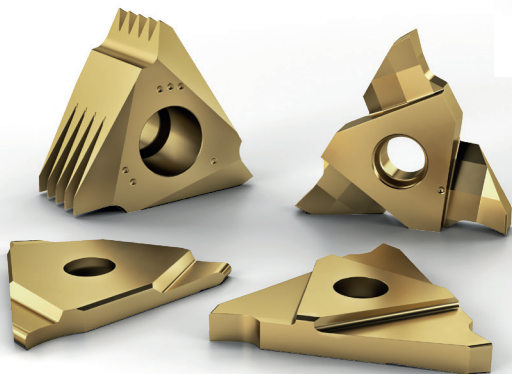
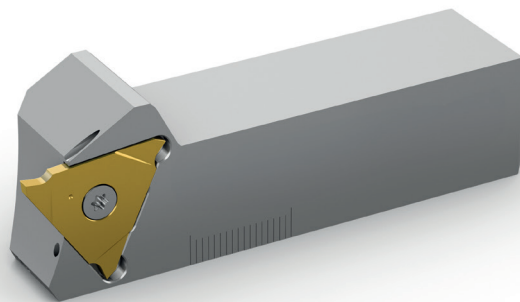
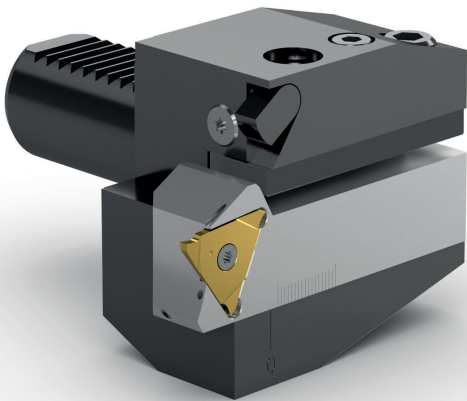
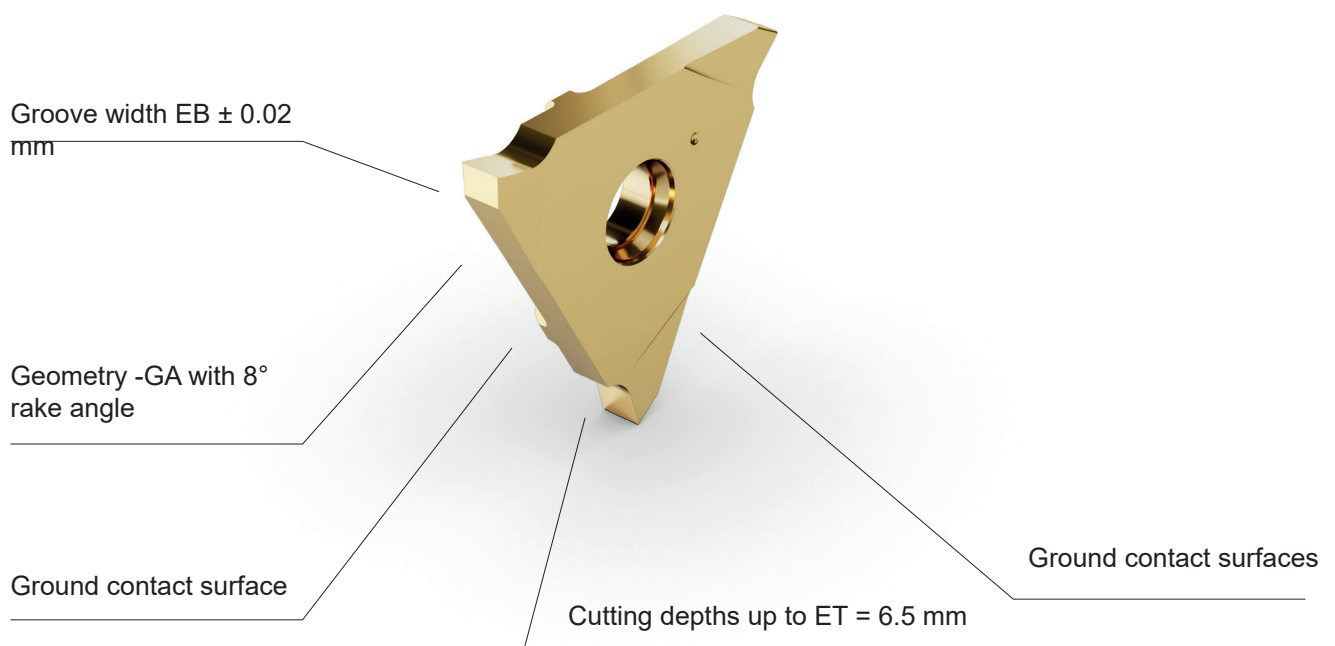
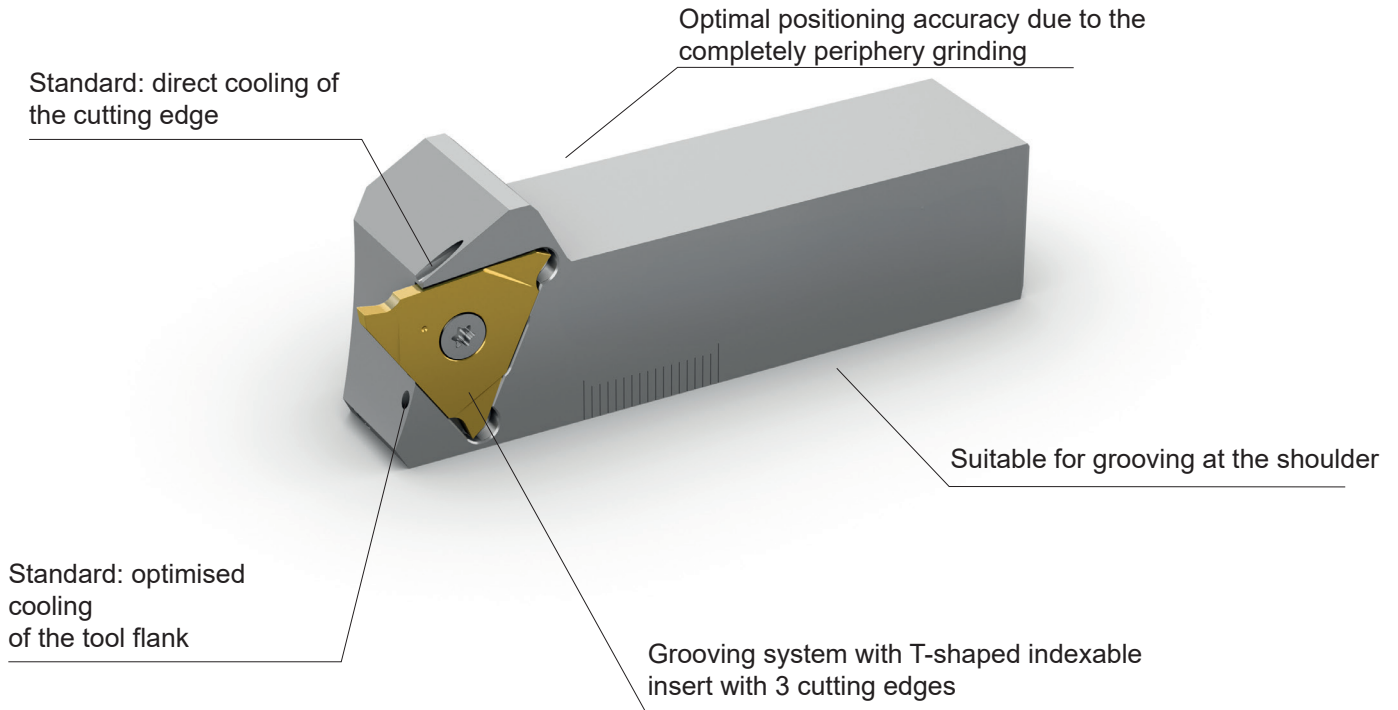
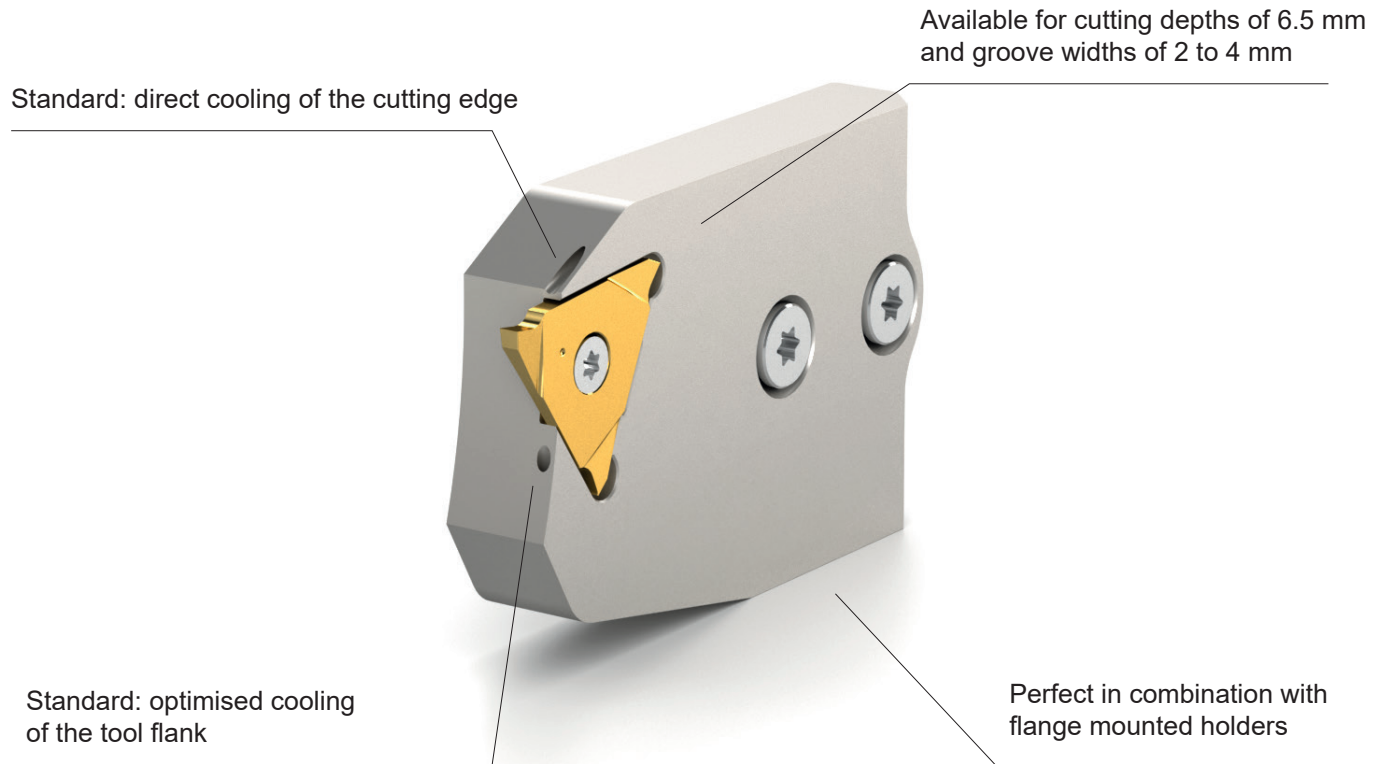


PRECISE EXTERNAL PARTING AND GROOVING



The PG tool system for external parting off has many strengths. One of them is versatility: the countersunk clamping screw and the compact design make the PG system ideal for applications like shoulder grooving or Swiss type machining. The optimised coolant supply to the cutting edge and tool flank ensure smooth chip evacuation and long tool life.

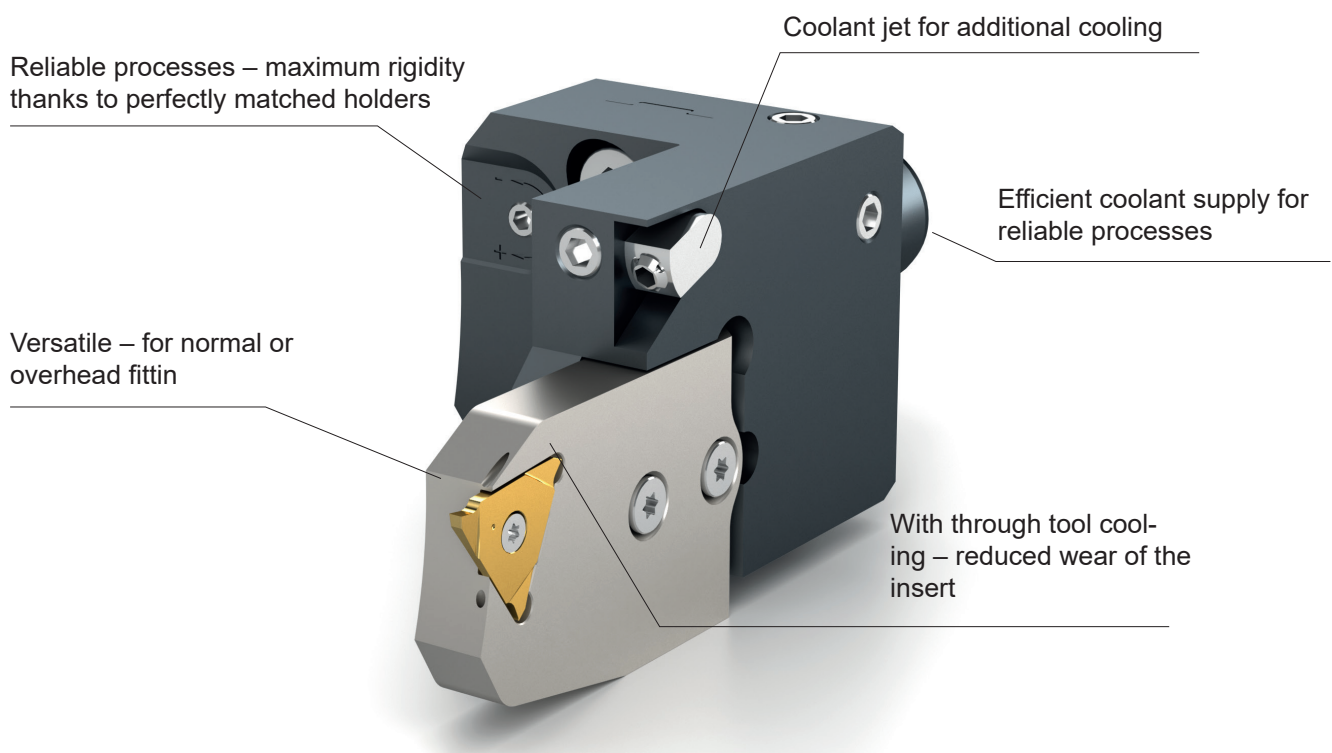
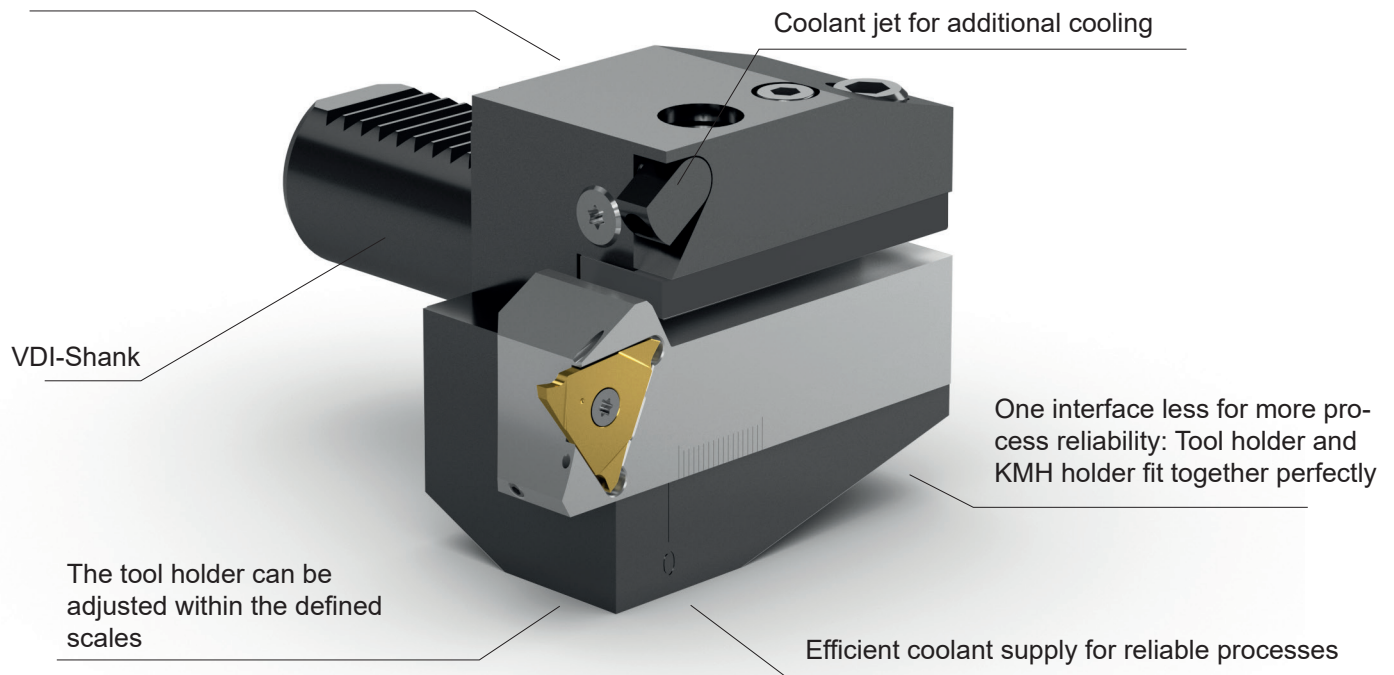




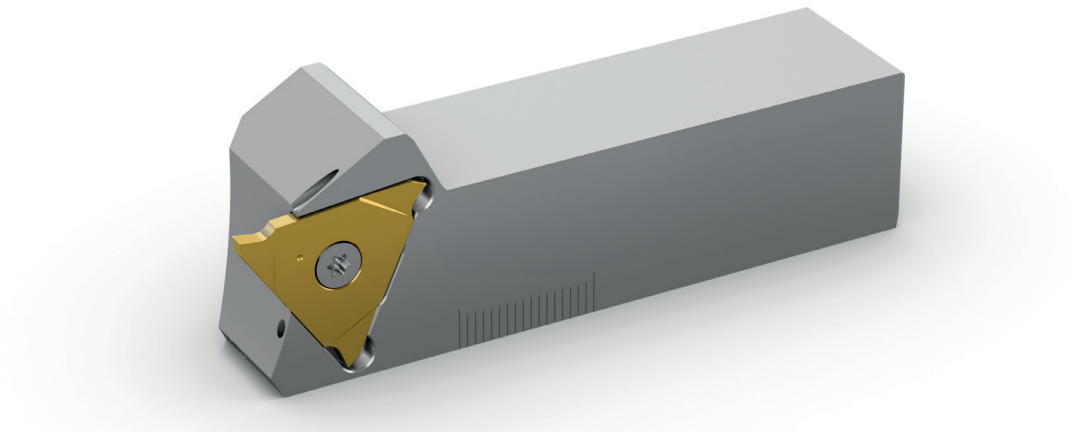
The connection for maximum stability.

Reliability is the top priority in grooving and parting off operations. On this point our flange mounted holders are specially optimised for each machine to eliminate an interface and therefore get rid of one more error source. They are perfectly designed to guarantee maximum rigidity. Whether your requirement is for a monoblock holder, grooving module or grooving blade – we offer you the matching flange mounted holder for every application and for many machine types. And because satisfied customers want to equip more and more machines with them, we are constantly designing new types.

Available in a variety of shapes from B1 to B4 and from C1 to C4



Monoblock holders

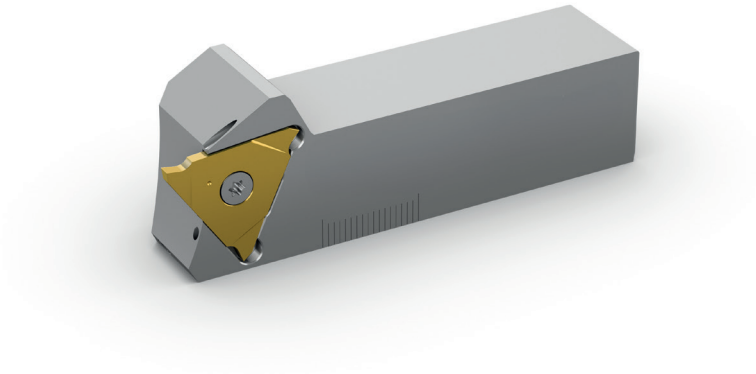


H	PG	2020	L	.A2	-S1	-14S
Interface machine-side	System	Shank size	Orientation R = Right-hand L = Left-hand	Coolant type	Coolant connection	Insert

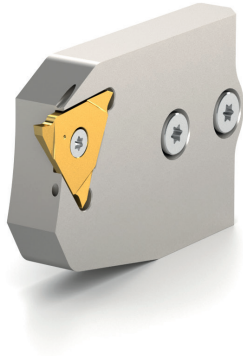
Inserts



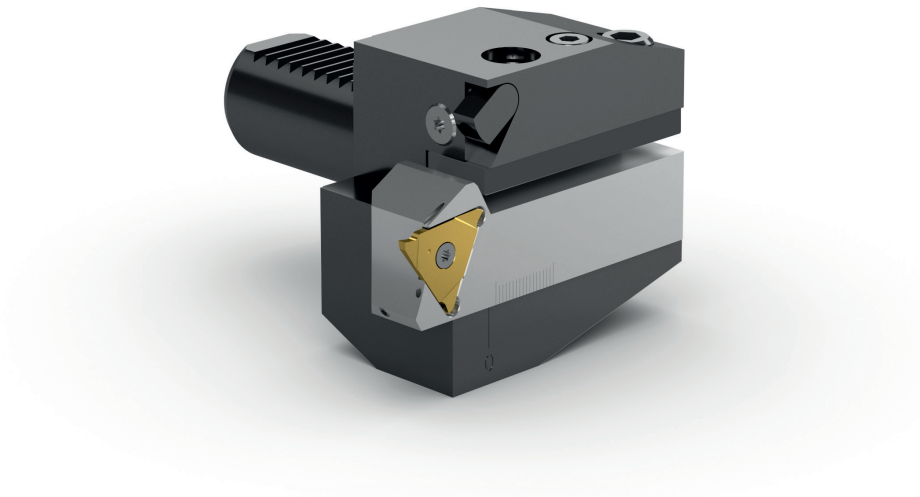
PG	14S	.L	100	.650	R03	-M	A4M-E2
System	Insert size	Orientation R = Right-hand L = Left-hand	Groove width EB = 1 mm	Grooving depth ET = 6,5 mm	Corner radius R = 0,3 mm	Geometry	Grade



Monoblock holders HPG



Modules MPG



KMH-Holders (VDI)

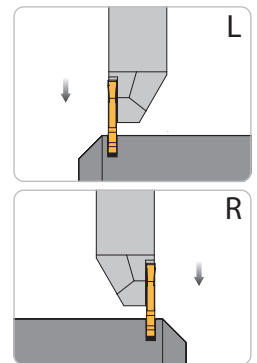
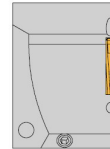
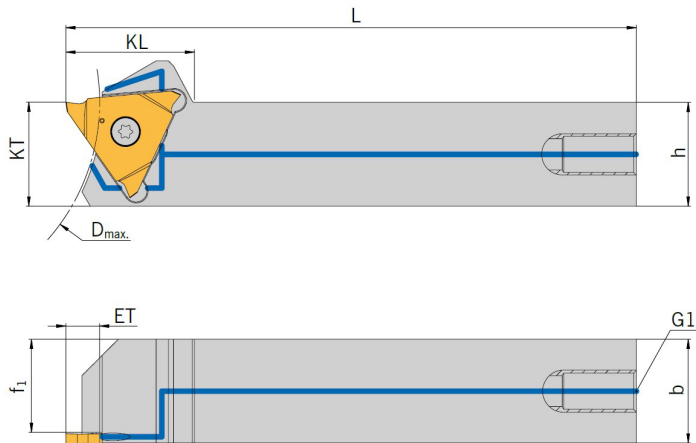


Inserts PG

Monoblock holders

HPG...A2-B...

Monoblock holder with through tool coolant (A2) access from the back



Similar to illustration

Holders

Execution B1

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	G1	Size	Insert
HPG 1212L/R.A2-B1-14S1	6,5	80	12	110	8,95	25	20	M8x1	H	PG14S1...
HPG 1212L/R.A2-B1-14M	6,5	80	12	110	7,95	25	20	M8x1	K	PG14M...
HPG 1212R.A2-B1-14S	6,5	80	12	110	9,95	25	20	M8x1	F	PG14S...
HPG 1212L/R.A2-B1-14P	8	16	12	110	9,95	25	20	M8x1	XF	PG14P...
HPG 1616L/R.A2-B1-14S	6,5	80	16	110	13,95	25	20	M8x1	F	PG14S...
HPG 1616L/R.A2-B1-14S1	6,5	80	16	110	12,95	25	20	M8x1	H	PG14S1...
HPG 1616L/R.A2-B1-14M	6,5	80	16	110	11,95	25	20	M8x1	K	PG14M...
HPG 1616L/R.A2-B1-14L	6,5	80	16	110	11,00	25	25	M8x1	P	PG14L...
HPG 1616L/R.A2-B1-14P	8	16	16	110	13,95	25	20	M8x1	XF	PG14P...
HPG 2020L/R.A2-B1-14S	6,5	80	20	110	17,95	25	20	M8x1	F	PG14S...
HPG 2020L/R.A2-B1-14S1	6,5	80	20	110	16,95	25	20	M8x1	H	PG14S1...
HPG 2020L/R.A2-B1-14M	6,5	80	20	110	15,95	25	20	M8x1	K	PG14M...
HPG 2020L/R.A2-B1-14L	6,5	80	20	110	15,00	25	25	M8x1	P	PG14L...
HPG 2525L/R.A2-B1-14S	6,5	150	25	110	22,95	25	25	M8x1	F	PG14P...
HPG 2525L/R.A2-B1-14S1	6,5	150	25	110	21,95	25	25	M8x1	H	PG14S...
HPG 2525L/R.A2-B1-14M	6,5	150	25	110	20,95	25	25	M8x1	K	PG14S1...
HPG 2525L/R.A2-B1-14L	6,5	150	25	110	19,95	25	25	M8x1	P	PG14M...
HPG 2525L/R.A2-B1-14L1	6,5	150	25	110	18,95	25	25	M8x1	S	PG14L...

Monoblock holders

Holders

Execution B2

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	G1	Size	Insert
HPG 1212L/R.A2-B2-14S	6,5	80	12	110	9,95	25	20	G1/8"	F	PG14S...
HPG 1212L/R.A2-B2-14S1	6,5	80	12	110	8,95	25	20	G1/8"	H	PG14S1...
HPG 1212L/R.A2-B2-14M	6,5	80	12	110	7,95	25	20	G1/8"	K	PG14M...
HPG 1212L/R.A2-B2-14P	8	16	12	110	9,95	25	20	G1/8"	XF	PG14P...
HPG 1616L/R.A2-B2-14S	6,5	80	16	110	13,95	25	20	G1/8"	F	PG14S...
HPG 1616L/R.A2-B2-14S1	6,5	80	16	110	12,95	25	20	G1/8"	H	PG14S1...
HPG 1616L/R.A2-B2-14M	6,5	80	16	110	11,95	25	20	G1/8"	K	PG14M...
HPG 1616L/R.A2-B2-14L	6,5	80	16	110	11,00	25	25	G1/8"	P	PG14L...
HPG 1616L/R.A2-B2-14P	8	16	16	110	13,95	25	20	G1/8"	XF	PG14P...
HPG 2020L/R.A2-B2-14S	6,5	80	20	110	17,95	25	20	G1/8"	F	PG14S...
HPG 2020L/R.A2-B2-14S1	6,5	80	20	110	16,95	25	20	G1/8"	H	PG14S1...
HPG 2020L/R.A2-B2-14M	6,5	80	20	110	15,95	25	20	G1/8"	K	PG14M...
HPG 2020L/R.A2-B2-14L	6,5	80	20	110	15,00	25	25	G1/8"	P	PG14L...
HPG 2525L/R.A2-B2-14S	6,5	150	25	110	22,95	25	25	G1/8"	F	PG14S...
HPG 2525L/R.A2-B2-14S1	6,5	150	25	110	21,95	25	25	G1/8"	H	PG14S1...
HPG 2525L/R.A2-B2-14M	6,5	150	25	110	20,95	25	25	G1/8"	K	PG14M...
HPG 2525L/R.A2-B2-14L	6,5	150	25	110	19,95	25	25	G1/8"	P	PG14L...
HPG 2525L/R.A2-B2-14L1	6,5	150	25	110	18,95	25	25	G1/8"	S	PG14L1...

Holders

Execution B3

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	G1	Size	Insert
HPG 1616L/R.A2-B3-14S	6,5	80	16	110	13,95	25	20	G1/4"	F	PG14S...
HPG 1616L/R.A2-B3-14S1	6,5	80	16	110	12,95	25	20	G1/4"	H	PG14S1...
HPG 1616L/R.A2-B3-14M	6,5	80	16	110	11,95	25	20	G1/4"	K	PG14M...
HPG 1616L/R.A2-B3-14L	6,5	80	16	110	11,00	25	25	G1/4"	P	PG14L...
HPG 1616L/R.A2-B3-14P	8	16	16	110	13,95	25	20	G1/4"	XF	PG14P...
HPG 2020L/R.A2-B3-14S	6,5	80	20	110	17,95	25	20	G1/4"	F	PG14S...
HPG 2020L/R.A2-B3-14S1	6,5	80	20	110	16,95	25	20	G1/4"	H	PG14S1...
HPG 2020L/R.A2-B3-14M	6,5	80	20	110	15,95	25	20	G1/4"	K	PG14M...
HPG 2020L/R.A2-B3-14L	6,5	80	20	110	15,00	25	25	G1/4"	P	PG14L...
HPG 2525L/R.A2-B3-14S	6,5	150	25	110	22,95	25	25	G1/4"	F	PG14S...
HPG 2525L/R.A2-B3-14S1	6,5	150	25	110	21,95	25	25	G1/4"	H	PG14S1...
HPG 2525L/R.A2-B3-14M	6,5	150	25	110	20,95	25	25	G1/4"	K	PG14M...
HPG 2525L/R.A2-B3-14L	6,5	150	25	110	19,95	25	25	G1/4"	P	PG14L...
HPG 2525L/R.A2-B3-14L1	6,5	150	25	110	18,95	25	25	G1/4"	S	PG14L1...

The coolant inlet can be supplied to your specification.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

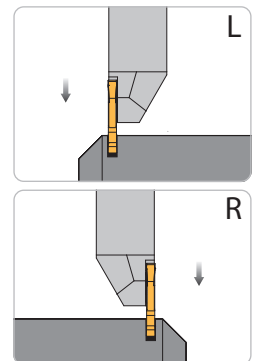
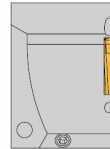
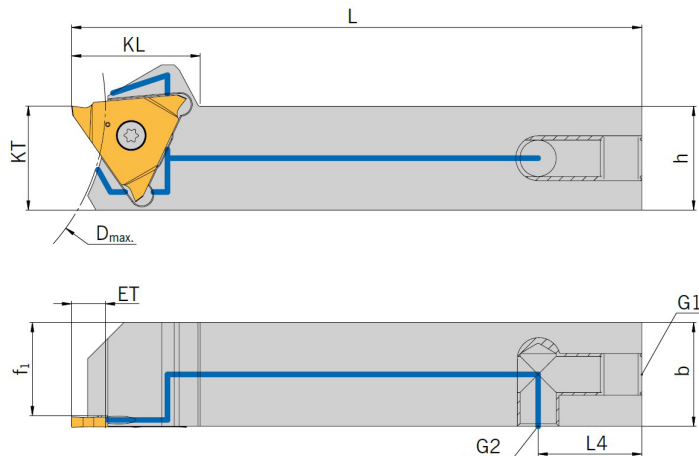
Spare Parts

Holder	Screw	Torque	Key
HPG-...-14...	A-005	2,5 Nm	BA-0-IPT2

Monoblock holders

HPG...A2-S...

Monoblock holder with through tool coolant (A2) access from the side



Similar
to illustration

Holders

Execution S1

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	L ₄	G1	G2	Size	Insert
HPG 1212L/R.A2-S1-14S	6,5	80	12	110	9,95	25	20	20	M8x1	M8x1	F	PG14S...
HPG 1212L/R.A2-S1-14S1	6,5	80	12	110	8,95	25	20	20	M8x1	M8x1	H	PG14S1...
HPG 1212L/R.A2-S1-14M	6,5	80	12	110	7,95	25	20	20	M8x1	M8x1	K	PG14M...
HPG 1212L/R.A2-S1-14P	8	16	12	110	9,95	25	20	20	M8x1	M8x1	XF	PG14P...
HPG 1616L/R.A2-S1-14S	6,5	80	16	110	13,95	25	20	20	M8x1	M8x1	F	PG14S...
HPG 1616L/R.A2-S1-14S1	6,5	80	16	110	12,95	25	20	20	M8x1	M8x1	H	PG14S1...
HPG 1616L/R.A2-S1-14M	6,5	80	16	110	11,95	25	20	20	M8x1	M8x1	K	PG14M...
HPG 1616L/R.A2-S1-14L	6,5	80	16	110	11,00	25	25	20	M8x1	M8x1	P	PG14L...
HPG 1616L/R.A2-S1-14P	8	16	16	110	13,95	25	20	20	M8x1	M8x1	XF	PG14P...
HPG 2020L/R.A2-S1-14S	6,5	80	20	110	17,95	25	20	20	M8x1	M8x1	F	PG14S...
HPG 2020L/R.A2-S1-14S1	6,5	80	20	110	16,95	25	20	20	M8x1	M8x1	H	PG14S1...
HPG 2020L/R.A2-S1-14M	6,5	80	20	110	15,95	25	20	20	M8x1	M8x1	K	PG14M...
HPG 2020L/R.A2-S1-14L	6,5	80	20	110	15,00	25	25	20	M8x1	M8x1	P	PG14L...
HPG 2525L/R.A2-S1-14S	6,5	150	25	110	22,95	25	25	20	M8x1	M8x1	F	PG14S...
HPG 2525L/R.A2-S1-14S1	6,5	150	25	110	21,95	25	25	20	M8x1	M8x1	H	PG14S1...
HPG 2525L/R.A2-S1-14M	6,5	150	25	110	20,95	25	25	20	M8x1	M8x1	K	PG14M...
HPG 2525L/R.A2-S1-14L	6,5	150	25	110	19,95	25	25	20	M8x1	M8x1	P	PG14L...
HPG 2525L/R.A2-S1-14L1	6,5	150	25	110	18,95	25	25	20	M8x1	M8x1	S	PG14L1...

Monoblock holders

Holders

Execution S2

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	L ₄	G1	G2	Size	Insert
HPG 1212L/R.A2-S2-14S	6,5	80	12	110	9,95	25	20	20	M8x1	G1/8"	F	PG14S...
HPG 1212L/R.A2-S2-14S1	6,5	80	12	110	8,95	25	20	20	M8x1	G1/8"	H	PG14S1...
HPG 1212L/R.A2-S2-14M	6,5	80	12	110	7,95	25	20	20	M8x1	G1/8"	K	PG14M...
HPG 1212L/R.A2-S2-14P	8	16	12	110	9,95	25	20	20	M8x1	M8x1	XF	PG14P...
HPG 1616L/R.A2-S2-14S	6,5	80	16	110	13,95	25	20	20	M8x1	G1/8"	F	PG14S...
HPG 1616L/R.A2-S2-14S1	6,5	80	16	110	12,95	25	20	20	M8x1	G1/8"	H	PG14S1...
HPG 1616L/R.A2-S2-14M	6,5	80	16	110	11,95	25	20	20	M8x1	G1/8"	K	PG14M...
HPG 1616L/R.A2-S2-14L	6,5	80	16	110	11,00	25	25	20	M8x1	G1/8"	P	PG14L...
HPG 1616L/R.A2-S2-14P	8	16	16	110	13,95	25	20	20	M8x1	M8x1	XF	PG14P...
HPG 2020L/R.A2-S2-14S	6,5	80	20	110	17,95	25	20	20	M8x1	G1/8"	F	PG14S...
HPG 2020L/R.A2-S2-14S1	6,5	80	20	110	16,95	25	20	20	M8x1	G1/8"	H	PG14S1...
HPG 2020L/R.A2-S2-14M	6,5	80	20	110	15,95	25	20	20	M8x1	G1/8"	K	PG14M...
HPG 2020L/R.A2-S2-14L	6,5	80	20	110	15,00	25	25	20	M8x1	G1/8"	P	PG14L...
HPG 2525L/R.A2-S2-14S	6,5	150	25	110	22,95	25	25	20	M8x1	G1/8"	F	PG14S...
HPG 2525L/R.A2-S2-14S1	6,5	150	25	110	21,95	25	25	20	M8x1	G1/8"	H	PG14S1...
HPG 2525L/R.A2-S2-14M	6,5	150	25	110	20,95	25	25	20	M8x1	G1/8"	K	PG14M...
HPG 2525L/R.A2-S2-14L	6,5	150	25	110	19,95	25	25	20	M8x1	G1/8"	P	PG14L...
HPG 2525L/R.A2-S2-14L1	6,5	150	25	110	18,95	25	25	20	M8x1	G1/8"	S	PG14L1...

The coolant inlet can be supplied to your specification.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

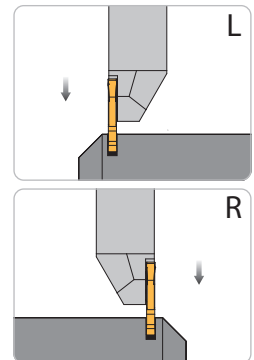
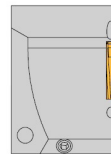
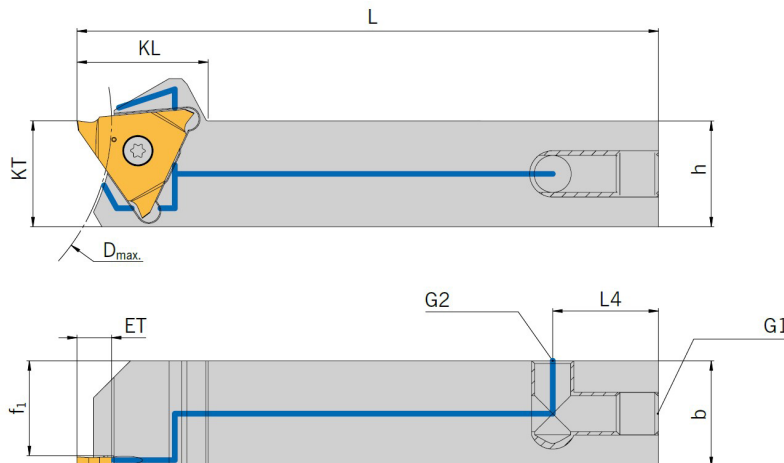
Spare Parts

Holder	Screw	Torque	Key
HPG-...-14...	A-005	2,5 Nm	BA-0-IPT2

Monoblock holders

HPG...A2-ST...

Monoblock holder with through tool coolant (A2) access from the opposite side of the cutting edge



Similar to illustration

Holders

Execution ST1

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	L ₄	G1	G2	Size	Insert
HPG 1212L/R.A2-ST1-14S	6,5	80	12	110	9,95	25	20	20	M8x1	M8x1	F	PG-14S...
HPG 1212L/R.A2-ST1-14S1	6,5	80	12	110	8,95	25	20	20	M8x1	M8x1	H	PG-14S...
HPG 1212L/R.A2-ST1-14M	6,5	80	12	110	7,95	25	20	20	M8x1	M8x1	K	PG-14M...
HPG 1212L/R.A2-ST1-14P	8	16	12	110	9,95	25	20	20	M8x1	M8x1	XF	PG-14P...
HPG 1616L/R.A2-ST1-14S	6,5	80	16	110	13,95	25	20	20	M8x1	M8x1	F	PG-14S...
HPG 1616L/R.A2-ST1-14S1	6,5	80	16	110	12,95	25	20	20	M8x1	M8x1	H	PG-14S...
HPG 1616L/R.A2-ST1-14M	6,5	80	16	110	11,95	25	20	20	M8x1	M8x1	K	PG-14M...
HPG 1616L/R.A2-ST1-14L	6,5	80	16	110	11,00	25	25	20	M8x1	M8x1	P	PG-14L...
HPG 1616L/R.A2-ST1-14P	8	16	16	110	13,95	25	20	20	M8x1	M8x1	XF	PG-14P...
HPG 2020L/R.A2-ST1-14S	6,5	80	20	110	17,95	25	20	20	M8x1	M8x1	F	PG-14S...
HPG 2020L/R.A2-ST1-14S1	6,5	80	20	110	16,95	25	20	20	M8x1	M8x1	H	PG-14S...
HPG 2020L/R.A2-ST1-14M	6,5	80	20	110	15,95	25	20	20	M8x1	M8x1	K	PG-14M...
HPG 2020L/R.A2-ST1-14L	6,5	80	20	110	15,00	25	25	25	M8x1	M8x1	P	PG-14L...
HPG 2525L/R.A2-ST1-14S	6,5	150	25	110	22,95	25	25	20	M8x1	M8x1	F	PG-14S...
HPG 2525L/R.A2-ST1-14S1	6,5	150	25	110	21,95	25	25	20	M8x1	M8x1	H	PG-14S...
HPG 2525L/R.A2-ST1-14M	6,5	150	25	110	20,95	25	25	20	M8x1	M8x1	K	PG-14M...
HPG 2525L/R.A2-ST1-14L	6,5	150	25	110	19,95	25	25	20	M8x1	M8x1	P	PG-14L...
HPG 2525L/R.A2-ST1-14L1	6,5	150	25	110	18,95	25	25	20	M8x1	M8x1	S	PG-14L...

Monoblock holders

Holders

Execution ST2

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	L ₄	G1	G2	Size	Insert
HPG 1212L/R.A2-ST2-14S	6,5	80	12	110	9,95	25	20	20	M8x1	G1/8"	F	PG-14S...
HPG 1212L/R.A2-ST2-14S1	6,5	80	12	110	8,95	25	20	20	M8x1	G1/8"	H	PG-14S...
HPG 1212L/R.A2-ST2-14M	6,5	80	12	110	7,95	25	20	20	M8x1	G1/8"	K	PG-14M...
HPG 1212L/R.A2-ST2-14P	8	16	12	110	9,95	25	20	20	M8x1	M8x1	XF	PG-14P...
HPG 1616L/R.A2-ST2-14S	6,5	80	16	110	13,95	25	20	20	M8x1	G1/8"	F	PG-14S...
HPG 1616L/R.A2-ST2-14S1	6,5	80	16	110	12,95	25	20	20	M8x1	G1/8"	H	PG-14S...
HPG 1616L/R.A2-ST2-14M	6,5	80	16	110	11,95	25	20	20	M8x1	G1/8"	K	PG-14M...
HPG 1616L/R.A2-ST2-14L	6,5	80	16	110	11,00	25	25	20	M8x1	G1/8"	P	PG-14L...
HPG 1616L/R.A2-ST2-14P	8	16	16	110	13,95	25	20	20	M8x1	M8x1	XF	PG-14P...
HPG 2020L/R.A2-ST2-14S	6,5	80	20	110	17,95	25	20	20	M8x1	G1/8"	F	PG-14S...
HPG 2020L/R.A2-ST2-14S1	6,5	80	20	110	16,95	25	20	20	M8x1	G1/8"	H	PG-14S...
HPG 2020L/R.A2-ST2-14M	6,5	80	20	110	15,95	25	20	20	M8x1	G1/8"	K	PG-14M...
HPG 2020L/R.A2-ST2-14L	6,5	80	20	110	15,00	25	25	20	M8x1	G1/8"	P	PG-14L...
HPG 2525L/R.A2-ST2-14S	6,5	150	25	110	22,95	25	25	20	M8x1	G1/8"	F	PG-14S...
HPG 2525L/R.A2-ST2-14S1	6,5	150	25	110	21,95	25	25	20	M8x1	G1/8"	H	PG-14S...
HPG 2525L/R.A2-ST2-14M	6,5	150	25	110	20,95	25	25	20	M8x1	G1/8"	K	PG-14M...
HPG 2525L/R.A2-ST2-14L	6,5	150	25	110	19,95	25	25	20	M8x1	G1/8"	P	PG-14L...
HPG 2525L/R.A2-ST2-14L1	6,5	150	25	110	18,95	25	25	20	M8x1	G1/8"	S	PG-14L...

The coolant inlet can be supplied to your specification.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

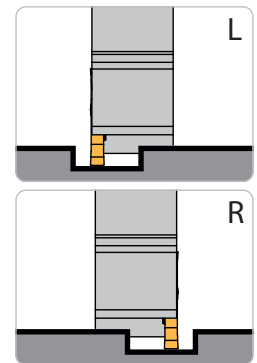
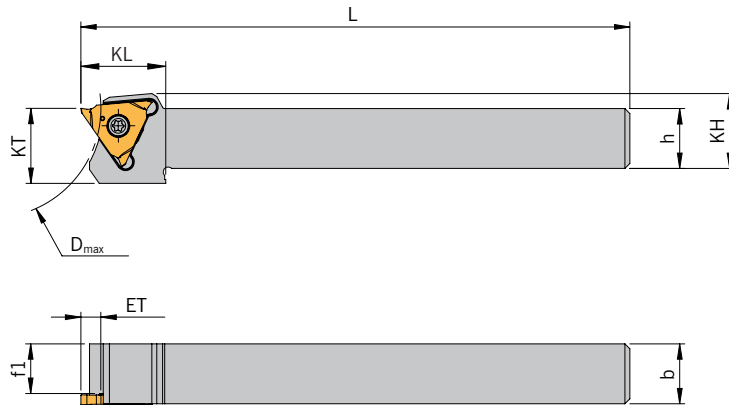
Spare Parts

Holder	Screw	Torque	Key
HPG-...-14...	A-005	2,5 Nm	BA-0-IPT2

Monoblock holders

HPG...-09S...

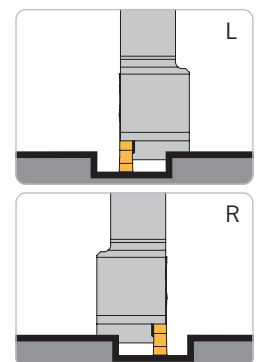
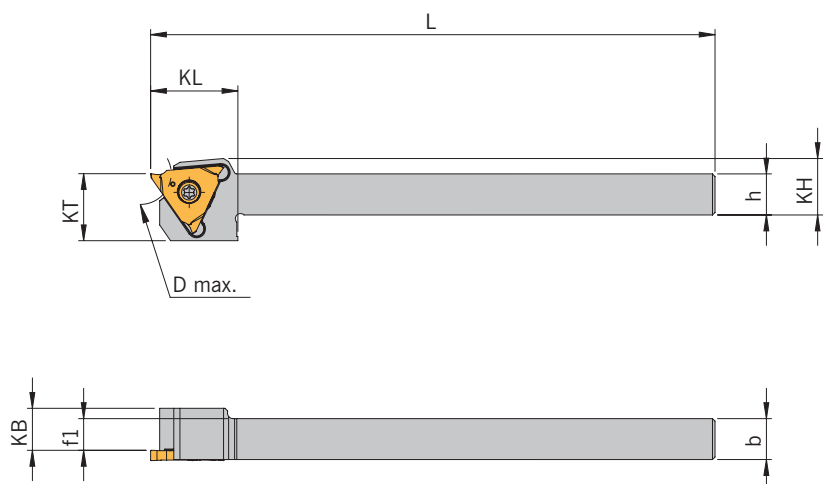
Monoblock holder without through tool coolant



Similar to illustration

Holders

Designation	ET _{max}	D _{max}	h	b	L	f ₁	KL	KT	Size	Torque Nm	Insert
HPG 1010L/R-09S	4	44	10	10	110	7,95	17	15	F	1,5	PG-09S...
HPG 1010L/R-09S1	4	44	10	10	110	6,95	17	15	H	1,5	PG-09S1...
HPG 1212L/R-09S	4	44	12	12	110	9,95	17	15	F	1,5	PG-09S...
HPG 1212L/R-09S1	4	44	12	12	110	8,95	17	15	H	1,5	PG-09S1...
HPG 1616L/R-09S	4	80	16	16	110	13,95	17	16	F	1,5	PG-09S...
HPG 2020L/R-09S	4	80	17	16	110	17,95	17	20	F	1,5	PG-09S...



Similar to illustration

Holders

Designation	ET _{max}	D _{max}	h	b	KB	L	f ₁	KL	KT	Size	Torque Nm	Insert
HPG 0808L/R-09S	4	12	8	8	7,95	110	5,95	17	13	F	1,5	PG-09S...

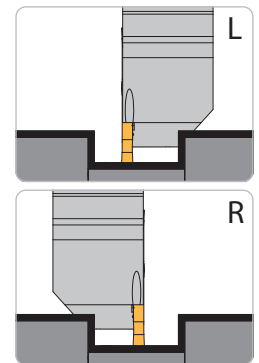
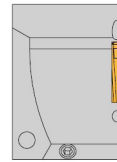
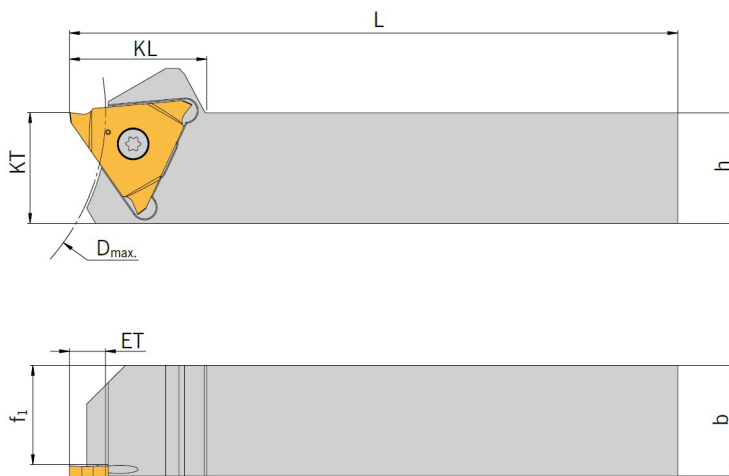
Spare Parts

Holder	Screw	Key
HPG-...-09S...	A-004	BA-8-IP

Monoblock holders

HPG...

Monoblock holder without through tool coolant



Similar to illustration

Holders

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	Size	Insert
HPG 1212L/R-14S	6,5	80	12	110	9,95	25	20	F	PG-14S...
HPG 1212L/R-14S1	6,5	80	12	110	8,95	25	20	H	PG-14S1...
HPG 1212L/R-14M	6,5	80	12	110	7,95	25	20	K	PG-14M...
HPG 1616L/R-14S	6,5	80	16	110	13,95	25	20	F	PG-14S...
HPG 1616L/R-14S1	6,5	80	16	110	12,95	25	20	H	PG-14S1...
HPG 1616L/R-14M	6,5	80	16	110	11,95	25	20	K	PG-14M...
HPG 1616L/R-14L	6,5	80	16	110	11,00	25	25	P	PG-14L...
HPG 2020L/R-14S	6,5	80	20	110	17,95	25	20	F	PG-14S...
HPG 2020L/R-14S1	6,5	80	20	110	16,95	25	20	H	PG-14S1...
HPG 2020L/R-14M	6,5	80	20	110	15,95	25	20	K	PG-14M...
HPG 2020L/R-14L	6,5	80	20	110	15,00	25	25	P	PG-14L...
HPG 2525L/R-14S	6,5	150	25	110	22,95	25	25	F	PG-14S...
HPG 2525L/R-14S1	6,5	150	25	110	21,95	25	25	H	PG-14S1...
HPG 2525L/R-14M	6,5	150	25	110	20,95	25	25	K	PG-14M...
HPG 2525L/R-14L	6,5	150	25	110	19,95	25	25	P	PG-14L...
HPG 2525L/R-14L1	6,5	150	25	110	18,95	25	25	S	PG-14L1...

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

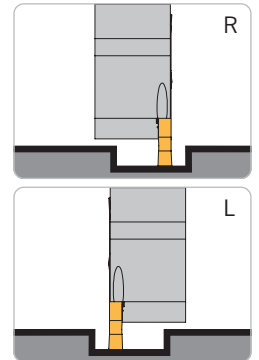
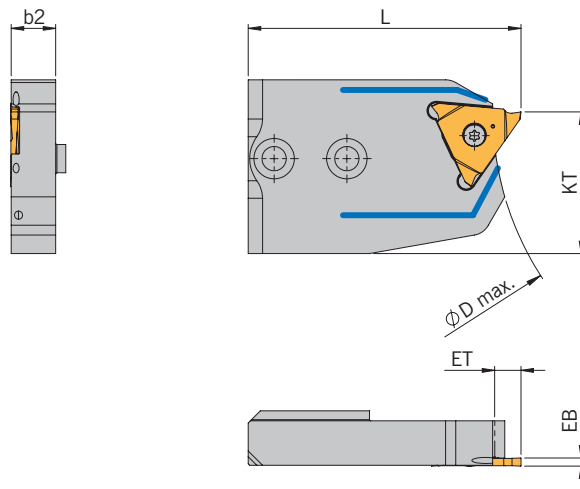
Spare Parts

Holder	Screw	Torque	Key
HPG-...-14...	A-005	2,5 Nm	BA-0-IPT2

Modules

MPG S...A2...

Module with through tool coolant - A2



Holders

Article	EB	ET	D _{max}	b ₂	L	KT	Torque Nm	Insert
MPG SL/R.A2-14S	2	6,5	150	11	67,5	35	2,5	PG-14S...
MPG SL/R.A2-14S1	3	6,5	150	11	67,5	35	2,5	PG-14S1...
MPG SL/R.A2-14M	4	6,5	150	11	67,5	35	2,5	PG-14M...

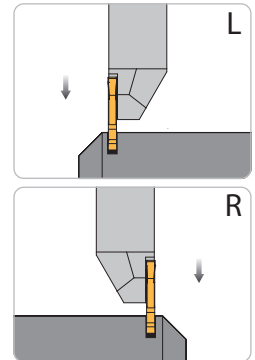
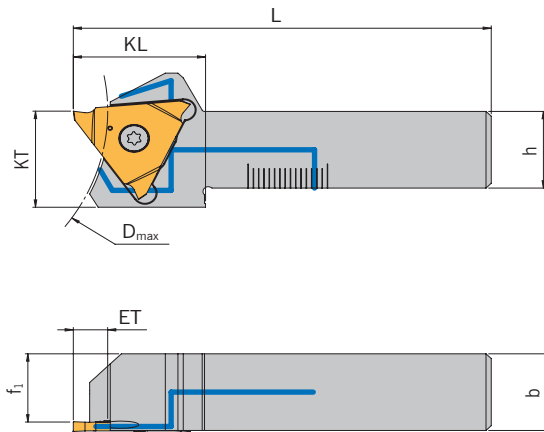
Spare Parts

Holder	Screw	Key
MPG-SL/R-14...-A2	A-005	BA-0-IPT2

Monoblock holders

HPG-...-A2-UN

Monoblock holder with coolant supply A2 from the bottom (Notch)



Similar to illustration

Holders

Execution UN

Designation	ET _{max}	D _{max}	h	L	f ₁	KL	KT	Size	Insert
HPG 1616L/R.A2-BN-14S	6,5	80	16	79	13,95	25	20	F	PG-14S...
HPG 1616L/R.A2-BN-14S1	6,5	80	16	79	12,95	25	20	H	PG-14S1...
HPG 1616L/R.A2-BN-14M	6,5	80	16	79	11,95	25	20	K	PG-14M...
HPG 1616L/R.A2-BN-14L	6,5	80	16	79	11,00	25	25	P	PG-14L...
HPG 1616L/R.A2-BN-14P	8	16	16	79	13,95	25	20	XF	PG-14P...
HPG 2020L/R.A2-BN-14S	6,5	80	20	94	17,95	25	20	F	PG-14S...
HPG 2020L/R.A2-BN-14S1	6,5	80	20	94	16,95	25	20	H	PG-14S1...
HPG 2020L/R.A2-BN-14M	6,5	80	20	94	15,95	25	20	K	PG-14M...
HPG 2020L/R.A2-BN-14L	6,5	80	20	94	15,00	25	25	P	PG-14L...
HPG 2525L/R.A2-BN-14S	6,5	150	25	97	22,95	25	25	F	PG-14S...
HPG 2525L/R.A2-BN-14S1	6,5	150	25	97	21,95	25	25	H	PG-14S1...
HPG 2525L/R.A2-BN-14M	6,5	150	25	97	20,95	25	25	K	PG-14M...
HPG 2525L/R.A2-BN-14L	6,5	150	25	97	19,95	25	25	P	PG-14L...
HPG 2525L/R.A2-BN-14L1	6,5	150	25	97	18,95	25	25	S	PG-14L1...

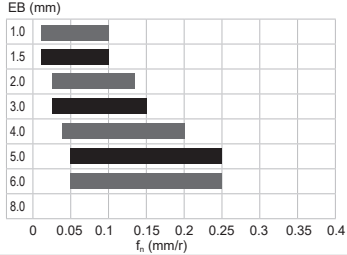
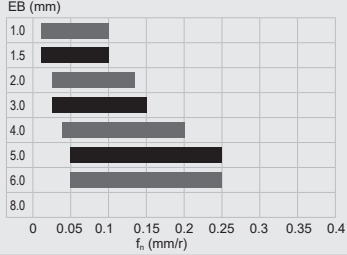
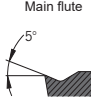
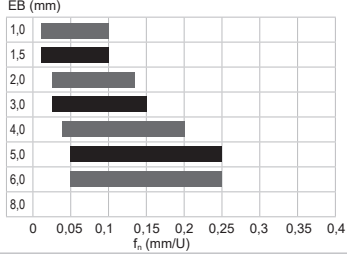
The coolant inlet can be supplied to your specification.

On request, we can supply you with inserts in special sizes with the appropriate holders. Plunge widths of up to 15 mm are possible.

Spare Parts

Holder	Screw	Torque	Key
HPG-...-14...	A-005	2,5 Nm	BA-0-IPT2

Geometry description

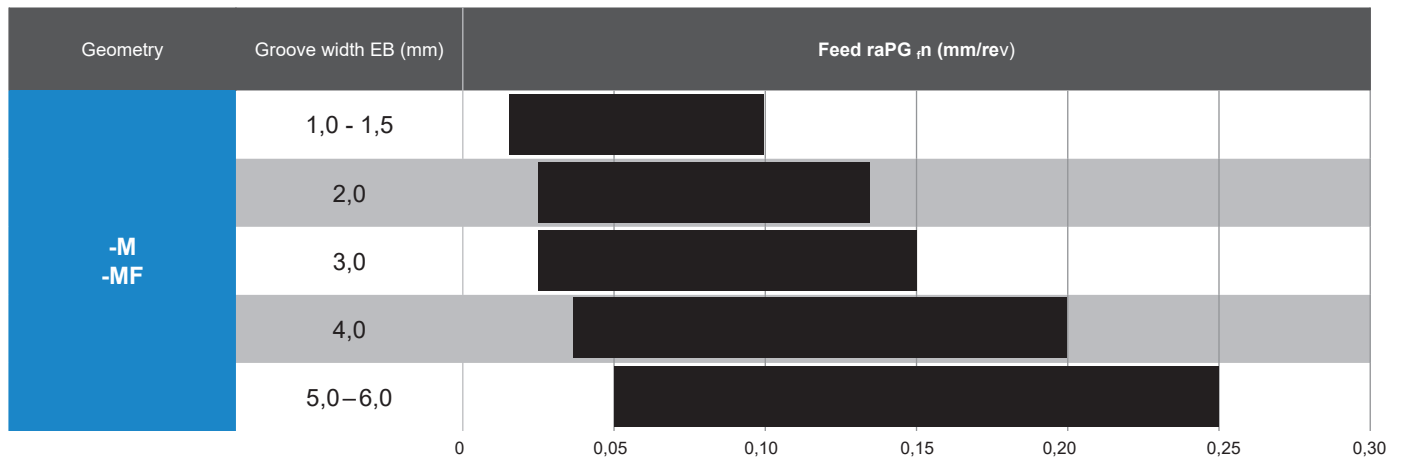
Geometry	Properties	Material group						View/Cut	Basic cutting data diagram
		P	M	K	N	S	H		
-M  	• Excellent for machining steel and stainless steel • Completely ground geometry • High precision and repeatability	●	○	○	○	○			
-MF  	• Very soft cutting geometry • Completely ground geometry • Low cutting forces	●	○	○	○	○			
-M1  	• Good chip control due to chip breaker with sharp cutting edge and stable cutting edge • Short breaking chips • Fully ground geometry	●	●	○	○	○			

Coatings description

Grade	Coating colour	Properties	Material group						Scope of application									
			P	M	K	N	S	H	5	10	15	20	25	30	35	40	45	● ● ✕
A4M-E2 		• Universally applicable grade • Good interplay between wear resistance and toughness • High resistance to oxidation	●	○		○	○											 
A42-CK2 		• Latest PVD coating generation ALTiN-based. • Universally applicable grade in the high-performance range.	●	○		○	○											 

Application reference

Application recommendations



Cutting depth dependent on D_{max}

Turning 14

Groove depht (mm)	HPG-1212-14..	HPG-1616-14...	HPG-2020-14...	HPG-2525-14...
ET	D _{max}			
2,0	∞	∞	∞	∞
2,5	∞	∞	∞	∞
3,0	935	935	935	∞
3,5	360	360	360	∞
4,0	220	220	220	945
4,5	160	160	160	450
5,0	125	125	125	300
5,5	105	105	105	220
6,0	90	90	90	180
6,5	80	80	80	150

Turning 9

Groove depht (mm)	HPG-0808-09...	HPG-1010-09...	HPG-1212-09...	HPG-1616-09...
ET	D _{max}			
1,0	∞	∞	∞	∞
1,5	105	450	∞	∞
2,0	38	160	175	∞
2,5	23	100	100	360
3,0	17	70	70	160
3,5	14	53	53	105
4,0	12	44	44	80

Application reference

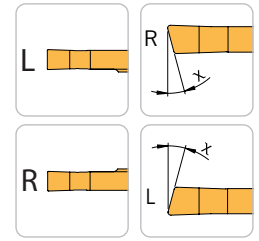
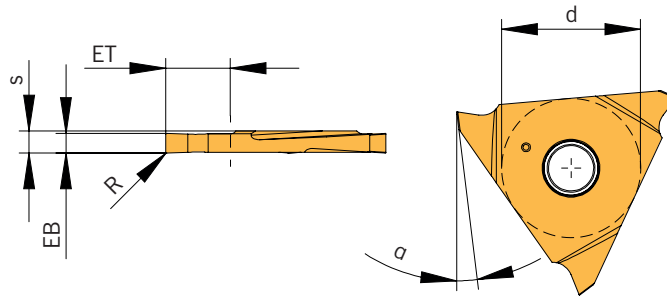
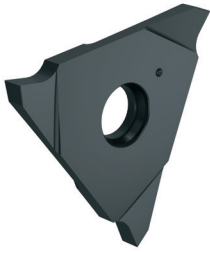
Cutting depth dependent on $D_{\max}$

Modules

Groove depht (mm)	MPG-...14...
ET	$D_{\max}$
1,0	∞
1,5	∞
2,0	∞
2,5	∞
3,0	∞
3,5	∞
4,0	945
4,5	450
5,0	300
5,5	220
6,0	180
6,5	150

Inserts

PG09...



Similar to illustration

Designation	EB	R	ET	d	s	α	χ	Size	HC
									A42-CK2
PG09S.L050.200R005-M	0,5	0,05	2	9	2,15	7°	0°	S	◆
PG09S.R050.200R005-M	0,5	0,05	2	9	2,15	7°	0°	S	◆
PG09S.L080.200R005-M	0,8	0,05	2	9	2,15	7°	0°	S	◆
PG09S.R080.200R005-M	0,8	0,05	2	9	2,15	7°	0°	S	◆
PG09S.L090.200R005-M	0,9	0,05	2	9	2,15	7°	0°	S	◆
PG09S.R090.200R005-M	0,9	0,05	2	9	2,15	7°	0°	S	◆
PG09S.L100.200R01-M	1	0,1	2	9	2,15	7°	0°	S	◆
PG09S.R100.200R01-M	1	0,1	2	9	2,15	7°	0°	S	◆
PG09S.L110.400R01-M	1,1	0,1	4	9	2,15	7°	0°	S	◆
PG09S.R110.400R01-M	1,1	0,1	4	9	2,15	7°	0°	S	◆
PG09S.L130.400R01-M	1,3	0,1	4	9	2,15	7°	0°	S	◆
PG09S.R130.400R01-M	1,3	0,1	4	9	2,15	7°	0°	S	◆
PG09S.L150.400R01-M	1,5	0,1	4	9	2,15	7°	0°	S	◆
PG09S.R150.400R01-M	1,5	0,1	4	9	2,15	7°	0°	S	◆
PG09S.L160.400R01-M	1,6	0,1	4	9	2,15	7°	0°	S	◆
PG09S.R160.400R01-M	1,6	0,1	4	9	2,15	7°	0°	S	◆
PG09S.L200.200R01-M	2	0,1	2	9	2,15	7°	0°	S	◆
PG09S.R200.200R01-M	2	0,1	2	9	2,15	7°	0°	S	◆
PG09S.L200.400R01-M	2	0,1	4	9	2,15	7°	0°	S	◆
PG09S.R200.400R01-M	2	0,1	4	9	2,15	7°	0°	S	◆

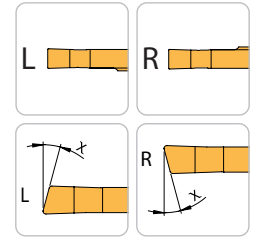
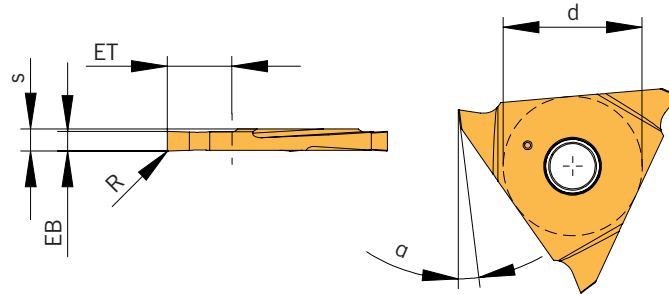
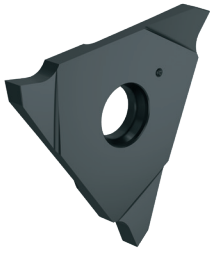
Carbide coated

P	●
M	○
K	○
N	○
S	○
H	

 ● Main application
 ○ Secondary application

Inserts

PG14...



Similar to illustration

Inserts straight dimensions

Designation	EB ± 0,02	R	ET	d	s	α	χ	Size	HC
									A42-BP2
PG14S.L080.300R01-M	0,8	0,1	3,0	14	2,25	7°	0°	S	◆
PG14S.R080.300R01-M	0,8	0,1	3,0	14	2,25	7°	0°	S	◆
PG14S.L100.300R01-M	1,0	0,1	3,0	14	2,25	7°	0°	S	◆
PG14S.L100.500R02.15-M	1,0	0,1	3,0	14	2,25	7°	15°	S	◆
PG14S.R100.300R01-M	1,0	0,1	3,0	14	2,25	7°	0°	S	◆
PG14S.L100.650R01-M	1,0	0,1	6,5	14	2,25	7°	0°	S	◆
PG14S.R100.650R01-M	1,0	0,1	6,5	14	2,25	7°	0°	S	◆
PG14S.L150.300R01-M	1,5	0,1	3,0	14	2,25	7°	0°	S	◆
PG14S.R150.300R01-M	1,5	0,1	3,0	14	2,25	7°	0°	S	◆
PG14S.L150.650R01-M	1,5	0,1	6,5	14	2,25	7°	0°	S	◆
PG14S.R150.650R01-M	1,5	0,1	6,5	14	2,25	7°	0°	S	◆
PG14S.R150.500R01.5-M	1,5	0,1	6,5	14	2,25	7°	5°	S	◆
PG14S.L200.650R01-M	2,0	0,1	6,5	14	2,25	7°	0°	S	◆
PG14S.R200.650R01-M	2,0	0,1	6,5	14	2,25	7°	0°	S	◆
PG14S.L200.650R02-M	2,0	0,2	6,5	14	2,25	7°	0°	S	◆
PG14S.R200.650R02-M	2,0	0,2	6,5	14	2,25	7°	0°	S	◆
PG14S.R200.650R02.15-M	2,0	0,2	6,5	14	2,25	7°	15°	S	◆
PG14S1.L250.650R02-M	2,5	0,2	6,5	14	3,25	7°	0°	S1	◆
PG14S1.R250.650R02-M	2,5	0,2	6,5	14	3,25	7°	0°	S1	◆
PG14S1.L250.650R04-M	2,5	0,4	6,5	14	3,25	7°	0°	S1	◆
PG14S1.R250.650R04-M	2,5	0,4	6,5	14	3,25	7°	0°	S1	◆
PG14S1.L300.650R02-M	3,0	0,2	6,5	14	3,25	7°	0°	S1	◆
PG14S1.R300.650R02-M	3,0	0,2	6,5	14	3,25	7°	0°	S1	◆
PG14S1.L300.650R04-M	3,0	0,4	6,5	14	3,25	7°	0°	S1	◆
PG14S1.R300.650R04-M	3,0	0,4	6,5	14	3,25	7°	0°	S1	◆

Inserts

PG14...

Designation	EB ± 0,02	R	ET	d	s	α	χ	Size	HC
									A42-BP2
PG14M.L400.650R02-M	4,0	0,2	6,5	14	4,25	7°	0°	M	◆
PG14M.R400.650R02-M	4,0	0,2	6,5	14	4,25	7°	0°	M	◆
PG14M.L400.650R04-M	4,0	0,4	6,5	14	4,25	7°	0°	M	◆
PG14M.R400.650R04-M	4,0	0,4	6,5	14	4,25	7°	0°	M	◆
PG14L.L500.650R02-M	5,0	0,2	6,5	14	5,25	7°	0°	L	◆
PG14L.R500.650R02-M	5,0	0,2	6,5	14	5,25	7°	0°	L	◆
PG14L.L500.650R04-M	5,0	0,4	6,5	14	5,25	7°	0°	L	◆
PG14L.R500.650R04-M	5,0	0,4	6,5	14	5,25	7°	0°	L	◆
PG14L1.L600.650R04-M	6,0	0,4	6,5	14	6,25	7°	0°	L1	◆
PG14L1.R600.650R04-M	6,0	0,4	6,5	14	6,25	7°	0°	L1	◆

Carbide coated

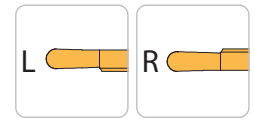
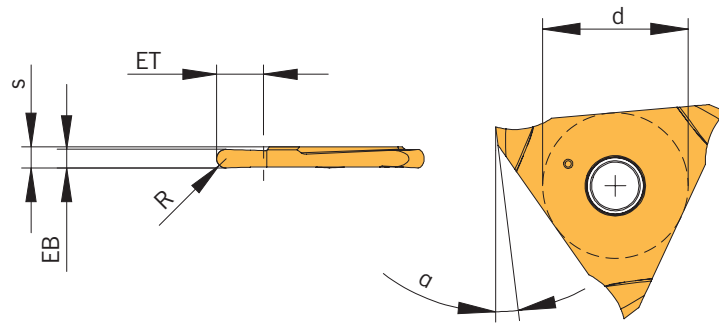
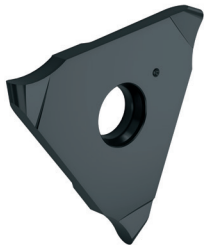
P	●
M	○
K	
N	○
S	○
H	

 ●
 Main application

 ○
 Secondary application

Inserts

PGC14...



Similar to illustration

Full radius inserts

Designation	EB ± 0,02	R	ET	d	s	α	Size	HC
								A42-BP2
PGC14S.R050.150R02-MF	0,5	0,25	1,5	14	2,25	7°	S	◆
PGC14S.L100.300R05-MF	1,0	0,5	3,0	14	2,25	7°	S	◆
PGC14S.R100.300R05-MF	1,0	0,5	3,0	14	2,25	7°	S	◆
PGC14S.L200.501R00-MF	2,0	1,0	5,0	14	2,25	7°	S	◆
PGC14S.R200.501R00-MF	2,0	1,0	5,0	14	2,25	7°	S	◆
PGC14S1.L300.501R05-MF	3,0	1,5	5,0	14	3,25	7°	S1	◆
PGC14S1.R300.501R05-MF	3,0	1,5	5,0	14	3,25	7°	S1	◆
PGC14M.L400.502R00-MF	4,0	2,0	5,0	14	4,25	7°	M	◆
PGC14M.R400.502R00-MF	4,0	2,0	5,0	14	4,25	7°	M	◆

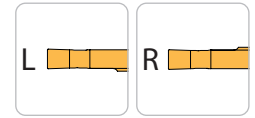
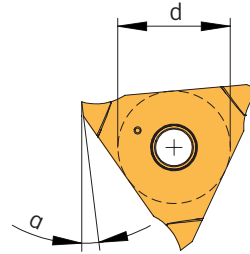
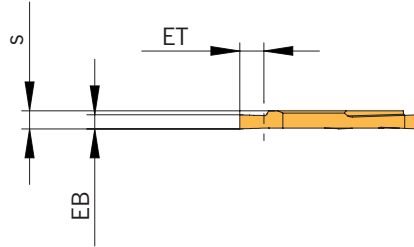
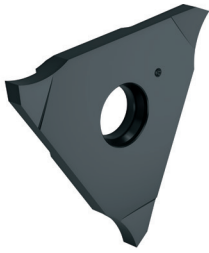
Carbide coated

P	●
M	○
K	
N	○
S	○
H	

 ● Main application
 ○ Secondary application

Inserts

PGR14...



Similar to illustration

Inserts for circlip grooves to DIN 471/472

Designation	EB - 0,05	m* H13	ET	d	s	α	Size	HC
								A42-BP2
PGR14S.L050.070-MF	0,57	0,50	0,7	14	2,25	7°	S	◆
PGR14S.R050.070-MF	0,57	0,50	0,7	14	2,25	7°	S	◆
PGR14S.L060.080-MF	0,67	0,60	0,8	14	2,25	7°	S	◆
PGR14S.R060.080-MF	0,67	0,60	0,8	14	2,25	7°	S	◆
PGR14S.L070.110-MF	0,77	0,70	1,1	14	2,25	7°	S	◆
PGR14S.R070.110-MF	0,77	0,70	1,1	14	2,25	7°	S	◆
PGR14S.L080.120-MF	0,87	0,80	1,2	14	2,25	7°	S	◆
PGR14S.R080.120-MF	0,87	0,80	1,2	14	2,25	7°	S	◆
PGR14S.L090.140-MF	0,97	0,90	1,4	14	2,25	7°	S	◆
PGR14S.R090.140-MF	0,97	0,90	1,4	14	2,25	7°	S	◆
PGR14S.L100.160-MF	1,07	1,00	1,6	14	2,25	7°	S	◆
PGR14S.R100.160-MF	1,07	1,00	1,6	14	2,25	7°	S	◆
PGR14S.L110.200-MF	1,24	1,10	2,0	14	2,25	7°	S	◆
PGR14S.R110.200-MF	1,24	1,10	2,0	14	2,25	7°	S	◆
PGR14S.L130.200-MF	1,44	1,30	2,0	14	2,25	7°	S	◆
PGR14S.R130.200-MF	1,44	1,30	2,0	14	2,25	7°	S	◆
PGR14S.L160.300-MF	1,74	1,60	3,0	14	2,25	7°	S	◆
PGR14S.R160.300-MF	1,74	1,60	3,0	14	2,25	7°	S	◆
PGR14S.L185.300-MF	1,99	1,85	3,0	14	2,25	7°	S	◆
PGR14S.R185.300-MF	1,99	1,85	3,0	14	2,25	7°	S	◆
PGR14S1.L215.400-MF	2,29	2,15	4,0	14	3,25	7°	S1	◆
PGR14S1.R215.400-MF	2,29	2,15	4,0	14	3,25	7°	S1	◆
PGR14S1.L265.400-MF	2,79	2,65	4,0	14	3,25	7°	S1	◆
PGR14S1.R265.400-MF	2,79	2,65	4,0	14	3,25	7°	S1	◆
PGR14M.L315.500-MF	3,29	3,15	5,0	14	4,25	7°	M	◆
PGR14M.R315.500-MF	3,29	3,15	5,0	14	4,25	7°	M	◆

Carbide coated

* Groove width "m"

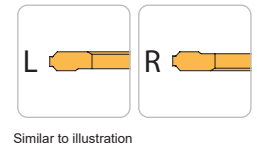
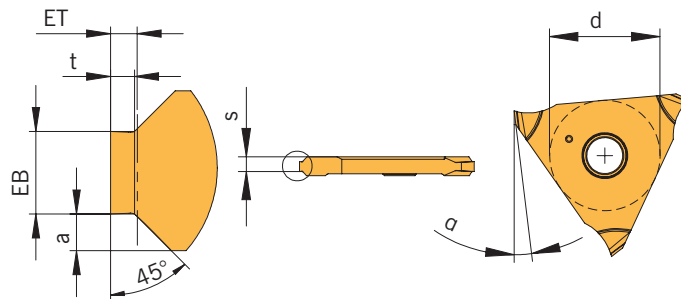
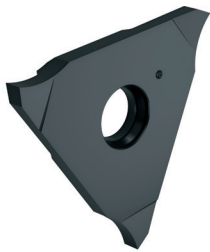
P	●
M	○
K	
N	○
S	○
H	

● Main application

○ Secondary application

Inserts

PGR14F...



Inserts for circlip grooves to DIN 471/472 full profile

Designation	EB - 0,05	m* H13	ET	a	t	s	d	α	Size	HC
										A42-BP2
PGR14FS.L110.020-MF	1,24	1,10	0,20	0,55	0,19	1,85	14	7°	S	◆
PGR14FS.R110.020-MF	1,24	1,10	0,20	0,55	0,19	1,85	14	7°	S	◆
PGR14FS.L110.025-MF	1,24	1,10	0,25	0,55	0,24	1,85	14	7°	S	◆
PGR14FS.R110.025-MF	1,24	1,10	0,25	0,55	0,24	1,85	14	7°	S	◆
PGR14FS.L110.030-MF	1,24	1,10	0,30	0,55	0,29	1,85	14	7°	S	◆
PGR14FS.R110.030-MF	1,24	1,10	0,30	0,55	0,29	1,85	14	7°	S	◆
PGR14FS.L110.035-MF	1,24	1,10	0,35	0,55	0,33	1,85	14	7°	S	◆
PGR14FS.R110.035-MF	1,24	1,10	0,35	0,55	0,33	1,85	14	7°	S	◆
PGR14FS.L110.040-MF	1,24	1,10	0,40	0,55	0,36	1,85	14	7°	S	◆
PGR14FS.R110.040-MF	1,24	1,10	0,40	0,55	0,36	1,85	14	7°	S	◆
PGR14FS.L130.055-MF	1,44	1,30	0,55	0,55	0,45	1,85	14	7°	S	◆
PGR14FS.R130.055-MF	1,44	1,30	0,55	0,55	0,45	1,85	14	7°	S	◆
PGR14FS1.L160.070-MF	1,74	1,60	0,70	0,55	0,60	2,85	14	7°	S1	◆
PGR14FS1.R160.070-MF	1,74	1,60	0,70	0,55	0,60	2,85	14	7°	S1	◆
PGR14FS1.L160.085-MF	1,74	1,60	0,85	0,55	0,75	2,85	14	7°	S1	◆
PGR14FS1.R160.085-MF	1,74	1,60	0,85	0,55	0,75	2,85	14	7°	S1	◆
PGR14FS1.L160.100-MF	1,74	1,60	1,00	0,55	0,85	2,85	14	7°	S1	◆
PGR14FS1.R160.100-MF	1,74	1,60	1,00	0,55	0,85	2,85	14	7°	S1	◆
PGR14FS1.L185.100-MF	1,99	1,85	1,00	0,55	0,85	2,85	14	7°	S1	◆
PGR14FS1.R185.100-MF	1,99	1,85	1,00	0,55	0,85	2,85	14	7°	S1	◆
PGR14FS1.L185.125-MF	1,99	1,85	1,25	0,55	1,10	2,85	14	7°	S1	◆
PGR14FS1.R185.500R10-MF	1,99	1,85	1,25	0,55	1,10	2,85	14	7°	S1	◆
PGR14FS1.L215.500R10-MF	2,29	2,15	1,50	0,55	1,35	2,85	14	7°	S1	◆
PGR14FS1.R215.500R20-MF	2,29	2,15	1,50	0,55	1,35	2,85	14	7°	S1	◆
PGR14FM.L265.500R20-MF	2,79	2,65	1,50	0,55	1,35	3,85	14	7°	M	◆
PGR14FM.R265.150-MF	2,79	2,65	1,50	0,55	1,35	3,85	14	7°	M	◆
PGR14FM.L265.175-MF	2,79	2,65	1,75	0,55	1,60	3,85	14	7°	M	◆
PGR14FM.R265.175-MF	2,79	2,65	1,75	0,55	1,60	3,85	14	7°	M	◆
PGR14FM.L315.175-MF	3,29	3,15	1,75	0,55	1,60	3,85	14	7°	M	◆
PGR14FM.R315.175-MF	3,29	3,15	1,75	0,55	1,60	3,85	14	7°	M	◆

Carbide coated

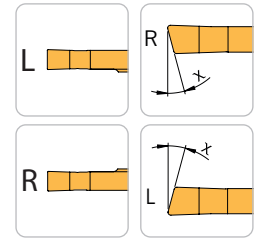
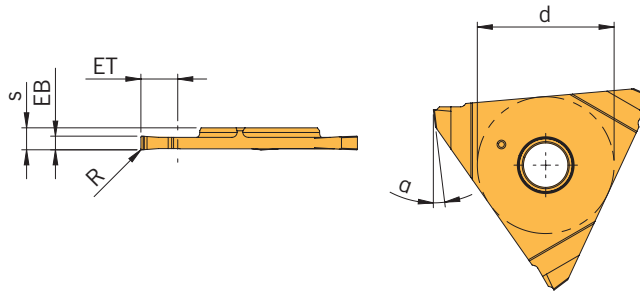
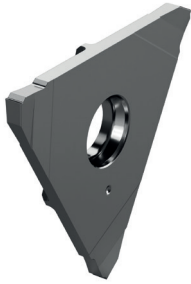
*Groove width "m"

 ● Main application
○ Secondary application

P	●
M	○
K	○
N	○
S	○
H	

Inserts

PG14XS...



Similar to illustration

Designation	EB	R	ET	d	s	α	Size	HC
								A42-CK2
PG14XS.L140.800R00-M1	1,4	0	8	14	2,25	7°	XS	◆
PG14XS.R140.800R00-M1	1,4	0	8	14	2,25	7°	XS	◆
PG14XS.L140.800R01-M1	1,4	0,1	8	14	2,25	7°	XS	◆
PG14XS.R140.800R01-M1	1,4	0,1	8	14	2,25	7°	XS	◆
PG14XS.L200.800R01-M1	2	0,1	8	14	2,25	7°	XS	◆
PG14XS.R200.800R01-M1	2	0,1	8	14	2,25	7°	XS	◆
PG14XS.L200.800R005-M1	2	0,05	8	14	2,25	7°	XS	◆
PG14XS.R200.800R005-M1	2	0,05	8	14	2,25	7°	XS	◆

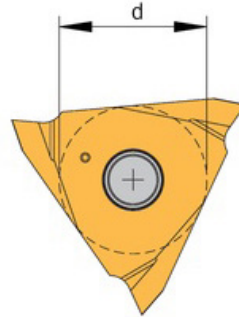
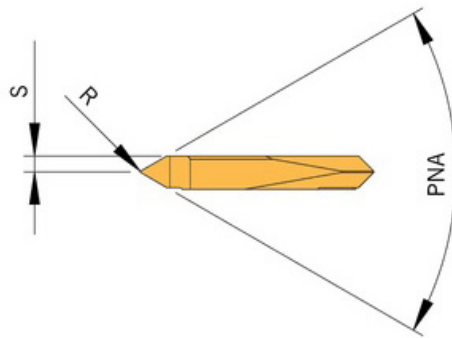
Carbide coated

P	●
M	○
K	
N	○
S	○
H	

● Main application
○ Secondary application

Inserts

PGT14S1... for threading - partial profile 60°



Similar to illustration

Full radius inserts

Designation	PNA	R	S	TPN	TPG	d	Size	HC
PGT14S1.LM-T.030R00-M	60	0,07	1,5	0,5	3,0	14	S1	A42-CK2
PGT14S1.RM-T.030R00-M	60	0,07	1,5	0,5	3,0	14	S1	

Carbide coated

P	●
M	○
K	
N	○
S	○
H	

● Main application

○ Secondary application

Technical data

Material group	Structure of the material groups and identification letters				Brinell hardness HB	Tensile strength Rm (N/mm ²)	Chipping group	Cutting speed Vc (m/min)	
								HC	
								A42-BP2	A42-CK2
P	Unalloyed steel	C ≤ 0.25 %	annealed		125	428	P1	120 - 150 - 180	120 - 150 - 180
		C > 0.25 ... ≤ 0.55 %	annealed		190	639	P2	80 - 115 - 150	80 - 115 - 150
		C > 0.25 ... ≤ 0.55 %	hardened and Tempered		210	708	P3	60 - 100 - 140	60 - 100 - 140
		C > 0.55 %	annealed		190	639	P4	80 - 115 - 150	80 - 115 - 150
		C > 0.55 %	hardened and Tempered		300	1013	P5	60 - 100 - 140	60 - 100 - 140
		Machinig steel (short-clipping)	annealed		220	745	P6	80 - 115 - 150	80 - 115 - 150
	Low alloyed steel	annealed			175	591	P7	80 - 125 - 170	80 - 125 - 170
		hardened and Tempered			300	1013	P8	60 - 95 - 130	60 - 95 - 130
		hardened and Tempered			380	1282	P9	60 - 95 - 130	60 - 95 - 130
		hardened and Tempered			430	1477	P10	60 - 90 - 120	60 - 90 - 120
	High alloyed steel and high alloyed tool steel	annealed			200	675	P11	80 - 110 - 140	80 - 110 - 140
		hardened			300	1013	P12	50 - 85 - 120	50 - 85 - 120
		hardened			400	1361	P13	50 - 85 - 120	50 - 85 - 120
	Stainless steel	ferretic / martensitic, annealed			200	675	P14	60 - 115 - 170	60 - 115 - 170
		martensitic, hardened and Tempered			330	1114	P15	50 - 75 - 100	50 - 75 - 100
M	Stainless steel	austenitic, chilled			200	675	M1	60 - 90 - 120	60 - 90 - 120
		austenitic, precipitation-hardened (PH)			300	1013	M2	50 - 70 - 90	50 - 70 - 90
		austenitic-ferritic, Duplex			230	778	M3	50 - 70 - 90	50 - 70 - 90
K	Malleable cast iron	ferritic			200	675	K1	-	-
		pearlitic			260	867	K2	-	-
	Cast iron	low tensile strength			180	602	K3	-	-
		high tensile strength / austenitic			245	825	K4	-	-
		ferritic			155	518	K5	-	-
	Cast iron with nodular Graphite	pearlitic			265	885	K6	-	-
N	GGV (CGI)				200	675	K7	-	-
	Aluminium alloys long chipping	not heat treatable			30	-	N1	100 - 300 - 500	100 - 300 - 500
		heat treatable, heat treated			100	343	N2	100 - 200 - 300	100 - 200 - 300
		≤ 12 % Si, not heat treatable			75	260	N3	100 - 300 - 500	100 - 300 - 500
	Casted aluminium alloys	≤ 12 % Si, heat treatable, heat treated			90	314	N4	100 - 200 - 300	100 - 200 - 300
		> 12 % Si, not heat treatable			130	447	N5	100 - 150 - 200	100 - 150 - 200
	Magnesium alloys	> 12 % Si, not heat treatable			70	250	N6	-	-
		Unalloyed, elektrolyte copper			100	343	N7	100 - 200 - 300	100 - 200 - 300
	Copper and copper alloys (Brass / Bronze)	Brass, Bronze			90	314	N8	100 - 300 - 500	100 - 300 - 500
		Cu-alloys, short-chipping			110	382	N9	100 - 200 - 300	100 - 200 - 300
					300	1013	N10	-	-
	Non-ferrous materials	Lead alloys (without abrasive filling material)			-	-	N11	80 - 130 - 180	80 - 130 - 180
		Duroplastic (without abrasive filling material)			-	-	N12	80 - 130 - 180	80 - 130 - 180
		Plastic glas fibre reinforced GFRP			-	-	N13	60 - 105 - 150	60 - 105 - 150
		Plastic carbon fibre reinforced CFRP			-	-	N14	60 - 105 - 150	60 - 105 - 150
		Plastic aramid fibre reinforced AFRP			-	-	N15	60 - 105 - 150	60 - 105 - 150
		Graphite (tech.)			80 Shore	-	N16	-	-
S	High Temperature resistant alloys	Fe-based	annealed		200	675	S1	20 - 35 - 50	20 - 35 - 50
		Fe-based	heat treated		280	943	S2	20 - 30 - 40	20 - 30 - 40
		Ni- or Co-alloyed	annealed		250	839	S3	15 - 20 - 25	15 - 20 - 25
		Ni- or Co-alloyed	heat treated		350	1177	S4	10 - 15 - 20	10 - 15 - 20
		Ni- or Co-alloyed	casting		320	1076	S5	10 - 15 - 20	10 - 15 - 20
	Titanium alloys	Pure titan			200	675	S6	50 - 85 - 120	50 - 85 - 120
		α- and β-alloys, heat treated			375	1262	S7	30 - 40 - 50	30 - 40 - 50
		β-alloys			410	1396	S8	25 - 35 - 45	25 - 35 - 45
	Wolfram alloys				300	1013	S9	-	-
	Molybdän alloys				300	1013	S10	-	-
H	Hardened steel	hardened			50 HRC	-	H1	-	-
		hardened			55 HRC	-	H2	-	-
		hardened			60 HRC	-	H3	-	-
	Hardened cast iron	hardened			55 HRC	-	H4	-	-

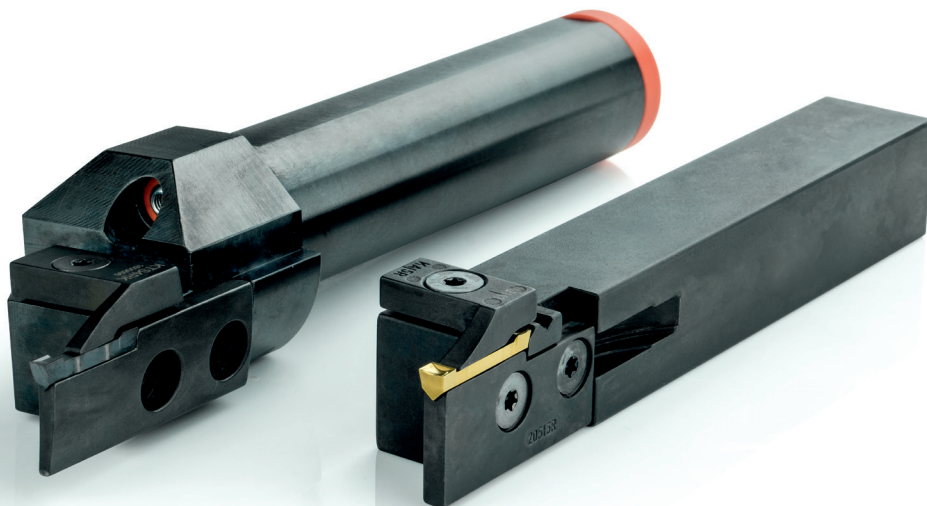
The recommended cutting data are only approximate values.

It may be necessary to adjust them to each individual machining application.

HC = Carbide coated

MG

GREAT PERFORMANCE GROOVE TURNING SYSTEM FOR EXTERNAL AND INTERNAL GROOVING AND COPY-TURNING.



External and internal groove turning system for radial, axial and contra grooving applications



Basic holders – External machining



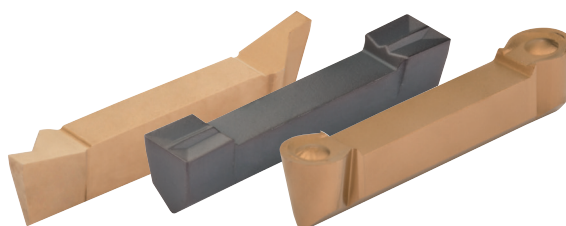
Monoblock holders



Basic holders – Internal machining



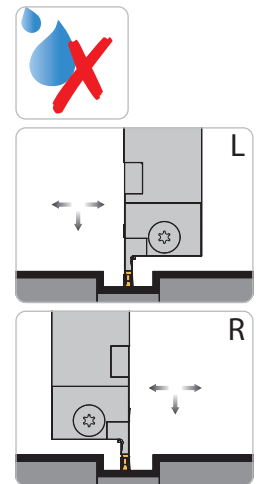
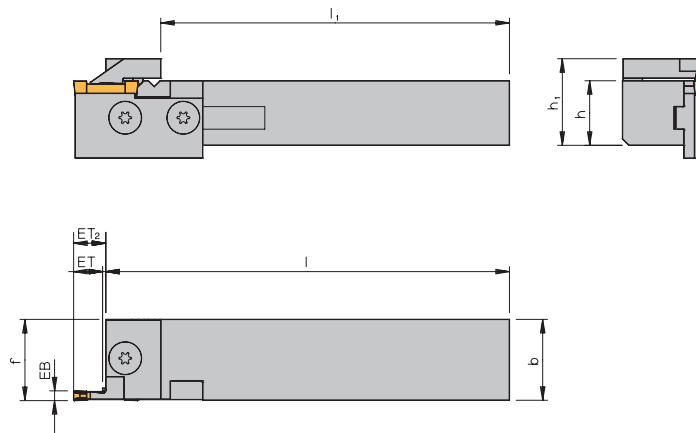
Boring bars



Inserts

Holders and accessories

Radial groove turning straight



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	l	h ₁	l ₁	f
HMG-R1 1216L/R-MG.05-3	12	16	90	17	81	16
HMG-R1 1616L/R-MG.05-3	16	16	110	21	101	16
HMG-R1 2020L/R-MG.05-3	20	20	125	25	116	20
HMG-R1 2025L/R-MG.05-6	20	25	125	27	113	25
HMG-R1 2525L/R-MG.05-6	25	25	150	32	138	25
HMG-R1 2525L.1-MG.3	25	25	150	30	141	25
HMG-R1 3225L/R-MG.05-6	32	25	170	39	158	25
HMG-R1 3225L/R-MG.8-10	32	25	170	41	145	26
HMG-R1 3232L/R-MG.8-10	32	32	170	40	145	33

*For width of cut 6 mm → f = b + 0.5; for all others f = b

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG-R1 1216L/R-MG.05-3	0,5 – 1,85	= EB	= EB	SBA02-471L/R	GCM-2L/R	MG2-... R/L
HMG-R1 1616L/R-MG.05-3	0,5 – 3,08	= EB	= EB	SBA03-471L/R	GCM-3L/R	MG3A-... R/L
HMG-R1 2020L/R-MG.05-3	2,00	8,0	8,0	SB012-08L/R	GCM-2L/R	MG12...
HMG-R1 2525L/R.1-DG.3	3,00	12,0	12,0	SB013-12L/R	GCM-3L/R	MG16...
HMG-R1 2025L/R-MG.05-6 HMG-R1 2525L/R-MG.05-6 HMG-R1 3225L/R-MG.05-6	0,5 – 3,08	= EB	= EB	SBA-471L/R	GCA-3L/R	MG3-... R/L
	3,00	9,5	9,5	SB023-10L/R	GCA-3L/R	MG20...
	4,00	11,5	11,5	SB024-12L/R	GCA-4L/R	MG22...
	5,00	14,5	14,5	SB025-15L/R	GCA-5L/R	MG25...
	6,00	19,5	19,5	SB026-20L/R	GCA-6L/R	MG30...
	3,00	16,0	18,5	SBT-316L/R	GC1T-3L/R	MG20...
	4,00	19,0	21,5	SBT-419L/R	GC1T-4L/R	MG22...
	5,00	22,0	24,5	SBT-522L/R	GC1T-5L/R	MG25...
HMG-R1 3225L/R-MG.8-10 HMG-R1 3232L/R-MG.8-10	6,00	27,0	29,5	SBT-627L/R	GC1T-6L/R	MG30...
	8,00	18,0	18,0	SB038-17L/R	GCK-8L/R	MG38...
	10,00	26,0	26,0	SB310-25L/R	GCK-10L/R	MG46...
	8,00	32,5	32,5	SBT-832L/R	GCA-8L/R	MG38...
	10,00	40,5	40,5	SBT-1040L/R	GCA-10L/R	MG46...

ET₂ = Grooving depth can be increased to measure "ET₂".

Basic holders will be supplied with screws and key, however without support blade and clamp.

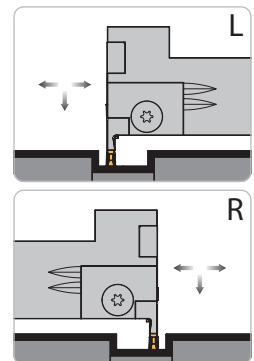
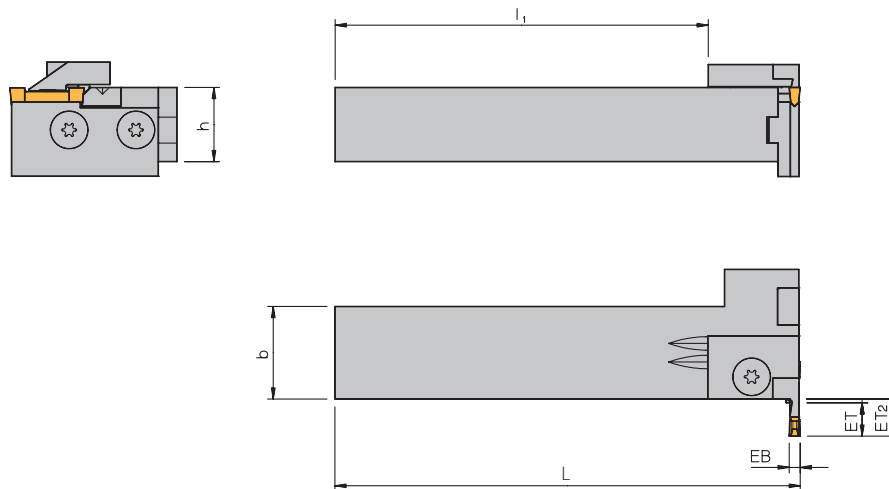
Attention: For hard work please use Heavy duty clamp system.

Spare Parts

Holder	Screw	Key
HMG-R1 3225..., HMG-R1 3232...	BA-T206	SD-5120
HMG-A1 1216..., HMG-A1 1616..., HMG-A1 2020..., HMG-R1 2525R/L.1...	BA-T154	AD-111
HMG-R1 2025..., HMG-R1 2525..., HMG-R1 3225...	BA-T205	SD-5120

Holders and accessories

Radial groove turning cranked



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	L	L ₁
HMG-R2 1616L/R-MG.05-3	16	16	110	95
HMG-R2 2020L/R-MG.05-3	20	20	125	110
HMG-R2 2525L/R-MG.05-3	25	25	150	125
HMG-R2 2025L/R-MG.05-6	20	25	125	101
HMG-R2 2525L/R-MG.05-6	25	25	150	126
HMG-R2 3232L/R-MG.05-6	32	32	170	146
HMG-R2 3232L/R-MG.8-10	32	32	170	145

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG-R2 1616L/R-MG.05-3	0,5 – 1,85	= EB	= EB	SBA02-471L/R	GCM-2L/R	MG2-... R/L
HMG-R2 2020L/R-MG.05-3	0,5 – 3,08	= EB	= EB	SBA03-471L/R	GCM-3L/R	MG3A-... R/L
HMG-R2 2525L/R-MG.05-3	2,00	8,0	8,0	SB012-08L/R	GCM-2L/R	MG12...
	3,00	12,0	12,0	SB013-12L/R	GCM-3L/R	MG16...
	0,5 – 3,08	= EB	= EB	SBA-471L/R	GCA-3L/R	MG3-... R/L
	3,00	9,5	9,5	SB023-10L/R	GCA-3L/R	MG20...
	4,00	11,5	11,5	SB024-12L/R	GCA-4L/R	MG22...
HMG-R2 2025L/R-MG.05-6	5,00	14,5	14,5	SB025-15L/R	GCA-5L/R	MG25...
HMG-R2 2525L/R-MG.05-6	6,00	19,5	19,5	SB026-20L/R	GCA-6L/R	MG30...
HMG-R2 3232L/R-MG.05-6	3,00	16,0	18,5	SBT-316L/R	GC1T-3L/R	MG20...
	4,00	19,0	21,5	SBT-419L/R	GC1T-4L/R	MG22...
	5,00	22,0	24,5	SBT-522L/R	GC1T-5L/R	MG25...
	6,00	27,0	29,5	SBT-627L/R	GC1T-6L/R	MG30...
	8,00	18,0	18,0	SB038-17L/R	GCK-8L/R	MG38...
HMG-R2 3232L/R-MG.8-10	10,00	26,0	26,0	SB310-25L/R	GCK-10L/R	MG46...
	8,00	32,5	32,5	SBT-832L/R	GCA-8L/R	MG38...
	10,00	40,5	40,5	SBT-1040L/R	GCA-10L/R	MG46...

ET₂ = Grooving depth can be increased to measure "ET₂".

Basic holders will be supplied with screws and key, however without support blade and clamp.

Attention: For hard work please use Heavy duty clamp system.

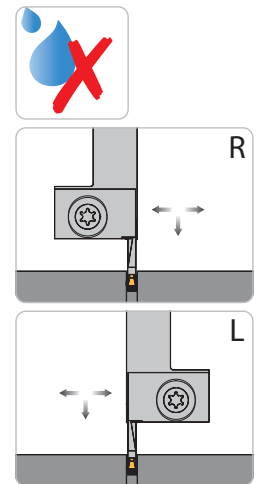
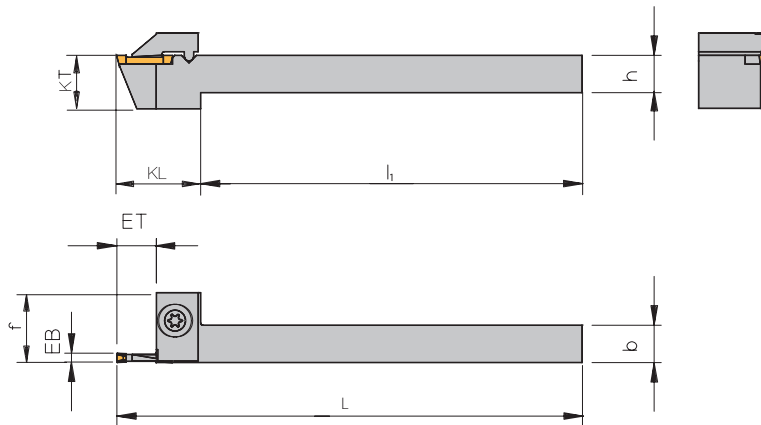
Spare Parts

Holder	Screw	Key
HMG-R2 1616..., HMG-R2 2020..., HMG-R2 2525L...	BA-T154	AD-111
HMG-R2 2025..., HMG-R2 2525L..., HMG-R2 3232...	BA-T205	SD-5120
HMG-R2 3232L/R-MG.8-10	BA-T206	SD-5120

Holders and accessories

Radial groove turning straight

For sliding head auto lathes



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	L	l_1	f
HMG-R3 0808L/R-MG.2	8	8	100	82	15
HMG-R3 0808L/R-MG.3	8	8	100	82	15
HMG-R3 1010L/R-MG.2	10	10	100	82	15
HMG-R3 1010L/R-MG.3	10	10	100	82	15
HMG-R3 1212L/R-MG.2	12	12	100	82	15
HMG-R3 1212L/R-MG.3	12	12	100	82	15
HMG-R3 1616L/R-MG.2	16	16	100	82	16
HMG-R3 1616L/R-MG.3	16	16	100	82	16

Basic holder and accessories

Basic holder	EB	ET	KL	KT	Clamp	Insert	Screw	Key
HMG-R3 0808L/R-MG.2	2	8	18	12	GCM-2L/R	MG12...	BA-T154	AD-111
HMG-R3 1010L/R-MG.2	2	8	18	12	GCM-2L/R	MG12...	BA-T154	AD-111
HMG-R3 1212L/R-MG.2	2	8	18	12	GCM-2L/R	MG12...	BA-T154	AD-111
HMG-R3 1616L/R-MG.2	2	8	18	16	GCM-2L/R	MG12...	BA-T154	AD-111
HMG-R3 0808L/R-MG.3	3	8	18	12	GCM-L3L/R	MG16...	BA-T154	AD-111
HMG-R3 1010L/R-MG.3	3	8	18	12	GCM-L3L/R	MG16...	BA-T154	AD-111
HMG-R3 1212L/R-MG.3	3	8	18	12	GCM-L3L/R	MG16...	BA-T154	AD-111
HMG-R3 1616L/R-MG.3	3	8	18	16	GCM-L3L/R	MG16...	BA-T154	AD-111

Basic holders will be supplied with screws and key, however without support blade and clamp.

Remark: Basic holder must be adapted in axial direction on to the work holding tool!

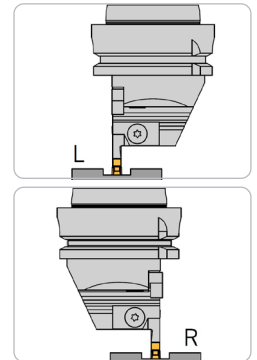
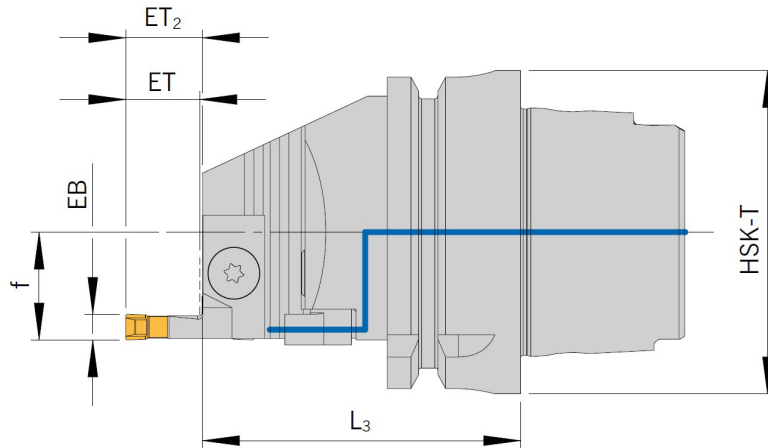
Spare Parts

Holder	Screw	Key
HMG-R3 0808..., HMG-R3 1616...	BA-T154	AD-111

Holders and accessories

Groove turning - axial and radial

HSK-T63 - with internal coolant



Similar to illustration

Holders

Designation	HSK-T	EB	f	L ₃
HMG-HSK-T63L/R-A1-MG.3-6	63	3 - 6	21	62

For width of cut 6 mm → Dimension „f“ + 0,5 mm

Radial - Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG-HSK T63L/R-A1-MG.3-6	0,5 – 3,08	= EB	= EB	SBA-471L/R	GCA-3L/R	MG3-... R/L
	3,00	9,5	9,5	SB023-10L/R	GCA-3L/R	MG20...
	4,00	11,5	11,5	SB024-12L/R	GCA-4L/R	MG22...
	5,00	14,5	14,5	SB025-15L/R	GCA-5L/R	MG25...
	6,00	19,5	19,5	SB026-20L/R	GCA-6L/R	MG30...
	3,00	16,0	18,5	SBT-316L/R	GC1T-3L/R	MG20...
	4,00	19,0	21,5	SBT-419L/R	GC1T-4L/R	MG22...
	5,00	22,0	24,5	SBT-522L/R	GC1T-5L/R	MG25...
	6,00	27,0	29,5	SBT-627L/R	GC1T-6L/R	MG30...

Axial - Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG-HSK T63L/R-A1-MG.3-6	3	9,5	9,5	50 – 60	SB023-5060L/R	GCA-3L/R	MG20...
	3	9,5	9,5	60 – 75	SB023-6075L/R	GCA-3L/R	MG20...
	3	9,5	9,5	75 – 100	SB023-75100L/R	GCA-3L/R	MG20...
	3	9,5	9,5	100 – 150	SB023-100150L/R	GCA-3L/R	MG20...
	3	9,5	9,5	150 – 300	SB023-150300L/R	GCA-3L/R	MG20...
	3	9,5	9,5	300 – 500	SB023-300500L/R	GCA-3L/R	MG20...
	3	9,5	9,5	500 – ∞	SB023-500XXL/R	GCA-3L/R	MG20...
	3	16,0	18,5	50 – 60	SBT03-5060L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	60 – 75	SBT03-6075L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	75 – 100	SBT03-75100L/R	GC1T-3L/R	MG20...

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG-HSK-T63L/R-A1-MG.3-6	3	16,0	18,5	100 – 150	SBT03-100150L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	150 – 300	SBT03-150300L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	300 – 500	SBT03-300500L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	500 – ∞	SBT03-500XXL/R	GC1T-3L/R	MG20...
	4	11,5	11,5	50 – 60	SB024-5060L/R	GCA-4L/R	MG22...
	4	11,5	11,5	60 – 75	SB024-6075L/R	GCA-4L/R	MG22...
	4	11,5	11,5	75 – 100	SB024-75100L/R	GCA-4L/R	MG22...
	4	11,5	11,5	100 – 150	SB024-100150L/R	GCA-4L/R	MG22...
	4	11,5	11,5	150 – 300	SB024-150300L/R	GCA-4L/R	MG22...
	4	11,5	11,5	300 – 500	SB024-300500L/R	GCA-4L/R	MG22...
	4	11,5	11,5	500 – ∞	SB024-500XXL/R	GCA-4L/R	MG22...
	4	19,0	21,5	50 – 60	SBT04-5060L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	60 – 75	SBT04-6075L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	75 – 100	SBT04-75100L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	100 – 150	SBT04-100150L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	150 – 300	SBT04-150300L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	300 – 500	SBT04-300500L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	500 – ∞	SBT04-500XXL/R	GC1T-4L/R	MG22...
	5	14,5	14,5	50 – 60	SB025-5060L/R	GCA-5L/R	MG25...
	5	14,5	14,5	60 – 75	SB025-6075L/R	GCA-5L/R	MG25...
	5	14,5	14,5	75 – 100	SB025-75100L/R	GCA-5L/R	MG25...
	5	14,5	14,5	100 – 150	SB025-100150L/R	GCA-5L/R	MG25...
	5	14,5	14,5	150 – 300	SB025-150300L/R	GCA-5L/R	MG25...
	5	14,5	14,5	300 – 500	SB025-300500L/R	GCA-5L/R	MG25...
	5	14,5	14,5	500 – ∞	SB025-500XXL/R	GCA-5L/R	MG25...
	5	22,0	24,5	50 – 60	SBT05-5060L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	60 – 75	SBT05-6075L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	75 – 100	SBT05-75100L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	100 – 150	SBT05-100150L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	150 – 300	SBT05-150300L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	300 – 500	SBT05-300500L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	500 – ∞	SBT05-500XXL/R	GC1T-5L/R	MG25...
	6	19,5	19,5	50 – 60	SB026-5060L/R	GCA-6L/R	MG30...
	6	19,5	19,5	60 – 75	SB026-6075L/R	GCA-6L/R	MG30...
	6	19,5	19,5	75 – 100	SB026-75100L/R	GCA-6L/R	MG30...
	6	19,5	19,5	100 – 150	SB026-100150L/R	GCA-6L/R	MG30...
	6	19,5	19,5	150 – 300	SB026-150300L/R	GCA-6L/R	MG30...
	6	19,5	19,5	300 – 500	SB026-300500L/R	GCA-6L/R	MG30...
	6	19,5	19,5	500 – ∞	SB026-500XXL/R	GCA-6L/R	MG30...
	6	27,0	29,5	50 – 60	SBT06-5060L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	60 – 75	SBT06-6075L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	75 – 100	SBT06-75100L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	100 – 150	SBT06-100150L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	150 – 300	SBT06-150300L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	300 – 500	SBT06-300500L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	500 – ∞	SBT06-500XXL/R	GC1T-6L/R	MG30...

ET₂ = Grooving depth can be increased to measure "ET2"

Basic holders will be supplied with screws and key, however without support blade and clamp.

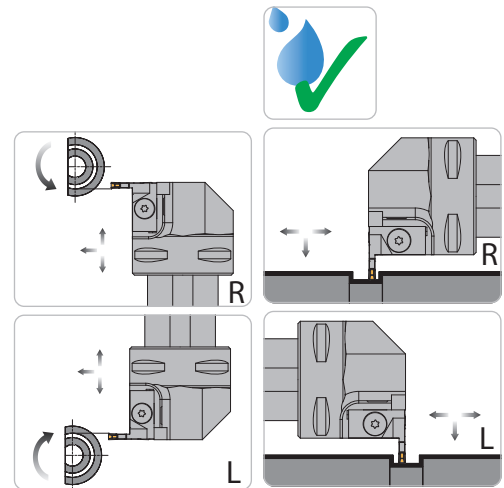
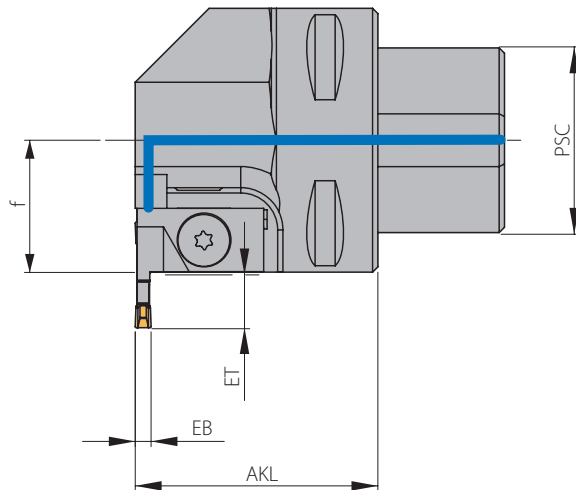
Spare parts and accessories

Holder	Screw	Key	Coolant jet	Screw for coolant jet
HMG-HSK-T63L/R-A1-MG.3-6	BA-T205	SD-5120	CA-818	TS-0020

Holders and accessories

Groove turning - axial and radial

Polygon-Shank



Similar to illustration

Right-hand execution shown

Holders

Designation	EB	H	AKL	f	PSC
HMG-RA C4L/R-A1-MG.2-3	0,5 - 3,0	20,5	45	20,5	C4
HMG-RA C5L/R-A1-MG.2-3	0,5 - 3,0	—	46	25	C5
HMG-RA C5L/R-A1-MG.3-6*	3,0 - 6,0	—	46	25	C5
HMG-RA C6L/R-A1-MG.3-6*	3,0 - 6,0	—	52	32	PSC60
HMG-RA C8L/R-A1-MG.3-6*	3,0 - 6,0	3,0 - 6,0	62	41	C8

*For width of cut 6 mm --> Dimension „f“ + 0,5 mm

Please note: Holder right hand-design --> Left-hand spare parts Holder left hand-design --> Right-hand spare parts

Information: Toolholder is suitable for all spare parts from the standard programme „Axial groove turning - Contra“ and „Axial groove turning“.

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG-RA C4L/R-A1-MG.2-3 HMG-RA C5L/R-A1-MG.2-3	0,5 - 1,85	= EB	= EB	SBA02-471L/R	GCM-2L/R	MG2... R/L
	0,5 - 3,08	= EB	= EB	SBA03-471L/R	GCM-3L/R	MG3A... R/L
	2,00	8,0	8,0	SB012-08L/R	GCM-2L/R	MG12...
	3,00	12,0	12,0	SB013-12L/R	GCM-3L/R	MG16...

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG-RA C5L/R-A1-MG.3-6 HMG-RA C6L/R-A1-MG.3-6 HMG-RA C8L/R-A1-MG.3-6	0,5 - 3,08	= EB	= EB	SBA-471L/R	GCA-3L/R	MG3... R/L
	3,00	9,5	9,5	SB023-10L/R	GCA-3L/R	MG20...
	4,00	11,5	11,5	SB024-12L/R	GCA-4L/R	MG22...
	5,00	14,5	14,5	SB025-15L/R	GCA-5L/R	MG25...
	6,00	19,5	19,5	SB026-20L/R	GCA-6L/R	MG30...
	3,00	16,0	18,5	SBT-316L/R	GC1T-3L/R	MG20...
	4,00	19,0	21,5	SBT-419L/R	GC1T-4L/R	MG22...
	5,00	22,0	24,5	SBT-522L/R	GC1T-5L/R	MG25...
	6,00	27,0	29,5	SBT-627L/R	GC1T-6L/R	MG30...

ET₂ = Grooving depth can be increased to measure "ET₂".

Basic holders will be supplied with screws and key, however without support blade and clamp.

Attention: For hard work please use Heavy duty clamp system.

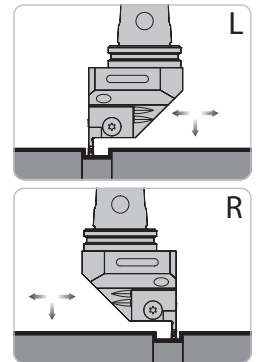
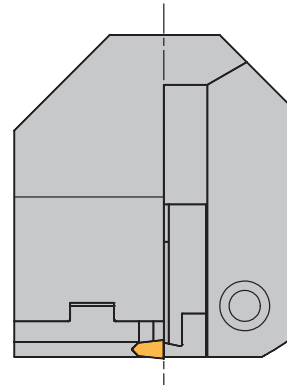
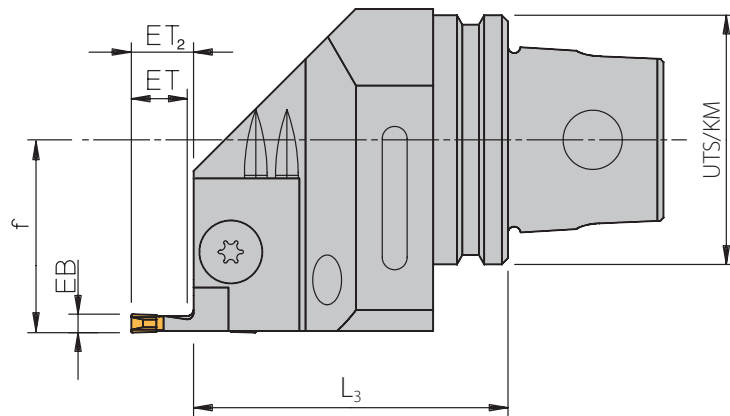
Spare Parts

Holder	Screw	Key	Coolant jet	Screw for coolant jet
HMG-RA C4...	BA-T154	AD-111	CA-519	TS-0020
HMG-RA C5...	BA-T154	AD-111	CA-519	TS-0020
HMG-RA C5-MG.3-6...HMG-RA C8-MG.3-6...	BA-T205	SD-5120	CA-818	TS-0020

Holders and accessories

Radial groove turning

UTS / KM



Similar to illustration

Holders

Right-hand execution shown

Designation	UTS/KM	f	L ₃
HMG UTS32L/R-MG.2-3	32	25,0	40,0
HMG UTS32L-MG.3-6*	32	25,0	45,0
HMG UTS40L/R-MG.3-6	40	31,0	50,5
HMG UTS50R-MG.2-3*	50	25,0	45,0
HMG UTS50L/R-MG.3-6*	50	36,0	56,0
HMG UTS63L/R-MG.3-6*	63	42,0	57,0
HMG UTS63R-MG.8-10*	63	41,5	67,0

*For width of cut 6 mm --> Dimension „f“ + 0,5 mm

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG UTS32L/R-MG.2-3 HMG UTS50R-MG.2-3	0,5 – 1,85	= EB	= EB	SBA02-471L/R	GCM-2L/R	MG2-... R/L
	0,5 – 3,08	= EB	= EB	SBA03-471L/R	GCM-3L/R	MG3A-... R/L
	2,00	8,0	8,0	SB012-08L/R	GCM-2L/R	MG12...
	3,00	12,0	12,0	SB013-12L/R	GCM-3L/R	MG16...
HMG UTS32L-MG.3-6 HMG UTS40L/R-MG.3-6 HMG UTS50L/R-MG.3-6 HMG UTS63L/R-MG.3-6	0,5 – 3,08	= EB	= EB	SBA-471L/R	GCA-3L/R	MG3-... R/L
	3,00	9,5	9,5	SB023-10L/R	GCA-3L/R	MG20...
	4,00	11,5	11,5	SB024-12L/R	GCA-4L/R	MG22...
	5,00	14,5	14,5	SB025-15L/R	GCA-5L/R	MG25...
	6,00	19,5	19,5	SB026-20L/R	GCA-6L/R	MG30...
	3,00	16,0	18,5	SBT-316L/R	GC1T-3L/R	MG20...
	4,00	19,0	21,5	SBT-419L/R	GC1T-4L/R	MG22...
	5,00	22,0	24,5	SBT-522L/R	GC1T-5L/R	MG25...
	6,00	27,0	29,5	SBT-627L/R	GC1T-6L/R	MG30...

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG UTS63R-MG.8-10	8,00	18,0	18,0	SB038-17L/R	GCK-8L/R	MG38...
	10,00	26,0	26,0	SB310-25L/R	GCK-10L/R	MG46...
	8,00	32,5	32,5	SBT-832L/R	GCA-8L/R	MG38...
	10,00	40,5	40,5	SBT-1040L/R	GCA-10L/R	MG46...

ET₂ = Grooving depth can be increased to measure "ET2".

Basic holders will be supplied with screws and key, however without support blade and clamp.

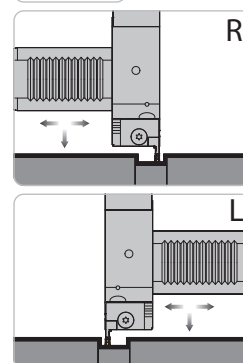
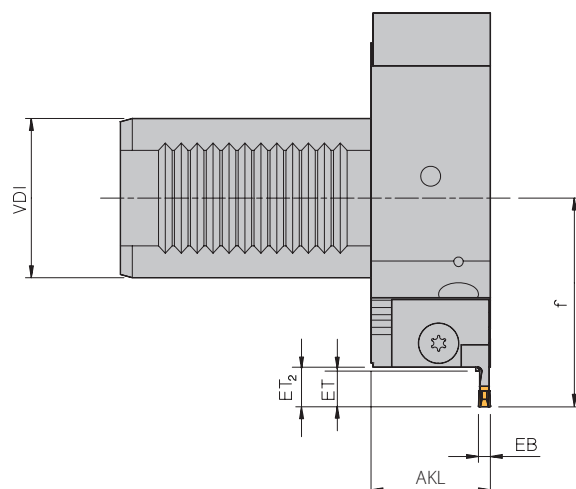
Spare Parts

Holder	Screw	Key
HMG UTS...2-3	BA-T154	AD-111
HMG UTS...3-6	BA-T205	SD-5120
HMG UTS...8-10	BA-T206	SD-5120

Holders and accessories

Radial groove turning

VDI



Similar to illustration

Right-hand execution shown

Holders

Designation	VDI	AKL	f
HMG VDI30L/R-MG.3-6	30	30	35,0
HMG VDI40L/R-MG.8-10*	40	30	45,0
HMG VDI40L/R-MG.3-6	40	30	42,5
HMG VDI50L/R-MG.8-10*	50	30	50,0
HMG VDI50R-MG.3-6	50	30	45,0
HMG VDI60L/R-MG.8-10*	60	40	55,0
HMG VDI60L/R-MG.3-6	60	40	52,5

*For width of cut 6 mm --> Dimension „AKL“ + 0,5mm

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG VDI30L/R-MG.3-6 HMG VDI40L/R-MG.3-6 HMG VDI50L/R-MG.3-6 HMG VDI60L/R-MG.3-6	0,5 – 3,08	= EB	= EB	SBA-471L/R	GCA-3L/R	MG3-... R/L
	3,00	9,5	9,5	SB023-10L/R	GCA-3L/R	MG20...
	4,00	11,5	11,5	SB024-12L/R	GCA-4L/R	MG22...
	5,00	14,5	14,5	SB025-15L/R	GCA-5L/R	MG25...
	6,00	19,5	19,5	SB026-20L/R	GCA-6L/R	MG30...
	3,00	16,0	18,5	SBT-316L/R	GC1T-3L/R	MG20...
	4,00	19,0	21,5	SBT-419L/R	GC1T-4L/R	MG22...
	5,00	22,0	24,5	SBT-522L/R	GC1T-5L/R	MG25...
	6,00	27,0	29,5	SBT-627L/R	GC1T-6L/R	MG30...
HMG VDI40L/R-MG.8-10 HMG VDI50L/R-MG.8-10 HMG VDI60L/R-MG.8-10	8,00	18,0	18,0	SB038-17L/R	GCK-8L/R	MG38...
	10,00	26,0	26,0	SB310-25L/R	GCK-10L/R	MG46...
	8,00	32,5	32,5	SBT-832L/R	GCA-8L/R	MG38...
	10,00	40,5	40,5	SBT-1040L/R	GCA-10L/R	MG46...

ET₂ = Grooving depth can be increased to measure "ET2..

Basic holders will be supplied with screws and key, however without support blade and clamp.

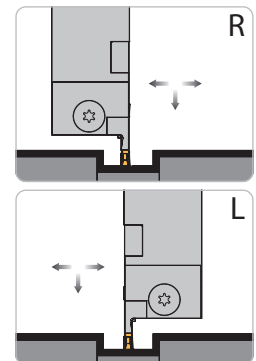
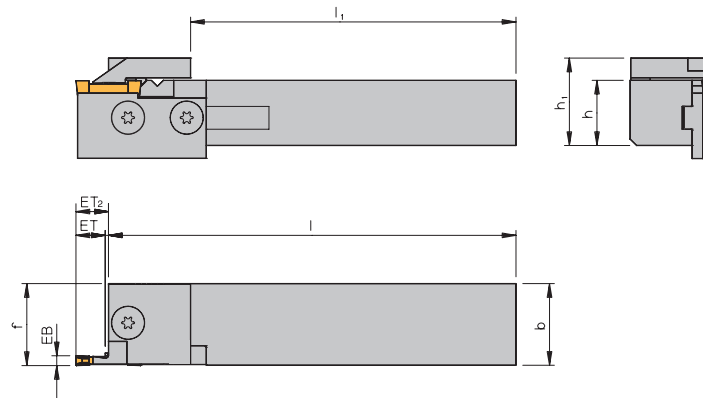
Attention: For hard work please use Heavy duty clamp system.

Spare Parts

Holder	Screw	Key
HMG VDI...-MG.8-10	BA-T206	SD-5120
HMG VDI...-MG.3-6	BA-T205	SD-5120

Holders and accessories

Heavy duty clamp



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	l	h ₁	l ₁	f
HMG-R1 2025L/R-MG.05-6*	20	25	125	27	108	25
HMG-R1 2525L/R-MG.05-6*	25	25	150	32	133	25
HMG-R1 3225L/R-MG.05-6*	32	25	170	39	153	25
HMG-R1 3225L/R-MG.8-10	32	25	170	41	145	26
HMG-R1 3232L/R-MG.8-10	32	32	170	40	145	33

*For width of cut 6 mm → f = b + 0.5; for all others f = b

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG-R1 2025L/R-MG.05-6 HMG-R1 2525L/R-MG.05-6 HMG-R1 3225L/R-MG.05-6	3,00	9,5	9,5	SB023-10L/R	GCS-3L/R	MG20...
	4,00	11,5	11,5	SB024-12L/R	GCS-4L/R	MG22...
	5,00	14,5	14,5	SB025-15L/R	GCS-5L/R	MG25...
	6,00	19,5	19,5	SB026-20L/R	GCS-6L/R	MG30...
	3,00	16,0	18,5	SBT-316L/R	GC1S-3L/R	MG20...
	4,00	19,0	21,5	SBT-419L/R	GC1S-4L/R	MG22...
	5,00	22,0	24,5	SBT-522L/R	GC1S-5L/R	MG25...
	6,00	27,0	29,5	SBT-627L/R	GC1S-6L/R	MG30...
HMG-R1...-MG.8-10	8,00	18,0	18,0	SB038-17L/R	GCS-8L/R	MG38...
	10,00	26,0	26,0	SB310-25L/R	GCS-10L/R	MG46...
	8,00	32,5	32,5	SBT-832L/R	GC1S-8L/R	MG38...
	10,00	40,5	40,5	SBT-1040L/R	GC1S-10L/R	MG46...

ET₂ = Grooving depth can be increased to measure "ET2..

Basic holders will be supplied with screws and key, however without support blade and clamp.

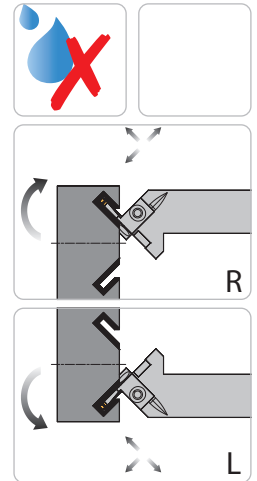
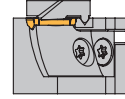
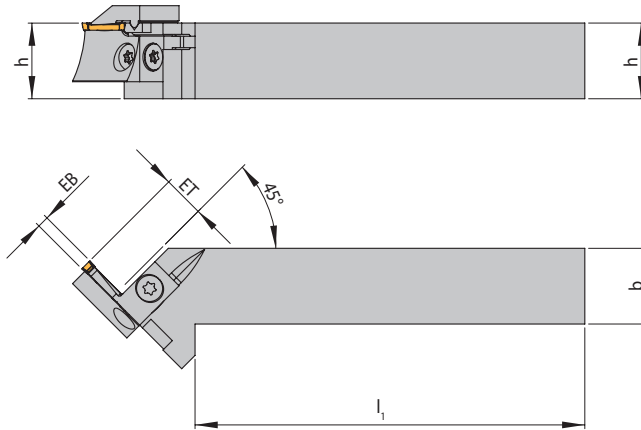
Attention: Heavy duty clamp can only be used with basic holders with two grooves.

Spare Parts

Holder	Screw	Key
HMG-R1 3225..., HMG-R1 3232	BA-T206	SD-5120
HMG-R1 2025..., HMG-R1 3225...	BA-T205	SD-5120

Holders and accessories

Groove turning - 45°



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	l ₁
HMG-45 2020L/R-MG.2-3	20	20	103

Basic holder and accessories

Basic holder	EB	ET	Support blade	Clamp	Insert
HMG-45 2020L/R-MG.2-3	2	8	SB012-08R	GCM-2L/R	MG12...
	3	12	SB013-12R	GCM-3L/R	MG16...

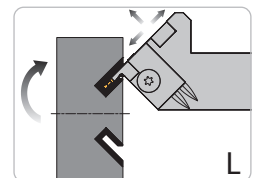
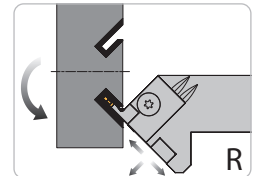
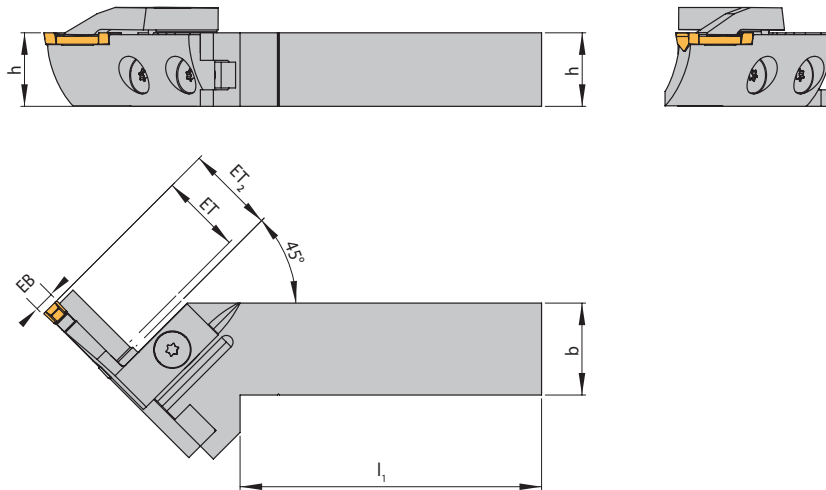
Attention: Please select always the next larger range of diameter referring to your OD of groove (DA)

Spare Parts

Holder	Screw	Key
HMG-45 2020L/R-MG.2-3	BA-T154	AD-111

Holders and accessories

Groove turning - 45°



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	l ₁
HMG-45 2025L/R-MG.3-6	20	25	82
HMG-45 2525L/R-MG.3-6	25	25	82

Basic holder and accessories

Basic holder	EB	ET	ET ₂	Support blade	Clamp	Insert
HMG-45 2025L/R-MG.3-6 HMG-45 2525L/R-MG.3-6	3	9,5	9,5	SB023... R/L	GCA-3L/R	MG20...
	3	16,0	18,5	SBT-3... R/L	GC1T-3L/R	MG20...
	4	11,5	11,5	SB024... R/L	GCA-4L/R	MG22...
	4	19,0	21,5	SBT-4... R/L	GC1T-4L/R	MG22...
	5	14,5	14,5	SB025... R/L	GCA-5L/R	MG25...
	5	22,0	24,5	SBT-5... R/L	GC1T-5L/R	MG25...
	6	19,5	19,5	SB026... R/L	GCA-6L/R	MG30...
	6	27,0	29,5	SBT-6... R/L	GC1T-6L/R	MG30...

ET₂ = Grooving depth can be increased to measure "ET₂".

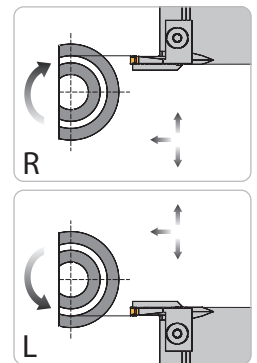
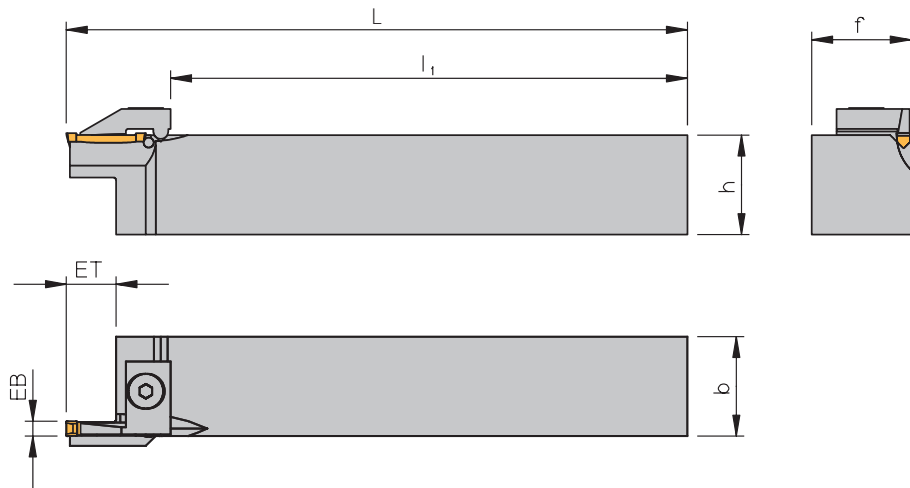
Remark: Toolholders are suitable for all spare parts from the standard programme "Axial groove turning".
Attention: Please select always the next larger range of diameter referring to your OD of groove (DA)
e.g. EB = 3 mm, ET = 12 mm, DA = 67 mm.

Spare Parts

Holder	Screw	Key
HMG-45...-MG.3-6	BA-T205	SD-5120

Holders and accessories

Axial groove turning straight - Ø 15 - 25 mm



Similar to illustration

Right-hand execution shown

Holders

Designation	OD of groove	EB	ET	h	b	L	l ₁	f	Clamp	Insert
HMG-A1 1216L/R-1520-MG.2	15-20	2	6	12	16	90	73	16	GCM-2L/R	MG12...
HMG-A1 1216L/R-2025-MG.2	20-25	2	6	12	16	90	73	16	GCM-2L/R	MG12...
HMG-A1 1216L/R-1520-MG.3	15-20	3	9	12	16	90	69	16	GCM-3L/R	MG16...
HMG-A1 1216L/R-2025-MG.3	20-25	3	9	12	16	90	69	16	GCM-3L/R	MG16...
HMG-A1 1616L/R-1520-MG.2	15-20	2	6	16	16	110	93	16	GCM-2L/R	MG12...
HMG-A1 1616L/R-2025-MG.2	20-25	2	6	16	16	110	93	16	GCM-2L/R	MG12...
HMG-A1 1616L/R-1520-MG.3	15-20	3	9	16	16	110	89	16	GCM-3L/R	MG16...
HMG-A1 1616L/R-2025-MG.3	20-25	3	9	16	16	110	89	16	GCM-3L/R	MG16...
HMG-A1 2020L/R-1520-MG.2	15-20	2	6	20	20	125	108	20	GCM-2L/R	MG12...
HMG-A1 2020L/R-2025-MG.2	20-25	2	6	20	20	125	108	20	GCM-2L/R	MG12...
HMG-A1 2020L/R-1520-MG.3	15-20	3	9	20	20	125	104	20	GCM-3L/R	MG16...
HMG-A1 2020L/R-2025-MG.3	20-25	3	9	20	20	125	104	20	GCM-3L/R	MG16...

Holders will be supplied with screws and key, however without support blade and clamp.

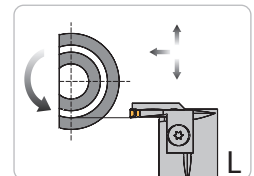
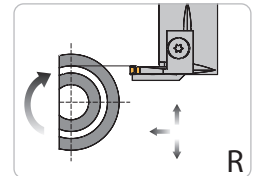
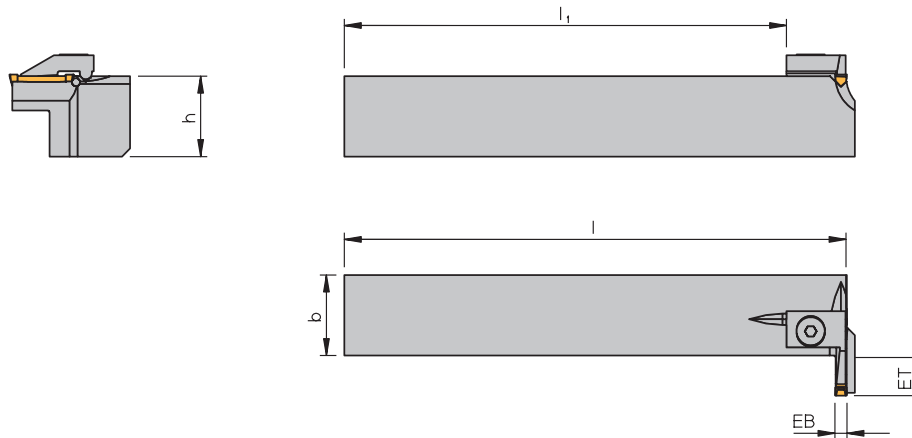
Attention: These tools should be set up according to dimension „h“ (shank-height), because the cutting edge is above centre height!

Spare Parts

Holder	Screw	Key
HMG-A1...-1520, HMG-A1...-2025	BA-T154	AD-111

Holders and accessories

Axial groove turning cranked - Ø 15 - 25 mm



Similar to illustration

Right-hand execution shown

Holders

Designation	OD of groove	EB	ET	h	b	l	l ₁	Clamp	Insert
HMG-A2 1616L/R-1520-MG.2	15-20	2	6	16	16	110	93	GCM-2L/R	MG12...
HMG-A2 1616L/R-2025-MG.2	20-25	2	6	16	16	110	93	GCM-2L/R	MG12...
HMG-A2 1616L/R-1520-MG.3	15-20	3	9	16	16	110	93	GCM-3L/R	MG16...
HMG-A2 1616L/R-2025-MG.3	20-25	3	9	16	16	110	93	GCM-3L/R	MG16...
HMG-A2 2020L/R-1520-MG.2	15-20	2	6	20	20	125	108	GCM-2L/R	MG12...
HMG-A2 2020L/R-2025-MG.2	20-25	2	6	20	20	125	108	GCM-2L/R	MG12...
HMG-A2 2020L/R-1520-MG.3	15-20	3	9	20	20	125	108	GCM-3L/R	MG16...
HMG-A2 2020L/R-2025-MG.3	20-25	3	9	20	20	125	108	GCM-3L/R	MG16...

Holders will be supplied with screws and key, however without support blade and clamp.

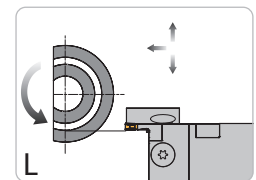
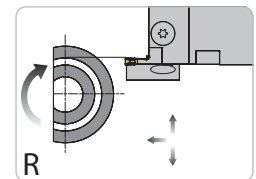
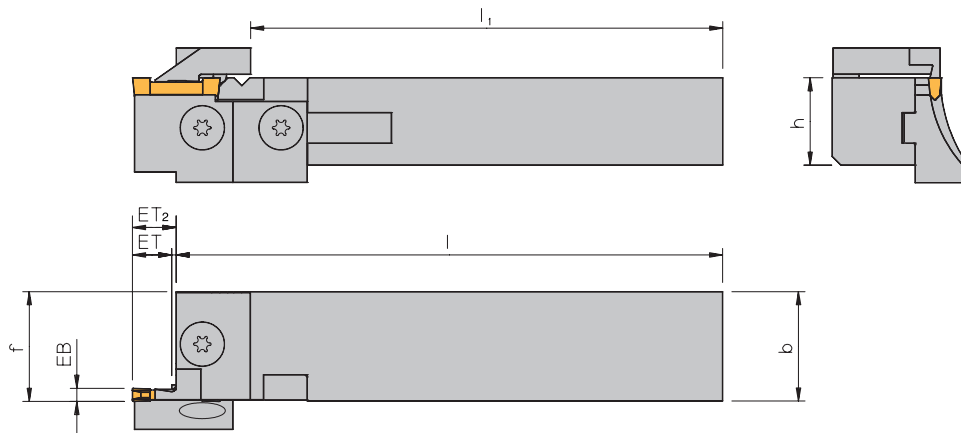
Attention: These tools should be set up according to dimension „h“ (shank-height), because the cuttingedge is above centre height!

Spare Parts

Holder	Screw	Key
HMG-A2...-1520, HMG-A2...-2025	BA-T154	AD-111

Holders and accessories

Axial groove turning straight



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	l	l ₁	f
HMG-R1 1216L/R-MG.05-3	12	16	90	81	16
HMG-R1 1616L/R-MG.05-3	16	16	110	101	16
HMG-R1 2020L/R-MG.05-3	20	20	125	116	20
HMG-R1 2025L/R-MG.05-6*	20	25	125	113	25
HMG-R1 2525L/R-MG.05-6*	25	25	150	138	25
HMG-R1 2525L.1-MG.3	25	25	150	141	25
HMG-R1 3225L/R-MG.05-6*	32	25	170	158	25
HMG-R1 3225L/R-MG.8-10	32	25	170	145	26
HMG-R1 3232L/R-MG.8-10	32	32	170	145	33

*For width of cut 6 mm --> f = b + 0.5; for all others f = b

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG-R1 1216L/R-MG.05-3 HMG-R1 1616L/R-MG.05-3 HMG-R1 2020L/R-MG.05-3 HMG-R1 2525L.1-MG.3	2	8,0	8,0	25 – 30	SB012-2530L/R	GCM-2L/R	MG12...
	2	8,0	8,0	30 – 40	SB012-3040L/R	GCM-2L/R	MG12...
	2	8,0	8,0	40 – 50	SB012-4050L/R	GCM-2L/R	MG12...
	2	8,0	8,0	50 – 60	SB012-5060L/R	GCM-2L/R	MG12...
	2	8,0	8,0	60 – 75	SB012-6075L/R	GCM-2L/R	MG12...
	2	8,0	8,0	75 – 100	SB012-75100L/R	GCM-2L/R	MG12...
	2	8,0	8,0	100 – 150	SB012-100150L/R	GCM-2L/R	MG12...
	2	8,0	8,0	150 – 300	SB012-150300L/R	GCM-2L/R	MG12...
	2	8,0	8,0	300 – 500	SB012-300500L/R	GCM-2L/R	MG12...
	2	8,0	8,0	500 – ∞	SB012-08L/R	GCM-2L/R	MG12...
	3	12,0	12,0	25 – 30	SB013-2530L/R	GCM-3L/R	MG16...
	3	12,0	12,0	30 – 40	SB013-3040L/R	GCM-3L/R	MG16...
	3	12,0	12,0	40 – 50	SB013-4050L/R	GCM-3L/R	MG16...
	3	12,0	12,0	50 – 60	SB013-5060L/R	GCM-3L/R	MG16...
	3	12,0	12,0	60 – 75	SB013-6075L/R	GCM-3L/R	MG16...
	3	12,0	12,0	75 – 100	SB013-75100L/R	GCM-3L/R	MG16...
	3	12,0	12,0	100 – 150	SB013-100150L/R	GCM-3L/R	MG16...
	3	12,0	12,0	150 – 300	SB013-150300L/R	GCM-3L/R	MG16...
	3	12,0	12,0	300 – 500	SB013-300500L/R	GCM-3L/R	MG16...
	3	12,0	12,0	500 – ∞	SB013-12L/R	GCM-3L/R	MG16...

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG-R1 2025L/R-MG.05-6 HMG-R1 2525L/R-MG.05-6 HMG-R1 3225L/R-MG.05-6	3	9,5	9,5	50 – 60	SB023-5060L/R	GCA-3L/R	MG20...
	3	9,5	9,5	60 – 75	SB023-6075L/R	GCA-3L/R	MG20...
	3	9,5	9,5	75 – 100	SB023-75100L/R	GCA-3L/R	MG20...
	3	9,5	9,5	100 – 150	SB023-100150L/R	GCA-3L/R	MG20...
	3	9,5	9,5	150 – 300	SB023-150300L/R	GCA-3L/R	MG20...
	3	9,5	9,5	300 – 500	SB023-300500L/R	GCA-3L/R	MG20...
	3	9,5	9,5	500 – ∞	SB023-500XXL/R	GCA-3L/R	MG20...
	3	16,0	18,5	50 – 60	SBT03-5060L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	60 – 75	SBT03-6075L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	75 – 100	SBT03-75100L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	100 – 150	SBT03-100150L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	150 – 300	SBT03-150300L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	300 – 500	SBT03-300500L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	500 – ∞	SBT03-500XXL/R	GC1T-3L/R	MG20...
	4	11,5	11,5	50 – 60	SB024-5060L/R	GCA-4L/R	MG22...
	4	11,5	11,5	60 – 75	SB024-6075L/R	GCA-4L/R	MG22...
	4	11,5	11,5	75 – 100	SB024-75100L/R	GCA-4L/R	MG22...
	4	11,5	11,5	100 – 150	SB024-100150L/R	GCA-4L/R	MG22...
	4	11,5	11,5	150 – 300	SB024-150300L/R	GCA-4L/R	MG22...
	4	11,5	11,5	300 – 500	SB024-300500L/R	GCA-4L/R	MG22...
	4	11,5	11,5	500 – ∞	SB024-500XXL/R	GCA-4L/R	MG22...
	4	19,0	21,5	50 – 60	SBT04-5060L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	60 – 75	SBT04-6075L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	75 – 100	SBT04-75100L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	100 – 150	SBT04-100150L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	150 – 300	SBT04-150300L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	300 – 500	SBT04-300500L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	500 – ∞	SBT04-500XXL/R	GC1T-4L/R	MG22...
	5	14,5	14,5	50 – 60	SB025-5060L/R	GCA-5L/R	MG25...
	5	14,5	14,5	60 – 75	SB025-6075L/R	GCA-5L/R	MG25...
	5	14,5	14,5	75 – 100	SB025-75100L/R	GCA-5L/R	MG25...
	5	14,5	14,5	100 – 150	SB025-100150L/R	GCA-5L/R	MG25...
	5	14,5	14,5	150 – 300	SB025-150300L/R	GCA-5L/R	MG25...
	5	14,5	14,5	300 – 500	SB025-300500L/R	GCA-5L/R	MG25...
	5	14,5	14,5	500 – ∞	SB025-500XXL/R	GCA-5L/R	MG25...
	5	22,0	24,5	50 – 60	SBT05-5060L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	60 – 75	SBT05-6075L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	75 – 100	SBT05-75100L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	100 – 150	SBT05-100150L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	150 – 300	SBT05-150300L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	300 – 500	SBT05-300500L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	500 – ∞	SBT05-500XXL/R	GC1T-5L/R	MG25...
	6	19,5	19,5	50 – 60	SB026-5060L/R	GCA-6L/R	MG30...
	6	19,5	19,5	60 – 75	SB026-6075L/R	GCA-6L/R	MG30...
	6	19,5	19,5	75 – 100	SB026-75100L/R	GCA-6L/R	MG30...
	6	19,5	19,5	100 – 150	SB026-100150L/R	GCA-6L/R	MG30...
	6	19,5	19,5	150 – 300	SB026-150300L/R	GCA-6L/R	MG30...
	6	19,5	19,5	300 – 500	SB026-300500L/R	GCA-6L/R	MG30...
	6	19,5	19,5	500 – ∞	SB026-500XXL/R	GCA-6L/R	MG30...
	6	27,0	29,5	50 – 60	SBT06-5060L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	60 – 75	SBT06-6075L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	75 – 100	SBT06-75100L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	100 – 150	SBT06-100150L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	150 – 300	SBT06-150300L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	300 – 500	SBT06-300500L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	500 – ∞	SBT06-500XXL/R	GC1T-6L/R	MG30...

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG-R1 3225L/R-MG.8-10 HMG-R1 3232L/R-MG.8-10	8	17,0	18,0	75 – 100	SB038-75100L/R	GCK-8L/R	MG38...
	8	17,0	18,0	100 – 150	SB038-100150L/R	GCK-8L/R	MG38...
	8	17,0	18,0	150 – 300	SB038-150300L/R	GCK-8L/R	MG38...
	8	17,0	18,0	300 – 500	SB038-300500L/R	GCK-8L/R	MG38...
	8	17,0	18,0	500 – ∞	SB038-500XXL/R	GCK-8L/R	MG38...
	8	32,0	32,5	75 – 100	SBT08-75100L/R	GCA-8L/R	MG38...
	8	32,0	32,5	100 – 150	SBT08-100150L/R	GCA-8L/R	MG38...
	8	32,0	32,5	150 – 300	SBT08-150300L/R	GCA-8L/R	MG38...
	8	32,0	32,5	300 – 500	SBT08-300500L/R	GCA-8L/R	MG38...
	8	32,0	32,5	500 – ∞	SBT08-500XXL/R	GCA-8L/R	MG38...
	10	25,0	26,0	75 – 100	SB310-75100L/R	GCK-10L/R	MG46...
	10	25,0	26,0	100 – 150	SB310-100150L/R	GCK-10L/R	MG46...
	10	25,0	26,0	150 – 300	SB310-150300L/R	GCK-10L/R	MG46...
	10	25,0	26,0	300 – 500	SB310-300500L/R	GCK-10L/R	MG46...
	10	25,0	26,0	500 – ∞	SB310-500XXL/R	GCK-10L/R	MG46...
	10	40,0	40,5	75 – 100	SBT10-75100L/R	GCA-10L/R	MG46...
	10	40,0	40,5	100 – 150	SBT10-100150L/R	GCA-10L/R	MG46...
	10	40,0	40,5	150 – 300	SBT10-150300L/R	GCA-10L/R	MG46...
	10	40,0	40,5	300 – 500	SBT10-300500L/R	GCA-10L/R	MG46...
	10	40,0	40,5	500 – ∞	SBT10-500XXL/R	GCA-10L/R	MG46...

ET₂ = Grooving depth can be increased to measure "ET2..

Basic holders will be supplied with screws and key, however without support blade and clamp.

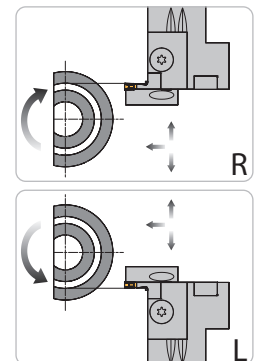
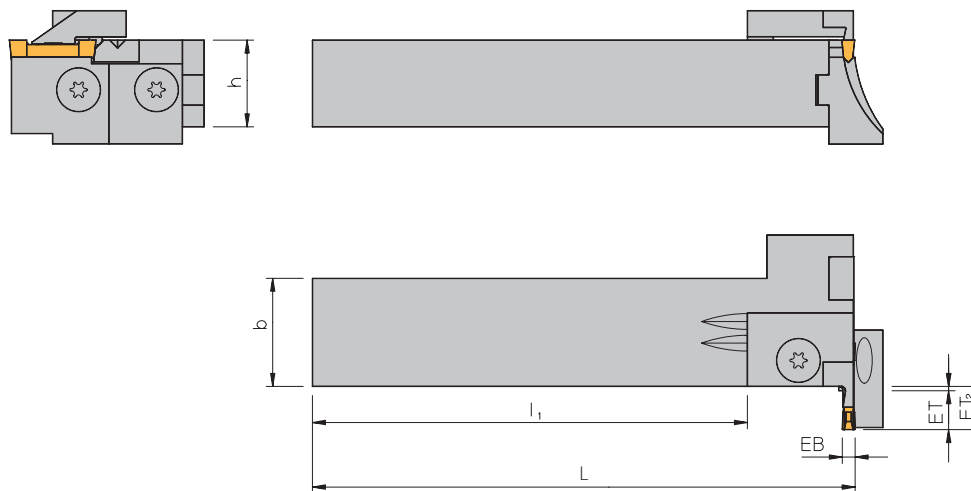
Attention: For hard work please use Heavy duty clamp system.

Spare Parts

Holder	Screw	Key
HMG-R1 3225..., HMG-R1 3232	BA-T206	SD-5120
HMG-R1 1216..., HMG-R1 2525R/L.1...	BA-T154	AD-111
HMG-R1 2025..., HMG-R1 3225...	BA-T205	SD-5120

Holders and accessories

Axial groove turning cranked



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	L	L ₁
HMG-R2 1616R/L-MG.05-3	16	16	110	95
HMG-R2 2020R/L-MG.05-3	20	20	125	110
HMG-R2 2525L-MG.05-3	25	25	150	125
HMG-R2 2025R/L-MG.05-6	20	25	125	101
HMG-R2 2525R/L-MG.05-6	25	25	150	126
HMG-R2 3232R/L-MG.05-6	32	32	170	146
HMG-R2 3232R/L-MG.8-10	32	32	170	145

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG-R2 1616R/L-MG.05-3 HMG-R2 2020R/L-MG.05-3 HMG-R2 2525L-MG.05-3	2	8,0	8,0	25 – 30	SB012-2530L/R	GCM-2L/R	MG12...
	2	8,0	8,0	30 – 40	SB012-3040L/R	GCM-2L/R	MG12...
	2	8,0	8,0	40 – 50	SB012-4050L/R	GCM-2L/R	MG12...
	2	8,0	8,0	50 – 60	SB012-5060L/R	GCM-2L/R	MG12...
	2	8,0	8,0	60 – 75	SB012-6075L/R	GCM-2L/R	MG12...
	2	8,0	8,0	75 – 100	SB012-75100L/R	GCM-2L/R	MG12...
	2	8,0	8,0	100 – 150	SB012-100150L/R	GCM-2L/R	MG12...
	2	8,0	8,0	150 – 300	SB012-150300L/R	GCM-2L/R	MG12...
	2	8,0	8,0	300 – 500	SB012-300500L/R	GCM-2L/R	MG12...
	2	8,0	8,0	500 – ∞	SB012-08L/R	GCM-2L/R	MG12...
	3	12,0	12,0	25 – 30	SB013-2530L/R	GCM-3L/R	MG16...
	3	12,0	12,0	30 – 40	SB013-3040L/R	GCM-3L/R	MG16...
	3	12,0	12,0	40 – 50	SB013-4050L/R	GCM-3L/R	MG16...
	3	12,0	12,0	50 – 60	SB013-5060L/R	GCM-3L/R	MG16...
	3	12,0	12,0	60 – 75	SB013-6075L/R	GCM-3L/R	MG16...
	3	12,0	12,0	75 – 100	SB013-75100L/R	GCM-3L/R	MG16...
	3	12,0	12,0	100 – 150	SB013-100150L/R	GCM-3L/R	MG16...
	3	12,0	12,0	150 – 300	SB013-150300L/R	GCM-3L/R	MG16...
	3	12,0	12,0	300 – 500	SB013-300500L/R	GCM-3L/R	MG16...
	3	12,0	12,0	500 – ∞	SB013-12L/R	GCM-3L/R	MG16...

*Minimum retouching work required!

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG-R2 2025R/L-MG.05-6 HMG-R2 2525R/L-MG.05-6 HMG-R2 3232R/L-MG.05-6	3	9,5	9,5	50 – 60	SB023-5060L/R	GCA-3L/R	MG20...
	3	9,5	9,5	60 – 75	SB023-6075L/R	GCA-3L/R	MG20...
	3	9,5	9,5	75 – 100	SB023-75100L/R	GCA-3L/R	MG20...
	3	9,5	9,5	100 – 150	SB023-100150L/R	GCA-3L/R	MG20...
	3	9,5	9,5	150 – 300	SB023-150300L/R	GCA-3L/R	MG20...
	3	9,5	9,5	300 – 500	SB023-300500L/R	GCA-3L/R	MG20...
	3	9,5	9,5	500 – ∞	SB023-500XXL/R	GCA-3L/R	MG20...
	3	16,0	18,5	50 – 60	SBT03-5060L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	60 – 75	SBT03-6075L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	75 – 100	SBT03-75100L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	100 – 150	SBT03-100150L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	150 – 300	SBT03-150300L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	300 – 500	SBT03-300500L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	500 – ∞	SBT03-500XXL/R	GC1T-3L/R	MG20...
	4	11,5	11,5	50 – 60	SB024-5060L/R	GCA-4L/R	MG22...
	4	11,5	11,5	60 – 75	SB024-6075L/R	GCA-4L/R	MG22...
	4	11,5	11,5	75 – 100	SB024-75100L/R	GCA-4L/R	MG22...
	4	11,5	11,5	100 – 150	SB024-100150L/R	GCA-4L/R	MG22...
	4	11,5	11,5	150 – 300	SB024-150300L/R	GCA-4L/R	MG22...
	4	11,5	11,5	300 – 500	SB024-300500L/R	GCA-4L/R	MG22...
	4	11,5	11,5	500 – ∞	SB024-500XXL/R	GCA-4L/R	MG22...
	4	19,0	21,5	50 – 60	SBT04-5060L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	60 – 75	SBT04-6075L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	75 – 100	SBT04-75100L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	100 – 150	SBT04-100150L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	150 – 300	SBT04-150300L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	300 – 500	SBT04-300500L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	500 – ∞	SBT04-500XXL/R	GC1T-4L/R	MG22...
	5	14,5	14,5	50 – 60	SB025-5060L/R	GCA-5L/R	MG25...
	5	14,5	14,5	60 – 75	SB025-6075L/R	GCA-5L/R	MG25...
	5	14,5	14,5	75 – 100	SB025-75100L/R	GCA-5L/R	MG25...
	5	14,5	14,5	100 – 150	SB025-100150L/R	GCA-5L/R	MG25...
	5	14,5	14,5	150 – 300	SB025-150300L/R	GCA-5L/R	MG25...
	5	14,5	14,5	300 – 500	SB025-300500L/R	GCA-5L/R	MG25...
	5	14,5	14,5	500 – ∞	SB025-500XXL/R	GCA-5L/R	MG25...
	5	22,0	24,5	50 – 60	SBT05-5060L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	60 – 75	SBT05-6075L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	75 – 100	SBT05-75100L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	100 – 150	SBT05-100150L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	150 – 300	SBT05-150300L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	300 – 500	SBT05-300500L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	500 – ∞	SBT05-500XXL/R	GC1T-5L/R	MG25...
	6	19,5	19,5	50 – 60	SB026-5060L/R	GCA-6L/R	MG30...
	6	19,5	19,5	60 – 75	SB026-6075L/R	GCA-6L/R	MG30...
	6	19,5	19,5	75 – 100	SB026-75100L/R	GCA-6L/R	MG30...
	6	19,5	19,5	100 – 150	SB026-100150L/R	GCA-6L/R	MG30...
	6	19,5	19,5	150 – 300	SB026-150300L/R	GCA-6L/R	MG30...
	6	19,5	19,5	300 – 500	SB026-300500L/R	GCA-6L/R	MG30...
	6	19,5	19,5	500 – ∞	SB026-500XXL/R	GCA-6L/R	MG30...
	6	27,0	29,5	50 – 60	SBT06-5060L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	60 – 75	SBT06-6075L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	75 – 100	SBT06-75100L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	100 – 150	SBT06-100150L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	150 – 300	SBT06-150300L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	300 – 500	SBT06-300500L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	500 – ∞	SBT06-500XXL/R	GC1T-6L/R	MG30...

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG-R2 3232R/L-MG.8-10	8	17,0	18,0	75 – 100	SB038-75100L/R	GCK-8L/R	MG38...
	8	17,0	18,0	100 – 150	SB038-100150L/R	GCK-8L/R	MG38...
	8	17,0	18,0	150 – 300	SB038-150300L/R	GCK-8L/R	MG38...
	8	17,0	18,0	300 – 500	SB038-300500L/R	GCK-8L/R	MG38...
	8	17,0	18,0	500 – ∞	SB038-500XXL/R	GCK-8L/R	MG38...
	8	32,0	32,5	75 – 100	SBT08-75100L/R	GCA-8L/R	MG38...
	8	32,0	32,5	100 – 150	SBT08-100150L/R	GCA-8L/R	MG38...
	8	32,0	32,5	150 – 300	SBT08-150300L/R	GCA-8L/R	MG38...
	8	32,0	32,5	300 – 500	SBT08-300500L/R	GCA-8L/R	MG38...
	8	32,0	32,5	500 – ∞	SBT08-500XXL/R	GCA-8L/R	MG38...
	10	25,0	26,0	75 – 100	SB310-75100L/R	GCK-10L/R	MG46...
	10	25,0	26,0	100 – 150	SB310-100150L/R	GCK-10L/R	MG46...
	10	25,0	26,0	150 – 300	SB310-150300L/R	GCK-10L/R	MG46...
	10	25,0	26,0	300 – 500	SB310-300500L/R	GCK-10L/R	MG46...
	10	25,0	26,0	500 – ∞	SB310-500XXL/R	GCK-10L/R	MG46...
	10	40,0	40,5	75 – 100	SBT10-75100L/R	GCA-10L/R	MG46...
	10	40,0	40,5	100 – 150	SBT10-100150L/R	GCA-10L/R	MG46...
	10	40,0	40,5	150 – 300	SBT10-150300L/R	GCA-10L/R	MG46...
	10	40,0	40,5	300 – 500	SBT10-300500L/R	GCA-10L/R	MG46...
	10	40,0	40,5	500 – ∞	SBT10-500XXL/R	GCA-10L/R	MG46...

ET₂ = Grooving depth can be increased to measure "ET2..

Basic holders will be supplied with screws and key, however without support blade and clamp.

Attention: For hard work please use Heavy duty clamp system.

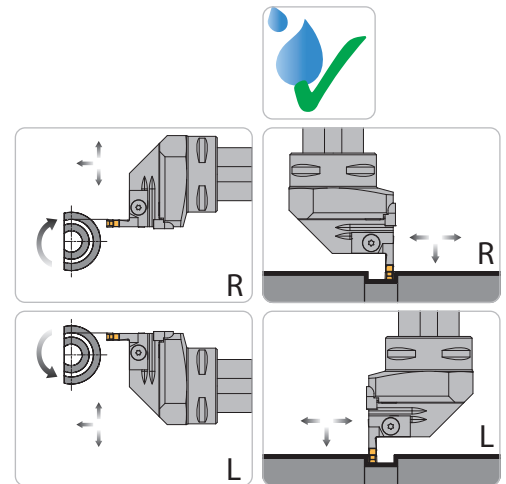
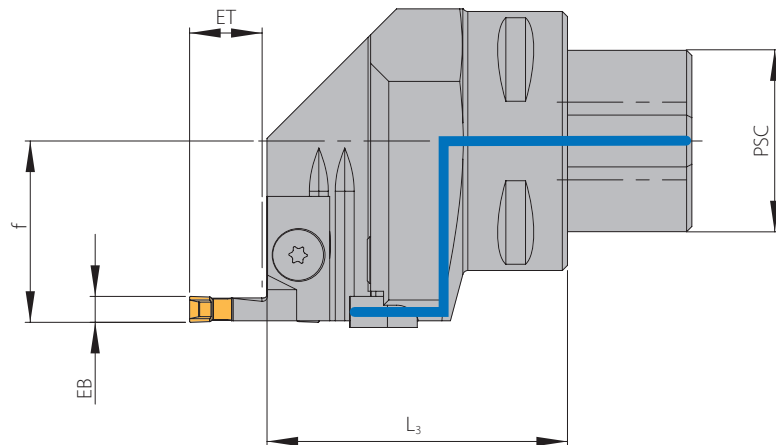
Spare Parts

Holder	Screw	Key
HMG-R2...-MG.05-3	BA-T154	AD-111
HMG-R2...-MG.05-6	BA-T205	SD-5120
HMG-R2...-MG.8-10	BA-T206	SD-5120

Holders and accessories

Groove turning - axial and radial

Polygon-Shank



Similar to illustration

Right-hand execution shown

Holders

Designation	PSC	EB	f	L ₃
HMG C4L/R-MG.2-3	C4	2 - 3	27	45
HMG C4L/R-MG.3-6	C4	3 - 6	27	58
HMG C5L-MG.2-3	C5	2 - 3	35	45
HMG C5L/R-MG.3-6	C5	3 - 6	35	58
HMG C6L/R-MG.2-3	C6	2 - 3	45	60
HMG C6L/R-MG.3-6	C6	3 - 6	45	60
HMG C8L-MG.3-6	C8	3 - 6	42	80

*For width of cut 6 mm → Dimension „f“ + 0,5 mm

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG C4L/R-MG.2-3 HMG C5L-MG.2-3 HMG C6L/R-MG.2-3	2	8,0	8,0	25 – 30	SB012-2530L/R	GCM-2L/R	MG12...
	2	8,0	8,0	30 – 40	SB012-3040L/R	GCM-2L/R	MG12...
	2	8,0	8,0	40 – 50	SB012-4050L/R	GCM-2L/R	MG12...
	2	8,0	8,0	50 – 60	SB012-5060L/R	GCM-2L/R	MG12...
	2	8,0	8,0	60 – 75	SB012-6075L/R	GCM-2L/R	MG12...
	2	8,0	8,0	75 – 100	SB012-75100L/R	GCM-2L/R	MG12...
	2	8,0	8,0	100 – 150	SB012-100150L/R	GCM-2L/R	MG12...
	2	8,0	8,0	150 – 300	SB012-150300L/R	GCM-2L/R	MG12...
	2	8,0	8,0	300 – 500	SB012-300500L/R	GCM-2L/R	MG12...
	2	8,0	8,0	500 – ∞	SB012-08L/R	GCM-2L/R	MG12...
	3	12,0	12,0	25 – 30	SB013-2530L/R	GCM-3L/R	MG16...
	3	12,0	12,0	30 – 40	SB013-3040L/R	GCM-3L/R	MG16...
	3	12,0	12,0	40 – 50	SB013-4050L/R	GCM-3L/R	MG16...
	3	12,0	12,0	50 – 60	SB013-5060L/R	GCM-3L/R	MG16...
	3	12,0	12,0	60 – 75	SB013-6075L/R	GCM-3L/R	MG16...
	3	12,0	12,0	75 – 100	SB013-75100L/R	GCM-3L/R	MG16...
	3	12,0	12,0	100 – 150	SB013-100150L/R	GCM-3L/R	MG16...
	3	12,0	12,0	150 – 300	SB013-150300L/R	GCM-3L/R	MG16...
	3	12,0	12,0	300 – 500	SB013-300500L/R	GCM-3L/R	MG16...
	3	12,0	12,0	500 – ∞	SB013-12L/R	GCM-3L/R	MG16...

*Minimum retouching work required!

Attention: For hard work please use Heavy duty clamp system.

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG C4L/R-MG.3-6 HMG C5L/R-MG.3-6 HMG C6L/R-MG.3-6 HMG C8L-MG.3-6	3	9,5	9,5	50 – 60	SB023-5060L/R	GCA-3L/R	MG20...
	3	9,5	9,5	60 – 75	SB023-6075L/R	GCA-3L/R	MG20...
	3	9,5	9,5	75 – 100	SB023-75100L/R	GCA-3L/R	MG20...
	3	9,5	9,5	100 – 150	SB023-100150L/R	GCA-3L/R	MG20...
	3	9,5	9,5	150 – 300	SB023-150300L/R	GCA-3L/R	MG20...
	3	9,5	9,5	300 – 500	SB023-300500L/R	GCA-3L/R	MG20...
	3	9,5	9,5	500 – ∞	SB023-500XXL/R	GCA-3L/R	MG20...
	3	16,0	18,5	50 – 60	SBT03-5060L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	60 – 75	SBT03-6075L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	75 – 100	SBT03-75100L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	100 – 150	SBT03-100150L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	150 – 300	SBT03-150300L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	300 – 500	SBT03-300500L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	500 – ∞	SBT03-500XXL/R	GC1T-3L/R	MG20...
	4	11,5	11,5	50 – 60	SB024-5060L/R	GCA-4L/R	MG22...
	4	11,5	11,5	60 – 75	SB024-6075L/R	GCA-4L/R	MG22...
	4	11,5	11,5	75 – 100	SB024-75100L/R	GCA-4L/R	MG22...
	4	11,5	11,5	100 – 150	SB024-100150L/R	GCA-4L/R	MG22...
	4	11,5	11,5	150 – 300	SB024-150300L/R	GCA-4L/R	MG22...
	4	11,5	11,5	300 – 500	SB024-300500L/R	GCA-4L/R	MG22...
	4	11,5	11,5	500 – ∞	SB024-500XXL/R	GCA-4L/R	MG22...
	4	19,0	21,5	50 – 60	SBT04-5060L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	60 – 75	SBT04-6075L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	75 – 100	SBT04-75100L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	100 – 150	SBT04-100150L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	150 – 300	SBT04-150300L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	300 – 500	SBT04-300500L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	500 – ∞	SBT04-500XXL/R	GC1T-4L/R	MG22...
	5	14,5	14,5	50 – 60	SB025-5060L/R	GCA-5L/R	MG25...
	5	14,5	14,5	60 – 75	SB025-6075L/R	GCA-5L/R	MG25...
	5	14,5	14,5	75 – 100	SB025-75100L/R	GCA-5L/R	MG25...
	5	14,5	14,5	100 – 150	SB025-100150L/R	GCA-5L/R	MG25...
	5	14,5	14,5	150 – 300	SB025-150300L/R	GCA-5L/R	MG25...
	5	14,5	14,5	300 – 500	SB025-300500L/R	GCA-5L/R	MG25...
	5	14,5	14,5	500 – ∞	SB025-500XXL/R	GCA-5L/R	MG25...
	5	22,0	24,5	50 – 60	SBT05-5060L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	60 – 75	SBT05-6075L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	75 – 100	SBT05-75100L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	100 – 150	SBT05-100150L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	150 – 300	SBT05-150300L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	300 – 500	SBT05-300500L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	500 – ∞	SBT05-500XXL/R	GC1T-5L/R	MG25...
	6	19,5	19,5	50 – 60	SB026-5060L/R	GCA-6L/R	MG30...
	6	19,5	19,5	60 – 75	SB026-6075L/R	GCA-6L/R	MG30...
	6	19,5	19,5	75 – 100	SB026-75100L/R	GCA-6L/R	MG30...
	6	19,5	19,5	100 – 150	SB026-100150L/R	GCA-6L/R	MG30...
	6	19,5	19,5	150 – 300	SB026-150300L/R	GCA-6L/R	MG30...
	6	19,5	19,5	300 – 500	SB026-300500L/R	GCA-6L/R	MG30...
	6	19,5	19,5	500 – ∞	SB026-500XXL/R	GCA-6L/R	MG30...
	6	27,0	29,5	50 – 60	SBT06-5060L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	60 – 75	SBT06-6075L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	75 – 100	SBT06-75100L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	100 – 150	SBT06-100150L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	150 – 300	SBT06-150300L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	300 – 500	SBT06-300500L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	500 – ∞	SBT06-500XXL/R	GC1T-6L/R	MG30...

ET₂ = Grooving depth can be increased to measure "ET₂".

Basic holders will be supplied with screws and key, however without support blade and clamp.

Holders and accessories

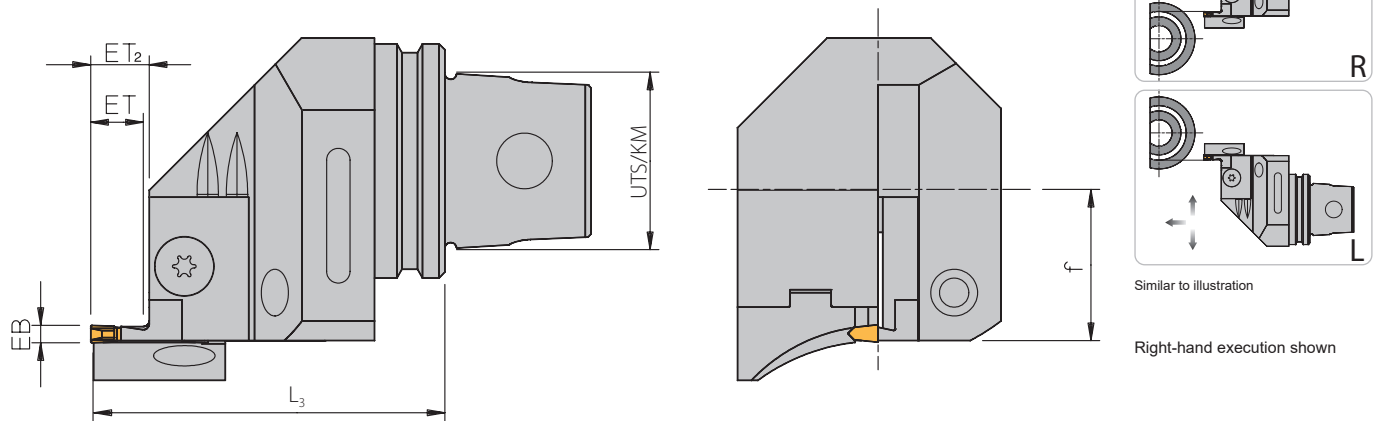
Spare Parts

Holder	Screw	Key	Coolant jet	Screw for coolant jet
HMG PSC...2-3	BA-T154	AD-111	CA-519	TS-0020
HMG C4...3-6	BA-T205	SD-5120	CA-519	TS-0020
HMG PSC...3.6	BA-T205	SD-5120	CA-818	TS-0020

Holders and accessories

Axial groove turning

UTS / KM



Holders

Designation	UTS/KM	f	L ₃
HMG UTS32L/R-MG.2-3	32	25,0	40,0
HMG UTS32L-MG.3-6*	32	25,0	45,0
HMG UTS40L/R-MG.3-6*	40	31,0	50,5
HMG UTS50R-MG.2-3	50	25,0	45,0
HMG UTS50L/R-MG.3-6*	50	36,0	56,0
HMG UTS63L/R-MG.3-6*	63	42,0	57,0
HMG UTS63R-MG.8-10	63	41,5	67,0

*For width of cut 6 mm --> Dimension „f“ + 0,5 mm

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG UTS...-MG.2-3	2	8,0	8,0	25 – 30	SB012-2530L/R	GCM-2L/R	MG12...
	2	8,0	8,0	30 – 40	SB012-3040L/R	GCM-2L/R	MG12...
	2	8,0	8,0	40 – 50	SB012-4050L/R	GCM-2L/R	MG12...
	2	8,0	8,0	50 – 60	SB012-5060L/R	GCM-2L/R	MG12...
	2	8,0	8,0	60 – 75	SB012-6075L/R	GCM-2L/R	MG12...
	2	8,0	8,0	75 – 100	SB012-75100L/R	GCM-2L/R	MG12...
	2	8,0	8,0	100 – 150	SB012-100150L/R	GCM-2L/R	MG12...
	2	8,0	8,0	150 – 300	SB012-150300L/R	GCM-2L/R	MG12...
	2	8,0	8,0	300 – 500	SB012-300500L/R	GCM-2L/R	MG12...
	2	8,0	8,0	500 – ∞	SB012-08L/R	GCM-2L/R	MG12...
	3	12,0	12,0	25 – 30	SB013-2530L/R	GCM-3L/R	MG16...
	3	12,0	12,0	30 – 40	SB013-3040L/R	GCM-3L/R	MG16...
	3	12,0	12,0	40 – 50	SB013-4050L/R	GCM-3L/R	MG16...
	3	12,0	12,0	50 – 60	SB013-5060L/R	GCM-3L/R	MG16...
	3	12,0	12,0	60 – 75	SB013-6075L/R	GCM-3L/R	MG16...
	3	12,0	12,0	75 – 100	SB013-75100L/R	GCM-3L/R	MG16...
	3	12,0	12,0	100 – 150	SB013-100150L/R	GCM-3L/R	MG16...
	3	12,0	12,0	150 – 300	SB013-150300L/R	GCM-3L/R	MG16...
	3	12,0	12,0	300 – 500	SB013-300500L/R	GCM-3L/R	MG16...
	3	12,0	12,0	500 – ∞	SB013-12L/R	GCM-3L/R	MG16...

*Minimum retouching work required!

Attention: For hard work please use Heavy duty clamp system.

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG UTS....MG.3-6	3	9,5	9,5	50 – 60	SB023-5060L/R	GCA-3L/R	MG20...
	3	9,5	9,5	60 – 75	SB023-6075L/R	GCA-3L/R	MG20...
	3	9,5	9,5	75 – 100	SB023-75100L/R	GCA-3L/R	MG20...
	3	9,5	9,5	100 – 150	SB023-100150L/R	GCA-3L/R	MG20...
	3	9,5	9,5	150 – 300	SB023-150300L/R	GCA-3L/R	MG20...
	3	9,5	9,5	300 – 500	SB023-300500L/R	GCA-3L/R	MG20...
	3	9,5	9,5	500 – ∞	SB023-500XXL/R	GCA-3L/R	MG20...
	3	16,0	18,5	50 – 60	SBT03-5060L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	60 – 75	SBT03-6075L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	75 – 100	SBT03-75100L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	100 – 150	SBT03-100150L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	150 – 300	SBT03-150300L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	300 – 500	SBT03-300500L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	500 – ∞	SBT03-500XXL/R	GC1T-3L/R	MG20...
	4	11,5	11,5	50 – 60	SB024-5060L/R	GCA-4L/R	MG22...
	4	11,5	11,5	60 – 75	SB024-6075L/R	GCA-4L/R	MG22...
	4	11,5	11,5	75 – 100	SB024-75100L/R	GCA-4L/R	MG22...
	4	11,5	11,5	100 – 150	SB024-100150L/R	GCA-4L/R	MG22...
	4	11,5	11,5	150 – 300	SB024-150300L/R	GCA-4L/R	MG22...
	4	11,5	11,5	300 – 500	SB024-300500L/R	GCA-4L/R	MG22...
	4	11,5	11,5	500 – ∞	SB024-500XXL/R	GCA-4L/R	MG22...
	4	19,0	21,5	50 – 60	SBT04-5060L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	60 – 75	SBT04-6075L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	75 – 100	SBT04-75100L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	100 – 150	SBT04-100150L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	150 – 300	SBT04-150300L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	300 – 500	SBT04-300500L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	500 – ∞	SBT04-500XXL/R	GC1T-4L/R	MG22...
	5	14,5	14,5	50 – 60	SB025-5060L/R	GCA-5L/R	MG25...
	5	14,5	14,5	60 – 75	SB025-6075L/R	GCA-5L/R	MG25...
	5	14,5	14,5	75 – 100	SB025-75100L/R	GCA-5L/R	MG25...
	5	14,5	14,5	100 – 150	SB025-100150L/R	GCA-5L/R	MG25...
	5	14,5	14,5	150 – 300	SB025-150300L/R	GCA-5L/R	MG25...
	5	14,5	14,5	300 – 500	SB025-300500L/R	GCA-5L/R	MG25...
	5	14,5	14,5	500 – ∞	SB025-500XXL/R	GCA-5L/R	MG25...
	5	22,0	24,5	50 – 60	SBT05-5060L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	60 – 75	SBT05-6075L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	75 – 100	SBT05-75100L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	100 – 150	SBT05-100150L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	150 – 300	SBT05-150300L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	300 – 500	SBT05-300500L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	500 – ∞	SBT05-500XXL/R	GC1T-5L/R	MG25...
	6	19,5	19,5	50 – 60	SB026-5060L/R	GCA-6L/R	MG30...
	6	19,5	19,5	60 – 75	SB026-6075L/R	GCA-6L/R	MG30...
	6	19,5	19,5	75 – 100	SB026-75100L/R	GCA-6L/R	MG30...
	6	19,5	19,5	100 – 150	SB026-100150L/R	GCA-6L/R	MG30...
	6	19,5	19,5	150 – 300	SB026-150300L/R	GCA-6L/R	MG30...
	6	19,5	19,5	300 – 500	SB026-300500L/R	GCA-6L/R	MG30...
	6	19,5	19,5	500 – ∞	SB026-500XXL/R	GCA-6L/R	MG30...
	6	27,0	29,5	50 – 60	SBT06-5060L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	60 – 75	SBT06-6075L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	75 – 100	SBT06-75100L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	100 – 150	SBT06-100150L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	150 – 300	SBT06-150300L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	300 – 500	SBT06-300500L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	500 – ∞	SBT06-500XXL/R	GC1T-6L/R	MG30...

ET₂ = Grooving depth can be increased to measure "ET2..

Basic holders will be supplied with screws and key, however without support blade and clamp.

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG UTS...-MG.8-10	8	17,0	18,0	75 – 100	SB038-75100L/R	GCK-8L/R	MG38...
	8	17,0	18,0	100 – 150	SB038-100150L/R	GCK-8L/R	MG38...
	8	17,0	18,0	150 – 300	SB038-150300L/R	GCK-8L/R	MG38...
	8	17,0	18,0	300 – 500	SB038-300500L/R	GCK-8L/R	MG38...
	8	17,0	18,0	500 – ∞	SB038-500XXL/R	GCK-8L/R	MG38...
	8	32,0	32,5	75 – 100	SBT08-75100L/R	GCA-8L/R	MG38...
	8	32,0	32,5	100 – 150	SBT08-100150L/R	GCA-8L/R	MG38...
	8	32,0	32,5	150 – 300	SBT08-150300L/R	GCA-8L/R	MG38...
	8	32,0	32,5	300 – 500	SBT08-300500L/R	GCA-8L/R	MG38...
	8	32,0	32,5	500 – ∞	SBT08-500XXL/R	GCA-8L/R	MG38...
	10	25,0	26,0	75 – 100	SB310-75100L/R	GCK-10L/R	MG46...
	10	25,0	26,0	100 – 150	SB310-100150L/R	GCK-10L/R	MG46...
	10	25,0	26,0	150 – 300	SB310-150300L/R	GCK-10L/R	MG46...
	10	25,0	26,0	300 – 500	SB310-300500L/R	GCK-10L/R	MG46...
	10	25,0	26,0	500 – ∞	SB310-500XXL/R	GCK-10L/R	MG46...
	10	40,0	40,5	75 – 100	SBT10-75100L/R	GCA-10L/R	MG46...
	10	40,0	40,5	100 – 150	SBT10-100150L/R	GCA-10L/R	MG46...
	10	40,0	40,5	150 – 300	SBT10-150300L/R	GCA-10L/R	MG46...
	10	40,0	40,5	300 – 500	SBT10-300500L/R	GCA-10L/R	MG46...
	10	40,0	40,5	500 – ∞	SBT10-500XXL/R	GCA-10L/R	MG46...

 ET₂ = Grooving depth can be increased to measure "ET2..

Basic holders will be supplied with screws and key, however without support blade and clamp.

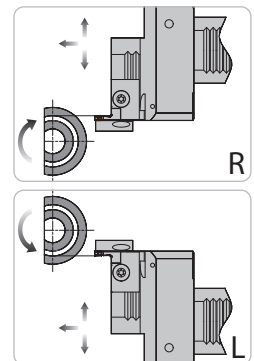
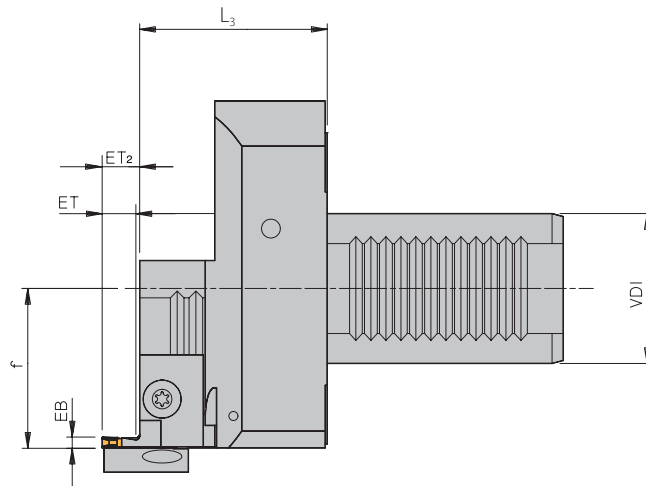
Spare Parts

Holder	Screw	Key
HMG UTS...-MG.3-6	BA-T205	SD-5120
HMG UTS...-MG.2-3	BA-T154	AD-111
HMG UTS...-MG.8-10	BA-T206	SD-5120

Holders and accessories

Axial groove turning

VDI



Similar to illustration

Right-hand execution shown

Holders

Designation	VDI	f	L ₃
HMG VDI30L/RA-MG.3-6*	30	35,0	50
HMG VDI40L/RA-MG.8-10	40	42,5	60
HMG VDI40L/RA-MG.3-6*	40	42,5	50
HMG VDI50L/RA-MG.8-10	50	42,5	60
HMG VDI50L/RA-MG.3-6*	50	42,5	50
HMG VDI60L/RA-MG.8-10	60	42,5	60
HMG VDI60L/RA-MG.3-6*	60	42,5	50

*For width of cut 6 mm --> Dimension „AKL“ + 0,5mm

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG VDI...A-MG.3-6	3	9,5	9,5	50 – 60	SB023-5060L/R	GCA-3L/R	MG20...
	3	9,5	9,5	60 – 75	SB023-6075L/R	GCA-3L/R	MG20...
	3	9,5	9,5	75 – 100	SB023-75100L/R	GCA-3L/R	MG20...
	3	9,5	9,5	100 – 150	SB023-100150L/R	GCA-3L/R	MG20...
	3	9,5	9,5	150 – 300	SB023-150300L/R	GCA-3L/R	MG20...
	3	9,5	9,5	300 – 500	SB023-300500L/R	GCA-3L/R	MG20...
	3	9,5	9,5	500 – ∞	SB023-500XXL/R	GCA-3L/R	MG20...
	3	16,0	18,5	50 – 60	SBT03-5060L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	60 – 75	SBT03-6075L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	75 – 100	SBT03-75100L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	100 – 150	SBT03-100150L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	150 – 300	SBT03-150300L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	300 – 500	SBT03-300500L/R	GC1T-3L/R	MG20...
	3	16,0	18,5	500 – ∞	SBT03-500XXL/R	GC1T-3L/R	MG20...
	4	11,5	11,5	50 – 60	SB024-5060L/R	GCA-4L/R	MG22...
	4	11,5	11,5	60 – 75	SB024-6075L/R	GCA-4L/R	MG22...
	4	11,5	11,5	75 – 100	SB024-75100L/R	GCA-4L/R	MG22...
	4	11,5	11,5	100 – 150	SB024-100150L/R	GCA-4L/R	MG22...
	4	11,5	11,5	150 – 300	SB024-150300L/R	GCA-4L/R	MG22...
	4	11,5	11,5	300 – 500	SB024-300500L/R	GCA-4L/R	MG22...

*Minimum retouching work required!

Attention: For hard work please use Heavy duty clamp system.

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	ET ₂	OD of groove	Support blade	Clamp	Insert
HMG VDI...A-MG.3-6	4	11,5	11,5	500 – ∞	SB024-500XXL/R	GCA-4L/R	MG22...
	4	19,0	21,5	50 – 60	SBT04-5060L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	60 – 75	SBT04-6075L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	75 – 100	SBT04-75100L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	100 – 150	SBT04-100150L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	150 – 300	SBT04-150300L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	300 – 500	SBT04-300500L/R	GC1T-4L/R	MG22...
	4	19,0	21,5	500 – ∞	SBT04-500XXL/R	GC1T-4L/R	MG22...
	5	14,5	14,5	50 – 60	SB025-5060L/R	GCA-5L/R	MG25...
	5	14,5	14,5	60 – 75	SB025-6075L/R	GCA-5L/R	MG25...
	5	14,5	14,5	75 – 100	SB025-75100L/R	GCA-5L/R	MG25...
	5	14,5	14,5	100 – 150	SB025-100150L/R	GCA-5L/R	MG25...
	5	14,5	14,5	150 – 300	SB025-150300L/R	GCA-5L/R	MG25...
	5	14,5	14,5	300 – 500	SB025-300500L/R	GCA-5L/R	MG25...
	5	14,5	14,5	500 – ∞	SB025-500XXL/R	GCA-5L/R	MG25...
	5	22,0	24,5	50 – 60	SBT05-5060L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	60 – 75	SBT05-6075L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	75 – 100	SBT05-75100L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	100 – 150	SBT05-100150L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	150 – 300	SBT05-150300L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	300 – 500	SBT05-300500L/R	GC1T-5L/R	MG25...
	5	22,0	24,5	500 – ∞	SBT05-500XXL/R	GC1T-5L/R	MG25...
	6	19,5	19,5	50 – 60	SB026-5060L/R	GCA-6L/R	MG30...
	6	19,5	19,5	60 – 75	SB026-6075L/R	GCA-6L/R	MG30...
	6	19,5	19,5	75 – 100	SB026-75100L/R	GCA-6L/R	MG30...
	6	19,5	19,5	100 – 150	SB026-100150L/R	GCA-6L/R	MG30...
	6	19,5	19,5	150 – 300	SB026-150300L/R	GCA-6L/R	MG30...
	6	19,5	19,5	300 – 500	SB026-300500L/R	GCA-6L/R	MG30...
	6	19,5	19,5	500 – ∞	SB026-500XXL/R	GCA-6L/R	MG30...
	6	27,0	29,5	50 – 60	SBT06-5060L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	60 – 75	SBT06-6075L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	75 – 100	SBT06-75100L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	100 – 150	SBT06-100150L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	150 – 300	SBT06-150300L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	300 – 500	SBT06-300500L/R	GC1T-6L/R	MG30...
	6	27,0	29,5	500 – ∞	SBT06-500XXL/R	GC1T-6L/R	MG30...
HMG VDI...A-MG.8-10	8	17,0	18,0	75 – 100	SB038-75100L/R	GCK-8L/R	MG38...
	8	17,0	18,0	100 – 150	SB038-100150L/R	GCK-8L/R	MG38...
	8	17,0	18,0	150 – 300	SB038-150300L/R	GCK-8L/R	MG38...
	8	17,0	18,0	300 – 500	SB038-300500L/R	GCK-8L/R	MG38...
	8	17,0	18,0	500 – ∞	SB038-500XXL/R	GCK-8L/R	MG38...
	8	32,0	32,5	75 – 100	SBT08-75100L/R	GCA-8L/R	MG38...
	8	32,0	32,5	100 – 150	SBT08-100150L/R	GCA-8L/R	MG38...
	8	32,0	32,5	150 – 300	SBT08-150300L/R	GCA-8L/R	MG38...
	8	32,0	32,5	300 – 500	SBT08-300500L/R	GCA-8L/R	MG38...
	8	32,0	32,5	500 – ∞	SBT08-500XXL/R	GCA-8L/R	MG38...
	10	25,0	26,0	75 – 100	SB310-75100L/R	GCK-10L/R	MG46...
	10	25,0	26,0	100 – 150	SB310-100150L/R	GCK-10L/R	MG46...
	10	25,0	26,0	150 – 300	SB310-150300L/R	GCK-10L/R	MG46...
	10	25,0	26,0	300 – 500	SB310-300500L/R	GCK-10L/R	MG46...
	10	25,0	26,0	500 – ∞	SB310-500XXL/R	GCK-10L/R	MG46...
	10	40,0	40,5	75 – 100	SBT10-75100L/R	GCA-10L/R	MG46...
	10	40,0	40,5	100 – 150	SBT10-100150L/R	GCA-10L/R	MG46...
	10	40,0	40,5	150 – 300	SBT10-150300L/R	GCA-10L/R	MG46...
	10	40,0	40,5	300 – 500	SBT10-300500L/R	GCA-10L/R	MG46...
	10	40,0	40,5	500 – ∞	SBT10-500XXL/R	GCA-10L/R	MG46...

ET₂ = Grooving depth can be increased to measure "ET2..

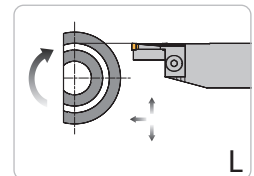
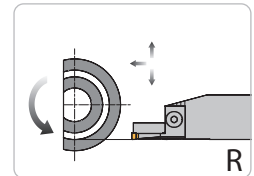
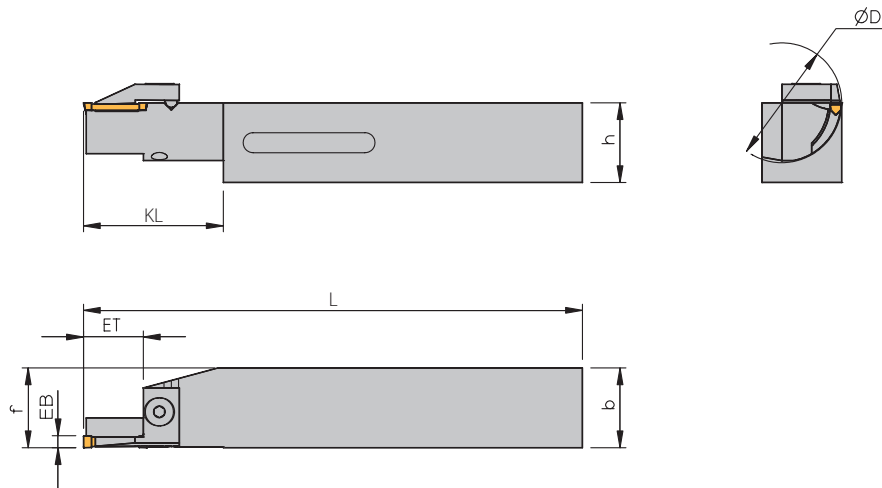
Basic holders will be supplied with screws and key, however without support blade and clamp.

Spare Parts

Holder	Screw	Key
HMG VDI...	BA-T205	SD-5120

Holders and accessories

Axial groove turning straight - Ø 20 - 300 mm



Similar to illustration

Right-hand execution shown

Holders

Designation	OD of groove	EB	ET	KL	h	b	L	f	Clamp	Insert
HMG-K 2020L/R-2025-MG.2	20-25	2	7,5	30	20	20	125	20	GCM-2L/R-K	MG12...
HMG-K 2020L/R-2530-MG.2	25-30	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-3035-MG.2	30-35	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-3540-MG.2	35-40	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-4050-MG.2	40-50	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-5060-MG.2	50-60	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-6075-MG.2	60-75	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-75100-MG.2	75-100	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-100150-MG.2	100-150	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-150300-MG.2	150-300	2	10,5	35	20	20	125	20	GC1M-2L/R-K	MG12...
HMG-K 2020L/R-2025-MG.3	20-25	3	11,5	30	20	20	125	20	GCM-3L/R-K	MG16...
HMG-K 2020L/R-2530-MG.3	25-30	3	14,5	35	20	20	125	20	GC1M-3L/R-K	MG16...
HMG-K 2020L/R-3035-MG.3	30-35	3	14,5	35	20	20	125	20	GC1M-3L/R-K	MG16...
HMG-K 2020L/R-3540-MG.3	35-40	3	14,5	35	20	20	125	20	GC1M-3L/R-K	MG16...
HMG-K 2020L/R-4050-MG.3	40-50	3	14,5	35	20	20	125	20	GC1M-3L/R-K	MG16...
HMG-K 2020L/R-5060-MG.3	50-60	3	14,5	35	20	20	125	20	GC1M-3L/R-K	MG16...

Holders will be supplied with screws and key, however without support blade and clamp.

Attention: These tools should be set up according to dimension „h“ (shank-height), because the cutting edge is above centre height!

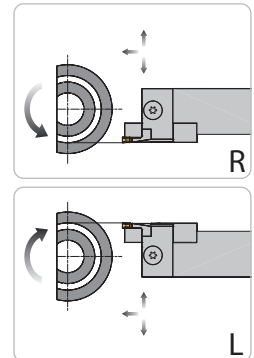
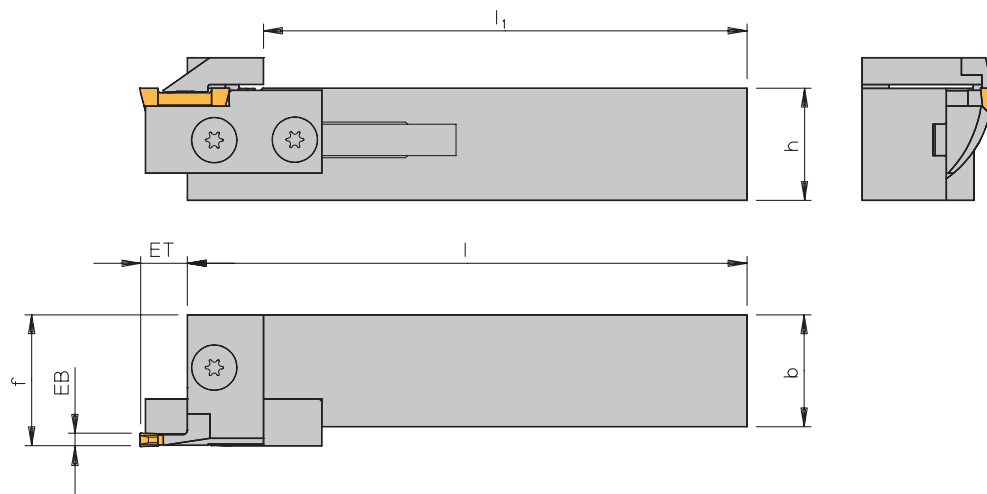
Remark: Contra-execution grooving tools from the grooving width of 3 mm and external diameter of 50 mm.

Spare Parts

Holder	Screw	Key
HMG-K...	BA-T154	AD-111

Holders and accessories

Axial groove turning straight



Similar to illustration

Right-hand execution shown

Holders

Designation	h	b	l	l ₁	f
HMG-R1 2025L/R-MG.05-6	20	25	125	113	29,65
HMG-R1 2525L/R-MG.05-6	25	25	150	138	29,65
HMG-R1 3225L/R-MG.05-6	32	25	170	158	29,65
HMG-R1 3225L/R-MG.8-10	32	25	170	145	29,65
HMG-R1 3232L/R-MG.8-10	32	32	170	145	38,50

*For width of cut 6 mm --> f = b + 0.5; for all others f = b

Basic holder and accessories

Basic holder	EB	ET	OD of groove	Support blade	Clamp	Insert
HMG-R1...-MG.05-6	3	10	50 – 60	SB023-5060L/R-K	GCS-3L/R-K	MG20...
	3	10	60 – 75	SB023-6075L/R-K	GCS-3L/R-K	MG20...
	3	10	75 – 100	SB023-75100L/R-K	GCS-3L/R-K	MG20...
	3	10	100 – 150	SB023-100150L/R-K	GCS-3L/R-K	MG20...
	3	10	150 – 300	SB023-150300L/R-K	GCS-3L/R-K	MG20...
	3	10	300 – 500	SB023-300500L/R-K	GCS-3L/R-K	MG20...
	3	10	500 – ∞	SB023-500XXL/R-K	GCS-3L/R-K	MG20...
	3	17	50 – 60	SBT03-S-5060L/R-K	GC1S-3L/R-K	MG20...
	3	17	60 – 75	SBT03-S-6075L/R-K	GC1S-3L/R-K	MG20...
	3	17	75 – 100	SBT03-S-75100L/R-K	GC1S-3L/R-K	MG20...
	3	17	100 – 150	SBT03-S-100150L/R-K	GC1S-3L/R-K	MG20...
	3	17	150 – 300	SBT03-S-150300L/R-K	GC1S-3L/R-K	MG20...
	3	17	300 – 500	SBT03-S-300500L/R-K	GC1S-3L/R-K	MG20...
	3	17	500 – ∞	SBT03-S-500XXL/R-K	GC1S-3L/R-K	MG20...
	4	12	50 – 60	SB024-5060L/R-K	GCS-4L/R-K	MG22...
	4	12	60 – 75	SB024-6075L/R-K	GCS-4L/R-K	MG22...
	4	12	75 – 100	SB024-75100L/R-K	GCS-4L/R-K	MG22...
	4	12	100 – 150	SB024-100150L/R-K	GCS-4L/R-K	MG22...
	4	12	150 – 300	SB024-150300L/R-K	GCS-4L/R-K	MG22...
	4	12	300 – 500	SB024-300500L/R-K	GCS-4L/R-K	MG22...
	4	12	500 – ∞	SB024-500XXL/R-K	GCS-4L/R-K	MG22...
	4	20	50 – 60	SBT04-S-5060L/R-K	GC1S-4L/R-K	MG22...
	4	20	60 – 75	SBT04-S-6075L/R-K	GC1S-4L/R-K	MG22...
	4	20	75 – 100	SBT04-S-75100L/R-K	GC1S-4L/R-K	MG22...
	4	20	100 – 150	SBT04-S-100150L/R-K	GC1S-4L/R-K	MG22...
	4	20	150 – 300	SBT04-S-150300L/R-K	GC1S-4L/R-K	MG22...
	4	20	300 – 500	SBT04-S-300500L/R-K	GC1S-4L/R-K	MG22...
	4	20	500 – ∞	SBT04-S-500XXL/R-K	GC1S-4L/R-K	MG22...

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	OD of groove	Support blade	Clamp	Insert
HMG-R1...-MG.05-6	5	15	50 – 60	SB025-5060L/R-K	GCS-5L/R-K	MG25...
	5	15	60 – 75	SB025-6075L/R-K	GCS-5L/R-K	MG25...
	5	15	75 – 100	SB025-75100L/R-K	GCS-5L/R-K	MG25...
	5	15	100 – 150	SB025-100150L/R-K	GCS-5L/R-K	MG25...
	5	15	150 – 300	SB025-150300L/R-K	GCS-5L/R-K	MG25...
	5	15	300 – 500	SB025-300500L/R-K	GCS-5L/R-K	MG25...
	5	15	500 – ∞	SB025-500XXL/R-K	GCS-5L/R-K	MG25...
	5	23	50 – 60	SBT05-S-5060L/R-K	GC1S-5L/R-K	MG25...
	5	23	60 – 75	SBT05-S-6075L/R-K	GC1S-5L/R-K	MG25...
	5	23	75 – 100	SBT05-S-75100L/R-K	GC1S-5L/R-K	MG25...
	5	23	100 – 150	SBT05-S-100150L/R-K	GC1S-5L/R-K	MG25...
	5	23	150 – 300	SBT05-S-150300L/R-K	GC1S-5L/R-K	MG25...
	5	23	300 – 500	SBT05-S-300500L/R-K	GC1S-5L/R-K	MG25...
	5	23	500 – ∞	SBT05-S-500XXL/R-K	GC1S-5L/R-K	MG25...
	6	20	50 – 60	SB026-5060L/R-K	GCS-6L/R-K	MG30...
	6	20	60 – 75	SB026-6075L/R-K	GCS-6L/R-K	MG30...
	6	20	75 – 100	SB026-75100L/R-K	GCS-6L/R-K	MG30...
	6	20	100 – 150	SB026-100150L/R-K	GCS-6L/R-K	MG30...
	6	20	150 – 300	SB026-150300L/R-K	GCS-6L/R-K	MG30...
	6	20	300 – 500	SB026-300500L/R-K	GCS-6L/R-K	MG30...
	6	20	500 – ∞	SB026-500XXL/R-K	GCS-6L/R-K	MG30...
	6	28	50 – 60	SBT06-S-5060L/R-K	GC1S-6L/R-K	MG30...
	6	28	60 – 75	SBT06-S-6075L/R-K	GC1S-6L/R-K	MG30...
	6	28	75 – 100	SBT06-S-75100L/R-K	GC1S-6L/R-K	MG30...
	6	28	100 – 150	SBT06-S-100150L/R-K	GC1S-6L/R-K	MG30...
	6	28	150 – 300	SBT06-S-150300L/R-K	GC1S-6L/R-K	MG30...
	6	28	300 – 500	SBT06-S-300500L/R-K	GC1S-6L/R-K	MG30...
	6	28	500 – ∞	SBT06-S-500XXL/R-K	GC1S-6L/R-K	MG30...
HMG-R1...-MG.8-10	8	25	75 – 100	SB038-75100L/R-K	GCS-8L/R-K	MG38...
	8	25	100 – 150	SB038-100150L/R-K	GCS-8L/R-K	MG38...
	8	25	150 – 300	SB038-150300L/R-K	GCS-8L/R-K	MG38...
	8	25	300 – 500	SB038-300500L/R-K	GCS-8L/R-K	MG38...
	8	25	500 – ∞	SB038-500XXL/R-K	GCS-8L/R-K	MG38...
	8	32	75 – 100	SBT08-S-75100L/R-K	GC1S-8L/R-K	MG38...
	8	32	100 – 150	SBT08-S-100150L/R-K	GC1S-8L/R-K	MG38...
	8	32	150 – 300	SBT08-S-150300L/R-K	GC1S-8L/R-K	MG38...
	8	32	300 – 500	SBT08-S-300500L/R-K	GC1S-8L/R-K	MG38...
	8	32	500 – ∞	SBT08-S-500XXL/R-K	GC1S-8L/R-K	MG38...
	10	35	75 – 100	SB310-75100L/R-K	GCS-10L/R-K	MG46...
	10	35	100 – 150	SB310-100150L/R-K	GCS-10L/R-K	MG46...
	10	35	150 – 300	SB310-150300L/R-K	GCS-10L/R-K	MG46...
	10	35	300 – 500	SB310-300500L/R-K	GCS-10L/R-K	MG46...
	10	35	500 – ∞	SB310-500XXL/R-K	GCS-10L/R-K	MG46...
	10	42	75 – 100	SBT10-S-75100L/R-K	GC1S-10L/R-K	MG46...
	10	42	100 – 150	SBT10-S-100150L/R-K	GC1S-10L/R-K	MG46...
	10	42	150 – 300	SBT10-S-150300L/R-K	GC1S-10L/R-K	MG46...
	10	42	300 – 500	SBT10-S-300500L/R-K	GC1S-10L/R-K	MG46...
	10	42	500 – ∞	SBT10-S-500XXL/R-K	GC1S-10L/R-K	MG46...

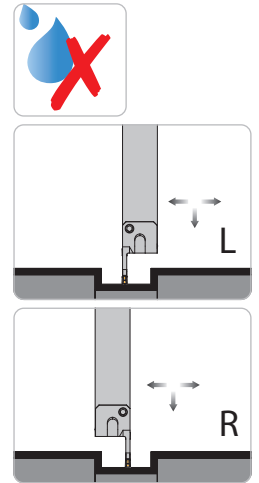
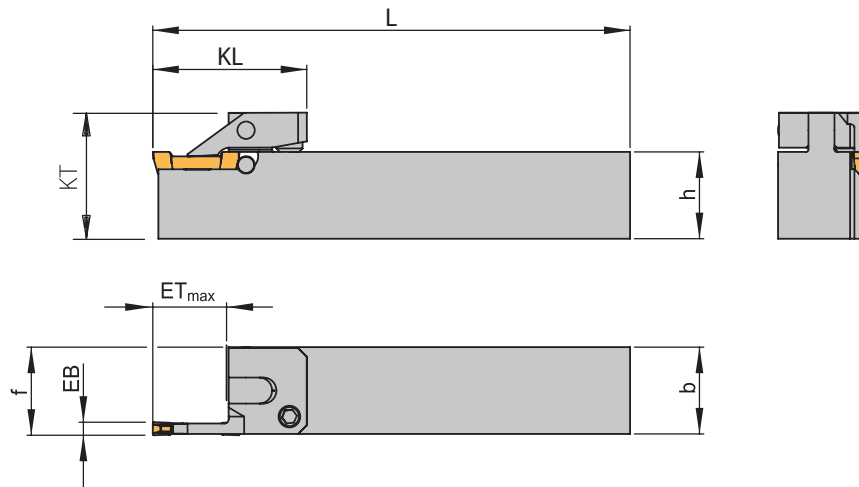
Basic holders will be supplied with screws and key, however without support blade and clamp.

Spare Parts

Holder	Screw	Key
HMG-R1...-MG.8-10	T206	T5120
HMG-R1...-MG.05-6	T205	T5120

Holders and accessories

Radial groove turning straight



Similar to illustration

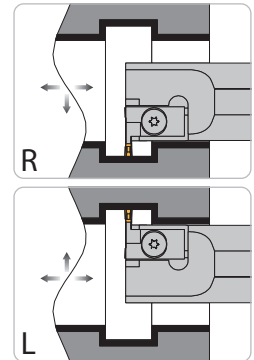
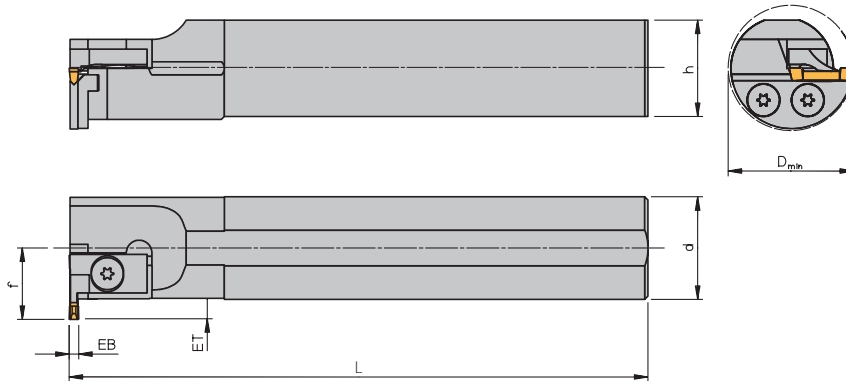
Right-hand execution shown

Holders

Designation	EB	ET _{max}	KL	KT	h	b	L	f	Insert
HMG-S 1616L/R-MG.3	3	17	35,5	25	16	16	100	16.3	320....
HMG-S 2020L/R-MG.3	3	17	35,5	29	20	20	110	20.3	320....
HMG-S 2525L/R-MG.3	3	17	35,5	34	25	25	125	25.3	320....
HMG-S 1616L/R-MG.4	4	19	37,6	25	16	16	100	16.3	422....
HMG-S 2020L/R-MG.4	4	19	37,6	29	20	20	110	20.3	422....
HMG-S 2525L/R-MG.4	4	19	37,6	34	25	25	125	25.3	422....
HMG-S 2020L/R-MG.5	5	22	40,6	29	20	20	110	20.3	525....
HMG-S 2525L/R-MG.5	5	22	40,6	34	25	25	125	25.3	525....
HMG-S 2020L/R-MG.6	6	27	45,7	29	20	20	110	20.3	630....
HMG-S 2525L/R-MG.6	6	27	45,7	34	25	25	125	25.3	630....

Holders and accessories

Internal groove turning from Ø 16 mm



Similar to illustration

Right-hand execution shown

Holders

Designation	d	L	h
HMG-R 12.L150L/R-MG.05-1,85	12	150	11
HMG-R 12.L150L/R-MG.2	12	150	11
HMG-R 16.L150L/R-MG.05-1,85	16	150	15
HMG-R 16.L150L/R-MG.2	16	150	15
HMG-R 16.L150L/R-MG.05-3	16	150	15
HMG-R 16.L150L/R-MG.3	16	150	15
HMG-R 20.L250L/R-MG.05-3	20	250	18
HMG-R 20.L250L/R-MG.3	20	250	18
HMG-R 25.L280L/R-MG.05-3	25	280	23
HMG-R 25.L280L/R-MG.3	25	280	23
HMG-R 32.L300L/R-MG.05-5	32	300	30

Basic holder and accessories

Basic holder	EB	ET	D _{min}	f	Support blade	Clamp	Insert
HMG-R 12.L150L/R-MG.2	2,00	3	16	9,0	—*	GCI-2FL/R	MG12...
HMG-R 12.L150L/R-MG.05-1,85	0,5 – 1,85	= EB	16	9,0	—*	GCI-2FL/R	MG2-... R/L
HMG-R 16.L150L/R-MG.2	2,00	3	20	11,0	—*	GCI-2FL/R	MG12...
HMG-R 16.L150L/R-MG.05-1,85	0,5 – 1,85	= EB	20	11,0	—*	GCI-2FL/R	MG2-... R/L
HMG-R 16.L150L/R-MG.3	3,00	4	21	12,0	—*	GC2I-3FL/R	MG16...
HMG-R 16.L150L/R-MG.05-3	0,5 – 3,08	= EB	21	12,0	—*	GC2I-3FL/R	MG3A-... R/L
HMG-R 20.L250L/R-MG.3	3,00	4	25	14,3	—*	GCI-3FL/R	MG20...
HMG-R 20.L250L/R-MG.05-3	0,5 – 3,08	= EB	25	14,3	—*	GCI-3FL/R	MG3-... R/L
HMG-R 25.L280L/R-MG.3	3,00	4	30	16,8	—*	GCI-3FL/R	MG20...
HMG-R 25.L280L/R-MG.05-3	0,5 – 3,08	= EB	30	16,8	—*	GCI-3FL/R	MG3-... R/L
HMG-R 32.L300L/R-MG.05-5	0,5 – 3,08	= EB	39	22,0	SBI-471L/R	GCI-3WL/R	MG3-... R/L
HMG-R 32.L300L/R-MG.05-5	3,00	6	39	22,0	SB023-06L/R	GCI-3WL/R	MG20...
HMG-R 32.L300L/R-MG.05-5	4,00	8	41	24,0	SB024-08L/R	GCI-4WL/R	MG22...
HMG-R 32.L300L/R-MG.05-5	5,00	11	44	27,0	SB025-11L/R	GCI-5WL/R	MG25...

*Monoblock holders

Basic holders will be supplied with screws and key, however without support blade and clamp.

Please note: Holder right-hand-design -> Left-hand spare parts

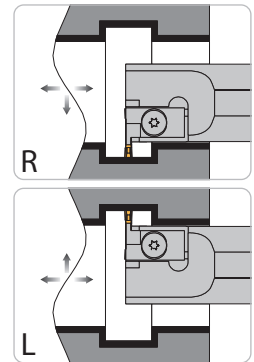
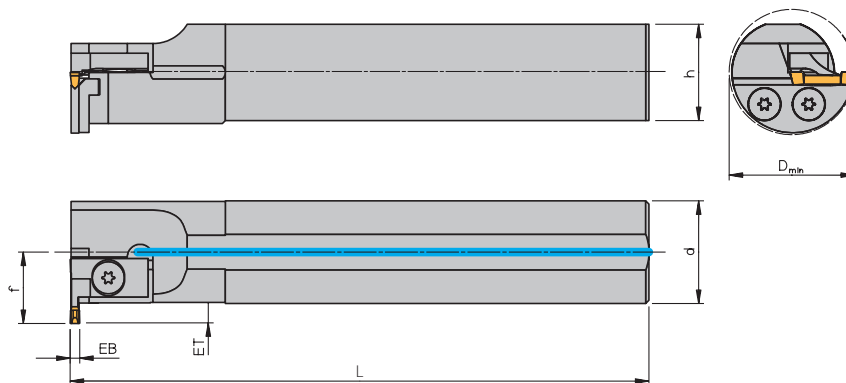
Holder left-hand-design -> Right-hand spare parts

Spare Parts

Holder	Screw	Key
HMG-R 12..., HMG-R 16...	AG-154	AD-111
HMG-R 20..., HMG-R 25...	BA-T154	AD-111
HMG-R 32...	BA-T205	SD-5120

Holders and accessories

Internal groove turning from Ø 25 mm



Similar to illustration

Right-hand execution shown

Holders

Designation	d	L	h
HMG-R 20.L150L/R-A1-MG.05-3	20	150	18
HMG-R 20.L150L/R-A1-MG.3	20	150	18
HMG-R 25.L160L/R-A1-MG.05-3	25	160	23
HMG-R 25.L160L/R-A1-MG.3	25	160	23
HMG-R 32.L180L/R-A1-MG.05-5	32	180	30
HMG-R 40.L240L/R-A1-MG.05-5	40	240	38
HMG-R 50.L300L/R-A1-MG.05-5	50	300	48
HMG-R 50.L300L/R-A1-MG.3-6	50	300	48

Basic holder and accessories

Basic holder	EB	ET	D _{min}	f	Support blade	Clamp	Insert
HMG-R 20.L150L/R-A1-MG.3	3,00	4	25	14,3	—*	GCI-3FL/R	MG20...
HMG-R 20.L150L/R-A1-MG.05-3	0,5 – 3,08	= EB	25	14,3	—*	GCI-3FL/R	MG3-... R/L
HMG-R 25.L160L/R-A1-MG.3	3,00	4	30	16,8	—*	GCI-3FL/R	MG20...
HMG-R 25.L160L/R-A1-MG.05-3	0,5 – 3,08	= EB	30	16,8	—*	GCI-3FL/R	MG3-... R/L
HMG-R 32.L180L/R-A1-MG.05-5	0,5 – 3,08	= EB	39	22,0	SBI-471L/R	GCI-3WL/R	MG3-... R/L
HMG-R 32.L180L/R-A1-MG.05-5	3,00	6	39	22,0	SB023-06L/R	GCI-3WL/R	MG20...
HMG-R 32.L180L/R-A1-MG.05-5	4,00	8	41	24,0	SB024-08L/R	GCI-4WL/R	MG22...
HMG-R 32.L180L/R-A1-MG.05-5	5,00	11	44	27,0	SB025-11L/R	GCI-5WL/R	MG25...
HMG-R 40.L240L/R-A1-MG.05-5	0,5 – 3,08	= EB	47	26,0	SBI-471L/R	GCI-3WL/R	MG3-... R/L
HMG-R 40.L240L/R-A1-MG.05-5	3,00	6	47	26,0	SB023-06L/R	GCI-3WL/R	MG20...
HMG-R 40.L240L/R-A1-MG.05-5	4,00	8	49	28,0	SB024-08L/R	GCI-4WL/R	MG22...
HMG-R 40.L240L/R-A1-MG.05-5	5,00	11	52	31,0	SB025-11L/R	GCI-5WL/R	MG25...
HMG-R 50.L300L/R-A1-MG.05-5	0,5 – 3,08	= EB	57	31,0	SBI-471L/R	GCI-3WL/R	MG3-... R/L
HMG-R 50.L300L/R-A1-MG.05-5	3,00	6	57	31,0	SB023-06L/R	GCI-3WL/R	MG20...
HMG-R 50.L300L/R-A1-MG.05-5	4,00	8	59	33,0	SB024-08L/R	GCI-4WL/R	MG22...
HMG-R 50.L300L/R-A1-MG.05-5	5,00	11	62	36,0	SB025-11L/R	GCI-5WL/R	MG25...
HMG-R 50.L300L/R-A1-MG.3-6	3,00	9	61	35,0	SB09-20310L/R	GCA-3L/R	MG20...
HMG-R 50.L300L/R-A1-MG.3-6	3,00	15	70	44,0	SB09-UT316L/R	GCI-1T-3L/R	MG20...
HMG-R 50.L300L/R-A1-MG.3-6	4,00	10	63	37,0	SB09-20412L/R	GCA-4L/R	MG22...
HMG-R 50.L300L/R-A1-MG.3-6	4,00	18	73	47,0	SB09-UT419L/R	GCI-1T-4L/R	MG22...
HMG-R 50.L300L/R-A1-MG.3-6	5,00	13	66	40,0	SB09-20515L/R	GCA-5L/R	MG25...
HMG-R 50.L300L/R-A1-MG.3-6	5,00	21	76	50,0	SB09-UT522L/R	GCI-1T-5L/R	MG25...
HMG-R 50.L300L/R-A1-MG.3-6	6,00	18	71	45,0	SB09-20620L/R	GCA-6L/R	MG30...
HMG-R 50.L300L/R-A1-MG.3-6	6,00	26	81	55,0	SB09-UT627L/R	GCI-1T-6L/R	MG30...

*Monoblock holders

Basic holders will be supplied with screws and key, however without support blade and clamp.

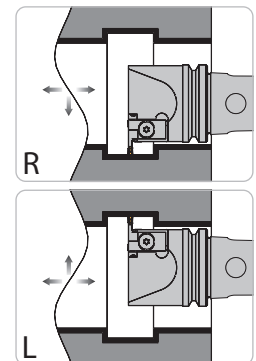
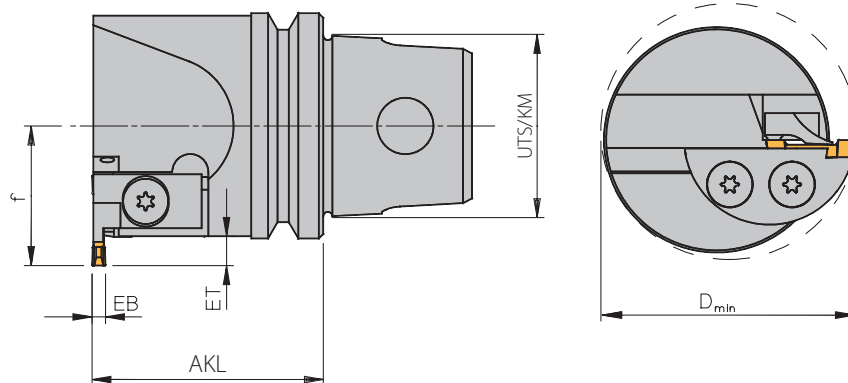
 Please note: Holder right-hand-design → Left-hand spare parts
 Holder left-hand-design → Right-hand spare parts

Spare Parts

Holder	Screw	Key
HMG-R 20..., HMG-R 25...	BA-T154	AD-111
HMG-R 32...- HMG-R 50...	BA-T205	SD-5120

Holders and accessories

Internal groove turning UTS / KM



Similar to illustration

Right-hand execution shown

Holders

Designation	UTS/KM	AKL
HMG-I UTS32L-MG.3-5	32	40,0
HMG-I UTS40L/R-MG.3-5	40	45,5
HMG-I UTS50L/R-MG.3-5	50	51,0
HMG-I UTS50L-MG.3-6	50	51,0

Please note: Holder right-hand-design → Left-hand spare parts
Holder left-hand-design → Right-hand spare parts

Basic holder and accessories

Basic holder	EB	ET	D _{min}	f	Support blade	Clamp	Insert
HMG-I UTS32L-MG.3-5	0,5 – 3,08	= EB	39	22,0	SBI-471R	GCI-3WR	MG3-... R/L
HMG-I UTS32L-MG.3-5	3,00	6	39	22,0	SB023-06R	GCI-3WR	MG20...
HMG-I UTS32L-MG.3-5	4,00	8	41	24,0	SB024-08R	GCI-4WR	MG22...
HMG-I UTS32L-MG.3-5	5,00	11	44	27,0	SB025-11R	GCI-5WR	MG25...
HMG-I UTS40L/R-MG.3-5	0,5 – 3,08	= EB	47	26,0	SBI-471L/R	GCI-3WL/R	MG3-... R/L
HMG-I UTS40L/R-MG.3-5	3,00	6	47	26,0	SB023-06L/R	GCI-3WL/R	MG20...
HMG-I UTS40L/R-MG.3-5	4,00	8	49	28,0	SB024-08L/R	GCI-4WL/R	MG22...
HMG-I UTS40L/R-MG.3-5	5,00	11	52	31,0	SB025-11L/R	GCI-5WL/R	MG25...
HMG-I UTS50L/R-MG.3-5	0,5 – 3,08	= EB	57	31,0	SBI-471L/R	GCI-3WL/R	MG3-... R/L
HMG-I UTS50L/R-MG.3-5	3,00	6	57	31,0	SB023-06L/R	GCI-3WL/R	MG20...
HMG-I UTS50L/R-MG.3-5	4,00	8	59	33,0	SB024-08L/R	GCI-4WL/R	MG22...
HMG-I UTS50L/R-MG.3-5	5,00	11	62	36,0	SB025-11L/R	GCI-5WL/R	MG25...

Basic holders will be supplied with screws and key, however without support blade and clamp.

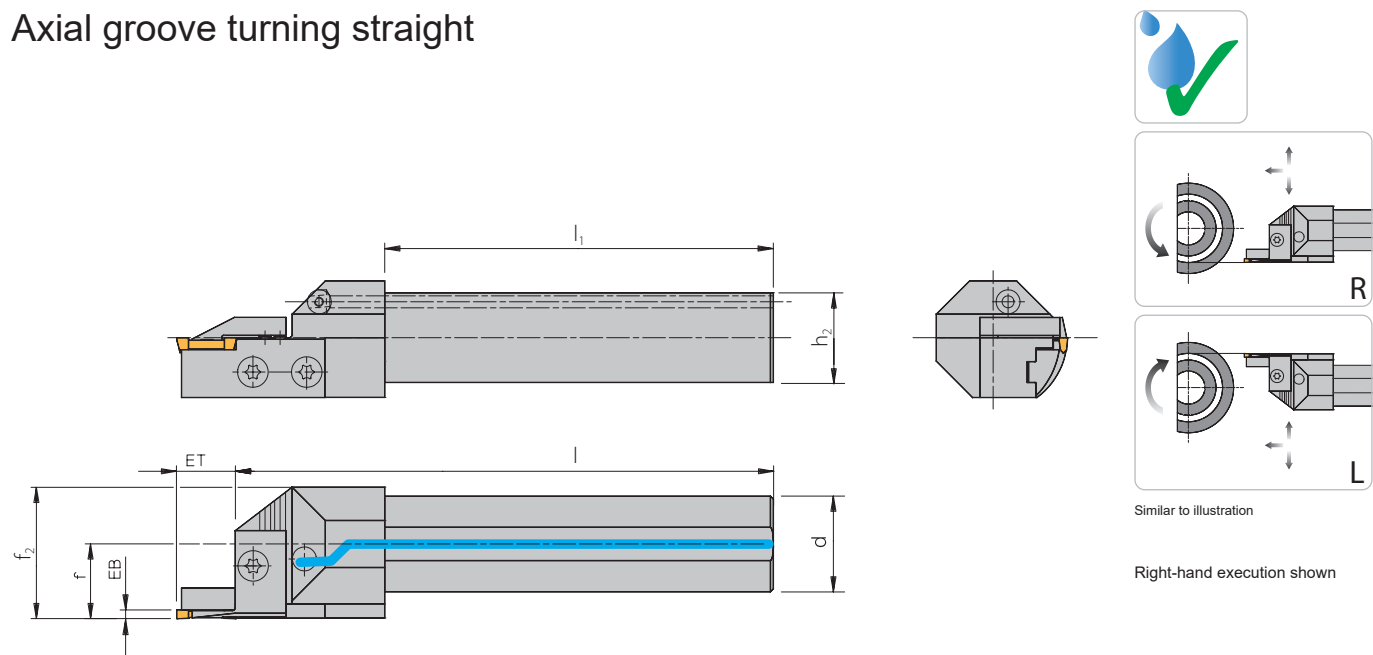
Please note: Holder right-hand-design → Left-hand spare parts
Holder left-hand-design → Right-hand spare parts

Spare Parts

Holder	Screw	Key
HMG-I UT...	BA-T205	SD-5120

Holders and accessories

Axial groove turning straight



Holders

Designation	d	l	l ₁	f ₂	h ₂	f
HMG-A 32.L180L/R-A1-MG.3-6*	32	180	130	44	30	25,0
HMG-A 40.L240L/R-A1-MG.3-6*	40	240	190	45	38	25,0
HMG-A 50.L300L/R-A1-MG.3-6*	50	300	250	55	48	30,0
HMG-A 50.L300L/R-A1-MG.8-10**	50	300	240	56	48	31,5

* For width of cut 6 mm → f = b + 0.5; for all others f = b

**A holder can only be used with a diameter of 60 mm

Basic holder and accessories

Basic holder	EB	ET	OD of groove	Support blade	Clamp	Insert
HMG-A 32...-MG.3-6 HMG-A 40...-MG.3-6 HMG-A 50...-MG.3-6	3	10	50 – 60	SB023-5060L/R-K	GCS-3L/R-K	MG20...
	3	10	60 – 75	SB023-6075L/R-K	GCS-3L/R-K	MG20...
	3	10	75 – 100	SB023-75100L/R-K	GCS-3L/R-K	MG20...
	3	10	100 – 150	SB023-100150L/R-K	GCS-3L/R-K	MG20...
	3	10	150 – 300	SB023-150300L/R-K	GCS-3L/R-K	MG20...
	3	10	300 – 500	SB023-300500L/R-K	GCS-3L/R-K	MG20...
	3	10	500 – ∞	SB023-500XXL/R-K	GCS-3L/R-K	MG20...
	3	17	50 – 60	SBT03-S-5060L/R-K	GC1S-3L/R-K	MG20...
	3	17	60 – 75	SBT03-S-6075L/R-K	GC1S-3L/R-K	MG20...
	3	17	75 – 100	SBT03-S-75100L/R-K	GC1S-3L/R-K	MG20...
	3	17	100 – 150	SBT03-S-100150L/R-K	GC1S-3L/R-K	MG20...
	3	17	150 – 300	SBT03-S-150300L/R-K	GC1S-3L/R-K	MG20...
	3	17	300 – 500	SBT03-S-300500L/R-K	GC1S-3L/R-K	MG20...
	3	17	500 – ∞	SBT03-S-500XXL/R-K	GC1S-3L/R-K	MG20...
	4	12	50 – 60	SB024-5060L/R-K	GCS-4L/R-K	MG22...
	4	12	60 – 75	SB024-6075L/R-K	GCS-4L/R-K	MG22...
	4	12	75 – 100	SB024-75100L/R-K	GCS-4L/R-K	MG22...
	4	12	100 – 150	SB024-100150L/R-K	GCS-4L/R-K	MG22...
	4	12	150 – 300	SB024-150300L/R-K	GCS-4L/R-K	MG22...
	4	12	300 – 500	SB024-300500L/R-K	GCS-4L/R-K	MG22...
	4	12	500 – ∞	SB024-500XXL/R-K	GCS-4L/R-K	MG22...
	4	20	50 – 60	SBT04-S-5060L/R-K	GC1S-4L/R-K	MG22...
	4	20	60 – 75	SBT04-S-6075L/R-K	GC1S-4L/R-K	MG22...
	4	20	75 – 100	SBT04-S-75100L/R-K	GC1S-4L/R-K	MG22...
	4	20	100 – 150	SBT04-S-100150L/R-K	GC1S-4L/R-K	MG22...
	4	20	150 – 300	SBT04-S-150300L/R-K	GC1S-4L/R-K	MG22...
	4	20	300 – 500	SBT04-S-300500L/R-K	GC1S-4L/R-K	MG22...
	4	20	500 – ∞	SBT04-S-500XXL/R-K	GC1S-4L/R-K	MG22...

Holders and accessories

Basic holder and accessories

Basic holder	EB	ET	OD of groove	Support blade	Clamp	Insert
HMG-A 32...-MG.3-6 HMG-A 40...-MG.3-6 HMG-A 50...-MG.3-6	5	15	50 – 60	SB025-5060L/R-K	GCS-5L/R-K	MG25...
	5	15	60 – 75	SB025-6075L/R-K	GCS-5L/R-K	MG25...
	5	15	75 – 100	SB025-75100L/R-K	GCS-5L/R-K	MG25...
	5	15	100 – 150	SB025-100150L/R-K	GCS-5L/R-K	MG25...
	5	15	150 – 300	SB025-150300L/R-K	GCS-5L/R-K	MG25...
	5	15	300 – 500	SB025-300500L/R-K	GCS-5L/R-K	MG25...
	5	15	500 – ∞	SB025-500XXL/R-K	GCS-5L/R-K	MG25...
	5	23	50 – 60	SBT05-S-5060L/R-K	GC1S-5L/R-K	MG25...
	5	23	60 – 75	SBT05-S-6075L/R-K	GC1S-5L/R-K	MG25...
	5	23	75 – 100	SBT05-S-75100L/R-K	GC1S-5L/R-K	MG25...
	5	23	100 – 150	SBT05-S-100150L/R-K	GC1S-5L/R-K	MG25...
	5	23	150 – 300	SBT05-S-150300L/R-K	GC1S-5L/R-K	MG25...
	5	23	300 – 500	SBT05-S-300500L/R-K	GC1S-5L/R-K	MG25...
	5	23	500 – ∞	SBT05-S-500XXL/R-K	GC1S-5L/R-K	MG25...
	6	20	50 – 60	SB026-5060L/R-K	GCS-6L/R-K	MG30...
	6	20	60 – 75	SB026-6075L/R-K	GCS-6L/R-K	MG30...
	6	20	75 – 100	SB026-75100L/R-K	GCS-6L/R-K	MG30...
	6	20	100 – 150	SB026-100150L/R-K	GCS-6L/R-K	MG30...
	6	20	150 – 300	SB026-150300L/R-K	GCS-6L/R-K	MG30...
	6	20	300 – 500	SB026-300500L/R-K	GCS-6L/R-K	MG30...
	6	20	500 – ∞	SB026-500XXL/R-K	GCS-6L/R-K	MG30...
	6	28	50 – 60	SBT06-S-5060L/R-K	GC1S-6L/R-K	MG30...
	6	28	60 – 75	SBT06-S-6075L/R-K	GC1S-6L/R-K	MG30...
	6	28	75 – 100	SBT06-S-75100L/R-K	GC1S-6L/R-K	MG30...
	6	28	100 – 150	SBT06-S-100150L/R-K	GC1S-6L/R-K	MG30...
	6	28	150 – 300	SBT06-S-150300L/R-K	GC1S-6L/R-K	MG30...
	6	28	300 – 500	SBT06-S-300500L/R-K	GC1S-6L/R-K	MG30...
	6	28	500 – ∞	SBT06-S-500XXL/R-K	GC1S-6L/R-K	MG30...
HMG-A 50...-MG.8-10	8	25	75 – 100	SB038-75100L/R-K	GCS-8L/R-K	MG38...
	8	25	100 – 150	SB038-100150L/R-K	GCS-8L/R-K	MG38...
	8	25	150 – 300	SB038-150300L/R-K	GCS-8L/R-K	MG38...
	8	25	300 – 500	SB038-300500L/R-K	GCS-8L/R-K	MG38...
	8	25	500 – ∞	SB038-500XXL/R-K	GCS-8L/R-K	MG38...
	8	32	75 – 100	SBT08-S-75100L/R-K	GC1S-8L/R-K	MG38...
	8	32	100 – 150	SBT08-S-100150L/R-K	GC1S-8L/R-K	MG38...
	8	32	150 – 300	SBT08-S-150300L/R-K	GC1S-8L/R-K	MG38...
	8	32	300 – 500	SBT08-S-300500L/R-K	GC1S-8L/R-K	MG38...
	8	32	500 – ∞	SBT08-S-500XXL/R-K	GC1S-8L/R-K	MG38...
	10	35	75 – 100	SB310-75100L/R-K	GCS-10L/R-K	MG46...
	10	35	100 – 150	SB310-100150L/R-K	GCS-10L/R-K	MG46...
	10	35	150 – 300	SB310-150300L/R-K	GCS-10L/R-K	MG46...
	10	35	300 – 500	SB310-300500L/R-K	GCS-10L/R-K	MG46...
	10	35	500 – ∞	SB310-500XXL/R-K	GCS-10L/R-K	MG46...
	10	42	75 – 100	SBT10-S-75100L/R-K	GC1S-10L/R-K	MG46...
	10	42	100 – 150	SBT10-S-100150L/R-K	GC1S-10L/R-K	MG46...
	10	42	150 – 300	SBT10-S-150300L/R-K	GC1S-10L/R-K	MG46...
	10	42	300 – 500	SBT10-S-300500L/R-K	GC1S-10L/R-K	MG46...
	10	42	500 – ∞	SBT10-S-500XXL/R-K	GC1S-10L/R-K	MG46...

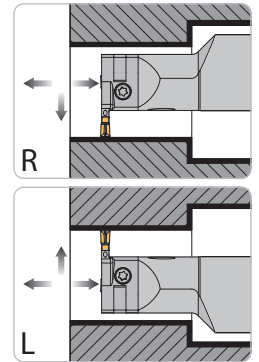
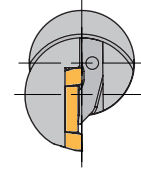
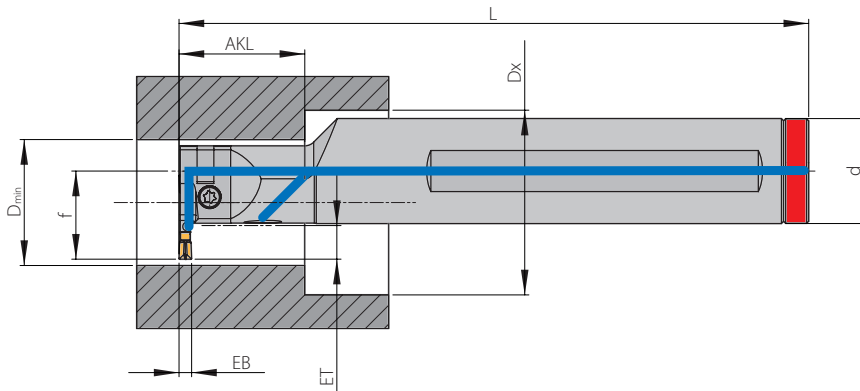
Basic holders will be supplied with screws and key, however without support blade and clamp.

Spare Parts

Holder	Screw	Key
HMG-A...-MG.3-6	BA-T205	SD-5120
HMG-A 50...-MG.8-10	BA-T206	SD-5120

Holders and accessories

Internal groove turning



Similar to illustration

Right-hand execution shown

Holders

Designation	D _{min}	EB	ET	AKL	d	L	f	D _x	Insert
HMG-R 16M.L110.20L/R-A2-MG.2	16	2	4,5	20	16	110	13,0	27,5	MG12...
HMG-R 16M.L110.30L/R-A2-MG.2	16	2	4,5	30	16	110	13,0	27,5	MG12...
HMG-R 20.L135.30L/R-A2-MG.3	28	3	8,0	30	20	135	18,5	31,0	MG20...
HMG-R 25.L150.301L/R-A2-MG.3	28	3	8,0	30	25	150	21,0	41,0	MG20...
HMG-R 20.L135.50L/R-A2-MG.3	28	3	8,0	50	20	135	18,5	31,0	MG20...
HMG-R 25.L150.50L/R-A2-MG.3	28	3	8,0	50	25	150	21,0	41,0	MG20...
HMG-R 25.L150.30L/R-A2-MG.3	32	3	11,0	30	25	150	24,0	43,0	MG20...
HMG-R 25.L150.501L/R-A2-MG.3	32	3	11,0	50	25	150	24,0	43,0	MG20...
HMG-R 20M.L135.27L/R-A2-MG.3	20	3	5,5	27	20	135	16,5	33,0	MG16...
HMG-R 20M.L135.40L/R-A2-MG.3	20	3	5,5	40	20	135	16,5	33,0	MG16...

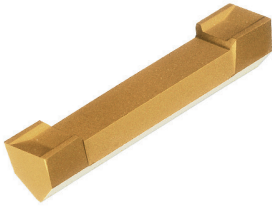
Spare Parts

Holder	Screw	Locking Ring
HMG- 16...-MG.2	TS-0018	SR-16R
HMG- 20...-MG.3	TS-1111	SR-20R
HMG- 25...-MG.3	TS-1111	SR-25R
HMG- 20M...-MG.3	TS-0019	SR-20R

*Please note: Cooling takes place exclusively on the side of the plate

Geometry

Standard geometry



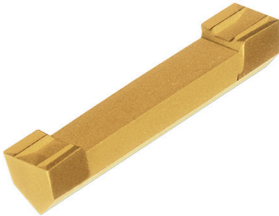
- precision ground insert
- two cutting edges
- special geometry with chip-contraction
- for grooving with small to medium chip-cross-section
- low cutting forces because of sharp cutting edges
- for a number of workpiece materials
- for internal and external machining

Full radius execution -FC



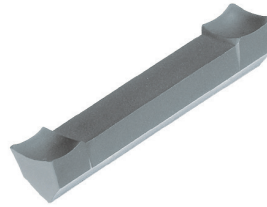
- precision ground insert
 - two cutting edges, full radius
 - for grooving and copy-turning operations up to medium chip-cross-section
- Particularity:
- special chipbreaker for controlled-chipbreaking when machining long chipping materials
 - for internal and external machining

Geometry for copying -C



- precision ground insert
- two cutting edges
- special geometry for chip-contraction
- 12° positive rake angle on all three cutting edges
- same application as standard execution, but also for copy-turning with medium chip-cross-section
- for internal and external machining

Aluminium type -ALU



- precision ground insert
- two cutting edges
- special geometry for chip-contraction
- 25° positive rake angle on all three cutting edges
- grooving and copy-turning of non-ferrous materials and plastics
- for internal and external machining

geometry -CB



- precision sintered twin edge inserts
- inserts for groove turning, cut in and withdraw
- considerable chip removal via stable cutting edge
- minimum cutting force via positive cutting geometry
- for internal and external machining

Circlip grooves -471



- Circlip grooves execution
- precision ground insert
 - two cutting edges
 - for all grooves to DIN 471/472 by using only one support blade for all widths
 - for internal and external machining

Full radius execution -F



- precision ground insert
- two cutting edges
- full radius
- for grooving and copy-turning operations with small chip-cross-section
- machining of short chipping materials
- for internal and external machining

Grade description

Coated

A42-BS2

CVD-multilayer coating
 Machining steel, cast steel as well as grey cast iron, at medium to high cutting speeds, medium to large chip-cross-sections and varying depths of cut. Used for finishing and medium roughing.

A72-L2

CVD-multilayer coating
 Machining steel, stainless steel and cast steel, at medium to large chip-cross-sections and medium to low cutting speeds under unfavourable machining conditions where good toughness is required.

B72-Q2

CVD-multilayer coating
 Grade with a good combination of wear resistance and toughness for turning steel, stainless steel as well as cast steel at medium chip-cross-sections and medium to high cutting speeds. Can also be used under unfavourable machining conditions. Special grade for stainless steel (austenitic). Apply in finishing and medium roughing applications.

B72-BF2

PVD-multilayer coating
 An improved PVD coating on a tough and wear resistant carbide grade. Due to the higher cobalt content this grade contains all the required toughness for part-off and grooving applications. Coating is excellent at machining most steel, stainless steel and hard to machine materials.

C32-V2

CVD-multilayer coating
 For machining grey cast iron, cast iron with graphite and hard cast material. Also suitable for stainless steel, steel and cast steel at medium to high cutting speed. Apply in finishing and lighter roughing applications.

C52-AD2

CVD-multilayer coating
 Machining of steel, stainless steel, spheroidal cast iron, cast steel and grey cast iron at high cutting speeds under stable machining conditions.

D22-AF2

PVD-multilayer coating
 Grade for machining aluminium and aluminium alloy, copper, brass, non-ferrous materials and refractory metals at medium cutting and under unfavourable cutting conditions. Also suitable for stainless steel.

Uncoated

C22-W2

Submicron carbide grade for machining cast materials, light and non-ferrous materials, refractory metals, hardened steels up to 55 HRC. In connection with chipbreaker-ALU specially suitable for machining aluminium and copper alloys.

CERMET

Machining of steel, steels with medium tensile strength as well as stainless steel and spheroidal cast iron. Limited use on grey cast iron.

F42-BG2 (CBN)

Machining of hardened materials (hardened steels). For example, hard cast iron, hardened steel from 50 HRC onwards, Nihard and stellite.

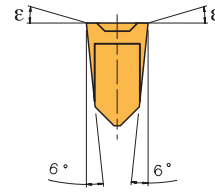
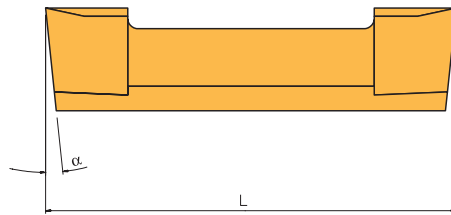
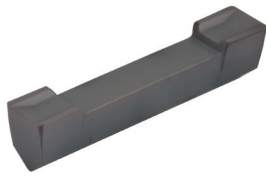
D42-BH2 (PKD)

Machining of non-ferrous metals, aluminium alloys with silicon, glass- and coal-fiber reinforced materials, spheroidal cast iron, at high cutting speeds. Sharp cutting edges enable low cutting forces and extremely good surface finish. Finishing and super finishing even at interrupted cuts.

Inserts

Standard geometry

Similar to illustration



Precision ground execution

Designation	EB ± 0,02	L ± 0,02	α	R	ϵ	Application	HC				HU	BU	DU
							A72-L2	B72-Q2	B72-BF2	C32-V2	C22-W2	F42-BG2	D42-BH2
MG12-2101	2	12	7/15°	0,1	12°	External and internal	●	●	●	●	●	●	●
MG12-2101FN	2	12	7/15°	0,1	0°		○	○	○	○	○	○	○
MG12-2101TN	2	12	7/15°	0,1	0°		○	○	○	○	○	○	○
MG12-2004	2	12	7/15°	0,4	12°		●	○	●	○	○	○	○
MG16-3002	3	16	7/15°	0,2	12°		●	●	●	●	●	●	●
MG16-3102FN	3	16	7/15°	0,2	0°		○	○	○	○	○	○	○
MG16-3102TN	3	16	7/15°	0,2	0°		○	○	○	○	○	○	○
MG16-3004	3	16	7/15°	0,4	12°		●	○	●	○	○	○	○
MG20-3002	3	20	6/16°	0,2	12°		●	●	●	●	●	●	●
MG20-3202FN	3	20	6/16°	0,2	0°		○	○	○	○	○	○	○
MG20-3202TN	3	20	6/16°	0,2	0°		○	○	○	○	○	○	○
MG20-3004	3	20	6/16°	0,4	12°		●	○	●	○	○	○	○
MG22-4002	4	22	6/9,5°	0,2	12°		●	●	●	●	●	●	●
MG22-4202FN	4	22	6/9,5°	0,2	0°		○	○	○	○	○	○	○
MG22-4202TN	4	22	6/9,5°	0,2	0°		○	○	○	○	○	○	○
MG22-4004	4	22	6/9,5°	0,4	12°		●	○	●	○	○	○	○
MG22-4010	4	22	6/9,5°	1,0	12°		●	○	●	○	○	○	○
MG25-5002	5	25	6/8,5°	0,2	12°		●	●	●	●	●	●	●
MG25-5202FN	5	25	6/8,5°	0,2	0°		○	○	○	○	○	○	○
MG25-5202TN	5	25	6/8,5°	0,2	0°		○	○	○	○	○	○	○
MG25-5004	5	25	6/8,5°	0,4	12°		●	○	●	○	○	○	○
MG30-6002	6	30	6°	0,2	12°	External only	●	●	●	●	●	●	●
MG30-6302FN	6	30	6°	0,2	0°		○	○	○	○	○	○	○
MG30-6302TN	6	30	6°	0,2	0°		○	○	○	○	○	○	○
MG30-6004	6	30	6°	0,4	12°		●	○	●	○	○	○	○
MG30-6010	6	30	6°	1,0	12°	External only	●	○	●	○	○	○	○
MG38-8004	8	38	6°	0,4	12°		●	●	●	●	●	●	●
MG38-8304FN	8	38	6°	0,4	0°		○	○	○	○	○	○	○
MG38-8304TN	8	38	6°	0,4	0°		○	○	○	○	○	○	○
MG46-10004	10	46	6°	0,4	12°	External only	●	●	●	●	●	●	●
MG46-10004FN	10	46	6°	0,4	0°		○	○	○	○	○	○	○
MG46-10004TN	10	46	6°	0,4	0°		○	○	○	○	○	○	○

ϵ = Rake angle

Remark for D42-BH2 and F42-BG2 inserts: single-sided with a rank angle of 0°

HC = Carbide coated

HU = Carbide uncoated

BU = CBN super hard cutting materials uncoated

DU = PKD super hard cutting materials uncoated

P	●	○	○	○			
M	○	●	●				
K				●	●		
N					●		●
S	○	○	○	○	○		○
H				○		●	

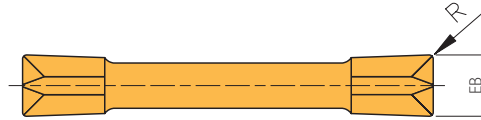
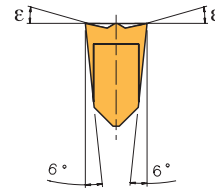
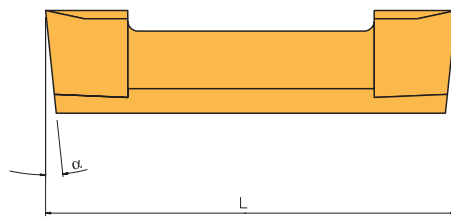
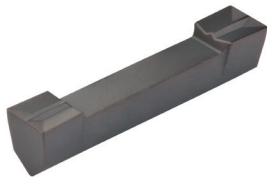
● Main application

○ Secondary application

Inserts

Copy-turning geometry (C)

Similar to illustration



Precision ground execution

Designation	EB ± 0,02	L ± 0,02	α	R	ϵ	Application	HC		
							A42-BS2	A72-L2	B72-BF2
MG12-2001-C	2,0	12	7/15°	0,1	12°	External and internal		◆	◆
MG16-3002-C	3,0	16	7/15°	0,2	12°			◆	◆
MG20-3002-C	3,0	20	6/16°	0,2	12°			◆	◆
MG22-4002-C	4,0	22	6/9,5°	0,2	12°			◆	◆
MG25-5002-C	5,0	25	6/8,5°	0,2	12°			◆	◆
MG30-6002-C	6,0	30	6°	0,2	12°	External only	◆	◆	◆
MG38-8004-C	8,0	38	6°	0,4	12°			◆	
MG46-10004-C	10,0	46	6°	0,4	12°			◆	

ϵ = Rake angle

HC = Carbide coated

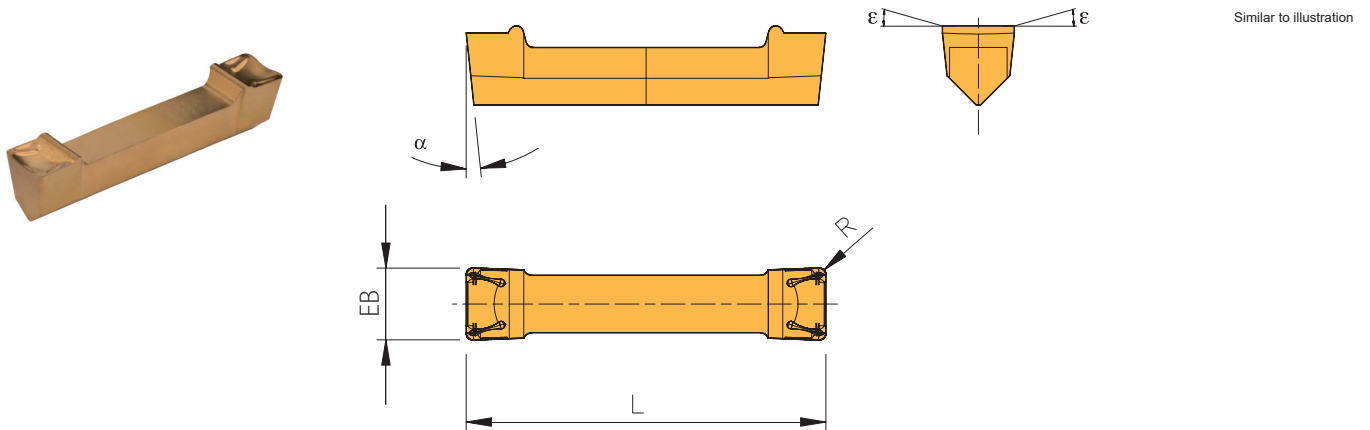
P	●	●	○
M	○	○	●
K			
N			
S	○	○	○
H			

● Main application

○ Secondary application

Inserts

Copy-turning geometry (CB)



Sintered Execution

Designation	EB ± 0,05	L	α	R	ε	Application	HC	
							A42-BS2	B72-Q2
MG12-2002-CB	2,06	12	6/15°	0,2	6 / 20°	External and internal	◆	◆
MG16-3002-CB	3,06	16	6/15°	0,2	6 / 20°		◆	◆
MG20-3002-CB	3,06	20	6/15°	0,2	6 / 20°		◆	◆
MG22-4004-CB	4,06	22	6/9,5°	0,4	6 / 20°		◆	◆
MG25-5004-CB	5,06	25	6/8,5°	0,4	6 / 20°		◆	◆
MG30-6008-CB	6,06	30	6°	0,8	6 / 20°	External only	◆	◆
MG38-8008-CB	8,06	38	6°	0,8	6 / 20°		◆	◆
MG46-10008-CB	10,07	46	6°	0,8	6 / 20°		◆	◆

ε = Rake angle

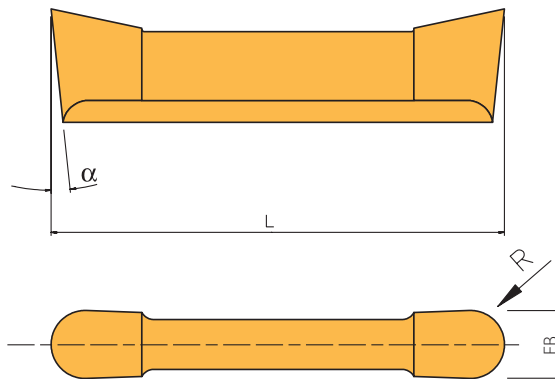
HC = Carbide coated

P	●	○
M	○	●
K		
N		
S	○	○
H		

● Main application
○ Secondary application

Inserts

Full radius execution (F)



Similar to illustration

Precision ground execution

Designation	EB $\pm 0,02$	L $\pm 0,02$	α	R	ε	Application	HC	HU	BU	DU
							A72-L2	C22-W2	F42-BG2	D42-BH2
MG12-2010-F	2	12	7/15°	1,0	12°	External and internal	◆	◆	◆	◆
MG12-2010F-FN	2	12	7/15°	1,0	0°				◆	
MG12-2010F-TN	2	12	7/15°	1,0	0°				◆	
MG16-3015-F	3	16	7/15°	1,5	12°		◆	◆	◆	◆
MG16-3015F-FN	3	16	7/15°	1,5	0°				◆	
MG16-3015F-TN	3	16	7/15°	1,5	0°				◆	
MG20-3015-F	3	20	6/16°	1,5	10°		◆	◆	◆	◆
MG20-3015F-FN	3	20	6/16°	1,5	0°				◆	
MG20-3015F-TN	3	20	6/16°	1,5	0°				◆	
MG22-4020-F	4	22	6/9,5°	2,0	10°		◆	◆	◆	◆
MG22-4020F-FN	4	22	6/9,5°	2,0	0°				◆	
MG22-4020F-TN	4	22	6/9,5°	2,0	0°				◆	
MG25-5025-F	5	25	6/8,5°	2,5	10°		◆	◆	◆	◆
MG25-5025F-FN	5	25	6/8,5°	2,5	0°				◆	
MG25-5025F-TN	5	25	6/8,5°	2,5	0°				◆	
MG30-6030-F	6	30	6°	3,0	10°	External only	◆	◆	◆	◆
MG30-6030F-FN	6	30	6°	3,0	0°				◆	
MG30-6030F-TN	6	30	6°	3,0	0°				◆	
MG38-8040-F	8	38	6°	4,0	10°		◆	◆	◆	◆
MG38-8040F-FN	8	38	6°	4,0	0°				◆	
MG38-8040F-TN	8	38	6°	4,0	0°				◆	
MG46-10050-F	10	46	6°	5,0	10°		◆	◆	◆	◆
MG46-10050-FN	10	46	6°	5,0	0°				◆	
MG46-10050-TN	10	46	6°	5,0	0°				◆	

Attention: The use of full radius inserts require a slightly modified support blade

ε = Rake angle

Remark for D42-BH2 and F42-BG2 inserts: single-sided with a rake angle of 0°

P	●			
M	○			
K		●		
N		●		●
S	○	○		○
H			●	

HC = Carbide coated

HU = Carbide uncoated

BU = CBN super hard cutting materials uncoated

DU = PKD super hard cutting materials uncoated

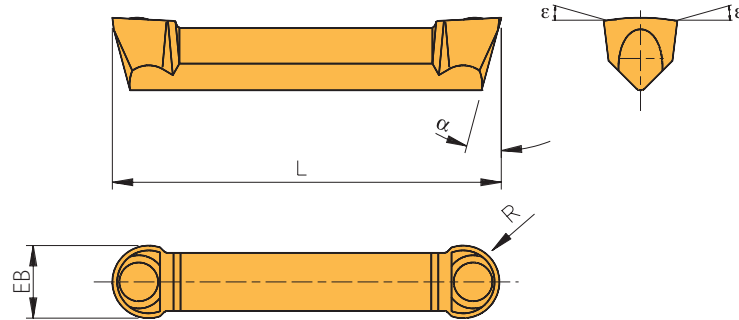
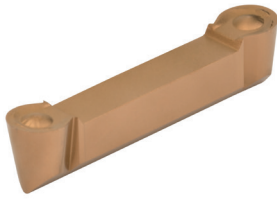
● Main application

○ Secondary application

Inserts

Full radius execution (FC)

Similar to illustration



Precision ground execution

Designation	EB ± 0,02	L ± 0,02	α	R	ε	Application	HC			HU
							A72-L2	B72-BF2	D22-AF2	C22-W2
MG12-2010-FC	2	12	7/15°	1,0	3°	External and internal	◆	◆	◆	◆
MG16-3015-FC	3	16	7/15°	1,5	3°		◆	◆	◆	◆
MG20-3015-FC	3	20	6/16°	1,5	3°		◆	◆	◆	◆
MG22-4020-FC	4	22	6/9,5°	2,0	3°		◆	◆	◆	◆
MG25-5025-FC	5	25	6/8,5°	2,5	3°		◆	◆	◆	◆
MG30-6030-FC	6	30	6°	3,0	3°	External only	◆	◆	◆	◆
MG38-8040-FC	8	38	6°	4,0	3°		◆	◆	◆	◆
MG46-10050-FC	10	46	6°	5,0	3°		◆	◆	◆	◆

Attention: The use of full radius inserts require a slightly modified support blade

ε = Rake angle

Remark for D42-BH2 and F42-BG2 inserts: single-sided with a rank angle of 0°

P	●	○		
M	○	●		
K			●	●
N			●	●
S	○	○	○	○
H				

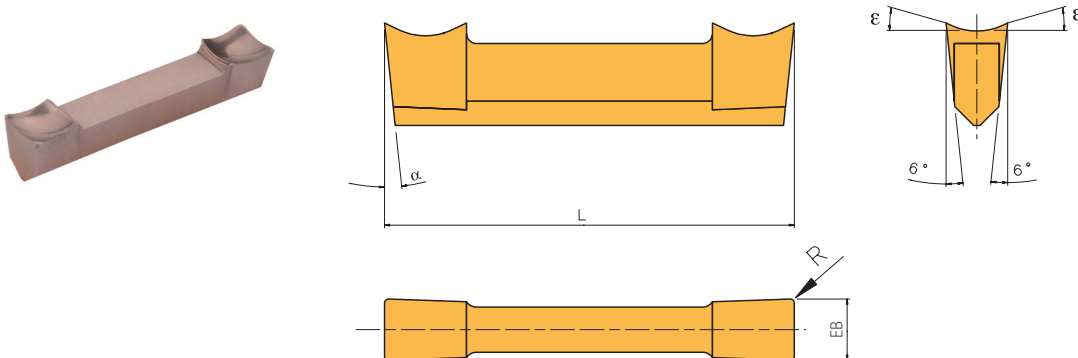
HC = Carbide coated
HU = Carbide uncoated

● Main application
○ Secondary application

Inserts

Aluminium geometry (ALU)

Similar to illustration



Precision ground execution

Designation	EB ± 0,03	L ± 0,03	α	R	ε	Application	HC		HU
							A72-L2	D22-AF2	C22-W2
MG12-2001-ALU	2	12	8/15°	0,1	25°	External and internal		●	●
MG16-3002-ALU	3	16	8/15°	0,2	25°			●	●
MG20-3002-ALU	3	20	8/16°	0,2	25°			●	●
MG22-4002-ALU	4	22	8°	0,2	25°			●	●
MG25-5002-ALU	5	25	8°	0,2	25°			●	●
MG30-6002-ALU	6	30	8°	0,2	25°	External only	●	●	●
MG38-8004-ALU	8	38	8°	0,4	25°			●	●
MG46-10004-ALU	10	46	8°	0,4	25°			●	●

ε = Rake angle

HC = Carbide coated

HU = Carbide uncoated

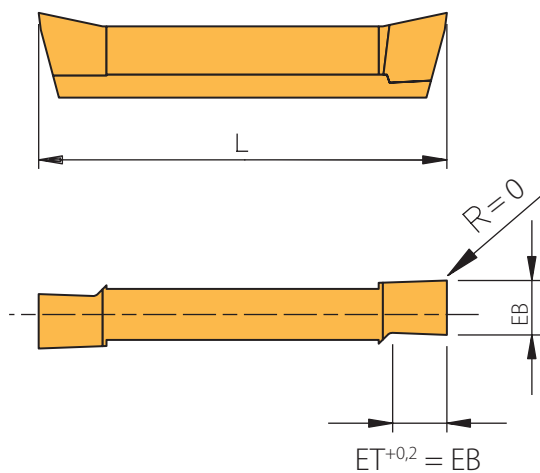
P	●		
M	○		
K		●	●
N		●	●
S	○	○	○
H			

● Main application

○ Secondary application

Inserts

Circlip inserts (471)



Similar to illustration

Right-hand execution shown

Precision ground execution

Designation	EB ± 0,05	L ± 0,03	ε	Application	HC	HU
					A72-L2	C22-W2
MG12-04.471R	0,55	12	12°	External and internal	◆	◆
MG12-06.471R	0,75	12	12°		◆	◆
MG12-07.471R	0,85	12	12°		◆	◆
MG12-08.471R	0,95	12	12°		◆	◆
MG12-10.471R	1,15	12	12°		◆	◆
MG12-12.471R	1,35	12	12°		◆	◆
MG12-15.471R	1,65	12	12°		◆	◆
MG12-17.471R	1,90	12	12°		◆	◆
MG20-04.471R	0,55	20	12°		◆	◆
MG20-06.471R	0,75	20	12°		◆	◆
MG20-07.471R	0,85	20	12°		◆	◆
MG20-08.471R	0,95	20	12°		◆	◆
MG20-10.471R	1,15	20	12°		◆	◆
MG20-12.471R	1,35	20	12°		◆	◆
MG20-15.471R	1,65	20	12°		◆	◆
MG20-17.471R	1,90	20	12°		◆	◆
MG20-20.471R	2,20	20	12°		◆	◆
MG20-25.471R	2,70	20	12°		◆	◆
MG20-30.471R	3,13	20	12°		◆	◆
MG16-04.471R	0,55	16	12°	External and internal	◆	
MG16-06.471R	0,75	16	12°		◆	
MG16-07.471R	0,85	16	12°		◆	
MG16-08.471R	0,95	16	12°		◆	
MG16-10.471R	1,15	16	12°		◆	
MG16-12.471R	1,35	16	12°		◆	
MG16-15.471R	1,65	16	12°		◆	
MG16-17.471R	1,90	16	12°		◆	
MG16-20.471R	2,20	16	12°		◆	
MG16-25.471R	2,70	16	12°		◆	
MG16-30.471R	3,13	16	12°		◆	

ε = Rake angle

HC = Carbide coated

HU = Carbide uncoated

P	●	
M	○	
K		●
N		●
S	○	○
H		

● Main application

○ Secondary application

Cutting data

Material group	Structure of the material groups and identification letters				Brinell hardness HB	Tensile strength Rm (N/mm²)	Chipping group	Cutting speed V _c (m/min)			
								coated			
								A42-BS2	A72-L2	B72-Q2	
P	Unalloyed steel	C ≤ 0.25 %	annealed		125	428	P1	140 - 195 - 250	120 - 135 - 150	140 - 165 - 190	
		C > 0.25 ... ≤ 0.55 %	annealed		190	639	P2	110 - 145 - 180	60 - 95 - 130	110 - 125 - 140	
		C > 0.25 ... ≤ 0.55 %	hardened and tempered		210	708	P3	100 - 125 - 150	70 - 85 - 100	90 - 100 - 110	
		C > 0.55 %	annealed		190	639	P4	110 - 145 - 180	60 - 95 - 130	110 - 125 - 140	
		C > 0.55 %	hardened and tempered		300	1013	P5	100 - 125 - 150	70 - 85 - 100	90 - 105 - 120	
		Machining steel (short-chipping)	tempered		220	745	P6	110 - 145 - 180	60 - 95 - 130	110 - 130 - 150	
	Low alloyed steel	annealed			175	591	P7	130 - 170 - 210	70 - 85 - 100	130 - 150 - 170	
		hardened and tempered			300	1013	P8	120 - 135 - 150	70 - 85 - 100	100 - 125 - 150	
		hardened and tempered			380	1282	P9	120 - 135 - 150	70 - 85 - 100	100 - 125 - 150	
		hardened and tempered			430	1477	P10	100 - 125 - 150	60 - 75 - 90	90 - 105 - 120	
	High alloyed steel and high alloyed tool steel	annealed			200	675	P11	120 - 130 - 140	60 - 70 - 80	90 - 120 - 150	
		hardened			300	1013	P12	90 - 100 - 110	60 - 70 - 80	70 - 95 - 120	
		hardened			400	1361	P13	90 - 100 - 110	60 - 70 - 80	70 - 95 - 120	
	Stainless steel	ferritic / martensitic, annealed			200	675	P14	140 - 180 - 220	90 - 105 - 120	110 - 140 - 170	
		martensitic, hardened and tempered			330	1114	P15	120 - 130 - 140	60 - 75 - 90	60 - 75 - 90	
M	Stainless steel	austenitic, chilled			200	675	M1	130 - 165 - 200	100 - 140 - 180	110 - 155 - 200	
		austenitic, precipitation-hardened (PH)			300	1013	M2	80 - 105 - 130	80 - 115 - 150	80 - 100 - 120	
		austenitic-ferritic, Duplex			230	778	M3	65 - 80 - 100	50 - 70 - 90	60 - 80 - 100	
K	Malleable cast iron	ferritic			200	675	K1	-	-	-	
		pearlitic			260	867	K2	-	-	-	
	Cast iron	low tensile strength			180	602	K3	-	-	-	
		high tensile strength / austenitic			245	825	K4	-	-	-	
	Cast iron with nodular graphite	ferritic			155	518	K5	-	-	-	
		pearlitic			265	885	K6	-	-	-	
	GGV (CGI)				200	675	K7	-	-	-	
N	Aluminium alloys long chipping	not heat treatable			30	-	N1	-	-	-	
		heat treatable, heat treated			100	343	N2	-	-	-	
		≤ 12 % Si, not heat treatable			75	260	N3	-	-	-	
	Casted aluminium alloys	≤ 12 % Si, aushärtbar, ausgehärtet			90	314	N4	-	-	-	
		> 12 % Si, not heat treatable			130	447	N5	-	-	-	
	Magnesium alloys				70	250	N6	-	-	-	
	Copper and copper alloys (Brass / Bronze)	Unalloyed, elektrolyte copper			100	343	N7	-	-	-	
		Brass, Bronze			90	314	N8	-	-	-	
		Cu-alloys, short-chipping			110	382	N9	-	-	-	
		High-tensile, Ampco			300	1013	N10	-	-	-	
	Non-ferrous materials	Lead alloys (without abrasive filling material)			-	-	N11	-	-	-	
		Duroplastic (without abrasive filling material)			-	-	N12	-	-	-	
		Plastic glas fibre reinforced GFRP			-	-	N13	-	-	-	
		Plastic carbon fibre reinforced CFRP			-	-	N14	-	-	-	
		Plastic aramid fibre reinforced AFRP			-	-	N15	-	-	-	
		Graphite (tech.)			80 Shore	-	N16	-	-	-	
S	High temperature resistant alloys	Fe-Basis	annealed		200	675	S1	30 - 40 - 50	-	-	
			heat treated		280	943	S2	25 - 35 - 40	20 - 30 - 40	20 - 30 - 40	
		Ni- or Co-alloyed	annealed		250	839	S3	10 - 20 - 30	20 - 25 - 30	20 - 25 - 30	
			heat treated		350	1177	S4	10 - 15 - 20	-	-	
			casting		320	1076	S5	10 - 15 - 20	-	-	
	Titanium alloys	Pure titan			200	675	S6	-	-	-	
		α- and β-alloys, heat treated			375	1262	S7	-	-	-	
		β-alloys			410	1396	S8	-	-	-	
	Wolfram alloys				300	1013	S9	-	-	-	
	Molybdän alloys				300	1013	S10	-	-	-	
H	Hardened steel	hardened			50 HRC	-	H1	-	-	-	
		hardened			55 HRC	-	H2	-	-	-	
		hardened			60 HRC	-	H3	-	-	-	
	Hardened cast iron	hardened			55 HRC	-	H4	-	-	-	

The recommended cutting data are only approximate values.
It may be necessary to adjust them to each individual machining application.

Cutting data

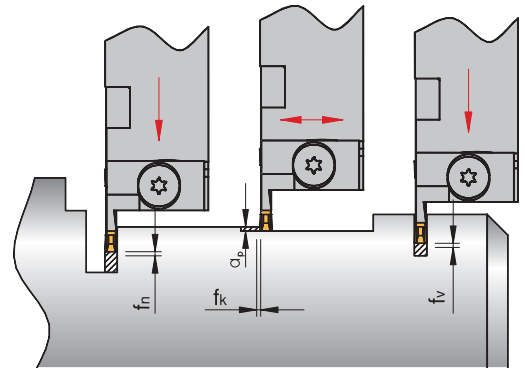
					uncoated		untra-hard	
	B72-BF2	C32-V2	C52-AD2	D22-AF2	C22-W2	CERMET	F42-BG2	D42-BH2
	140 - 165 - 190	150 - 195 - 240	160 - 205 - 250	-	-	130 - 265 - 400	-	-
	110 - 125 - 145	110 - 140 - 170	120 - 155 - 190	-	-	100 - 215 - 325	-	-
	90 - 105 - 120	90 - 125 - 160	100 - 115 - 130	-	-	80 - 180 - 275	-	-
	110 - 125 - 140	110 - 140 - 170	120 - 155 - 190	-	-	100 - 215 - 325	-	-
	90 - 105 - 120	90 - 125 - 160	100 - 115 - 130	-	-	80 - 180 - 275	-	-
	110 - 125 - 140	110 - 140 - 170	120 - 155 - 190	-	-	100 - 215 - 325	-	-
	130 - 150 - 170	100 - 130 - 160	150 - 180 - 210	-	-	100 - 175 - 250	-	-
	100 - 125 - 150	80 - 105 - 150	130 - 150 - 170	-	-	90 - 195 - 300	-	-
	100 - 125 - 150	80 - 105 - 150	130 - 150 - 170	-	-	90 - 195 - 300	-	-
	90 - 105 - 120	70 - 95 - 120	100 - 125 - 150	-	-	60 - 105 - 150	-	-
	90 - 115 - 140	90 - 110 - 130	140 - 150 - 160	-	-	80 - 130 - 180	-	-
	70 - 95 - 120	70 - 90 - 110	90 - 110 - 130	-	-	60 - 100 - 140	-	-
	70 - 95 - 120	70 - 90 - 110	90 - 110 - 130	-	-	60 - 100 - 140	-	-
	110 - 140 - 170	110 - 135 - 160	140 - 180 - 220	-	-	80 - 150 - 220	-	-
	60 - 75 - 90	90 - 115 - 140	60 - 80 - 100	-	-	70 - 125 - 180	-	-
	110 - 155 - 200	-	130 - 165 - 200	-	-	100 - 175 - 250	-	-
	80 - 100 - 120	-	80 - 105 - 130	-	-	80 - 130 - 180	-	-
	60 - 80 - 100	-	65 - 80 - 100	-	-	60 - 105 - 150	-	-
	-	150 - 180 - 210	150 - 180 - 210	120 - 185 - 250	120 - 130 - 140	250 - 300 - 350	-	-
	-	120 - 160 - 200	120 - 160 - 200	100 - 150 - 200	90 - 110 - 130	160 - 190 - 250	-	-
	-	130 - 175 - 220	130 - 175 - 220	140 - 170 - 200	120 - 140 - 160	-	-	-
	-	100 - 130 - 160	100 - 130 - 160	120 - 145 - 170	120 - 135 - 150	-	-	-
	-	160 - 195 - 230	160 - 195 - 230	110 - 145 - 180	160 - 180 - 200	220 - 260 - 300	-	-
	-	120 - 145 - 170	120 - 145 - 170	120 - 170 - 220	100 - 120 - 140	180 - 205 - 230	-	-
	-	150 - 180 - 210	150 - 180 - 210	120 - 185 - 250	120 - 130 - 140	250 - 300 - 350	-	-
	-	-	-	120 - 535 - 950	100 - 450 - 800	-	-	-
	-	-	-	100 - 525 - 950	80 - 440 - 800	-	-	350 - 1675 - 3000
	-	-	-	100 - 350 - 600	80 - 290 - 500	-	-	350 - 1675 - 3000
	-	-	-	-	-	-	-	350 - 1675 - 3000
	-	-	-	-	-	-	-	350 - 1675 - 3000
	-	-	-	-	-	-	-	-
	-	-	-	150 - 250 - 350	130 - 215 - 300	-	-	600 - 900 - 1200
	-	-	-	250 - 425 - 600	200 - 350 - 500	-	-	600 - 900 - 1200
	-	-	-	150 - 250 - 350	130 - 215 - 300	-	-	600 - 900 - 1200
	-	-	-	-	-	-	-	-
	-	-	-	120 - 360 - 600	100 - 300 - 500	-	-	600 - 900 - 1200
	-	-	-	120 - 360 - 600	100 - 300 - 500	-	-	600 - 900 - 1200
	-	-	-	100 - 140 - 180	80 - 105 - 150	-	-	80 - 790 - 1500
	-	-	-	100 - 140 - 180	80 - 105 - 150	-	-	80 - 790 - 1500
	-	-	-	100 - 140 - 180	80 - 105 - 150	-	-	80 - 790 - 1500
	-	-	-	-	-	-	-	-
	-	30 - 40 - 50	25 - 35 - 45	-	-	-	-	-
	20 - 30 - 40	25 - 30 - 35	20 - 30 - 40	-	-	-	-	-
	20 - 25 - 30	15 - 20 - 25	15 - 20 - 25	-	-	-	-	-
	-	10 - 20 - 25	10 - 15 - 20	-	-	-	-	-
	-	10 - 15 - 20	10 - 15 - 20	-	-	-	-	-
	-	100 - 125 - 150	-	100 - 125 - 150	80 - 105 - 130	-	-	60 - 70 - 80
	-	40 - 50 - 60	-	50 - 65 - 80	40 - 55 - 70	-	-	50 - 60 - 70
	-	35 - 45 - 55	-	45 - 60 - 75	35 - 50 - 65	-	-	45 - 55 - 65
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-
	-	35 - 40 - 45	10 - 15 - 20	-	-	-	-	-
	-	-	-	-	-	-	80 - 140 - 200	-
	-	35 - 40 - 45	10 - 15 - 20	-	-	-	80 - 140 - 200	-

CUTTING DATA

Max. feed rate and depth of cut

- f_v [mm/U] = Feed rate into solid
 f_n [mm/U] = Feed rate for re-grooving
 f_k [mm/U] = Feed rate for copying
 a_p [mm] = Depth of cut

The recommended cutting data are only approximate values. It may be necessary to adjust them to each individual machining application.



Standard geometry

	Insert							
	21201	31602	32002	42202	52502	63002	83804	104604
	f_v	0,02–0,08	0,02–0,08	0,05–0,12	0,07–0,18	0,07–0,18	0,07–0,18	0,10–0,25
	f_n	0,02–0,08	0,02–0,08	0,05–0,12	0,07–0,18	0,07–0,18	0,07–0,18	0,10–0,30
	f_k	0,02–0,05	0,02–0,05	0,05–0,10	0,05–0,10	0,05–0,10	0,07–0,15	0,12–0,25
	$a_{p \max}$	0,30	0,30	0,50	0,50	0,50	0,50	1,00

Geometry for copying

-C

	Insert							
	21201-C	31602-C	32002-C	42202-C	52502-C	63002-C	83804-C	104604-C
	f_v	0,02–0,08	0,02–0,08	0,05–0,15	0,07–0,18	0,07–0,18	0,07–0,18	0,10–0,18
	f_n	0,02–0,08	0,02–0,08	0,05–0,15	0,07–0,18	0,07–0,18	0,07–0,18	0,10–0,30
	f_k	0,02–0,05	0,02–0,05	0,05–0,10	0,07–0,18	0,07–0,18	0,07–0,18	0,10–0,40
	$a_{p \max}$	0,50	0,50	1,50	2,00	2,50	2,50	4,00

Groove turning

-CB

	Insert							
	21202-CB	31602-CB	32002-CB	42204-CB	52504-CB	63008-CB	83808-CB	104608-CB
	f_v	0,02–0,08	0,02–0,08	0,04–0,15	0,07–0,18	0,07–0,25	0,10–0,25	0,10–0,40
	f_n	0,02–0,08	0,02–0,08	0,04–0,15	0,07–0,18	0,07–0,25	0,10–0,25	0,10–0,40
	f_k	0,02–0,12	0,02–0,12	0,04–0,15	0,07–0,18	0,07–0,25	0,10–0,25	0,10–0,40
	$a_{p \max}$	0,50	0,50	1,50	2,00	2,50	2,50	4,00

Full radius execution

-F

	Insert							
	21210-F	31615-F	32015-F	42220-F	52525-F	63030-F	83840-F	104650-F
	f_v	0,02–0,05	0,02–0,05	0,05–0,10	0,05–0,10	0,05–0,10	0,07–0,12	0,07–0,15
	f_n	0,02–0,05	0,02–0,05	0,05–0,10	0,05–0,10	0,05–0,10	0,07–0,12	0,07–0,15
	f_k	0,02–0,05	0,02–0,05	0,05–0,10	0,05–0,10	0,05–0,10	0,07–0,12	0,07–0,15
	$a_{p \max}$	0,30	0,30	0,50	0,50	0,50	0,50	1,00

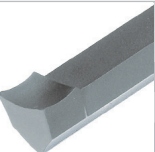
Full radius execution

-FC

	Insert							
	21210-FC	31615-FC	32015-FC	42220-FC	52525-FC	63030-FC	83840-FC	104650-FC
	f_v	0,02–0,05	0,02–0,05	0,05–0,12	0,05–0,12	0,05–0,12	0,07–0,12	0,07–0,15
	f_n	0,02–0,05	0,02–0,05	0,05–0,12	0,05–0,12	0,05–0,12	0,07–0,25	0,07–0,30
	f_k	0,02–0,05	0,02–0,05	0,05–0,15	0,05–0,12	0,08–0,12	0,07–0,30	0,07–0,40
	$a_{p \max}$	0,50	0,50	1,50	2,00	2,50	3,00	5,00

Aluminium geometry

-ALU

	Insert							
	21201-ALU	31602-ALU	32002-ALU	42202-ALU	52502-ALU	63002-ALU	83804-ALU	104604-ALU
	f_v	0,02–0,08	0,02–0,12	0,05–0,18	0,05–0,18	0,05–0,18	0,05–0,18	0,10–0,25
	f_n	0,02–0,08	0,02–0,12	0,05–0,18	0,05–0,18	0,05–0,18	0,05–0,18	0,10–0,30
	f_k	0,02–0,10	0,02–0,15	0,05–0,20	0,05–0,20	0,05–0,20	0,05–0,20	0,10–0,35
	$a_{p \max}$	0,50	0,50	2,00	2,50	3,00	3,00	5,00

Circlip inserts

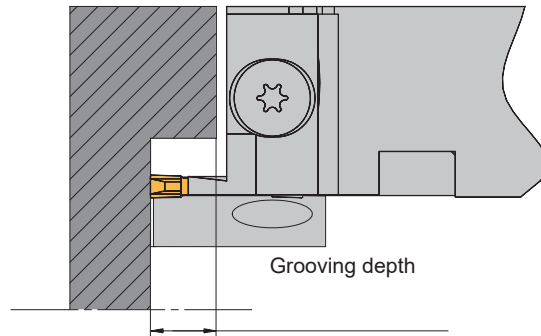
-471

	Insert		
	MG2-...	MG3A-...	MG3-...
f_v	0,01–0,05	0,01–0,05	0,01–0,10

Application reference

Selecting the toolholder

The maximum shank cross section should be used. In order to minimize vibration, the tool and support blade should be setup with minimum overhang.

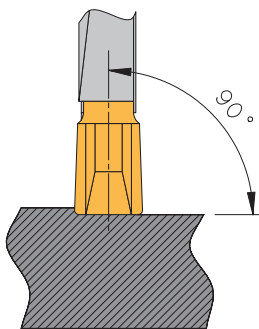


Selecting the inserts

In order to achieve maximum stability, the widest possible insert (depending on the size of the tool) should be selected.

The grooving depth of the tool is depending on the width. The largest possible corner radius should be used. A insert with a larger corner radius gives more stability and better tool-life, as the cutting forces are equalized. A large corner radius improves the surface quality. The radius should be larger than the maximum feed rate. The smallest depth cut should not be less than the corner radius of the insert.

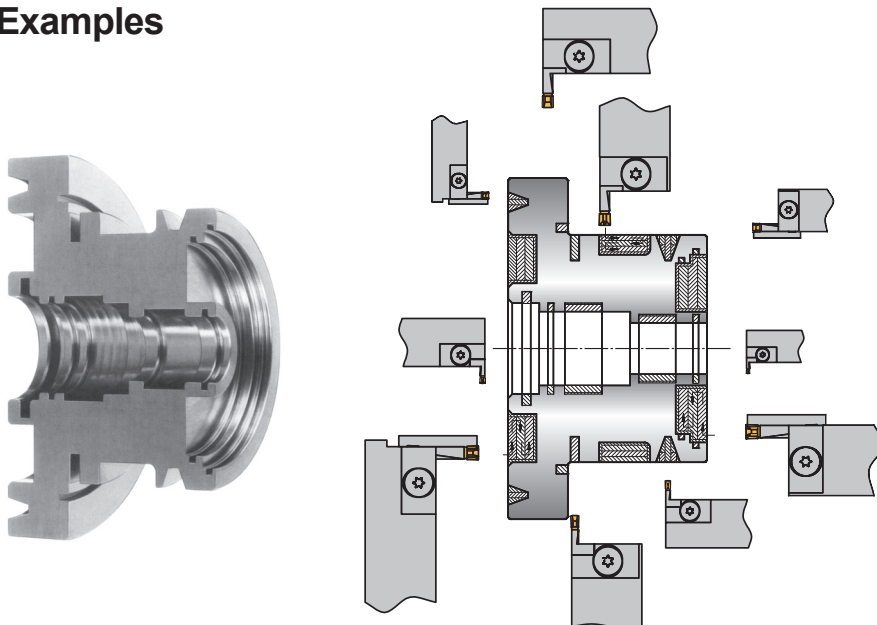
Set up of the tool



Optimal processing results can only be achieved if the tool is correctly mounted. Whereby it should be noted that the tool (cutting edge) must be always mounted at right angles to the work piece rotating axis (or respectively parallel with axial groove turning). With duplicating turning, the second corner is to be released 0.05 mm.

ATTENTION: If cutting edges are not set correctly, vibration can be caused.

Examples

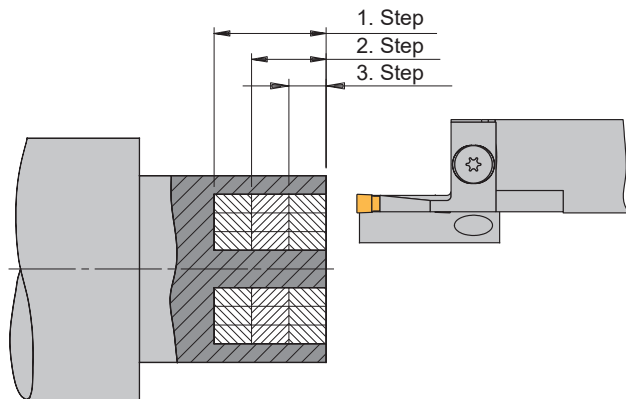


The shaded area shows the sequence of operations as well as the final profiling cut with the MG precision grooving tools.

- A low tensile steel was used for this component
- Average cutting speed 150 m/min
- Feed rates 0.1 up to 0.25 mm/rev

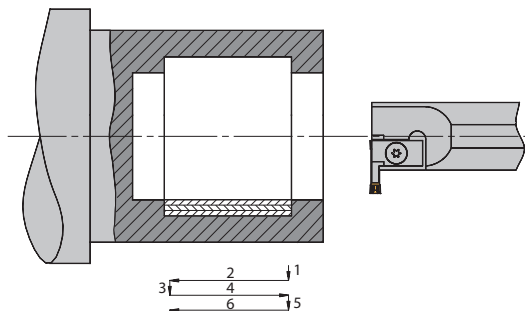
Application reference

Grooving into solid



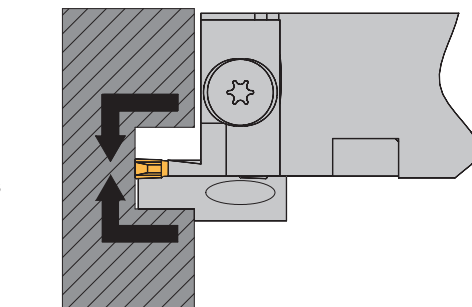
If large groove depths are required, rough out in a series of plunges, before finishing the profile down each side and blending into the centre.

Internal grooving



Inward- and outward copy-turning

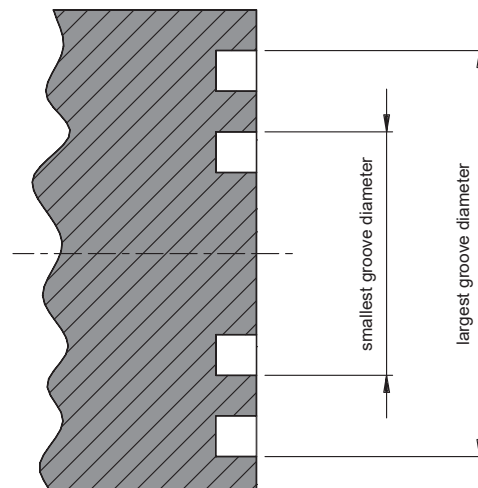
Inward copy-turning gives a more uniform chip-breaking and minimizes insert wear. In order to achieve rectangular faces, we recommend inward copy-turning.



Axial grooving and facing

Axial grooving is only possible within the diameter range (e.g. 50–60). If not, the tool can be damaged or destroyed.

ATTENTION: The specified diameter range in all cases refers to the outer diameter of the groove!



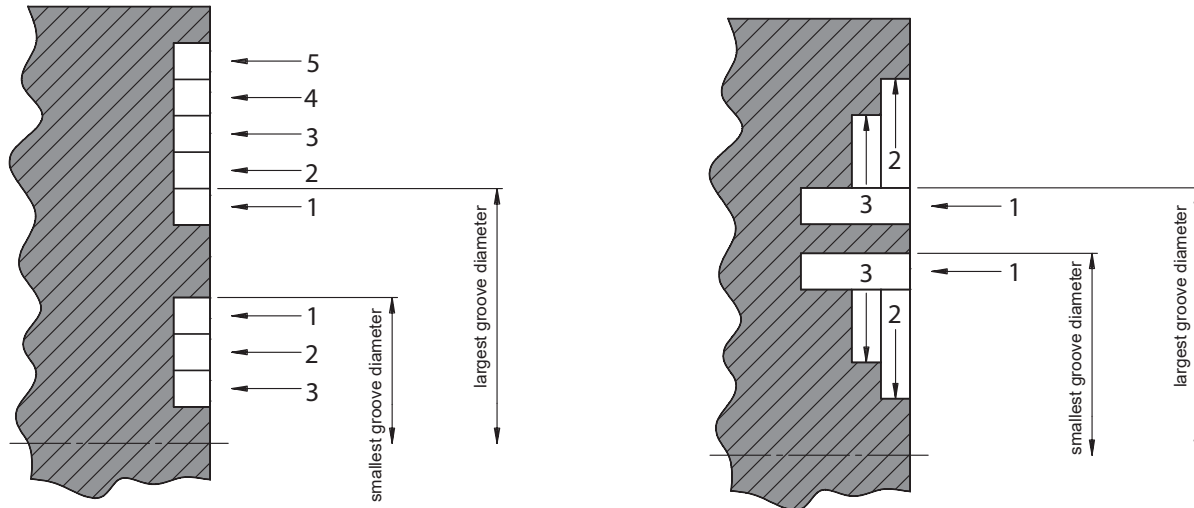
Application reference

ATTENTION

When axial grooving always begin at the groove outside diameter.

Once the first plunge is complete, it is possible to widen the groove above and below the diameter range quoted.

The first groove made must be within the quoted diameter range. The depth of the next cut must not be deeper than the depth of the first groove.

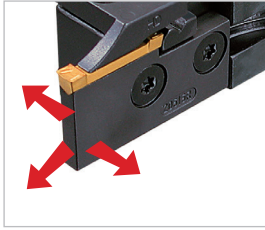


- A modular grooving and copy-turning system giving different tool variations from one basic holder by simply exchanging the support blade and clamp.
- A complete programme for external radial and axial grooves of various widths.
- For internal machining a range of boring bars with and without coolant feed and inserts in different widths are available.
- For deep grooving applications special support blades and clamps can be designed and manufactured.
- Toolholder with VDI or UTS/KM and Capto® shanks, which can give improved stability, along with their spares are stock items. These holders are used in conjunction with standard support blades, clamps and inserts.

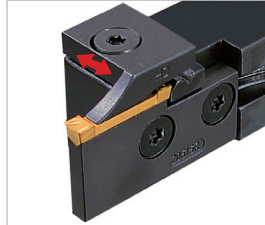
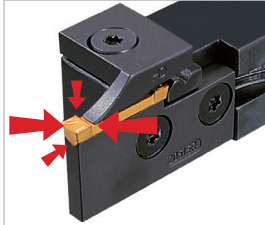


- Precision or sintered ground inserts with two cutting edges for use on internal and external grooving applications.
- A choice of chipbreaker geometries together with coated and uncoated carbide grades, combine to offer optimum cutting performance on a wide range of materials.
- Inserts have a ground vee seating for a positive location into the support blade. This ensures maximum stability when side turning or copying.
- The positive insert geometry minimises deflection (less than 0.01 mm) and is therefore particularly suitable for finishing operations.

Application reference



- Tools and operate in three directions offering the opportunity to consolidate several operations into one and reduce the number of tool changes.

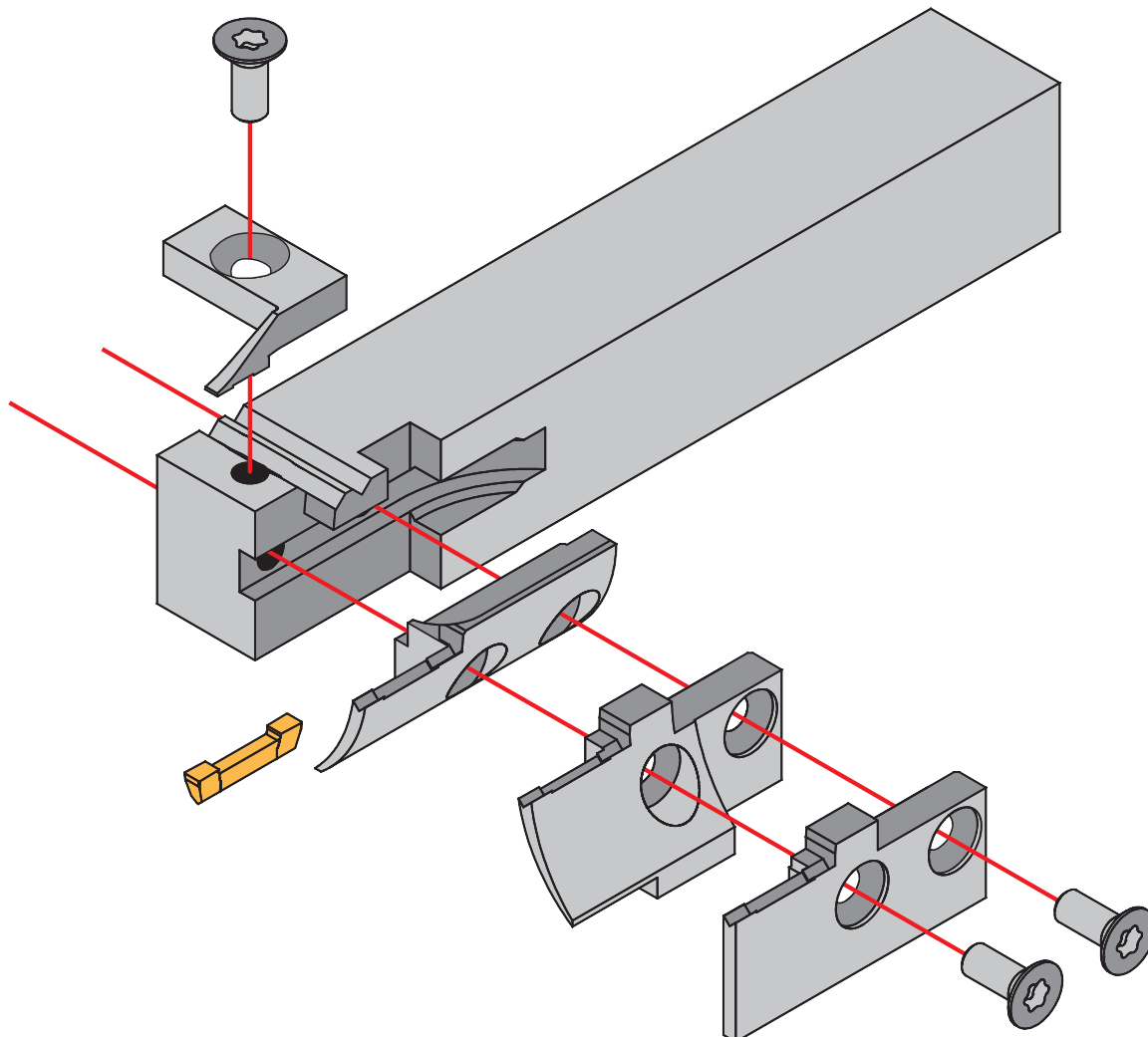


- The design of the insert clamping and the vee location provides for accurate indexing of insert edges and index repeatability is achievable.
- The relief in the support blade means the insert is supported under the ends to ensure high stability and optimum rigidity.



- To complete the grooving programme, there are monoblock holders for axial grooving diameters of 15 mm upward. Also an internal boring bar for 11 mm minimum bore diameter are available.

Assembling of groove turning system



SG2

THE RIGID SYSTEM FOR GROOVING AND TURNING WITH ONE TOOL



The combination of optimum stability in the holder (short overhang, latest clamping technique) and sintered double-sided insert (special chip geometry and cutting edge preparation) makes the SG2 system the best partner for high machining outputs in grooving and turning applications.

Designation system

Monoblock holders



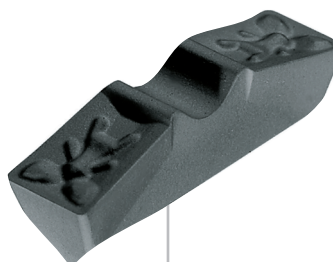
HSC	R/L	2525	M	04	A7
Designation	Version R = Right-hand L = Left-hand	Shank height x Shank width	Length (ISO)	Groove width EB = 4 mm	Execution D = Machining non-ferrous materials .1 = Screw type machines

Boring bars



A32	HSC	R/L	41	10	-A1
Shank diameter 32 mm	Holder	Version R = Right-hand L = Left-hand	Groove width EB = 3.1 mm	Groove depth ET = 10 mm	Cooling from the top of the insert

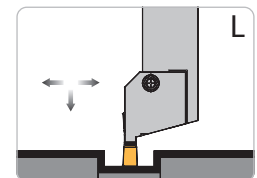
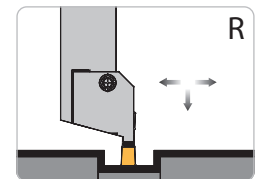
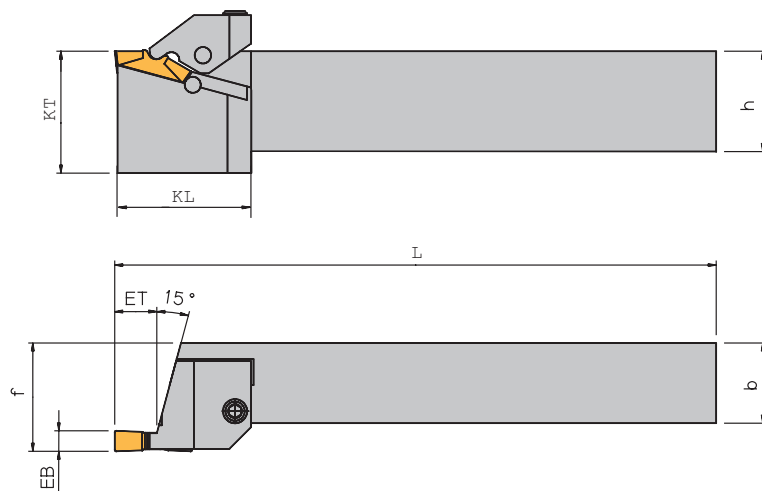
Inserts



SG2	18	04	04	SG	B72-R2
Designation	Insert length 18 mm	Inserts width EB = 4 mm	Corner radius R = 0.4 mm	Geometry	Grade code

Monoblock holders

Radial groove turning



Similar to illustration
Right-hand execution shown

Holders

Designation	EB	ET	ET _{max}	h	b	L	KL	KT	f	Insert
HSCL/R 1616 J03	3,1	6,5	10,5	16	16	110	-	-	23	SG2 15...
HSCL/R 1616 J04	4,1	8,5	13,0	16	16	110	-	-	23	SG2 18...
HSCL/R 2020 K03	3,1	6,5	10,5	20	20	125	-	-	27	SG2 15...
HSCL/R 2020 K04	4,1	8,5	13,0	20	20	125	-	-	27	SG2 18...
HSCL/R 2020 K05	5,1	10,5	15,0	20	20	125	-	-	27	SG2 20...
HSCL/R 2020 K06	6,1	12,5	18,5	20	20	125	39	25	27	SG2 24...
HSCL/R 2525 M03	3,1	6,5	10,5	25	25	150	-	-	32	SG2 15...
HSCL/R 2525 M04	4,1	8,5	13,0	25	25	150	-	-	32	SG2 18...
HSCL/R 2525 M05	5,1	10,5	15,0	25	25	150	-	-	32	SG2 20...
HSCL/R 2525 M06	6,1	12,5	18,5	25	25	150	-	-	32	SG2 24...
HSCL/R 2525 M08	8,1	14,5	25,0	25	25	150	48	32	26	SG2 32...
HSCL/R 2525 M10	10,1	16,5	27,0	25	25	150	48	32	26	SG2 40...
HSCL/R 3225 P05	5,1	10,5	15,0	32	25	170	-	-	32	SG2 20...
HSCL/R 3225 P06	6,1	12,5	18,5	32	25	170	-	-	32	SG2 24...
HSCL/R 3225 P08	8,1	14,5	25,0	32	25	170	-	-	26	SG2 32...
HSCL/R 3225 P10	10,1	16,5	27,0	32	25	170	-	-	26	SG2 40...

The standard recess depth of the basic support corresponds to the recess depth ET. At the request of the customer, the recess depth can be extended to the maximum recess depth, max. ET

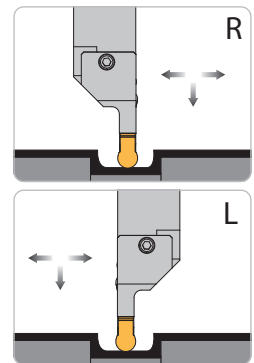
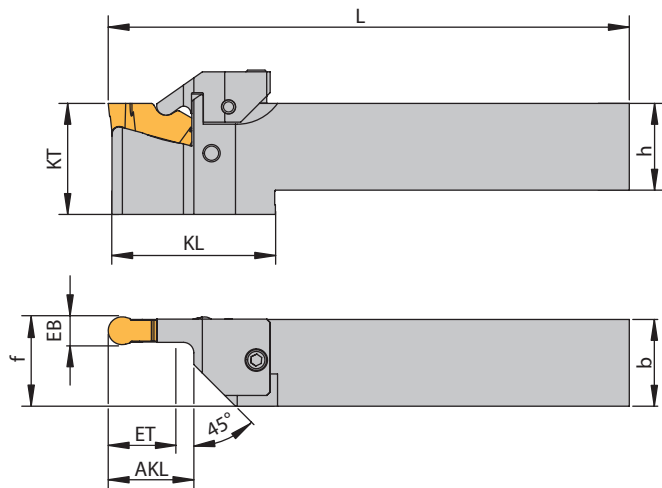
Spare Parts

Holder	Clamp	Clamping pin	Screw	Support pin	Key
HSCR/L 03	GC1C-3L/R	BA-TC...*	BD-C6N	AA-C1N	AD-1111
HSCR/L 04	GC1C-4L/R	BA-TC...*	BD-C6N	AA-C1N	AD-1111
HSCR/L 05	GC1C-5L/R	BA-TC...*	BD-C6N	AA-C1N	AD-1111
HSCR/L 06	GC1C-6L/R	BA-TC...*	BD-C6N	AA-C1N	AD-1111
HSCR/L 08	GC1C-8L/R	BA-TC2N	BD-C6N	AA-C2N	AD-1111
HSCR/L 10	GC1C-10L/R	BA-TC2N	BD-C6N	AA-C2N	AD-1111

*Shank 16 --> Clamping pin STC3N Shank 20mm --> Clamping pin STC1N Shank 25 and 32mm --> Clamping pin STC2N

Monoblock holders

Radial groove turning - for machining of non-ferrous materials



Similar to illustration
Left-hand execution shown

Holders

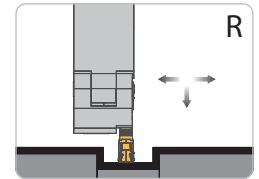
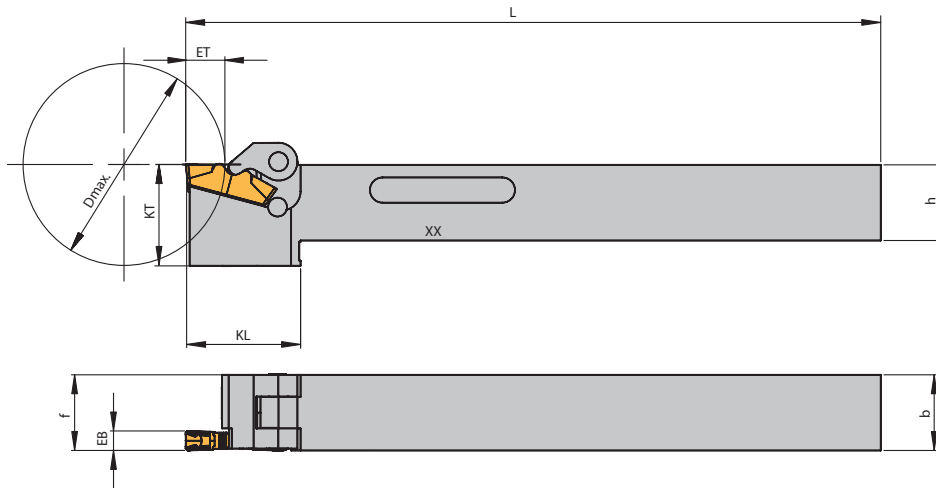
Designation	EB	ET	h	b	L	KL	KT	f	AKL	Insert
HSCL/R 2525 M06.D	6	21	25	25	150	48	32	25,60	24	SG2 2406...-AG
HSCL/R 2525 M08.D	6	24	25	25	150	48	32	25,75	24	SG2 3208...-AG
HSCR 2532 M08.D	8	24	25	32	150	64	40	32,80	24	SG2 3208...-AG

Spare Parts

Holder	Clamp	Clamping pin	Screw	Key
HSCR/L ... 06.D	GC1C-6L/RA	BA-TC4N	BD-C6N	AD-1111
HSCR/L ... 08.D	GC1C-8L/RA	BA-TC4N	BD-C6N	AD-1111

Monoblock holders

Radial groove turning - for auto lathes



Similar to illustration
Right-hand execution shown



Holders

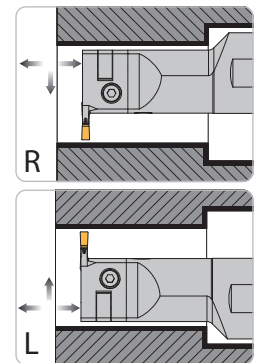
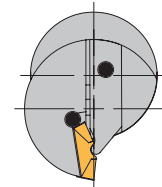
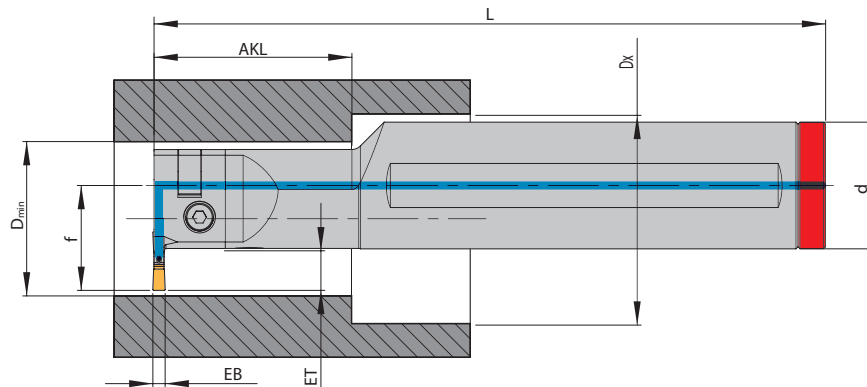
Designation	EB	ET	h	b	L	KL	KT	f	D _{max}	Insert
HSCR 1010 J02.1	2,1	4,0	10	10	110	20	14	10	32	SG2 12...
HSCR 1212 J02.1	2,1	4,0	12	12	110	20	16	12	32	SG2 12...
HSCR 1212 J03.1	3,1	6,0	12	12	110	20	16	12	32	SG2 15...
HSCR 1616 J04.1	4,1	8,0	16	16	110	-	-	16	32	SG2 18...
HSCR 1616 J05.1	5,1	9,5	16	16	110	26	20.5	16	32	SG2 20...
HSCR 1616 J06.1	6,1	9,5	16	16	110	26	25	16	32	SG2 24...

Spare Parts

Holder	Clamp	Clamping pin	Compressing spring	Screw	Key
HSCR .. J02.1	GC1C-2R1	AA-3.10	AA-900	AA-912.4-10	AD-1111
HSCR .. J03.1	GC1C-3R1	AA-3.12	AA-900	AA-912.4-10	AD-1111
HSCR .. J04.1	GC1C-4R1	AA-3.12	AA-900	AA-912.4-10	AD-1111
HSCR .. J05.1	GC1C-5R1	AA-3.14	AA-900	AA-912.4-10	AD-3421
HSCR .. J06.1	GC1C-6R1	AA-4.14	AA-900	AA-912.4-16	AD-1321

Intrenal holders

Internal groove turning



Similar to illustration
Right-hand execution shown

Holders

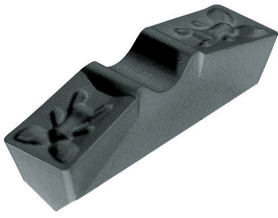
Designation	D _{min}	EB	ET	L	d	f	AKL	D _x	Insert
A20-HSCL/R 31.08.30-A1	29,5	3,1	8	130	20	18,5	30	-	SG2 1503...
A25-HSCL/R 31.08.40-A1	29,5	3,1	8	150	25	21,0	40	39,5	SG2 1503...
A25-HSCL/R 31.08.60-A1	29,5	3,1	8	150	25	21,0	60	39,5	SG2 1503...
A25-HSCL/R 31.10.40-A1	36,5	3,1	10	150	25	23,0	40	-	SG2 1503...
A32-HSCL/R 31.10.50-A1	36,5	3,1	10	170	32	26,5	50	50,5	SG2 1503...
A32-HSCL/R 31.10.75-A1	36,5	3,1	10	170	32	26,5	75	50,5	SG2 1503...
A25-HSCL/R 41.10.40-A1	36,5	4,1	10	150	25	23,0	40	-	SG2 1804...
A32-HSCL/R 41.10.40-A1	43,5	4,1	10	150	32	26,5	40	-	SG2 1804...
A32-HSCL/R 41.10.50-A1	36,5	4,1	10	170	32	26,5	50	50,5	SG2 1804...
A40-HSCL/R 41.10.65-A1	43,5	4,1	10	200	40	30,5	65	59,0	SG2 1804...
A32-HSCL/R 41.10.75-A1	36,5	4,1	10	170	32	26,5	75	50,5	SG2 1804...
A40-HSCL/R 41.10.100-A1	43,5	4,1	10	200	40	30,5	100	59,0	SG2 1804...
A32-HSCL/R 41.14.40-A1	47,5	4,1	14	180	32	30,5	40	-	SG2 1804...

Spare Parts

Holder	Screw	Locking Ring
A20-HSCL/R 31.08.30-A1	AA-912.3-10	SR-20R
A25-HSCL/R 31.08.40-A1	AA-912.3-10	SR-25R
A25-HSCL/R 31.08.60-A1	AA-912.3-10	SR-25R
A25-HSCL/R 31.10.40-A1	AA-912.4-16	SR-25R
A32-HSCL/R 31.10.50-A1	AA-912.4-16	SR-32R
A32-HSCL/R 31.10.75-A1	AA-912.4-16	SR-32R
A25-HSCL/R 41.10.40-A1	AA-912.4-16	SR-25R
A32-HSCL/R 41.10.40-A1	AA-912.4-16	SR-32R
A32-HSCL/R 41.10.50-A1	AA-912.4-16	SR-32R
A40-HSCL/R 41.10.65-A1	AA-912.4-16	SR-40R
A32-HSCL/R 41.10.75-A1	AA-912.4-16	SR-32R
A40-HSCL/R 41.10.100-A1	AA-912.4-16	SR-40R
A32-HSCL/R 41.14.40-A1	AA-912.4-16	SR-32R

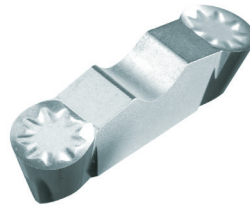
Geometry / grade description

Standard geometry



- sintered insert
- two cutting edges
- for grooving and turning with medium to large chip-cross-section
- strong cutting edge for interrupted cutting and changing chip-cross-sections
- for various materials

AG geometry



- completely ground insert
- two cutting edges
- polished surface
- for groove turning and copy-turning with medium to large chip-cross-section
- special chipbreaker for controlled chip breaking
- machining of aluminum and aluminium alloys, non-ferrous metals as well as titanium and titanium alloys

SG geometry



- sintered insert
- two cutting edges
- for grooving and copy-turning at medium to large chip-cross-sections
- special soft cutting geometry
- machining all steel materials

AG1 geometry



- special geometries for machining aluminum rims
- completely ground insert
- two cutting edges
- polished surface
- machining of aluminum and aluminium alloys

Coated

A42-BS2

CVD-multilayer coating
Machining steel, cast steel as well as grey cast iron, at medium to high cutting speeds, medium to large chip-cross-sections and varying depths of cut.
Used for finishing and medium roughing.

B72-Q2

CVD-multilayer coating
Grade with a good combination of wear resistance and toughness for turning steel, stainless steel as well as cast steel at medium chip-cross-sections and medium to high cutting speeds. Can also be used under unfavourable machining conditions. Special grade for stainless steel (austenitic). Apply in finishing and medium roughing applications.

A72-L2

CVD-multilayer coating
Machining steel, stainless steel and cast steel, at medium to large chip-cross-sections and medium to low cutting speeds under unfavourable machining conditions where good toughness is required.

C52-AD2

CVD-multilayer coating
Machining of steel, stainless steel, spheroidal cast iron, cast steel and grey cast iron at high cutting speeds under stable machining conditions.

Uncoated

C22-W2

Submicron carbide grade for machining cast materials, light and non-ferrous materials, refractory metals, hardened steels up to 55 HRC.
In connection with chipbreaker-ALU specially suitable for machining aluminium and copper alloys.

D42-BH2 (PKD/PCD)

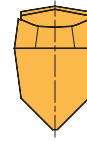
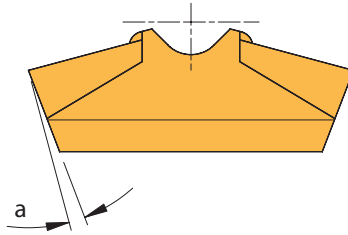
Machining of non-ferrous metals, aluminium alloys with silicon, glass- and coal-fiber reinforced materials, spheroidal cast iron, at high cutting speeds. Sharp cutting edges enable low cutting forces and extremely good surface finish. Finishing and super finishing even at interrupted cuts.

A82-CA2

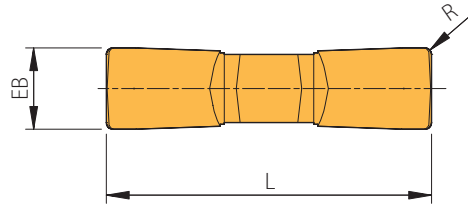
Machining of steel, cast steel and austenitic steel, at medium to lower cutting speeds, medium to large chip-cross-sections, also under unfavourable conditions.

Inserts

Radial groove turning



Similar to illustration



Sintered Execution

Designation	EB ± 0,05	L	α	R	HC				HU	
					A42-BS2	A72-L2	B72-Q2	C52-AD2	C22-W2	A82-CA2
SG2 120202	2,1	12	6°	0,2			●			
SG2 150302	3,1	15	6°	0,2		●	●	●		●
SG2 180404	4,1	18	6°	0,4	●	●	●	●		●
SG2 200504	5,1	20	6°	0,4	●	●		●	●	●
SG2 200508	5,1	20	6°	0,8	●	●		●		●
SG2 240608	6,1	24	6°	0,8	●	●		●		●

 HC = Carbide coated
 HU = Carbide uncoated

P	●	●	○	○		●
M	○	○	●	○		
K				●	●	
N					●	
S	○	○	○	○	○	
H				○		

● Main application

○ Secondary application

Inserts

Radial groove turning

Precision ground execution

					HU	DU
Designation	EB ± 0,05	L	α	R	C22-W2	D42-BH2
SG2 320800	8	32	6°	4		◆
SG2 320800-A1G	8	32	6°	4	◆	
SG2 320800-ALU	8	32	6°	4		◆

HU = Carbide uncoated

DU = PKD super hard cutting materials uncoated

P		
M		
K	●	
N	●	●
S	○	○
H		○

● Main application

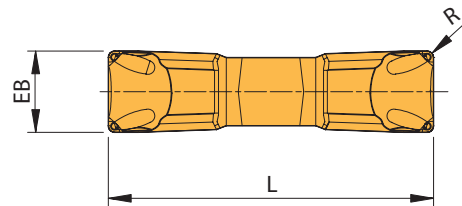
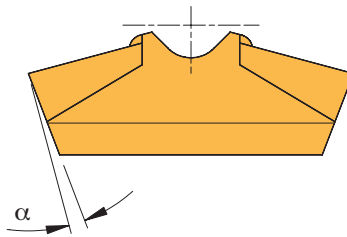
○ Secondary application

Inserts

Groove turning SG-geometry



Similar to illustration



Sintered Execution

Designation	EB ± 0,05	L	α	R	HC	
					A42-BS2	B72-Q2
SG2 150302-SG	3,1	15	6°	0,2	◆	◆
SG2 150304-SG	3,1	15	6°	0,2		◆
SG2 180402-SG	4,1	18	6°	0,2		◆
SG2 180404-SG	4,1	18	6°	0,4	◆	◆
SG2 200504-SG	5,1	20	6°	0,4	◆	◆
SG2 240608-SG	5,1	24	6°	0,8		◆
SG2 320808-SG	8,1	32	6°	0,8	◆	◆
SG2 401008-SG	10,1	40	6°	0,8		◆

HC = Carbide coated

P	●	○
M	○	●
K		
N		
S	○	○
H		

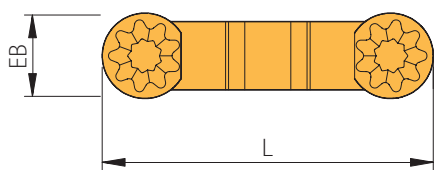
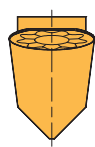
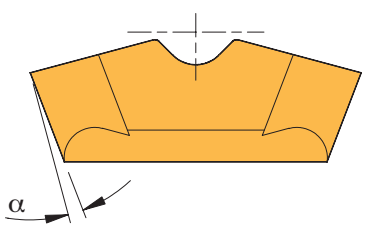
● Main application
○ Secondary application

Inserts

Groove turning AG-geometry



Similar to illustration



Precision grounded execution

					HU	DU
Designation	EB ± 0,02	L ± 0,18	α	R	C22-W2	D42-BH2
SG2 240600-AG	6	24	6°	3	◆	◆
SG2 320800-AG1	8	32	6°	4	◆	◆
SG2 320800-AG	8	32	6°	4	◆	◆

* Submicron carbide grad
 HU = Carbide uncoated
 DU = PKD super hard cutting materials uncoated

P		
M		
K	●	
N	●	●
S	○	○
H		○

● Main application
 ○ Secondary application

Cutting data

Material group	Structure of the material groups and identification letters			Brinell hardness HB	Tensile strength Rm (N/mm²)	Chipping group	Cutting speed V _c (m/min)		
							coat		
							A42-BS2	A72-L2	
P	Unalloyed steel	C ≤ 0.25 % annealed		125	428	P1	110 - 150 - 190	60 - 100 - 140	
		C > 0.25 ... ≤ 0.55 % annealed		190	639	P2	100 - 130 - 160	70 - 90 - 110	
		C > 0.25 ... ≤ 0.55 % hardened and tempered		210	708	P3	110 - 150 - 190	60 - 100 - 140	
		C > 0.55 % annealed		190	639	P4	100 - 130 - 160	70 - 90 - 110	
		C > 0.55 % hardened and tempered		300	1013	P5	110 - 150 - 190	60 - 100 - 140	
		Machining steel (short-chipping) tempered		220	745	P6	130 - 175 - 220	70 - 85 - 100	
	Low alloyed steel	annealed		175	591	P7	120 - 140 - 160	70 - 85 - 100	
		hardened and tempered		300	1013	P8	120 - 140 - 160	70 - 85 - 100	
		hardened and tempered		380	1282	P9	100 - 130 - 160	60 - 75 - 90	
		hardened and tempered		430	1477	P10	120 - 135 - 150	60 - 70 - 80	
	High alloyed steel and high alloyed tool steel	annealed		200	675	P11	90 - 105 - 120	60 - 70 - 80	
		hardened		300	1013	P12	90 - 105 - 120	60 - 70 - 80	
		hardened		400	1361	P13	140 - 195 - 250	90 - 105 - 120	
	Stainless steel	ferritic / martensitic, annealed		200	675	P14	120 - 135 - 150	60 - 85 - 90	
		martensitic, hardened and tempered		330	1114	P15	130 - 165 - 200	100 - 140 - 180	
M	Stainless steel	austenitic, chilled		200	675	M1	80 - 105 - 130	80 - 115 - 150	
		austenitic, precipitation-hardened (PH)		300	1013	M2	65 - 80 - 100	50 - 70 - 90	
		austenitic-ferritic, Duplex		230	778	M3	-	-	
K	Malleable cast iron	ferritic		200	675	K1	-	-	
		pearlitic		260	867	K2	-	-	
	Cast iron	low tensile strength		180	602	K3	-	-	
		high tensile strength / austenitic		245	825	K4	-	-	
	Cast iron with nodular graphite	ferritic		155	518	K5	-	-	
		pearlitic		265	885	K6	-	-	
N	GGV (CGI)			200	675	K7	-	-	
	Aluminium alloys long chipping	not heat treatable		30	-	N1	-	-	
		heat treatable, heat treated		100	343	N2	-	-	
		≤ 12 % Si, not heat treatable		75	260	N3	-	-	
	Casted aluminium alloys	≤ 12 % Si, aushärtbar, ausgehärtet		90	314	N4	-	-	
		> 12 % Si, not heat treatable		130	447	N5	-	-	
	Magnesium alloys			70	250	N6	-	-	
	Copper and copper alloys (Brass / Bronze)	Unalloyed, elektrolyte copper		100	343	N7	-	-	
		Brass, Bronze		90	314	N8	-	-	
		Cu-alloys, short-chipping		110	382	N9	-	-	
		High-tensile, Ampco		300	1013	N10	-	-	
	Non-ferrous materials	Lead alloys (without abrasive filling material)		-	-	N11	-	-	
		Duroplastic (without abrasive filling material)		-	-	N12	-	-	
		Plastic glas fibre reinforced GFRP		-	-	N13	-	-	
		Plastic carbon fibre reinforced CFRP		-	-	N14	-	-	
		Plastic aramid fibre reinforced AFRP		-	-	N15	-	-	
		Graphite (tech.)		80 Shore	-	N16	30 - 40 - 50	-	
S	High temperature resistant alloys	Fe-Basis annealed		200	675	S1	25 - 35 - 40	20 - 30 - 40	
		Fe-Basis heat treated		280	943	S2	10 - 20 - 30	20 - 25 - 30	
		Fe-Basis annealed		250	839	S3	10 - 15 - 20	-	
		Ni- or Co-alloyed heat treated		350	1177	S4	10 - 15 - 20	-	
		Ni- or Co-alloyed casting		320	1076	S5	-	-	
	Titanium alloys	Pure titan		200	675	S6	-	-	
		α- and β-alloys, heat treated		375	1262	S7	-	-	
		β-alloys		410	1396	S8	-	-	
	Wolfram alloys			300	1013	S9	-	-	
	Molybdän alloys			300	1013	S10	-	-	
H	Hardened steel	hardened		50 HRC	-	H1	-	-	
		hardened		55 HRC	-	H2	-	-	
		hardened		60 HRC	-	H3	-	-	
	Hardened cast iron	hardened		55 HRC	-	H4	-	-	

The recommended cutting data are only approximate values.
It may be necessary to adjust them to each individual machining application.

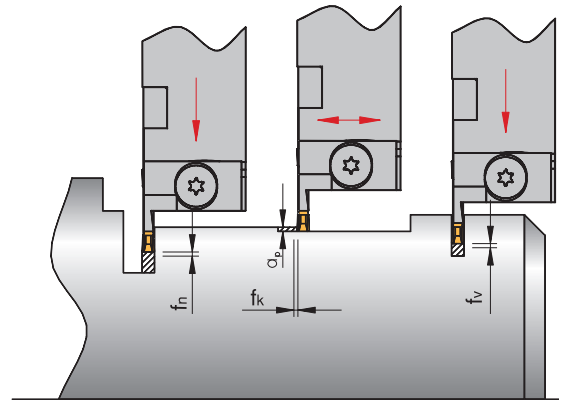
Cutting data

ed			uncoated		PCD
	B72-Q2	C52-AD2	C22-W2	A82-CA2	D42-BH2
	110 - 130 - 150	160 - 220 - 280	-	90 - 105 - 120	-
	90 - 105 - 120	120 - 160 - 200	-	65 - 75 - 85	-
	110 - 130 - 150	100 - 115 - 130	-	50 - 60 - 70	-
	90 - 105 - 120	120 - 160 - 200	-	65 - 75 - 85	-
	110 - 130 - 150	100 - 115 - 130	-	50 - 60 - 70	-
	130 - 155 - 180	120 - 160 - 200	-	65 - 75 - 85	-
	100 - 125 - 150	150 - 190 - 230	-	70 - 85 - 100	-
	100 - 125 - 150	130 - 155 - 180	-	60 - 70 - 80	-
	90 - 105 - 120	130 - 155 - 180	-	60 - 70 - 80	-
	90 - 120 - 150	100 - 125 - 150	-	50 - 60 - 70	-
	70 - 95 - 120	140 - 155 - 170	-	50 - 60 - 70	-
	70 - 95 - 120	90 - 110 - 130	-	50 - 60 - 70	-
	110 - 145 - 180	90 - 110 - 130	-	50 - 60 - 70	-
	60 - 75 - 90	140 - 190 - 240	-	80 - 100 - 120	-
	110 - 155 - 200	60 - 80 - 100	-	60 - 80 - 100	-
	80 - 100 - 120	130 - 165 - 200	-	-	-
	55 - 80 - 100	80 - 105 - 130	-	-	-
	-	65 - 80 - 100	-	-	-
	-	150 - 180 - 210	100 - 150 - 200	-	-
	-	120 - 160 - 200	80 - 120 - 160	-	-
	-	130 - 175 - 220	120 - 140 - 160	-	-
	-	100 - 130 - 160	100 - 120 - 140	-	-
	-	160 - 195 - 230	90 - 120 - 150	-	-
	-	120 - 145 - 170	100 - 140 - 180	-	-
	-	150 - 180 - 210	100 - 150 - 200	-	-
	-	-	100 - 450 - 800	-	-
	-	-	80 - 440 - 800	-	350 - 1675 - 3000
	-	-	80 - 290 - 500	-	350 - 1675 - 3000
	-	-	-	-	350 - 1675 - 3000
	-	-	-	-	350 - 1675 - 3000
	-	-	-	-	-
	-	-	130 - 215 - 300	-	600 - 900 - 1200
	-	-	200 - 350 - 500	-	600 - 900 - 1200
	-	-	130 - 215 - 300	-	600 - 900 - 1200
	-	-	-	-	-
	-	-	100 - 300 - 500	-	600 - 900 - 1200
	-	-	100 - 300 - 500	-	600 - 900 - 1200
	-	-	80 - 115 - 150	-	80 - 790 - 1500
	-	-	80 - 115 - 150	-	80 - 790 - 1500
	-	-	80 - 115 - 150	-	80 - 790 - 1500
	-	-	-	-	-
	20 - 30 - 40	25 - 35 - 45	-	-	80 - 790 - 1500
	20 - 25 - 30	20 - 30 - 40	-	-	-
	-	15 - 20 - 25	-	-	-
	-	10 - 15 - 20	-	-	-
	-	10 - 15 - 20	-	-	-
	-	-	80 - 105 - 130	-	-
	-	-	40 - 55 - 70	-	60 - 70 - 80
	-	-	35 - 50 - 65	-	55 - 65 - 75
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	10 - 15 - 20	-	-	50 - 60 - 70
	-	-	-	-	-
		10 - 15 - 20	-	-	-

Cutting data

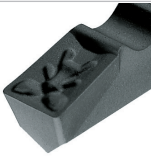
Max. feed rate and depth of cut

f_v (mm/U) = Feed rate into solid
 f_n (mm/U) = Feed rate for re-grooving
 f_k (mm/U) = Feed rate for copying
 a_p (mm) = Depth of cut



Groove turning

STANDART

	Insert					
	SG2 120202	SG2 150302	SG2 180404	SG2 200504/08	SG2 240608	
	f_v	0,04–0,15	0,08–0,15	0,10–0,25	0,10–0,25	0,10–0,30
	f_n	0,04–0,15	0,08–0,15	0,10–0,30	0,10–0,35	0,10–0,40
	f_k	0,04–0,10	0,08–0,15	0,10–0,25	0,10–0,25	0,10–0,30
	$a_p \text{ max}$	0,20–1,00	0,20–1,50	0,40–2,00	0,40–2,50	0,80–3,00

Groove turning

-SG

	Insert						
	SG2 150302-SG	SG2 180404-SG	SG2 200504/08-SG	SG2 240608-SG	SG2 320808-SG	SG2 401008-SG	
	f_v	0,08–0,15	0,10–0,25	0,10–0,30	0,10–0,30	0,10–0,35	0,10–0,35
	f_n	0,08–0,15	0,10–0,30	0,10–0,35	0,10–0,40	0,10–0,40	0,10–0,40
	f_k	0,08–0,20	0,10–0,30	0,10–0,30	0,10–0,35	0,10–0,35	0,10–0,35
	$a_p \text{ max}$	0,20–1,50	0,40–2,00	0,40–2,50	0,80–3,00	0,80–4,00	0,80–5,00

Groove turning

-AG

	Insert	
	SG2 240600 -AG	SG2 320800 -AG
	f_v	0,15–0,30
	f_n	0,15–0,45
	f_k	0,15–0,45
	$a_p \text{ max}$	3,00

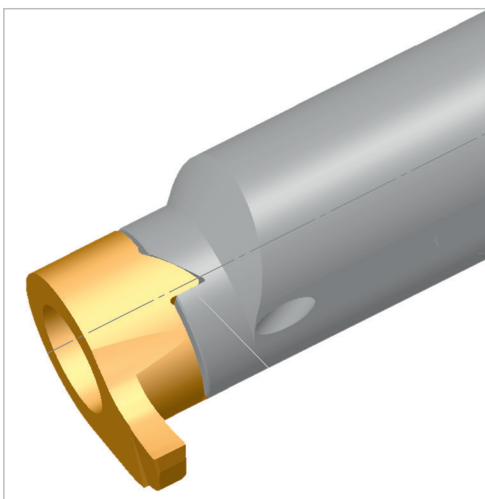
The recommended cutting data are only approximate values. It may be necessary to adjust them to each individual machining application.

MMS

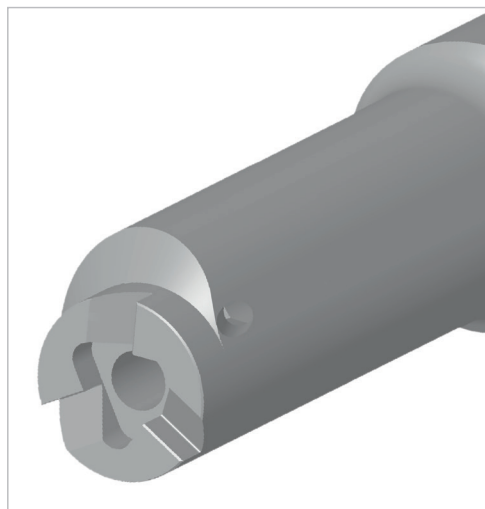
MODULAR INTERNAL GROOVING SYSTEM
STARTING AT DMIN 6.7 MM.
HOLDERS ARE AVAILABLE IN STEEL OR
CARBIDE EXECUTION (WITH BRAZED STEEL
HEAD) AND SCREWED ON CARBIDE INSERT.



Advantages of the patented location:



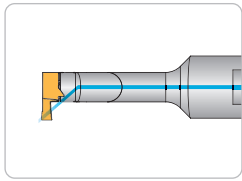
Right angled location flat
Optimum transfer of locking forces
due to right angled location.



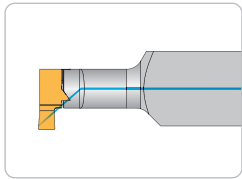
3-point location
3-point location guarantees high repeatability
and positioning of the insert.

Tool options

Program overview boring bars and inserts

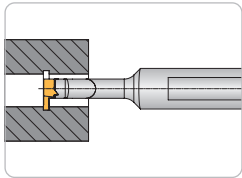


Boring bars - standard

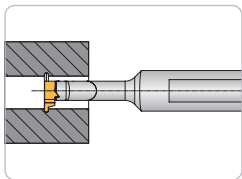


Square holder

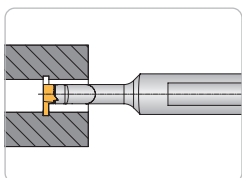
Inserts



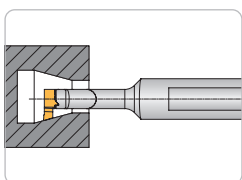
Grooving



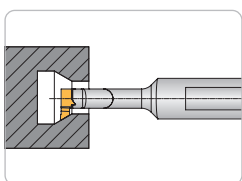
Radius grooving



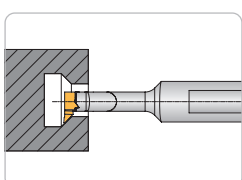
Cir-clip grooving DIN 471/472



Copying 15°



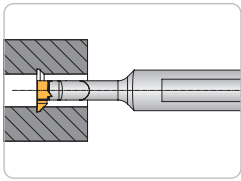
Copying 30°



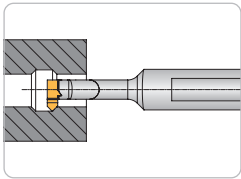
Copying 45°

Tool options

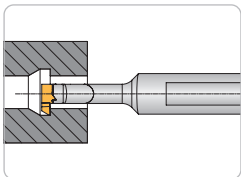
Program overview boring bars and inserts



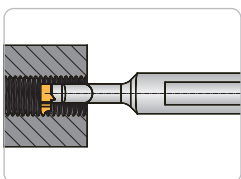
Pre-grooving and chamfering



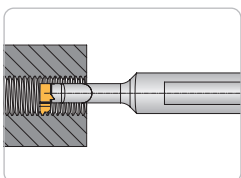
Chamfering 45°



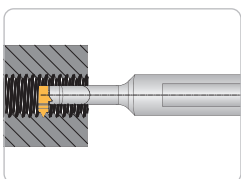
Back turning



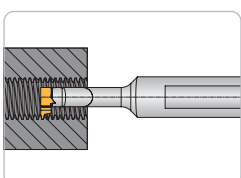
Threading 60° Metric partial profile



Threading 60° Metric full profile



Whitworth pipe thread 55° DIN ISO 228-Full profile



Trapezoidal 30° DIN ISO 103-Partial profile

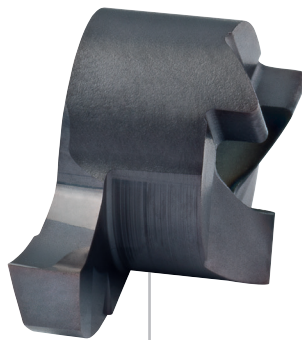
Designation system

Boring bars



HMMS	R/L	.A	24	12	A
HMMS = Holder MMS A = Size Dimensione (Z, A, B, C, D)	Version R = Right-hand L = Left-hand	Version A = Steel otherwise Carbide/brazed	Maximum work length 24 mm	Shank diameter 12 mm	Size (Z, A, B, C, D)

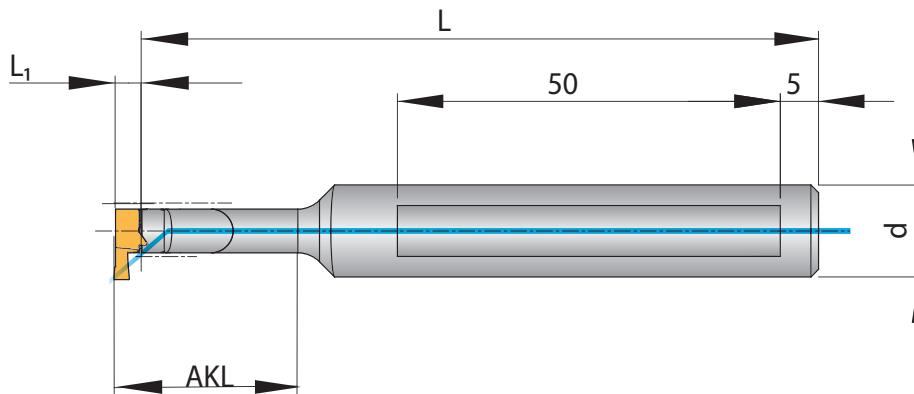
Inserts



MMS	097A	15	30	02	W	R/L	AP	A4M-E2
MMS = Insert	Minimum diameter D_{min} 097 = 9,7 mm A = Size (Z, A, B, C, D)	Groove width EB = 1,5 mm	Groove depth ET = 3 mm	Corner radius R = 0.2 mm	Location	Version R = Right- hand L = Left- hand	Application area	Grade

Boring bars

Boring bars - standard



Holders

HMMS-Z

Designation	Size	d	L	L ₁	AKL	Insert
HMMSL/R.A 1012Z*	Z	12	76,5	3	10	MMS...Z...
HMMSL/R 1812Z	Z	12	84,5	3	18	MMS...Z...
HMMSL/R.A 2012Z*	Z	12	86,5	3	20	MMS...Z...
HMMSL/R 2612Z	Z	12	92,5	3	26	MMS...Z...
HMMSL/R.A 2612Z*	Z	12	92,5	3	26	MMS...Z...
HMMSL/R 3612Z	Z	12	102,5	3	36	MMS...Z...

HMMS-A

Designation	Size	d	L	L ₁	AKL	Insert
HMMSL/R.A 1212A*	A	12	76,5	3,5	12	MMS...A...
HMMSL/R 1512A	A	12	79,5	3,5	15	MMS...A...
HMMSL/R 2412A	A	12	88,5	3,5	24	MMS...A...
HMMSL/R.A 2412A*	A	12	88,5	3,5	24	MMS...A...
HMMSL/R 3212A	A	12	96,5	3,5	32	MMS...A...
HMMSL/R 4812A	A	12	111,5	3,5	48	MMS...A...

HMMS-B

Designation	Size	d	L	L ₁	AKL	Insert
HMMSL/R.A 1412B*	B	12	75,5	4,5	14	MMS...B...
HMMSL/R.A 2912B*	B	12	90,5	4,5	29	MMS...B...
HMMSL/R 4212B	B	12	105,5	4,5	42	MMS...B...
HMMSL/R 5612B	B	12	115,5	4,5	56	MMS...B...

*Steel boring bar

HMMS-C

Designation	Size	d	L	L ₁	AKL	Insert
HMMSL/R.A 1616C*	C	16	77,5	4,5	16	MMS...C...
HMMSL/R.A 3416C*	C	16	95,5	4,5	34	MMS...C...
HMMSL/R 4516C	C	16	105,5	4,5	45	MMS...C...
HMMSL/R 6416C	C	16	125,5	4,5	64	MMS...C...

HMMS-D

Designation	Size	d	L	L ₁	AKL	Insert
HMMSL/R.A 1816D*	D	16	102,5	5,5	18	MMS...D...
HMMSL/R 4016D	D	16	124,5	5,5	40	MMS...D...
HMMSL/R.A 4016D*	D	16	124,5	5,5	40	MMS...D...
HMMSL/R 5616D	D	16	124,5	5,5	56	MMS...D...
HMMSL/R 8016D	D	16	144,5	5,5	80	MMS...D...

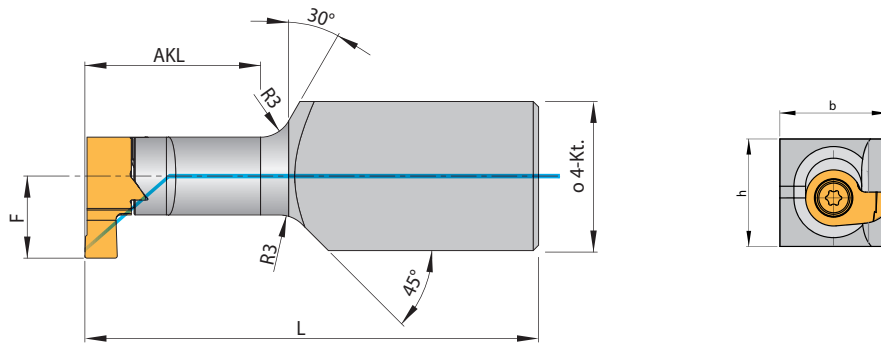
*Steel boring bar

Spare Parts

Boring Bars - Size	Screw	Key	Nm	Thread size
HMMS...Z	TS-0030	SD-5107 PLUS	0,6	M 2,0
HMMS...A	TS-0031	SD-5108 PLUS	1,3	M 2,5
HMMS...B	TS-0032	SD-5109 PLUS	2,2	M 3,0
HMMS...C	TS-0033	SD-5110 PLUS	3,4	M 3,5
HMMS...D	TS-0034	SD-5115 PLUS	5,0	M 4,0

Boring bars

Square holder



Holders

Designation	F	Size	h	b	AKL	L	Insert
HMMSLA 3212D	10,1	D	12	20	32	100	MMS...D...

Spare Parts

Boring Bars - Size	Screw	Key	Nm	Thread size
HMMS...D	TS-0034	SD-5115 PLUS	5	M 4,0

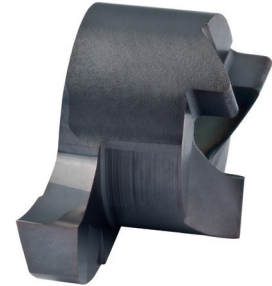
Grade description

HC - SOLID CARBIDE COATED

A42-BP2

PVD

- Universally applicable type
- Good interplay between wear resistance and toughness
- High oxidation resistance

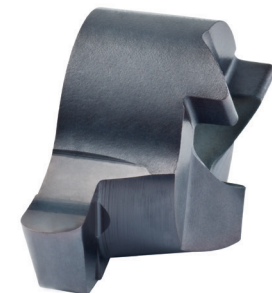


HU - SOLID CARBIDE UNCOATED

D42-AM2

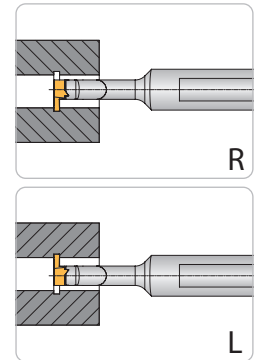
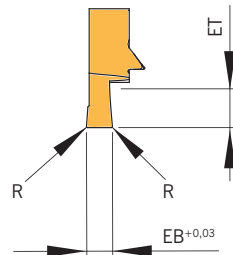
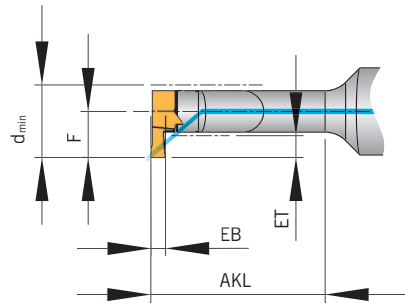
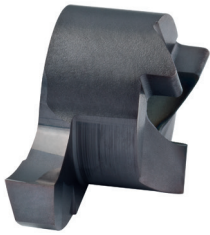
PVD

- For finish machining
- Well suited for non-ferrous metals
- For smooth cut or slightly varying cutting depths



Inserts

Grooving



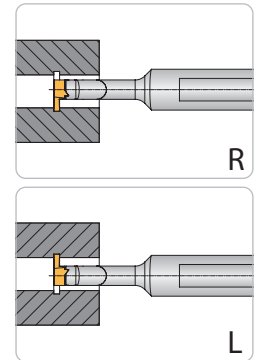
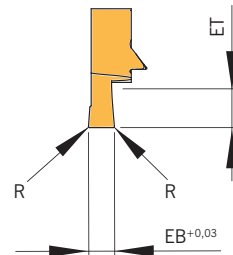
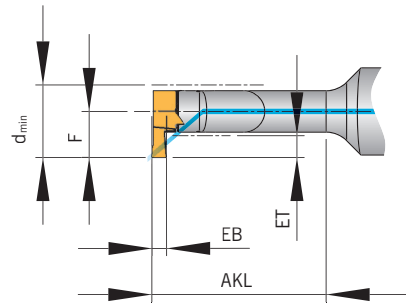
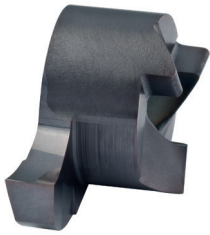
EB = Groove width [mm]
ET = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	ET	EB	R	F	HC	HU
							A42-BP2	D42-AM2
MMS067Z-0510005WL/R	Z	6,7	1,0	0,5	0,05	3,85	◆	◆
MMS067Z-1010005WL/R	Z	6,7	1,0	1,0	0,05	3,85	◆	◆
MMS067Z-1510005WL/R	Z	6,7	1,0	1,5	0,05	3,85	◆	◆
MMS067Z-201001WL/R	Z	6,7	1,0	2,0	0,10	3,85	◆	◆
MMS077Z-0520005WL/R	Z	7,7	2,0	0,5	0,05	4,85	◆	◆
MMS077Z-1020005WL/R	Z	7,7	2,0	1,0	0,05	4,85	◆	◆
MMS077Z-1520005WL/R	Z	7,7	2,0	1,5	0,05	4,85	◆	◆
MMS077Z-202001WL/R	Z	7,7	2,0	2,0	0,10	4,85	◆	◆
MMS097A-1030005WL/R	A	9,7	3,0	1,0	0,05	6,35	◆	◆
MMS097A-1530005WL/R	A	9,7	3,0	1,5	0,05	6,35	◆	◆
MMS097A-153002WR	A	9,7	3,0	1,5	0,20	6,35	◆	◆
MMS097A-203001WL/R	A	9,7	3,0	2,0	0,10	6,35	◆	◆
MMS097A-253001WL/R	A	9,7	3,0	2,5	0,10	6,35	◆	◆
MMS097A-303002WL/R	A	9,7	3,0	3,0	0,20	6,35	◆	◆
MMS117B-071000WL/R	B	11,7	1,0	0,7	0,00	7,60	◆	◆
MMS117B-0730005WR	B	11,7	3,0	0,7	0,05	7,60	◆	◆
MMS117B-1035005WL/R	B	11,7	3,5	1,0	0,05	7,60	◆	◆
MMS117B-1535005WL/R	B	11,7	3,5	1,5	0,05	7,60	◆	◆
MMS117B-203501WL/R	B	11,7	3,5	2,0	0,10	7,60	◆	◆
MMS117B-253501WL/R	B	11,7	3,5	2,5	0,10	7,60	◆	◆
MMS117B-303502WL/R	B	11,7	3,5	3,0	0,20	7,60	◆	◆
MMS137C-1040005WL/R	C	13,7	4,0	1,0	0,05	8,85	◆	◆
MMS137C-1540005WL/R	C	13,7	4,0	1,5	0,05	8,85	◆	◆
MMS137C-204001WL/R	C	13,7	4,0	2,0	0,10	8,85	◆	◆
MMS137C-254001WL/R	C	13,7	4,0	2,5	0,10	8,85	◆	◆
MMS137C-304002WL/R	C	13,7	4,0	3,0	0,20	8,85	◆	◆
MMS157D-204501WL/R	D	15,7	4,5	2,0	0,10	10,10	◆	◆
MMS157D-254501WL/R	D	15,7	4,5	2,5	0,10	10,10	◆	◆
MMS157D-304502WL/R	D	15,7	4,5	3,0	0,20	10,10	◆	◆
MMS157D-354502WL/R	D	15,7	4,5	3,5	0,20	10,10	◆	◆

Inserts

Grooving



EB = Groove width [mm]
ET = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	ET	EB	R	F	HC	HU
							A42-BP2	D42-AM2
MMS157D-404502WL/R	D	15,7	4,5	4,0	0,20	10,10	◆	◆
MMS172D-206001WL/R	D	17,2	6,0	2,0	0,10	11,60	◆	◆
MMS172D-306002WL/R	D	17,2	6,0	3,0	0,20	11,60	◆	◆

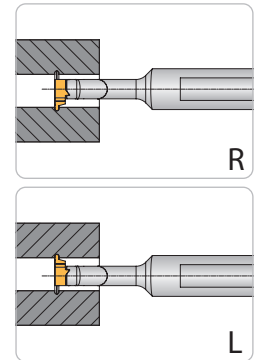
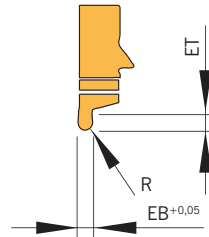
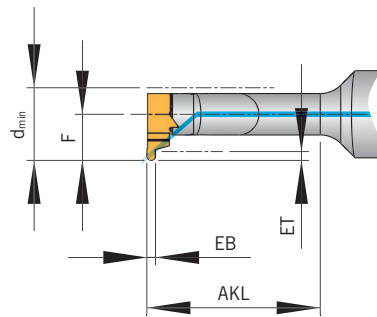
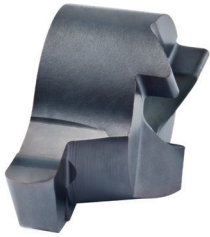
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Radius grooving



EB = Groove width [mm]
ET = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	ET	EB	R	F	HC	HU
							A42-BP2	D42-AM2
MMS097A-V-081004L/R	A	9,7	1,0	0,8	0,4	6,35	◆	◆
MMS097A-V-121006L/R	A	9,7	1,0	1,2	0,6	6,35	◆	◆
MMS097A-V-181009L/R	A	9,7	1,0	1,8	0,9	6,35	◆	◆
MMS117B-V-082504L/R	B	11,7	2,5	0,8	0,4	7,60	◆	◆
MMS117B-V-102505L/R	B	11,7	2,5	1,0	0,5	7,60	◆	◆
MMS117B-V-122506L/R	B	11,7	2,5	1,2	0,6	7,60	◆	◆
MMS117B-V-182509L/R	B	11,7	2,5	1,8	0,9	7,60	◆	◆
MMS117B-V-202510L/R	B	11,7	2,5	2,0	1,0	7,60	◆	◆
MMS117B-V-302515L/R	B	11,7	2,5	3,0	1,5	7,60	◆	◆
MMS137C-V-124006L/R	C	13,7	4,0	1,2	0,6	8,85	◆	◆
MMS137C-V-184009L/R	C	13,7	4,0	1,8	0,9	8,85	◆	◆
MMS137C-V-204010L/R	C	13,7	4,0	2,0	1,0	8,85	◆	◆
MMS137C-V-224011L/R	C	13,7	4,0	2,2	1,1	8,85	◆	◆
MMS137C-V-304015L/R	C	13,7	4,0	3,0	1,5	8,85	◆	◆
MMS157D-V-184509L/R	D	15,7	4,5	1,8	0,9	10,10	◆	◆
MMS157D-V-224511L/R	D	15,7	4,5	2,2	1,1	10,10	◆	◆
MMS157D-V-304515L/R	D	15,7	4,5	3,0	1,5	10,10	◆	◆
MMS157D-V-404520L/R	D	15,7	4,5	4,0	2,0	10,10	◆	◆

HC = Carbide coated

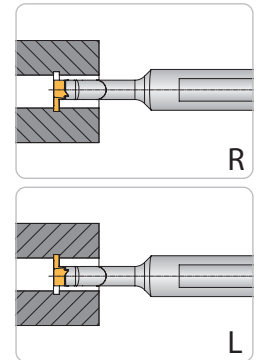
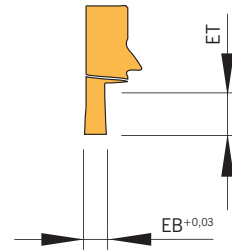
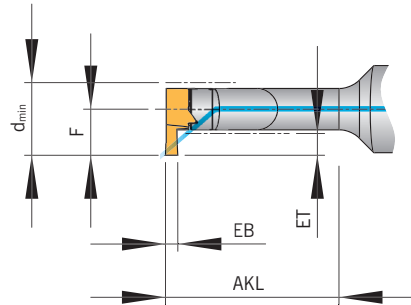
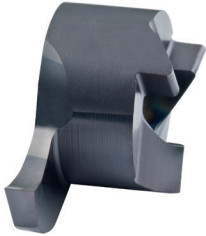
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Cir-clip grooving DIN 471/472



EB = Groove width [mm]
ET = Groove depth [mm]

Similar to illustration

Designation	Size	d _{min}	ET	EB	F	HC	HU
						A42-BP2	D42-AM2
MMS097A-071000WL/R	A	9,7	1,0	0,73	6,35	◆	◆
MMS097A-081000WL/R	A	9,7	1,0	0,83	6,35	◆	◆
MMS097A-093000WL/R	A	9,7	3,0	0,93	6,35	◆	◆
MMS097A-113000WL/R	A	9,7	3,0	1,19	6,35	◆	◆
MMS097A-133000WL/R	A	9,7	3,0	1,39	6,35	◆	◆
MMS097A-163000WL/R	A	9,7	3,0	1,69	6,35	◆	◆
MMS117B-071000WL/R	B	11,7	1,0	0,70	7,60	◆	◆
MMS117B-081000WL/R	B	11,7	1,0	0,83	7,60	◆	◆
MMS117B-093500WL/R	B	11,7	3,5	0,93	7,60	◆	◆
MMS117B-113500WL/R	B	11,7	3,5	1,19	7,60	◆	◆
MMS117B-133500WL/R	B	11,7	3,5	1,39	7,60	◆	◆
MMS117B-163500WL/R	B	11,7	3,5	1,69	7,60	◆	◆
MMS137C-071000WL/R	C	13,7	1,0	0,73	8,85	◆	◆
MMS137C-081000WL/R	C	13,7	1,0	0,83	8,85	◆	◆
MMS137C-094000WL/R	C	13,7	4,0	0,93	8,85	◆	◆
MMS137C-114000WL/R	C	13,7	4,0	1,19	8,85	◆	◆
MMS137C-134000WL/R	C	13,7	4,0	1,39	8,85	◆	◆
MMS137C-164000WL/R	C	13,7	4,0	1,69	8,85	◆	◆
MMS157D-071000WL/R	D	15,7	1,0	0,73	10,10	◆	◆
MMS157D-081000WL/R	D	15,7	1,0	0,83	10,10	◆	◆
MMS157D-094500WL/R	D	15,7	4,5	0,93	10,10	◆	◆
MMS157D-114500WL/R	D	15,7	4,5	1,19	10,10	◆	◆
MMS157D-134500WL/R	D	15,7	4,5	1,39	10,10	◆	◆
MMS157D-164500WL/R	D	15,7	4,5	1,69	10,10	◆	◆

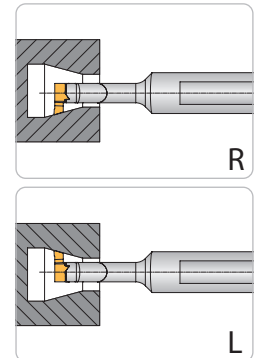
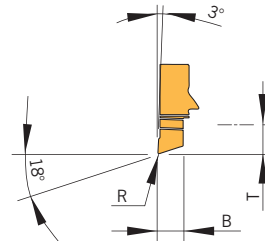
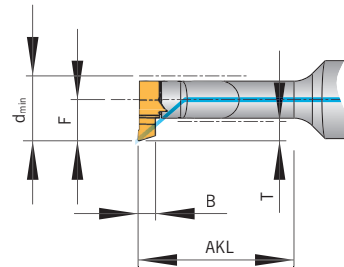
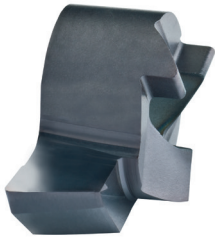
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Copying 15°



B = Groove width [mm]
T = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	T	B	R	F	HC	HU
							A42-BP2	D42-AM2
MMS067Z-K18-02L/R	Z	6,7	1,0	2,2	0,2	3,85	◆	◆
MMS067Z-K18-04L/R	Z	6,7	1,0	2,2	0,4	3,85	◆	◆
MMS097A-K18-02L/R	A	9,7	3,0	2,7	0,2	6,35	◆	◆
MMS117B-K18-02L/R	B	11,7	3,5	3,7	0,2	7,60	◆	◆
MMS137C-K18-02L/R	C	13,7	4,0	3,7	0,2	8,85	◆	◆
MMS157D-K18-02L/R	D	15,7	4,5	4,7	0,2	10,10	◆	◆

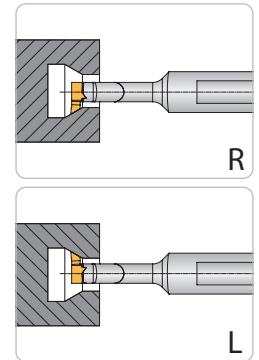
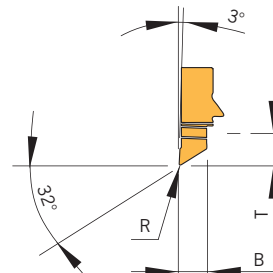
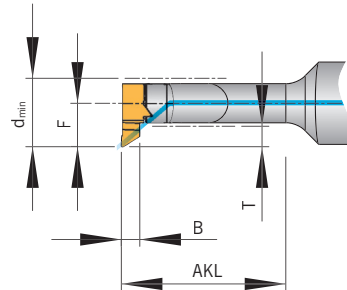
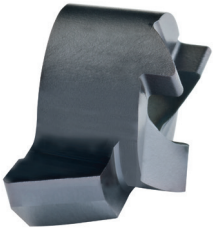
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Copying 30°



B = Groove width [mm]
T = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	T	B	R	F	HC	HU
							A42-BP2	D42-AM2
MMS097A-K32-02L/R	A	9,7	3,0	2,7	0,2	6,35	◆	◆
MMS117B-K32-02L/R	B	11,7	3,5	3,7	0,2	7,60	◆	◆
MMS137C-K32-02L/R	C	13,7	4,0	3,7	0,2	8,85	◆	◆
MMS157D-K32-02L/R	D	15,7	4,5	4,7	0,2	10,10	◆	◆

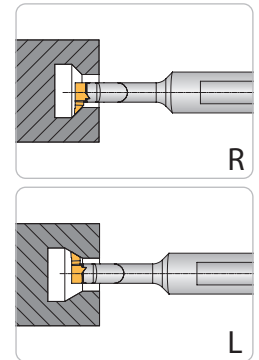
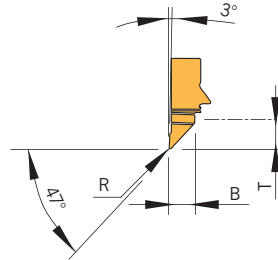
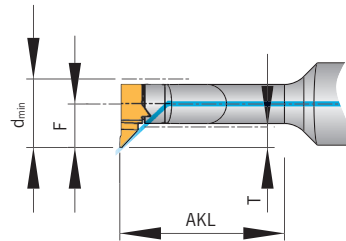
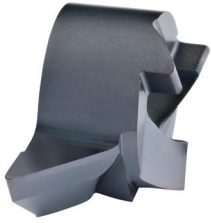
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Copying 45°



B = Groove width [mm]
T = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	T	B	R	F	HC	HU
							A42-BP2	D42-AM2
MMS097A-K47-02L/R	A	9,7	3,0	2,7	0,2	6,35	◆	◆
MMS117B-K47-02L/R	B	11,7	3,5	3,7	0,2	7,60	◆	◆
MMS137C-K47-02L/R	C	13,7	4,0	3,7	0,2	8,85	◆	◆
MMS157D-K47-02L/R	D	15,7	4,5	4,7	0,2	10,10	◆	◆

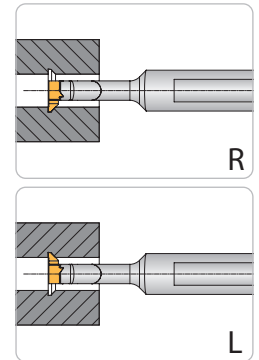
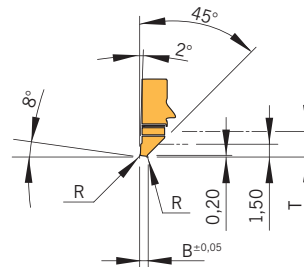
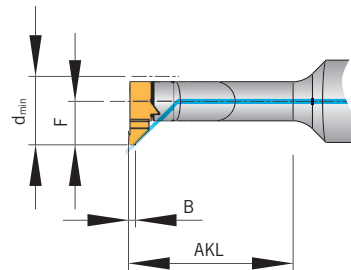
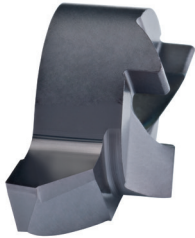
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Pre-grooving and chamfering



B = Groove width [mm]
T = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	T	B	R	F	HC	HU
							A42-BP2	D42-AM2
MMS097A-VF-0810-45L/R	A	9,7	3,0	1,0	0,1	6,35	◆	◆
MMS117B-VF-0810-45L/R	B	11,7	3,5	1,0	0,1	7,60	◆	◆
MMS137C-VF-0815-45L/R	C	13,7	4,0	1,5	0,1	8,85	◆	◆
MMS157D-VF-0815-45L/R	D	15,7	4,5	1,5	0,1	10,10	◆	◆

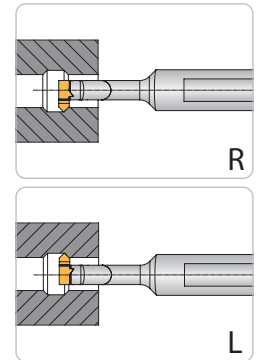
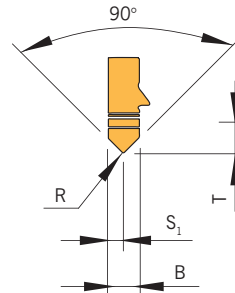
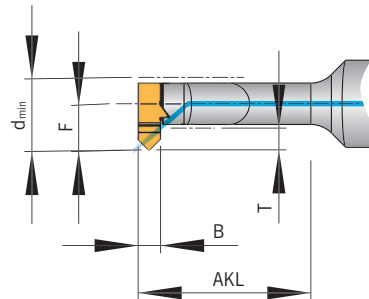
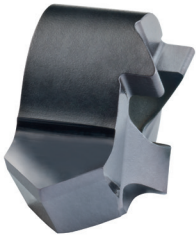
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Chamfering 45°



B = Groove width [mm]
T = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	T	B	R	S ₁	F	HC	HU
								A42-BP2	D42-AM2
MMS067Z-F45-02L/R	Z	6,7	1,0	2,2	0,2	1,1	3,85	◆	◆
MMS097A-F45-02L/R	A	9,7	3,0	3,0	0,2	1,5	6,35	◆	◆
MMS117B-F45-02L/R	B	11,7	3,5	4,0	0,2	2,0	7,60	◆	◆
MMS137C-F45-02L/R	C	13,7	4,0	4,0	0,2	2,0	8,85	◆	◆
MMS157D-F45-02L/R	D	15,7	4,5	5,0	0,2	2,5	10,10	◆	◆

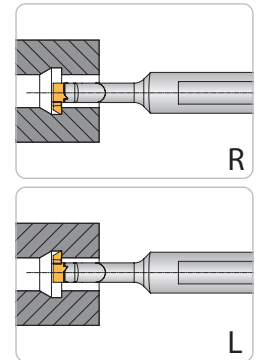
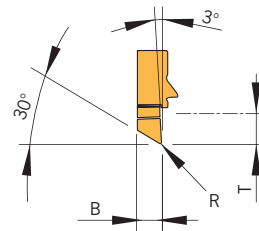
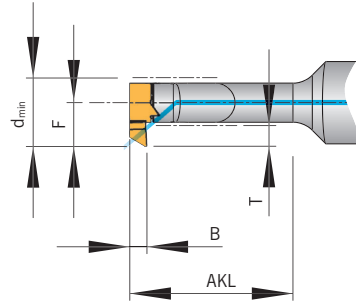
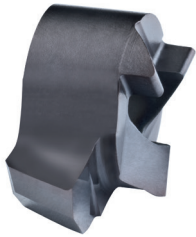
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Back turning



B = Groove width [mm]
T = Groove depth [mm]
R = Radius

Similar to illustration

Designation	Size	d _{min}	T	B	R	F	HC	HU
							A42-BP2	D42-AM2
MMS067Z-R30-01R	Z	6,7	1,0	2,5	0,1	3,85	◆	◆
MMS097A-R30-02R	A	9,7	3,0	2,5	0,2	6,35	◆	◆
MMS117B-R30-02R	B	11,7	3,5	3,5	0,2	7,60	◆	◆
MMS137C-R30-02R	C	13,7	4,0	3,5	0,2	8,85	◆	◆
MMS157D-R30-02R	D	15,7	4,5	4,5	0,2	10,10	◆	◆

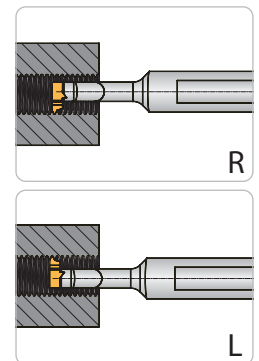
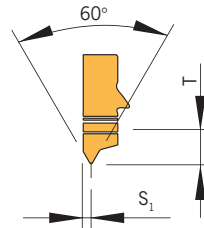
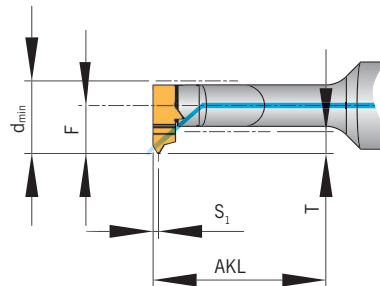
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Threading 60° Metric-partial profile



T = Groove depth [mm]

Designation	Size	d _{min}	Type	P Pitch	S _i	T	F	HC	HU
								A42-BP2	D42-AM2
MMS067Z-G-MF050100L/R	Z	6,7	MF	0,5 - 1,0	0,8	1,0	3,85	◆	◆
MMS067Z-G-M125L/R	Z	6,7	M	1,25	0,8	1,0	3,85	◆	◆
MMS080A-G-MF050075L/R	A	8,0	MF	0,5 - 0,75	0,8	1,8	4,85	◆	◆
MMS080A-G-MF100125L/R	A	8,0	MF	1,0 - 1,25	0,8	1,8	4,85	◆	◆
MMS080A-G-M150175L/R	A	8,0	M	1,5 - 1,75	1,0	1,8	4,85	◆	◆
MMS107B-G-MF050075L/R	B	10,7	MF	0,5 - 0,75	0,8	3,0	6,80	◆	◆
MMS107B-G-MF100125L/R	B	10,7	MF	1,0 - 1,25	0,8	3,0	6,80	◆	◆
MMS107B-G-MF150175L/R	B	10,7	MF	1,5 - 1,75	1,0	3,0	6,80	◆	◆
MMS107B-G-M200L/R	B	10,7	M	2,00	1,3	3,0	6,80	◆	◆
MMS107B-G-M250L/R	B	10,7	M	2,50	1,4	3,0	6,80	◆	◆
MMS137C-G-MF050075L/R	C	13,7	MF	0,5 - 0,75	0,8	4,2	8,85	◆	◆
MMS137C-G-MF100125L/R	C	13,7	MF	1,0 - 1,25	0,8	4,2	8,85	◆	◆
MMS137C-G-MF150175L/R	C	13,7	MF	1,5 - 1,75	1,0	4,2	8,85	◆	◆
MMS137C-G-M200L/R	C	13,7	M	2,00	1,3	4,2	8,85	◆	◆
MMS137C-G-M250L/R	C	13,7	M	2,50	1,4	4,2	8,85	◆	◆
MMS157D-G-MF100125L/R	D	15,7	MF	1,0 - 1,25	0,8	4,7	10,10	◆	◆
MMS157D-G-MF150175L/R	D	15,7	MF	1,5 - 1,75	1,0	4,7	10,10	◆	◆
MMS157D-G-MF200L/R	D	15,7	MF	2,00	1,3	4,7	10,10	◆	◆
MMS157D-G-M250L/R	D	15,7	M	2,50	1,4	4,7	10,10	◆	◆

M = ISO-Metric
MF = ISO-Metric – Fine

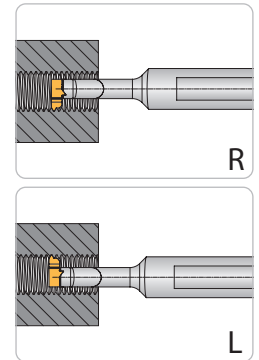
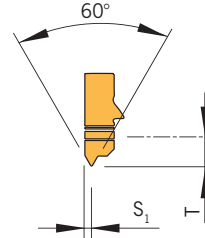
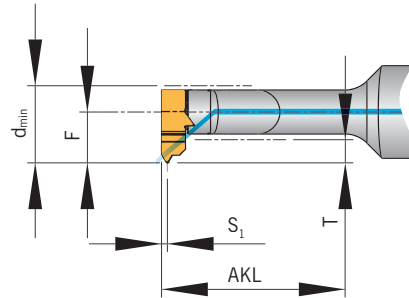
HC = Carbide coated
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Threading 60° Metric-full profile



T = Groove depth [mm]

Designation	Size	d _{min}	Type	P Pitch	S ₁	T	F	HC	HU
								A42-BP2	D42-AM2
MMS080A-GV-M150L/R	A	8,0	M	1,5	1,0	1,8	4,85	◆	◆
MMS107B-GV-M200L/R	B	10,7	M	2,0	1,3	3,0	6,80	◆	◆
MMS107B-GV-MF100L/R	B	10,7	MF	1,0	0,8	3,0	6,80	◆	◆
MMS107B-GV-MF150L/R	B	10,7	MF	1,5	1,0	3,0	6,80	◆	◆
MMS107B-GV-M250L/R	B	10,7	M	2,5	1,4	3,0	6,80	◆	◆
MMS107B-GV-M300L/R	B	10,7	M	3,0	1,6	3,0	6,80	◆	◆
MMS137C-GV-MF100L/R	C	13,7	MF	1,0	0,8	4,2	8,85	◆	◆
MMS137C-GV-MF150L/R	C	13,7	MF	1,5	1,0	4,2	8,85	◆	◆
MMS137C-GV-M200L/R	C	13,7	M	2,0	1,3	4,2	8,85	◆	◆
MMS137C-GV-M250L/R	C	13,7	M	2,5	1,4	4,2	8,85	◆	◆
MMS157D-GV-M250L/R	D	15,7	M	2,5	1,4	4,7	10,10	◆	◆
MMS157D-GV-M300L/R	D	15,7	M	3,0	1,6	4,7	10,10	◆	◆
MMS157D-GV-M350L/R	D	15,7	M	3,5	1,8	4,7	10,10	◆	◆
MMS157D-GV-M400L/R	D	15,7	M	4,0	2,0	4,7	10,10	◆	◆
MMS157D-GV-MF100L/R	D	15,7	MF	1,0	0,8	4,7	10,10	◆	◆
MMS157D-GV-MF150L/R	D	15,7	MF	1,5	1,0	4,7	10,10	◆	◆
MMS157D-GV-MF200L/R	D	15,7	MF	2,0	1,3	4,7	10,10	◆	◆

M = ISO-Metric
MF – ISO-Metric – Fine

HC = Carbide coated
HU = Carbide uncoated

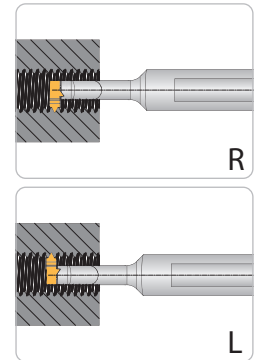
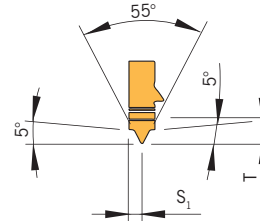
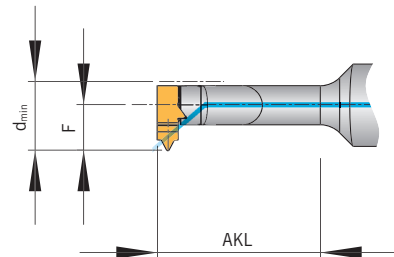
P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Whitworth pipe thread 55°

DIN ISO 228 - Full profile



T = Groove depth [mm]

Similar to illustration

Designation	Size	d _{min}	Type	P Pitch	G/Inch TPI G/Inch	S ₁	T	F	HC	HU
									A42-BP2	D42-AM2
MMS157D-GV-W228/11L/R	D	15,7	W228	2,309	11	2,0	4,7	10,1	◆	◆
MMS157D-GV-W228/14L/R	D	15,7	W228	1,814	14	1,6	4,7	10,1	◆	◆
MMS107B-GV-W228/14L/R	B	10,7	W228	1,814	14	1,6	3,0	6,8	◆	◆
MMS107B-GV-W228/19L/R	B	10,7	W228	1,337	19	1,3	3,0	6,8	◆	◆

HC = Carbide coated

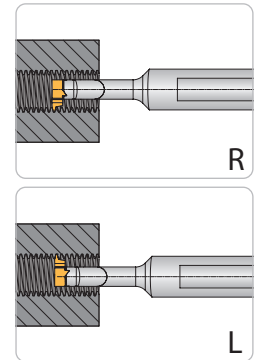
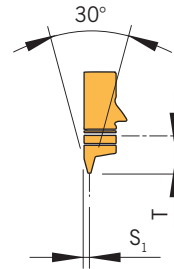
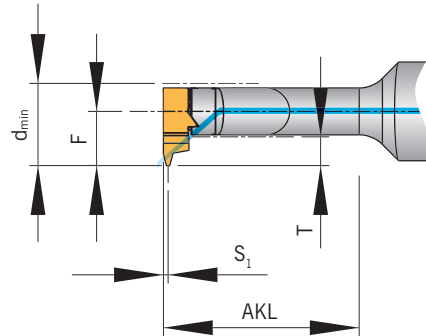
HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Inserts

Trapezoidal 30° DIN ISO 103-Partial profile



T = Groove depth [mm]

Similar to illustration

Designation	Size	d _{min}	Type	P Pitch	S ₁	T	F	HC	HU
								A42-BP2	D42-AM2
MMS082A-G-TR103/1,5L/R	A	8,2	TR103	1,5	0,6	1,9	4,85	◆	◆
MMS087A-G-TR103/2,0L/R	A	8,7	TR103	2,0	1,0	2,4	4,85	◆	◆
MMS087A-G-TR103/3,0L/R	A	8,7	TR103	3,0	1,2	2,4	4,85	◆	◆
MMS107B-G-TR103/1,5L/R	B	10,7	TR103	1,5	0,6	3,0	6,80	◆	◆
MMS107B-G-TR103/2,0L/R	B	10,7	TR103	2,0	1,0	3,0	6,80	◆	◆
MMS107B-G-TR103/3,0L/R	B	10,7	TR103	3,0	1,2	3,0	6,80	◆	◆
MMS107B-G-TR103/4,0L/R	B	10,7	TR103	4,0	1,6	3,0	6,80	◆	◆
MMS137C-G-TR103/4,0L/R	C	13,7	TR103	4,0	1,6	4,2	8,85	◆	◆
MMS137C-G-TR103/5,0L/R	C	13,7	TR103	5,0	2,0	4,2	8,85	◆	◆
MMS157D-G-TR103/2,0L/R	D	15,7	TR103	2,0	1,0	4,7	10,10	◆	◆
MMS157D-G-TR103/3,0L/R	D	15,7	TR103	3,0	1,2	4,7	10,10	◆	◆
MMS157D-G-TR103/4,0L/R	D	15,7	TR103	4,0	1,6	4,7	10,10	◆	◆
MMS157D-G-TR103/5,0L/R	D	15,7	TR103	5,0	2,0	4,7	10,10	◆	◆
MMS157D-G-TR103/6,0L/R	D	15,7	TR103	6,0	2,2	4,7	10,10	◆	◆

HC = Carbide coated

HU = Carbide uncoated

P	●	
M	●	
K	●	
N	○	●
S	●	
H		

● Main application
○ Secondary application

Cutting data - grooving, turning, copying

Material group	Structure of the material groups and identification letters		Brinell hardness HB	Tensile strength Rm (N/mm²)	Chipping group	Cutting speed V _c (m/min)	
						coated	uncoated
						A42-BP2	D42-AM2
P	Unalloyed steel	C ≤ 0.25 % annealed	125	428	P1	20 - 100 - 180	20 - 75 - 130
		C > 0.25 ... ≤ 0.55 % annealed	190	639	P2	20 - 100 - 180	20 - 75 - 130
		C > 0.25 ... ≤ 0.55 % hardened and tempered	210	708	P3	20 - 100 - 180	20 - 75 - 130
		C > 0.55 % annealed	190	639	P4	20 - 100 - 180	20 - 75 - 130
		C > 0.55 % hardened and tempered	300	1013	P5	20 - 100 - 180	20 - 75 - 130
		Machining steel (short-chipping) tempered	220	745	P6	20 - 100 - 180	20 - 75 - 130
	Low alloyed steel	annealed	175	591	P7	15 - 90 - 160	15 - 65 - 110
		hardened and tempered	300	1013	P8	15 - 90 - 160	15 - 65 - 110
		hardened and tempered	380	1282	P9	15 - 90 - 160	15 - 65 - 110
		hardened and tempered	430	1477	P10	15 - 90 - 160	15 - 65 - 110
	High alloyed steel and high alloyed tool steel	annealed	200	675	P11	20 - 70 - 120	20 - 55 - 85
		hardened	300	1013	P12	20 - 70 - 120	20 - 55 - 85
		hardened	400	1361	P13	20 - 70 - 120	20 - 55 - 85
	Stainless steel	ferritic / martensitic, annealed	200	675	P14	20 - 55 - 90	20 - 40 - 60
		martensitic, hardened and tempered	330	1114	P15	20 - 100 - 180	20 - 40 - 60
M	Stainless steel	austenitic, chilled	200	675	M1	15 - 50 - 80	15 - 45 - 70
		austenitic, precipitation-hardened (PH)	300	1013	M2	20 - 65 - 110	15 - 50 - 80
		austenitic-ferritic, Duplex	230	778	M3	10 - 35 - 60	10 - 25 - 40
K	Malleable cast iron	ferritic	200	675	K1	20 - 85 - 150	20 - 70 - 120
		pearlitic	260	867	K2	20 - 85 - 150	20 - 70 - 120
	Cast iron	low tensile strength	180	602	K3	20 - 90 - 160	20 - 65 - 110
		high tensile strength / austenitic	245	825	K4	20 - 90 - 160	20 - 65 - 110
	Cast iron with nodular graphite	ferritic	155	518	K5	20 - 85 - 150	20 - 65 - 110
		pearlitic	265	885	K6	20 - 85 - 150	20 - 65 - 110
	GGV (CGI)		200	675	K7	20 - 85 - 150	20 - 70 - 120
N	Aluminium alloys long chipping	not heat treatable	30	-	N1	20 - 310 - 600	20 - 260 - 500
		heat treatable, heat treated	100	343	N2	20 - 310 - 600	20 - 260 - 500
		≤ 12 % Si, not heat treatable	75	260	N3	20 - 310 - 600	20 - 260 - 500
	Casted aluminium alloys	≤ 12 % Si, aushärtbar, ausgehärtet	90	314	N4	20 - 310 - 600	20 - 260 - 500
		> 12 % Si, not heat treatable	130	447	N5	20 - 310 - 600	20 - 260 - 500
	Magnesium alloys		70	250	N6	-	-
	Copper and copper alloys (Brass / Bronze)	Unalloyed, elektrolyte copper	100	343	N7	20 - 310 - 600	15 - 260 - 500
		Brass, Bronze	90	314	N8	20 - 310 - 600	15 - 260 - 500
		Cu-alloys, short-chipping	110	382	N9	20 - 310 - 600	15 - 260 - 500
		High-tensile, Ampco	300	1013	N10	-	-
	Non-ferrous materials	Lead alloys (without abrasive filling material)	-	-	N11	-	-
		Duroplastic (without abrasive filling material)	-	-	N12	-	-
		Plastic glas fibre reinforced GFRP	-	-	N13	-	-
		Plastic carbon fibre reinforced CFRP	-	-	N14	-	-
		Plastic aramid fibre reinforced AFRP	-	-	N15	-	-
		Graphite (tech.)	80 Shore	-	N16	-	-
S	High temperature resistant alloys	Fe-Basis annealed	200	675	S1	15 - 45 - 75	15 - 25 - 30
		Fe-Basis heat treated	280	943	S2	15 - 45 - 75	15 - 25 - 30
		Ni- or Co-alloyed annealed	250	839	S3	15 - 30 - 40	15 - 30 - 40
		Ni- or Co-alloyed heat treated	350	1177	S4	15 - 30 - 40	15 - 30 - 40
		Ni- or Co-alloyed casting	320	1076	S5	15 - 30 - 40	15 - 30 - 40
	Titanium alloys	Pure titan	200	675	S6	-	-
		α- and β-alloys, heat treated	375	1262	S7	-	-
		β-alloys	410	1396	S8	-	-
	Wolfram alloys		300	1013	S9	-	-
	Molybdän alloys		300	1013	S10	-	-
H	Hardened steel	hardened	50 HRC	-	H1	-	-
		hardened	55 HRC	-	H2	-	-
		hardened	60 HRC	-	H3	-	-
	Hardened cast iron	hardened	55 HRC	-	H4	-	-

The recommended cutting data are only approximate values.
It may be necessary to adjust them to each individual machining application.

Cutting data - threading

Material group	Structure of the material groups and identification letters		Brinell hardness HB	Tensile strength Rm (N/mm²)	Chipping group	Cutting speed V _c (m/min)	
						coated	uncoated
						A42-BP2	D42-AM2
P	Unalloyed steel	C ≤ 0.25 % annealed	125	428	P1	80 - 115 - 150	80 - 95 - 110
		C > 0.25 ... ≤ 0.55 % annealed	190	639	P2	80 - 115 - 150	80 - 95 - 110
		C > 0.25 ... ≤ 0.55 % hardened and tempered	210	708	P3	60 - 90 - 120	60 - 75 - 90
		C > 0.55 % annealed	190	639	P4	80 - 115 - 150	80 - 95 - 110
		C > 0.55 % hardened and tempered	300	1013	P5	60 - 90 - 120	60 - 75 - 90
		Machining steel (short-chipping) tempered	220	745	P6	80 - 115 - 150	80 - 95 - 110
	Low alloyed steel	annealed	175	591	P7	70 - 100 - 130	70 - 85 - 100
		hardened and tempered	300	1013	P8	70 - 95 - 120	70 - 80 - 90
		hardened and tempered	380	1282	P9	70 - 95 - 120	70 - 80 - 90
		hardened and tempered	430	1477	P10	70 - 95 - 115	70 - 80 - 85
	High alloyed steel and high alloyed tool steel	annealed	200	675	P11	60 - 85 - 110	60 - 70 - 80
		hardened	300	1013	P12	50 - 70 - 90	50 - 60 - 70
		hardened	400	1361	P13	50 - 70 - 90	50 - 60 - 70
	Stainless steel	ferritic / martensitic, annealed	200	675	P14	50 - 65 - 80	50 - 60 - 70
		martensitic, hardened and tempered	330	1114	P15	50 - 65 - 80	50 - 60 - 70
M	Stainless steel	austenitic, chilled	200	675	M1	70 - 95 - 120	70 - 80 - 90
		austenitic, precipitation-hardened (PH)	300	1013	M2	40 - 65 - 90	40 - 55 - 65
		austenitic-ferritic, Duplex	230	778	M3	10 - 35 - 60	10 - 25 - 40
K	Malleable cast iron	ferritic	200	675	K1	70 - 110 - 150	70 - 90 - 110
		pearlitic	260	867	K2	-	-
	Cast iron	low tensile strength	180	602	K3	-	-
		high tensile strength / austenitic	245	825	K4	80 - 100 - 120	80 - 90 - 100
	Cast iron with nodular graphite	ferritic	155	518	K5	80 - 90 - 100	80 - 85 - 90
		pearlitic	265	885	K6	80 - 90 - 100	80 - 85 - 90
	GGV (CGI)		200	675	K7	70 - 110 - 150	70 - 90 - 110
N	Aluminium alloys long chipping	not heat treatable	30	-	N1	100 - 170 - 240	100 - 170 - 240
		heat treatable, heat treated	100	343	N2	80 - 125 - 170	80 - 125 - 170
		≤ 12 % Si, not heat treatable	75	260	N3	-	-
	Casted aluminium alloys	≤ 12 % Si, aushärtbar, ausgehärtet	90	314	N4	-	-
		> 12 % Si, not heat treatable	130	447	N5	-	-
	Magnesium alloys		70	250	N6	-	-
	Copper and copper alloys (Brass / Bronze)	Unalloyed, elektrolyte copper	100	343	N7	100 - 175 - 250	100 - 175 - 250
		Brass, Bronze	90	314	N8	80 - 140 - 200	80 - 140 - 200
		Cu-alloys, short-chipping	110	382	N9	100 - 175 - 250	100 - 175 - 250
		High-tensile, Ampco	300	1013	N10	-	-
	Non-ferrous materials	Lead alloys (without abrasive filling material)	-	-	N11	-	-
		Duroplastic (without abrasive filling material)	-	-	N12	-	-
		Plastic glas fibre reinforced GFRP	-	-	N13	-	-
		Plastic carbon fibre reinforced CFRP	-	-	N14	-	-
		Plastic aramid fibre reinforced AFRP	-	-	N15	-	-
		Graphite (tech.)	80 Shore	-	N16	-	-
S	High temperature resistant alloys	Fe-Basis annealed	200	675	S1	-	-
		Fe-Basis heat treated	280	943	S2	-	-
		Ni- or Co-alloyed annealed	250	839	S3	-	-
		Ni- or Co-alloyed heat treated	350	1177	S4	-	-
		Ni- or Co-alloyed casting	320	1076	S5	-	-
	Titanium alloys	Pure titan	200	675	S6	-	-
		α- and β-alloys, heat treated	375	1262	S7	-	-
		β-alloys	410	1396	S8	-	-
	Wolfram alloys		300	1013	S9	-	-
	Molybdän alloys		300	1013	S10	-	-
H	Hardened steel	hardened	50 HRC	-	H1	-	-
		hardened	55 HRC	-	H2	-	-
		hardened	60 HRC	-	H3	-	-
	Hardened cast iron	hardened	55 HRC	-	H4	-	-

The recommended cutting data are only approximate values.
It may be necessary to adjust them to each individual machining application.

Technical data

Recommended cutting data – Threading – Number of passes

Pitch		Number of passes					
(mm)	Pitch/Inch	Steel strength (N/mm ²)			Stainless	Cast	Aluminium
		400–700	700–1.000	> 1.000			
0,8	32	8	9	10	10	9	8
1	24	10	11	12	12	12	10
1,25	20–19	12	14	15	15	14	12
1,5	16	15	17	18	18	17	15
1,75	14	17	19	21	21	18	17
2	12	19	22	25	25	20	18
2,5	10	22	26	31	31	22	20
3,0–3,5	8	28	32	38	38	24	22

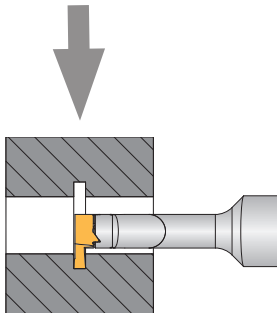
The above mentioned data are general recommendations for machining steel and non-ferrous materials. With hard materials we recommend to reduce cutting speed and increase number of passes.

By cutting edge breakage we suggest to increase number of passes, by edge wear reduce the number of passes.

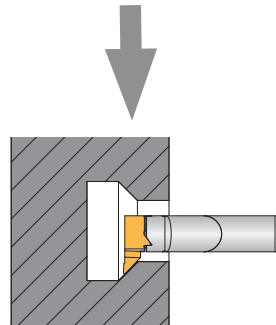
Remark: The chip thickness should be constant at every pass, so with more cutting depth reduce the in-feed in order to obtain constant cutting forces.

SIM – Boring bars – Feed rate

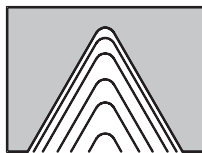
f [mm/U] 0,01–0,05



f [mm/U] 0,03–0,10



Threading



Flank infeed
Infeed at an angle of 3°–5° to the flank of the thread. Mainly used on NC-machines. Excellent chip control, therefore very suitable for internal threads and long chipping materials. Pitches greater than 2 mm.



Radial infeed
Radial infeed is the simplest and quickest method. The feed is perpendicular to the turning axis and both flanks of the insert perform the cutting operation. Radial infeed is recommended when the pitch is smaller than 2 mm, for material with short chips, for workhardened materials and stainless steel.



Alternating flank infeed
Use of alternate flank infeed is recommended especially in large pitches and for long chipping materials. This method divides the work equally on both flanks, resulting in equal wear on both edges. Alternate flank infeed requires more complicated programming and is not available on all lathes.

Technical data

Calculation of helix angle β

$$\beta = \frac{P \text{ [mm]}}{D \text{ [mm]}} \times 18,23$$

Example internal thread M10. Pitch 1.5 mm:

$$\beta = \frac{1,5 \text{ mm}}{9,03 \text{ mm}} \times 18,23 = 3,03^\circ$$

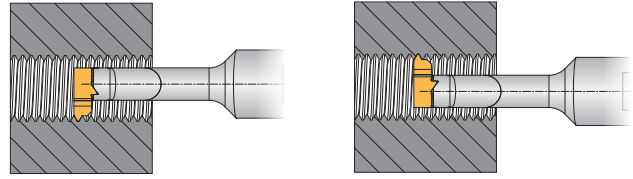
helix angle

β = Helix angle ($^\circ$)

P = Pitch (mm)

D = Edge diameter (mm)

ISO – Internal thread

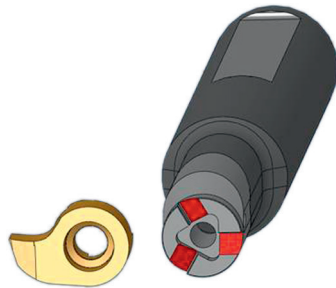


Holder and inserts in
Right-hand version

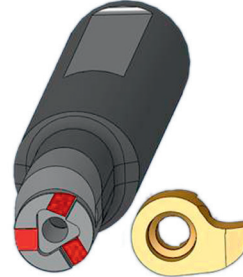
Holder and inserts in
Left-hand version

Assembly guide

Left boring bar
Left insert



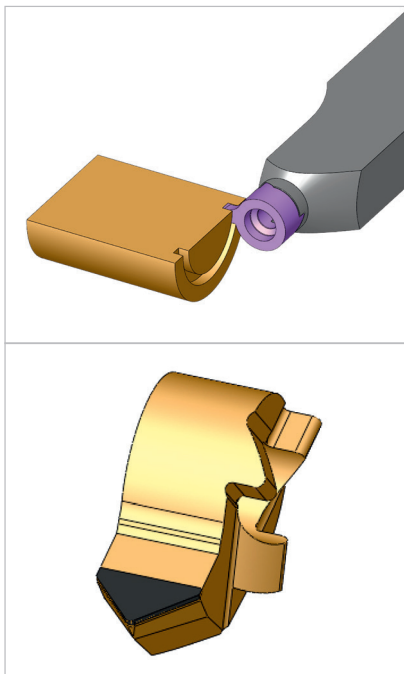
Right boring bar
Right insert



The 3-point location ensures accurate repeatability of the cutting edge height. However always be aware of the edge height. When machining small components small differences can cause big problems.

Suggestions:

- Always select smallest possible insert width, thereby the swarf remains flexible and evacuates the bore easier. To avoid swarf clogging we recommend grooving in steps or inserting a swarf release cut.
- Recommended coolant pressure = 5 bar.
- Clean insert pocket with compressed air when changing the insert.



Special holder
Special design for face grooving.

Special insert
CBN brazed especially for hard turning.