

UP²DATE

Precision Thread Production

Thanks to the new performance upgrade, the MonoThread milling cutter now ensures maximum durability and value.

... ADDITIONAL PRODUCT HIGHLIGHTS

- ▲ Workpiece clamping for all small sizes: Zero point clamping system **MNG mini** takes performance to the max.
- ▲ Modular, flexible, extensive: Exchangeable head system **MaxiChange** now with grooving heads.

CERATIZIT is a high-technology engineering group specialised in cutting tools and hard material solutions.

Tooling a Sustainable Future

ceratizit.com



CERATIZIT
GROUP

Welcome!



It couldn't be easier

**Ordering via the
Online Shop**

<http://cuttingtools.ceratizit.com>



On-site technical support

**Your Local Technical
Sales Engineer**

Your customer number

MonoThread – SFSE & SGF

The threading specialists with
a real performance boost



WNT

Improved thread milling cutter performance

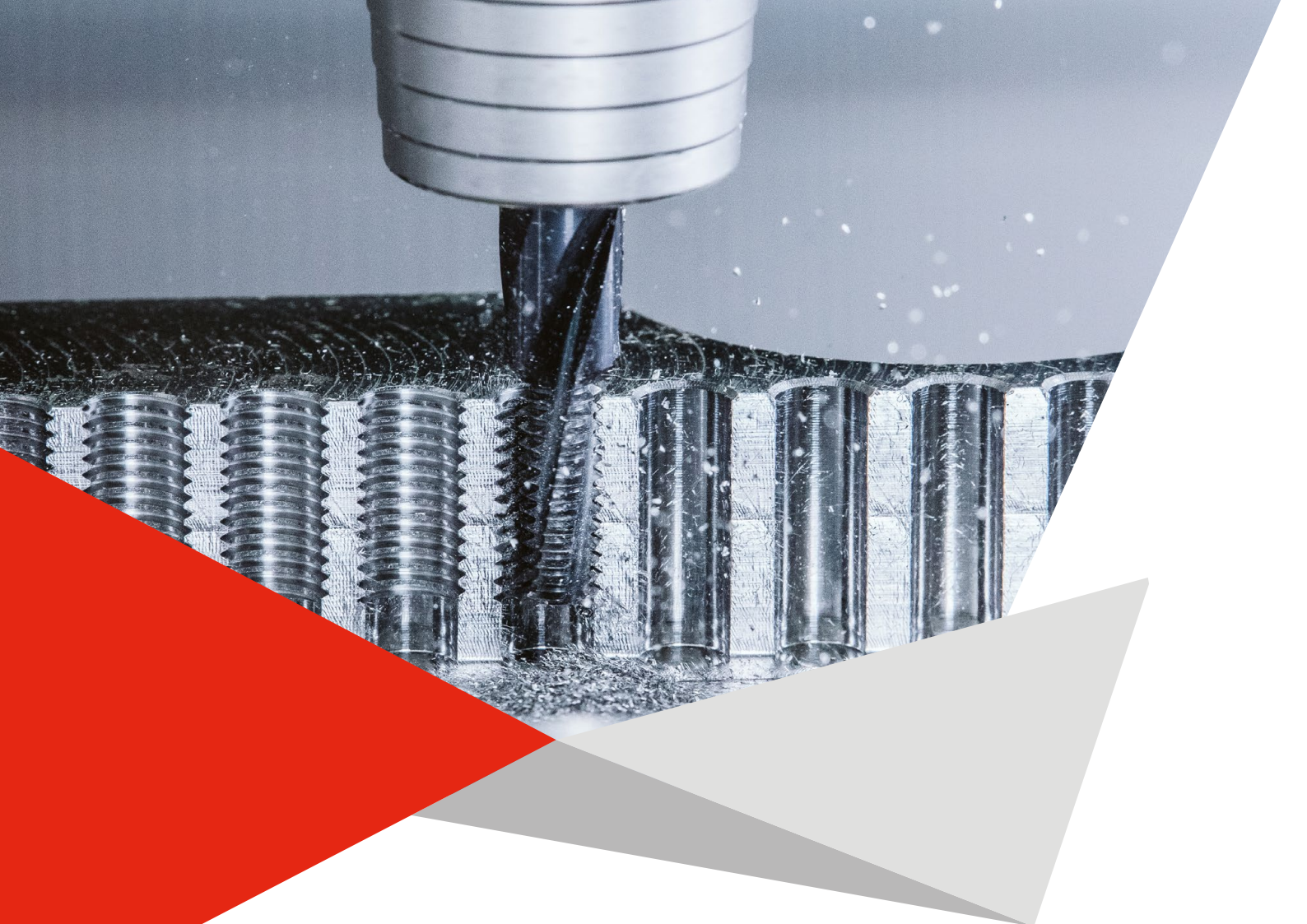
In recent years, thread milling has become a viable alternative to tapping and thread forming or thread whirling. With the MonoThread – SGF as a shank thread milling cutter and the MonoThread – SFSE, the shank thread milling cutter with chamfer facet, CERATIZIT has launched two completely reworked tools from the Performance Line. Our tool developers placed particular focus on the performance aspect of both tools.



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You can find further information on the product here.

cts.ceratizit.com/en/monothread-sfg-sfse



The new editions of CERATIZIT's Performance MonoThread – SGF & SFSE thread milling cutters are making strides towards their mission:

→ **Reliable increase in performance of up to 20% compared to the previous model!**

The product upgrade guarantees enhanced performance:

▲ Increased number of cutting edges	→	Quicker machining time
▲ Optimised core rounding and taper	→	Improved service life and dimensional accuracy
▲ Precision grinding	→	Significantly higher grinding quality
▲ Thro' coolant from a thread size of M4	→	Improved tool life
▲ Advanced coating	→	Higher wear resistance
▲ Possible to regrind up to three times	→	higher efficiency



Find out more about our regrinding service here:

cts.ceratizit.com/en/regrinding

Material-friendly thread production

The quality of a thread often determines whether the final product is a success or a reject. As it is often produced at the very end of the entire machining process, maximum precision and process security are key. Our new Performance shank thread milling cutters are undisputed champions in this area and boast an improved service life and unbeatable price-performance ratio.



Thread milling cutter

MonoThread – SGF

- ▲ 28 different versions
- ▲ Thread types → M / MF / G
- ▲ Materials → Universal



Thread milling cutter with chamfer facet

MonoThread – SFSE

- ▲ 38 different versions
- ▲ Thread types → M / MF / G / NPT / UNC / UNF
- ▲ Materials → Universal

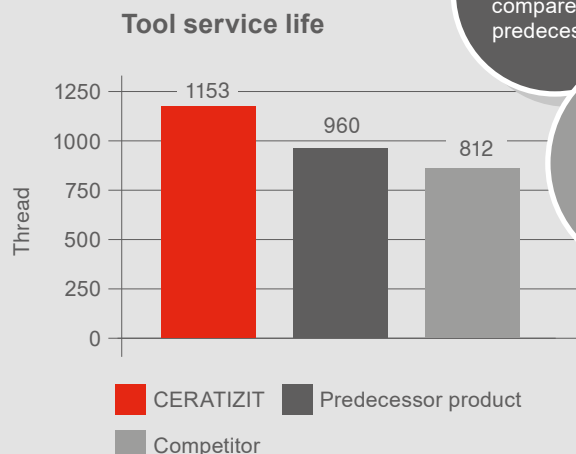


The new thread milling cutters are also available in different lengths as semi-standard products!

The thread milling cutter upgrade is ideal for all standardised thread profiles with all tolerances and especially for asymmetrical, thin-walled, large or very expensive workpieces. The new shank thread milling cutters can be used to machine any materials, including high-strength and tempered steels.

Test report: **MonoThread – SFSE**

Process	Thread milling
Product	MonoThread – SFSE M8 2xD
Thread depth	16 mm
Material	42CrMo4
Cooling	Int. coolant supply
Technology	$v_c = 100 \text{ m/min}$ $f_z = 0.040 \text{ mm/tooth}$



+20%

compared to predecessor

+40%

compared to competition

One system, unlimited possibilities

Grooving heads added to the flexible
MaxiChange exchangeable head system

CERATIZIT



cts.ceratizit.com/en/maxichange

MaxiChange GX keeps a cool head during grooving

The MaxiChange exchangeable head system, with its countless base holders through to its vibration-damped boring bars, has become a flexible solution for a wide range of turning operations. Now we are expanding the product range to include the MaxiChange GX modular grooving system – which features an internal coolant supply to boot – to achieve a cool head, even under challenging conditions.

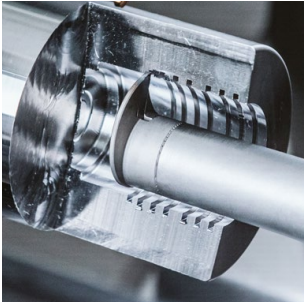


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You can find further information on the product here.

Flexible solution for a variety of applications

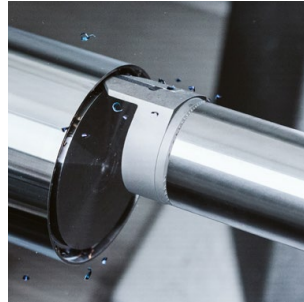
As the MaxiChange exchangeable head system is modular, it is extremely flexible and can be used for a variety of applications thanks to the wide selection of exchangeable heads. On top of these advantages, the MaxiChange GX also includes a grooving function for internal and external machining as well as axial and radial machining.



Internal



External



axial



radial

Advantage/benefit

Modular → All heads and base holders are compatible with each other

Flexible → Can be used for a variety of applications

Extensive → Wide range of exchangeable heads and base holders

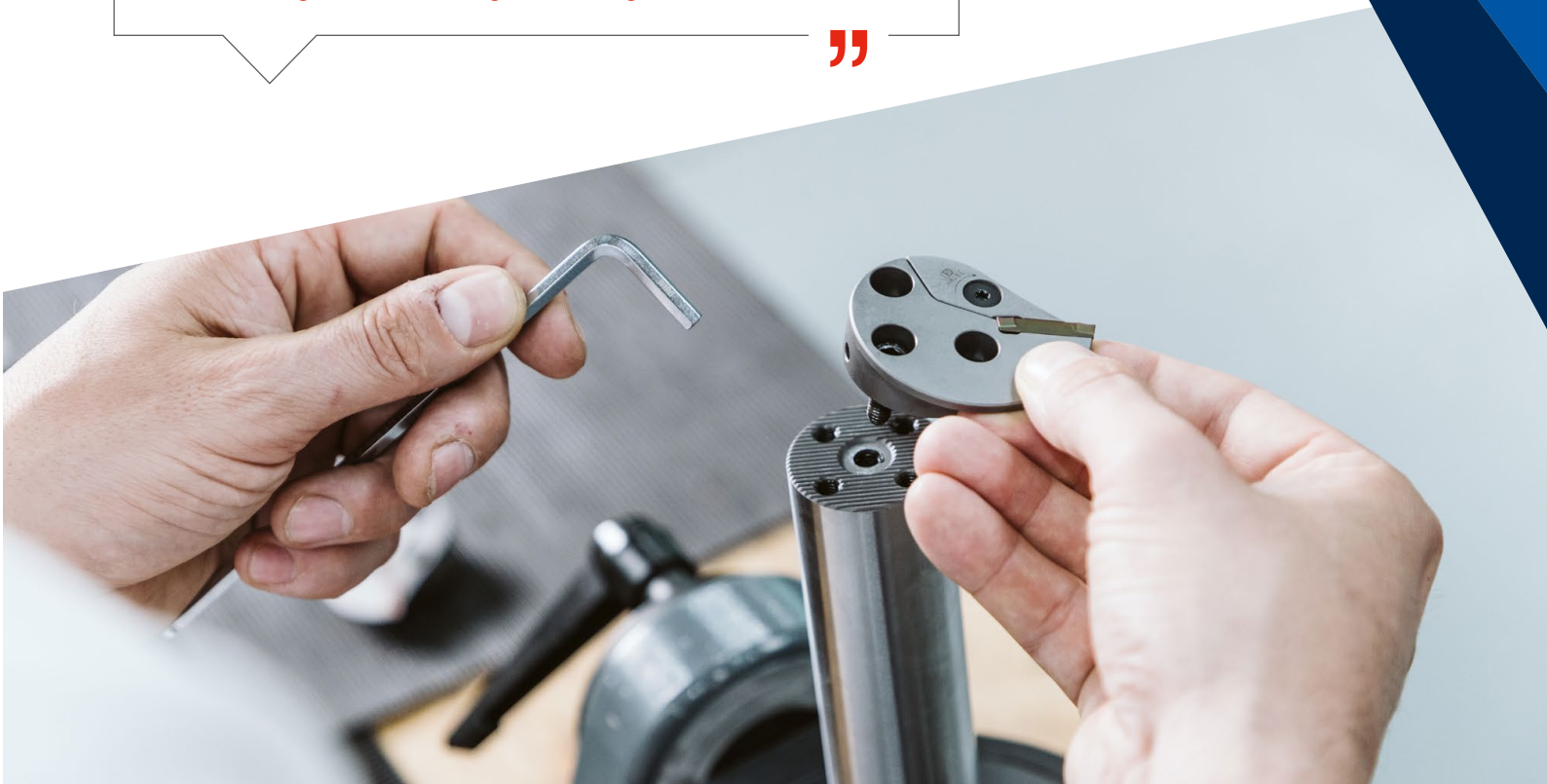
“

We have engineered the system for maximum changeover precision and exceptional stability. At the same time, the modular design means it is extremely flexible and can be used for a variety of applications thanks to its wide selection of exchangeable heads.

Paul Höckberg, Product Manager Grooving Tools



”



Zero point clamping system – MNG mini

For workpiece clamping in the smaller dimension range



WNT

MNG mini – small zero point clamping system that delivers maxi performance

Machine reference points are indispensable when it comes to highly precise machining. Zero point clamping systems, which are used both to clamp as well as to position the workpiece, are established solutions for this.

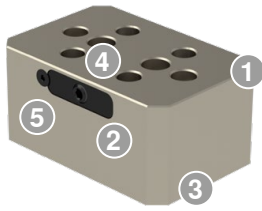
With the MNG mini, CERATIZIT is launching the little brother of the tried-and-tested MNG mechanical zero point clamping system – a stand-out product thanks to its weight-optimised consoles, pyramids and clamping towers with an integrated zero point clamping system for small clamping devices. These vices can be quickly and easily clamped manually using the four clamping bolts to increase machine runtimes while also reducing setup times.



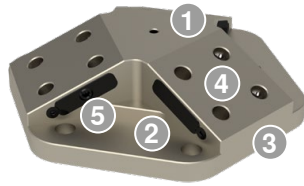
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You can find further information on the product here.

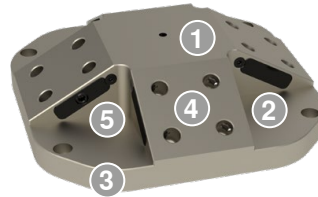
System overview



1-sided console



3-sided pyramid



4-sided pyramid



3-sided clamping tower

1 Suitable for the following clamping systems:

- ▲ ZSG 4 / 80 L-130
- ▲ ZSG mini 70 L-80
- ▲ ZSG mini 70 L-100
- ▲ ESG 5 80 L-130

4 Centre distance:

- ▲ 52 x 52 mm mounting bolt spacing
- ▲ Compatible with other manufacturers

2 Mechanical clamping:

- ▲ 1 clamping screw per MNG mini
- ▲ Tightening torque 30 Nm
- ▲ Insertion force 15 kN
- ▲ Width across flats 6 mm

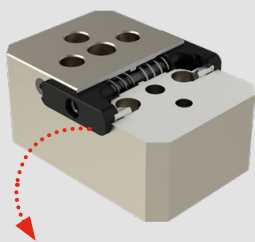
5 Integrated zero point clamping system:

- ▲ Weight-saving
- ▲ More cost effective
- ▲ Fewer interference contours

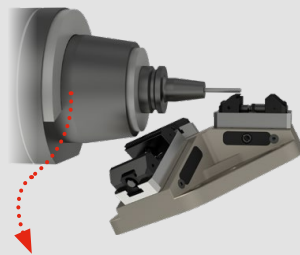
3 Clamping options:

- ▲ Pallet and machine table
- ▲ Zero point clamping systems

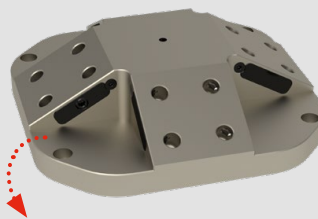
Advantage/benefit



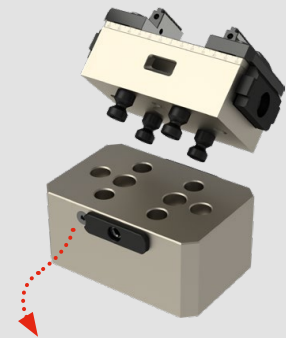
Integrated zero point clamping system



Optimum accessibility with the machine spindle



Lightweight due to use of a high-strength, hard-anodised aluminium alloy



Quick, simple and accurate setup and retrofitting



Multi-clamping on 5-axis machines





Exchangeable head system – MaxiChange

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Zero point clamping system – MNG mini

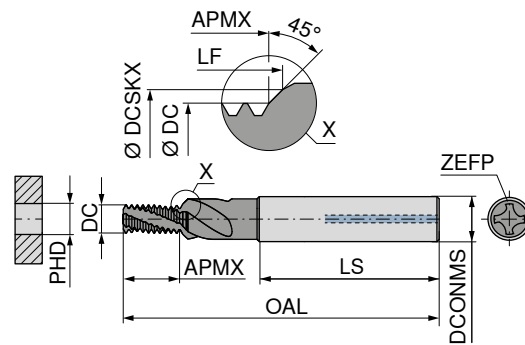
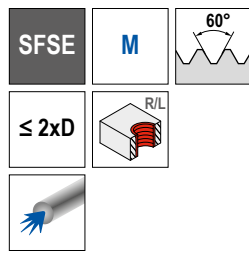


MonoThread – SFSE & SGF



MonoThread – Thread Milling Cutter with Chamfer Facet

▲ Profile corrected



NEW

AlTiN



Solid carbide

50 552 ...

DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	DCSKX mm	LF mm	ZEFP	PHD mm	
3,95	M5	0,80	55	10,05	36	6	5,3	10,60	3	4,2	05000
4,68	M6	1,00	62	12,56	36	8	6,3	13,20	4	5,0	06000
6,22	M8	1,25	74	16,99	40	10	8,3	17,76	4	6,8	08000
7,79	M10	1,50	79	20,41	45	12	10,3	21,30	4	8,5	10000
9,38	M12	1,75	89	25,57	45	14	12,3	26,60	5	10,2	12000
12,83	M16	2,00	102	33,27	48	18	16,3	34,42	5	14,0	16000



NEW

50 553 ...

DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	DCSKX mm	LF mm	ZEFP	PHD mm	
6,22	M8x1	1,00	74	16,69	40	10	8,3	17,34	4	7,0	08200
7,79	M10x1	1,00	79	20,81	45	12	10,3	21,46	4	9,0	10200
7,79	M10x1,25	1,25	79	20,85	45	12	12,3	21,63	4	8,8	10300
9,38	M12x1,25	1,25	89	24,72	45	14	12,3	25,49	5	10,8	12300
9,38	M12x1,5	1,50	89	25,02	45	14	12,3	25,92	5	10,5	12400
10,92	M14x1	1,00	102	29,06	48	16	14,3	29,71	5	13,0	14200
10,92	M14x1,5	1,50	102	29,65	48	16	14,3	30,55	5	12,5	14400
12,82	M16x1,5	1,50	102	32,67	48	18	14,3	33,57	5	14,5	16400

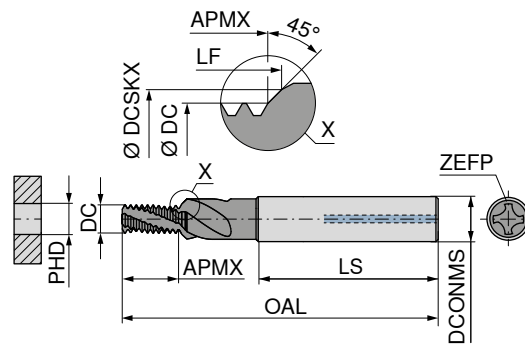
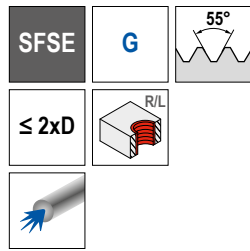
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→ v_c/f_z Page 19

When calculating the feedrate for circular milling it is important to know whether contour feed v_f or feed on the center path v_{fm} is used.

MonoThread – Thread Milling Cutter with Chamfer Facet

▲ Profile corrected



NEW

AlTiN



Solid carbide

50 551 ...

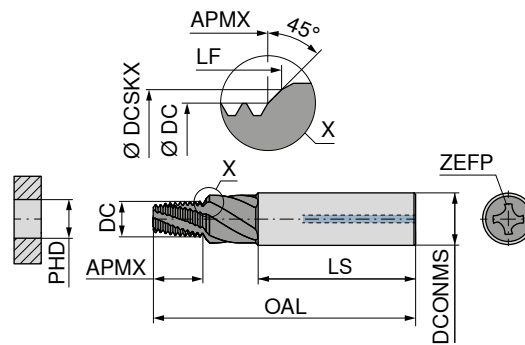
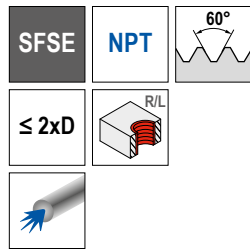
DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	DCSKX mm	LF mm	ZEFP	PHD mm	
7,79	G 1/8-28	0,907	79	20,59	45	12	10,03	21,25	4	8,80	01800
10,92	G 1/4-19	1,337	102	27,53	48	16	13,46	28,43	5	11,80	01400
13,92	G 3/8-19	1,337	102	34,34	48	18	16,96	35,24	5	15,25	03800
15,98	G 1/2-14	1,814	127	43,27	56	25	21,25	44,45	5	19,00	01200
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→ v_c/f_z Page 19

When calculating the feedrate for circular milling it is important to know whether contour feed v_f or feed on the center path v_{fm} is used.

MonoThread – Thread Milling Cutter with Chamfer Facet

▲ Profile corrected



NEW

AlTiN



Solid carbide

50 554 ...

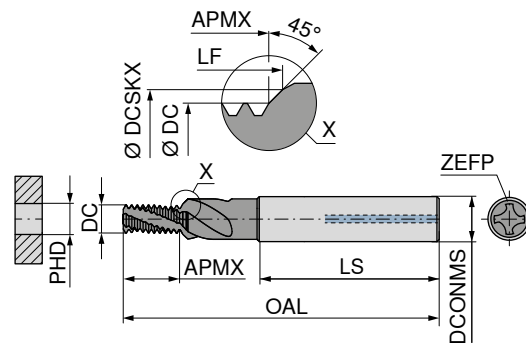
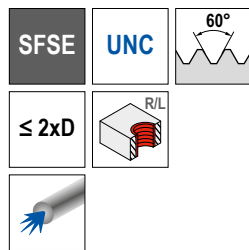
DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	DCSKX mm	LF mm	ZEFP	PHD mm	
5,45	NPT 1/16-27	0,941	64	9,86	40	10	8,70	11,33	4	6,15	11600
7,87	NPT 1/8-27	0,941	74	9,86	45	12	11,10	11,33	4	8,50	01800
10,10	NPT 1/4-18	1,411	80	14,78	48	16	14,50	16,76	5	11,10	01400
16,42	NPT 1/2-14	1,814	94	18,98	48	18			5	17,90	01200 ¹⁾
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1) Chamfer section at the front of the tool

→ v_c/f_z Page 19When calculating the feedrate for circular milling it is important to know whether contour feed v_f or feed on the center path v_{fm} is used.

MonoThread – Thread Milling Cutter with Chamfer Facet

▲ Profile corrected



NEW

AlTiN



Solid carbide

50 555 ...

DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	DCSKX mm	LF mm	ZEFP mm	PHD mm	
4,70	UNC 1/4-20	1,270	62	14,68	36	8	6,65	15,46	4	5,1	01400
6,22	UNC 5/16-18	1,411	74	16,28	40	10	8,24	17,14	4	6,6	51600
7,34	UNC 3/8-16	1,588	79	19,98	45	12	9,83	20,92	4	8,0	03800
8,57	UNC 7/16-14	1,814	79	22,83	45	12	11,41	23,89	4	9,4	71600
9,38	UNC 1/2-13	1,954	89	26,71	45	14	13,00	27,83	5	10,8	01200
10,92	UNC 9/16-12	2,117	102	30,99	48	16	14,60	32,20	5	12,2	91600
12,50	UNC 5/8-11	2,309	102	33,72	48	18	16,18	35,03	5	13,5	05800
15,21	UNC 3/4-10	2,540	110	39,68	50	20	19,35	41,10	5	16,5	03400



NEW

50 556 ...

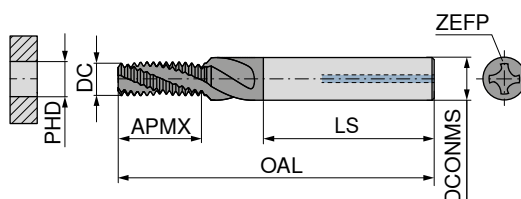
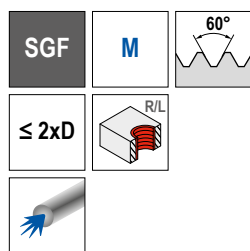
DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	DCSKX mm	LF mm	ZEFP mm	PHD mm	
4,70	UNF 1/4-28	0,907	62	14,24	36	8	6,65	14,84	4	5,5	01400
6,22	UNF 5/16-24	1,058	74	16,56	40	10	8,24	17,23	4	6,9	51600
7,79	UNF 3/8-24	1,058	79	19,73	45	12	9,83	20,41	4	8,5	03800
9,32	UNF 7/16-20	1,270	89	22,34	45	14	11,40	23,13	5	9,9	71600
9,38	UNF 1/2-20	1,270	89	26,57	45	14	13,00	27,36	5	11,5	01200
10,92	UNF 9/16-18	1,411	102	29,43	48	16	14,59	30,29	5	12,9	91600
12,82	UNF 5/8-18	1,411	102	33,58	48	18	16,18	34,43	5	14,5	05800
15,82	UNF 3/4-16	1,587	110	39,29	50	20	19,35	40,23	5	17,5	03400

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→ v_c/f_z Page 19When calculating the feedrate for circular milling it is important to know whether contour feed v_f or feed on the center path v_{fm} is used.

MonoThread – Thread Milling Cutter

▲ Profile corrected



NEW

AlTiN



Solid carbide

50 531 ...

DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	ZEFP	PHD mm	
2,44	M3	0,50	42	6,24	36	4	3	2,5	03000 ¹⁾
3,14	M4	0,70	49	8,00	36	6	3	3,3	04000
3,95	M5	0,80	55	10,00	36	6	3	4,2	05000
4,68	M6	1,00	55	12,47	36	6	4	5,0	06000
6,22	M8	1,25	62	16,83	36	8	4	6,8	08000
7,79	M10	1,50	74	20,20	40	10	4	8,5	10000
9,38	M12	1,75	79	25,32	45	12	5	10,2	12000
10,92	M14	2,00	89	28,93	45	14	5	12,0	14000
12,83	M16	2,00	102	32,94	48	16	5	14,0	16000
13,93	M18	2,50	102	36,17	48	16	5	15,5	18000
15,83	M20	2,50	110	41,17	50	20	5	17,5	20000

1) Without Through Coolant



NEW

50 532 ...

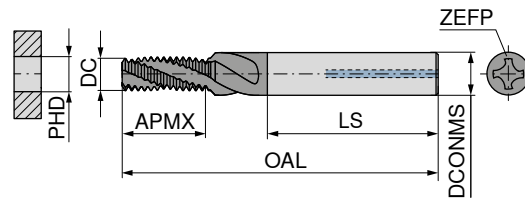
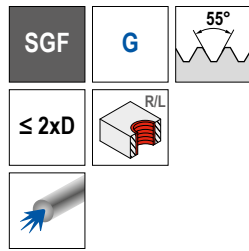
DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	ZEFP	PHD mm	
3,14	M4x0,5	0,50	49	8,00	36	6	3	3,5	04000
3,95	M5x0,5	0,50	55	10,00	36	6	3	4,5	05000
4,68	M6x0,75	0,75	55	12,34	36	6	4	5,2	06100
6,22	M8x0,75	0,75	62	16,09	36	8	4	7,2	08100
6,22	M8x1	1,00	62	16,46	36	8	4	7,0	08200
7,79	M10x1	1,00	74	20,46	40	10	4	9,0	10200
9,38	M12x1	1,00	79	24,45	45	12	5	11,0	12200
9,38	M12x1,5	1,50	79	24,69	45	12	5	10,5	12400
10,92	M14x1,5	1,50	89	29,19	45	14	5	12,5	14400
12,82	M16x1,5	1,50	102	32,19	48	16	5	14,5	16400
13,93	M18x1,5	1,50	102	36,68	48	16	5	16,5	18400
15,83	M20x1,5	1,50	110	41,18	50	20	5	18,5	20400

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→ v_c/f_z Page 19When calculating the feedrate for circular milling it is important to know whether contour feed v_t or feed on the center path v_{fm} is used.

MonoThread – Thread Milling Cutter

▲ Profile corrected



NEW

AlTiN



Solid carbide

50 530 ...

DC mm	Thread	TP mm	OAL mm	APMX mm	LS mm	DCONMS _{h6} mm	ZEFP	PHD mm	
7,79	G 1/8-28	0,907	74	20,35	40	10	4	8,80	01800
10,92	G 1/4-19	1,337	89	27,34	45	14	5	11,80	01400
13,92	G 3/8-19	1,337	102	35,36	48	16	5	15,25	03800
15,90	G 1-11	2,309	102	33,29	48	16	5	30,75	10000
15,98	G 1/2-14	1,814	110	42,51	50	20	5	19,00	01200

P	●
M	●
K	●
N	●
S	●
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→ v_c/f_z Page 19

When calculating the feedrate for circular milling it is important to know whether contour feed v_f or feed on the center path v_{fm} is used.

Material examples for cutting data tables

	Material sub-group	Index	Composition / Structure / Heat treatment		Tensile strength N/mm ² / HB / HRC	Material number	Material designation	Material number	Material designation
P	Unalloyed steel	P.1.1	< 0,15 % C	Annealed	420 N/mm ² / 125 HB	1.0401	C15	1.1141	Ck15
		P.1.2	< 0,45 % C	Annealed	640 N/mm ² / 190 HB	1.1191	C45E	1.0718	9SMnPb28
		P.1.3		Tempered	840 N/mm ² / 250 HB	1.1191	C45E	1.0535	C55
		P.1.4	< 0,75 % C	Annealed	910 N/mm ² / 270 HB	1.1223	C60R	1.0535	C55
		P.1.5		Tempered	1010 N/mm ² / 300 HB	1.1223	C60R	1.0727	45S20
	Low-alloy steel	P.2.1		Annealed	610 N/mm ² / 180 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.2		Tempered	930 N/mm ² / 275 HB	1.7131	16MnCr5	1.6587	17CrNiMo6
		P.2.3		Tempered	1010 N/mm ² / 300 HB	1.7225	42CrMo4	1.3505	100Cr6
		P.2.4		Tempered	1200 N/mm ² / 375 HB	1.7225	42CrMo4	1.3505	100Cr6
	High-alloy steel and high-alloy tool steel	P.3.1		Annealed	680 N/mm ² / 200 HB	1.4021	X20Cr13	1.4034	X46Cr13
		P.3.2		Hardened and tempered	1100 N/mm ² / 300 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
		P.3.3		Hardened and tempered	1300 N/mm ² / 400 HB	1.2343	X38CrMoV5-1	1.4034	X46Cr13
	Stainless steel	P.4.1	Ferritic / martensitic	Annealed	680 N/mm ² / 200 HB	1.4016	X6Cr17	1.2316	X36CrMo16
		P.4.2	Martensitic	Tempered	1010 N/mm ² / 300 HB	1.4112	X90CrMoV18	1.2316	X36CrMo16
M	Stainless steel	M.1.1	Austenitic / austenitic-ferritic	Quenched	610 N/mm ² / 180 HB	1.4301	X5CrNi18-10	1.4571	X6CrNiMoTi17-12-2
		M.2.1	Austenitic	Tempered	300 HB	1.4841	X15CrNiSi25-21	1.4539	X1NiCrMoCu25-20-5
		M.3.1	Austenitic / ferritic (Duplex)		780 N/mm ² / 230 HB	1.4462	X2CrNiMoN22-5-3	1.4501	X2CrNiMoCuWN25-7-4
K	Grey cast iron	K.1.1	Pearlitic / ferritic		350 N/mm ² / 180 HB	0.6010	GG-10	0.6025	GG-25
		K.1.2	Pearlitic (martensitic)		500 N/mm ² / 260 HB	0.6030	GG-30	0.6045	GG-45
	Spherulitic graphite cast iron	K.2.1	Ferritic		540 N/mm ² / 160 HB	0.7040	GGG-40	0.7060	GGG-60
		K.2.2	Pearlitic		845 N/mm ² / 250 HB	0.7070	GGG-70	0.7080	GGG-80
	Malleable iron	K.3.1	Ferritic		440 N/mm ² / 130 HB	0.8035	GTW-35-04	0.8045	GTW-45
		K.3.2	Pearlitic		780 N/mm ² / 230 HB	0.8165	GTS-65-02	0.8170	GTS-70-02
N	Aluminium wrought alloy	N.1.1	Non-hardenable		60 HB	3.0255	Al99,5	3.3315	AlMg1
		N.1.2	Hardenable	Age-hardened	340 N/mm ² / 100 HB	3.1355	AlCuMg2	3.2315	AlMgSi1
	Cast aluminium alloy	N.2.1	≤ 12 % Si, non-hardenable		250 N/mm ² / 75 HB	3.2581	G-AlSi12	3.2163	G-AlSi9Cu3
		N.2.2	≤ 12 % Si, hardenable	Age-hardened	300 N/mm ² / 90 HB	3.2134	G-AlSi5Cu1Mg	3.2373	G-AlSi9Mg
		N.2.3	> 12 % Si, non-hardenable		440 N/mm ² / 130 HB		G-AlSi17Cu4Mg		G-AlSi18CuNiMg
	Copper and copper alloys (bronze/brass)	N.3.1	Free-machining alloys, PB > 1 %		375 N/mm ² / 110 HB	2.0380	CuZn39Pb2 (Ms58)	2.0410	CuZn44Pb2
		N.3.2	CuZn, CuSnZn		300 N/mm ² / 90 HB	2.0331	CuZn15	2.4070	CuZn28Sn1As
		N.3.3	CuSn, lead-free copper and electrolytic copper		340 N/mm ² / 100 HB	2.0060	E-Cu57	2.0590	CuZn40Fe
	Magnesium alloys	N.4.1	Magnesium and magnesium alloys		70 HB	3.5612	MgAl6Zn	3.5312	MgAl3Zn
S	Heat-resistant alloys	S.1.1	Fe - basis	Annealed	680 N/mm ² / 200 HB	1.4864	X12NiCrSi 36-16	1.4865	G-X40NiCrSi38-18
		S.1.2		Age-hardened	950 N/mm ² / 280 HB	1.4980	X6NiCrTiMoVB25-15-2	1.4876	X10NiCrAlTi32-20
		S.2.1	Ni or Co basis	Annealed	840 N/mm ² / 250 HB	2.4631	NiCr20TiAl (Nimonic80A)	3.4856	NiCr22Mo9Nb
		S.2.2		Age-hardened	1180 N/mm ² / 350 HB	2.4668	NiCr19Nb5Mo3 (Inconel 718)	2.4955	NiFe25Cr20NbTi
		S.2.3		Cast	1080 N/mm ² / 320 HB	2.4765	CoCr20W15Ni	1.3401	G-X120Mn12
	Titanium alloys	S.3.1	Pure titanium		400 N/mm ²	3.7025	Ti99,8	3.7034	Ti99,7
		S.3.2	Alpha + beta alloys	Age-hardened	1050 N/mm ² / 320 HB	3.7165	TiAl6V4	Ti-6246	Ti-6Al-2Sn-4Zr-6Mo
		S.3.3	Beta alloys		1400 N/mm ² / 410 HB	Ti555.3	Ti-5Al-5V-5Mo-3Cr	R56410	Ti-10V-2Fe-3Al
H	Hardened steel	H.1.1		Hardened and tempered	46–55 HRC				
		H.1.2		Hardened and tempered	56–60 HRC				
		H.1.3		Hardened and tempered	61–65 HRC				
		H.1.4		Hardened and tempered	66–70 HRC				
	Chilled iron	H.2.1		Cast	400 HB				
	Hardened cast iron	H.3.1		Hardened and tempered	55 HRC				
O	Non-metal materials	O.1.1	Plastics, duroplastic		≤ 150 N/mm ²				
		O.1.2	Plastics, thermoplastic		≤ 100 N/mm ²				
		O.2.1	Aramid fibre-reinforced		≤ 1000 N/mm ²				
		O.2.2	Glass/carbon-fibre reinforced		≤ 1000 N/mm ²				
		O.3.1	Graphite						

* Tensile strength

Cutting data standard values

Index	50 551 ..., 50 552 ..., 50 553 ..., 50 554 ..., 50 555 ..., 50 556 ... / 50 530 ..., 50 531 ..., 50 532 ...			
	SFSE	SGF	AITiN Solid carbide	
			Ø 2,4 – 5,9	Ø 6,0 – 11,9
		v _c (m/min)		f _z (mm/tooth)
P.1.1	80–150	0,015–0,04	0,04–0,08	0,08–0,15
P.1.2	80–120	0,015–0,04	0,04–0,08	0,08–0,15
P.1.3	80–120	0,015–0,04	0,04–0,08	0,08–0,15
P.1.4	80–120	0,015–0,04	0,04–0,08	0,08–0,15
P.1.5	60–100	0,01–0,04	0,04–0,06	0,04–0,10
P.2.1	80–120	0,015–0,04	0,04–0,08	0,08–0,15
P.2.2	80–100	0,015–0,04	0,04–0,08	0,08–0,15
P.2.3	80–100	0,010–0,04	0,04–0,08	0,08–0,15
P.2.4	80–100	0,010–0,04	0,04–0,08	0,08–0,15
P.3.1	70–90	0,01–0,03	0,03–0,05	0,06–0,12
P.3.2	60–80	0,006–0,02	0,02–0,04	0,04–0,06
P.3.3	50–70	0,006–0,02	0,02–0,04	0,04–0,06
P.4.1	70–90	0,006–0,02	0,02–0,04	0,04–0,06
P.4.2	60–80	0,006–0,02	0,02–0,04	0,04–0,06
M.1.1	60–100	0,01–0,04	0,04–0,08	0,08–0,10
M.2.1	60–100	0,01–0,03	0,03–0,06	0,06–0,10
M.3.1	60–100	0,01–0,03	0,03–0,06	0,06–0,10
K.1.1	80–120	0,02–0,06	0,06–0,12	0,10–0,15
K.1.2	80–120	0,02–0,05	0,05–0,10	0,10–0,12
K.2.1	80–100	0,02–0,05	0,05–0,10	0,08–0,15
K.2.2	80–100	0,02–0,05	0,05–0,10	0,08–0,12
K.3.1	80–100	0,015–0,05	0,05–0,08	0,08–0,12
K.3.2	80–100	0,015–0,03	0,03–0,08	0,08–0,12
N.1.1	100–400	0,04–0,09	0,08–0,15	0,12–0,20
N.1.2	100–400	0,04–0,09	0,08–0,15	0,12–0,20
N.2.1	100–400	0,04–0,09	0,08–0,15	0,12–0,20
N.2.2	100–400	0,04–0,09	0,08–0,15	0,12–0,20
N.2.3	100–250	0,04–0,09	0,08–0,15	0,12–0,20
N.3.1	100–400	0,04–0,09	0,08–0,15	0,12–0,20
N.3.2	100–400	0,04–0,09	0,08–0,15	0,12–0,20
N.3.3	100–400	0,04–0,09	0,08–0,15	0,12–0,20
N.4.1	100–400	0,04–0,09	0,08–0,15	0,12–0,20
S.1.1	40–100	0,01–0,04	0,04–0,07	0,07–0,12
S.1.2				
S.2.1				
S.2.2				
S.2.3				
S.3.1	40–100	0,01–0,04	0,04–0,07	0,07–0,15
S.3.2				
S.3.3				
H.1.1				
H.1.2				
H.1.3				
H.1.4				
H.2.1				
H.3.1				
O.1.1	100–400	0,03–0,08	0,08–0,15	0,15–0,20
O.1.2	100–400	0,03–0,08	0,08–0,15	0,15–0,20
O.2.1	50–80	0,03–0,08	0,08–0,15	0,15–0,20
O.2.2	50–80	0,03–0,08	0,08–0,15	0,15–0,20
O.3.1				



The cutting data is strongly influenced by external conditions, such as the stability of the tool and workpiece clamping, material and type of machine. The specified values represent guideline cutting data that can be adjusted by approx. $\pm 20\%$ according to the usage conditions.

MaxiChange – Overview of the product range

As the MaxiChange exchangeable head system is modular, it is extremely flexible and can be used for a variety of applications thanks to the wide selection of exchangeable heads. On top of these advantages, the MaxiChange GX also includes a grooving function for internal and external machining as well as axial and radial machining.

Exchangeable heads

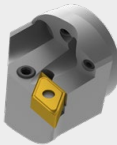
Turning Tools

For negative inserts

PCLN 95°



PDUN 93°



PDQN 107,5°

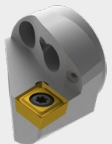


PWLN 95°



For positive inserts

SCLC 95°



SDUC 93°



SDQC 107,5°

**NEW**

SVPC 117,5°

**NEW**

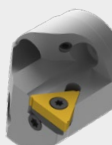
SVUC 93°

**NEW**

SVQC 107,5°



For internal thread

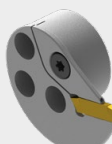


Grooving Tools

For radial grooving

NEW

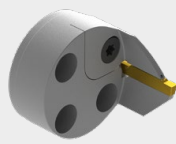
GX 16



For axial grooving

NEW

GX 24



Tool holder

PSC

NEW

Vibration damped

Actively
vibration-damped**NEW**

HSK-T

NEW

Vibration damped

Actively
vibration-damped**NEW**

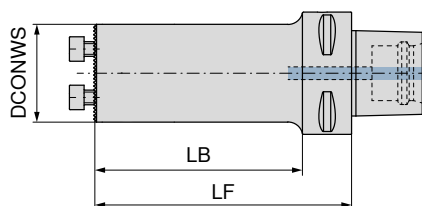
Cylindrical shank

NEWActively
vibration-damped**NEW**Square shank holder
0°**NEW**Square shank holder
90°**NEW**

MaxiChange – Base holders for the exchangeable head system

Scope of supply:

Includes clamping screws



NEW

84 192 ...

Adapter	LF mm	LB mm	DCONWS mm	
PSC 40	40	20	16	01695
PSC 40	50	30	20	02095
PSC 50	40	20	16	01694
PSC 50	50	30	20	02094
PSC 63	40	18	16	01693
PSC 63	50	28	20	02093



Clamping Screw

84 950 ...

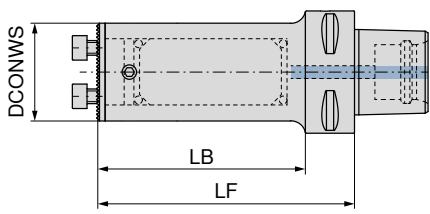
Spare parts

DCONWS			
16	M3x10		44800
20	M3,5X12		44900

MaxiChange – Base holders for the exchangeable head system – actively vibration-damped

- ▲ Reduction of vibrations through actively mounted dampers
- ▲ Improvement in surface finish and chip evacuation

Scope of supply:
Includes clamping screws



NEW
84 198 ...

Adapter	LF mm	LB mm	DCONWS mm	
PSC 40	88	68	16	31695 ¹⁾
PSC 40	107	87	20	32095 ¹⁾
PSC 50	85	65	16	31694 ¹⁾
PSC 50	109	89	20	32094 ¹⁾
PSC 63	90	68	16	31693 ¹⁾
PSC 63	110	88	20	32093 ¹⁾

1) Not ex-stock



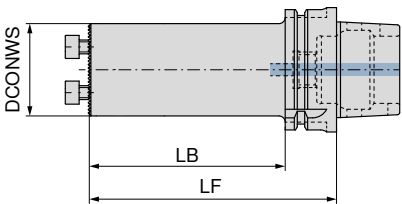
Clamping Screw

84 950 ...

Spare parts		
DCONWS		
16	M3x10	44800
20	M3,5X12	44900

MaxiChange – Base holders for the exchangeable head system

Scope of supply:
Includes clamping screws



NEW

84 193 ...

01637

02037

Adapter	LF mm	LB mm	DCONWS mm
HSK-T 63	56	30	16
HSK-T 63	80	54	20



Clamping Screw

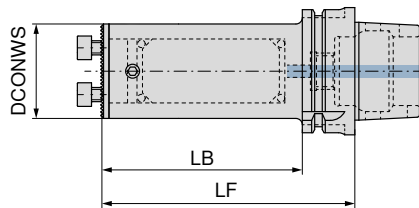
Spare parts
DCONWS

16	M3x10	44800
20	M3,5x12	44900

MaxiChange – Base holders for the exchangeable head system – actively vibration-damped

- ▲ Reduction of vibrations through actively mounted dampers
- ▲ Improvement in surface finish and chip evacuation

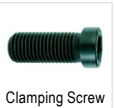
Scope of supply:
Includes clamping screws



NEW	
84 198 ...	
HSK-T 63	31637 ¹⁾
HSK-T 63	32037 ¹⁾

Adapter	LF mm	LB mm	DCONWS mm
HSK-T 63	90	64	16
HSK-T 63	106	80	20

1) Not ex-stock



Clamping Screw

Spare parts

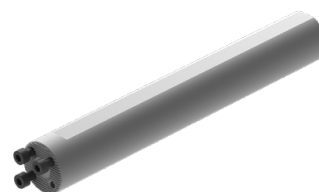
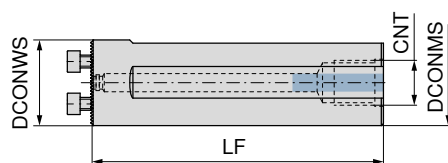
DCONWS		84 950 ...	
16	M3x10	44800	
20	M3,5X12	44900	

MaxiChange – Base holders for the exchangeable head system – cylindrical

- ▲ Connection thread for thro' coolant
- ▲ 3 clamping flats

Scope of supply:

Includes clamping screws



NEW

84 194 ...

DCONWS mm	LF mm	DCONMS mm	CNT
25	100	25	M8 x 1
32	120	32	M8 x 1
40	120	40	M8 x 1

12599

13299

14099



Clamping Screw

84 950 ...

Spare parts

DCONWS

25	M4X12 (SW3)	30000
32	M5X14 (SW4)	29900
40	M6X16 (SW5)	29800

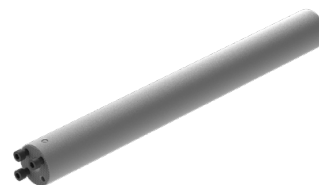
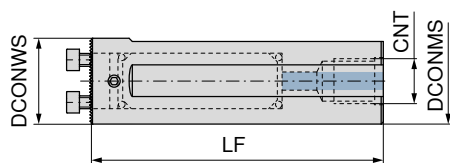
MaxiChange – Base holders for the exchangeable head system – actively vibration-damped

▲ Connection thread for thro' coolant

▲ 3 clamping flats

Scope of supply:

Includes clamping screws



NEW

84 198 ...

DCONWS mm	LF mm	DCONMS mm	CNT	
16	150	16	1/4	31699
20	180	20	1/4	32099
25	220	25	1/4	32599
32	285	32	1/2	33299
40	368	40	1/2	34099



Clamping Screw

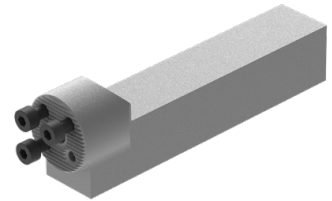
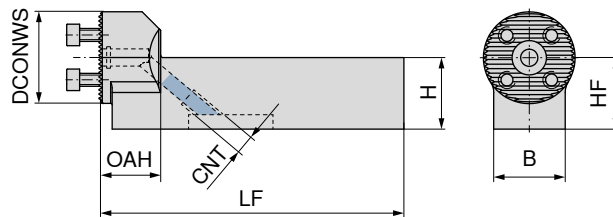
84 950 ...

DCONWS		
16	M3x10	44800
20	M3,5x12	44900
25	M4x12 (SW3)	30000
32	M5x14 (SW4)	29900
40	M6x16 (SW5)	29800

MaxiChange – 0° base holders for the exchangeable head system

Scope of supply:

Includes clamping screws



NEW

84 185 ...

DCONWS mm	H mm	B mm	HF mm	OAH mm	LF mm	CNT	
25	20	20	20	21	106	M8x1	02500
32	20	20	20	21	106	M8x1	03200
32	25	25	25	21	106	M8x1	13200
40	25	25	25	21	106	M8x1	14000



Clamping Screw

84 950 ...

Spare parts

DCONWS

25	M4X12 (SW3)	30000
32	M5X14 (SW4)	29900
40	M6X16 (SW5)	29800

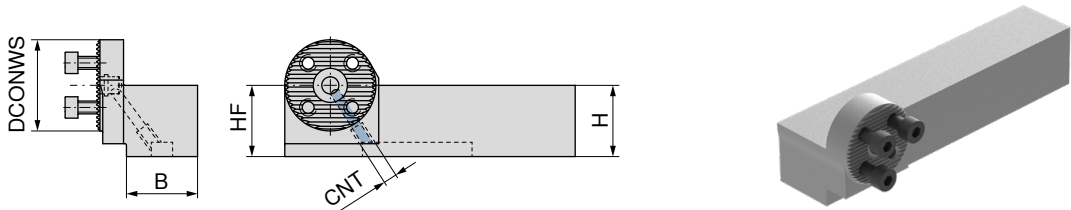


→ Chapter 16 Adapters and accessories

Here you will find the suitable base adaptors.

MaxiChange – 90° base holders for the exchangeable head system

Scope of supply:
Includes clamping screws



DCONWS mm	H mm	B mm	HF mm	CNT
25	20	20	20	M8x1
32	20	20	20	M8x1
32	25	25	25	M8x1
40	25	25	25	M8x1

NEW
84 184 ...
02500
03200
13200
14000



Clamping Screw

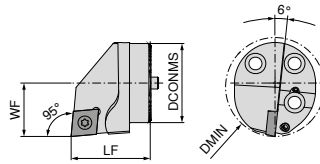
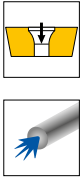
Spare parts
DCONWS

25	M4X12 (SW3)	30000
32	M4X12 (SW3)	30000
40	M6X16 (SW5)	29800

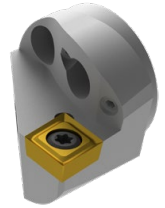
84 950 ...

→ Chapter 16 Adapters and accessories
Here you will find the suitable base adaptors.

MaxiChange-S – SCLC 95° – Exchangeable cutting head with screw clamping



Illustrations show right-hand versions



NEW	
Left-hand	Right-hand
84 147 ...	84 148 ...
01600	01600
02000	02000

DCONMS mm	LF mm	DMIN mm	WF mm	torque moment Nm	Insert
16	20	20	11	0.9	CC.. 0602
20	20	25	13	3	CC.. 09T3



Clamping screw

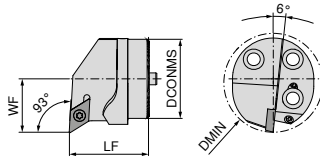
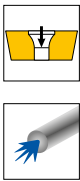
84 950 ...

Spare parts

Insert

CC.. 0602	44700
CC.. 09T3	27600

MaxiChange-S – SDUC 93° – Exchangeable cutting head with screw clamping



Illustrations show right-hand versions



NEW	
Left-hand	Right-hand
84 143 ...	84 144 ...
01600	01600
02000	02000

DCONMS mm	LF mm	DMIN mm	WF mm	torque moment Nm	Insert
16	20	20	11	0.9	DC.. 0702
20	20	25	13	3	DC.. 11T3



Clamping screw

84 950 ...

Spare parts

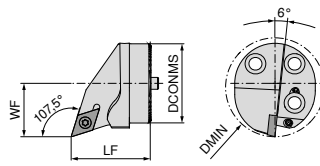
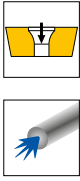
Insert

DC.. 0702	44700
DC.. 11T3	27600



→ Chapter 9 – Turning Tools
Find suitable indexable inserts here.

MaxiChange-S – SDQC 107.5° – Exchangeable cutting head with screw clamping



Illustrations show right-hand versions



DCONMS mm	LF mm	DMIN mm	WF mm	torque moment Nm	Insert
20	20	25	13	3	DC.. 11T3

NEW	NEW
Left-hand	Right-hand
84 145 ...	84 146 ...
02000	02000

Spare parts

Insert

DC.. 11T3

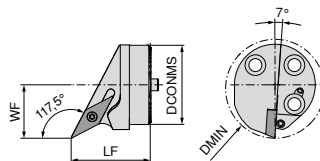
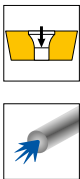


Clamping screw

84 950 ...

27600

MaxiChange-S – SVPC 117.5° – Exchangeable cutting head with screw clamping



Illustrations show right-hand versions



DCONMS mm	LF mm	DMIN mm	WF mm	torque moment Nm	Insert
25	35	32	17	3	VC.. 1103
32	35	40	22	3	VC.. 1604
40	40	50	27	3	VC.. 1604

NEW	NEW
Left-hand	Right-hand
84 176 ...	84 176 ...
12500	02500
13200	03200
14000	04000

Spare parts

Insert

VC.. 1103

VC.. 1604



Clamping screw

84 950 ...

27600

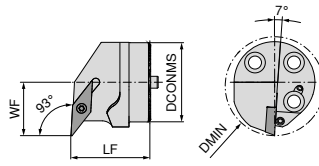
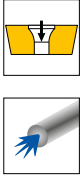
27600



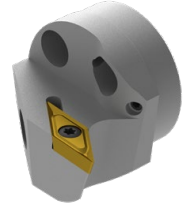
→ Chapter 9 – Turning Tools

Find suitable indexable inserts here.

MaxiChange-S – SVUC 93° – Exchangeable cutting head with screw clamping



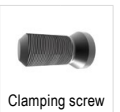
Illustrations show right-hand versions



DCONMS mm	LF mm	DMIN mm	WF mm	torque moment Nm	Insert	NEW Left-hand 84 177 ...	NEW Right-hand 84 177 ...
20	20	25	13	3	VC.. 1103	12000	02000
25	35	32	17	3	VC.. 1103	12500	02500
32	35	40	22	3	VC.. 1604	13200	03200
40	40	50	27	3	VC.. 1604	14000	04000

Spare parts

Insert
VC.. 1103
VC.. 1604

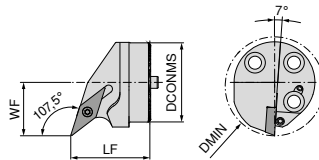
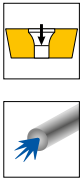


Clamping screw

84 950 ...

27600
27600

MaxiChange-S – SVQC 107.5° – Exchangeable cutting head with screw clamping



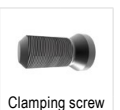
Illustrations show right-hand versions



DCONMS mm	LF mm	DMIN mm	WF mm	torque moment Nm	Insert	NEW Left-hand 84 178 ...	NEW Right-hand 84 178 ...
20	20	25	13	3	VC.. 1103	12000	02000
25	35	32	17	3	VC.. 1103	12500	02500
32	35	40	22	3	VC.. 1604	13200	03200
40	40	50	27	3	VC.. 1604	14000	04000

Spare parts

Insert
VC.. 1103
VC.. 1604



Clamping screw

84 950 ...

27600
27600



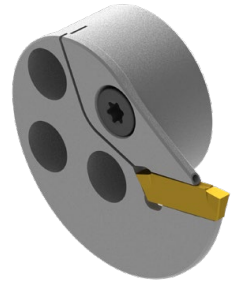
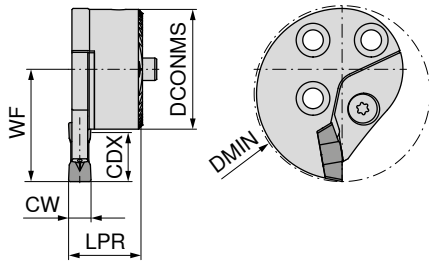
→ Chapter 9 – Turning Tools
Find suitable indexable inserts here.

MaxiChange-GX – GX-DC 16 exchangeable grooving head

▲ For grooving and turning

Scope of supply:

Exchangeable grooving head with clamping claw and clamping screw



Illustrations show right-hand versions

ISO designation	DCONMS mm	CW mm	WF mm	LPR mm	DMIN mm	CDX mm	for grooving inserts	NEW	
								Left-hand	Right-hand
								84 188 ...	84 189 ...
WK25 R/L 14-DC GX 16-S2	25	2	27	16,00	41	14	GX 16-1 ..N	22500	22500
WK25 R/L 14-DC GX 16-S3	25	3	27	14,75	41	14	GX 16-2 ..N	32500	32500
WK25 R/L 14-DC GX 16-S4/5	25	4/5	27	15,75	41	14	GX 16-3 ..N	42500	42500
WK32 R/L 13-DC GX 16-S4/5	32	4/5	30	17,75	47	13	GX 16-3 ..N	43200	43200
WK32 R/L 13-DC GX 16-S6	32	6	30	19,35	47	13	GX 16-3 ..N	63200	63200



Clamping claw



O-Ring



Clamping screw



Guide pin

Spare parts for Article no.

	84 950 ...		84 950 ...		84 950 ...		84 950 ...	
84 189 22500	50400	2x1	50300	M4X4/T15	50000	D3H6X10	53000	
84 188 22500	50500	2x1	50300	M4X4/T15	50000	D3H6X10	53000	
84 189 32500	50600	2x1	50300	M4X4/T15	50000	D3H6X10	53000	
84 188 32500	50700	2x1	50300	M4X4/T15	50000	D3H6X10	53000	
84 189 42500	50800	2x1	50300	M4X4/T15	50000	D3H6X10	53000	
84 188 42500	50900	2x1	50300	M4X4/T15	50000	D3H6X10	53000	
84 189 43200	51000	2x1	50300	M5X5,5/T15	50100	D4H6X10	53100	
84 188 43200	51100	2x1	50300	M5X5,5/T15	50100	D4H6X10	53100	
84 189 63200	51200	2x1	50300	M5X5,5/T15	50100	D4H6X10	53100	
84 188 63200	51300	2x1	50300	M5X5,5/T15	50100	D4H6X10	53100	



→ Chapter 11 – Grooving tools

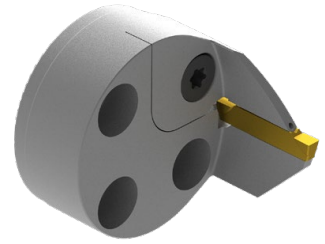
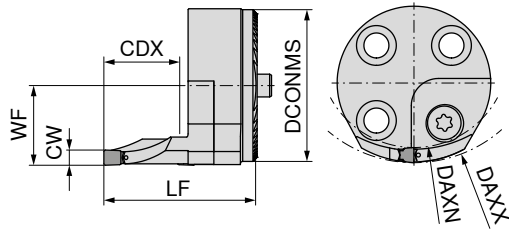
Find suitable grooving inserts here.

MaxiChange-GX – GX-DC 24 axial exchangeable grooving head

▲ For axial grooving

Scope of supply:

Exchangeable grooving head with clamping claw and clamping screw



Illustrations show right-hand versions

ISO designation	DCONMS mm	DAXN mm	DAXX mm	CW mm	WF mm	LF mm	CDX mm	for grooving inserts	NEW	
									Left-hand 84 186 ...	Right-hand 84 187 ...
WK40 R/L 20-DC GX 24-S3 D50-70	40	50	70	3	21	40	20	GX 24-2 ..N	34000	34000
WK40 R/L 20-DC GX 24-S3 D70-100	40	70	100	3	21	40	20	GX 24-2 ..N	34100	34100
WK40 R/L 20-DC GX 24-S3 D100-150	40	100	150	3	21	40	20	GX 24-2 ..N	34200	34200
WK40 R/L 20-DC GX 24-S3 D150-300	40	150	300	3	21	40	20	GX 24-2 ..N	34300	34300
WK40 R/L 20-DC GX 24-S4 D50-70	40	50	70	4	21	40	20	GX 24-3 ..N	44000	44000
WK40 R/L 20-DC GX 24-S4 D70-100	40	70	100	4	21	40	20	GX 24-3 ..N	44100	44100
WK40 R/L 20-DC GX 24-S4 D100-150	40	100	150	4	21	40	20	GX 24-3 ..N	44200	44200
WK40 R/L 20-DC GX 24-S4 D150-300	40	150	300	4	21	40	20	GX 24-3 ..N	44300	44300



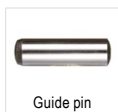
84 950 ...



84 950 ...



84 950 ...



84 950 ...

Spare parts for Article no.

84 187 34000	51400	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 186 34000	51800	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 187 34100	51500	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 186 34100	51900	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 187 34200	51600	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 186 34200	52000	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 187 34300	51700	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 186 34300	52100	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 187 44000	52200	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 186 44000	52600	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 187 44100	52300	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 186 44100	52700	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 187 44200	52400	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 186 44200	52800	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 187 44300	52500	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200
84 186 44300	52900	2x1	50300	M6x0,5X5/T25	50200	D4H6X12	53200



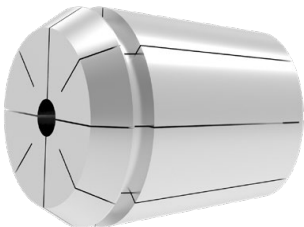
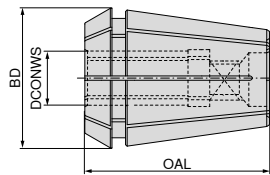
→ Chapter 11 – Grooving tools

Find suitable grooving inserts here.

ER collet with internal square

- ▲ Similar DIN ISO 15488-A (old DIN 6499-A)
- ▲ 8 times slotted
- ▲ Double taper collets for holding taps on synchronised spindle machines, without compensating lengths

ER-A
15 µm



NEW

BD = 16,7
OAL = 27,5
426 E / ER16

82 695 ...

DCONWS	
mm	
2,8	02800
3,5	03500
4,0	04000
4,5	04500
5,0	05000
5,5	05500
6,0	06000
7,0	07000
8,0	08000
9,0	09000

From the eCatalog to the shopping basket

The complete cutting tool solution is available in a digital version!

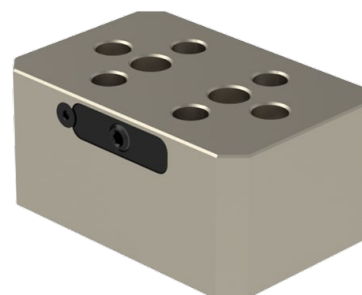
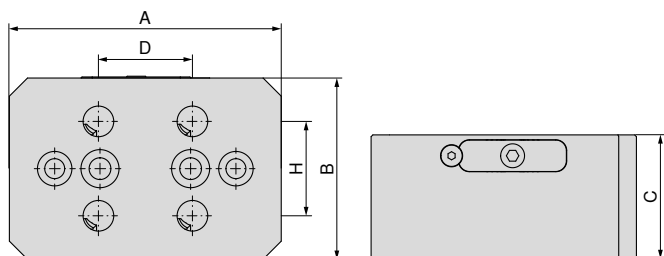


cutting.tools/int/en/digitalcatalogue

Console

- ▲ With integrated MNG mini zero point clamping system
- ▲ Order mounting bolts separately
- ▲ Material: hard-anodised aluminium

**MNG
mini**



NEW

80 915 ...

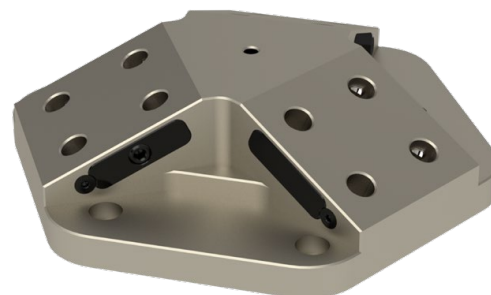
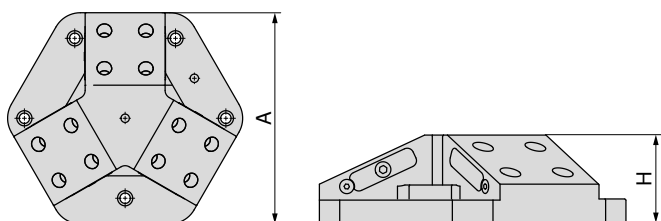
A	B	C	D	H
mm	mm	mm	mm	mm
150	100	70	52	52

57000

Three-sided pyramid

- ▲ Incl. 3 x MNG mini zero point clamping systems
- ▲ Order mounting bolts separately
- ▲ Material: hard-anodised aluminium

**MNG
mini**



NEW

80 915 ...

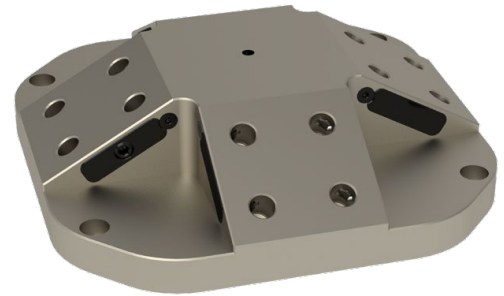
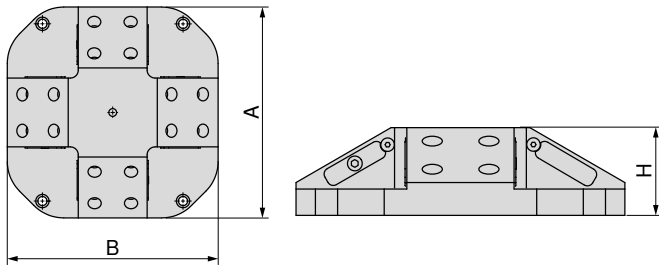
A	H
mm	mm
264	75

58000

Four-sided pyramid

- ▲ Incl. 4 x MNG mini zero point clamping systems
- ▲ Order mounting bolts separately
- ▲ Material: hard-anodised aluminium

**MNG
mini**



NEW

80 915 ...

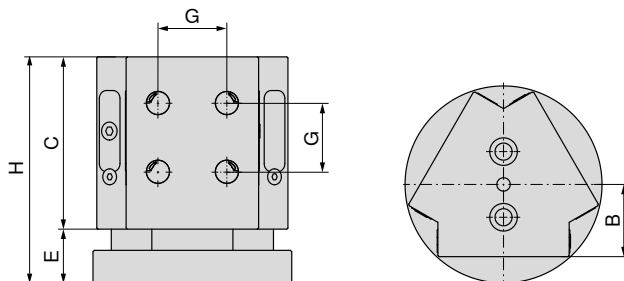
57500

A	B	H
mm	mm	mm
300	300	80

Triangular tombstone

- ▲ Incl. 3 x MNG mini zero point clamping systems
- ▲ Order mounting bolts separately
- ▲ Material: hard-anodised aluminium

**MNG
mini**



NEW

80 915 ...

51700

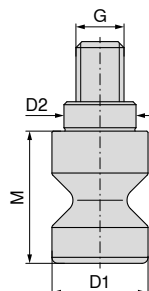
B	C	E	G	H
mm	mm	mm	mm	mm
55	130	41	52	171

MNG mini mounting bolt set

Scope of supply:

Set contains four mounting bolts

**MNG
mini**



NEW

80 915 ...

D ₁ h6 mm	D ₂ h6 mm	M mm	G mm	TQX Nm	Clamping force kN
16	12	22	M8	18	15

51600

Clamping Screw Set for T-slot for MNG mini

Scope of supply:

Clamping screw and T-Nuts

**MNG
mini**



NEW

80 915 ...

for slot width mm	G	
12	M10	61200
14	M12	61400
16	M12	61600
18	M12	61800

Alignment/centering set for T-slots

▲ MNG – Mechanical Zero-point Clamping System

▲ A = groove spacing

Scope of supply:

1 Terminal block, 2 T-nuts, 2 screws, 2 washers
for width 12 mm, without clamping strip!

**MNG
mini**



NEW

80 915 ...

A mm	for slot width mm	
100	12	81200
100	14	81400
100	16	81600
100	18	81800

Socket

▲ Suitable for 1/2" or 3/8" square drive

**MNG
mini**



NEW

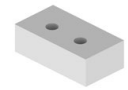
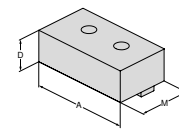
80 877 ...

Square	DRVS mm	
3/8"	6	10600

System jaws overview

Soft jaw, steel, fixed

- ▲ for producing shaped jaws
- ▲ Price per piece

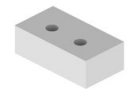
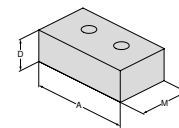


NEW

For vice width	A	A ₁	D	D ₁	D ₂	E	M	M ₁	M ₂		NCG	H5G / -S / -Z	X5G-Z / -S	ESG 4	ESG 5	HDG 2	ZSG 4	ZSG mini	DSG 4	Verso	HSG
80	80		28				48			80 901 31800				●	●						
125	125		40				68			80 901 31900				●	●						

Soft jaw, steel, movable

- ▲ for producing shaped jaws
- ▲ Price per piece



NEW

For vice width	A	A ₁	D	D ₁	D ₂	E	M	M ₁	M ₂		NCG	H5G / -S / -Z	X5G-Z / -S	ESG 4	ESG 5	HDG 2	ZSG 4	ZSG mini	DSG 4	Verso	HSG
80	80		28				48			80 878 32000				●	●		●				
125	125		40				68			80 878 32100				●	●		●				



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