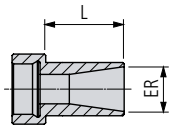


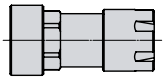
MBS E…

Order designation	N	Dimensions L	L_1	Basic tool holders MBG…	Spacers MBZ…	Type ER…
MBS E08 20 C02*	■	20	8	MBG … B02	MBZ ST 02-…	ER08
MBS E08 30 C02*	■	30	8	MBG … B02	MBZ ST 02-…	ER08
MBS E11 25 C02*	■	25	8	MBG … B02	MBZ ST 02-…	ER11
MBS E11 35 C02*	■	35	8	MBG … B02	MBZ ST 02-…	ER11
MBS E16 25 C02*	■	25	8	MBG … B02	MBZ ST 02-…	ER16
MBS E16 35 C02*	■	35	8	MBG … B02	MBZ ST 02-…	ER16
MBS E20 35 C02*	■	35	8	MBG … B02	MBZ ST 02-…	ER20
MBS E20 45 C02*	■	45	8	MBG … B02	MBZ ST 02-…	ER20
MBS E08 20 C05*	■	20	8	MBG … B05	MBZ ST 05-…	ER08
MBS E08 30 C05*	■	30	8	MBG … B05	MBZ ST 05-…	ER08
MBS E11 25 C05*	■	25	8	MBG … B05	MBZ ST 05-…	ER11
MBS E11 35 C05*	■	35	8	MBG … B05	MBZ ST 05-…	ER11
MBS E08 20 C06*	■	20	8	MBG … B06	MBZ ST 06-…	ER08
MBS E08 30 C06*	■	30	8	MBG … B06	MBZ ST 06-…	ER08
MBS E11 25 C06*	■	25	8	MBG … B06	MBZ ST 06-…	ER11
MBS E11 35 C06*	■	35	8	MBG … B06	MBZ ST 06-…	ER11
MBS E16 25 C06*	■	25	8	MBG … B06	MBZ ST 06-…	ER16
MBS E16 35 C06*	■	35	8	MBG … B06	MBZ ST 06-…	ER16
MBS E08 20 C90	■	20	7	MBG … B90	MBZ ST 90-…	ER08
MBS E08 30 C90	■	30	7	MBG … B90	MBZ ST 90-…	ER08
MBS E11 25 C90	■	25	7	MBG … B90	MBZ ST 90-…	ER11
MBS E11 35 C90	■	35	7	MBG … B90	MBZ ST 90-…	ER11
MBS E16 25 C90	■	25	7	MBG … B90	MBZ ST 90-…	ER16
MBS E16 35 C90	■	35	7	MBG … B90	MBZ ST 90-…	ER16
MBS E20 35 C90	■	35	7	MBG … B90	MBZ ST 90-…	ER20
MBS E20 45 C90	■	45	7	MBG … B90	MBZ ST 90-…	ER20

* Setting the centre height with adjustment excenter MBV E04



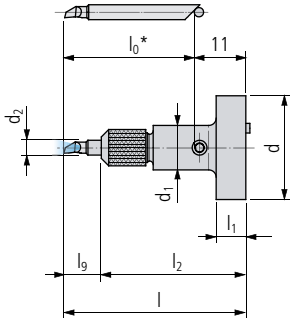




MBS V…

Order designation	N	L	Holders MBS…	Type ER…
MBS V11 30	■	28	MBS E11 …	ER11
MBS V16 30	■	28	MBS E16 …	ER16
MBS V20 30	■	28	MBS E20 …	ER20





MBS SDA…

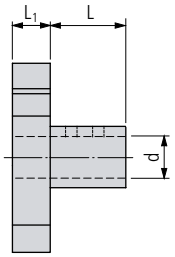
$l = l_0 + 11$
$l_9 = l - l_2$

Order designation	N	d_1	d_2	L_1	L_2	Basic tool holders MBG…	Spacers MBZ…	Inserts 367…
MBS SDA4 IT02 IC*	■	12	4	8	35	MBG … B02	MBZ ST 02-…	SD. 4… / SX. 4…
MBS SDA6 IT02 IC*	■	15	6	8	38	MBG … B02	MBZ ST 02-…	SD. 6… / SX. 6…
MBS SDA8 IT02 IC*	■	18	8	8	40	MBG … B02	MBZ ST 02-…	SD. 8… / SX. 8…
MBS SDA4 IT05 IC*	■	12	4	8	35	MBG … B05	MBZ ST 05-…	SD. 4… / SX. 4…
MBS SDA4 IT90 IC	■	12	4	7	35	MBG … B90	MBZ ST 90-…	SD. 4… / SX. 4…
MBS SDA6 IT90 IC	■	15	6	7	38	MBG … B90	MBZ ST 90-…	SD. 6… / SX. 6…
MBS SDA8 IT90 IC	■	18	8	7	40	MBG … B90	MBZ ST 90-…	SD. 8… / SX. 8…

* Setting the centre height with adjustment excenter MBV E04

Legend ..... 6…



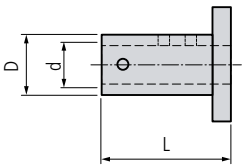


MBS … IT..

Order designation	N	Dimensions d	L	L_1	Basic tool holders MBG…	Spacers MBZ…
MBS 10 IT02*	■	10	13	8	MBG … B02	MBZ ST 02-…
MBS 12 IT02*	■	12	13	8	MBG … B02	MBZ ST 02-…
MBS 14 IT02*	■	14	13	8	MBG … B02	MBZ ST 02-…
MBS 10 IT05*	■	10	13	8	MBG … B05	MBZ ST 05-…
MBS 10 IT90	■	10	14	7	MBG … B90	MBZ ST 90-…
MBS 12 IT90	■	12	14	7	MBG … B90	MBZ ST 90-…
MBS 14 IT90	■	14	14	7	MBG … B90	MBZ ST 90-…
MBS 16 IT90	■	16	14	7	MBG … B90	MBZ ST 90-…

* Setting the centre height with adjustment excenter MBV E04





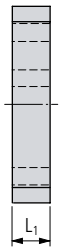
MBR …

Order designation		Dimensions D	d	L
MBR D10-02	■	10	2	22
MBR D10-03	■	10	3	22
MBR D10-04	■	10	4	22
MBR D10-05	■	10	5	22
MBR D10-06	■	10	6	22
MBR D10-07	■	10	7	22
MBR D10-08	■	10	8	22
MBR D12-04	■	12	4	22
MBR D12-05	■	12	5	22
MBR D12-06	■	12	6	22
MBR D12-07	■	12	7	22
MBR D12-08	■	12	8	22
MBR D12-09	■	12	9	22
MBR D12-10	■	12	10	22
MBR L D12-06	■	12	6	30.85
MBR L D12-08	■	12	8	30.85
MBR L D12-10	■	12	10	30.85
MBR L D16-10	■	16	10	30.85
MBR L D16-12	■	16	12	30.85
MBR L D16-14	■	16	14	30.85





IC



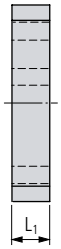
MBZ …

Order designation		Dimensions L_1	Basic tool holders MBG…	Insert holders, collet holders and tool holders MBS…
MBZ ST 02-10*	■	10	MBG … B02	MBS … 02
MBZ ST 02 10 02/05*	■	10	MBG … B02	MBS … 02/MBS … 05
MBZ ST 02-20*	■	20	MBG … B02	MBS … 02
MBZ ST 02-20 IC*/**	■	20	MBG … B02	MBS … 02 IC
MBZ ST 02-25*	■	25	MBG … B02	MBS … 02
MBZ ST 02-25 IC*/**	■	25	MBG … B02	MBS … 02 IC
MBZ ST 02-30*	■	30	MBG … B02	MBS … 02
MBZ ST 02-30 IC*/**	■	30	MBG … B02	MBS … 02 IC
MBS ST 05-10*	■	10	MBG … B05	MBS … 05
MBZ ST 05-20*	■	20	MBG … B05	MBS … 05
MBZ ST 90-10	■	10	MBG … B90	MBS … 90
MBZ ST 90-20	■	20	MBG … B90	MBS … 90
MBZ ST 90-20 IC**	■	20	MBG … B90	MBS … 90 IC
MBZ ST 90-25 IC**	■	25	MBG … B90	MBS … 90 IC
MBZ ST 90-30	■	30	MBG … B90	MBS … 90

* Setting the centre height with adjustment excenter MBV E04
** With internal cooling

Matching allen head screws 553



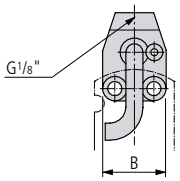


MBA …

Order designation		Dimensions L_1	Basic tool holders MBG…	Insert holders, collet holders and tool holders MBS…
MBA 02-05	■	10	MBG … B02	MBS … 05
MBA 06-02*	■	10	MBG … B06	MBS … 02

* Included with basic holders MBG … B06

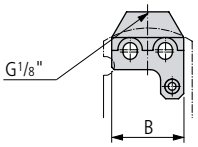




MBK Cool Flex

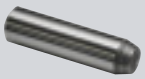
Order designation		Dimensions		Basic tool holders	Spacers	Insert holders, collet holders and tool holders
N		B		MBG…	MBZ…	MBS…
MBK Cool Flex	■	22.3		MBG … B02	MBZ ST 02-…	MBS …02



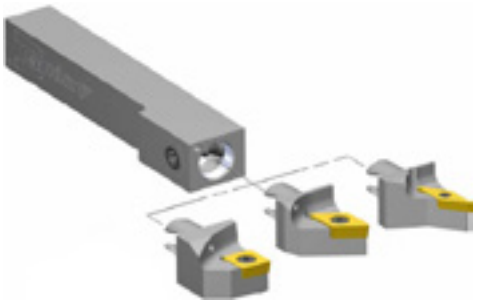


MBK Cool Fix

Order designation				Dimensions		Basic tool holders	Spacers	Insert holders, collet holders and tool holders
L		R		B		MBG…	MBZ…	MBS…
MBK Cool Fix L	■	MBK Cool Fix R	■	28		MBG … B02	MBZ ST 02-…	MBS …02

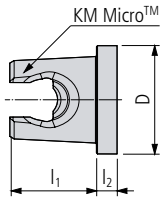
Illustration	Description	Dimensions	Order designation		Inserts
	Adjustment excenter		MBV E04	■	
	Adjustment excenter mini		MBV E05	■	
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	CC06, DC07, TC11, VC11, VP10, 1600…
		M2.5 × 7 T08	MSP 25070 T08	■	1600… 4
		M2.5 × 9 T08	MSP 25090 T08	■	1600… 6 1600… 8
		M3 × 7.3 T08	MSP 30073 T08	■	3000-08… 3000…A
		M3.5 × 7.2 T15	MSP 35072T15	■	
		M3 × 9 T08	MSP 30090 T08	■	3000…
		M3.5 × 8.6 T15	MSP 35086T15	■	
		M3.5 × 11 T15	MSP 35110 T15	■	CC09, DC11
		M3 × 12 T10	MSP 540120 T10 UP	■	16EL/ER…
	Shim screw		MSP 540070 T10 UP	■	16EL/ER…
	Anvil		YE3	■	16EL/ER…
	Socket head screw	M4 × 12 DIN912	MSP M412	■	
		M4 × 20 DIN912	MSP M420	■	
		M4 × 35 DIN912	MSP M435	■	
		M4 × 40 DIN912	MSP M440	■	
		M4 × 45 DIN912	MSP M445	■	
		M4 × 50 DIN912	MSP M450	■	
		M5 × 16 DIN912	MSP M516	■	
		M5 × 20 DIN912	MSP M520	■	
		M5 × 25 DIN912	MSP M525	■	
		M5 × 35 DIN912	MSP M535	■	
		M5 × 45 DIN912	MSP M545	■	
	L-piece for MBS 090 1212 T02	8 × 8	MSP A0808 T02	■	
		10 × 10	MSP A1010 T02	■	
	Flat-head socket cap screw	M3 × 6 DIN7991	MSP 30060 SKS IB2.5	■	
		M3 × 8 DIN7991	MSP 30080 SKS IB2.5	■	
	Clamping screw for MBS 090 1212 T02	M6 × 10 DIN913	MSP 60100 GST2 IB3	■	
	Elastic washer	M4/4.3/10/0.6	MSP US-4	■	
		M5/5.3/9.2/0.45	MSP US-5	■	
	Cylindrical pin without spacer	Ø6_{h6} × 12 DIN6325	MSP ZS612	■	
	Cylindrical pin for spacer MBZ ST 02-10	Ø6_{h6} × 25 DIN6325	MSP ZS625	■	
	Cylindrical pin for spacer MBZ ST 02-20	Ø6_{h6} × 35 DIN6325	MSP ZS635	■	
	Cylindrical pin for spacer MBZ ST 02-30	Ø6_{h6} × 45 DIN6325	MSP ZS645	■	

multidec®-KM™ is a precise and robust quick-change system for automatic lathes with an interface to ISO standard 26622.
UTILIS has suitable holders for multidec®-CUT, -TOP and for multidec®-BORE MICRO inserts for the KM Micro™ system.



KM™ is a Trademark of Kennametall Inc.

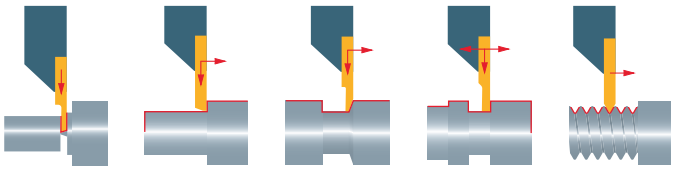
Advantages:
– Fast and simple installation of KM™ basic tool holders into the existing tool positions
– Quick tool changes
– Annealed holders
– High-quality multidec® cutting edges



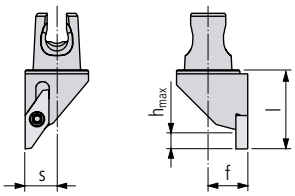
Size	System			Dimensions		
		Kennametal Widia	Ceratizit	D	l_1	l_2
12	KM Micro™	KM12		12	13	–
16		KM16		16	14.3	–

Overview – multidec®-KM™

Technical information	9
 Holders (OD turning)	
KM 12/16 CUT 1600 .	556
KM 12/16 CUT 3000 .	556
KM 12/16 CUT 1600-90 .	557
KM 12/16 SVXP… (91°)	558
KM 12/16 SVJP… (93°)	559
 Holders (ID turning)	
KM 12 SDA…	560
KM 16 SDA…	560
 Replacement and spare parts	561

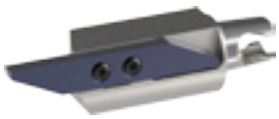


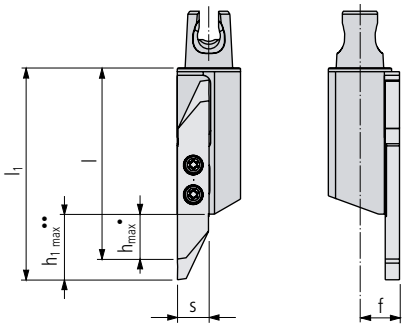




KM 12/16 CUT 1600 .

Order designation L		Order designation R		Dimensions KM	f	l	s	h_{max}	Inserts ▯ 51…
KM 12 CUT 1600 L	■	KM 12 CUT 1600 R	■	12	8	20	6	5	16…
KM 16 CUT 1600 L	■	KM 16 CUT 1600 R	■	16	10	20	8	5	16…

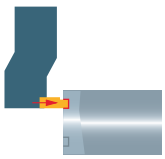




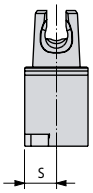
KM 12/16 CUT 3000 .

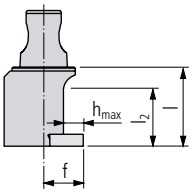
Order designation L		Order designation R		Dimensions KM	f	l	l_1	s	h_{max}	$h_{1\,max}$	Inserts ▯ 123…
KM 12 CUT 3000 L	■	KM 12 CUT 3000 R	■	12	8	43	–	6	10	–	30…
KM 16 CUT 3000 L	■	KM 16 CUT 3000 R	■	16	10	48	54	8	10	16	30…

• Short insert; •• Long insert







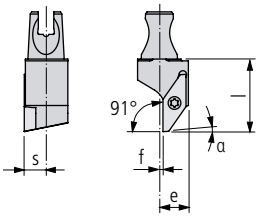


KM 12/16 CUT 1600-90 .

Order designation				Dimensions										Inserts
L		R		KM		f	l	l_2			s	h_{max}		51…
KM 12 CUT 1600-90 L	■	KM 12 CUT 1600-90 R	■	12		8	20	14			6	5		16…
KM 16 CUT 1600-90 L	■	KM 16 CUT 1600-90 R	■	16		10	20	14			8	5		16…



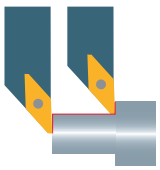




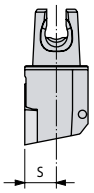
KM 12/16 SVXP… (91°)

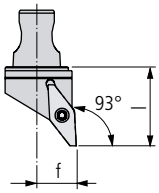
Order designation L		Order designation R		Dimensions KM	f	l	e	s	α	Inserts* 337…
KM 12 SVXPL 10	■	KM 12 SVXPR 10	■	12	1	20	8	6	3°	VP..1003..
KM 16 SVXPL 10	■	KM 16 SVXPR 10	■	16	3	20	10	8	3°	VP..1003..

*** Attention**
Right hand holder needs left hand insert!



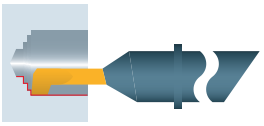






KM 12/16 SVJP… (93°)

Order designation				Dimensions										Inserts
L		R		KM		f	l				s			337…
KM 12 SVJPL 10	■	KM 12 SVJPR 10	■	12		8	20				6			VP..1003..
KM 16 SVJPL 10	■	KM 16 SVJPR 10	■	16		10	20				8			VP..1003..

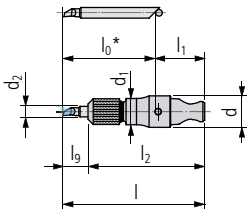


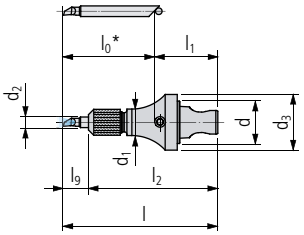


KM 12 SDA…



KM 16 SDA…





Order designation			Dimensions										Inserts
N			KM	d	l	l_9	l_1	l_2	d_1	d_2	d_3		367…
KM 12 SDA-4	■		12	12	l_0+l_1	l–l_2	6	31.5	10	4	–		SD.4… / SX.4…
KM 12 SDA-6	■		12	12	l_0+l_1	l–l_2	6	35.5	15	6	15		SD.6… / SX.6…
KM 12 SDA-8	■		12	12	l_0+l_1	l–l_2	6	37.5	18	8	18		SD.8… / SX.8…
KM 16 SDA-4 IC	■		16	16	l_0+l_1	l–l_2	9	34.5	10	4	21		SD.4… / SX.4…
KM 16 SDA-6 IC	■		16	16	l_0+l_1	l–l_2	9	38.5	15	6	21		SD.6… / SX.6…
KM 16 SDA-8 IC	■		16	16	l_0+l_1	l–l_2	9	40.5	18	8	21		SD.8… / SX.8…

* The length of the insert is variable

Illustration	Description	Dimensions	Order designation		Holders	Inserts
	TORX screw	M2.5 × 8 T08	MSP 25060 T08	■	KM.. CUT 1600, KM.. SV.P.10	
		M3 × 9 T08	MSP 30090 T08	■	KM.. CUT 3000.	
	Nut	M8 × 0.5	MSP SDA 4M	■	KM..SDA-4.	
		M12 × 0.6	MSP SDA 6M	■	KM..SDA-6.	
		M14 × 0.75	MSP SDA 8M	■	KM..SDA-8.	
	Aligning device		SDA 4X	■	KM..SDA-4.	
			SDA 6X	■	KM..SDA-6.	
			SDA 8X	■	KM..SDA-8.	
	Retaining ring		MSP SDA 4S	■		SD. 4… SX. 4…
			MSP SDA 6S	■		SD. 6… SX. 6…
			MSP SDA 8S	■		SD. 8… SX. 8…

TORX screwdriver ..... 703…

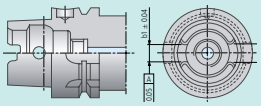
Use of the multidec®-HSK-system with ISO 12164/DIN 69893 standardized attachment has become increasingly widespread in recent years. This system makes the customer independent from specific tool system, which is a great advantage. Simplicity, precision and reliability: these are the criteria that customers place on modern tool systems. HSK tools largely satisfy these demands and help to maximize productivity. The program comprises a wide selection of tool holders for both OD and ID turning on lathes. The standard range has been developed in size 32 and form "C" for manual tool changing. Now we propose a new size 40 in form HSK-T for the automatic- and manual tool change. Other HSK shapes and sizes are available on request.



Advantages:
– Large program of toolholders in heat-treatable steel, with internal cooling, available from stock
– Holder with high rigidity and repeat accuracy
– High precision in positioning of cutting edge, cause of the axial positioning and the close tolerance of the holder keyway HSK-T standard ISO 12164
– Utilisation of high quality UTILIS multidec®-inserts

Overview – multidec®-HSK

Technical information 9



HSK versions 564



Holders (IOD turning)

HSK-… CUT 1600 . 566

HSK-… CUT 3000 . 566

HSK-… CUT 1600-90 . 567

HSK-… CUT 3000-90 . 567

HSK-… SVJP… (93°) 568

HSK-… SVXP… (91°) 569



Holders (ID turning)

HSK-… CUT 1600… RD . 570

HSK-… SDA… 571



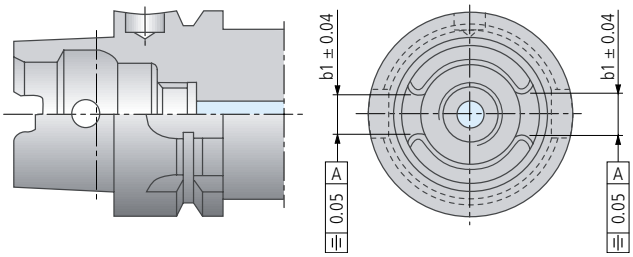
Closing plugs

HSK-… VS 572



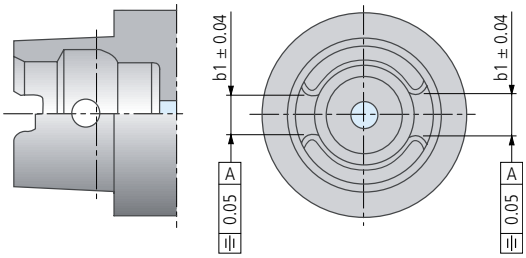
Replacement and spare parts 573

HSK – Form A



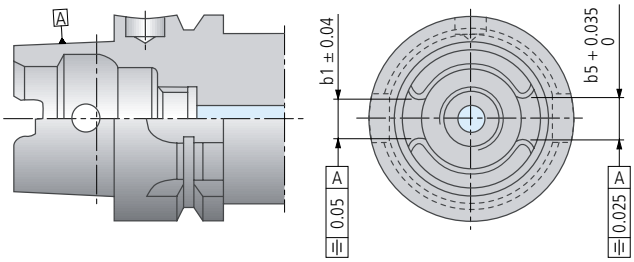
– Used on machining centers, milling machines, turning machines, special machines with automatic tool change
– Central, axial coolant supply through coolant tube
– Torque transmission via two key slots at end of taper
– Two slots on collar for tool magazine, location edge hole for data carrier in collar

HSK – Form C



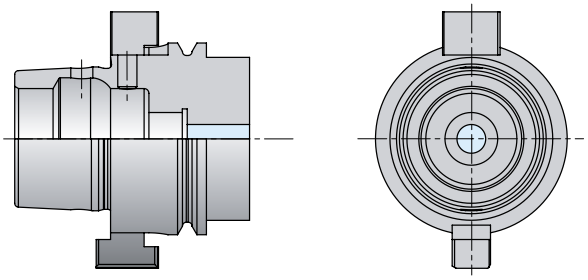
– Preferably used for spindles on transfer lines and spezial machines without automatic tool change or for short bore spindles and tool extensions and reductions
– Central, axial coolant supply
– Torque transmission via two key slots at end of taper

HSK – Form T



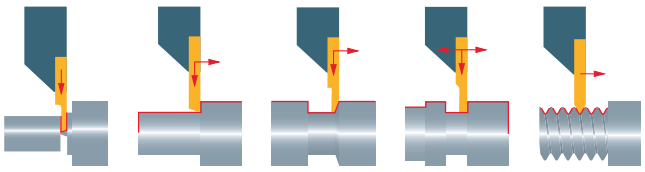
Tighter tolerance for perfect change precision
The "T" stands for "Turning". HSK-T combines the basic shape of the HSK taper in form A/C and differs by closer tolerances of the cam grooves on the cone of the tools.
This important feature for turning assures accurate radial positioning (center height).

HSK – Form E…(WM)

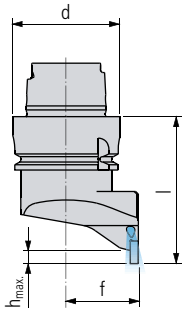


Version especially for Willemin-Macodel machines
– Torque transmission via two slot nuts.

Execution with form B, D, E and F on request



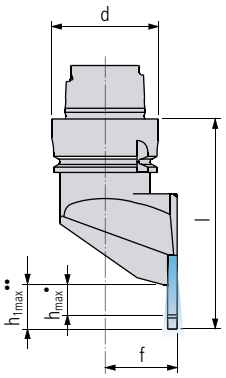




HSK-… CUT 1600 .

Order designation L		Order designation R		Form / Size HSK	Dimensions d	f	l	h_{max}	Inserts 🗋 51…
HSK-C32 CUT 1600 L	■	HSK-C32 CUT 1600 R	■	C32	32	22	40	5	16…
HSK-T40 CUT 1600 L	■	HSK-T40 CUT 1600 R	■	A40 / C40	40	27	55	5	16…

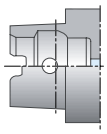




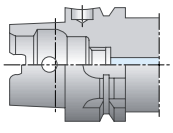
HSK-… CUT 3000 .

Order designation L		Order designation R		Form / Size HSK	Dimensions d	f	l	h_{max}	h_{1max}	Inserts 🗋 123…
HSK-C32 CUT 3000 L	■	HSK-C32 CUT 3000 R	■	C32	32	22	50	10	16	30…
HSK-T40 CUT 3000 L	■	HSK-T40 CUT 3000 R	■	A40 / C40	40	27	73	10	16	30…

• Short insert; •• Long insert

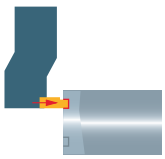


HSK-C…

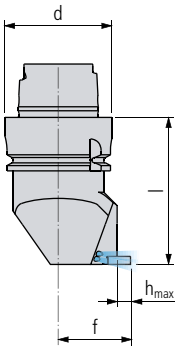


HSK-T (A/C)…

Versions 🗋 564



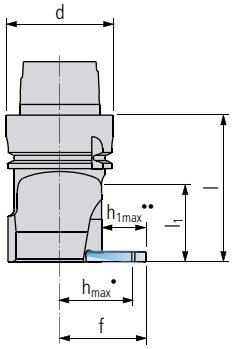




HSK-… CUT 1600-90 .

Order designation L		Order designation R		Form / Size HSK	Dimensions d	f	l			h_{max}			Inserts* 51…
HSK-C32 CUT 1600-90 L	■	HSK-C32 CUT 1600-90 R	■	C32	32	22	40			5			16…
HSK-T40 CUT 1600-90 L	■	HSK-T40 CUT 1600-90 R	■	A40 / C40	40	27	55			5			16…



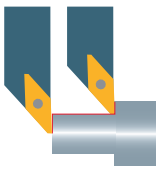


HSK-… CUT 3000-90 .

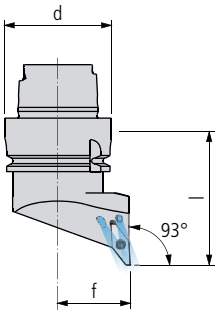
Order designation L		Order designation R		Form / Size HSK	Dimensions d	f	l	l_1		h_{max}	h_{1max}		Inserts* 123…
HSK-C32 CUT 3000-90 L	■	HSK-C32 CUT 3000-90 R	■	C32	32	22	40	24		10	–		30…
HSK-T40 CUT 3000-90 L	■	HSK-T40 CUT 3000-90 R	■	A40 / C40	40	27	55	30		10	16		30…

• Short insert; •• Long insert

*** Attention**
Right hand holder needs left hand insert!

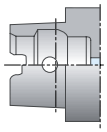




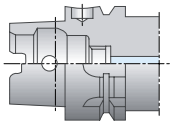


HSK-… SVJP… (93°)

Order designation L		Order designation R		Form / Size HSK	Dimensions d	f	l	Inserts 337…
HSK-C32 SVJPL 10	■	HSK-C32 SVJPR 10	■	C32	32	22	40	VP…1003…
HSK-T40 SVJPL 10	■	HSK-T40 SVJPR 10	■	A40 / C40	40	27	55	VP…1003…



HSK-C…

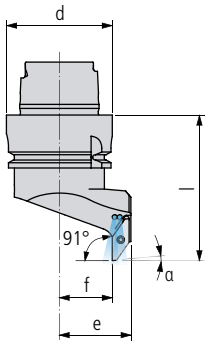


HSK-T (A/C)…

Versions 564



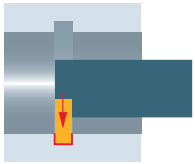




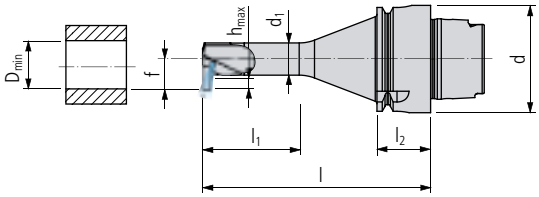
HSK-… SVXP… (91°)

Order designation L		Order designation R		Form / Size HSK	Dimensions d	f	l	e			α		Inserts* 337…
HSK-C32 SVXPL 10	■	HSK-C32 SVXPR 10	■	C32	32	14	40	22			3°		VP…1003…
HSK-T40 SVXPL 10	■	HSK-T40 SVXPR 10	■	A40 / C40	40	19	55	27			3°		VP…1003…

*** Attention**
Right hand holder needs left hand insert!



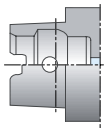




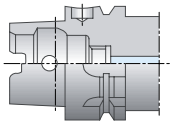
HSK-… CUT 1600… RD .

Order designation L		Order designation R		Form / Size HSK	Dimensions d	f	l	D_{min}	l_1	l_2	d_1	h_{max}	Inserts* 51…
HSK-C32 CUT 1600-12 RD L	■	HSK-C32 CUT 1600-12 RD R	■	C32	32	11	75	17.5	36	10	12	3	16…
HSK-C32 CUT 1600-16 RD L	■	HSK-C32 CUT 1600-16 RD R	■	C32	32	13	75	21	48	10	16	4	16…
HSK-C32 CUT 1600-20 RD L	■	HSK-C32 CUT 1600-20 RD R	■	C32	32	15	75	25	60	10	20	4	16…
HSK-T40 CUT 1600-12 RD L	■	HSK-T40 CUT 1600-12 RD R	■	A40 / C40	40	11	85	17.5	36	20	12	3	16…
HSK-T40 CUT 1600-16 RD L	■	HSK-T40 CUT 1600-16 RD R	■	A40 / C40	40	13	85	21	48	20	16	4	16…
HSK-T40 CUT 1600-20 RD L	■	HSK-T40 CUT 1600-20 RD R	■	A40 / C40	40	15	85	25	60	20	20	4	16…

*** Attention**
Right hand holder needs left hand insert!



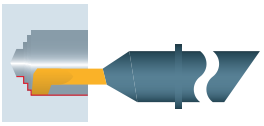
HSK-C…



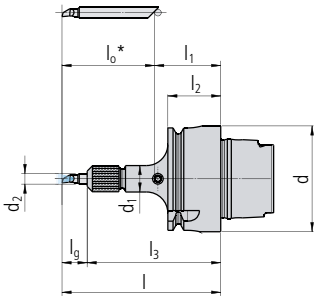
HSK-T (A/C)…

Versions 564

Legend 6…

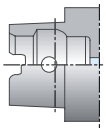




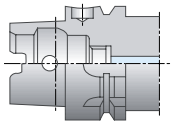


HSK-… SDA…

Order designation	N	Form / Size HSK	Dimensions d	l	l_g	l_1	l_2	l_3	d_1	d_2	Inserts 📄367…
HSK-C32 SDA-4	■	C32	32	l_0+l_1	l–l_3	15	10	40.5	10	4	SD.4…/SX.4…
HSK-C32 SDA-6	■	C32	32	l_0+l_1	l–l_3	15	10	44.5	15	6	SD.6…/SX.6…
HSK-C32 SDA-8	■	C32	32	l_0+l_1	l–l_3	15	10	46.5	18	8	SD.8…/SX.8…
HSK-T40 SDA-4	■	A40 / C40	40	l_0+l_1	l–l_3	25	20	50.5	10	4	SD.4…/SX.4…
HSK-T40 SDA-6	■	A40 / C40	40	l_0+l_1	l–l_3	25	20	54.5	15	6	SD.6…/SX.6…
HSK-T40 SDA-8	■	A40 / C40	40	l_0+l_1	l–l_3	25	20	56.5	18	8	SD.8…/SX.8…



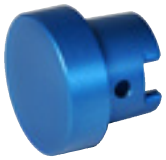
HSK-C…

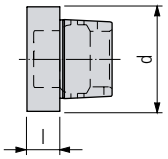


HSK-T (A/C)…

Versions 📄564

*** Attention**
As the cutting edge length "l_0" is variable, the projection length "l" may exceed the maximum permitted length under certain circumstances. It is therefore recommended to check this length to avoid collisions in the tool magazine during tool change.





HSK-... VS

Order designation		Form / Size HSK	Dimensions d	l
HSK-C32 VS	■	C32	32	10
HSK-C40 VS	■	C40	40	15

For holders (CUT/SC/SD/SV…) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	HSK … CUT 1600 … HSK … SV.P …
		M3 × 9 T08	MSP 30090 T08	■	HSK … CUT 3000 …

For holders (CUT/SC/SD/SV…) ID turning

Illustration	Description	Dimensions	Order designation		Holders	Inserts
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	HSK … CUT 1600 … RD	
	Nut	M8 × 0.5	MSP SDA 4M	■	HSK..SDA-4.	
		M12 × 0.6	MSP SDA 6M	■	HSK..SDA-6.	
		M14 × 0.75	MSP SDA 8M	■	HSK..SDA-8.	
	Aligning device		SDA 4X	■	HSK..SDA-4.	
			SDA 6X	■	HSK..SDA-6.	
			SDA 8X	■	HSK..SDA-8.	
	Retaining ring		MSP SDA 4S	■		SD. 4… SX. 4…
			MSP SDA 6S	■		SD. 6… SX. 6…
			MSP SDA 8S	■		SD. 8… SX. 8…

TORX screwdriver ..... 703…

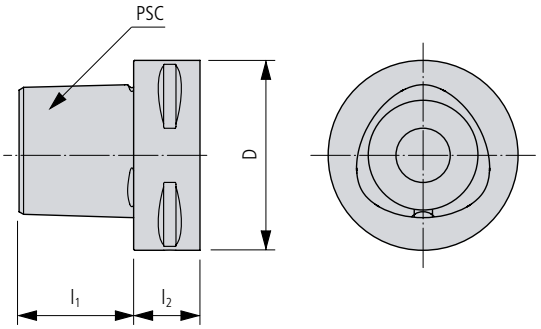
multidec®-PSC (ISO 26623)

multidec®-PSC is a flexible and modular quick change toolholder-system, with a polygon-connection compliant with ISO 26623-1 standard. High torque transmission is one basic advantage of the system. The program includes tool holders suitable for turning machines with multidec®-CUT, multidec®-TOP and multidec®-BORE MICRO inserts.





Advantages:
– Connection with high rigidity, repeat accuracy and self-centering
– Quick change of toolholders
– Toolholders with heat-treatable steel and internal cooling
– Utilisation of high quality multidec® inserts

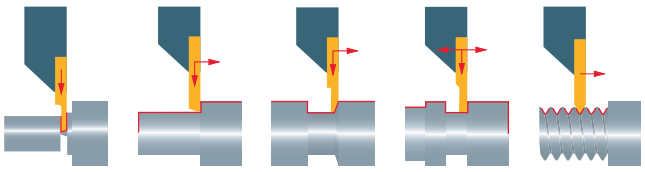


Size		Dimensions		
PSC	Sandvik Coromant Capto®	D	l_1	l_2
32	C3	32	19	15
40	C4	40	24	20
50	C5	50	30	20
63	C6	63	38	22
80	C8	80	48	30
100	C10	100	60	32

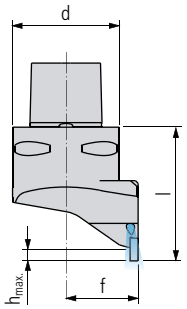
UTILIS multidec® swiss type tools

Overview – multidec®-PSC

Technical information	9
 Holders (OD turning)	
PSC … CUT 1600 .	576
PSC … CUT 3000 .	576
PSC … CUT 1600-90 .	577
PSC … CUT 3000-90 .	577
PSC … SVXP… (91°)	578
PSC … SVJP… (93°)	579
 Holders (ID turning)	
PSC … CUT 1600… RD .	580
PSC … SDA…	581
 Replacement and spare parts	582



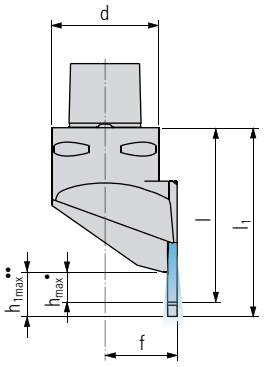




PSC … CUT 1600 .

Order designation L		Order designation R		Size PSC	Dimensions d	f	l				h_{max}			Inserts 51…
PSC 32 CUT 1600 L	■	PSC 32 CUT 1600 R	■	32	32	22	40				5			16…
PSC 40 CUT 1600 L	■	PSC 40 CUT 1600 R	■	40	40	27	50				5			16…

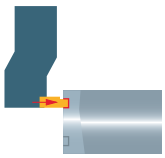




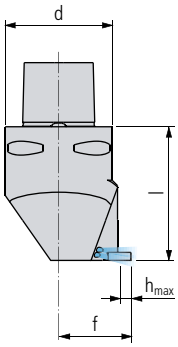
PSC … CUT 3000 .

Order designation L		Order designation R		Size PSC	Dimensions d	f	l	l_1			h_{max}	h_{1max}		Inserts 123…
PSC 32 CUT 3000 L	■	PSC 32 CUT 3000 R	■	32	32	22	60	66			10	16		30…
PSC 40 CUT 3000 L	■	PSC 40 CUT 3000 R	■	40	40	27	65	71			10	16		30…

• Short insert; •• Long insert



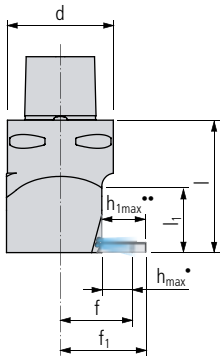




PSC … CUT 1600-90 .

Order designation L		Order designation R		Size PSC	Dimensions d	f	l				h_{max}			Inserts* 51…
PSC 32 CUT 1600-90 L	■	PSC 32 CUT 1600-90 R	■	32	32	22	40				5			16…
PSC 40 CUT 1600-90 L	■	PSC 40 CUT 1600-90 R	■	40	40	27	50				5			16…





PSC … CUT 3000-90 .

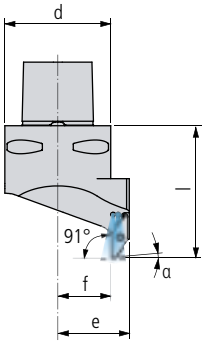
Order designation L		Order designation R		Size PSC	Dimensions d	f	f_1	l	l_1		h_{max}	h_{1max}		Inserts* 123…
PSC 32 CUT 3000-90 L	■	PSC 32 CUT 3000-90 R	■	32	32	22	27	40	19		10	16		30…
PSC 40 CUT 3000-90 L	■	PSC 40 CUT 3000-90 R	■	40	40	27	32	50	30		10	16		30…

• Short insert; •• Long insert

*** Attention**
Right hand holder needs left hand insert!



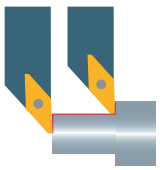




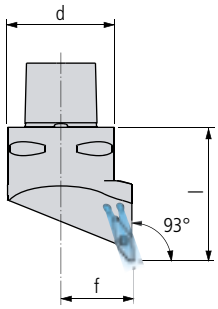
PSC … SVXP… (91°)

Order designation L		Order designation R		Size PSC	Dimensions d	f	l	e				α		Inserts* 337…
PSC 32 SVXPL 10	■	PSC 32 SVXPR 10	■	32	32	15	40	22				3°		VP…1003…
PSC 40 SVXPL 10	■	PSC 40 SVXPR 10	■	40	40	20	50	27				3°		VP…1003…

*** Attention**
Right hand holder needs left hand insert!

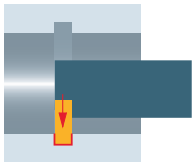




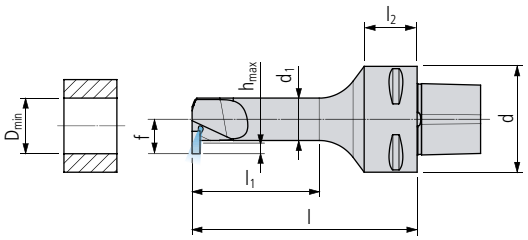


PSC … SVJP… (93°)

Order designation L		Order designation R		Size PSC	Dimensions d	f	l	Inserts 337…
PSC 32 SVJPL 10	■	PSC 32 SVJPR 10	■	32	32	22	40	VP…1003…
PSC 40 SVJPL 10	■	PSC 40 SVJPR 10	■	40	40	27	50	VP…1003…



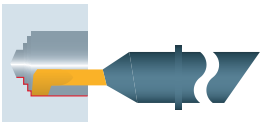




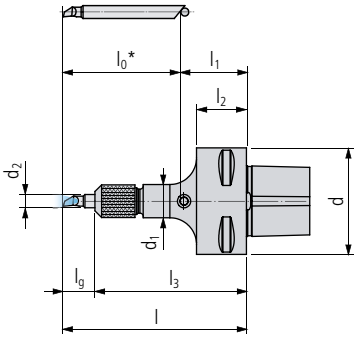
PSC … CUT 1600… RD .

Order designation L		Order designation R		Size PSC	Dimensions d	f	l	D_{min}	l_1	l_2	d1		h_{max}	Inserts* 51…
PSC 32 CUT 1600-12 RD L	■	PSC 32 CUT 1600-12 RD R	■	32	32	11	80	17.5	36	15	12		3	16…
PSC 32 CUT 1600-16 RD L	■	PSC 32 CUT 1600-16 RD R	■	32	32	13	80	21	48	15	16		4	16…
PSC 32 CUT 1600-20 RD L	■	PSC 32 CUT 1600-20 RD R	■	32	32	15	80	25	60	15	20		4	16…
PSC 40 CUT 1600-12 RD L	■	PSC 40 CUT 1600-12 RD R	■	40	40	11	85	17.5	36	20	12		3	16…
PSC 40 CUT 1600-16 RD L	■	PSC 40 CUT 1600-16 RD R	■	40	40	13	85	21	48	20	16		4	16…
PSC 40 CUT 1600-20 RD L	■	PSC 40 CUT 1600-20 RD R	■	40	40	15	85	25	60	20	20		4	16…

*** Attention**
Right hand holder needs left hand insert!







PSC … SDA…

Order designation	N	Size	Dimensions								Inserts
		PSC	d	l	l_g	l_1	l_2	l_3	d_1	d_2	367…
PSC 32 SDA-4	■	32	32	l_0+l_1	l–l_3	20	15	45.5	10	4	SD.4…/SX.4…
PSC 32 SDA-6	■	32	32	l_0+l_1	l–l_3	20	15	49.5	15	6	SD.6…/SX.6…
PSC 32 SDA-8	■	32	32	l_0+l_1	l–l_3	20	15	51.5	18	8	SD.8…/SX.8…
PSC 40 SDA-4	■	40	40	l_0+l_1	l–l_3	25	20	50.5	10	4	SD.4…/SX.4…
PSC 40 SDA-6	■	40	40	l_0+l_1	l–l_3	25	20	54.5	15	6	SD.6…/SX.6…
PSC 40 SDA-8	■	40	40	l_0+l_1	l–l_3	25	20	56.5	18	8	SD.8…/SX.8…

*** Attention**
As the cutting edge length "l_0" is variable, the projection length "l" may exceed the maximum permitted length under certain circumstances. It is therefore recommended to check this length to avoid collisions in the tool magazine during tool change.

For holders (CUT/TOP…) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	PSC … CUT 1600 … PSC … SV.P …
		M3 × 9 T08	MSP 30090 T08	■	PSC … CUT 3000 …

For holders (CUT…) ID turning

Illustration	Description	Dimensions	Order designation		Holders	Inserts
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	PSC … CUT 1600 … RD	
	Nut	M8 × 0.5	MSP SDA 4M	■	PSC..SDA-4.	
		M12 × 0.6	MSP SDA 6M	■	PSC..SDA-6.	
		M14 × 0.75	MSP SDA 8M	■	PSC..SDA-8.	
	Aligning device		SDA 4X	■	PSC..SDA-4.	
			SDA 6X	■	PSC..SDA-6.	
			SDA 8X	■	PSC..SDA-8.	
	Retaining ring		MSP SDA 4S	■		SD. 4… SX. 4…
			MSP SDA 6S	■		SD. 6… SX. 6…
			MSP SDA 8S	■		SD. 8… SX. 8…

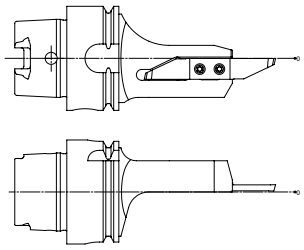
TORX screwdriver ..... 703…

Notes

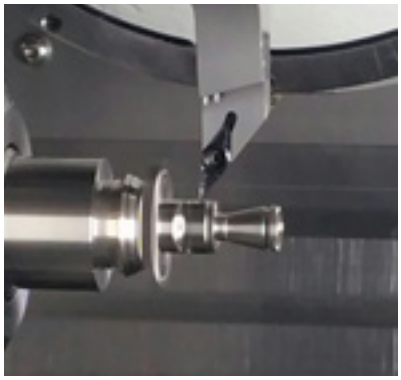
multidec®-MULTITASK

Solid and compact tools are an enormous advantage for turning operations on multitask machines. Specially-designed tools must be used with the machine spindle during the turning process that can allow work to be done very close to the main or opposed spindle. Any errors in the height of the cutting edge and torsional forces should also be kept to a minimum.
With the HSK-E40, HSK-T32, HSK-T40, HSK-A40 and PSC 40 (Capto C4) spindles, this sophisticated range of tools offers ideal solutions for modern turning and milling centers.





Advantages:
– Monoblock tools with interchangeable inserts
– Compact and solid design
– The insert is positioned on the center line (guaranteeing a very accurate cutting edge height and high repeatability while also reducing of the load on the spindle)
– All tools are equipped with integrated coolant supply
– The high quality UTILIS inserts from the multidec®-CUT, -ISO, -TOP and -BORE MICRO series can be used



Milling and turning centres that are well-known on the market are ideal for the use of these tools, such as WILLEMIN-MACODEL, BUMOTEC, TSUGAMI and other multi-tasking machines that are equipped with HSK and PSC spindles and can perform turning operations with a stationary machine spindle.

Willemin-Macodel: 308 MT2, 308 S2, 408 MT, 408 MTS, 408 S2, 508 MT, 508 MT2, 508S2 series
Bumotec: S181, S191, S191-V, S191 neo series
Tsugami: HS38MH-5AX series

WILLEMIN-MACODEL



starrag bumotec

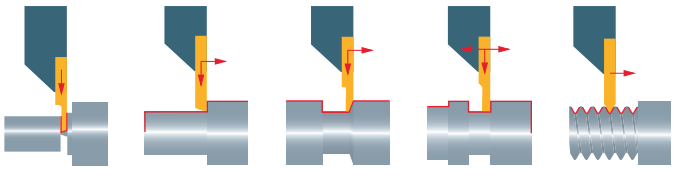


PRECISION TSUGAMI

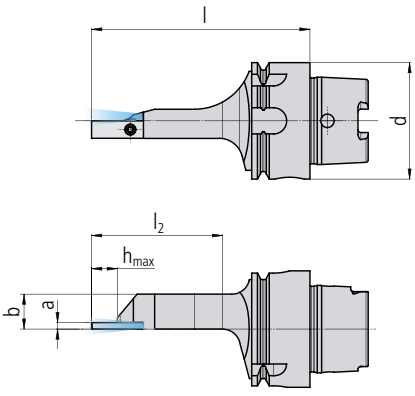


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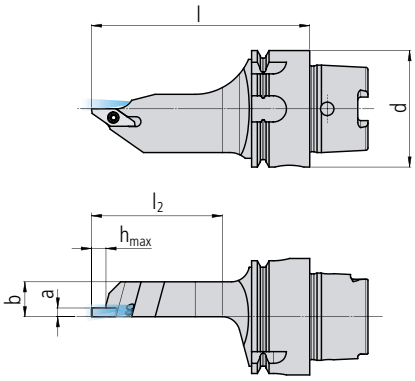






HSK-… MT CUT 500 .

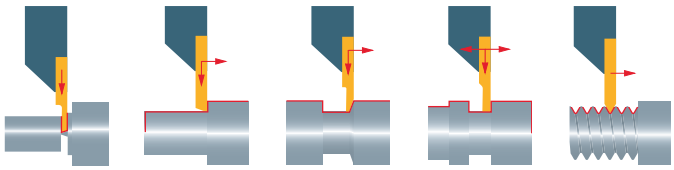
Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2	a			h_{max}	Inserts 43…
HSK-T32 MT CUT 500 L	■	HSK-T32 MT CUT 500 R	■	T32	32	12	65	35	2			8.5	50.
HSK-T40 MT CUT 500 L	■	HSK-T40 MT CUT 500 R	■	T40	40	12	75	45	2			8.5	50.
HSK-A40 MT CUT 500 L	■	HSK-A40 MT CUT 500 R	■	A40	40	12	75	45	2			8.5	50.



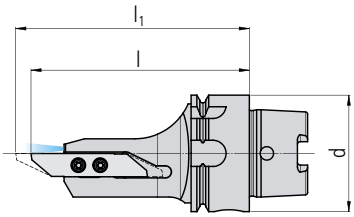


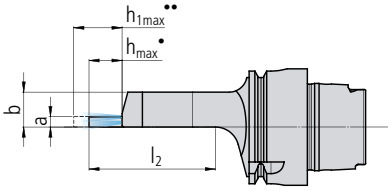
HSK-… MT CUT 1600 .

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2	a			h_{max}	Inserts 51…
HSK-T32 MT CUT 1600 L	■	HSK-T32 MT CUT 1600 R	■	T32	32	12	65	35	3			5	16..
HSK-T40 MT CUT 1600 L	■	HSK-T40 MT CUT 1600 R	■	T40	40	12	75	45	3			5	16..
HSK-A40 MT CUT 1600 L	■	HSK-A40 MT CUT 1600 R	■	A40	40	12	75	45	3			5	16..







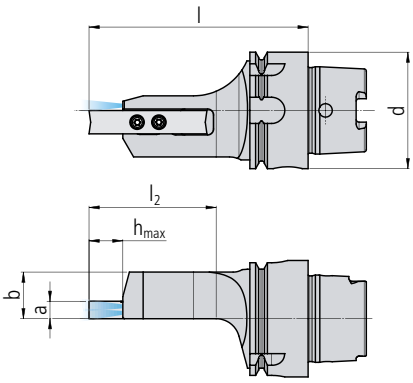


HSK-… MT CUT 3000 .

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_1	l_2	a	h_{max}	h_{1max}	Inserts 123…
HSK-T32 MT CUT 3000 L	■	HSK-T32 MT CUT 3000 R	■	T32	32	12	65	–	35	3.5	10	–	30..
HSK-T40 MT CUT 3000 L	■	HSK-T40 MT CUT 3000 R	■	T40	40	12	75	80	45	3.5	10	16	30..
HSK-A40 MT CUT 3000 L	■	HSK-A40 MT CUT 3000 R	■	A40	40	12	75	80	45	3.5	10	16	30..

• Short insert; •• Long insert



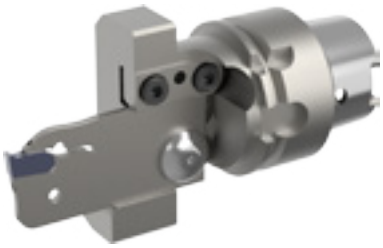


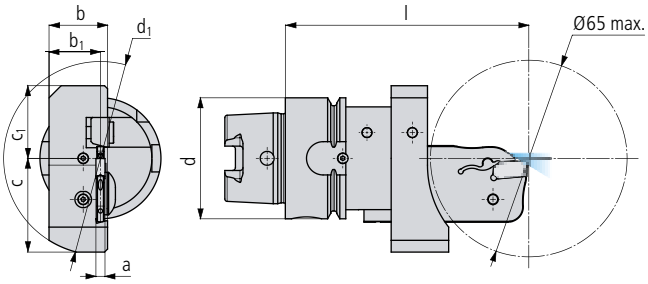
HSK-… MT CUT 3600 .

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2	a			h_{max}	Inserts 183…
HSK-T40 MT CUT 3600 L	■	HSK-T40 MT CUT 3600 R	■	T40	40	16	75	43	6			10	36..
HSK-A40 MT CUT 3600 L	■	HSK-A40 MT CUT 3600 R	■	A40	40	16	75	43	6			10	36..



HSK – Form T
HSK – Form A

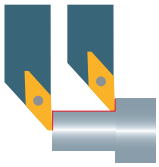




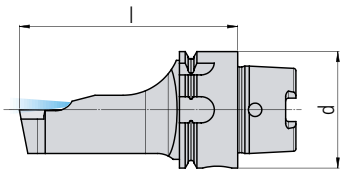
HSK-… MT 4000 …

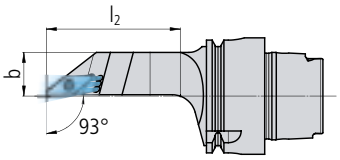
Order designation				Form / Size	Dimensions								Inserts
L		R		HSK	d	d_1	a	l	b	b_1	c	c_1	201…
HSK-T40 MT 4000 26 L	■	HSK-T40 MT 4000 26 R	■	T40	40	64	3	80	19.4	17	31	24	40…
HSK-A40 MT 4000 26 L	■	HSK-A40 MT 4000 26 R	■	A40	40	64	3	80	19.4	17	31	24	40…

Scope of delivery: tool including cut off blade and assembly key



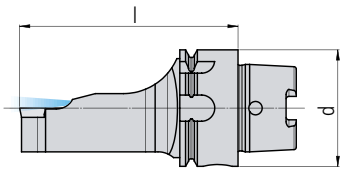




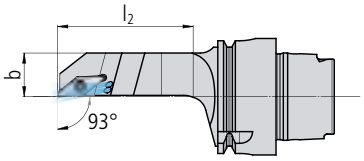


HSK-… MT SVJP… (93°)

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2				Inserts 337…
HSK-T32 MT SVJPL 10	■	HSK-T32 MT SVJPR 10	■	T32	32	12	65	36				VP.. 1003..
HSK-T40 MT SVJPL 10	■	HSK-T40 MT SVJPR 10	■	T40	40	15	75	46				VP.. 1003..
HSK-A40 MT SVJPL 10	■	HSK-A40 MT SVJPR 10	■	A40	40	15	75	46				VP.. 1003..

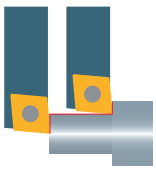




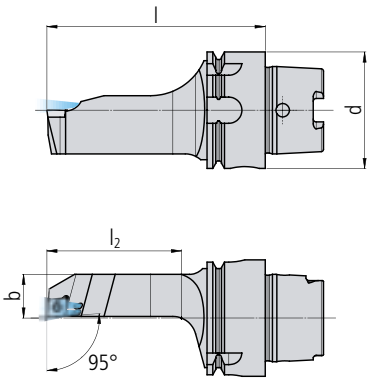


HSK-… MT SVJP… V (93°)

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2				Inserts 337…
HSK-T32 MT SVJPL 10 V	■	HSK-T32 MT SVJPR 10 V	■	T32	32	12	65	36				VP.. 1003..
HSK-T40 MT SVJPL 10 V	■	HSK-T40 MT SVJPR 10 V	■	T40	40	15	75	46				VP.. 1003..
HSK-A40 MT SVJPL 10 V	■	HSK-A40 MT SVJPR 10 V	■	A40	40	15	75	46				VP.. 1003..

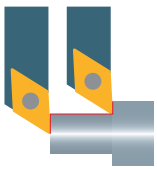




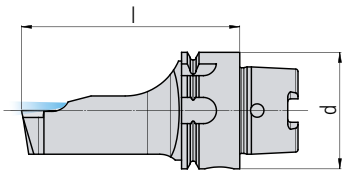


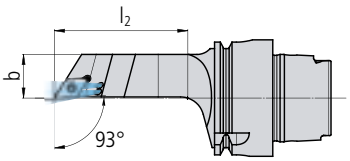
HSK-… MT SCLC… (95°)

Order designation				Form / Size	Dimensions								Inserts
L		R		HSK	d	b	l	l_2					217…
HSK-T32 MT SCLCL 06	■	HSK-T32 MT SCLCR 06	■	T32	32	15	65	35					CC.. 0602..
HSK-T32 MT SCLCL 09	■	HSK-T32 MT SCLCR 09	■	T32	32	15	65	35					CC.. 09T3..
HSK-T40 MT SCLCL 06	■	HSK-T40 MT SCLCR 06	■	T40	40	15	75	45					CC.. 0602..
HSK-T40 MT SCLCL 09	■	HSK-T40 MT SCLCR 09	■	T40	40	15	75	45					CC.. 09T3..
HSK-A40 MT SCLCL 06	■	HSK-A40 MT SCLCR 06	■	A40	40	15	75	45					CC.. 0602..
HSK-A40 MT SCLCL 09	■	HSK-A40 MT SCLCR 09	■	A40	40	15	75	45					CC.. 09T3..



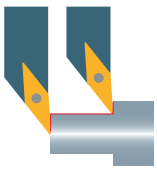




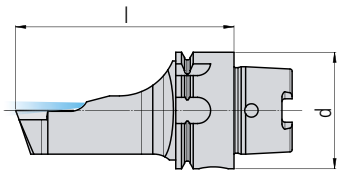


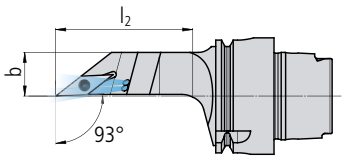
HSK-… MT SDJC… (93°)

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2					Inserts 239…
HSK-T32 MT SDJCL 07	■	HSK-T32 MT SDJCR 07	■	T32	32	12	65	36					DC.. 0702..
HSK-T32 MT SDJCL 11	■	HSK-T32 MT SDJCR 11	■	T32	32	12.5	65	37					DC.. 11T3..
HSK-T40 MT SDJCL 07	■	HSK-T40 MT SDJCR 07	■	T40	40	15	75	46					DC.. 0702..
HSK-T40 MT SDJCL 11	■	HSK-T40 MT SDJCR 11	■	T40	40	15	75	46					DC.. 11T3..
HSK-A40 MT SDJCL 07	■	HSK-A40 MT SDJCR 07	■	A40	40	15	75	46					DC.. 0702..
HSK-A40 MT SDJCL 11	■	HSK-A40 MT SDJCR 11	■	A40	40	15	75	46					DC.. 11T3..



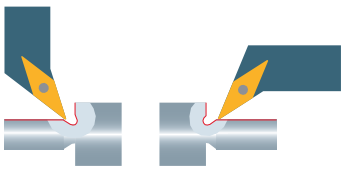




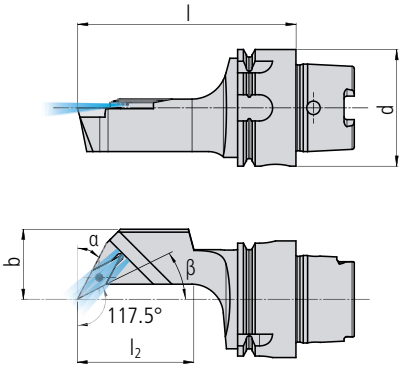


HSK-… MT SVJC… (93°)

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2					Inserts ▯295…
HSK-T32 MT SVJCL 07	■	HSK-T32 MT SVJCR 07	■	T32	32	12	65	36					VC.. 0702..
HSK-T32 MT SVJCL 11	■	HSK-T32 MT SVJCR 11	■	T32	32	12	65	36					VC.. 1103..
HSK-T40 MT SVJCL 07	■	HSK-T40 MT SVJCR 07	■	T40	40	15	75	46					VC.. 0702..
HSK-T40 MT SVJCL 11	■	HSK-T40 MT SVJCR 11	■	T40	40	15	75	46					VC.. 1103..
HSK-T40 MT SVJCL 13	■	HSK-T40 MT SVJCR 13	■	T40	40	15	75	46					VC.. 1303..
HSK-A40 MT SVJCL 07	■	HSK-A40 MT SVJCR 07	■	A40	40	15	75	46					VC.. 0702..
HSK-A40 MT SVJCL 11	■	HSK-A40 MT SVJCR 11	■	A40	40	15	75	46					VC.. 1103..
HSK-A40 MT SVJCL 13	■	HSK-A40 MT SVJCR 13	■	A40	40	15	75	46					VC.. 1303..

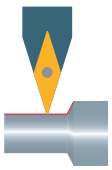




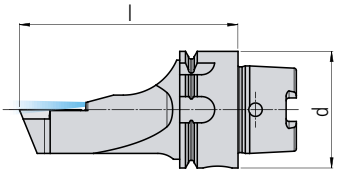


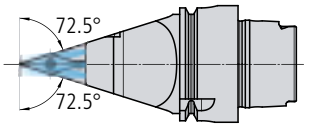
HSK-… MT SVPC… (117.5°)

Order designation				Form / Size	Dimensions								Inserts
L		R		HSK	d	b	l	l_2	α	β			295…
HSK-T40 MT SVPCL 11	■	HSK-T40 MT SVPCR 11	■	T40	40	24	75	39	27.5°	27.5°			VC..1103..
HSK-A40 MT SVPCL 11	■	HSK-A40 MT SVPCR 11	■	A40	40	24	75	39	27.5°	27.5°			VC..1103..



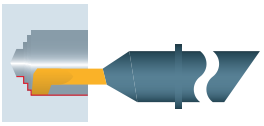




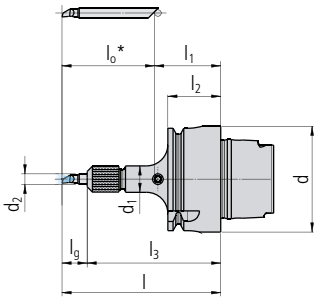


HSK-… MT SVVCN .. (72.5°)

Order designation	N	Form / Size	Dimensions		Inserts
		HSK	d	l	295…
HSK-T40 MT SVVCN 11	■	T40	40	75	VC..1103..
HSK-A40 MT SVVCN 11	■	A40	40	75	VC..1103..



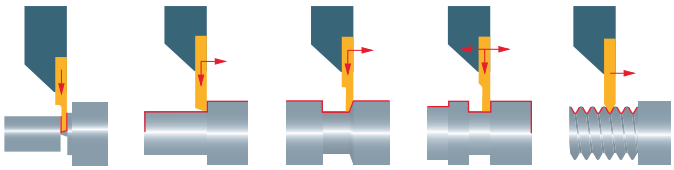




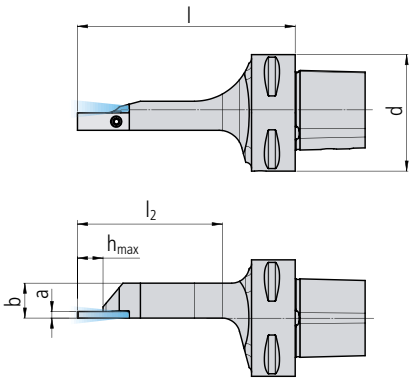
HSK-… SDA…

Order designation	N	Form / Size	Dimensions								Inserts
		HSK	d	l	l_g	l_1	l_2	l_3	d_1	d_2	367…
HSK-T32 SDA-4	■	T32	32	l_0+l_1	$l-l_3$	25	20	50.5	10	4	SD.4… / SX.4..
HSK-T32 SDA-6	■	T32	32	l_0+l_1	$l-l_3$	25	20	54.5	15	6	SD.6… / SX.6..
HSK-T32 SDA-8	■	T32	32	l_0+l_1	$l-l_3$	25	20	56.5	18	8	SD.8… / SX.8..
HSK-T40 SDA-4	■	T40	40	l_0+l_1	$l-l_3$	25	20	50.5	10	4	SD.4… / SX.4..
HSK-T40 SDA-6	■	T40	40	l_0+l_1	$l-l_3$	25	20	54.5	15	6	SD.6… / SX.6..
HSK-T40 SDA-8	■	T40	40	l_0+l_1	$l-l_3$	25	20	56.5	18	8	SD.8… / SX.8..
HSK-A40 SDA-4	■	A40	40	l_0+l_1	$l-l_3$	25	20	50.5	10	4	SD.4… / SX.4..
HSK-A40 SDA-6	■	A40	40	l_0+l_1	$l-l_3$	25	20	54.5	15	6	SD.6… / SX.6..
HSK-A40 SDA-8	■	A40	40	l_0+l_1	$l-l_3$	25	20	56.5	18	8	SD.8… / SX.8..

*** Attention**
As the cutting edge length "l_0" is variable, the projection length "l" may exceed the maximum permitted length under certain circumstances. It is therefore recommended to check this length to avoid collisions in the tool magazine during tool change.



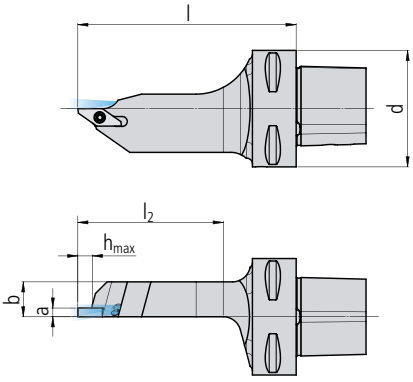




PSC 40 MT CUT 500 .

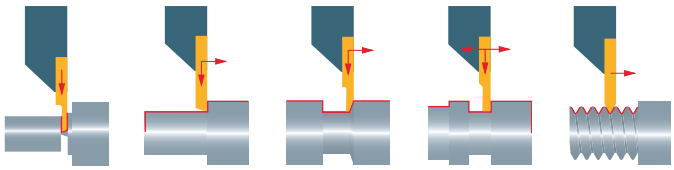
Order designation L		Order designation R		Form / Size PSC	Dimensions d	b	l	l_2	a			h_{max}	Inserts 43…
PSC 40 MT CUT 500 L	■	PSC 40 MT CUT 500 R	■	40	40	12	75	45	2			8.5	50.



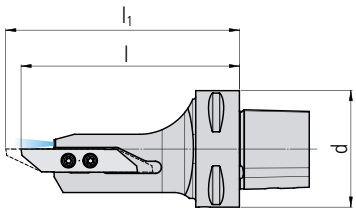


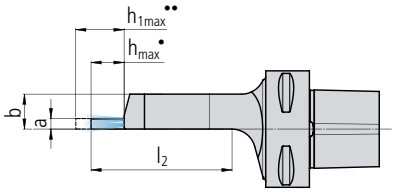
PSC 40 MT CUT 1600 .

Order designation L		Order designation R		Form / Size PSC	Dimensions d	b	l	l_2	a			h_{max}	Inserts 51…
PSC 40 MT CUT 1600 L	■	PSC 40 MT CUT 1600 R	■	40	40	12	75	45	3			5	16..







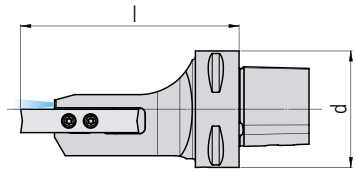


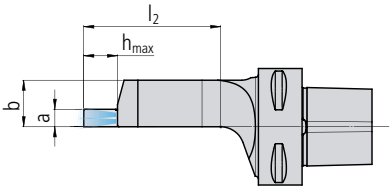
PSC 40 MT CUT 3000 .

Order designation L		Order designation R		Form / Size PSC	Dimensions d	b	l	l_1	l_2	a	h_{max}	$h1_{max}$	Inserts 123…
PSC 40 MT CUT 3000 L	■	PSC 40 MT CUT 3000 R	■	40	40	12	75	80	45	3.5	10	16	30..

• Short insert; •• Long insert

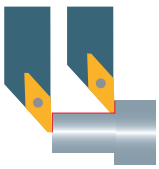




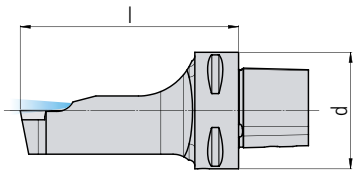


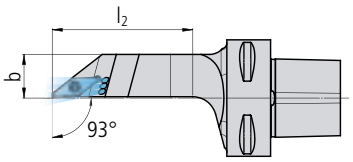
PSC 40 MT CUT 3600 .

Order designation L		Order designation R		Form / Size PSC	Dimensions d	b	l	l_2	a			h_{max}	Inserts 183…
PSC 40 MT CUT 3600 L	■	PSC 40 MT CUT 3600 R	■	40	40	16	75	44	6			10	36..





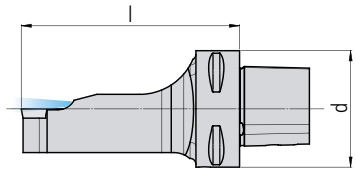


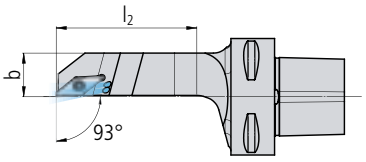


PSC 40 MT SVJP… (93°)

Order designation				Form / Size	Dimensions								Inserts
L		R		PSC	d	b	l	l_2					337…
PSC 40 MT SVJPL 10	■	PSC 40 MT SVJPR 10	■	40	40	15	75	50					VP.. 1003..





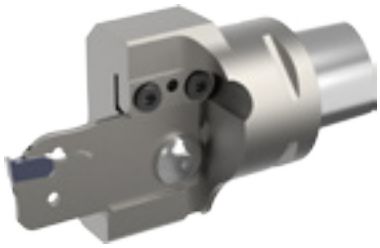


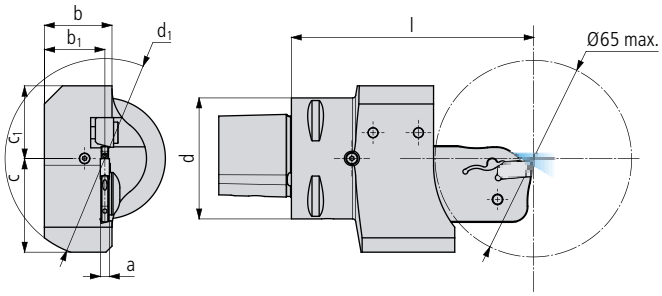
PSC 40 MT SVJP… V (93°)

Order designation				Form / Size	Dimensions								Inserts
L		R		PSC	d	b	l	l_2					337…
PSC 40 MT SVJPL 10 V	■	PSC 40 MT SVJPR 10 V	■	40	40	15	75	50					VP.. 1003..



PSC / Capto®

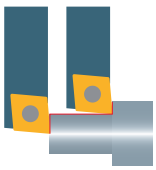




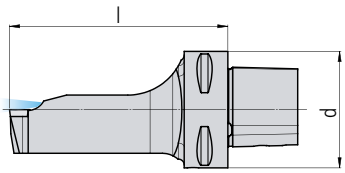
PSC 40 MT 4000 …

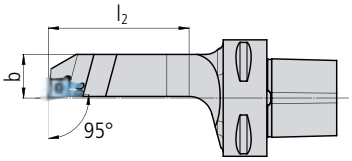
Order designation				Form / Size	Dimensions								Inserts
L		R		PSC	d	d_1	a	l	b	b_1	c	c_1	201…
PSC 40 MT 4000 26 L	■	PSC 40 MT 4000 26 R	■	40	40	66	3	80	22.4	20	31	24	40…

Scope of delivery: tool including cut off blade and assembly key



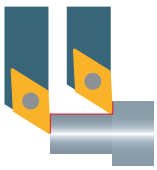




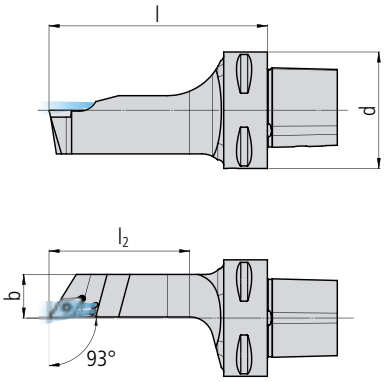


PSC 40 MT SCLC… (95°)

Order designation				Form / Size	Dimensions								Inserts
L		R		PSC	d	b	l	l_2					217…
PSC 40 MT SCLCL 06	■	PSC 40 MT SCLCR 06	■	40	40	15	75	43					CC.. 0602..
PSC 40 MT SCLCL 09	■	PSC 40 MT SCLCR 09	■	40	40	15	75	43					CC.. 09T3..

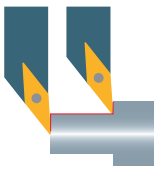




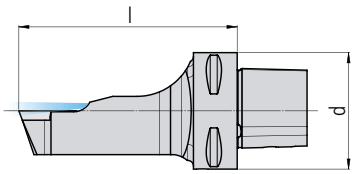


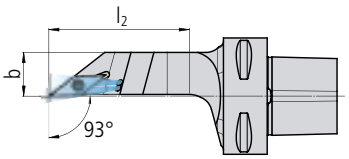
PSC 40 MT SDJC… (93°)

Order designation				Form / Size	Dimensions								Inserts
L		R		PSC	d	b	l	l_2					239…
PSC 40 MT SDJCL 07	■	PSC 40 MT SDJCR 07	■	40	40	15	75	43					DC.. 0702..
PSC 40 MT SDJCL 11	■	PSC 40 MT SDJCR 11	■	40	40	15	75	43					DC.. 11T3..







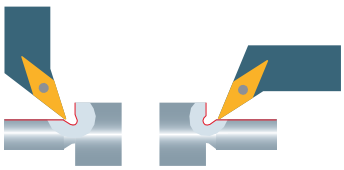


PSC 40 MT SVJC… (93°)

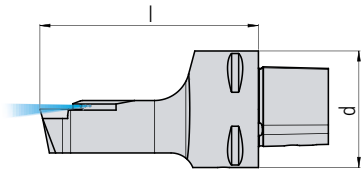
Order designation				Form / Size	Dimensions								Inserts
L		R		PSC	d	b	l	l_2					295…
PSC 40 MT SVJCL 07	■	PSC 40 MT SVJCR 07	■	40	40	15	75	45					VC.. 0702..
PSC 40 MT SVJCL 11	■	PSC 40 MT SVJCR 11	■	40	40	15	75	45					VC.. 1103..
PSC 40 MT SVJCL 13	■	PSC 40 MT SVJCR 13	■	40	40	15	75	45					VC.. 1303..

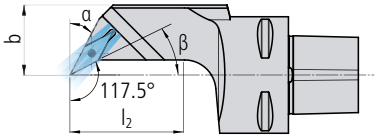
UTILIS multidec® swiss type tools

Legend 6…



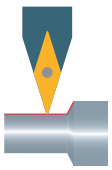




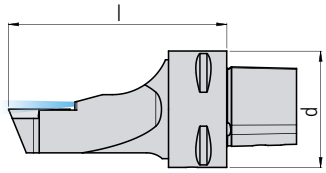


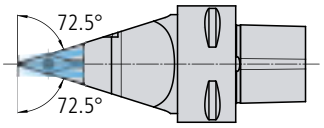
PSC 40 MT SVPC… (117.5°)

Order designation				Form / Size	Dimensions								Inserts
L		R		PSC	d	b	l	l_2	α	β			295…
PSC 40 MT SVPCL 11	■	PSC 40 MT SVPCR 11	■	40	40	24	75	39	27.5°	27.5°			VC..1103..



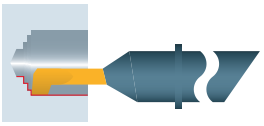




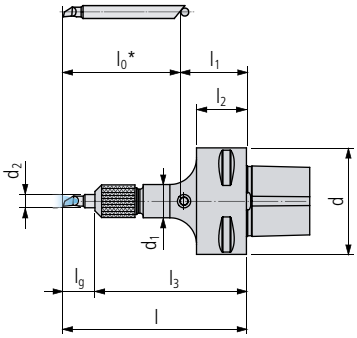


PSC 40 MT SVVCN .. (72.5°)

Order designation		Form / Size	Dimensions							Inserts
N		PSC	d	l						295…
PSC 40 MT SVVCN 11	■	40	40	75						VC..1103..



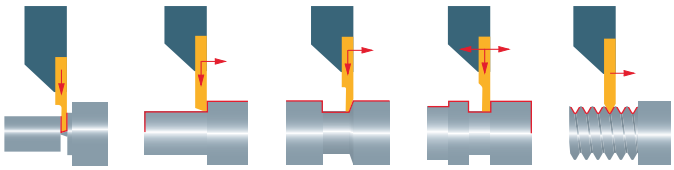




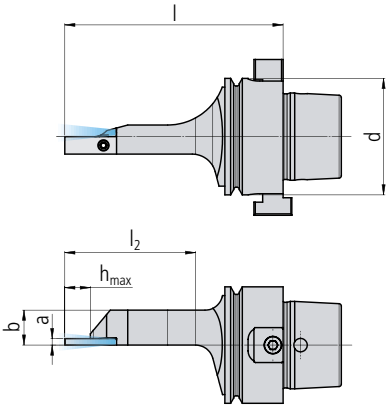
PSC 40 SDA…

Order designation	N	Form / Size	Dimensions								Inserts
		PSC	d	l	l_g	l_1	l_2	l_3	d_1	d_2	367…
PSC 40 SDA-4	■	40	40	l_0+l_1	$l-l_3$	25	20	50.5	10	4	SD.4… / SX.4..
PSC 40 SDA-6	■	40	40	l_0+l_1	$l-l_3$	25	20	54.5	15	6	SD.6… / SX.6..
PSC 40 SDA-8	■	40	40	l_0+l_1	$l-l_3$	25	20	56.5	18	8	SD.8… / SX.8..

*** Attention**
As the cutting edge length "l_0" is variable, the projection length "l" may exceed the maximum permitted length under certain circumstances. It is therefore recommended to check this length to avoid collisions in the tool magazine during tool change.



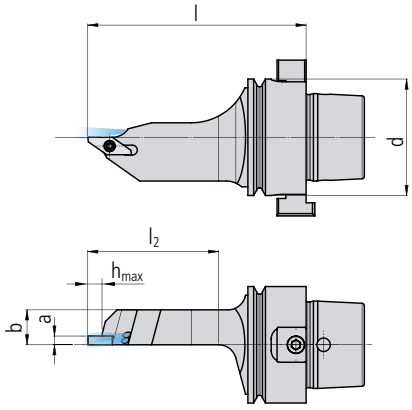




HSK-E40 MT CUT 500 . WM

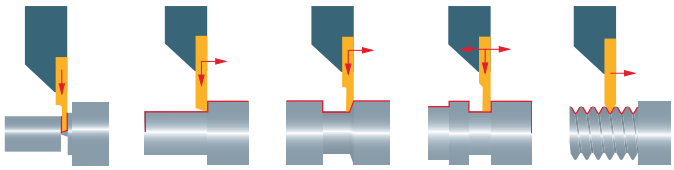
Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2	a			h_{max}	Inserts 43…
HSK-E40 MT CUT 500 L WM	■	HSK-E40 MT CUT 500 R WM	■	E40	40	12	75	45	2			8.5	50.



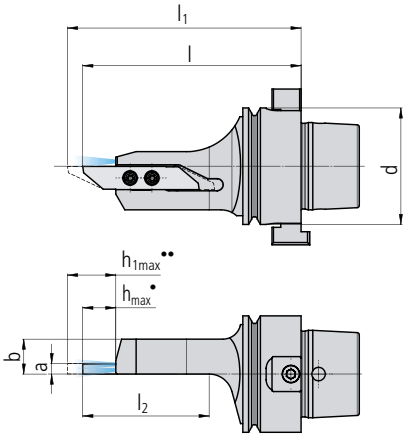


HSK-E40 MT CUT 1600 . WM

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2	a			h_{max}	Inserts 51…
HSK-E40 MT CUT 1600 L WM	■	HSK-E40 MT CUT 1600 R WM	■	E40	40	12	75	45	3			5	16..





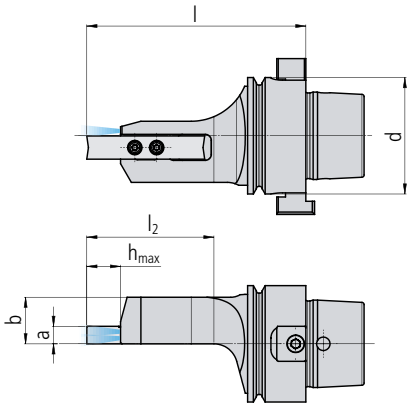


HSK-E40 MT CUT 3000 . WM

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_1	l_2	a	h_{max}	$h1_{max}$	Inserts 123…
HSK-E40 MT CUT 3000 L WM	■	HSK-E40 MT CUT 3000 R WM	■	E40	40	12	75	80	43	3.5	10	16	30..

• Short insert; •• Long insert



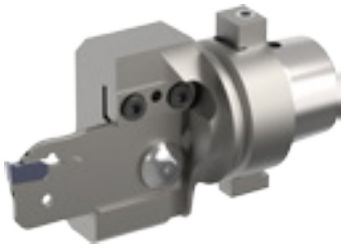


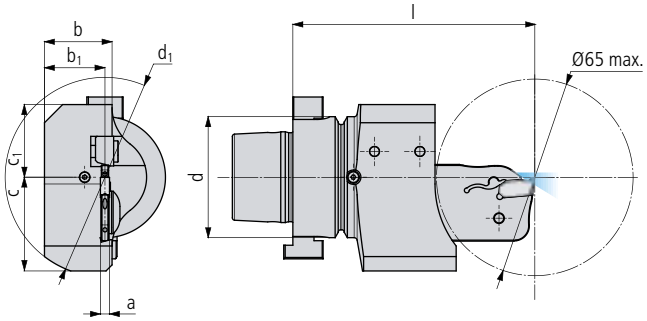
HSK-E40 MT CUT 3600 . WM

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2	a			h_{max}	Inserts 183…
HSK-E40 MT CUT 3600 L WM	■	HSK-E40 MT CUT 3600 R WM	■	E40	40	16	75	44	6			10	36..



HSK – Form E
(for Willemin-Macodel machines)



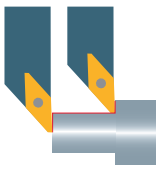


HSK-E40 MT 4000 … WM

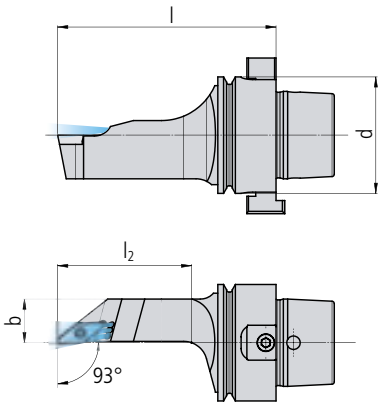
Order designation		Form / Size	Dimensions								Inserts
L	R	HSK	d	d_1	a	l	b	b_1	c	c_1	201…
HSK-E40 MT 4000 26 L WM ■	HSK-E40 MT 4000 26 R WM ■	E40	40	66	3	80	22.4	20	31	24	40…

Scope of delivery: tool including cut off blade and assembly key

Legend 6…



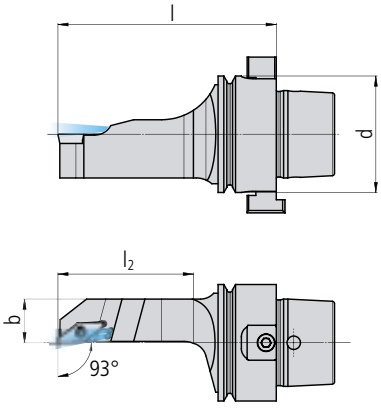




HSK-E40 MT SVJP… WM (93°)

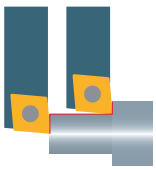
Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2				Inserts 337…
HSK-E40 MT SVJPL 10 WM	■	HSK-E40 MT SVJPR 10 WM	■	E40	40	15	75	46				VP.. 1003..



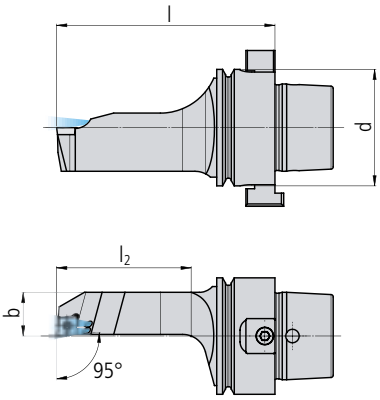


HSK-E40 MT SVJP… V WM (93°)

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2				Inserts 337…
HSK-E40 MT SVJPL 10 V WM	■	HSK-E40 MT SVJPR 10 V WM	■	E40	40	15	75	46				VP.. 1003..

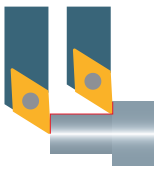




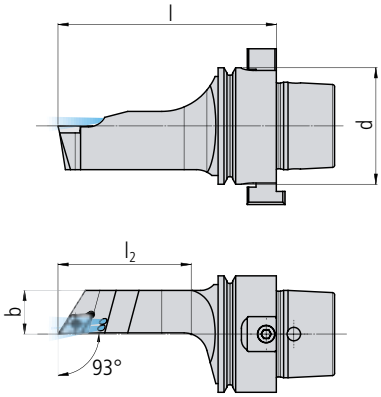


HSK-E40 MT SCLC… WM (95°)

Order designation				Form / Size	Dimensions								Inserts
L		R		HSK	d	b	l	l_2					217…
HSK-E40 MT SCLCL 06 WM	■	HSK-E40 MT SCLCR 06 WM	■	E40	40	15	75	47					CC.. 0602..
HSK-E40 MT SCLCL 09 WM	■	HSK-E40 MT SCLCR 09 WM	■	E40	40	15	75	47					CC.. 09T3..

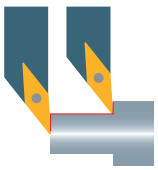




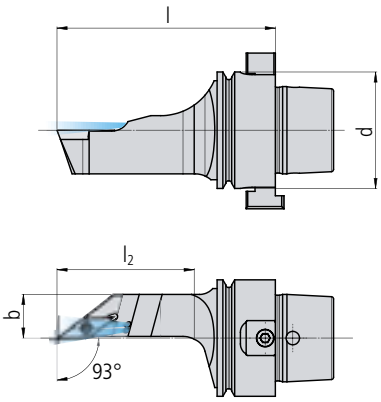


HSK-E40 MT SDJC… WM (93°)

Order designation L		Order designation R		Form / Size HSK	Dimensions d	b	l	l_2					Inserts 239…
HSK-E40 MT SDJCL 07 WM	■	HSK-E40 MT SDJCR 07 WM	■	E40	40	15	75	46					DC.. 0702..
HSK-E40 MT SDJCL 11 WM	■	HSK-E40 MT SDJCR 11 WM	■	E40	40	15	75	46					DC.. 11T3..

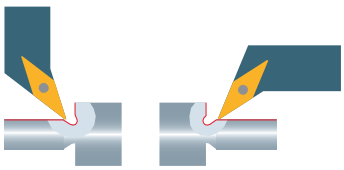




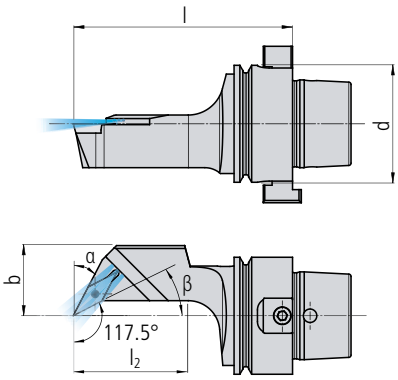


HSK-E40 MT SVJC… WM (93°)

Order designation				Form / Size	Dimensions								Inserts
L		R		HSK	d	b	l	l_2					295…
HSK-E40 MT SVJCL 07 WM	■	HSK-E40 MT SVJCR 07 WM	■	E40	40	15	75	45					VC.. 0702..
HSK-E40 MT SVJCL 11 WM	■	HSK-E40 MT SVJCR 11 WM	■	E40	40	15	75	45					VC.. 1103..
HSK-E40 MT SVJCL 13 WM	■	HSK-E40 MT SVJCR 13 WM	■	E40	40	15	75	45					VC.. 1303..

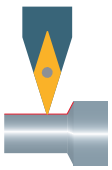




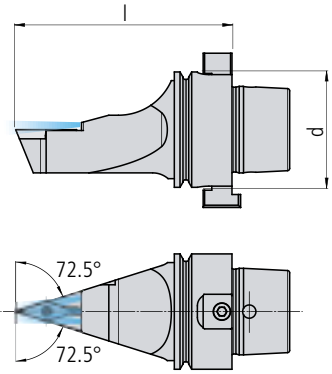


HSK-E40 MT SVPC… WM (117.5°)

Order designation				Form / Size	Dimensions								Inserts
L		R		HSK	d	b	l	l_2	α	β			295…
HSK-E40 MT SVPCL 11 WM	■	HSK-E40 MT SVPCR 11 WM	■	E40	40	24	75	39	27.5°	27.5°			VC..1103..

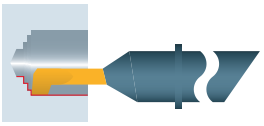




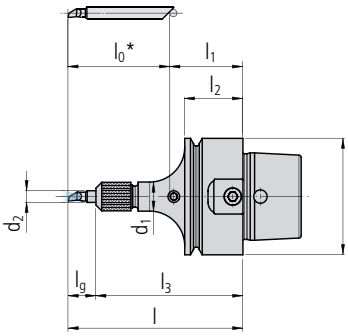


HSK-E40 MT SVVCN … WM (72.5°)

Order designation	Form / Size	Dimensions		Inserts
N	HSK	d	l	295…
HSK-E40 MT SVVCN 11 WM ■	T40	40	75	VC..1103..







HSK-E40 MT SDA… WM

Order designation	N	Form / Size	Dimensions								Inserts
		HSK	d	l	l_g	l_1	l_2	l_3	d_1	d_2	367…
HSK-E40 MT SDA-4 WM	■	E40	40	l_0+l_1	$l-l_3$	25	20	50.5	10	4	SD.4… / SX.4..
HSK-E40 MT SDA-6 WM	■	E40	40	l_0+l_1	$l-l_3$	25	20	54.5	15	6	SD.6… / SX.6..
HSK-E40 MT SDA-8 WM	■	E40	40	l_0+l_1	$l-l_3$	25	20	56.5	18	8	SD.8… / SX.8..

*** Attention**
As the cutting edge length "l_0" is variable, the projection length "l" may exceed the maximum permitted length under certain circumstances. It is therefore recommended to check this length to avoid collisions in the tool magazine during tool change.

For holders (CUT/SV/SC/SD) OD turning

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2 × 5.5 T06	MSP 20055 T06	■	… SV.. 07
		M2.5 × 6 T08	MSP 25060 T08	■	… CUT 500 … CUT 1600 … SC.. 06 … SD.. 07 … SV.P 10 … SV..11
		M3 × 9 T08	MSP 30090 T08	■	… CUT 3000 … SV..13
		M3 × 11 TP09	MSP 30110 TP09	■	… CUT 3600
		M3.5 × 11 T15	MSP 35110 T15	■	… SC.. 09 … SD.. 11

For holders (SDA) ID turning

Illustration	Description	Dimensions	Order designation		Holders	Inserts
	Nut	M8 × 0.5	MSP SDA 4M	■	… SDA-4.	
		M12 × 0.6	MSP SDA 6M	■	… SDA-6.	
		M14 × 0.75	MSP SDA 8M	■	… SDA-8.	
	Aligning device		SDA 4X	■	… SDA-4.	
			SDA 6X	■	… SDA-6.	
			SDA 8X	■	… SDA-8.	
	Retaining ring		MSP SDA 4S	■		SD. 4… SX. 4…
			MSP SDA 6S	■		SD. 6… SX. 6…
			MSP SDA 8S	■		SD. 8… SX. 8…

TORX screwdriver ..... 703…

Legend ..... 6…

Replacement and spare parts — *multidec®-MULTITASK*

Illustration	Description	Dimensions	Order designation		Holders
	Cut-off blade including screw plug with seal ring		MSP 4000 26 GS-3 SK	■	…4000 26..
	Screw plug with seal ring	M4 / Torx 15	MSP 4000 M4 KVS	■	MSP 4000 26 GS-3 SK
	Installation wrench		MSP 4000 2-3 MS	■	MSP 4000 26 GS-3 SK
	Clamping shim for cut-off blade (right-hand holder)		MSP 4000 SK-R	■	…4000 26 R
	Clamping shim for cut-off blade (left-hand holder)		MSP 4000 SK-L	■	…4000 26 L
	Cylinder head screw	M4 × 12	MSP 40120 ZKS IB3	■	MSP 4000 SK-.
	Seal ring (O-ring)		MSP OR 8.00x1.50	■	…4000 26..

TORX screwdriver ..... 703…

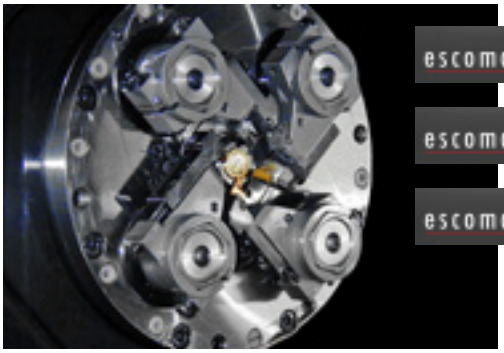
UTILIS multidec® swiss type tools

Legend ..... 6…

ESCOMATIC machines are known as versatile and flexible automatic turning centers for the low cost manufacture of complex work pieces in small and large batch sizes. Material is fed from the coil with a straightening unit or from a bar loader. UTILIS has developed a range of insert holders for various machine types.

Advantages:
– Elaborate program of toolholders, available from stock
– Nickelized toolholders with heat-treatable steel
– Utilisation of high quality multidec® inserts
– Quick change of inserts in the machine or presetting outside of the machine
– Significant reduction of machine downtimes



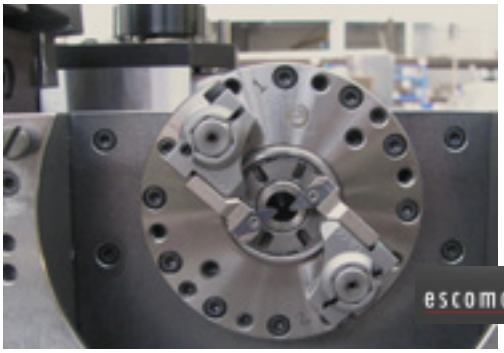


(Newmach)



For the rotating tool heads of machine types ECO8, EC12, Newmach NM 64X, NM6 FLEXI, NM 6 TWIN and NM8 FLEXI, the program includes tool holders which are suitable for multidec®-CUT, multidec®-TOP and ISO standard inserts.





ESCO offers a modification of the existing chuck on the D2, D4 and D5 machine types, where the basic holders for the cranks can be replaced with insert holders. Following this modification, holders for UTILIS inserts can then be attached.
Important: In order to guarantee perfect functionality, modifications may only made by ESCO. UTILIS only supplies the holders and the corresponding inserts.

The following machine types can be modified:
D2, D2 Flex Speed, D5 Flex Speed, D2-CNC, D2-CNC-UP, D4, D5, D5-CNC, D5-Twin and D5-Ultra





For the machine type D6, we recommend a new exchange kit. This new holder and insert system will replace the old system with monobloc tools.

Overview – multidec®-ESCOMATIC

Technical information 9



Supports

ESCO … 620



Holders

ESCO … CUT 1600 . 621

ESCO … DC … 622

ESCO … VC … 623

ESCO … VC … N 623

ESCO … VB … 624

ESCO … VB … N 624

ESCO … VP … 625



Replacement and spare parts 625



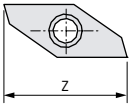
ESCO …

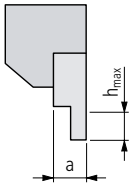
Order designation		Machine type	Holders 🗋621…
ESCO 503-M086	■	EC 08	ESCO 503-…
ESCO 403-M051	■	EC 12	ESCO 403-…
ESCO 603-M027	■	NM 8 …	ESCO 503-…
ESCO 303-M627	■	NM 6 …	ESCO 303-…
ESCO D6-9-38-B	■	D6	ESCO D6-12-…
ESCO D2-R-M1414-2	■	D2, D4, D5	ESCO D2-…





ESCO … CUT 1600 .

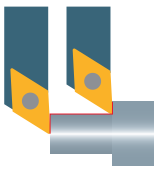




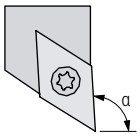
Order designation	Execution L	Execution N	Execution R	Machine type	Dimensions z	Dimensions h_{max}	Dimensions a	Inserts 51…
ESCO 503-0679 CUT 1600 R			■	EC 08 / NM8 FLEXI	16	5.5	3	16…
ESCO 503-0940 CUT 1600 R			■	EC 08 / NM8 FLEXI	15	5	3	16…
ESCO 503-0403 CUT 1600 R*			■	EC 08 / NM8 FLEXI	13–14	4–4.5	3	16…
ESCO 403-0875 CUT 1600 R*			■	EC 12	13–14	4–4.5	3	16…
ESCO 303-1711 CUT 1600 R			■	NM 64X / NM6 FLEXI / NM 6 Twin	15	5	3	16…
ESCO 303-2126 CUT 1600 R*			■	NM 64X / NM6 FLEXI / NM 6 Twin	14–15	4.5–5	3	16…
ESCO 303-2125 CUT 1600 R*			■	NM 64X / NM6 FLEXI / NM 6 Twin	14.5–15.5	4.75–5.25	3	16…
ESCO 303-1657 CUT 1600 R*			■	NM 64X / NM6 FLEXI / NM 6 Twin	13–14	4–4.5	3	16…
ESCO D6-12-5451 CUT 1600 R			■	D6	15	5	3	16…
ESCO D6-12-5452 CUT 1600 L	■			D6	15	5	3	16…
ESCO D6-12-5451-1 CUT 1600 R			■	D6	15	5	4	1694…**
ESCO D6-12-5452-1 CUT 1600 L	■			D6	15	5	4	1694…**
ESCO D2-R-6353-1 CUT 1600 R			■	D2, D4, D5	15	5	3	16…
ESCO D2-R-6590-1 CUT 1600 L	■			D2, D4, D5	15	5	3	16…
ESCO D2-R-6353 CUT 1600 R*			■	D2, D4, D5	13–14	4–4.5	3	16…
ESCO D2-R-6590 CUT 1600 L*	■			D2, D4, D5	13–14	4–4.5	3	16…

** Special inserts – multidec4you® 636…

*** Attention**
The total length (z) of the CUT 16… cutting edge is 15 mm. If this length is undershot or exceeded to a significant extent, the travel distance of the holder may no longer be sufficient. In this case, a change to another holder must take place.

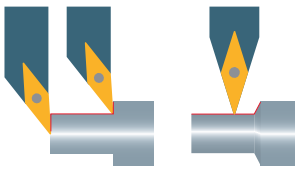




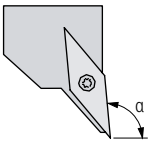


ESCO … DC …

Order designation	Execution L	Execution N	Execution R	Machine type	Dimensions α			Inserts 239…
ESCO 503-0333 DC 0702 R			■	EC 08 / NM8 FLEXI	92°			DC..0702..
ESCO 503-0629 DC 0702 L	■			EC 08 / NM8 FLEXI	92°			DC..0702..
ESCO 403-0653 DC 0702 R			■	EC 12	92°			DC..0702..
ESCO 303-1760 DC 0702 R			■	NM 64X / NM6 FLEXI / NM 6 Twin	92°			DC..0702..
ESCO D6-12-5458 DC 0702 R			■	D6	92°			DC..0702..
ESCO D6-12-5457 DC 0702 L	■			D6	92°			DC..0702..
ESCO D2-R-6592 DC 0702 R			■	D2, D4, D5	92°			DC..0702..



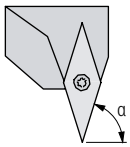




ESCO … VC …

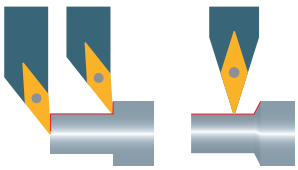
Order designation	Execution L	Execution N	Execution R	Machine type	Dimensions α			Inserts 295…
ESCO 503-0262 VC 0702 R			■	EC 08 / NM8 FLEXI	92°			VC..0702..(R<0.1)
ESCO 503-0483 VC 0702 R			■	EC 08 / NM8 FLEXI	92°			VC..0702..(R≥0.1)
ESCO 503-0583 VC 0702 L	■			EC 08 / NM8 FLEXI	92°			VC..0702..(R≥0.1)
ESCO 503-0404 VC 1103 R			■	EC 08 / NM8 FLEXI	92°			VC..1103..
ESCO 303-2127 VC 0702 L	■			NM 64X / NM6 FLEXI / NM 6 Twin	92°			VC..0702..(R<0.03)
ESCO 303-1637 VC 0702 R			■	NM 64X / NM6 FLEXI / NM 6 Twin	92°			VC..0702..(R<0.03)
ESCO 303-1640 VC 0702 R			■	NM 64X / NM6 FLEXI / NM 6 Twin	92°			VC..0702..(R≥0.03)
ESCO D6-12-5455 VC 1103 R			■	D6	92°			VC..1103..
ESCO D6-12-5454 VC 1103 L	■			D6	92°			VC..1103..
ESCO D2-R-6588 VC 0702 R			■	D2, D4, D5	92°			VC..0702..(R<0.1)
ESCO D2-R-6588-1 VC 0702 R			■	D2, D4, D5	92°			VC..0702..(R≥0.1)



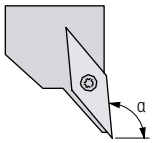


ESCO … VC … N

Order designation	Execution L	Execution N	Execution R	Machine type	Dimensions α			Inserts 295…
ESCO 503-0482 VC 0702 N		■		EC 08 / NM8 FLEXI	72.5°			VC..0702..
ESCO 303-1642 VC 0702 N		■		NM 64X / NM6 FLEXI / NM 6 Twin	72.5°			VC..0702..

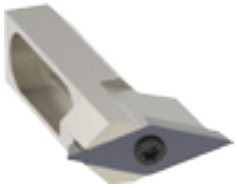


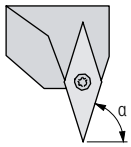




ESCO … VB …

Order designation	Execution L	Execution N	Execution R	Machine type	Dimensions α			Inserts
ESCO 403-0674 VB 1103 R			■	EC 12	92°			VB..1103
ESCO 403-0696 VB 1103 L	■			EC 12	92°			VB..1103





ESCO … VB … N

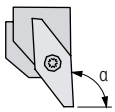
Order designation	Execution L	Execution N	Execution R	Machine type	Dimensions α			Inserts
ESCO 403-0679 VB 1103 N		■		EC 12	72.5°			VB..1103

Holders

multidec®-ESCOMATIC







ESCO … VP …

Order designation	Execution L	Execution N	Execution R	Machine type	Dimensions α	Inserts 337…
ESCO 503-0335 VP 1003 R			■	EC 08 / NM8 FLEXI	92°	VP..1003..
ESCO 403-0293 VP 1003 R			■	EC 12	90°	VP..1003..
ESCO 403-0594 VP 1003 R			■	EC 12	92°	VP..1003..
ESCO 403-0652 VP 1003 L	■			EC 12	92°	VP..1003..
ESCO D6-12-5456 VP 1003 R			■	D6	92°	VP..1003..
ESCO D6-12-5453 VP 1003 L	■			D6	92°	VP..1003..

Replacement and spare parts

multidec®-ESCOMATIC

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2 × 5.5 T06	MSP 20055 T06	■	ESCO… VC 0702 .
		M2.5 × 6 T08	MSP 25060 T08	■	ESCO… CUT 1600 . ESCO… VP 1003 . ESCO… VB 1103 . ESCO… VC 1103 . ESCO… DC 0702 .
	Special allen head screw	M4 × 12	ESCO D6-4-409 IB3	■	ESCO D6-9-38-B
	Socket head screw	M4 × 10	MSP 40100 ZKS IB3	■	ESCO D6-12…
		M4 × 12	MSP 40120 ZKS IB3	■	
	Set screw	M3 × 25	MSP 30250 GST IB1.5	■	ESCO D6-9-38-B
	Allen key	SW 1.5	MSP IB1.5	■	MSP 30… IB1.5
		SW 3	MSP IB3	■	MSP 40… IB3

multidec®-TORNOS DECO

Cut-off operation near the spindle or the sub-spindle is frequently difficult with standard-tool holders. The cutting edge is to far away or the tool holder collides with the spindle. Adapted special tool holders are the solution in this case.
This program proposes to use multidec®-CUT and -TOP inserts, adapted tool holders and modules for machines of DECO 7, DECO 10, EvoDECO 10, DECO 13, EvoDECO 16, DECO 20, DECO 26 and EvoDECO 32.

TORNOS



Advantages:
– Adapted tool-holders with internal cooling, nickel plated and made from heat treated steel, available from stock
– Increased stability by direct attachment of tool holders on the machine base plate
– Cutting edge near the spindle/sub-spindle
– Cut-off of small parts without problems
– Utilisation of high quality multidec®-CUT inserts





Overview – multidec®-TORNOS DECO

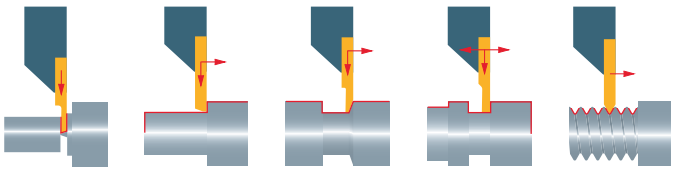
Technical information	9



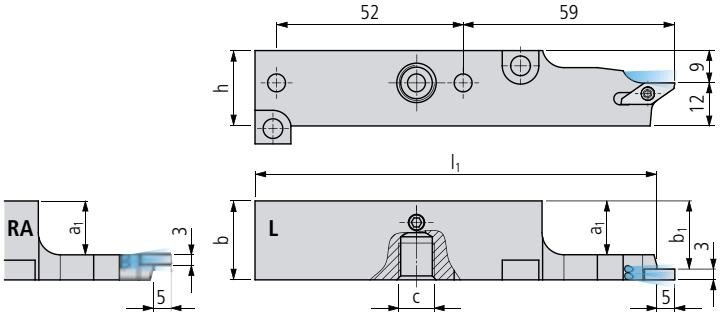
Holders	
DECO… 7/10 CUT 1600 …	628
DECO… 7/10 CUT 3000 …	628
DECO… 13/16 CUT 3000 …	629
DECO… 20/26/32 CUT 3000 …	629
DECO… 7/10 SVJP … (93°)	630
DECO… 7/10 SVJP … V … (93°)	630
DECO… 13/16 SDJC … (93°)	631
DECO… 13/16 SVJP … (93°)	632
DECO… 13/16 SVJP … V … (93°)	632
DECO… 20/26/32 SVJP … (93°)	633
DECO… 20/26/32 SVJP … V … (93°)	633



Replacement and spare parts	634



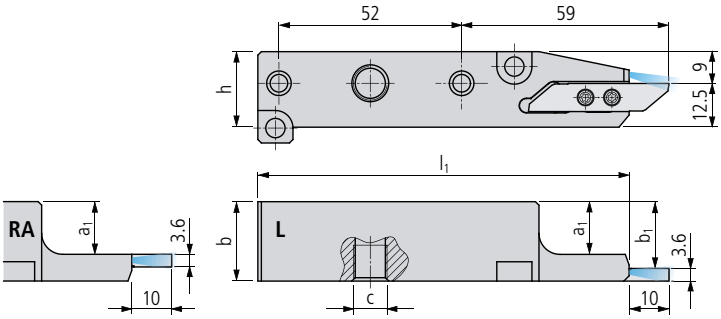




DECO… 7/10 CUT 1600 …

Order designation L	Order designation R	Dimensions h	b	l_1	a_1	b_1	c	Machine type	Inserts 51…
DECO/EVO 7/10 CUT 1600 L IC ■	DECO/EVO 7/10 CUT 1600 RA IC ■	21	22	112	15	19	G⅛	DECO 7/10, EvoDECO 10	16…

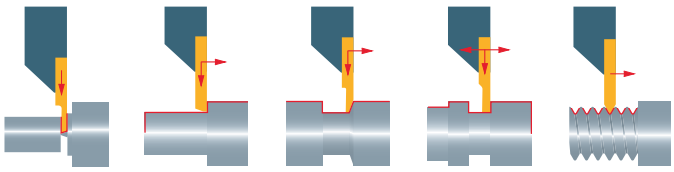




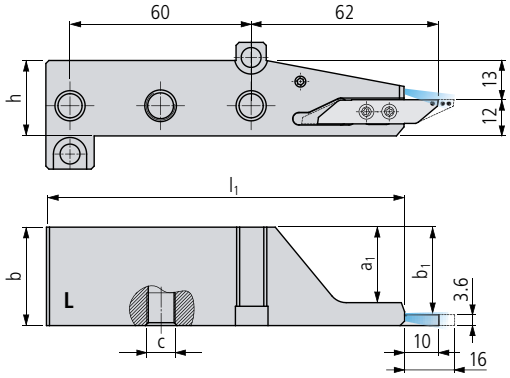
DECO… 7/10 CUT 3000 …

Order designation L	Order designation R	Dimensions h	b	l_1	a_1	b_1	c	Machine type	Inserts 123…
DECO/EVO 7/10 CUT 3000 L IC ■	DECO/EVO 7/10 CUT 3000 RA IC ■	21.5	22.6	105.6	15	19	G⅛	DECO 7/10, EvoDECO 10	30 …

• Short insert; •• Long insert



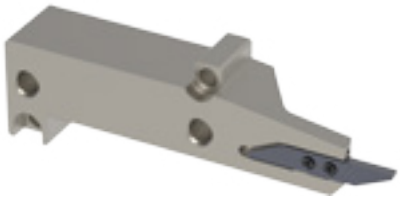


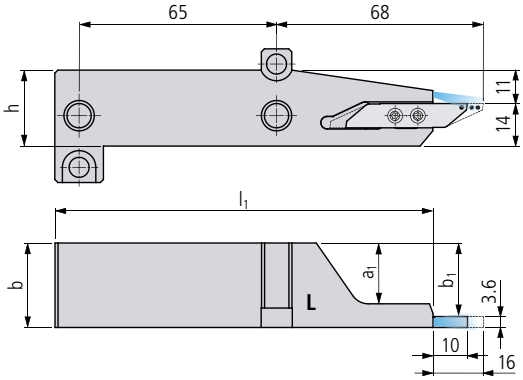


DECO… 13/16 CUT 3000 …

Order designation				Dimensions						Machine type	Inserts
L		R		h	b	l_1	a_1	b_1	c		123…
DECO/EVO 13/16 CUT 3000 L IC	■	DECO/EVO 13/16 CUT 3000 RA IC	■	25	32.6	118.6	25	29	G⅛	DECO 13, EvoDECO 16	30…

• Short insert; •• Long insert

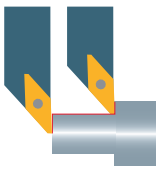




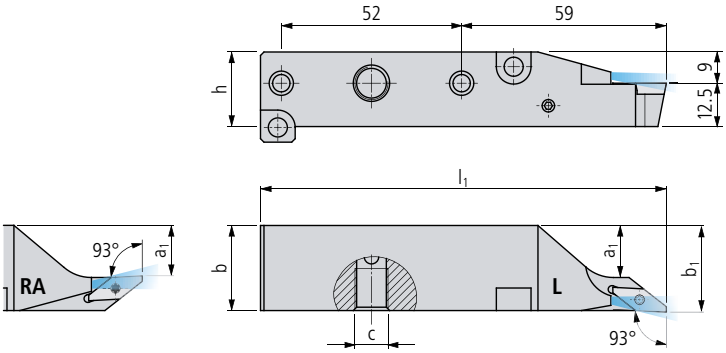
DECO… 20/26/32 CUT 3000 …

Order designation				Dimensions					Machine type	Inserts
L		R		h	b	l_1	a_1	b_1		123…
DECO/EVO 20/26/32 CUT 3000 L IC	■	DECO/EVO 20/26/32 CUT 3000 RA IC	■	25	27.8	124.4	20	24.2	DECO 20/26, Evo DECO 32	30…

• Short insert; •• Long insert



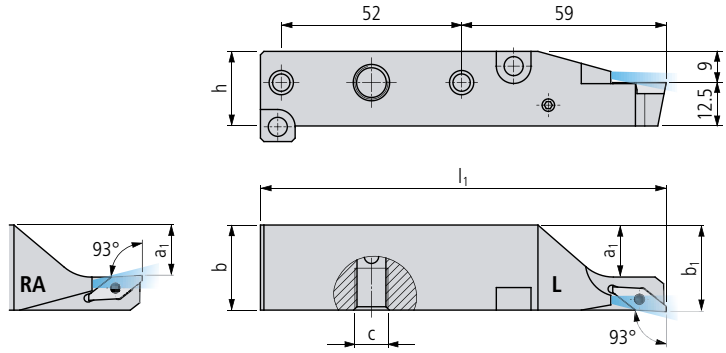




DECO… 7/10 SVJP … (93°)

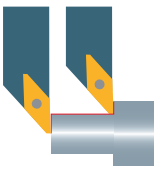
Order designation			Dimensions						Machine type	Inserts
L		R	h	b	l_1	a_1	b_1	c		337…
DECO/EVO 7/10 SVJP L IC	■	DECO/EVO 7/10 SVJP RA IC	21.5	24.5	117	15	25	G⅛	DECO 7/10, EvoDECO 10	VP 1003..



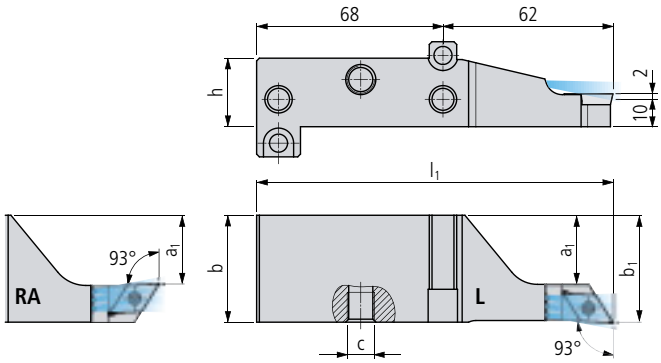


DECO… 7/10 SVJP … V … (93°)

Order designation			Dimensions						Machine type	Inserts
L		R	h	b	l_1	a_1	b_1	c		337…
DECO/EVO 7/10 SVJP L V IC	■	DECO/EVO 7/10 SVJP RA V IC	21.5	24.5	117	15	25	G⅛	DECO 7/10, EvoDECO 10	VP 1003..

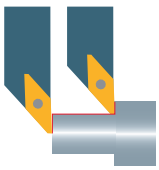


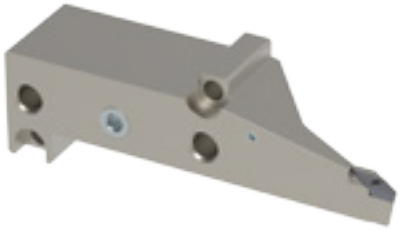


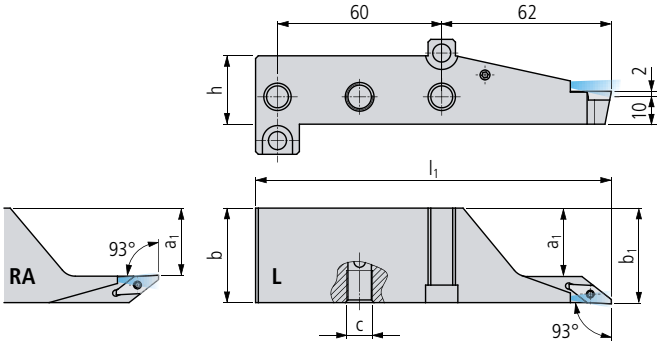


DECO… 13/16 SDJC … (93°)

Order designation				Dimensions						Machine type	Inserts
L		R		h	b	l_1	a_1	b_1	c		239…
DECO/EVO 13/16 SDJC 11 L IC	■	DECO/EVO 13/16 SDJC 11 RA IC	■	25	39	130	25	39	G⅛	DECO 13, EvoDECO 16	DC.. 11T3..



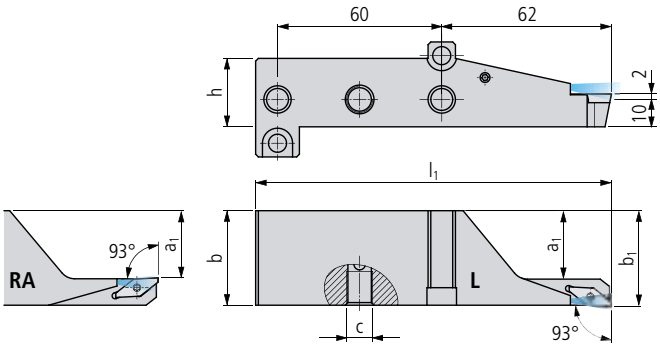




DECO… 13/16 SVJP … (93°)

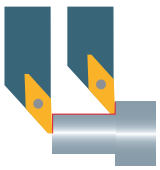
Order designation				Dimensions						Machine type	Inserts
L		R		h	b	l_1	a_1	b_1	c		337…
DECO/EVO 13/16 SVJP L IC	■	DECO/EVO 13/16 SVJP RA IC	■	25	34.5	130	25	35	G⅛	DECO 13, EvoDECO 16	VP 1003..

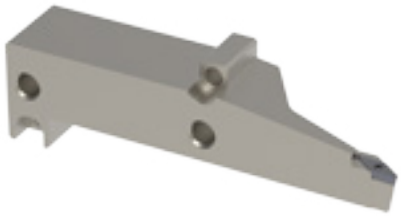


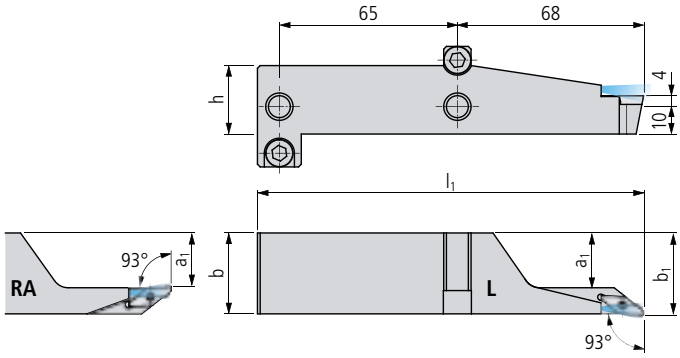


DECO… 13/16 SVJP … V … (93°)

Order designation				Dimensions						Machine type	Inserts
L		R		h	b	l_1	a_1	b_1	c		337…
DECO/EVO 13/16 SVJP L V IC	■	DECO/EVO 13/16 SVJP RA V IC	■	25	34.5	130	25	35	G⅛	DECO 13, EvoDECO 16	VP 1003..

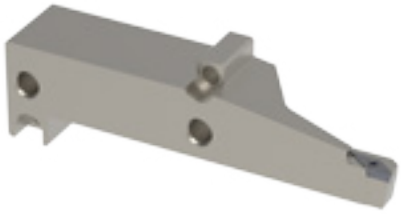


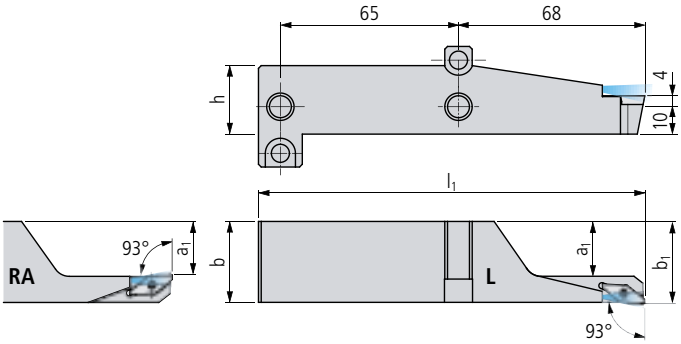




DECO… 20/26/32 SVJP … (93°)

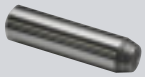
Order designation L	Order designation R	Dimensions h	b	l_1	a_1	b_1	Machine type	Inserts 337…
DECO/EVO 20/26/32 SVJP L IC ■	DECO/EVO 20/26/32 SVJP RA IC ■	25	29.5	141	20	30	DECO 20/26, EvoDECO 32	VP 1003..





DECO… 20/26/32 SVJP … V … (93°)

Order designation L	Order designation R	Dimensions h	b	l_1	a_1	b_1	Machine type	Inserts 337…
DECO/EVO 20/26/32 SVJP L V IC ■	DECO/EVO 20/26/32 SVJP RA V IC ■	25	29.5	141	20	30	DECO 20/26, EvoDECO 32	VP 1003..

Illustration	Description	Dimensions	Order designation		Holders
	TORX screw	M2.5 × 6 T08	MSP 25060 T08	■	DECO/EVO… CUT 1600.. DECO/EVO…SVJP..
		M3 × 9 T08	MSP 30090 T08	■	DECO/EVO… CUT 3000..
	Cylindrical pin	ø5 h6 × 24	MSP ZS524	■	DECO/EVO 7/10…
		ø5 h6 × 24	MSP ZS524 special	■	DECO/EVO 7/10…
	Socket head screw	M5 × 30 IB4	MSP 50300 ZKS IB4	■	DECO/EVO 7/10…
		M6 × 40 IB5	MSP 60400 ZKS IB5	■	DECO/EVO 13/16…
		M6 × 35 IB5	MSP 60350 ZKS IB5	■	DECO/EVO 20/26/32…
	Allen key	SW 4	MSP IB4	■	MSP 50… IB4
		SW 5	MSP IB5	■	MSP 60… IB5
	Screw plug	G⅛" IB5	MSP VSR G1/8 IB5	■	DECO/EVO 7/10… DECO/EVO 13/16…

TORX screwdriver ..... 703…

Notes

Product description
Development and production of multidec® tools for your own specific needs.

Customer's situation
A special machining situation is very difficult or impossible to be resolved by using tools from the standard multidec® range. For this, a special tool or a standard tool with a different dimension is required.

UTILIS solution
After detailed consultation, we will develop and make the best multidec® solution for your particular needs. Normally this will be done using standard blanks which enable the special tools to be produced and delivered quickly and at reasonable cost. The familiar multidec® quality is of course always guaranteed.

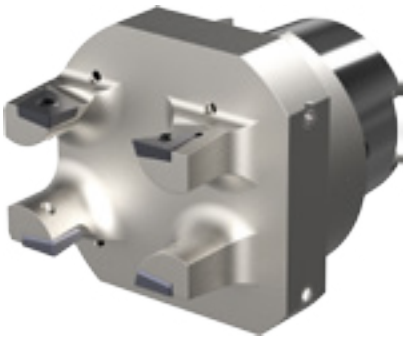
Advantages:
– UTILIS know-how and quality, even for special solutions
– Targeted new development in accordance with customer requirements is possible
– Construction with many years of experience
– Modern manufacturing with the best machinery



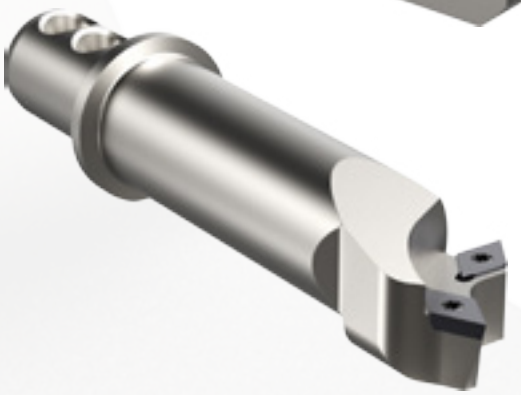




Equipping with PCD, CVD diamond or CBN cutter possible by request.







The feasibility study starts in the technical office when your inquiry is received and the first estimate of the costs is then worked out with the involvement of the production.
Competent product managers will prepare a tailor-made solution for you and provide you with a quotation.

Your customer service centre
Fon +41 52 762 62 62
Fax +41 52 762 62 00
info@utilis.com

Efficiency and process reliability are important in today's competition-oriented environment.
multidec®-LUB makes a significant contribution to increasing efficiency and increasing the process reliability of your Swiss type automatic lathe.
The principle of integrated cooling is consistently implemented in this product line. UTILIS provides you, as a user, with two options for optimising your cooling.
The first option is a complete tool plate consisting of a tool plate and clamping shims in which the cooling medium is directed straight to the cutting edge by the plate and the clamping shim.
The first option consists of replacing the existing original clamping shims on your original tool plate with multidec®-LUB clamping shims which also direct the coolant directly onto the cutting edge.
The second option is somewhat more complicated but has the major advantage that only one coolant connection to the tool plate is needed. A coolant distributor and connecting tubes are not required. With the second option you still keep your tool plate and merely replace the original clamping shims with multidec®-LUB clamping shims and connect these to your cooling unit.
A wide range of coolant distributors, tubes, unions and quick-change connections for high and low pressure are available in our multidec®-LUB coolant product line.
The multidec®-LUB system from UTILIS has the major advantage that you as a customer remain completely independent and can continue to use your existing insert holders.

Take advantage of the benefits and increase the performance of your machine.

CITIZEN
DMG MORI
DOOSAN
GOODWAY MACHINE CORP.
Hanwha
Miyano
NEXTURN SWISS TURN LEADER
star
TORNOS
PRECISION TSUGAMI

Overview – multidec®-LUB

Technical information 9

multidec®-LUB – Tool plates, complete 640

multidec®-LUB – Clamping shims for existing original tool plates 641

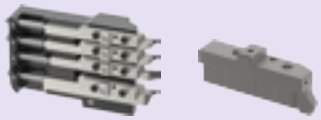
Designation system for tool plates and clamping shims 642

CITIZEN tool plates and clamping shims  644

DOOSAN / GILDEMEISTER / DMG / GOODWAY clamping shims  650

HANWHA / MIYANO / NEXTURN clamping shims  651

STAR tool plates and clamping shims  652

TORNOS tool plates and clamping shims  658

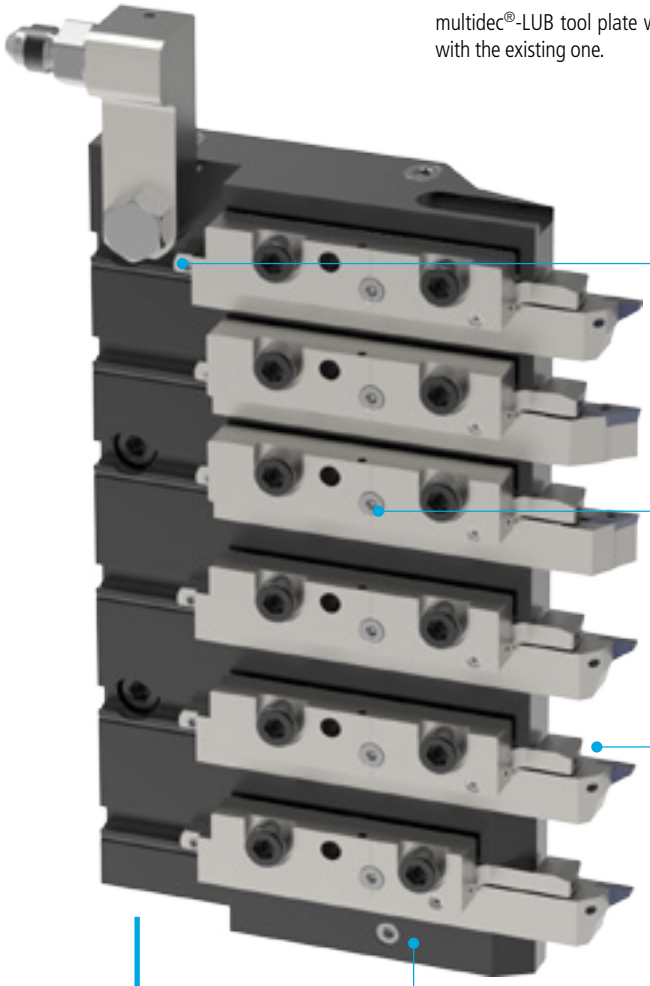
TSUGAMI clamping shims  665

Replacement and spare parts  666

Tool plate / clamping shim inquiry 668

Inquiry form for clamping shims 669

multidec®-LUB – Tool plates, complete



multidec®-LUB tool plate with an integrated coolant system, which can be quickly and easily replaced with the existing one.



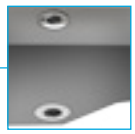
Quick change system
Quick and exact tool change by means of adjustable stops in the tool plate.



Flow controller at the clamping shim
Targeted regulation of the tool cooling with on / off function.



Two coolant outputs at the clamping shim
Reduced tool wear due to focussed cooling directly at the cutting edge. Thanks to the integrated coolant system, externally attached coolant connections are not required.



Coolant connections at the plate
A wide range of connecting options ensure that there is a direct connection to the coolant unit.



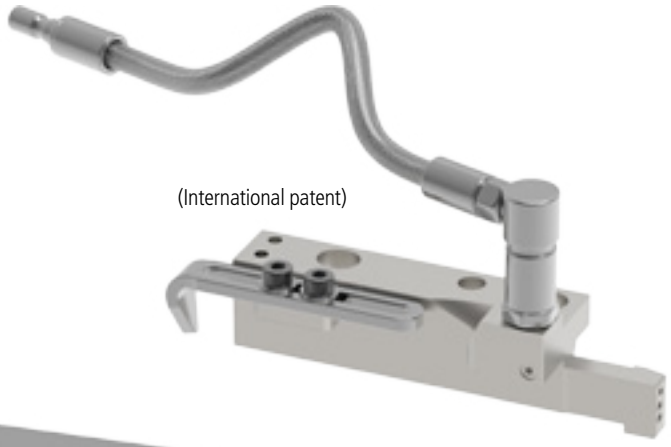
Advantages:
– Easy installation by replacing the original plate with the complete multidec®-LUB tool plate
– Increased process reliability
– Quick and safe replacement of the insert thanks to integrated stop
– Tool holders without internal cooling (IC) can continue to be used
– No more coolant distributors and tubes required

If you would like up to date information about the available tool plates and clamping shims, please visit our web site at **www.utilis.com**. You can view all items which have now been realised under "Lub actual standing list".

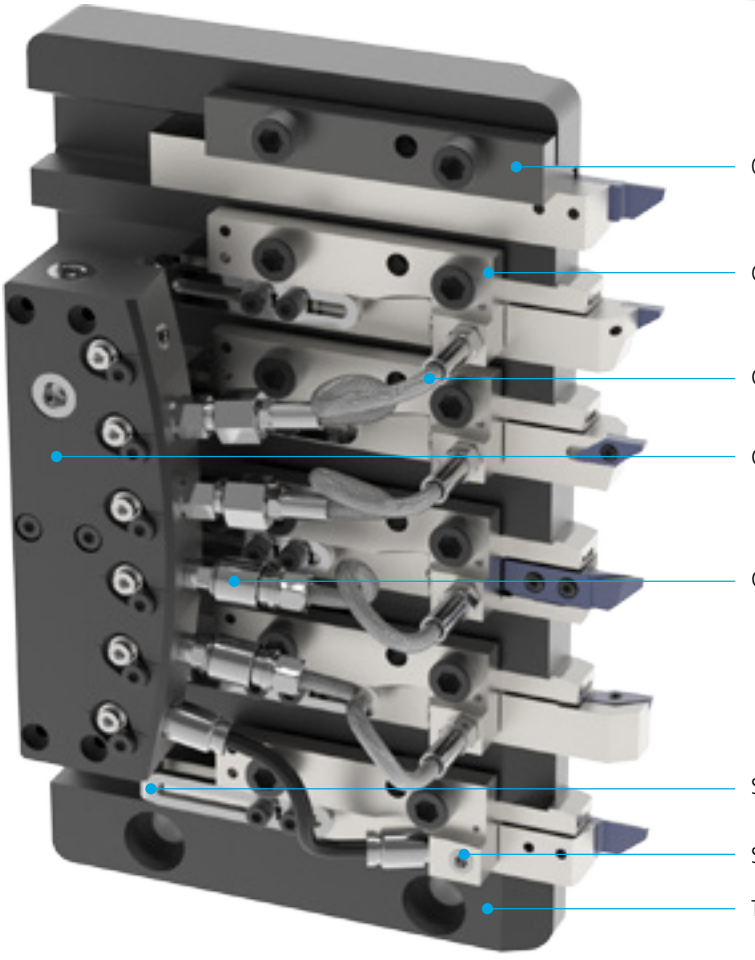
The latest information about multidec®-LUB

multidec®-LUB – Clamping shims for existing original tool plates

multidec®-LUB clamping shims with integrated cooling and tool stop, for replacing existing clamping shims.



(International patent)



Advantages:
– Simple installation through replacement of the original clamping shim with the multidec®-LUB clamping shim
– Increased process reliability
– Quick and reliable tool change thanks to integrated stop
– Tool holders without internal cooling (IC) can continue to be used
– Different coolant distributors, tubes and push-in fittings for high and low pressure from the multidec®-LUB coolant system product line are available

The latest information about multidec®-LUB

The designation of a clamping wedge contains all of the important information, which is put together in accordance with the following system:

Tool plate

MLU ST - 01 - TPC - IC - 6T

- 6T: Number of tool positions
- IC: with internal cooling
- TPC: Version
- 01: Code (in accordance with machine type)
- ST: Machine
- MLU: Product line



Order designation
The selected product is ordered by entering the order designation.
Additional information about the products can be found in accordance with page reference (🗋 …).

Order designation		
MLU TO-SN-TPC-IC-3T	■	Example: MLU TO-SN-TPC-IC-3T
MLU TO-SN-TPC-IC-4T	■	
MLU TO-SN-TPC-IC-4T-4x8	■	

The latest information about multidec®-LUB

The designation of a clamping wedge contains all of the important information, which is put together in accordance with the following system:

Clamping shim

MLU CI - 12 - R-R IC - F

- MLU: Product line
- CI: Machine
- 12: Code (in accordance with machine type)
- R-R: Version (for right-hand or left-hand holder)
- IC: with internal cooling
- F: fixed outlet of the coolant



Order designation

The selected product is ordered by entering the order designation.
Additional information about the products can be found in accordance with page reference (🗋 …).

Order designation			
R		L	
MLU GM-01 R-R IC-F	■	MLU GM-01 R-L IC-F	■
MLU GM-02 R-R IC-F	■	MLU GM-02 R-L IC-F	■
MLU GM-03 R-R IC-F	■	MLU GM-03 R-L IC-F	■

Example: MLU GM-01 R-R IC-F

The latest information about multidec®-LUB

With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates



MLU CI-03-TPC-IC-.. (CITIZEN L12)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
L12	6	10×10	10×10	1	MLU CI-03-TPC-IC-6T	■
				2	MLU CI-03-TPC-IC-6T-2K	■

Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver and mounting screws

Note
Depending on the size of the tool plate, the lengths of the holders which can be used may be limited when using the tool stops if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.



With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates

MLU CI-21-TPC-IC-… (CITIZEN L12 X)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
L12 X	7	12×12	10×10	2**	MLU CI-21-TPC-IC-7T-2K	■
				3*	MLU CI-21-TPC-IC-7T-3K	■

Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver and mounting screws

Note
* Tool plate without stop pins.
** Depending on the size of the tool plate, the lengths of the holders which can be used may be limited when using the tool stops if the recommended overhanging length "Lx" is to be maintained.
Shorter holders and tool stops in various lengths are available as a standard solution.

With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates



MLU CI-01-TPC-IC-.. (CITIZEN M16)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
M16	5	10×10	10×10	1	MLU CI-01-TPC-IC-5T	■
				2	MLU CI-01-TPC-IC-5T-2K	■

Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver and mounting screws

Note
Depending on the size of the tool plate, the lengths of the holders which can be used, may be limited, when using the tool stops, if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.

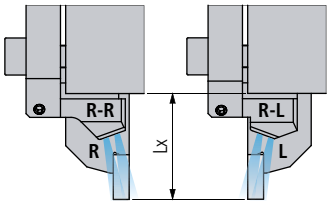
The latest information about multidec®-LUB

Legend 6…

For tool plates "TPC-IC" (replacement part)
With integrated adjustable coolant supply "IC"



MLU … IC-F-.. (CITIZEN L12 / L12 X / M16)



R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

Tool plate type	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
L12-6T	10 × 10	T1 - T6	20	MLU 03 R-R IC-F-02	■	MLU 03 R-L IC-F-02	■	
L12-6T-2K	10 × 10	T1 - T6	20	MLU 03 R-R IC-F-02	■	MLU 03 R-L IC-F-02	■	
L12 X-7T-2K	10 × 10	T2 - T7	20	MLU 03 R-R IC-F-02	■	MLU 03 R-L IC-F-02	■	
	12 × 12	T1 (cut off)		MLU 03 R-R IC-F-03	■	MLU 03 R-L IC-F-03	■	
L12 X-7T-3K	10 × 10	T2 - T7	20	MLU 03 R-R IC-F-02	■	MLU 03 R-L IC-F-02	■	
	12 × 12	T1 (cut off)		MLU 03 R-R IC-F-03	■	MLU 03 R-L IC-F-03	■	
M16-5T	10 × 10	T1 - T5	20	MLU 03 R-R IC-F-01	■	MLU 03 R-L IC-F-01	■	
M16-5T-2K	10 × 10	T1 - T5	20	MLU 03 R-R IC-F-01	■	MLU 03 R-L IC-F-01	■	

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with coolant regulating screw, without mounting screws
Clamping shims for other holder overhanging lengths by request

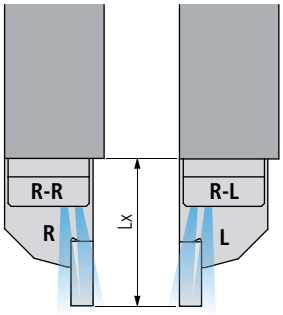
Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend 6…

For existing original tool plates
For replacing original clamping shims





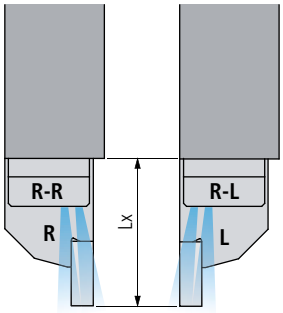
R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU CI-… IC-F (CITIZEN)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
A20	BTF1012	12×12	T1–T6	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
	BTF2413	½" (12.7)	T1–T6	30	MLU CI-05 R-R IC-F	■	MLU CI-05 R-L IC-F	■	
			T2–T5	20	MLU CI-03 R-R IC-F	■	MLU CI-03 R-L IC-F	■	
	GTF3612	12×12	T2–T5	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
		⅝" (15.875)	T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		16×16							
A20 L	BTF2212	12×12	T2–T5	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
	BTF2213	½" (12.7)			MLU CI-03 R-R IC-F	■	MLU CI-03 R-L IC-F	■	
	BTF2412	12×12			MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
A32		⅝" (15.875)	T1–T6	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		16×16							
C16	GTF6010	10×10	T1–T6	20	MLU CI-02 R-R IC-F	■	MLU CI-02 R-L IC-F	■	
K12	BTF1012	12×12	T1–T6	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
	GTF7010	10×10	T1–T6	17.5	MLU CI-09 R-R IC-F	■	MLU CI-09 R-L IC-F	■	
K12 E	BTF1010	10×10	T1–T7	20	MLU CI-02 R-R IC-F	■	MLU CI-02 R-L IC-F	■	
K16	BTF1010	10×10	T1–T7	20	MLU CI-02 R-R IC-F	■	MLU CI-02 R-L IC-F	■	
	BTF1012	12×12	T1–T6		MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
	GTF5110	10×10	T1–T5		MLU CI-02 R-R IC-F	■	MLU CI-02 R-L IC-F	■	
K16 E	BTF1012	12×12	T1–T6	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
L12	GTF7010	10×10	T1–T6	17.5	MLU CI-09 R-R IC-F	■	MLU CI-09 R-L IC-F	■	
	GTF7010 L	⅜" (9.525)			MLU CI-07 R-R IC-F	■	MLU CI-07 R-L IC-F	■	
	GTF7020	8×8		13	MLU CI-10 R-R IC-F	■	MLU CI-10 R-L IC-F	■	
L16	GTF3110	10×10	T1–T4	20	MLU CI-14 R-R IC-F	■	MLU CI-14 R-L IC-F	■	
L20	BTF2413	½" (12.7)	T2–T5	20	MLU CI-03 R-R IC-F	■	MLU CI-03 R-L IC-F	■	
	GTF3113		T2–T6		MLU CI-03 R-R IC-F	■	MLU CI-03 R-L IC-F	■	
	GTF3612	12×12	T2–T5	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
			T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		⅝" (15.875)	T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		16×16							
	GTF3812	12×12	T1–T6	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
L20 E	GTF3612	12×12	T2–T5	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
			T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		⅝" (15.875)	T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		16×16							
	GTF3613	⅝" (15.875)	T1–T5	22	MLU CI-11 R-R IC-F	■	MLU CI-11 R-L IC-F	■	
L20 X	BTF2413	½" (12.7)	T2–T5	20	MLU CI-03 R-R IC-F	■	MLU CI-03 R-L IC-F	■	
		⅝" (15.875)	T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		16×16							
	GTF3612	12×12	T2–T5	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
			T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		⅝" (15.875)	T2–T5	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
			T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
		16×16	T2–T5	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
			T1 (cut off)	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
L25	GTF4016	16×16	T11–T15	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
L32	GTF4016	16×16	T11–T15	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
L4-25	GTF4516	⅝" (15.875)	T11–T15	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Continuation



R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU CI-… IC-F (CITIZEN)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
M16	BTF1012	12×12	T1–T6	20	MLU CI-01 R-R IC-F	■	MLU CI-01 R-L IC-F	■	
	GTF5110	10×10	T1–T5	20	MLU CI-02 R-R IC-F	■	MLU CI-02 R-L IC-F	■	
M20	GTF2513	12×12	T1–T5	30	MLU CI-05 R-R IC-F	■	MLU CI-05 R-L IC-F	■	
M32	GTF5216	⅝" (15.875) 16×16	T1–T5	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
	GTF5816	⅝" (15.875) 16×16							
M32 V	GTF5216L	⅝" (15.875) 16×16	T1–T5	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
M416-V	GTF5210	10×10	T1–T5	20	MLU CI-02 R-R IC-F	■	MLU CI-02 R-L IC-F	■	
M416-VIII	GTF5210	10×10	T1–T5	20	MLU CI-02 R-R IC-F	■	MLU CI-02 R-L IC-F	■	
M432-V	GTF5816	⅝" (15.875) 16×16	T1–T5	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
M432-VII	GTF5816	⅝" (15.875) 16×16	T1–T5	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
M432-VIII	GTF5816	⅝" (15.875) 16×16	T1–T5	25	MLU CI-08 R-R IC-F	■	MLU CI-08 R-L IC-F	■	
R07	QTF4308	8×8	T11–T12	13	MLU CI-12 R-R IC-F	■	MLU CI-12 R-L IC-F	■	

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with stop

Coolant system ..... 671…
Torque screwdriver ..... 703…

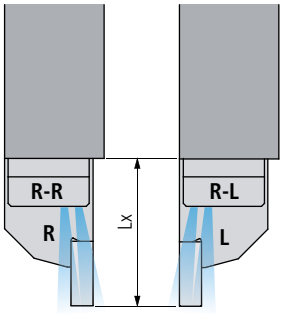
Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend ..... 6…

For existing original tool plates
For replacing original clamping shims





R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU DO-… IC-F (DOOSAN)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
Puma ST20G		12 × 12	T1–T6	23	MLU DO-01 R-R IC-F	■	MLU DO-01 R-L IC-F	■	

MLU GM-… IC-F (GILDEMEISTER / DMG)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
Sprint 20		12 × 12	T1–T5	25	MLU GM-01 R-R IC-F	■	MLU GM-01 R-L IC-F	■	
Sprint 32/42 linear classic	Plate 1	16 × 16	T1–T5	20	MLU GM-02 R-R IC-F	■	MLU GM-02 R-L IC-F	■	
	Plate 2		T6–T8		MLU GM-03 R-R IC-F	■	MLU GM-03 R-L IC-F	■	

MLU GO-… IC-F (GOODWAY)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
SW42	99B086	16 × 16	T2–T6	37	MLU GO-01 R-R IC-F	■	MLU GO-01 R-L IC-F	■	
		20 × 20	T1 (cut off)		MLU GO-02 R-R IC-F	■	MLU GO-02 R-L IC-F	■	

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with stop

Coolant system ..... 671…
Torque screwdriver ..... 703…

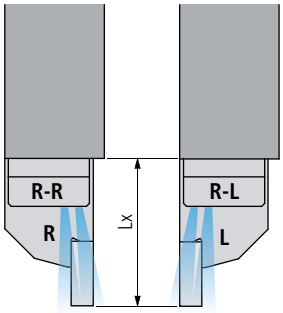
Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend ..... 6…

For existing original tool plates
For replacing original clamping shims





R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU HA-… IC-F (HANWHA)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
SL16 S		12 × 12		20	MLU HA-01 R-R IC-F	■	MLU HA-01 R-L IC-F	■	
SL200	SP05010_701A	12 × 12	T1–T6	20	MLU HA-02 R-R IC-F	■	MLU HA-02 R-L IC-F	■	
XD12J		12 × 12		20	MLU HA-01 R-R IC-F	■	MLU HA-01 R-L IC-F	■	
XD20H	SP05010_701A	12 × 12	T1–T6	20	MLU HA-02 R-R IC-F	■	MLU HA-02 R-L IC-F	■	
XD20J	SP05010_701A	12 × 12	T1–T6	20	MLU HA-02 R-R IC-F	■	MLU HA-02 R-L IC-F	■	
XD38H II		16 × 16	T1–T5	35	MLU HA-05 R-R IC-F	■	MLU HA-05 R-L IC-F	■	

MLU MI-… IC-F (MIYANO)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
BX-26 S		16 × 16	T1–T6	34	MLU MI-01 R-R IC-F	■	MLU MI-01 R-L IC-F	■	

MLU NE-… IC-F (NEXTURN)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
SA20 XII		12 × 12		30	MLU NE-01 R-R IC-F	■	MLU NE-01 R-L IC-F	■	

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with stop

Coolant system ..... 671…
Torque screwdriver ..... 703…

Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend ..... 6…



With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates

MLU ST-03-TPC-IC-.. (STAR SB12 R G)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
SB12 R G	6	12×12	12×12	1	MLU ST-03-TPC-IC-6T	■

Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver, angled connections and mounting screws

Note
Depending on the size of the tool plate, the lengths of the holders which can be used, may be limited, when using the tool stops, if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.



With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates

MLU ST-01-TPC-IC-.. (STAR SR20 J)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
SR20 J	6	12×12	12×12	1	MLU ST-01-TPC-IC-6T	■

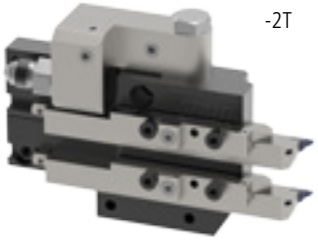
Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver, angled connections and mounting screws

Note
Depending on the size of the tool plate, the lengths of the holders which can be used, may be limited, when using the tool stops, if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.



-5T

With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates



-2T

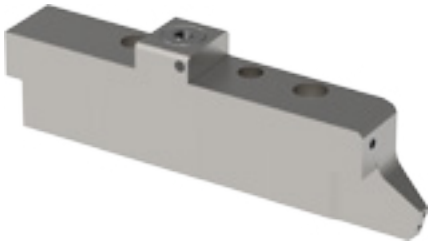
MLU ST-02-TPC-IC-.. (STAR SW12 RII)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
SW12 RII	5	10×10	10×10	1	MLU ST-02-TPC-IC-5T	■
	2				MLU ST-02-TPC-IC-2T	■

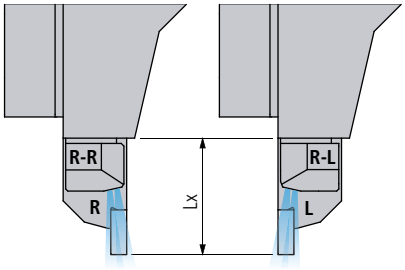
Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver, angled connections and mounting screws

Note
Depending on the size of the tool plate, the lengths of the holders which can be used, may be limited, when using the tool stops, if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.

For tool plates "TPC-IC" (replacement part)
With integrated adjustable coolant supply "IC"



MLU … IC-F-.. (STAR)



R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

Tool plate type	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
SB12 R G-6T	12×12	T2–T6	22	MLU 02 R-R IC-F-01	■	MLU 02 R-L IC-F-01	■	
		T1 (cut-off)		MLU 02 R-R IC-F-02	■	MLU 02 R-L IC-F-02	■	
SR20 J-6T	12×12	T2–T6	22	MLU 02 R-R IC-F-01	■	MLU 02 R-L IC-F-01	■	
		T1 (cut-off)		MLU 02 R-R IC-F-02	■	MLU 02 R-L IC-F-02	■	
SW12 RII-2T	10×10	T1–T2	20	MLU 01 R-R IC-F-05	■	MLU 01 R-L IC-F-05	■	
SW12 RII-5T	10×10	T1–T5	20	MLU 01 R-R IC-F-05	■	MLU 01 R-L IC-F-05	■	

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with coolant regulating screw, without mounting screws
Clamping shims for other holder overhanging lengths by request

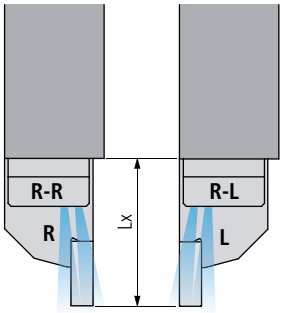
Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend 6…

For existing original tool plates
For replacing original clamping shims





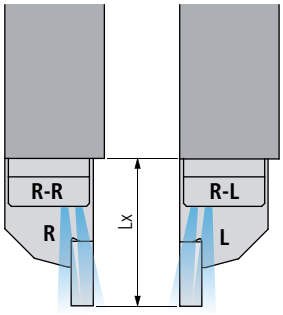
R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU ST-… IC-F (STAR)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
SB-12 R	0M103-00	12×12	T1–T6	22	MLU ST-16 R-R IC-F	■	MLU ST-16 R-L IC-F	■	
SB-12 R Type G	0M104.010	10×10	T2–T6	20	MLU ST-14 R-R IC-F	■	MLU ST-14 R-L IC-F	■	
			T1 (cut off)		MLU ST-21 R-R IC-F	■	MLU ST-21 R-L IC-F	■	
SB-16	481-02	12×12	T2–T6	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
			T1 (cut off)		MLU ST-08 R-R IC-F	■	MLU ST-08 R-L IC-F	■	
SB-16 C	630.62.00	12×12	T1–T5	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
SB-20 R	0M101	12×12	T2–T6	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
			T1 (cut off)		MLU ST-08 R-R IC-F	■	MLU ST-08 R-L IC-F	■	
SR-10 J	22-0100629-00	8×8	T1–T6	20	MLU ST-01 R-R IC-F	■	MLU ST-01 R-L IC-F	■	
	691-01								
SR-16 R	541-01	12×12	T1–T6	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
SR-20 J	0E0-62	12×12	T2–T6	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
			T1 (cut off)		MLU ST-08 R-R IC-F	■	MLU ST-08 R-L IC-F	■	
	22-0100679-00		T2–T6		MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
			T1 (cut off)		MLU ST-08 R-R IC-F	■	MLU ST-08 R-L IC-F	■	
	22-0100712-00		T2–T6		MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
			T1 (cut off)		MLU ST-08 R-R IC-F	■	MLU ST-08 R-L IC-F	■	
SR-20 J Type C	22-0100679-00	12×12	T2–T6	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
	22-0100712-00								
SR-20 RII	541-01	12×12	T1–T6	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
SR-20 RIII	680-62	12×12	T2–T6	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
SR-20 RIV	0W0-62	12×12	T2–T5, T11–T12	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
			T1 (cut off)		MLU ST-09 R-R IC-F	■	MLU ST-09 R-L IC-F	■	
	22-0101068-00		T2–T5, T11–T12		MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
			T1 (cut off)		MLU ST-09 R-R IC-F	■	MLU ST-09 R-L IC-F	■	
SR-32 J	670-62	5/8" (15.875)	T2–T6	25	MLU ST-03 R-R IC-F	■	MLU ST-03 R-L IC-F	■	
			T1 cut off)		MLU ST-02 R-R IC-F	■	MLU ST-02 R-L IC-F	■	
		16×16	T2–T6		MLU ST-03 R-R IC-F	■	MLU ST-03 R-L IC-F	■	
			T1 cut off)		MLU ST-02 R-R IC-F	■	MLU ST-02 R-L IC-F	■	
SV-12	22-0100181-01	12×12	T3–T5	20	MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
		½" (12.7)	T3–T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
	24-0002928-03	12×12	T3–T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
		½" (12.7)	T3–T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
	421-01	12×12	T3–T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
		½" (12.7)	T3–T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Continuation



R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU ST-… IC-F (STAR)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
SV-20	22-0100181-01	12 × 12	T3–T5	20	MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
		½" (12.7)	T3–T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
	24-0002928-03	12 × 12	T3-T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
		½" (12.7)	T3–T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
	421-01	12 × 12	T3-T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
		½" (12.7)	T3–T5		MLU ST-10 R-R IC-F	■	MLU ST-10 R-L IC-F	■	
			T1–T2 (cut off)		MLU ST-11 R-R IC-F	■	MLU ST-11 R-L IC-F	■	
SV-20 R	T100	12 × 12	T1–T7	22	MLU ST-15 R-R IC-F	■	MLU ST-15 R-L IC-F	■	
SV-32	421-04.010	16 × 16	T2–T4	25	MLU ST-13 R-R IC-F	■	MLU ST-13 R-L IC-F	■	
			T1 (cut off)		MLU ST-12 R-R IC-F	■	MLU ST-12 R-L IC-F	■	
SV-32 J	421-04.010	16 × 16	T2–T4	25	MLU ST-13 R-R IC-F	■	MLU ST-13 R-L IC-F	■	
			T1 (cut off)		MLU ST-12 R-R IC-F	■	MLU ST-12 R-L IC-F	■	
SW-12 RII	0M104.010	10 × 10	T2–T6	20	MLU ST-14 R-R IC-F	■	MLU ST-14 R-L IC-F	■	
			T1 (cut off)		MLU ST-21 R-R IC-F	■	MLU ST-21 R-L IC-F	■	
SW-20	571-01	12 × 12	T11–T12	20	MLU ST-07 R-R IC-F	■	MLU ST-07 R-L IC-F	■	
	571-03		T2–T4						
			T1 (cut off)						

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with stop

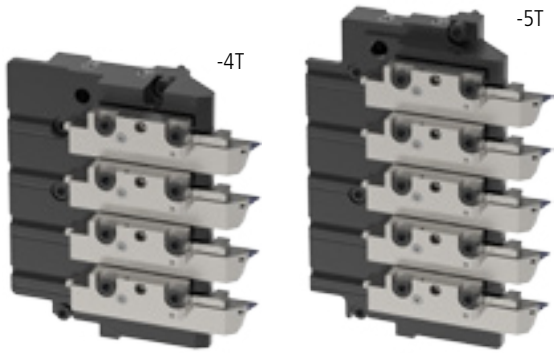
Coolant system ..... 671…
Torque screwdriver ..... 703…

Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend ..... 6…

With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates



MLU TO-01-TPC-IC-.. (TORNOS GT26)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
GT26	4	16×16	16×16	1	MLU TO-01-TPC-IC-4T	■
	5				MLU TO-01-TPC-IC-5T	■

Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver and mounting screws

Note
Depending on the size of the tool plate, the lengths of the holders which can be used, may be limited, when using the tool stops, if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.

The latest information about multidec®-LUB

Legend 6…

With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates

-5T



-6T



-9T



MLU TO-SN-TPC-IC-… (TORNOS SwissNano 7 / 10) (SN7 / SN10)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
SN7 SN10	5*	12×12	10×10	1	MLU TO-SN-TPC-IC-5T*	■
	6				MLU TO-SN-TPC-IC-6T	■
	9	–	8×8	2	MLU TO-SN-TPC-IC-9T-9x8-2K	■

* Without the uppermost tool position in order to make space for a powered unit for lateral drilling tools and milling cutters.

Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver and mounting screws

Note
Depending on the size of the tool plate, the lengths of the holders which can be used, may be limited, when using the tool stops, if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.

With integrated adjustable coolant supply "TPC-IC"
For replacing original tool plates

-3T



-4T



-4T-4x8



MLU TO-SN-TPC-IC-… (TORNOS SwissNano 4) (SN4)

Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
SN4	3	8×8	8×8	1	MLU TO-SN-TPC-IC-3T	■
	4	12×12			MLU TO-SN-TPC-IC-4T	■
		–			MLU TO-SN-TPC-IC-4T-4x8	■

Scope of delivery: Tool plate, clamping shim with coolant control screw, tool stops, torque screwdriver and mounting screws

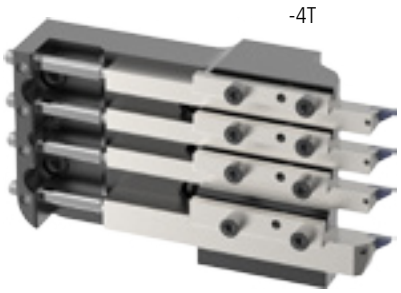
Note
Depending on the size of the tool plate, the lengths of the holders which can be used, may be limited, when using the tool stops, if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.

The latest information about multidec®-LUB

Legend 6…

Without integrated coolant supply "TPC"
For replacing original tool plates





MLU TO-SN-TPC-.. (TORNOS SwissNano 4) (SN4)

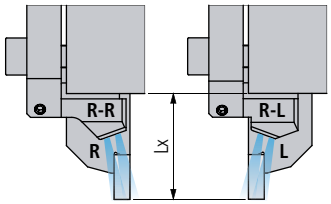
Type of machine	Number of tool positions	Cut-off position holder	Holder for other tool positions	Number of cooling circuits	Order designation 642	
SN4	3	8×8	8×8	1	MLU TO-SN-TPC-3T	■
	4	12×12			MLU TO-SN-TPC-4T	■

Scope of delivery: Tool plate, clamping shims without coolant control screw, tool stops, torque screwdriver and mounting screws

Note
Depending on the size of the tool plate, the lengths of the holders which can be used, may be limited, when using the tool stops, if the recommended overhanging length "Lx" is to be maintained. Shorter holders and tool stops in various lengths are available as a standard solution.

For tool plates "TPC-IC" (replacement part)
With integrated adjustable coolant supply "IC"





R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU … IC-F-.. (TORNOS GT26 / SwissNano 4 / 7 / 10) (SN4 / SN7 / SN10)

Tool plate type	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
GT26-4T	16 × 16	T1 - T4	25	MLU 01 R-R IC-F-10	■	MLU 01 R-L IC-F-10	■	
GT26-5T	16 × 16	T1 - T5	25	MLU 01 R-R IC-F-10	■	MLU 01 R-L IC-F-10	■	
SN7-5T SN10-5T	10 × 10	T2 - T5	15	MLU 01 R-R IC-F-02	■	MLU 01 R-L IC-F-02	■	
			20	MLU 01 R-R IC-F-05	■			
			25	MLU 01 R-R IC-F-08	■			
			30	MLU 01 R-R IC-F-09	■			
	12 × 12	T1 (cut-off)	15	MLU 01 R-R IC-F-01	■	MLU 01 R-L IC-F-01	■	
			25	MLU 01 R-R IC-F-04	■			
SN7-6T SN10-6T	10 × 10	T2 - T6	15	MLU 01 R-R IC-F-02	■	MLU 01 R-L IC-F-02	■	
			20	MLU 01 R-R IC-F-05	■			
			25	MLU 01 R-R IC-F-08	■			
			30	MLU 01 R-R IC-F-09	■			
	12 × 12	T1 (cut-off)	15	MLU 01 R-R IC-F-01	■	MLU 01 R-L IC-F-01	■	
			25	MLU 01 R-R IC-F-04	■			
SN7-9T / SN10-9T	8 × 8	T1 - T9	15	MLU 01 R-R IC-F-03	■			
SN4-3T	8 × 8	T1 - T3	15	MLU 01 R-R IC-F-03	■			
SN4-4T	8 × 8	T2 - T4	15	MLU 01 R-R IC-F-03	■			
	12 × 12	T1 (cut-off)		MLU 01 R-R IC-F-01	■	MLU 01 R-L IC-F-01	■	
			25	MLU 01 R-R IC-F-04	■			

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with coolant regulating screw, without mounting screws
Clamping shims for other holder overhanging lengths by request

Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend 6…

For "TPC" tool plates (replacement part)
Without integrated coolant supply
For replacing original clamping shims (if only the stop is being used)



MLU 01-SE-.. (TORNOS SwissNano 4) (SN4)

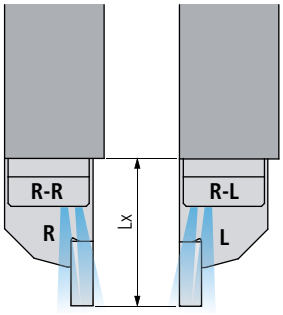
Tool plate type	Holders	Positions	Dimensions Lx	Order designation R				642
SN4-3T	8×8	T1-T4	–	MLU 01-SE-02	■			
SN4-4T	8×8	T2-T4	–	MLU 01-SE-02	■			
	12×12	T1 (cut-off)		MLU 01-SE-01	■			

Scope of delivery: Clamping shim, without mounting screws
Clamping shims for other holder overhanging lengths by request

Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

For existing original tool plates
For replacing original clamping shims





R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU TO-… IC-F (TORNOS)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
CT20/5	2000118	12×12	T1–T6	20	MLU TO-05 R-R IC-F	■	MLU TO-05 R-L IC-F	■	
DT13	390223	12×12	T2–T5	20	MLU TO-06 R-R IC-F	■	MLU TO-06 R-L IC-F	■	
	390224		T1 (cut off)		MLU TO-07 R-R IC-F	■	MLU TO-07 R-L IC-F	■	
Gamma 20/6		16×16	T1 (cut off)	30	MLU TO-10 R-R IC-F	■			
GT13	390223	12×12	T2–T5	20	MLU TO-06 R-R IC-F	■	MLU TO-06 R-L IC-F	■	
	390224		T1 (cut off)		MLU TO-07 R-R IC-F	■	MLU TO-07 R-L IC-F	■	
Swiss GT26	386209	16×16	T1–T5	22.5	MLU TO-04 R-R IC-F	■	MLU TO-04 R-L IC-F	■	
	386210		T2–T4	20	MLU TO-03 R-R IC-F	■	MLU TO-03 R-L IC-F	■	
			T1 (cut off)		MLU TO-02 R-R IC-F	■	MLU TO-02 R-L IC-F	■	
Swiss GT32		16×16	T110–T114	22.5	MLU TO-04 R-R IC-F	■	MLU TO-04 R-L IC-F	■	
Swiss ST26	398577	12×12	T2–T5	22	MLU TO-09 R-R IC-F	■	MLU TO-09 R-L IC-F	■	
			T1		MLU TO-08 R-R IC-F	■	MLU TO-08 R-L IC-F	■	
	398585		T1–T3						
	398595		T1–T2						

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with stop

Coolant system ..... 671…
Torque screwdriver ..... 703…

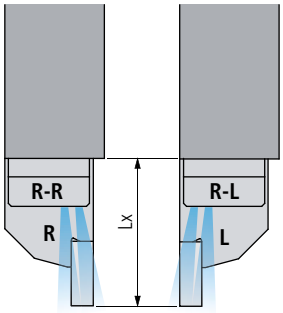
Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend ..... 6…

For existing original tool plates
For replacing original clamping shims





R-R: Clamping shim for right-hand holders "R"
R-L: Clamping shim for left-hand holders "L"

MLU TS-… IC-F (TSUGAMI)

Type of machine	Tool plates	Holders	Positions	Dimensions Lx*	Order designation R		Order designation L		642
BH20		12 × 12	T2–T4	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
			T1 (cut off)	–	MLU TS-04 R-R IC-F	■	MLU TS-04 R-L IC-F	■	
BH20 Z		12 × 12	T2–T4	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
			T1 (cut off)	–	MLU TS-04 R-R IC-F	■	MLU TS-04 R-L IC-F	■	
BO123 E	Plate 1	12 × 12	T1–T6	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
BO124 E	Plate 1	12 × 12	T1–T6	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
BO125 E	Plate 1	12 × 12	T1–T6	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
BO126 E II	Plate 1	12 × 12	T1–T6	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
BO203	Plate 1	12 × 12	T1–T6	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
BO204 E	Plate 1	12 × 12	T1–T6	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
BO205 E	Plate 1	12 × 12	T1–T6	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
BO326 E II		16 × 16		20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
BS20 S-V	Plate 1	12 × 12	T4–T5	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
	Plate 2		T11–T16						
BW208 E III				20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
HS207	Plate 1	12 × 12	T4–T8	20	MLU TS-01 R-R IC-F	■	MLU TS-01 R-L IC-F	■	
HS267		16 × 16		20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
HS327		16 × 16	T1–T5	30	MLU TS-06 R-R IC-F	■	MLU TS-06 R-L IC-F	■	
S205	Plate 1	12 × 12	T4–T8	20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
	Plate 2		T18–T20						
S206	Plate 1	12 × 12	T4–T8	20	MLU TS-01 R-R IC-F	■	MLU TS-01 R-L IC-F	■	
	Plate 2		T18–T20						
S206 E		12 × 12		20	MLU TS-02 R-R IC-F	■	MLU TS-02 R-L IC-F	■	
SS207	Plate 1	12 × 12	T4–T8	20	MLU TS-01 R-R IC-F	■	MLU TS-01 R-L IC-F	■	
	Plate 2		T18–T20						
		½" (12.7)	T4–T8		MLU TS-11 R-R IC-F	■	MLU TS-11 R-L IC-F	■	
SS207-5AX	Plate 1	12 × 12	T4–T8	20	MLU TS-01 R-R IC-F	■	MLU TS-01 R-L IC-F	■	
	Plate 2		T18–T20						

* Lx: Recommended overhanging length of the tool for optimum impacting of the coolant on the cutting edge.

Scope of delivery: Clamping shim with stop

Coolant system ..... 671…
Torque screwdriver ..... 703…

Attention
Tighten the multidec®-LUB clamping shim using the torque screwdriver according to the marking on the shim.

The latest information about multidec®-LUB

Legend ..... 6…

For tool plates, complete

Illustration	Description	Dimensions	Order designation	
	Angled connections	30 × 32 × 56	MLU WST G1/8 2 01 56	■
		16 × 18 × 28	MLU WST G1/8 1 01 28	■
		18 × 18 × 56.2	MLU WST G1/8 1 02 56	■
	Tool stop	5 × 5 × 5.5	MLU 00050 AN	■
		9 × 5 × 5.5	MLU 090L50 AN	■
		9 × 5 × 5.5	MLU 090R50 AN	■
		16 × 5 × 5.5	MLU 11550 AN	■
		22 × 5 × 5.5	MLU 17550 AN	■
		8 × 7 × 8	MLU 80085 AN	■
		16.5 × 7 × 8	MLU 98-01 AN-02	■
		24 × 7 × 8	MLU 98-01 AN-06	■
		6 × 40*	MLU 60400 AN	■
	Banjo bolt	SW14 × 30	MLU HS G1/8x24.5 SW28	■
	Reduction union	SW14 × 29	MSP RVR G1/8 - 7/16-20 UNF	■
	Screw plug	M5 IB2.5	MSP VSR M5 IB2.5	■
		M8 × 1 IB4	MSP VSR M8x1 IB5	■
		G⅛" IB5	MSP VSR G1/8" IB5	■
	Allen head screw	M4 × 20	MSP 40200 ZKS IB3	■
		M4 × 25	MSP 40250 ZKS IB3	■
		M5 × 12	MSP 50120 ZKS IB4	■
		M5 × 16	MSP 50160 ZKS IB4	■
		M5 × 20	MSP 50200 ZKS IB4	■
		M5 × 25	MSP 50250 ZKS IB4	■
		M5 × 30	MSP 50300 ZKS IB4	■
		M6 × 16	MSP 60160 ZKS IB5	■
		M6 × 20	MSP 60200 ZKS IB5	■
		M6 × 20	MSP 60200 ZKS IB5 INOX	■
		M6 × 25	MSP 60250 ZKS IB5	■
		M6 × 30	MSP 60300 ZKS IB5	■
	Clamping screw	M2 × 2	MSP 20020 GST IB0.9	■
		M2.5 × 2	MSP 25020 GST IB2	■
		M2.5 × 3	MSP 25030 GST IB2	■
		M3 × 3	MSP 30030 GST IB2	■
		M4 × 3	MSP 40030 GST IB2	■

* Other lengths by request

For clamping shims for existing original tool plates

Illustration	Description	Dimensions	Order designation	
	Stop	L 27	MLU-27-06 AN-A	■
		L 42	MLU 42 AN-A	■
		L 47	MLU-47-06 AN-A	■
		L 50	MLU 50 AN-A	■
		L 60	MLU 60 AN-A	■
	Stop	L 54	MLU 54 AN-I	■
	Pointer		MLU 68-01	■
	Screw plug	M5 × 4	MSP VSR M5	■
	Allen head screw	M3 × 6 DIN912	MSP30060 IB2.5	■
	Washer	M3 / 3.2 / 7 / 0.5	MSP US-3	■

Are you interested in "TPC" complete tool plates or clamping shims which are not yet available in our product line or a special version? If so, please send us an inquiry with the necessary information. We will then check your inquiry and send you a quote.



"TPC" complete tool plates
In order to construct a multidec®-LUB tool plate, we require:
– The CAD data of the original tool plate or
provide us with the original tool plate for measuring



Clamping shims for existing original tool plates
In order to determine the correct multidec®-LUB clamping shim, we require:
– The data of your tool plate and your clamping shims
– To do this, please complete the "inquiry form" on page 669 or
provide us with the tool plate and the clamping shims for measuring

If you would like up to date information about the available tool plates and clamping shims, please visit our web site at **www.utilis.com**. You can view all items which have now been realised under "Lub actual standing list".

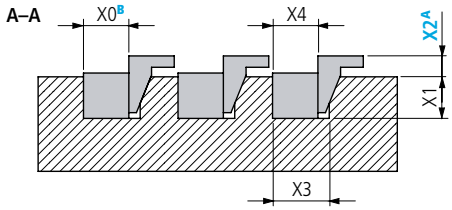
The latest information
about multidec®-LUB

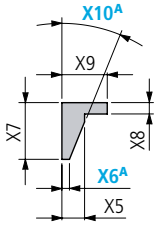
Attention
The positions in the tool plate are not always identical. Therefore, measure the position where you want to use the multidec®-LUB clamping shim exactly.

Machine data	
Manufacturer	
Type	
Year of manufacture	
Serial number	
Plate number	
Shaft cross-section	

[A] **Important dimension: Enter exact measurement!**
[B] **If the cut-off position has a different dimension.**
[C] **If the holder dimensions are different.**

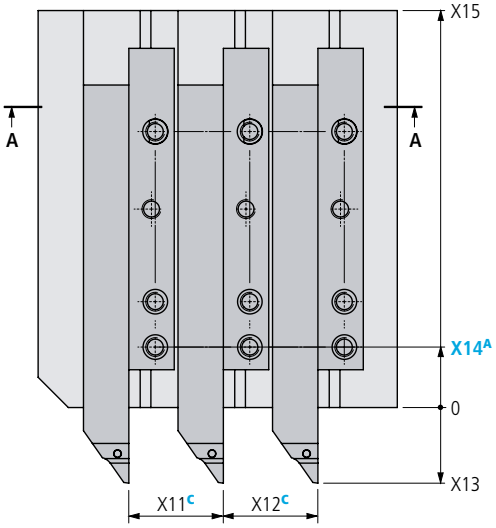
Dimensions (mm)	
X0[B]	
X1	
X2[A]	
X3	
X4	

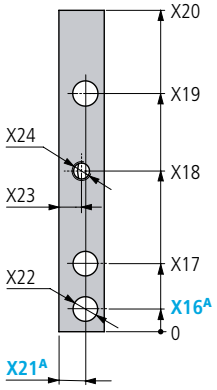




Dimensions (mm)	
X5	
X6[A]	
X7	
X8	
X9	
X10[A]	

Dimensions (mm)	
X11[C]	
X12[C]	
X13	
X14[A]	
X15	





Dimensions (mm)	
X16[A]	
X17	
X18	
X19	
X20	
X21[A]	
X22	
X23	
X24	

Company

Responsible person

Road

Postal code, City

Phone

Fax

E-mail

UTILIS®
Tooling for High Technology

Utilis AG, Precision Tools
Kreuzlingerstrasse 22, CH-8555 Müllheim, Switzerland
Phone +41 52 762 62 62, Fax +41 52 762 62 00
info@utilis.com, www.utilis.com

The newly developed high-pressure solution from UTILIS (up to a maximum of 200 bar or 2900 psi) ensures optimal delivery of coolant to the insert.
The highly compact and robust design and the stainless steel finish are the main features of this product.
The product range includes several straight and pivoting unions with connection diameters of 4 mm and several quick connections. The use thereof dispenses with the laborious task of unscrewing the high-pressure tubes. This increases efficiency by minimising machine downtime.
The high-pressure hoses are available in a wide variety of lengths with different connections.
Reduction unions, extensions, screw connections, spare parts and coolant distributors round off the product range.

Advantages:
– Flexible enough to be used with all multidec® product lines with internal cooling
– Can be used within a temperature range of –60 to +250 °C or –76 to +482 °F
– Can be used up to a maximum operating pressure of 200 bar or 2900 psi



The range associated with the low-pressure solution for operating pressures up to a maximum of 30 bar or 435 psi includes a straight union and a swivel-type union with a connecting diameter of 4 mm when a polyurethane tube is being used.
As with our high-pressure solution, we offer reduction unions, extensions, closing plugs, and sealing rings.
The polyurethane tube with an external diameter of 4 mm is 1000 mm long. This allows you to cut it to the length you need on a case-by-case basis.
A well-balanced range of compact coolant distributors made of light metal completes the offer.

Advantages:
– Flexible enough to be used with all multidec® product lines with internal cooling
– Can be used up to a maximum operating pressure of 30 bar or 435 psi (test pressure of 30 bar or 435 psi)
– Corrosion-resistant and compact design



Overview – Coolant system

Connecting options 672

Coolant distributors – high / low pressure  675

Coolant tubes – high pressure  676 / 680 / 683

Quick change connectors – high pressure  678

Unions – high pressure  682

Coolant tubes – low pressure  684

Unions – low pressure  685

Flow controller – high / low pressure  686

Extensions – high / low pressure  686

Screw connections – high / low pressure  687

Reduction unions – high / low pressure  688

Closing plug – high pressure  689

Closing plug – low pressure  689

Replacement parts – high / low pressure  690

Nozzle / socket installation  692

STVR / EWR installation  693

High pressure

MLU KV …



📄675…

M5	MSP UCF …  📄678		MSP UHPT …  📄676/677
M5	MSP EVRA …  📄687	MSP UICF …  📄678	MSP UHPT …  📄676/677

MLU… IC …



📄639…

M5	MSP UGVR …  📄682	**4**	MSP UHPT …  📄680/681
M5	MSP UNM …  📄679	**NM** MSP UICF …  📄678	**M5** MSP UHPT …  📄677/681/683

… IC



📄91…

M5	MSP UCF …  📄678	**NM** MSP UNM …  📄679	**M5** MSP EVRI …  📄687	**M5** MSP UHPT …  📄677/681/683

Low pressure

M5	MSP STVR …  📄685	**4KS**	MSP KSK…  📄684

Various extensions, reduction unions, screw plugs and closing plugs are also available for high / low pressure. 📄687–689

High pressure

MSP UHPT …



676/677

NM

MSP UACF …



678

M5

MSP EVRA …



687

M5

… IC



91…

MSP UHPT …



680/681

4

MSP USVR …



682

M5

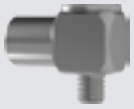
MSP UHPT …



677/681/683

M5

MSP RVRW …



687

M5

MLU… IC …



639…

MSP UHPT …



677/681/683

M5

MSP UICF …



678

NM

MSP USNM …



679

M5

MSP UHPT …



677/681/683

M5

MSP UANM …



679

NM

MSP UCF …



678

M5

MLU KV …



675…

MSP UHPT …



677/681/683

M5

MSP UACF …



678

NM

MSP UNM …



679

M5

Low pressure

MSP KSK…



684

4KS

MSP EWR …



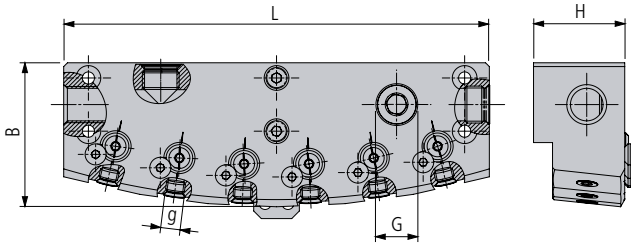
685

M5

With flow control

maximum 200 bar/2900 psi





MLU KV … L DFR (Large)

Order designation		Inputs	Outputs	Dimensions			Connecting options	672 / 673
		G	g	B	L	H	M5	G⅛**
MLU KV 2-4 L DFR	■	4 × G⅛	2 × M5	37	45	24	Miscellaneous	MSP … G1/8
MLU KV 4-4 L DFR	■	4 × G⅛	4 × M5	38	72	24		
MLU KV 6-4 L DFR	■	4 × G⅛	6 × M5	38	112	24		
MLU KV 8-4 L DFR	■	4 × G⅛	8 × M5	37	154	24		

MLU KV … S DFR* (Small)

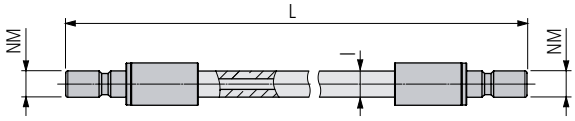
Order designation		Inputs	Outputs	Dimensions			Connecting options	672 / 673
		G	g	B	L	H	M5	G⅛**
MLU KV 2-4 S DFR	■	4 × G⅛	2 × M5	37	33	24	Miscellaneous	MSP … G1/8
MLU KV 4-4 S DFR	■	4 × G⅛	4 × M5	38	50	24		
MLU KV 6-4 S DFR	■	4 × G⅛	6 × M5	38	78	24		
MLU KV 8-4 S DFR	■	4 × G⅛	8 × M5	37	106	24		

* Quick couplings can only be used to a limited extent (less space in this version)

** Screw plugs 689
Replacement parts 690

maximum 200 bar/2900 psi





MSP UHPT* … NM-NM (Plug – Plug)

Order designation		Dimensions L	l				Connecting options NM	672/673
MSP UHPT 100 NM-NM	■	100	4.5					
MSP UHPT 150 NM-NM	■	150	4.5					
MSP UHPT 200 NM-NM	■	200	4.5				MSP UICF …	
MSP UHPT 250 NM-NM	■	250	4.5				MSP UCF …	
MSP UHPT 300 NM-NM	■	300	4.5				MSP UACF …	
MSP UHPT 400 NM-NM	■	400	4.5					
MSP UHPT 500 NM-NM	■	500	4.5					

No sealing ring required

MSP UHPTB … NM-NM (Plug – Plug)**

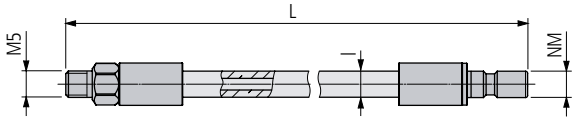
Order designation		Dimensions L	l				Connecting options NM	672/673
MSP UHPTB 100 NM-NM	■	100	6.2					
MSP UHPTB 150 NM-NM	■	150	6.2					
MSP UHPTB 200 NM-NM	■	200	6.2				MSP UICF …	
MSP UHPTB 250 NM-NM	■	250	6.2				MSP UCF …	
MSP UHPTB 300 NM-NM	■	300	6.2				MSP UACF …	
MSP UHPTB 400 NM-NM	■	400	6.2					
MSP UHPTB 500 NM-NM	■	500	6.2					

No sealing ring required

Note
* Standard tube with high flexibility
** Reinforced tube with increased bending strength and with 50 % higher flow volume

maximum 200 bar/2900 psi





MSP UHPT* … M5-NM (External thread – Pug)

Order designation		Dimensions L	l				Connecting options M5	NM	672/673
MSP UHPT 100 M5-NM	■	100	4.5						
MSP UHPT 150 M5-NM	■	150	4.5						
MSP UHPT 200 M5-NM	■	200	4.5					MSP UICF …	
MSP UHPT 250 M5-NM	■	250	4.5				Miscellaneous	MSP UCF …	
MSP UHPT 300 M5-NM	■	300	4.5					MSP UACF …	
MSP UHPT 400 M5-NM	■	400	4.5						
MSP UHPT 500 M5-NM	■	500	4.5						

No sealing ring required

MSP UHPTB … M5-NM (External thread – Pug)**

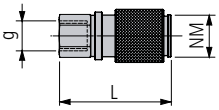
Order designation		Dimensions L	l				Connecting options M5	NM	672/673
MSP UHPTB 100 M5-NM	■	100	6.2						
MSP UHPTB 150 M5-NM	■	150	6.2						
MSP UHPTB 200 M5-NM	■	200	6.2					MSP UICF …	
MSP UHPTB 250 M5-NM	■	250	6.2				Miscellaneous	MSP UCF …	
MSP UHPTB 300 M5-NM	■	300	6.2					MSP UACF …	
MSP UHPTB 400 M5-NM	■	400	6.2						
MSP UHPTB 500 M5-NM	■	500	6.2						

No sealing ring required

Note
* Standard tube with high flexibility
** Reinforced tube with increased bending strength and with 50 % higher flow volume

maximum 200 bar/2900 psi



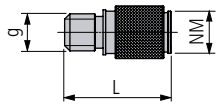


MSP UICF … (Internal thread – Coupling)

Order designation		Dimensions g	L				Connecting options g	NM	672/673
MSP UICF M5	■	M5	18				Miscellaneous	MSP …UNM MSP …USNM MSP …UANM	

No sealing ring required



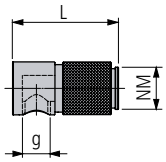


MSP UCF … (External thread – Coupling)

Order designation		Dimensions g	L				Connecting options g	NM	672/673
MSP UCF M5	■	M5	21				Miscellaneous	MSP …UNM MSP …USNM MSP …UANM	
MSP UCF M6	■	M6	21						
MSP UCF M8	■	M8	19						
MSP UCF M8x1	■	M8 × 1	19						
MSP UCF G1/8	■	G⅛	19						
MSP UCF PT1/8	■	PT⅛	20						

No sealing ring required





MSP UACF … (Internal thread 90° – Coupling)

Order designation		Dimensions g	L				Connecting options g	NM	672/673
MSP UACF M5	■	M5	20				Miscellaneous	MSP …UNM MSP …USNM MSP …UANM	

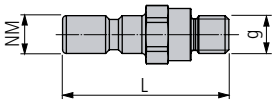
No sealing ring required

Closing plug 689
Replacement parts 690

Legend ..... 6…

maximum 200 bar/2900 psi



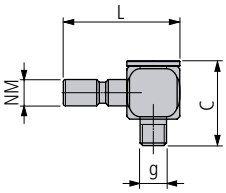


MSP UNM … (Plug – External thread)

Order designation		Dimensions g	L				Connecting options g	NM	672/673
MSP UNM M5	■	M5	19.5				Miscellaneous	MSP …UICF … MSP …UCF … MSP …UACF …	
MSP UNM M6	■	M6	19.5						
MSP UNM M8	■	M8	21.5						
MSP UNM M8x1	■	M8 × 1	19.5						
MSP UNM G1/8	■	G⅛	22						
MSP UNM PT1/8	■	PT⅛	20						
MSP UNM UNF5/16	■	UNF5/16	19.5						

No sealing ring required



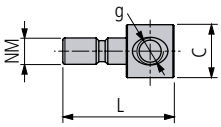


MSP USNM … (90° plug – External thread, swivelling)

Order designation		Dimensions g	C	L			Connecting options g	NM	672/673
MSP USNM M5	■	M5	16	22			Miscellaneous	MSP …UICF … MSP …UCF … MSP …UACF …	
MSP USNM M6	■	M6	17	22					
MSP USNM M8	■	M8	17.5	24					
MSP USNM M8x1	■	M8 × 1	17.5	24					
MSP USNM G1/8	■	G⅛	20	28					

No sealing ring required





MSP UANM … (Plug, internal thread 90°)

Order designation		Dimensions g	C	L			Connecting options g	NM	672/673
MSP UANM M5	■	M5	10	21			Miscellaneous	MSP …UICF … MSP …UCF … MSP …UACF …	

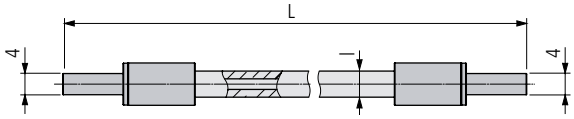
No sealing ring required

Replacement parts 690

Legend ..... 6…

maximum 200 bar/2900 psi





MSP UHPT* … 4-4 (Nozzle – Nozzle)

Order designation		Dimensions L	l				Connecting options 4	672/673
MSP UHPT 100 4-4	■	100	4.5				MSP UGVR … MSP USVR …	
MSP UHPT 150 4-4	■	150	4.5					
MSP UHPT 200 4-4	■	200	4.5					
MSP UHPT 250 4-4	■	250	4.5					
MSP UHPT 300 4-4	■	300	4.5					
MSP UHPT 400 4-4	■	400	4.5					
MSP UHPT 500 4-4	■	500	4.5					

No sealing ring required

MSP UHPTB … 4-4 (Nozzle – Nozzle)**

Order designation		Dimensions L	l				Connecting options 4	672/673
MSP UHPTB 100 4-4	■	100	6.2				MSP UGVR … MSP USVR …	
MSP UHPTB 150 4-4	■	150	6.2					
MSP UHPTB 200 4-4	■	200	6.2					
MSP UHPTB 250 4-4	■	250	6.2					
MSP UHPTB 300 4-4	■	300	6.2					
MSP UHPTB 400 4-4	■	400	6.2					
MSP UHPTB 500 4-4	■	500	6.2					

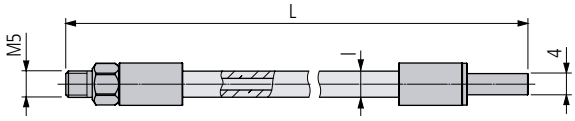
No sealing ring required

Nozzle/socket installation 692

Note
* Standard tube with high flexibility
** Reinforced tube with increased bending strength and with 50 % higher flow volume

maximum 200 bar/2900 psi





MSP UHPT* … M5-4 (External thread – Nozzle)

Order designation		Dimensions L	l				Connecting options M5	4 (📄672/673)
MSP UHPT 100 M5-4	■	100	4.5				Miscellaneous	MSP UGVR … MSP USVR …
MSP UHPT 150 M5-4	■	150	4.5					
MSP UHPT 200 M5-4	■	200	4.5					
MSP UHPT 250 M5-4	■	250	4.5					
MSP UHPT 300 M5-4	■	300	4.5					
MSP UHPT 400 M5-4	■	400	4.5					
MSP UHPT 500 M5-4	■	500	4.5					

No sealing ring required

MSP UHPTB … M5-4 (External thread – Nozzle)**

Order designation		Dimensions L	l				Connecting options M5	4 (📄672/673)
MSP UHPTB 100 M5-4	■	100	6.2				Miscellaneous	MSP UGVR … MSP USVR …
MSP UHPTB 150 M5-4	■	150	6.2					
MSP UHPTB 200 M5-4	■	200	6.2					
MSP UHPTB 250 M5-4	■	250	6.2					
MSP UHPTB 300 M5-4	■	300	6.2					
MSP UHPTB 400 M5-4	■	400	6.2					
MSP UHPTB 500 M5-4	■	500	6.2					

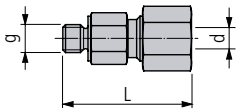
No sealing ring required

Nozzle / socket installation ..... 📄692

Note
* Standard tube with high flexibility
** Reinforced tube with increased bending strength and with 50 % higher flow volume

maximum 200 bar/2900 psi



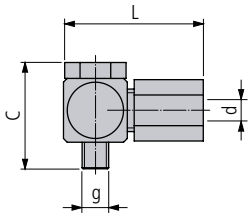


MSP UGVR … (External thread – External thread)

Order designation		Dimensions					Connecting options 672/673	
		g	d	L			g	4
MSP UGVR M5-4	■	M5	4	27			Miscellaneous	MSP UHPT …-4
MSP UGVR G1/8-4	■	G⅛	4	32				
MSP UGVR PT1/8-4	■	PT⅛	4	32				

No sealing ring required





MSP USVR … (External thread 90°, swivelling – Socket)

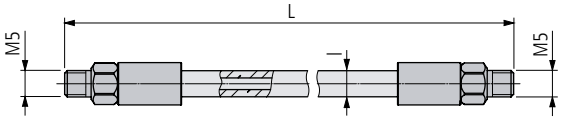
Order designation		Dimensions					Connecting options 672/673	
		g	d	L	C		g	4
MSP USVR M5-4	■	M5	4	28	21		Miscellaneous	MSP UHPT …-4
MSP USVR G1/8-4	■	G⅛	4	37	30			

No sealing ring required

Replacement parts 690
Nozzle/socket installation 692

maximum 200 bar/2900 psi





MSP UHPT* … M5-M5 (External thread – External thread)

Order designation		Dimensions L	l				Connecting options M5	672/673
MSP UHPT 100 M5-M5	■	100	4.5					
MSP UHPT 150 M5-M5	■	150	4.5					
MSP UHPT 200 M5-M5	■	200	4.5					
MSP UHPT 250 M5-M5	■	250	4.5				Miscellaneous	
MSP UHPT 300 M5-M5	■	300	4.5					
MSP UHPT 400 M5-M5	■	400	4.5					
MSP UHPT 500 M5-M5	■	500	4.5					

No sealing ring required

MSP UHPTB … M5-M5 (External thread – External thread)**

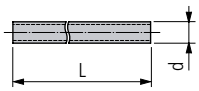
Order designation		Dimensions L	l				Connecting options M5	672/673
MSP UHPTB 100 M5-M5	■	100	6.2					
MSP UHPTB 150 M5-M5	■	150	6.2					
MSP UHPTB 200 M5-M5	■	200	6.2					
MSP UHPTB 250 M5-M5	■	250	6.2				Miscellaneous	
MSP UHPTB 300 M5-M5	■	300	6.2					
MSP UHPTB 400 M5-M5	■	400	6.2					
MSP UHPTB 500 M5-M5	■	500	6.2					

No sealing ring required

Note
* Standard tube with high flexibility
** Reinforced tube with increased bending strength and with 50 % higher flow volume

maximum 30 bar/435 psi



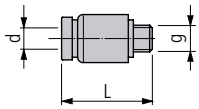


MSP KSK… (4KS – 4KS)

Order designation		Dimensions					Connecting options 672/673
		d	L				4KS
MSP KSK-4KS	■	4	1000				MSP STVR … MSP EWR …

maximum 30 bar/435 psi



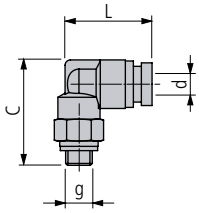


MSP STVR … (KS4 – External thread)

Order designation		Dimensions					Connecting options 672/673	
		d	g	L			KS4	M5
MSP STVR KS4-M5	■	4	M5	17			MSP KSK…	Miscellaneous

Including sealing ring





MSP EWR … (External thread 90° – KS4)

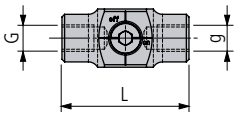
Order designation		Dimensions					Connecting options 672/673	
		g	d	L	C		M5	KS4
MSP EWR M5-KS4	■	M5	4	18	21		Miscellaneous	MSP KSK…

Including sealing ring

Closing plug MSP VSK … 689
Replacement parts 690
STVR / EWR installation 693

maximum 200 bar/2900 psi





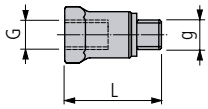
MLU DFR…

Order designation		Dimensions G	g	L			
MLU DFR-1 M5-M5	■	M5	M5	24			

No sealing ring required

maximum 200 bar/2900 psi





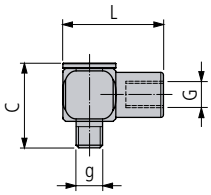
MSP VLR … (Internal thread – External thread)

Order designation		Dimensions G	g	L			
MSP VLR 100 M5-M5	■	M5	M5	10			
MSP VLR 200 M5-M5	■	M5	M5	20			
MSP VLR 400 M5-M5	■	M5	M5	40			

Including sealing ring

maximum 200 bar/2900 psi



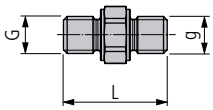


MSP RVRW … (External thread 90°, swivelling – Internal thread)

Order designation		Dimensions g	G	L	C		672/673
MSP RVRW M5-M5	■	M5	M5	19	16		

No sealing ring required



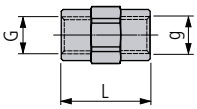


MSP EVRA … (External thread – External thread)

Order designation		Dimensions G	g	L			672/673
MSP EVRA M5-M5	■	M5	M5	14			

No sealing ring required





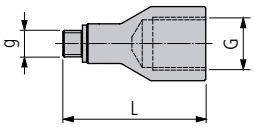
MSP EVRI … (Internal thread – Internal thread)

Order designation		Dimensions G	g	L			672/673
MSP EVRI M5-M5	■	M5	M5	14			

No sealing ring required

maximum 200 bar/2900 psi



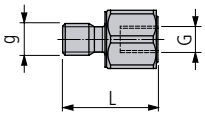


MSP RVRI … (External thread – Internal thread)

Order designation		Dimensions g	G	L			
MSP RVRI 100 M5-M6	■	M5	M6	15			
MSP RVRI 185 M5-M8x1	■	M5	M8×1	23			
MSP RVRI 225 M5-M10x1	■	M5	M10×1	27			
MSP RVRI 225 M5-G1/8	■	M5	G⅛	27			

Including sealing ring



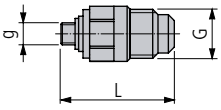


MSP RVRA … (External thread – Internal thread)

Order designation		Dimensions g	G	L			
MSP RVRA 100 M6-M5	■	M6	M5	18			
MSP RVRA 70 M8x1-M5	■	M8×1	M5	15			
MSP RVRA 70 M10x1-M5	■	M10×1	M5	15			
MSP RVRA 70 G1/8-M5	■	G⅛	M5	15			

No sealing ring required





MSP RVR … (External thread – External thread)

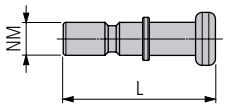
Order designation		Dimensions g	G	L			
MSP RVR M5-7/16-20 UNF	■	M5	7/16-20 UNF	29			
MSP RVR G1/8-7/16-20 UNF	■	G⅛	7/16-20 UNF	29			

Including sealing ring

Replacement parts 690

maximum 200 bar/2900 psi





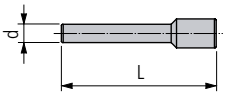
MSP VNM (Plug)

Order designation		Dimensions L					NM
MSP VNM	■	23					MSP …UICF … MSP …UCF … MSP …UACF …

No sealing ring required

maximum 30 bar/435 psi





MSP VSK… (4KS)

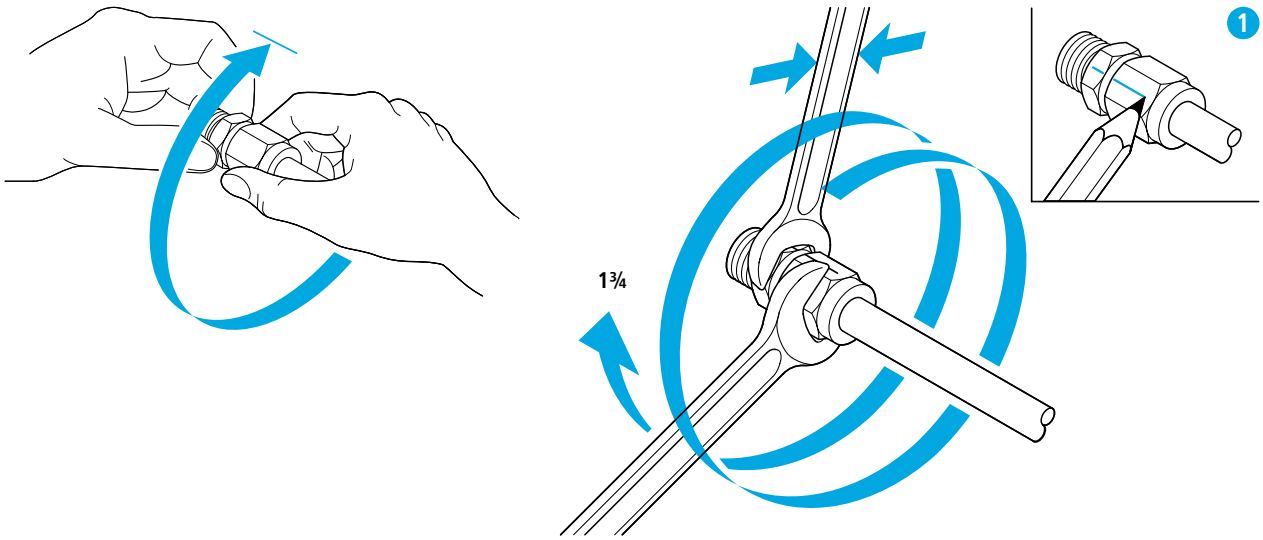
Order designation		Dimensions d	L				d
MSP VSK-4KS	■	4	32				MSP STVR … MSP EWR …

Illustration	Description	Dimensions	Order designation		related to
	Holder	40 × 12	MLU HKV-10	■	MLU KV…
	Nut	4	MSP UCN 4	■	MSP UGVR M5-4 MSP USVR M5-4
			MSP UCN 6	■	MSP UGVR G1/8-4 MSP USVR G1/8-4
			MSP UCN PT1/8	■	MSP UGVR PT1/8
	Clamping ring	4	MSP UCR 4	■	MSP UCN 4
			MSP UCR 6-4	■	MSP UCN 6
			MSP UCR PT1/8	■	MSP UCN PT1/8
	Sealing ring	5	MSP USK-M5	■	MSP STVR… MSP EWR… MSP VLR… MSP RVRI… MSP RVR…
	Screw plug	M5	MSP VSR M5 IB2.5	■	MLU KV…
		M6 × 0.5	MSP VSR M6x0.5 IB3	■	
		M8 × 1	MSP VSR M8x1 IB4	■	
		G⅛	MSP VSR G1/8 IB5	■	
	Allen head screw	M3 × 25 IB2.5	MSP 30250 ZKS IB2.5	■	
		M3 × 6 IB2.5	MSP 30060 ZKS IB2.5	■	

Notes *Coolant system*

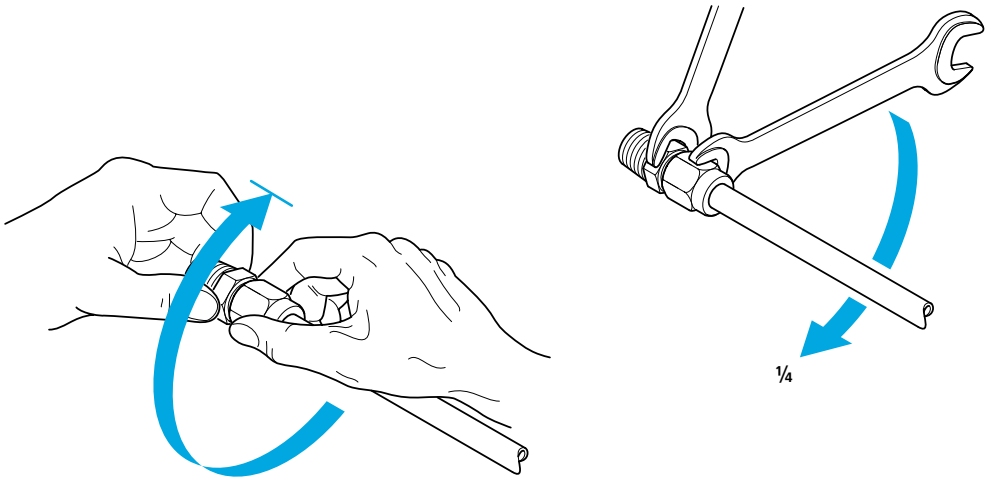
Initial assembly

1. Screw on the union nut by hand until finger-tight. At the same time, push the tube against the fitting.
2. Tighten down the union nut through **1¾ rotations** using an open-end wrench.
   ❶ Making a mark will assist in correct rotation. Hold the adaptor with a second wrench to prevent it turning.



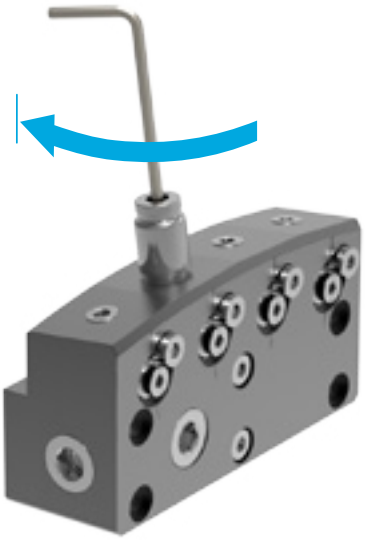
Repeat assembly

When refitting the same tube union, screw the union nut back on by hand until finger-tight and tighten down the union nut with an open-end wrench with **¼ of a rotation** for the final fit.
In the event of repeat fitting, parts must be lubricated.



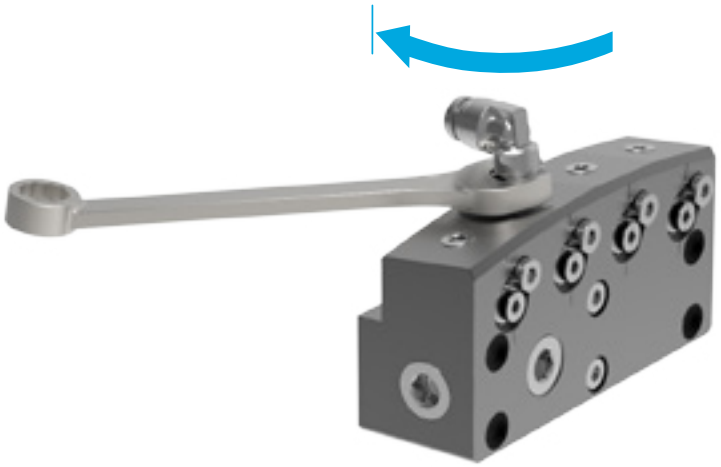
Installation of the straight plug connector

1. Screw on the straight plug connector by hand until finger-tight.
2. With the Allen key, thoroughly tighten the straight plug connector (as shown) through the opening for the connection using the force of your fingers only.



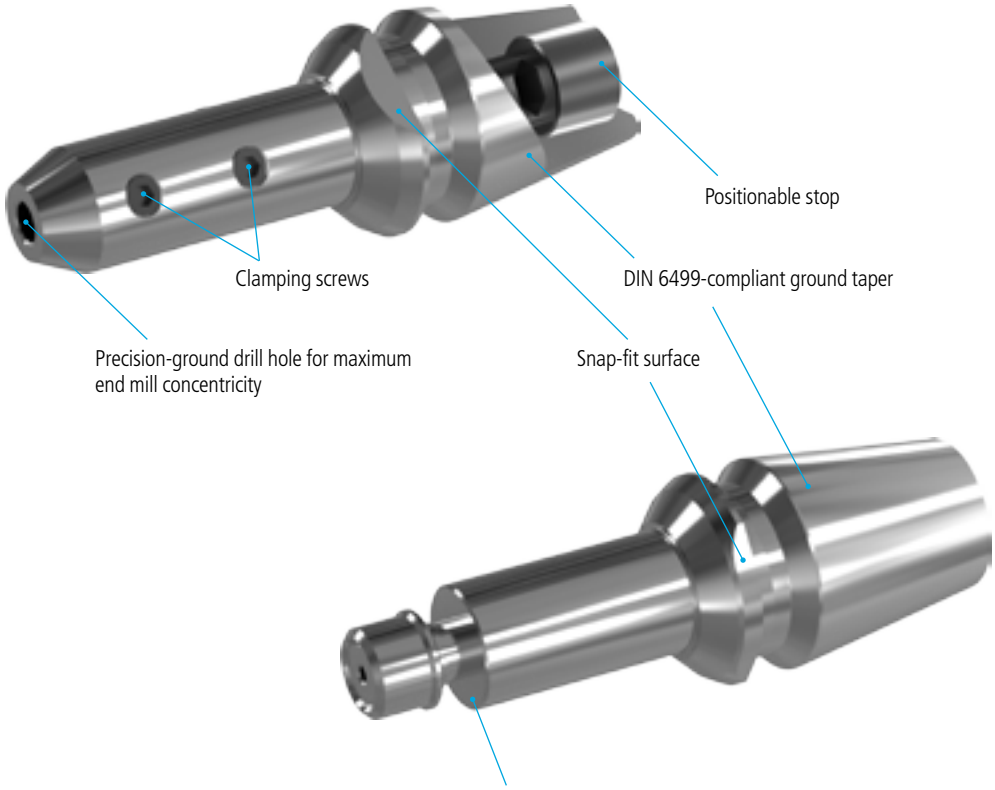
Installation of the swivel-type plug connector

1. Screw on the swivel plug connector by hand until finger-tight.
2. With an open-end wrench, thoroughly tighten the swivel-type plug connector (as shown) using a normal amount of force.



multidec®-TAPER-IN

multidec®-TAPER-IN is a tool holder serie that has been specially developed to be used on Swiss type turning machines. These tool holders have a monoblock design in order to achieve the highest possible stability. The multidec®-TAPER-IN tool holders can be used in any driven or stationary spindle compliant with the DIN 6499 standard.



Advantages:
– Ideally suited to Swiss-type turning machines (profile turning)
– Direct fit in the collet chuck with ER cone
– No special clamping nuts are needed
– Monoblock design for reduced added tolerance
– High stability
– Ground surfaces
– Holder for ER sizes 8, 11, 16, 20 and 25
– Concentric accuracy of 0.005 mm
– Stop screw adjustable on both sides for tool positioning

Overview – multidec®-TAPER-IN

Technical information 9



Monoblock ER tool holders (for end mills) 696



Monoblock ER tool holders (for saw blades and side mills) 698



Replacement and spare parts 700

For end mills



Fig. 1

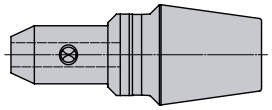
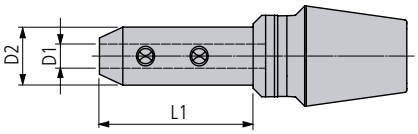


Fig. 2



MTIM ER …

Order designation		Dimensions							
		ER	D1	L1	D2				Fig.
MTIM ER8-1.00-10	■	8	1	10	6.4				1
MTIM ER8-1.00-15	■	8	1	15	6.4				1
MTIM ER8-1.50-10	■	8	1.5	10	6.4				1
MTIM ER8-1.50-15	■	8	1.5	15	6.4				1
MTIM ER8-1.59-10	■	8	1.59	10	6.4				1
MTIM ER8-1.59-15	■	8	1.59	15	6.4				1
MTIM ER8-2.00-10	■	8	2	10	6.4				1
MTIM ER8-2.00-15	■	8	2	15	6.4				1
MTIM ER8-3.00-10	■	8	3	10	7				1
MTIM ER8-3.00-15	■	8	3	15	7				1
MTIM ER8-3.18-10	■	8	3.18	10	7				1
MTIM ER8-3.18-15	■	8	3.18	15	7				1
MTIM ER11-1.59-10	■	11	1.59	10	6.4				1
MTIM ER11-2.00-10	■	11	2	10	6.4				1
MTIM ER11-3.00-10	■	11	3	10	8				1
MTIM ER11-3.00-15	■	11	3	15	8				1
MTIM ER11-3.00-20	■	11	3	20	8				2
MTIM ER11-3.18-10	■	11	3.18	10	8				1
MTIM ER11-3.18-15	■	11	3.18	15	8				1
MTIM ER11-3.18-20	■	11	3.18	20	8				2
MTIM ER11-4.00-15	■	11	4	15	8				1
MTIM ER11-4.00-20	■	11	4	20	8				2
MTIM ER16-1.00-16	■	16	1	16	6.4				1
MTIM ER16-1.50-16	■	16	1.5	16	6.4				1
MTIM ER16-1.59-16	■	16	1.59	16	6.4				1
MTIM ER16-2.00-16	■	16	2	16	6.4				1
MTIM ER16-3.00-16	■	16	3	16	9.5				1
MTIM ER16-3.00-25	■	16	3	25	9.5				2
MTIM ER16-3.18-16	■	16	3.18	16	9.5				1
MTIM ER16-3.18-25	■	16	3.18	25	9.5				2
MTIM ER16-4.00-16	■	16	4	16	9.5				1
MTIM ER16-4.00-25	■	16	4	25	9.5				2
MTIM ER16-4.76-16	■	16	4.76	16	9.5				1
MTIM ER16-4.76-25	■	16	4.76	25	9.5				2
MTIM ER16-5.00-16	■	16	5	16	9.5				1
MTIM ER16-5.00-25	■	16	5	25	9.5				2
MTIM ER20-3.00-25	■	20	3	25	9.5				2
MTIM ER20-3.18-16	■	20	3.18	16	9.5				1
MTIM ER20-3.18-25	■	20	3.18	25	9.5				2
MTIM ER20-4.00-14	■	20	4	14	9.5				1
MTIM ER20-4.00-16	■	20	4	16	9.5				1
MTIM ER20-4.00-25	■	20	4	25	9.5				2
MTIM-ER20-4.76-14	■	20	4.76	14	11.4				1
MTIM ER20-4.76-25	■	20	4.76	25	11.4				2
MTIM ER20-5.00-14	■	20	5	14	11.4				1
MTIM ER20-5.00-25	■	20	5	25	11.4				2

Continuation

Fig. 1

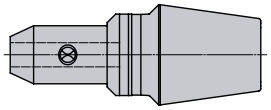
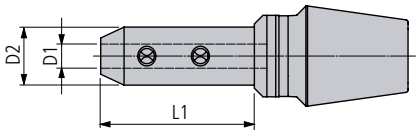


Fig. 2



MTIM ER …

Order designation		Dimensions							
		ER	D1	L1	D2				Fig.
MTIM ER20-6.00-14	■	20	6	14	12.5				1
MTIM ER20-6.00-25	■	20	6	25	12.5				2
MTIM ER20-6.35-14	■	20	6.35	14	12.5				1
MTIM ER20-6.35-25	■	20	6.35	25	12.5				2
MTIM ER25-3.00-25	■	25	3	25	10				2
MTIM ER25-3.18-25	■	25	3.18	25	10				2
MTIM ER25-4.00-25	■	25	4	25	10				2
MTIM ER25-4.76-25	■	25	4.76	25	12.5				2
MTIM ER25-5.00-25	■	25	5	25	12.5				2
MTIM ER25-6.00-25	■	25	6	25	12.5				2
MTIM ER25-6.35-25	■	25	6.35	25	12.5				2
MTIM ER25-7.00-25	■	25	7	25	16				2
MTIM ER25-7.94-25	■	25	7.94	25	16				2
MTIM ER25-8.00-25	■	25	8	25	16				2

For saw blades and side mills



Fig. 1

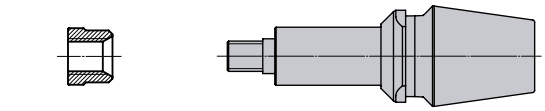
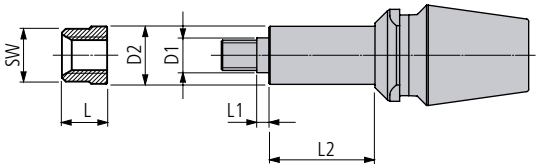


Fig. 2



MTIS ER …

Order designation		Dimensions							Saw blade thickness	
		ER	D1	D2	L1	L2	L	SW	Fig. 1	Fig. 2
MTIS ER11-3.00-10	■	11	3	6.35	1.27	10	5	5	0.13–2	1.2–3
MTIS ER11-3.00-14	■	11	3	6.35	1.27	14	5	5	0.13–2	1.2–3
MTIS ER11-3.00-19	■	11	3	6.35	1.27	19	5	5	0.13–2	1.2–3
MTIS ER11-3.00-25	■	11	3	6.35	1.27	25	5	5	0.13–2	1.2–3
MTIS ER11-3.18-10	■	11	3.18	6.35	1.27	10	5	5	0.13–2	1.2–3
MTIS ER11-3.18-14	■	11	3.18	6.35	1.27	14	5	5	0.13–2	1.2–3
MTIS ER11-3.18-19	■	11	3.18	6.35	1.27	19	5	5	0.13–2	1.2–3
MTIS ER11-3.18-25	■	11	3.18	6.35	1.27	25	5	5	0.13–2	1.2–3
MTIS ER11-4.76-10	■	11	4.76	8	1.27	10	5	7	0.13–2	1.2–3
MTIS ER11-4.76-14	■	11	4.76	8	1.27	14	5	7	0.13–2	1.2–3
MTIS ER11-4.76-19	■	11	4.76	8	1.27	19	5	7	0.13–2	1.2–3
MTIS ER11-4.76-25	■	11	4.76	8	1.27	25	5	7	0.13–2	1.2–3
MTIS ER11-5.00-10	■	11	5	8	1.27	10	5	7	0.13–2	1.2–3
MTIS ER11-5.00-14	■	11	5	8	1.27	14	5	7	0.13–2	1.2–3
MTIS ER11-5.00-19	■	11	5	8	1.27	19	5	7	0.13–2	1.2–3
MTIS ER11-5.00-25	■	11	5	8	1.27	25	5	7	0.13–2	1.2–3
MTIS ER11-6.00-10	■	11	6	8	1.27	10	6.35	7	0.13–2	1.2–3
MTIS ER11-6.00-14	■	11	6	8	1.27	14	6.35	7	0.13–2	1.2–3
MTIS ER11-6.00-19	■	11	6	8	1.27	19	6.35	7	0.13–2	1.2–3
MTIS ER11-6.00-25	■	11	6	8	1.27	25	6.35	7	0.13–2	1.2–3
MTIS ER16-3.00-18	■	16	3	6.35	1.27	18	6.35	5	0.13–2.5	1.2–3
MTIS ER16-3.00-24	■	16	3	6.35	1.27	24	6.35	5	0.13–2.5	1.2–3
MTIS ER16-3.18-18	■	16	3.18	6.35	1.27	18	6.35	5	0.13–2.5	1.2–3
MTIS ER16-3.18-24	■	16	3.18	6.35	1.27	24	6.35	5	0.13–2.5	1.2–4
MTIS ER16-4.76-18	■	16	4.76	9.53	1.27	18	6.35	8	0.13–2.5	1.2–4
MTIS ER16-4.76-24	■	16	4.76	9.53	1.27	24	6.35	8	0.13–2.5	1.2–4
MTIS ER16-5.00-18	■	16	5	9.53	1.27	18	6.35	8	0.13–2.5	1.2–4
MTIS ER16-5.00-24	■	16	5	9.53	1.27	24	6.35	8	0.13–2.5	1.2–4
MTIS ER16-6.00-18	■	16	6	9.53	1.27	18	6.35	8	0.13–2	1.2–4
MTIS ER16-6.00-24	■	16	6	9.53	1.27	24	6.35	8	0.13–2	1.2–4
MTIS ER16-6.35-18	■	16	6.35	9.53	1.27	18	6.35	8	0.13–2.5	1.2–4
MTIS ER16-6.35-24	■	16	6.35	9.53	1.27	24	6.35	8	0.13–2.5	1.2–4
MTIS ER16-7.94-18	■	16	7.94	10	1.27	18	6.35	9	0.13–2.5	1.2–4
MTIS ER16-7.94-24	■	16	7.94	10	1.27	24	6.35	9	0.13–2.5	1.2–4
MTIS ER16-8.00-18	■	16	8	10	1.27	18	6.35	9	0.13–2.5	1.2–4
MTIS ER16-8.00-24	■	16	8	10	1.27	24	6.35	9	0.13–2.5	1.2–4
MTIS ER20-3.00-18	■	20	3	6.35	1.27	18	6.35	5	0.13–3	1.2–3
MTIS ER20-3.00-30	■	20	3	6.35	1.27	30	6.35	5	0.13–3	1.2–3
MTIS ER20-3.18-18	■	20	3.18	6.35	1.27	18	6.35	5	0.13–3	1.2–3
MTIS ER20-3.18-30	■	20	3.18	6.35	1.27	30	6.35	5	0.13–3	1.2–3
MTIS ER20-4.76-18	■	20	4.76	9.53	1.27	18	6.35	8	0.13–3	1.2–4
MTIS ER20-4.76-30	■	20	4.76	9.53	1.27	30	6.35	8	0.13–3	1.2–4
MTIS ER20-5.00-18	■	20	5	9.53	1.27	18	6.35	8	0.13–3	1.2–4
MTIS ER20-5.00-30	■	20	5	9.53	1.27	30	6.35	8	0.13–3	1.2–4
MTIS ER20-6.00-18	■	20	6	9.53	1.27	18	6.35	8	0.13–3	1.2–4

Continuation

Fig. 1

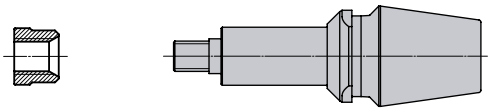
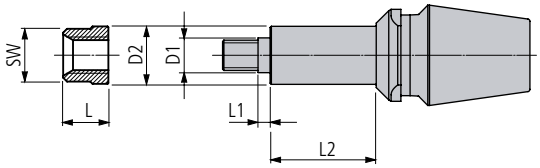


Fig. 2



MTIS ER …

Order designation		Dimensions							Saw blade thickness	
		ER	D1	D2	L1	L2	L	SW	Fig. 1	Fig. 2
MTIS ER20-6.00-30	■	20	6	9.53	1.27	30	6.35	8	0.13–3	1.2–4
MTIS ER20-6.35-18	■	20	6.35	9.53	1.27	18	6.35	8	0.13–3	1.2–4
MTIS ER20-6.35-30	■	20	6.35	9.53	1.27	30	6.35	8	0.13–3	1.2–4
MTIS ER20-7.94-18	■	20	7.94	10	1.27	18	6.35	9	0.13–3	1.2–4
MTIS ER20-7.94-30	■	20	7.94	10	1.27	30	6.35	9	0.13–3	1.2–4
MTIS ER20-8.00-18	■	20	8	10	1.27	18	6.35	9	0.13–3	1.2–4
MTIS ER20-8.00-30	■	20	8	10	1.27	30	6.35	9	0.13–3	1.2–4
MTIS ER20-9.52-18	■	20	9.52	12.5	1.27	18	7	11	0.13–3	1.2–4
MTIS ER20-9.52-30	■	20	9.52	12.5	1.27	30	7	11	0.13–3	1.2–4
MTIS ER20-10.0-18	■	20	10	12.5	1.27	18	7	11	0.13–4	1.2–6
MTIS ER20-10.0-30	■	20	10	12.5	1.27	30	7	11	0.13–4	1.2–6

Including clamping nuts

Legend 6…

For tool clamp

Illustration	Description	Dimensions	Order designation		Tool holders
	Clamping screw	M2 × 2	MSP 20020 GST IB0.9	■	MTIM ER8…
		M3 × 3	MSP 30030 GST IB1.5	■	MTIM ER11… / MTIM ER16… / MTIM ER20-3.00–5.00 / MTIM ER25-3.00–5.00
		M4 × 4	MSP 40040 GST IB2	■	MTIM ER20-6.00–6.35 / MTIM ER 25-6.00–8.00
	Allen key	SW 0.9	MSP IB0.9	■	MTIM ER8…

For positionable stop

Illustration	Description	Dimensions	Order designation		Tool holders
	Headless screw with hexagon socket	M4 × 4	MSP 40040 GST IB2	■	MTIM ER8…
		M6 × 5	MSP 60050 AN IB3-2.5	■	MTIM ER11…
		M8 × 6	MSP 80060 AN IB4-2.5	■	MTIM ER16… / MTIM ER20…
		M10 × 21	MSP 100210 AN IB5-2.5	■	MTIM ER25…

For side mill holder

Illustration	Description	Dimensions	Order designation		Tool holders
	Clamping nut	M3 × 0.5	MSP TI 03.00 ER11	■	MTIS ER11-3.00… / MTIS ER11-3.18…
		M3 × 0.5	MSP TI 03.00 ER16-ER20	■	MTIS ER16-3.00… / MTIS ER16-3.18… / MTIS ER20-3.00… / MTIS ER20-3.18…
		10-32 UNF	MSP TI 04.76 ER16-ER20	■	MTIS ER16-4.76… / MTIS ER20-4.76…
		10-32 UNF	MSP TI 05.00 ER11	■	MTIS ER11-4.76… / MTIS ER11-5.00…
		M5 × 0.8	MSP TI 05.00 ER16-ER20	■	MTIS ER16-5.00… / MTIS ER20-5.00…
		M6 × 1	MSP TI 06.00 ER11	■	MTIS ER11-6.00…
		M6 × 1	MSP TI 06.00 ER16-ER20	■	MTIS ER16-6.00… / MTIS ER20-6.00…
		¼-32 UNF	MSP TI 06.35 ER16-ER20	■	MTIS ER16-6.35… / MTIS ER20-6.35…
		5/16-32 UNF	MSP TI 08.00 ER16-ER20	■	MTIS ER16-7.94… / MTIS ER16-8.00… / MTIS ER20-7.94… / MTIS ER20-8.00…
		⅜-32 UNF	MSP TI 10.00 ER20	■	MTIS ER20-9.52… / MTIS ER20-10.00…

For spindle-connection

Illustration	Description	Dimensions	Order designation		Tool holders
	Clamping nut	M10 × 0.75	Hi-Q / ERM 8	■	ER8
		M13 × 0.75	Hi-Q / ERM 11	■	ER11
		M19 × 1	Hi-Q / ERM 16	■	ER16
		M24 × 1	Hi-Q / ERM 20	■	ER20
		M30 × 1	Hi-Q / ERM 25	■	ER25

Notes *multidec®-TAPER-IN*

Screwdrivers

Maximum possible hardness combined with high toughness are essential for any high quality tool.
Use of a special alloy gives our blades exceptional toughness and elasticity even at a hardness of 58 to 60 HRC.
The special surface structure of the handle gives a firm grip even with wet and oily hands.
Safe working and a long tool life are guaranteed with this screwdriver.







Overview – Screwdrivers

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Torque screwdrivers 704

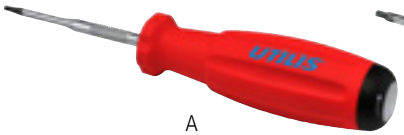


Replaceable blades 704

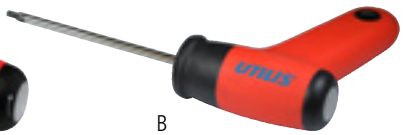


TORX screwdrivers 705





A



B



MSP TX… / GHEX … D*

Order designation		Dimensions TORX	TORX PLUS	Allen head	Torque (Nm)	Handle
MSP TX06 D	■	T06			0.6	A
MSP TX07 D	■	T07			0.9	A
MSP TX08 D	■	T08			1.2	A
MSP TX09 D	■	T09			1.4	A
MSP TX10 D	■	T10			2	A
MSP TX15 D	■	T15			3	A
MSP TX20 D	■	T20			3	A
MSP TXP06 D	■		TP06		0.6	A
MSP TXP07 D	■		TP07		0.9	A
MSP TXP08 D	■		TP08		1.2	A
MSP TXP09 D	■		TP09		1.4	A
MSP TXP10 D	■		TP10		2	A
MSP TXP15 D	■		TP15		3	A
MSP TXP20 D	■		TP20		3	A
MSP GHEX 2.9 D	■			M4	2.9	A
MSP GHEX 6.0 D	■			M5	6	B
MSP GHEX 10.0 D	■			M6	10	B

MSP KTX… / KHEX … D

Order designation		Screw
MSP KTX06 D	■	M… T 06
MSP KTX07 D	■	M… T 07
MSP KTX08 D	■	M… T 08
MSP KTX09 D	■	M… T 09
MSP KTX10 D	■	M… T 10
MSP KTX15 D	■	M… T 15
MSP KTX20 D	■	M… T 20
MSP KTXP06 D	■	M… TP 06
MSP KTXP07 D	■	M… TP 07
MSP KTXP08 D	■	M… TP 08
MSP KTXP09 D	■	M… TP 09
MSP KTXP10 D	■	M… TP 10
MSP KTXP15 D	■	M… TP 15
MSP KTXP20 D	■	M… TP 20
MSP KHEX IB3 D	■	M4
MSP KHEX IB4 D	■	M5
MSP KHEX IB5 D	■	M6

* Preset with replaceable blade (TORX and TORX PLUS can be used with the same handle)





MSP TX…

Order designation		Dimensions				Screw
		TORX	TORX PLUS	Allen head	Torque (Nm)	
MSP TX05	■	T05				M… T 05
MSP TX06	■	T06				M… T 06
MSP TX07	■	T07				M… T 07
MSP TX08	■	T08				M… T 08
MSP TX09	■	T09				M… T 09
MSP TX10	■	T10				M… T 10
MSP TX15	■	T15				M… T 15
MSP TX20	■	T20				M… T 20
MSP TXP06	■		TP06			M… TP 06
MSP TXP07	■		TP07			M… TP 07
MSP TXP08	■		TP08			M… TP 08
MSP TXP09	■		TP09			M… TP 09
MSP TXP10	■		TP10			M… TP 10
MSP TXP15	■		TP15			M… TP 15
MSP TXP20	■		TP20			M… TP 20

These collets are made in-house by UTILIS and can be supplied from stock. They are manufactured for universal use with all screw-fitted milling cutters which have the same interface-specific application. To be used as ER adapters they offer several advantages, even by comparison with full carbide shank milling cutters.



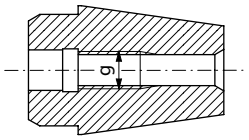




Special features and advantages:
– Short and stable tool clamping
– Suitable for use on both, Swiss type lathes and regular short turning lathes
– Fewer vibrations than carbide endmill (less wear/tool breakage)
– Lower tool costs
– Higher cutting parameters than carbide endmill
– Also suitable for low power machines
– Concentricity <0.005 mm



ER.. EF ..



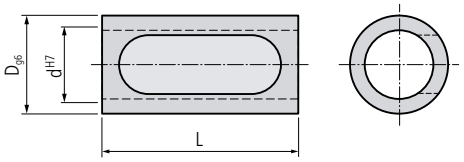
Order designation		Dimensions g						Collet type (DIN/ISO 15488, Form A)
ER16 EF M6	■	M6						ER16
ER16 EF M8	■	M8						ER16
ER16 EF M8-LH	■	M8-LH*						ER16
ER16 EF M10	■	M10						ER16
ER20 EF M6	■	M6						ER20
ER20 EF M8	■	M8						ER20
ER20 EF M10	■	M10						ER20
ER20 EF M12	■	M12						ER20
ER20 EF M14-LH	■	M14-LH*						ER20
ER25 EF M6	■	M6						ER25
ER25 EF M8	■	M8						ER25
ER25 EF M10	■	M10						ER25
ER32 EF M6	■	M6						ER32
ER32 EF M8	■	M8						ER32
ER32 EF M10	■	M10						ER32

* LH = Left-hand thread

The reduction sleeve gives the possibility fixing small tools in to the machine tool fixtures with bigger diameters. This small investment is an extremely flexible and economic solution giving an independent solution for different tool fixing situations.







MRH …

Order designation		Dimensions											
		D_{g6}	d^{H7}	L									
MRH 15875 1230	■	15.875	12	30									
MRH 1600 1230	■	16	12	30									
MRH 1905 0840	■	19.05	8	40									
MRH 1905 1040	■	19.05	10	40									
MRH 1905 1240	■	19.05	12	40									
MRH 1905 1440	■	19.05	14	40									
MRH 1905 1640	■	19.05	16	40									
MRH 2000 1040	■	20	10	40									
MRH 2000 1240	■	20	12	40									
MRH 2000 1640	■	20	16	40									
MRH 2200 1240	■	22	12	40									
MRH 2200 1640	■	22	16	40									
MRH 2500 1240	■	25	12	40									
MRH 2500 1640	■	25	16	40									
MRH 2500 2040	■	25	20	40									
MRH 2540 1240	■	25.4	12	40									
MRH 2540 1640	■	25.4	16	40									
MRH 2540 2040	■	25.4	20	40									
MRH 3300 2040	■	33	20	40									
MRH 3300 2240	■	33	22	40									
MRH 3300 2540	■	33	25	40									

Concentricity < 0.01 mm

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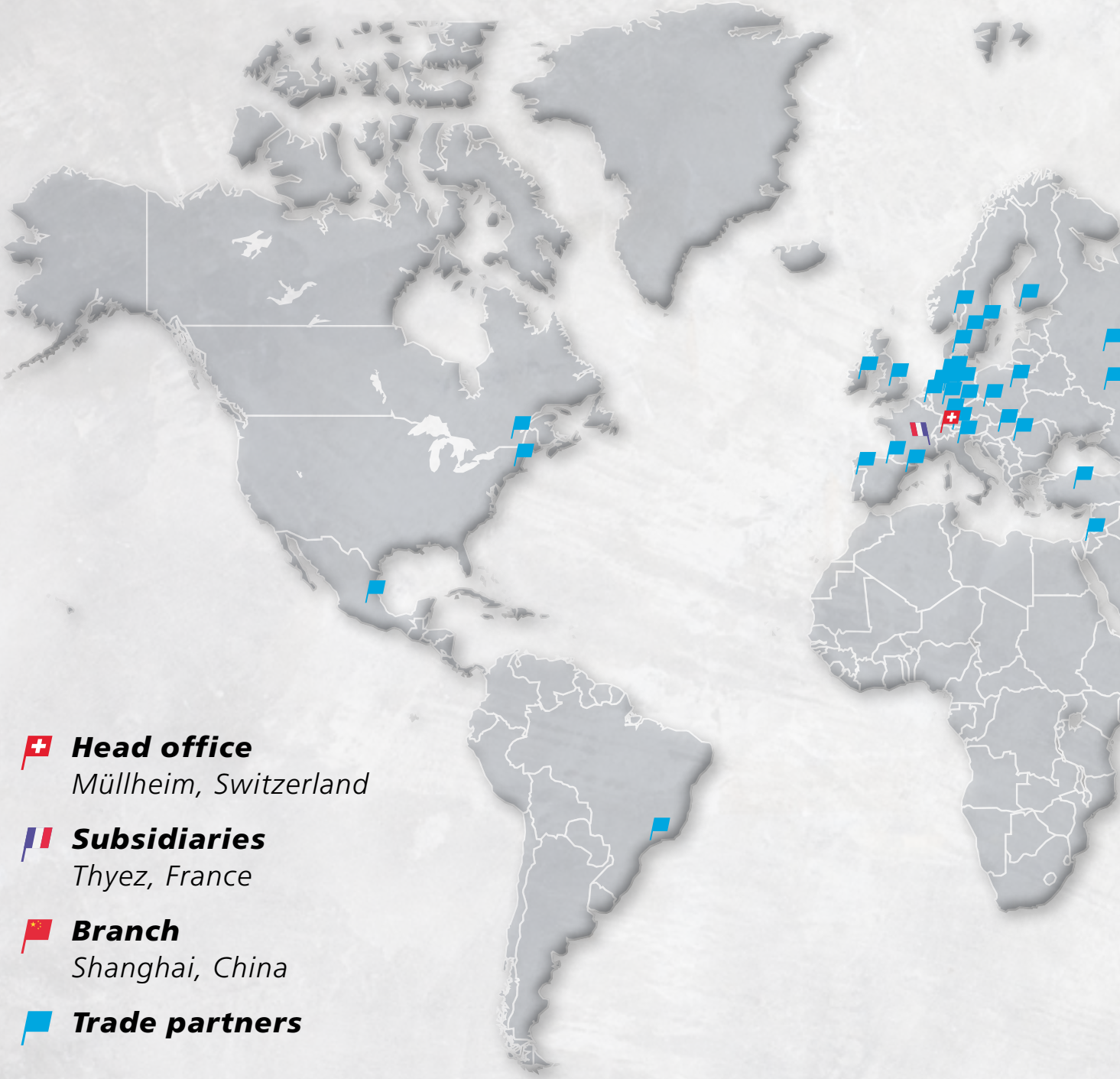
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■ ***Utilis AG, Precision Tools***
Kreuzlingerstrasse 22, CH-8555 Müllheim, Switzerland
Phone +41 52 762 62 62, Fax +41 52 762 62 00
info@utilis.com, www.utilis.com

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