



MEGAcut

MEGACUTTING TOOLS

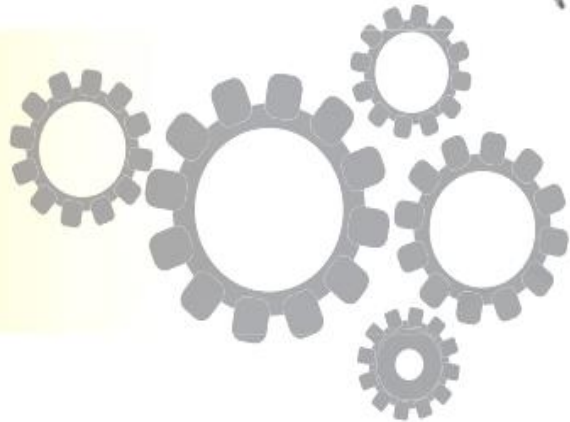
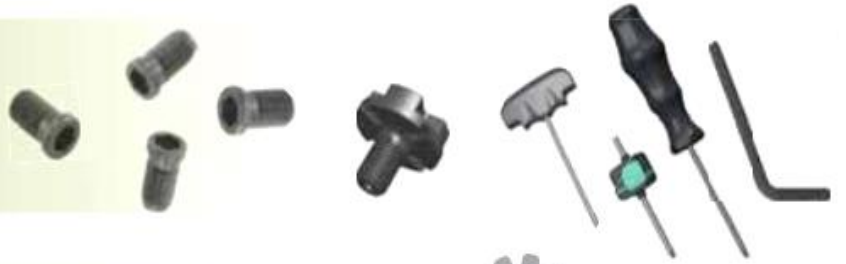
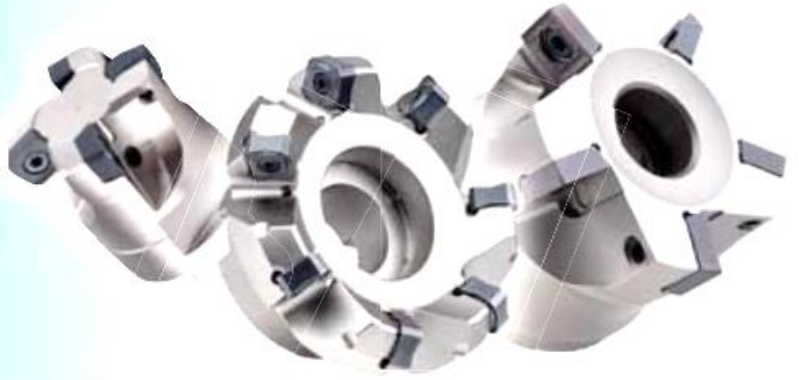
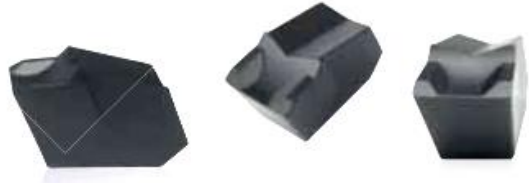
2019-2020



MEGAcut Turning Carbide insert



MEGACUT Turning Aluminum







TURNING



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Insert Designation System

C¹

N²

M³

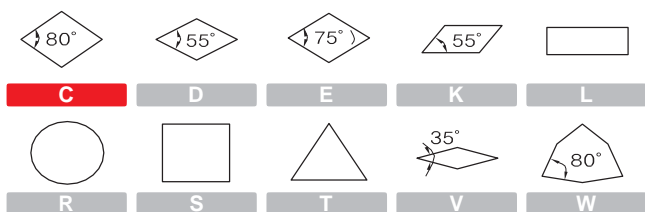
G⁴

12⁵

1

Insert Shape

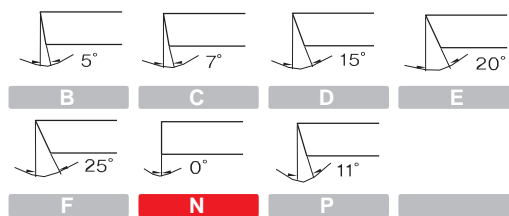
C **N** **M** **G** 12 04 08 - MR



2

Relief Angle

C **N** **M** **G** 12 04 08 - MR

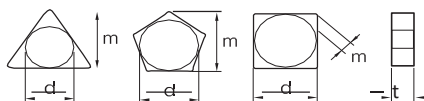


3

Tolerance

C **N** **M** **G** 12 04 08 - MR

d: Inscribed Circle
t: Thickness
m: Refer to figure



Class	d	m	t
A	±0.025	±0.005	±0.025
C	±0.025	±0.013	±0.025
H	±0.013	±0.013	±0.025
E	±0.025	±0.025	±0.025
G	±0.025	±0.025	±0.13
J*	±0.05 ~ ±0.15	±0.005	±0.025
K*	±0.05 ~ ±0.15	±0.013	±0.025
L*	±0.05 ~ ±0.15	±0.025	±0.025
M*	±0.05 ~ ±0.15	±0.08 ~ ±0.20	±0.13
N*	±0.05 ~ ±0.15	±0.08 ~ ±0.18	±0.025
U*	±0.08 ~ ±0.25	±0.13 ~ ±0.38	±0.13

Sides are based on unground insert

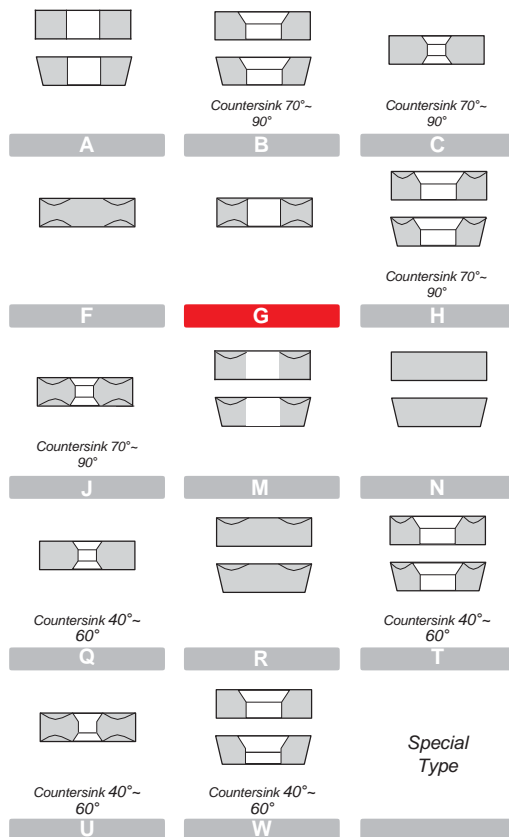
Tolerance on C,E,H,M,O,P,R,S,T,W Insert Shape

d	(d) Tolerance		(m) Tolerance	
	JKLMN	U	M,N	U
6.350	±0.05	±0.08	±0.08	±0.13
9.525	±0.05	±0.08	±0.08	±0.13
12.700	±0.08	±0.13	±0.13	±0.20
15.875	±0.10	±0.18	±0.15	±0.27
19.050	±0.10	±0.18	±0.15	±0.27
25.400	±0.13	±0.25	±0.18	±0.38

4

Form and Clamping

C **N** **M** **G** 12 04 08 - MR



Insert Designation System

04⁶

08⁷

MR⁸

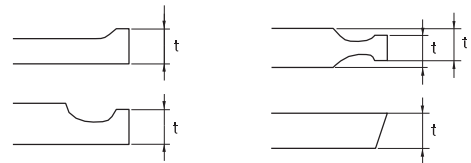
5 Cutting Edge Length on Incribed Circle

C N M G 12 04 08 - MR

Symbol							IC (∅mm)
C	d	S	T	R	V	W	
03	04	03	06	03	-	02	3.97
04	05	04	08	04	08	03	4.76
05	06	05	09	05	09	03	5.56
-	-	-	-	06	-	-	6.00
06	07	06	11	06	11	04	6.35
08	09	07	13	07	13	05	7.94
-	-	-	-	08	-	-	8.00
09	11	09	16	09	16	06	9.525
-	-	-	-	10	-	-	10.00
11	13	11	19	11	19	07	11.11
-	-	-	-	12	-	-	12.00
12	15	12	22	12	22	08	12.70
14	17	14	24	14	24	09	14.29
16	19	15	27	15	27	10	15.875
-	-	-	-	16	-	-	16.00
17	21	17	30	17	30	11	17.46
19	23	19	33	19	33	13	19.05
-	-	-	-	20	-	-	20.00
22	27	22	38	22	38	15	22.225
-	-	-	-	25	-	-	25.00
25	31	25	44	25	44	17	25.40
32	38	31	54	31	54	21	31.75
-	-	-	-	32	-	-	32.00

6 Thickness

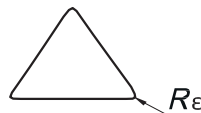
C N M G 12 04 08 - MR



Symbol	Thickness
Metric	mm
01	1.59
T0	1.79
T1	1.98
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52
11	11.11
12	12.70

7 Corner Radius

C N M G 12 04 08 - MR



Symbol	Corner Radius
Metric	Metric
01	0.1
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2
M0	Round insert (Metric)

8 Chip Breaker

C N M G 12 04 08 - MR



Grade Designation System

M¹G²P³1⁴5⁵

1 Brand (M= Mega)

2 Brand (C= Cutting)

3

P Steel

M Stainless Steel

K Cast Iron

N Non Ferrous

S Heat Resistant Alloys

H Hardened Materials

U Universal Machining

4 Coating Type

0= Uncoated

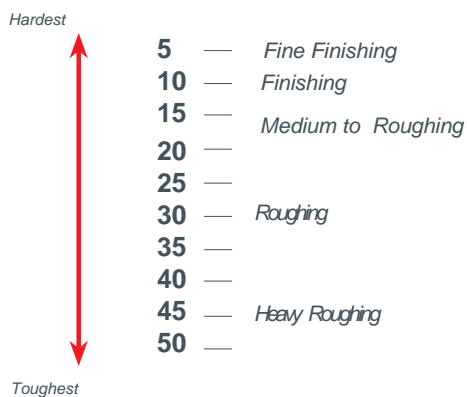
1= MT-CVD-Al₂O₃

2= PVD TiAlN









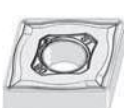





3= PVD AlTiN

4= Diamond













5 Application Range



Selection Guide for Negative Inserts


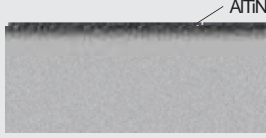


Chipbreaker*	Example insert Form	Operation	Materials Group			
Chipbreaker*	Example insert Form	Operation	Materials Group	Continuous Cutting	Variable Cutting	Interrupt Cutting
MF		Finishing	•	MGP515	MGP515	MGP525
				-	-	-
				-	-	-
				-	-	-
LC		Finishing to medium	•	MGU515	MGUU525	MGUU525
				-	-	-
				-	-	-
				-	-	-
MS		Finishing to medium	•	-	MGUM720	-
				-	-	-
			•	MGN010	MGN010	-
			•	MGM720	MGM720	-
SF		Finishing to medium	•	MGP710	MGP710	MGM720
				-	-	-
			•	MGM720	MGM720	MGM720
			•	MGM720	MGM720	MGM720
MR		Medium	•	MGU515	MGU525	MGU540
				-	-	-
				-	-	-
				-	-	-
ST		Medium	•	MGK510	MGK520	MGK520
				-	-	-
				-	-	-
				-	-	-
SS		Medium to Roughing	•	MGP710	MGP710	MGM720
				-	-	-
				-	-	-
				MGM720	MGM720	MGM720
HR		Roughing	•	MGU515	MGU525	MGU540
			•	MGU515	MGU525	MGU540
			•	MGU525	MGU540	MGU540
				-	-	-
..NM - HY		Heavy Roughing	•	-	MGU525	MGU540
				-	-	-
				-	-	-
				-	-	-
..NM - HS		Heavy Roughing	•	MGU525	-	-
			•	MGU525	-	-
				-	-	-
				-	-	-
..NM - HZ		Heavy Roughing	•	MGU525	MGU525	MGU540
				-	-	-
			•	MGK520	MGK520	MGU540
				-	-	-

Selection Guide for Positive Inserts

Chipbreaker*	Example insert Form	Operation	Materials Group			
				Continuous Cutting	Variable Cutting	Interrupt Cutting
FP		Fine Finishing	•	MGU515	MGU515	MGU525
				-	-	-
				-	-	-
				-	-	-
				-	-	-
BO		Fine Finishing	•	MGP710	MGP710	MGM720
				-	-	-
				-	-	-
				-	-	-
				-	-	-
FM		Fine Finishing	•	MGP710	MGM720	MGS725
				-	-	-
				-	-	-
			•	MGP710	MGM720	MGS725
				-	-	-
FK		Fine Finishing	•	MGK510	MGK510	MGK520
				-	-	-
				-	-	-
				-	-	-
				-	-	-
MP		Finishing	•	MGU515	MGU525	MGU535
				-	-	-
				-	-	-
				-	-	-
				-	-	-
MM		Finishing	•	MGP710	MGM720	MGS725
				-	-	-
				-	-	-
			•	MGP710	MGM720	MGS725
				-	-	-
MK		Finishing	•	MGK510	MGK520	MGK520
				-	-	-
				-	-	-
				-	-	-
				-	-	-
FS		Fine Finishing to Finishing	•	MGP710	MGM720	-
				-	-	-
				-	-	-
			•	MGP710	MGM720	-
				-	-	-
LN		Fine Finishing to Finishing	•	MGN010	MGN010	MGN010
				-	-	-
				-	-	-
				-	-	-
				-	-	-

Grade Description

PVD

Grade	Description	
MGP710 P05-P10 M05-M10 S05-S15	<i>AlTiN PVD coated carbide grade with a very hard micro grain substrate improves wear resistance, heat dissipation and avoid built-up edge. High performance on "gummy" materials. For light turning of stainless steels and HRSA.</i>	
MGM720 P10-P35 M10-M25 S10-S30	<i>A micro grain size combined with the AlTiN PVD coating make it suitable for Roughing to Finishing operations under good cutting conditions to light interrupted cuts at medium cutting speeds. Suitable for steels, stainless steel, HRSA.</i>	
MGS725 M10-M30 S10-S30	<i>General grade for medium to finishing operations under good to medium cutting conditions. The substrate balances hardness and toughness. The combination with a wear resistant AlTiN PVD coating make it suitable to stainless steel, HRSA at medium cutting speeds.</i>	
MGU610 P05-P10 M05-M10 S05-S15	<i>TiAlN PVD coated carbide grade with a very hard micro grain substrate for light turning of steels, hardened steels, stainless steels and HRSA.</i>	
MGU620 P10-P35 M10-M25 S10-S30	<i>An advanced TiAlN PVD coated grade over a tough wear resistant sub-micro substrate for general machining of steels, stainless steels & titanium alloys.</i>	

Grade Description

CVD

Grade	Description	
MGU515 P01-P30 M01-M25	<p>Medium temperature MT-CVD coating with Al₂O₃. Carbide grade with a gradient layer close to the surface.</p> <p>Suitable for high to medium cutting speeds on steels, cast steels & cast irons.</p>	
MGU525 P10-P35 M05-M30	<p>Carbide grade suitable for medium machining of steels & cast steels at medium cutting speeds. The substrate is suitable for the adhesion of the Alumina coating Al₂O₃ medium temperature MT-CVD, improving the tool life.</p>	
MGP535* P20-P40 M15-M35 K15-K30	<p>A MT-CVD Coated grade suitable for Grooving and parting off operations with single side inserts. The high toughness make it the first choice in a wide range of materials with interrupted cuts. To be used at medium to low cutting speeds.</p>	
MGU540 P25-P45 M25-M45 K20-K40	<p>Substrate with medium grain size combined with a medium temperature MT-CVD coating. Suitable for roughing to heavy roughing operations with interrupted cuts at low to medium cutting speeds.</p>	
MGK510 P01-P10 K05-K15	<p>The substrate grade with a very good wear resistance combined with the MT-CVD coating allow to work at high to medium cutting speeds at stable conditions. Recommend for turning of grey cast irons (GCI) or hardened steels. Can also be a solution for high alloy steels.</p>	
MGK520 P01-P15 K01-K25	<p>Medium temperature MT-CVD coating Al₂O₃ combined with a hard substrate make it capable of withstanding interrupted conditions. Recommended as general choice for roughing of all cast irons at low to medium cutting speeds. Can also be a solution for high alloy steels.</p>	

Uncoated

MGN010 N01-N20	<p>Uncoated carbide micrograin grade combining a good abrasive wear resistance and toughness. Suitable for rough to finish turning of HRSA, Titanium alloys, cast irons and Aluminium alloys.</p>	
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Grade Application

PVD

Grade	Application	ISO
MGP710	steel / stainless steel / HRSA	P(05-10), M(05-10), S(05-15)
MGM720	steel / stainless steel / HRSA	P(10-35), M(10-25), S(10-30)
MGS725	stainless steel / HRSA	P(10-35), M(10-30), S(10-30)
MGU610	steel / stainless steel / HRSA	P(05-10), M(05-10), S(05-15)
MGU620	steel / stainless steel / titanium	P(10-35), M(10-25), S(10-30)

CVD

Grade	Application	ISO
MGU515	steel/stainless steel	P (01-30), M (01-25)
MGU525	steel/stainless steel	P (10-35), M (05-30)
MGP535*	steel/stainless/cast iron	P(20-40), M(15-35), K(15-30)
MGU540	steel/stainless/cast iron	P(25-45), M(25-45), K(20-40)
MGK510	steel/cast iron	P (01-10), K (01-25)
MGK520	steel/cast iron	P (01-15), K (05-15)

Uncoated

Grade	Application	ISO
MGN010	Aluminium / Non Ferrous	N (01-20)



Turning



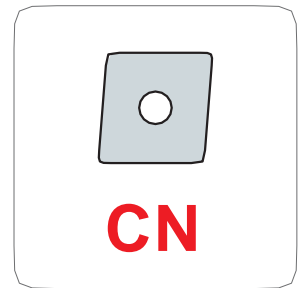
Inserts

Negative

Inserts Index


<i>Rhombic 80° Negative</i>	22	<i>Triangular 60° Negative</i>	56
CNMA	22	TNMA	56
CNMG-MF	22	TNMG-MF	58
CNMG-MS	24	TNMG-MS	58
CNMG-SF	24	TNMG-SF	58
CNMG-LC	24	TNMG-LC	60
CNMG-MR	26	TNMG-MR	60
CNMG-SS	28	TNMG-SS	62
CNMG-ST	28	TNMG-ST	62
CNMG-HR	30	TNMG-HR	64
CNMG-HY	32	<i>Rhombic 35° Negative</i>	66
CNMM-HS	32	VNMA	66
CNMM-HZ	32	VNMG-MF	66
<i>Rhombic 55° Negative</i>	34	VNMG-MS	66
DNMA	34	VNMG-SF	68
DNMG-MF	34	VNMG-LC	68
DNMG-MS	36	VNMG-MR	68
DNMG-SF	36	VNMG-SS	70
DNMG-LC	38	VNMG-ST	70
DNMG-MR	38	<i>Trigon 80° Negative</i>	72
DNMG-SS	40	WNMA	72
DNMG-ST	40	WNMG-MF	72
DNMG-HR	42	WNMG-MS	74
<i>Round R Negative</i>	44	WNMG-SF	76
RNMG-ST	44	WNMG-LC	76
<i>Square 90° Negative</i>	46	WNMG-MR	78
SNMA	46	WNMG-SS	78
SNMG-MF	48	WNMG-ST	80
SNMG-MR	48	WNMG-HR	80
SNMG-SS	50	<i>Parallelogram 55° Negative</i>	82
SNMG-ST	50	KNUX-01	82
SNMG-HR	52	KNUX-02	82
SNMG-HM	52		
SNMG-HY	54		
SNMG-HZ	54		


Rhombic 80° Negative



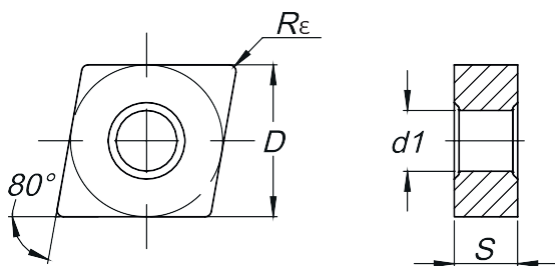
Turning


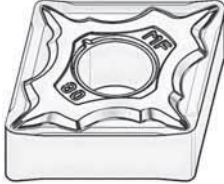
Grade

Inserts	ISO Code	Grade												
		P			M				K			N	S	
		MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 Roughing	CNMA CNMA120404	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMA120408	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMA120412	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMA120416	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMA160608	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMA160612	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMA160616	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMA190612	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMA190616	-	-	-	-	-	-	-	-	-	-	-	-	-

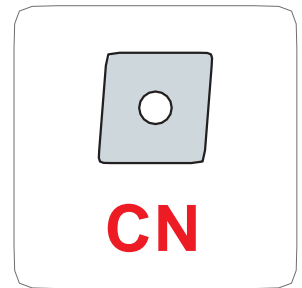
 Finishing	CNMG-MF CNMG090304MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	CNMG090308MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	CNMG09T304MF	■	-	-	■	-	-	-	-	-	-	-	-	-
	CNMG09T308MF	■	-	-	■	-	-	-	-	-	-	-	-	-
	CNMG120404MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	CNMG120408MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	CNMG120412MF	■	■	-	■	■	-	-	-	-	-	-	-	-




Ordering example: Insert Code + Grade



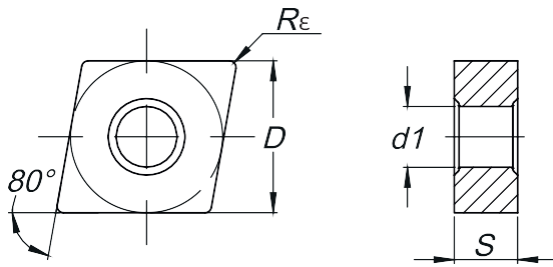
Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,4	5,16	2,50	0,20	5,00	0,20	0,10	0,30	CNMA120404	 Roughing
12,7	4,76	0,8	5,16	4,00	0,20	8,00	0,35	0,15	0,60	CNMA120408	
12,7	4,76	1,2	5,16	4,00	0,30	8,00	0,45	0,20	0,80	CNMA120412	
12,7	4,76	1,6	5,16	4,00	0,30	8,00	0,55	0,20	1,00	CNMA120416	
15,875	6,35	0,8	6,35	5,00	0,30	10,00	0,45	0,20	0,80	CNMA160608	
15,875	6,35	1,2	6,35	5,00	0,30	10,00	0,45	0,20	0,80	CNMA160612	
15,875	6,35	1,6	6,35	5,00	0,30	10,00	0,55	0,20	1,00	CNMA160616	
19,05	6,35	1,2	7,94	6,00	0,30	12,00	0,45	0,20	0,80	CNMA190612	
19,05	6,35	1,6	7,94	6,00	0,30	12,00	0,55	0,20	1,00	CNMA190616	
9,525	3,18	0,4	3,81	0,35	0,10	1,50	0,15	0,05	0,25	CNMG090304MF	 Finishing
9,525	3,18	0,8	3,81	0,35	0,10	1,50	0,20	0,10	0,40	CNMG090308MF	
9,525	3,97	0,4	3,81	0,35	0,10	1,50	0,15	0,05	0,25	CNMG09T304MF	
9,525	3,97	0,8	3,81	0,35	0,10	1,50	0,20	0,10	0,40	CNMG09T308MF	
12,7	4,76	0,4	5,16	0,40	0,10	1,50	0,15	0,05	0,25	CNMG120404MF	
12,7	4,76	0,8	5,16	0,40	0,10	1,50	0,20	0,10	0,40	CNMG120408MF	
12,7	4,76	1,2	5,16	0,80	0,50	2,50	0,25	0,15	0,50	CNMG120412MF	




Rhombic 80° Negative



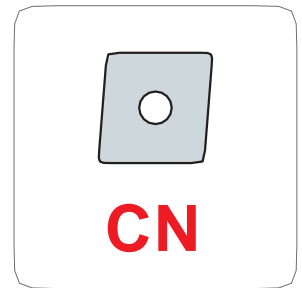
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 Finishing to Medium	CNMG-MS CNMG120404MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMG120408MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMG120412MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMG120416MS	-	-	-	-	-	-	-	-	-	-	-	-	-
 Finishing to Medium	CNMG-SF CNMG120404SF	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMG120408SF	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMG120412SF	-	-	-	-	-	-	-	-	-	-	-	-	-
 Finishing to Medium	CNMG-LC CNMG120404LC	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMG120408LC	-	-	-	-	-	-	-	-	-	-	-	-	-

Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	R ϵ	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,4	5,16	1,50	0,20	3,60	0,15	0,10	0,20	CNMG120404MS	 Finishing to Medium
12,7	4,76	0,8	5,16	2,00	0,30	3,60	0,25	0,10	0,40	CNMG120408MS	
12,7	4,76	1,2	5,16	2,40	0,40	3,60	0,30	0,15	0,60	CNMG120412MS	
12,7	4,76	1,6	5,16	2,40	0,40	3,60	0,40	0,15	0,80	CNMG120416MS	
12,7	4,76	0,4	5,16	1,50	0,60	3,00	0,15	0,10	0,23	CNMG120404SF	 Finishing to Medium
12,7	4,76	0,8	5,16	1,50	0,60	3,00	0,25	0,12	0,38	CNMG120408SF	
12,7	4,76	1,2	5,16	1,50	0,60	3,00	0,35	0,15	0,55	CNMG120412SF	
12,7	4,76	0,4	5,16	1,00	0,40	2,50	0,10	0,07	0,30	CNMG120404LC	 Finishing to Medium
12,7	4,76	0,8	5,16	1,50	0,40	2,50	0,15	0,10	0,40	CNMG120408LC	

Rhombic 80° Negative

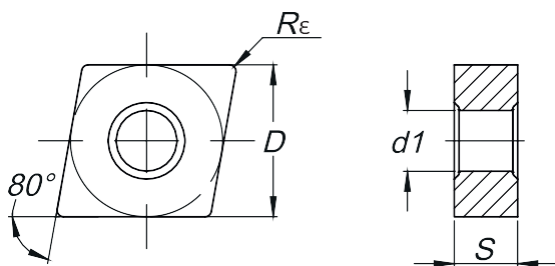


Grade

Inserts	ISO Code	Grade												
		P			M				K			N	S	
		MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
	CNMG090304MR			-	-	-	-	-	-	-	-	-	-	-
	CNMG090308MR			-	-	-	-	-	-	-	-	-	-	-
	CNMG120404MR				-	-	-	-	-	-	-	-	-	-
	CNMG120408MR				-	-	-	-	-	-	-	-	-	-
	CNMG120412MR				-	-	-	-	-	-	-	-	-	-
	CNMG120416MR				-	-	-	-	-	-	-	-	-	-
	CNMG160608MR				-	-	-	-	-	-	-	-	-	-
	CNMG160612MR				-	-	-	-	-	-	-	-	-	-
	CNMG160616MR				-	-	-	-	-	-	-	-	-	-
	CNMG190612MR				-	-	-	-	-	-	-	-	-	-
	CNMG190616MR				-	-	-	-	-	-	-	-	-	-

Medium

Ordering example: Insert Code + Grade

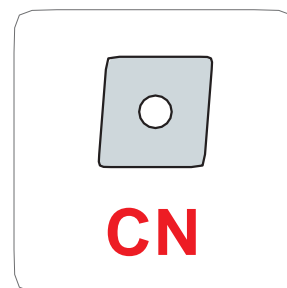


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,18	0,4	3,81	2,00	0,40	4,00	0,20	0,10	0,30	CNMG090304MR	CNMG-MR
9,525	3,18	0,8	3,81	2,00	0,50	4,00	0,30	0,15	0,50	CNMG090308MR	
12,7	4,76	0,4	5,16	3,00	0,40	5,50	0,20	0,10	0,30	CNMG120404MR	
12,7	4,76	0,8	5,16	3,00	0,50	5,50	0,30	0,15	0,50	CNMG120408MR	
12,7	4,76	1,2	5,16	3,00	0,80	5,50	0,35	0,18	0,60	CNMG120412MR	
12,7	4,76	1,6	5,16	3,00	1,00	5,50	0,40	0,23	0,65	CNMG120416MR	
15,875	6,35	0,8	6,35	4,00	0,50	7,20	0,30	0,15	0,50	CNMG160608MR	
15,875	6,35	1,2	6,35	4,00	0,80	7,20	0,35	0,18	0,60	CNMG160612MR	
15,875	6,35	1,6	6,35	4,00	1,00	7,20	0,40	0,23	0,65	CNMG160616MR	
19,05	6,35	1,2	7,94	4,00	0,80	8,60	0,35	0,18	0,60	CNMG190612MR	
19,05	6,35	1,6	7,94	4,00	1,00	8,60	0,40	0,23	0,65	CNMG190616MR	


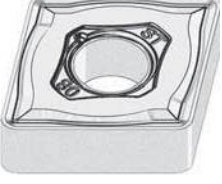


Medium

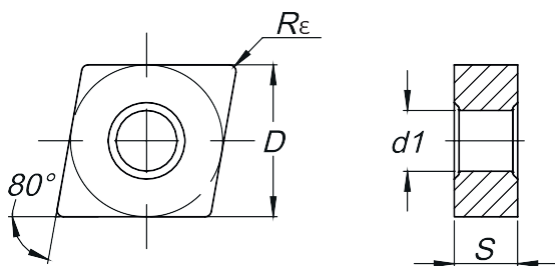
Rhombic 80° Negative

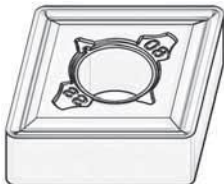
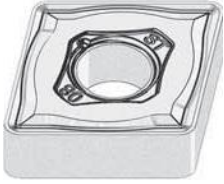


Turning

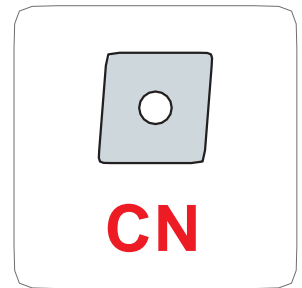
		Grade													
		P			M				K			N	S		
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720	
 <p>Medium to Roughing</p>	CNMG-SS CNMG090304SS	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CNMG090308SS	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CNMG120404SS	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CNMG120408SS	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CNMG120412SS	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CNMG120416SS	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CNMG160608SS	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CNMG160612SS	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CNMG190612SS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CNMG190616SS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
 <p>Medium</p>	CNMG-ST CNMG120404ST	-	-	-	-	-	-	-	■	■	-	-	-	-	
	CNMG120408ST	-	-	-	-	-	-	-	■	■	-	-	-	-	
	CNMG120412ST	-	-	-	-	-	-	-	■	■	-	-	-	-	
	CNMG120416ST	-	-	-	-	-	-	-	■	■	-	-	-	-	
	CNMG160608ST	-	-	-	-	-	-	-	■	■	-	-	-	-	
	CNMG160612ST	-	-	-	-	-	-	-	■	■	-	-	-	-	
	CNMG160616ST	-	-	-	-	-	-	-	■	■	-	-	-	-	

Ordering example: Insert Code + Grade

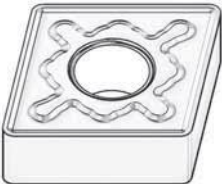


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,18	0,4	3,81	2,00	0,50	2,50	0,20	0,10	0,25	CNMG090304SS	 Medium to Roughing
9,525	3,18	0,8	3,81	2,00	0,50	2,50	0,25	0,12	0,45	CNMG090308SS	
12,7	4,76	0,4	5,16	3,00	0,50	5,70	0,20	0,10	0,25	CNMG120404SS	
12,7	4,76	0,8	5,16	3,00	0,50	5,70	0,25	0,12	0,45	CNMG120408SS	
12,7	4,76	1,2	5,16	3,00	0,50	5,70	0,30	0,15	0,60	CNMG120412SS	
12,7	4,76	1,6	5,16	3,00	0,50	5,70	0,37	0,18	0,65	CNMG120416SS	
15,875	6,35	0,8	6,35	4,00	0,50	7,20	0,25	0,12	0,45	CNMG160608SS	
15,875	6,35	1,2	6,35	4,00	0,50	7,20	0,30	0,15	0,60	CNMG160612SS	
19,05	6,35	1,2	7,94	4,00	0,50	8,50	0,30	0,15	0,60	CNMG190612SS	
19,05	6,35	1,6	7,94	4,00	0,50	8,50	0,37	0,18	0,65	CNMG190616SS	
12,700	4,76	0,4	5,16	2,50	0,20	5,00	0,22	0,15	0,26	CNMG120404ST	 Medium
12,700	4,76	0,8	5,16	3,00	0,20	6,00	0,35	0,15	0,50	CNMG120408ST	
12,700	4,76	1,2	5,16	3,00	0,30	6,00	0,40	0,15	0,60	CNMG120412ST	
12,700	4,76	1,6	5,16	3,00	0,30	6,00	0,45	0,20	0,70	CNMG120416ST	
15,875	6,35	0,8	6,35	4,00	0,20	8,00	0,35	0,15	0,50	CNMG160608ST	
15,875	6,35	1,2	6,35	4,00	0,30	8,00	0,40	0,15	0,60	CNMG160612ST	
15,875	6,35	1,6	6,35	4,00	0,30	8,00	0,45	0,20	0,70	CNMG160616ST	

Rhombic 80° Negative

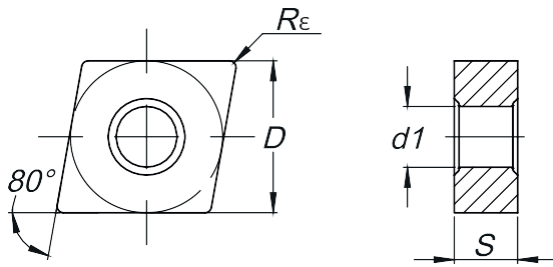


Turning

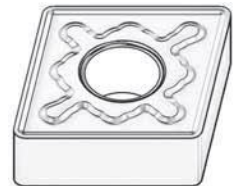
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
	CNMG-HR CNMG120408HR						-	-			-	-	-	-
	CNMG120412HR						-	-			-	-	-	-
	CNMG120416HR			-			-	-			-	-	-	-
	CNMG160608HR						-	-			-	-	-	-
	CNMG160612HR						-	-			-	-	-	-
	CNMG160616HR	-			-		-	-			-	-	-	-
	CNMG190612HR						-	-			-	-	-	-
	CNMG190616HR						-	-			-	-	-	-
	CNMG250924HR	-			-		-	-	-	-	-	-	-	-

Roughing

Ordering example: Insert Code + Grade

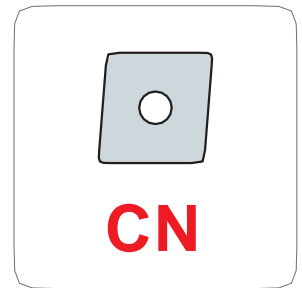




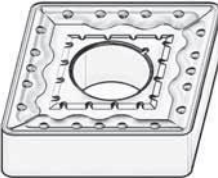
Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,8	5,16	4,00	1,00	7,00	0,35	0,20	0,55	CNMG120408HR	CNMG-HR
12,7	4,76	1,2	5,16	4,00	1,00	7,00	0,40	0,25	0,60	CNMG120412HR	
12,7	4,76	1,6	5,16	4,00	1,50	7,00	0,50	0,32	0,75	CNMG120416HR	
15,875	6,35	0,8	6,35	5,00	1,00	8,00	0,35	0,20	0,55	CNMG160608HR	
15,875	6,35	1,2	6,35	5,00	1,00	8,00	0,40	0,25	0,60	CNMG160612HR	
15,875	6,35	1,6	6,35	5,00	1,50	8,00	0,50	0,32	0,75	CNMG160616HR	
19,05	6,35	1,2	7,94	5,50	2,00	10,00	0,40	0,25	0,70	CNMG190612HR	
19,05	6,35	1,6	7,94	5,50	2,00	10,00	0,50	0,32	0,80	CNMG190616HR	
25,4	9,52	2,4	9,12	6,00	2,00	15,00	0,60	0,40	1,00	CNMG250924HR	



Roughing

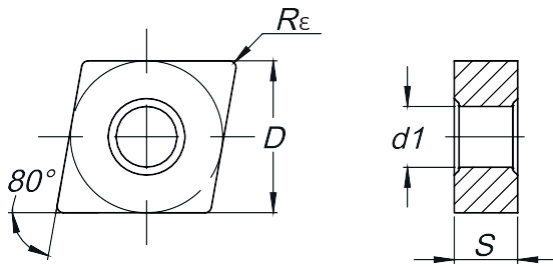
Rhombic 80° Negative


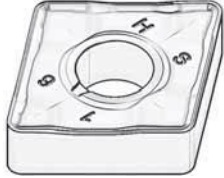
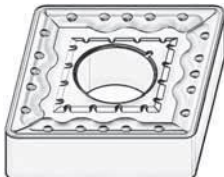


		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 Roughing to Heavy	CNMM-HY CNMM190612HY						-	-	-	-	-	-	-	-
	CNMM190616HY						-	-	-	-	-	-	-	-
	CNMM190624HY						-	-	-	-	-	-	-	-
	CNMM250924HY						-	-	-	-	-	-	-	-
 Roughing to Heavy	CNMM-HS CNMM190616HS	-		-	-		-	-	-	-	-	-	-	-
	CNMM190624HS	-		-	-		-	-	-	-	-	-	-	-
	CNMM250924HS	-		-	-		-	-	-	-	-	-	-	-
 Roughing to Heavy	CNMM-HZ CNMM190612HZ				-	-	-	-	-	-	-	-	-	-
	CNMM190616HZ				-	-	-	-	-	-	-	-	-	-
	CNMM190624HZ				-	-	-	-	-	-	-	-	-	-
	CNMM250924HZ				-	-	-	-	-	-	-	-	-	-

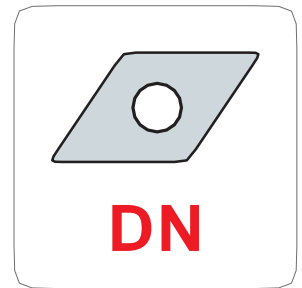
Ordering example: Insert Code + Grade

Available on request



Dimension				Cutting Data						ISO Code	Inserts
D	S	R ϵ	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
19,05	6,35	1,2	7,94	6,00	2,00	12,00	0,50	0,35	0,80	CNMM190612HY	 Roughing to Heavy
19,05	6,35	1,6	7,94	6,00	2,00	12,00	0,60	0,35	1,00	CNMM190616HY	
19,05	6,35	2,4	7,94	6,00	2,00	12,00	0,60	0,35	1,20	CNMM190624HY	
25,40	9,52	2,4	9,12	8,00	2,50	15,00	0,70	0,40	1,40	CNMM250924HY	
19,05	6,35	1,6	7,94	7,00	1,80	12,00	0,55	0,35	0,90	CNMM190616HS	 Roughing to Heavy
19,05	6,35	2,4	7,94	7,00	2,50	12,00	0,60	0,40	1,20	CNMM190624HS	
25,40	9,52	2,4	9,12	9,00	2,50	15,00	0,65	0,45	1,40	CNMM250924HS	
19,05	6,35	1,2	7,94	10,00	2,40	12,00	0,65	0,50	0,80	CNMM190612HZ	 Roughing to Heavy
19,05	6,35	1,6	7,94	10,00	2,40	12,00	0,80	0,50	1,10	CNMM190616HZ	
19,05	6,35	2,4	7,94	10,00	3,20	12,00	1,00	0,60	1,60	CNMM190624HZ	
25,40	9,52	2,4	9,12	10,00	3,20	17,00	1,00	0,60	1,60	CNMM250924HZ	

Rhombic 55° Negative

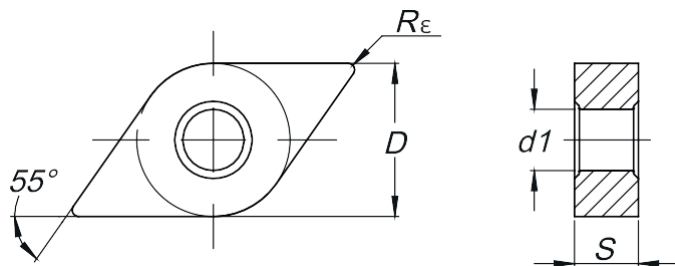



Turning


		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
DNMA	DNMA110404	-	-	-	-	-	-	-	-	-	-	-	-	-
 SCHRUPPEN Roughing	DNMA150404	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMA150408	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMA150412	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMA150416	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMA150604	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMA150608	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMA150612	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMA150616	-	-	-	-	-	-	-	-	-	-	-	-	-

DNMG-MF	DNMG110404MF	■	■	-	■	■	-	-	-	-	-	-	-	-
 Finishing	DNMG110408MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	DNMG150404MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	DNMG150408MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	DNMG150412MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	DNMG150604MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	DNMG150608MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	DNMG150612MF	■	■	-	■	■	-	-	-	-	-	-	-	-

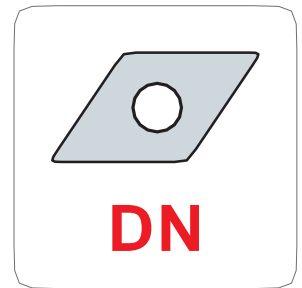
Ordering example: Insert Code + Grade





Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	3,81	2,00	0,20	3,50	0,15	0,10	0,30	DNMA110404	
12,7	4,76	0,4	3,81	3,00	0,20	4,00	0,15	0,10	0,30	DNMA150404	
12,7	4,76	0,8	5,16	3,00	0,20	6,00	0,35	0,15	0,60	DNMA150408	
12,7	4,76	1,2	5,16	3,00	0,30	6,00	0,45	0,20	0,80	DNMA150412	
12,7	4,76	1,6	5,16	3,00	0,30	6,00	0,55	0,20	1,00	DNMA150416	
12,7	6,35	0,4	5,16	3,00	0,20	4,00	0,15	0,10	0,30	DNMA150604	
12,7	6,35	0,8	5,16	3,00	0,20	6,00	0,35	0,15	0,60	DNMA150608	
12,7	6,35	1,2	5,16	3,00	0,30	6,00	0,45	0,20	0,80	DNMA150612	
12,7	6,35	1,6	5,16	3,00	0,30	6,00	0,55	0,20	1,00	DNMA150616	

9,525	4,76	0,4	3,81	0,40	0,10	1,50	0,15	0,05	0,25	DNMG110404MF	
9,525	4,76	0,8	3,81	0,40	0,10	1,50	0,20	0,10	0,40	DNMG110408MF	
12,7	4,76	0,4	5,16	0,40	0,10	1,50	0,15	0,05	0,25	DNMG150404MF	
12,7	4,76	0,8	5,16	0,40	0,10	1,50	0,20	0,10	0,40	DNMG150408MF	
12,7	4,76	1,2	5,16	0,80	0,20	2,50	0,25	0,15	0,50	DNMG150412MF	
12,7	6,35	0,4	5,16	0,40	0,10	1,50	0,15	0,05	0,25	DNMG150604MF	
12,7	6,35	0,8	5,16	0,40	0,10	1,50	0,20	0,10	0,40	DNMG150608MF	
12,7	6,35	1,2	5,16	0,80	0,20	2,50	0,25	0,15	0,50	DNMG150612MF	

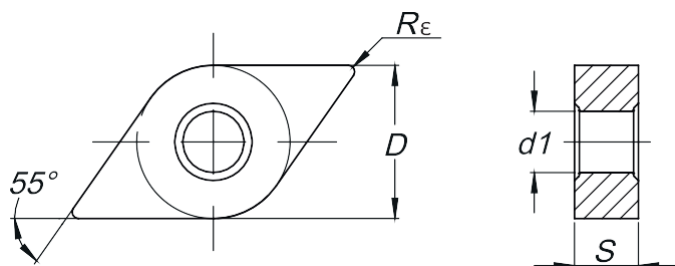
Rhombic 55° Negative





Turning

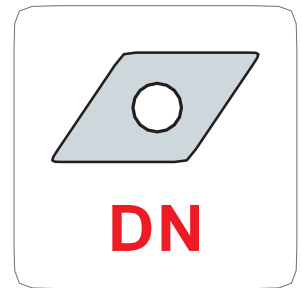
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
DNMG-MS	DNMG150404MS	-	-	-	-	-	-	-	-	-	-	-	-	-
 Finishing to Medium	DNMG150408MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMG150412MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMG150416MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMG150604MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMG150608MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	DNMG150612MS	-	-	-	-	-	-	-	-	-	-	-	-	■
	DNMG-SF	DNMG110404SF	-	-	-	-	-	■	■	-	-	-	-	■
 Finishing to Medium	DNMG110408SF	-	-	-	-	-	■	■	-	-	-	-	■	■
	DNMG150404SF	-	-	-	-	-	■	■	-	-	-	-	■	■
	DNMG150408SF	-	-	-	-	-	■	■	-	-	-	-	■	■
	DNMG150412SF	-	-	-	-	-	■	■	-	-	-	-	■	■
	DNMG150604SF	-	-	-	-	-	■	■	-	-	-	-	■	■
	DNMG150608SF	-	-	-	-	-	■	■	-	-	-	-	■	■
	DNMG150612SF	-	-	-	-	-	■	■	-	-	-	-	■	■

Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,4	5,16	1,50	0,20	3,60	0,15	0,10	0,20	DNMG150404MS	 <i>Finishing to Medium</i>
12,7	4,76	0,8	5,16	2,00	0,30	3,80	0,25	0,10	0,40	DNMG150408MS	
12,7	4,76	1,2	5,16	2,50	0,40	4,00	0,30	0,15	0,60	DNMG150412MS	
12,7	4,76	1,6	5,16	2,80	0,40	4,50	0,40	0,15	0,80	DNMG150416MS	
12,7	6,35	0,4	5,16	1,50	0,20	3,60	0,15	0,10	0,20	DNMG150604MS	
12,7	6,35	0,8	5,16	2,00	0,30	4,00	0,25	0,10	0,40	DNMG150608MS	
12,7	6,35	1,2	5,16	2,80	0,40	4,50	0,30	0,15	0,60	DNMG150612MS	
9,525	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23	DNMG110404SF	 <i>Finishing to Medium</i>
9,525	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38	DNMG110408SF	
12,7	4,76	0,4	5,16	1,50	0,60	3,00	0,15	0,10	0,23	DNMG150404SF	
12,7	4,76	0,8	5,16	1,50	0,60	3,00	0,25	0,12	0,38	DNMG150408SF	
12,7	4,76	1,2	5,16	1,50	0,60	3,00	0,35	0,15	0,55	DNMG150412SF	
12,7	6,35	0,4	5,16	1,50	0,60	3,00	0,15	0,10	0,23	DNMG150604SF	
12,7	6,35	0,8	5,16	1,50	0,60	3,00	0,25	0,12	0,38	DNMG150608SF	
12,7	6,35	1,2	5,16	1,50	0,60	3,00	0,35	0,15	0,55	DNMG150612SF	

Rhombic 55° Negative

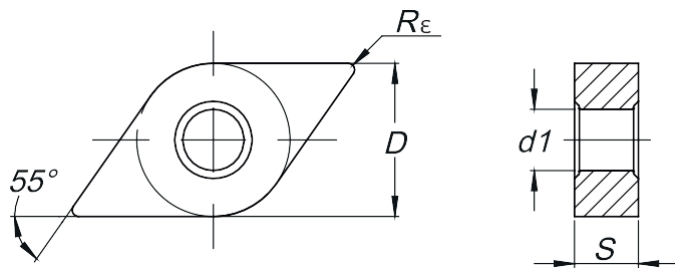


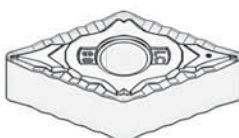

Turning

		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
<p>Finishing to Medium</p>	DNMG-LC DNMG150404LC			-	-	-	-	-	-	-	-	-	-	-
	DNMG150408LC			-	-	-	-	-	-	-	-	-	-	-
	DNMG150412LC			-	-	-	-	-	-	-	-	-	-	-
	DNMG150604LC			-	-	-	-	-	-	-	-	-	-	-
	DNMG150608LC			-	-	-	-	-	-	-	-	-	-	-
	DNMG150612LC			-	-	-	-	-	-	-	-	-	-	-

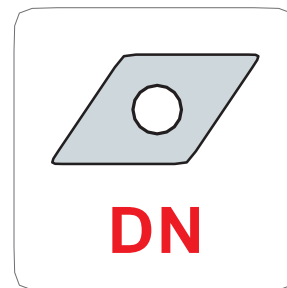
<p>Medium</p>	DNMG-MR DNMG110404MR	■	■	-	-	-	-	-	-	-	-	-	-	-	
	DNMG110408MR	■	■	-	-	-	-	-	-	-	-	-	-	-	
	DNMG150404MR	■	■	■	-	-	-	-	-	-	-	-	-	-	
	DNMG150408MR	■	■	■	-	-	-	-	-	-	-	-	-	-	
	DNMG150412MR	■	■	■	-	-	-	-	-	-	-	-	-	-	
	DNMG150604MR	■	■	■	-	-	-	-	-	-	-	-	-	-	
	DNMG150608MR	■	■	■	-	-	-	-	-	-	-	-	-	-	
	DNMG150612MR	■	■	■	-	-	-	-	-	-	-	-	-	-	
	DNMG150616MR	-	■	-	-	-	-	-	-	-	-	-	-	-	-

Ordering example: Insert Code + Grade





Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,4	5,16	1,00	0,40	2,50	0,15	0,07	0,30	DNMG150404LC	 Finishing to Medium
12,7	4,76	0,8	5,16	1,50	0,40	2,50	0,20	0,10	0,40	DNMG150408LC	
12,7	4,76	1,2	5,16	2,00	0,80	3,00	0,25	0,15	0,50	DNMG150412LC	
12,7	6,35	0,4	5,16	2,00	0,40	3,00	0,15	0,07	0,30	DNMG150604LC	
12,7	6,35	0,8	5,16	2,00	0,40	3,00	0,20	0,10	0,40	DNMG150608LC	
12,7	6,35	1,2	5,16	2,50	0,80	3,50	0,25	0,15	0,50	DNMG150612LC	
9,525	4,76	0,4	3,81	2,00	0,40	5,00	0,20	0,10	0,30	DNMG110404MR	 Medium
9,525	4,76	0,8	3,81	2,00	0,50	5,00	0,30	0,15	0,50	DNMG110408MR	
12,7	4,76	0,4	5,16	3,00	0,40	6,00	0,20	0,10	0,30	DNMG150404MR	
12,7	4,76	0,8	5,16	3,00	0,50	6,00	0,30	0,15	0,50	DNMG150408MR	
12,7	4,76	1,2	5,16	3,00	0,80	6,00	0,35	0,18	0,60	DNMG150412MR	
12,7	6,35	0,4	5,16	3,00	0,40	6,00	0,20	0,10	0,30	DNMG150604MR	
12,7	6,35	0,8	5,16	3,00	0,50	6,00	0,30	0,15	0,50	DNMG150608MR	
12,7	6,35	1,2	5,16	3,00	0,80	6,00	0,35	0,18	0,60	DNMG150612MR	
12,7	6,35	1,6	5,16	3,00	1,00	6,00	0,40	0,23	0,65	DNMG150616MR	

Rhombic 55° Negative

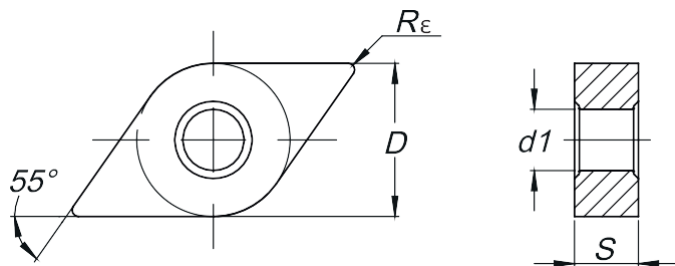



Turning


		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
DNMG-SS	DNMG110408SS	-	-	-	-				-	-	-	-		
 Medium to Roughing	DNMG150404SS	-	-						-	-	-	-		
	DNMG150408SS	-	-						-	-	-	-		
	DNMG150412SS	-	-						-	-	-	-		
	DNMG150604SS	-	-						-	-	-	-		
	DNMG150608SS	-	-						-	-	-	-		
	DNMG150612SS	-	-						-	-	-	-		
	DNMG150616SS	-	-	-	-	-	-	-	-	-	-	-	-	-
DNMG-ST	DNMG110404ST	-	-	-	-	-	-	-	■	■	-	-	-	-
 Medium	DNMG110408ST	-	-	-	-	-	-	-	■	■	-	-	-	-
	DNMG150404ST	-	-	-	-	-	-	-	■	■	-	-	-	-
	DNMG150408ST	-	-	-	-	-	-	-	■	■	-	-	-	-
	DNMG150412ST	-	-	-	-	-	-	-	■	■	-	-	-	-
	DNMG150416ST	-	-	-	-	-	-	-	■	■	-	-	-	-
	DNMG150604ST	-	-	-	-	-	-	-	■	■	-	-	-	-
	DNMG150608ST	-	-	-	-	-	-	-	■	■	-	-	-	-
	DNMG150612ST	-	-	-	-	-	-	-	■	■	-	-	-	-
	DNMG150616ST	-	-	-	-	-	-	-	■	■	-	-	-	-

Ordering example: Insert Code + Grade

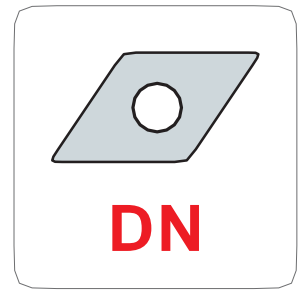
Available on request



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,8	3,81	2,00	0,50	4,40	0,25	0,12	0,45	DNMG110408SS	 Medium to Roughing
12,7	4,76	0,4	5,16	3,00	0,30	6,00	0,25	0,10	0,30	DNMG150404SS	
12,7	4,76	0,8	5,16	3,00	0,50	6,40	0,25	0,12	0,45	DNMG150408SS	
12,7	4,76	1,2	5,16	3,00	0,50	6,40	0,30	0,15	0,60	DNMG150412SS	
12,7	6,35	0,4	5,16	3,00	0,30	6,00	0,25	0,10	0,30	DNMG150604SS	
12,7	6,35	0,8	5,16	3,00	0,50	6,40	0,25	0,12	0,45	DNMG150608SS	
12,7	6,35	1,2	5,16	3,00	0,50	6,40	0,30	0,15	0,60	DNMG150612SS	
12,7	6,35	1,6	5,16	3,00	0,50	6,40	0,50	0,20	1,00	DNMG150616SS	

9,525	4,76	0,4	3,81	2,00	0,20	3,50	0,20	0,15	0,30	DNMG110404ST	 Medium
9,525	4,76	0,8	3,81	2,00	0,20	3,50	0,35	0,15	0,50	DNMG110408ST	
12,7	4,76	0,4	5,16	2,50	0,20	5,00	0,20	0,15	0,30	DNMG150404ST	
12,7	4,76	0,8	5,16	2,50	0,50	5,00	0,35	0,15	0,50	DNMG150408ST	
12,7	4,76	1,2	5,16	3,00	0,50	6,00	0,50	0,25	0,70	DNMG150412ST	
12,7	4,76	1,6	5,16	3,00	0,30	6,00	0,60	0,25	1,00	DNMG150416ST	
12,7	6,35	0,4	5,16	2,50	0,20	5,00	0,20	0,15	0,30	DNMG150604ST	
12,7	6,35	0,8	5,16	2,50	0,20	5,00	0,35	0,15	0,50	DNMG150608ST	
12,7	6,35	1,2	5,16	3,00	0,30	6,00	0,50	0,15	0,70	DNMG150612ST	
12,7	6,35	1,6	5,16	3,00	0,30	6,00	0,60	0,25	1,00	DNMG150616ST	

Rhombic 55° Negative



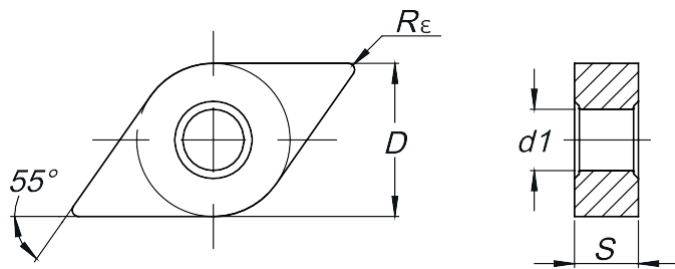
Turning

		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
DNMG-HR	DNMG150408HR						-	-				-	-	-
	DNMG150412HR						-	-				-	-	-
	DNMG150608HR						-	-				-	-	-
	DNMG150612HR						-	-				-	-	-
	DNMG150616HR						-	-				-	-	-



Roughing

Ordering example: Insert Code + Grade

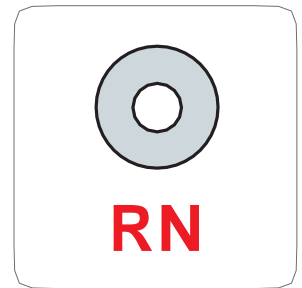


Dimension				Cutting Data						ISO Code	Inserts
D	S	R ϵ	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,8	5,16	4,00	0,80	6,00	0,35	0,20	0,55	DNMG150408HR	DNMG-HR
12,7	4,76	1,2	5,16	4,00	1,00	6,00	0,40	0,25	0,70	DNMG150412HR	
12,7	6,35	0,8	5,16	4,00	0,80	6,00	0,35	0,20	0,55	DNMG150608HR	
12,7	6,35	1,2	5,16	4,00	1,00	6,00	0,40	0,25	0,70	DNMG150612HR	
12,7	6,35	1,6	5,16	4,00	1,50	6,00	0,50	0,30	0,80	DNMG150616HR	



Roughing

Round R Negative



		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
RNMG-ST	RNMG090300ST	-			-		-		-	-		-	-	-
	RNMG120400ST	-			-		-		-	-		-	-	-
	RNMG150600ST	-			-		-		-	-		-	-	-
	RNMG190600ST	-			-		-		-	-		-	-	-
	RNMG250900ST	-			-		-		-	-		-	-	-

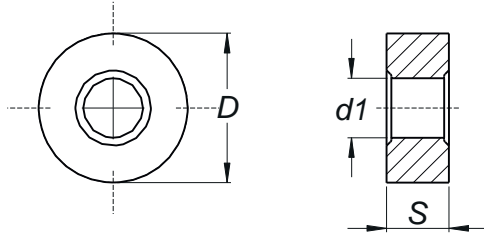


Medium

Ordering example: Insert Code + Grade



Available on request

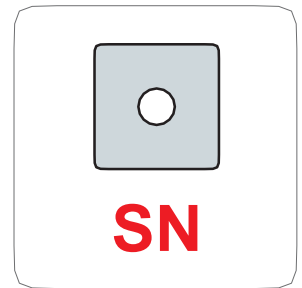


Dimension				Cutting Data						ISO Code	Inserts
D	S	R ϵ	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,18	-	3,18	2,30	0,90	4,50	0,30	0,10	0,90	RNMG090300ST	RNMG-ST
12,7	4,76	-	5,16	3,00	1,20	4,80	0,40	0,12	1,20	RNMG120400ST	
15,875	6,35	-	6,35	3,80	1,50	7,50	0,50	0,15	1,50	RNMG150600ST	
19,05	6,35	-	7,94	4,50	1,90	7,60	0,65	0,20	1,90	RNMG190600ST	
25,4	9,52	-	9,12	6,30	2,50	10,00	0,80	0,25	2,50	RNMG250900ST	




Medium

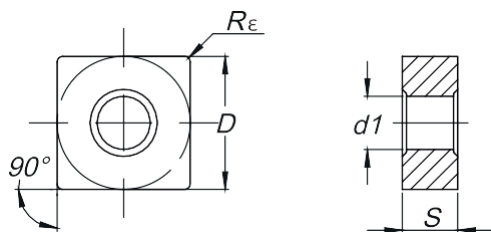
Square 90° Negative



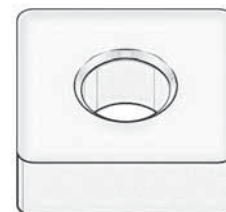
Turning

		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
	SNMA													
	SNMA090304	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA090308	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA120404	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA120408	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA120412	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA120416	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA150412	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA150612	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA190612	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA190616	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA190624	-	-	-	-	-	-	-	-	-	-	-	-	-
	SNMA250724	-	-	-	-	-	-	-	-	-	-	-	-	-
Roughing														

Ordering example: Insert Code + Grade

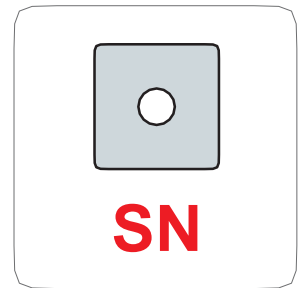


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,18	0,4	3,81	2,50	0,20	4,50	0,20	0,15	0,30	SNMA090304	SNMA
9,525	3,18	0,8	3,81	2,50	0,40	4,50	0,40	0,20	0,60	SNMA090308	
12,7	4,76	0,4	5,16	4,00	0,20	8,00	0,20	0,15	0,30	SNMA120404	
12,7	4,76	0,8	5,16	4,00	0,20	8,00	0,40	0,20	0,60	SNMA120408	
12,7	4,76	1,2	5,16	4,00	0,30	8,00	0,45	0,20	0,80	SNMA120412	
12,7	4,76	1,6	5,16	4,00	0,30	8,00	0,55	0,20	1,00	SNMA120416	
15,875	4,76	1,2	6,35	5,00	0,30	9,00	0,45	0,20	0,80	SNMA150412	
15,875	6,35	1,2	6,35	5,00	0,30	10,00	0,45	0,20	0,80	SNMA150612	
19,05	6,35	1,2	7,94	6,00	0,30	12,00	0,45	0,20	0,80	SNMA190612	
19,05	6,35	1,6	7,94	6,00	0,30	12,00	0,55	0,20	1,00	SNMA190616	
19,05	6,35	2,4	7,94	6,00	0,30	12,00	0,60	0,20	1,20	SNMA190624	
25,4	7,94	2,4	9,12	6,00	0,40	12,00	0,60	0,20	1,40	SNMA250724	





Roughing

Square 90° Negative



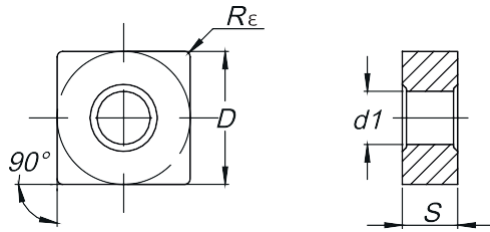
Turning


		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 <p>Finishing</p>	SNMG-MF SNMG120404MF			-			-	-	-	-	-	-	-	-
	SNMG120408MF			-			-	-	-	-	-	-	-	-
	SNMG120412MF			-			-	-	-	-	-	-	-	-

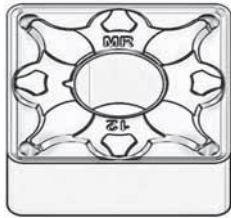
 <p>Medium</p>	SNMG-MR SNMG120404MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	SNMG120408MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	SNMG120412MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	SNMG120416MR	-	■	■	-	-	-	-	-	-	-	-	-	-
	SNMG150608MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	SNMG150612MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	SNMG150616MR	□	□	□	-	-	-	-	-	-	-	-	-	-
	SNMG190612MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	SNMG190616MR	■	■	■	-	-	-	-	-	-	-	-	-	-

Ordering example: Insert Code + Grade

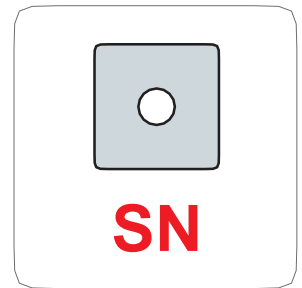
Available on request




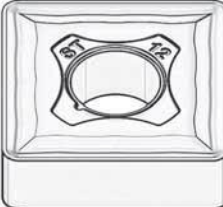
Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,4	5,16	0,40	0,10	1,50	0,10	0,05	0,25	SNMG120404MF	 Finishing
12,7	4,76	0,8	5,16	0,40	0,10	1,50	0,20	0,10	0,40	SNMG120408MF	
12,7	4,76	1,2	5,16	0,80	0,15	2,50	0,30	0,20	0,60	SNMG120412MF	

12,7	4,76	0,4	5,16	3,00	0,40	6,00	0,20	0,10	0,30	SNMG120404MR	 Medium
12,7	4,76	0,8	5,16	3,00	0,50	6,00	0,30	0,15	0,50	SNMG120408MR	
12,7	4,76	1,2	5,16	3,00	0,80	6,00	0,35	0,18	0,60	SNMG120412MR	
12,7	4,76	1,6	5,16	3,00	1,00	6,00	0,40	0,23	0,65	SNMG120416MR	
15,875	6,35	0,8	6,35	4,00	0,60	7,50	0,30	0,15	0,50	SNMG150608MR	
15,875	6,35	1,2	6,35	4,00	0,80	7,50	0,35	0,18	0,60	SNMG150612MR	
15,875	6,35	1,6	6,35	4,00	1,00	7,50	0,40	0,23	0,65	SNMG150616MR	
19,05	6,35	1,2	7,94	5,00	0,80	9,00	0,35	0,18	0,60	SNMG190612MR	
19,05	6,35	1,6	7,94	5,00	1,00	9,00	0,40	0,23	0,65	SNMG190616MR	

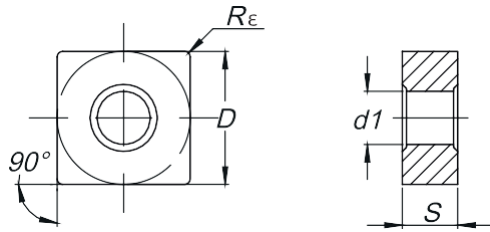
Square 90° Negative


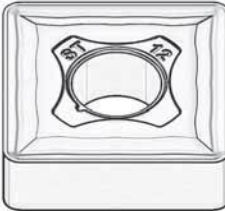


Turning

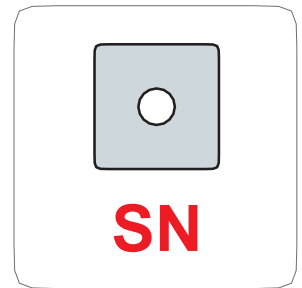
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 Medium to Roughing	SNMG-SS SNMG090304SS	-	-	-	-	-			-	-	-	-		
	SNMG090308SS	-	-	-	-	-			-	-	-	-		
	SNMG120404SS	-	-	-	-				-	-	-	-		
	SNMG120408SS	-	-	-	-				-	-	-	-		
	SNMG120412SS	-	-	-	-				-	-	-	-		
	SNMG120416SS	-	-	-	-				-	-	-	-	-	-
	SNMG150608SS	-	-	-	-				-	-	-	-	-	-
	SNMG150612SS	-	-	-	-				-	-	-	-	-	-
	SNMG190616SS	-	-	-	-				-	-	-	-	-	-
 Medium	SNMG-ST SNMG090308ST	-	-	-	-	-			■	■	-	-	-	-
	SNMG120408ST	-	-	-	-	-			■	■	-	-	-	-
	SNMG120412ST	-	-	-	-	-			■	■	-	-	-	-
	SNMG120416ST	-	-	-	-	-			■	■	-	-	-	-
	SNMG190612ST	-	-	-	-	-			■	■	-	-	-	-
	SNMG190616ST	-	-	-	-	-			■	■	-	-	-	-

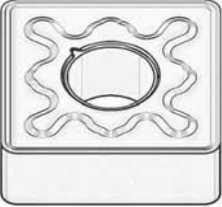

Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,18	0,4	3,81	2,00	0,50	4,50	0,20	0,10	0,30	SNMG090304SS	 Medium to Roughing
9,525	3,18	0,8	3,81	2,00	0,50	4,50	0,25	0,12	0,45	SNMG090308SS	
12,7	4,76	0,4	5,16	3,00	0,50	6,40	0,20	0,12	0,30	SNMG120404SS	
12,7	4,76	0,8	5,16	3,00	0,50	6,40	0,25	0,12	0,45	SNMG120408SS	
12,7	4,76	1,2	5,16	3,00	0,50	6,40	0,30	0,15	0,60	SNMG120412SS	
12,7	4,76	1,6	5,16	3,00	0,50	6,40	0,45	0,15	0,80	SNMG120416SS	
15,875	6,35	0,8	6,35	4,00	0,50	8,00	0,25	0,12	0,45	SNMG150608SS	
15,875	6,35	1,2	6,35	4,00	0,50	8,00	0,30	0,15	0,60	SNMG150612SS	
19,05	6,35	1,6	7,94	4,00	0,50	8,00	0,45	0,15	0,80	SNMG190616SS	
9,525	3,18	0,8	3,81	2,50	0,20	4,50	0,35	0,15	0,50	SNMG090308ST	 Medium
12,7	4,76	0,8	5,16	3,00	0,20	6,00	0,35	0,15	0,50	SNMG120408ST	
12,7	4,76	1,2	5,16	3,00	0,30	6,00	0,40	0,15	0,60	SNMG120412ST	
12,7	4,76	1,6	5,16	3,00	0,30	6,00	0,45	0,20	0,70	SNMG120416ST	
19,05	6,35	1,2	7,94	4,50	0,30	9,00	0,40	0,15	0,60	SNMG190612ST	
19,05	6,35	1,6	7,94	4,50	0,30	9,00	0,45	0,20	0,70	SNMG190616ST	

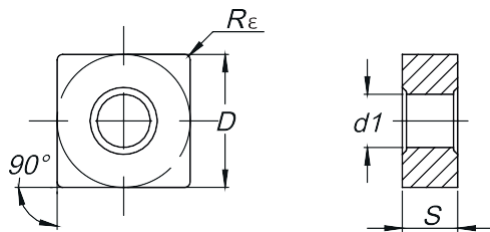
Square 90° Negative


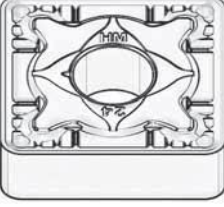


		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 Roughing	SNMG-HR SNMG120408HR						-	-	-	-	-	-	-	-
	SNMG120412HR						-	-	-	-	-	-	-	-
	SNMG120416HR						-	-	-	-	-	-	-	-
	SNMG150612HR	-			-		-	-	-	-	-	-	-	-
	SNMG150616HR	-			-		-	-	-	-	-	-	-	-
	SNMG190612HR						-	-	-	-	-	-	-	-
	SNMG190616HR						-	-	-	-	-	-	-	-
	SNMG250924HR	-		-	-		-	-	-	-	-	-	-	-
 Roughing	SNMG-HM SNMG250924HM	-	■	□	-	■	-	-	-	-	-	-	-	-

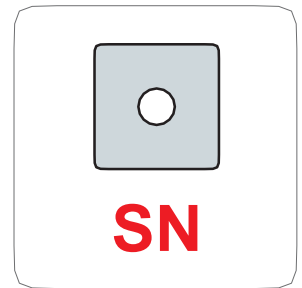
Ordering example: Insert Code + Grade

Available on request

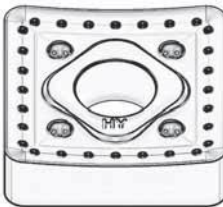



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,8	5,16	4,00	0,80	7,00	0,35	0,20	0,55	SNMG120408HR	 Roughing
12,7	4,76	1,2	5,16	4,00	1,00	7,00	0,40	0,25	0,70	SNMG120412HR	
12,7	4,76	1,6	5,16	4,00	1,50	7,00	0,50	0,32	0,80	SNMG120416HR	
15,875	6,35	1,2	6,35	4,00	1,00	8,00	0,40	0,25	0,70	SNMG150612HR	
15,875	6,35	1,6	6,35	4,00	1,50	8,00	0,50	0,32	0,80	SNMG150616HR	
19,05	6,35	1,2	7,94	5,00	1,00	10,00	0,40	0,25	0,70	SNMG190612HR	
19,05	6,35	1,6	7,94	5,00	1,50	10,00	0,50	0,32	0,80	SNMG190616HR	
25,4	9,52	2,4	9,12	6,00	2,00	15,00	1,00	0,40	1,20	SNMG250924HR	
25,4	9,52	2,4	9,12	6,00	2,00	15,00	1,00	0,40	1,20	SNMG250924HM	 Roughing

Square 90° Negative



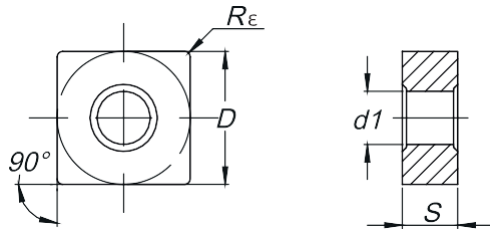
Turning

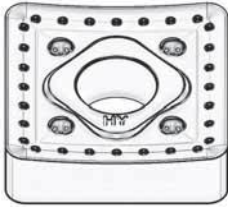
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 <p>Roughing to Heavy</p>	SNMM-HY SNMM190612HY						-	-	-	-	-	-	-	-
	SNMM190616HY						-	-	-	-	-	-	-	-
	SNMM190624HY						-	-	-	-	-	-	-	-
	SNMM250724HY						-	-	-	-	-	-	-	-
	SNMM250924HY						-	-	-	-	-	-	-	-

 <p>Roughing to Heavy</p>	SNMM-HZ SNMM190612HZ	■	■	□	-	-	-	-	-	■	-	-	-	-
	SNMM190616HZ	■	■	□	-	-	-	-	-	■	-	-	-	-
	SNMM190624HZ	■	■	□	-	-	-	-	-	■	-	-	-	-
	SNMM250724HZ	■	■	□	-	-	-	-	-	■	-	-	-	-
	SNMM250924HZ	■	■	□	-	-	-	-	-	■	-	-	-	-

Ordering example: Insert Code + Grade

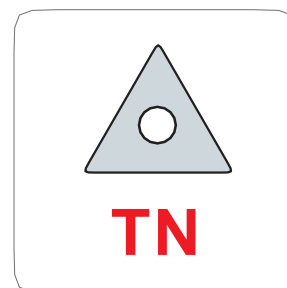
Available on request



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
19,05	6,35	1,2	7,94	6,00	2,00	12,00	0,60	0,35	0,90	SNMM190612HY	 Roughing to Heavy
19,05	6,35	1,6	7,94	6,00	2,00	12,00	0,60	0,35	1,20	SNMM190616HY	
19,05	6,35	2,4	7,94	6,00	2,00	12,00	1,00	0,60	1,60	SNMM190624HY	
25,4	7,94	2,4	9,12	8,50	2,50	15,00	1,00	0,60	1,60	SNMM250724HY	
25,4	9,52	2,4	9,12	8,50	3,00	15,00	1,00	0,60	1,60	SNMM250924HY	

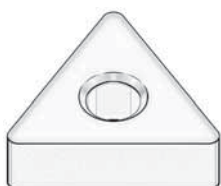
19,05	6,35	1,2	7,94	10,00	2,40	13,00	0,60	0,35	0,90	SNMM190612HZ	 Roughing to Heavy
19,05	6,35	1,6	7,94	10,00	2,40	13,00	0,60	0,35	1,20	SNMM190616HZ	
19,05	6,35	2,4	7,94	10,00	3,20	13,00	1,00	0,60	1,60	SNMM190624HZ	
25,4	7,94	2,4	9,12	10,00	3,20	17,00	1,00	0,60	1,60	SNMM250724HZ	
25,4	9,52	2,4	9,12	10,00	3,20	17,00	1,00	0,60	1,60	SNMM250924HZ	

Triaangular 60° Negative



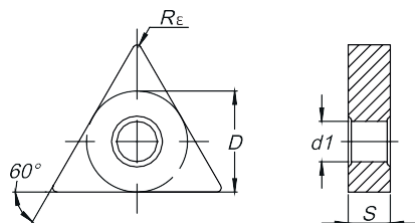
Turning

		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
TNMA	TNMA110304	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA110308	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA160304	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA160308	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA160404	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA160408	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA160412	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA160416	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA220404	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA220408	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA220412	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA220416	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA270608	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA270612	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA270616	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMA330724	-	-	-	-	-	-	-	-	-	-	-	-	-

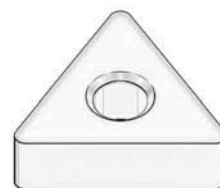


Roughing

Ordering example: Insert Code + Grade

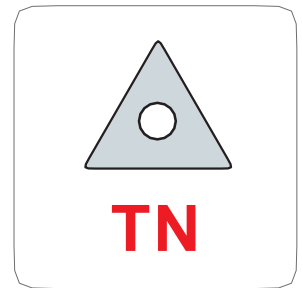


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	3,18	0,4	2,26	2,00	0,15	4,00	0,20	0,10	0,30	TNMA110304	TNMA
6,35	3,18	0,8	2,26	2,00	0,15	4,00	0,35	0,15	0,60	TNMA110308	
9,525	3,18	0,4	3,81	2,50	0,20	5,00	0,20	0,10	0,30	TNMA160304	
9,525	3,18	0,8	3,81	2,50	0,20	5,00	0,35	0,15	0,60	TNMA160308	
9,525	4,76	0,4	3,81	2,50	0,20	5,00	0,20	0,10	0,30	TNMA160404	
9,525	4,76	0,8	3,81	3,50	0,20	7,00	0,35	0,15	0,60	TNMA160408	
9,525	4,76	1,2	3,81	3,50	0,30	7,00	0,45	0,20	0,80	TNMA160412	
9,525	4,76	1,6	3,81	3,50	0,30	7,00	0,55	0,20	1,00	TNMA160416	
12,7	4,76	0,4	5,16	4,00	0,20	10,00	0,20	0,10	0,30	TNMA220404	
12,7	4,76	0,8	5,16	5,00	0,20	10,00	0,35	0,15	0,60	TNMA220408	
12,7	4,76	1,2	5,16	5,00	0,30	10,00	0,45	0,20	0,80	TNMA220412	
12,7	4,76	1,6	5,16	5,00	0,30	10,00	0,55	0,20	1,00	TNMA220416	
15,875	6,35	0,8	6,35	5,00	0,30	12,00	0,35	0,15	0,60	TNMA270608	
15,875	6,35	1,2	6,35	5,00	0,30	12,00	0,45	0,20	0,80	TNMA270612	
15,875	6,35	1,6	6,35	5,00	0,30	12,00	0,55	0,20	1,00	TNMA270616	
19,05	7,94	2,4	7,94	6,50	0,30	15,00	0,60	0,30	2,00	TNMA330724	

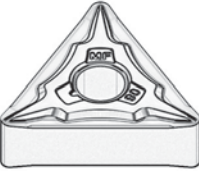




Roughing

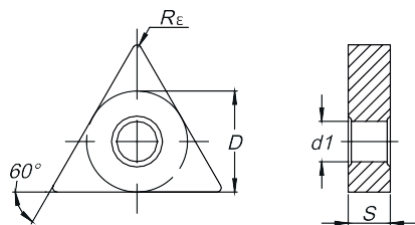
Triaangular 60° Negative

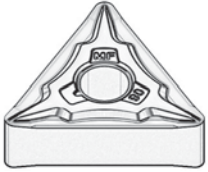




Turning

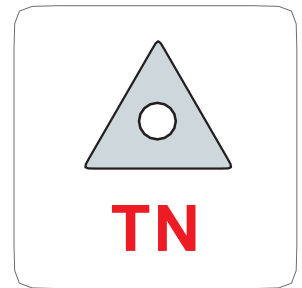
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
TNMG-MF	TNMG160404MF			-			-	-	-	-	-	-	-	-
 Finishing	TNMG160408MF			-			-	-	-	-	-	-	-	-
	TNMG160412MF			-			-	-	-	-	-	-	-	-
	TNMG220408MF			-			-	-	-	-	-	-	-	-
TNMG-MS	TNMG160404MS	-	-	-	-	-	-	-	-	-	-	-	-	-
 Finishing to Medium	TNMG160408MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMG160412MS	-	-	-	-	-	-	-	-	-	-	-	-	-
TNMG-SF	TNMG160404SF	-	-	-	-	-	-	-	-	-	-	-	-	-
 Finishing to Medium	TNMG160408SF	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMG160412SF	-	-	-	-	-	-	-	-	-	-	-	-	-
	TNMG220408SF	-	-	-	-	-	-	-	-	-	-	-	-	-

Ordering example: Insert Code + Grade

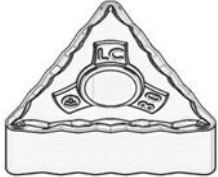


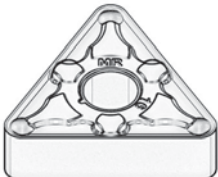
Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	3,81	0,40	0,10	1,50	0,15	0,05	0,25	TNMG160404MF	 Finishing
9,525	4,76	0,8	3,81	0,40	0,10	1,50	0,20	0,10	0,40	TNMG160408MF	
9,525	4,76	1,2	3,81	1,00	0,20	2,50	0,30	0,15	0,60	TNMG160412MF	
12,7	4,76	0,8	5,16	1,50	0,25	2,50	0,20	0,10	0,40	TNMG220408MF	
9,525	4,76	0,4	3,81	2,00	0,30	3,80	0,15	0,10	0,20	TNMG160404MS	 Finishing to Medium
9,525	4,76	0,8	3,81	2,00	0,30	3,80	0,25	0,10	0,40	TNMG160408MS	
9,525	4,76	1,2	3,81	2,00	0,40	3,80	0,30	0,15	0,60	TNMG160412MS	
9,525	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23	TNMG160404SF	 Finishing to Medium
9,525	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38	TNMG160408SF	
9,525	4,76	1,2	3,81	1,50	0,60	3,00	0,35	0,15	0,55	TNMG160412SF	
12,7	4,76	0,8	5,16	1,50	0,60	3,00	0,25	0,12	0,38	TNMG220408SF	

Triaangular 60° Negative

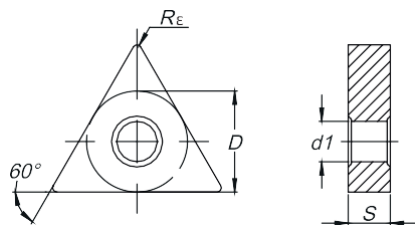


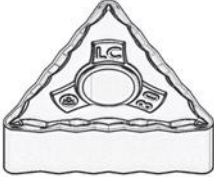
Turning

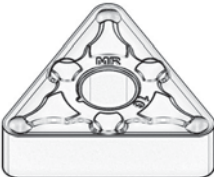
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
TNMG-LC	TNMG160404LC			-	-	-	-	-	-	-	-	-	-	-
 <p>Finishing to Medium</p>	TNMG160408LC			-	-	-	-	-	-	-	-	-	-	-
	TNMG160412LC			-	-	-	-	-	-	-	-	-	-	-
	TNMG220408LC			-	-	-	-	-	-	-	-	-	-	-
	TNMG220412LC			-	-	-	-	-	-	-	-	-	-	-

TNMG-MR	TNMG160308MR	■	■	-	-	-	-	-	-	-	-	-	-	-
 <p>Medium</p>	TNMG160404MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	TNMG160408MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	TNMG160412MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	TNMG220404MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	TNMG220408MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	TNMG220412MR	■	■	■	-	-	-	-	-	-	-	-	-	-
	TNMG220416MR	-	■	■	-	-	-	-	-	-	-	-	-	-

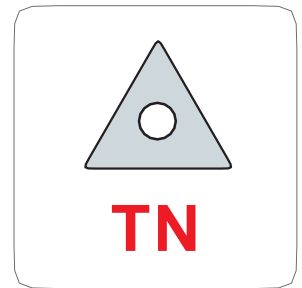
Ordering example: Insert Code + Grade

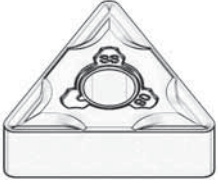



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	3,81	1,00	0,40	2,50	0,15	0,07	0,30	TNMG160404LC	 Finishing to Medium
9,525	4,76	0,8	3,81	1,50	0,40	2,50	0,20	0,10	0,40	TNMG160408LC	
9,525	4,76	1,2	3,81	2,00	0,80	3,00	0,25	0,15	0,50	TNMG160412LC	
12,7	4,76	0,8	5,16	2,00	0,40	3,00	0,20	0,10	0,40	TNMG220408LC	
12,7	4,76	1,2	5,16	2,50	0,80	3,50	0,25	0,15	0,50	TNMG220412LC	

9,525	3,18	0,8	3,81	2,80	0,30	5,00	0,30	0,15	0,50	TNMG160308MR	 Medium
9,525	4,76	0,4	3,81	3,00	0,40	5,00	0,20	0,10	0,30	TNMG160404MR	
9,525	4,76	0,8	3,81	3,00	0,50	5,00	0,30	0,15	0,50	TNMG160408MR	
9,525	4,76	1,2	3,81	3,00	0,80	5,00	0,35	0,18	0,60	TNMG160412MR	
12,7	4,76	0,4	5,16	4,00	0,40	6,60	0,20	0,10	0,30	TNMG220404MR	
12,7	4,76	0,8	5,16	4,00	0,50	6,60	0,30	0,15	0,50	TNMG220408MR	
12,7	4,76	1,2	5,16	4,00	0,80	6,60	0,35	0,18	0,60	TNMG220412MR	
12,7	4,76	1,6	5,16	4,00	1,00	6,60	0,40	0,23	0,70	TNMG220416MR	

Triaangular 60° Negative

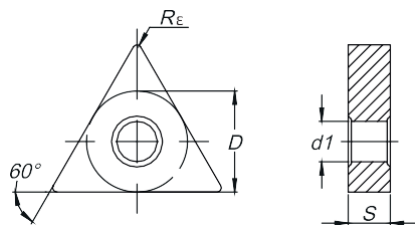


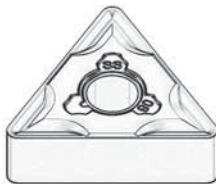
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
TNMG-SS	TNMG160404SS	-	-						-	-	-	-		
 <p>Medium to Roughing</p>	TNMG160408SS	-	-						-	-	-	-		
	TNMG160412SS	-	-						-	-	-	-		
	TNMG220408SS	-	-						-	-	-	-		
	TNMG220412SS	-	-	-	-	-	-	-	-	-	-	-	-	-

TNMG-ST	TNMG110308ST	-	-	-	-	-	-	-	-	■	-	-	-	-	
 <p>Medium</p>	TNMG160304ST	-	-	-	-	-	-	-	-	■	-	-	-	-	
	TNMG160308ST	-	-	-	-	-	-	-	-	■	-	-	-	-	-
	TNMG160404ST	-	-	-	-	-	-	-	■	■	-	-	-	-	-
	TNMG160408ST	-	-	-	-	-	-	-	■	■	-	-	-	-	-
	TNMG160412ST	-	-	-	-	-	-	-	■	■	-	-	-	-	-
	TNMG160416ST	-	-	-	-	-	-	-	■	■	-	-	-	-	-
	TNMG220404ST	-	-	-	-	-	-	-	■	■	-	-	-	-	-
	TNMG220408ST	-	-	-	-	-	-	-	■	■	-	-	-	-	-
	TNMG220412ST	-	-	-	-	-	-	-	■	■	-	-	-	-	-
	TNMG220416ST	-	-	-	-	-	-	-	■	■	-	-	-	-	-

Ordering example: Insert Code + Grade

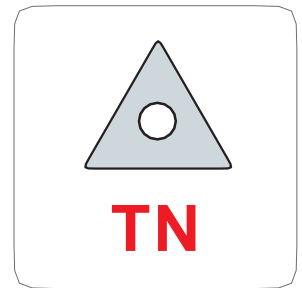
Available on request



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	3,81	2,00	0,50	4,00	0,20	0,10	0,30	TNMG160404SS	 Medium to Roughing
9,525	4,76	0,8	3,81	3,00	0,50	4,80	0,25	0,12	0,45	TNMG160408SS	
9,525	4,76	1,2	3,81	3,00	0,50	4,80	0,30	0,15	0,60	TNMG160412SS	
12,7	4,76	0,8	5,16	4,00	0,50	6,60	0,25	0,12	0,45	TNMG220408SS	
12,7	4,76	1,2	5,16	4,00	0,50	6,60	0,30	0,15	0,60	TNMG220412SS	

6,35	3,18	0,8	2,26	2,00	0,15	4,50	0,35	0,15	0,50	TNMG110308ST	 Medium
9,525	3,18	0,4	3,81	3,00	0,20	5,50	0,22	0,15	0,30	TNMG160304ST	
9,525	3,18	0,8	3,81	3,00	0,20	5,50	0,35	0,15	0,50	TNMG160308ST	
9,525	4,76	0,4	3,81	3,00	0,20	5,50	0,22	0,15	0,30	TNMG160404ST	
9,525	4,76	0,8	3,81	3,00	0,20	5,50	0,35	0,15	0,50	TNMG160408ST	
9,525	4,76	1,2	3,81	3,00	0,30	5,50	0,40	0,15	0,60	TNMG160412ST	
9,525	4,76	1,6	3,81	3,00	0,30	5,50	0,40	0,15	0,60	TNMG160416ST	
12,7	4,76	0,4	5,16	4,00	0,20	8,00	0,22	0,15	0,30	TNMG220404ST	
12,7	4,76	0,8	5,16	4,00	0,20	8,00	0,35	0,15	0,50	TNMG220408ST	
12,7	4,76	1,2	5,16	4,00	0,30	8,00	0,40	0,15	0,60	TNMG220412ST	
12,7	4,76	1,6	5,16	4,00	0,30	8,00	0,45	0,20	0,70	TNMG220416ST	

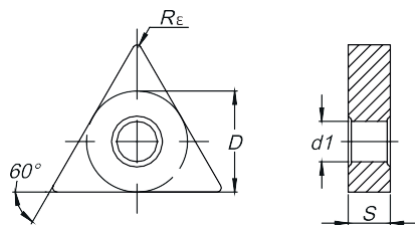
Triaangular 60° Negative



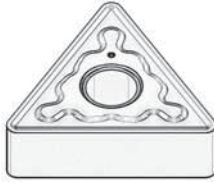
		Grade												
		P			M				K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
	TNMG-HR						-	-			-	-	-	-
	TNMG160408HR						-	-			-	-	-	-
	TNMG160412HR						-	-			-	-	-	-
	TNMG220408HR						-	-			-	-	-	-
	TNMG220412HR						-	-			-	-	-	-
	TNMG220416HR						-	-			-	-	-	-

Roughing

Ordering example: Insert Code + Grade

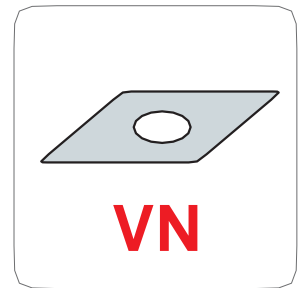



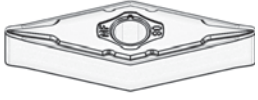
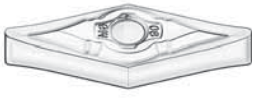
Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,8	3,81	3,00	0,80	6,00	0,35	0,20	0,55	TNMG160408HR	TNMG-HR
9,525	4,76	1,2	3,81	3,00	1,00	6,00	0,40	0,25	0,70	TNMG160412HR	
12,7	4,76	0,8	5,16	4,00	0,80	6,50	0,35	0,20	0,55	TNMG220408HR	
12,7	4,76	1,2	5,16	4,00	1,00	7,00	0,40	0,25	0,70	TNMG220412HR	
12,7	4,76	1,6	5,16	4,00	1,50	7,00	0,60	0,25	0,90	TNMG220416HR	



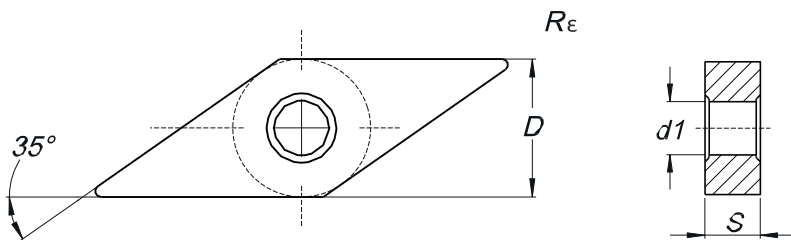
Roughing




Rhombic 35° Negative



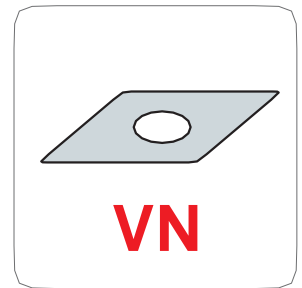
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
VNMA	VNMA160404	-	-	-	-	-	-	-	-	-	-	-	-	-
	VNMA160408	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Roughing</i>													
VNMG-MF	VNMG160404MF			-			-	-	-	-	-	-	-	-
	VNMG160408MF			-			-	-	-	-	-	-	-	-
	<i>Finishing</i>													
VNMG-MS	VNMG160404MS	-	-	-	-	-	-		-	-	-		-	
	VNMG160408MS	-	-	-	-	-	-		-	-	-		-	
	<i>Finishing to Medium</i>													

Ordering example: Insert Code + Grade






Dimension				Cutting Data						ISO Code	Inserts
D	S	R ϵ	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	3,81	0,20	0,10	3,30	0,15	0,08	0,25	VNMA160404	VNMA
9,525	4,76	0,8	3,81	0,20	0,10	3,30	0,30	0,10	0,50	VNMA160408	
											 Roughing
9,525	4,76	0,4	3,81	0,40	0,10	1,50	0,15	0,05	0,25	VNMG160404MF	VNMG-MF
9,525	4,76	0,8	3,81	0,40	0,10	1,50	0,20	0,10	0,40	VNMG160408MF	
											 Finishing
9,525	4,76	0,4	3,81	2,00	0,20	4,00	0,15	0,10	0,20	VNMG160404MS	VNMG-MS
9,525	4,76	0,8	3,81	2,50	0,20	4,00	0,25	0,15	0,40	VNMG160408MS	
											 Finishing to Medium

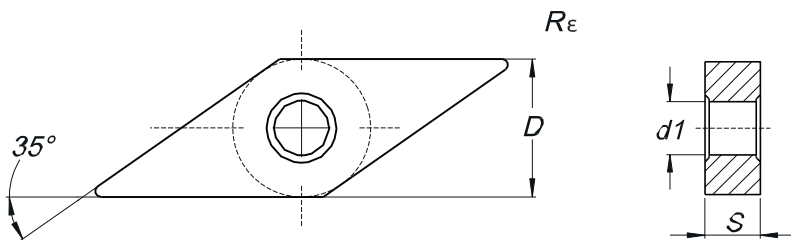
Rhombic 35° Negative






Turning

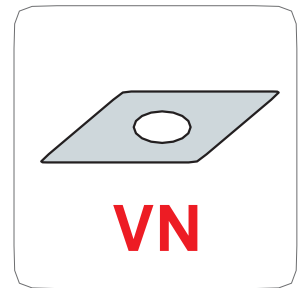
		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
VNMG-SF	VNMG160402SF	-	-	-	-	-			-	-	-	-		
 Finishing to Medium	VNMG160404SF	-	-	-	-	-			-	-	-	-		
	VNMG160408SF	-	-	-	-	-			-	-	-	-		
	VNMG160412SF													
	VNMG-LC	VNMG160404LC			-	-	-	-	-	-	-	-	-	-
	VNMG160408LC			-	-	-	-	-	-	-	-	-	-	-
 Finishing to Medium														
VNMG-MR	VNMG160404MR				-	-	-	-	-	-	-	-	-	-
 Medium	VNMG160408MR				-	-	-	-	-	-	-	-	-	-
	VNMG220408MR				-	-	-	-	-	-	-	-	-	-

Ordering example: Insert Code + Grade





Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,2	3,81	1,50	0,60	3,00	0,15	0,10	0,23	VNMG160402SF	 Finishing to Medium
9,525	4,76	0,4	3,81	1,50	0,60	3,00	0,25	0,12	0,38	VNMG160404SF	
9,525	4,76	0,8	3,81	1,50	0,60	3,00	0,35	0,15	0,55	VNMG160408SF	
9,525	4,76	1,2	3,81	1,50	0,60	3,00	0,35	0,15	0,55	VNMG160412SF	
9,525	4,76	0,8	3,81	1,50	0,40	2,50	0,15	0,10	0,40	VNMG160408LC	 Finishing to Medium
9,525	4,76	0,4	3,81	3,00	1,00	4,00	0,25	0,10	0,30	VNMG160404MR	 Medium
9,525	4,76	0,8	3,81	3,00	1,00	4,00	0,30	0,15	0,50	VNMG160408MR	
12,7	4,76	0,8	5,16	4,00	1,50	5,00	0,35	0,15	0,50	VNMG220408MR	

Rhombic 35° Negative

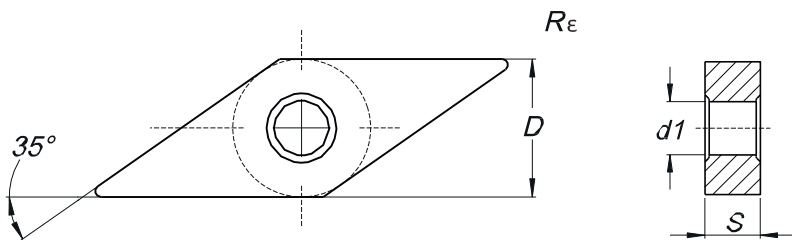




Turning

		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 Medium to Roughing	VNMG-SS VNMG160404SS	-	-	-	-	-	-	-	-	-	-	-	-	-
	VNMG160408SS	-	-	-	-	-	-	-	-	-	-	-	-	-

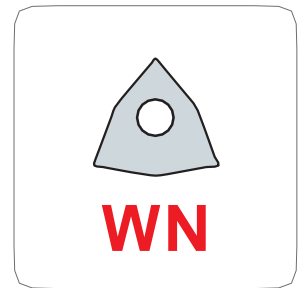
 Medium	VNMG-ST VNMG160404ST	-	-	-	-	-	-	-	-	-	-	-	-	-
	VNMG160408ST	-	-	-	-	-	-	-	-	-	-	-	-	-


Ordering example: Insert Code + Grade




Dimension				Cutting Data						ISO Code	Inserts
D	S	R ϵ	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	3,81	1,50	0,50	4,00	0,20	0,10	0,30	VNMG160404SS	VNMG-SS
9,525	4,76	0,8	3,81	2,00	0,50	4,00	0,25	0,12	0,45	VNMG160408SS	 Medium to Roughing
9,525	4,76	0,4	3,81	2,00	0,20	3,50	0,30	0,15	0,40	VNMG160404ST	
9,525	4,76	0,8	3,81	2,00	0,30	3,50	0,35	0,15	0,50	VNMG160408ST	 Medium

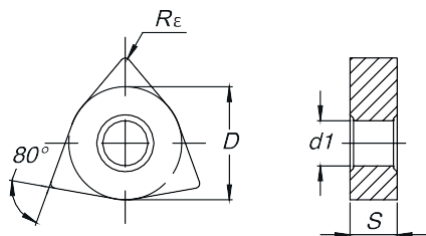
Triggon 80° Negative





		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
WNMA	WNMA060408	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMA080404	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMA080408	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMA080412	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMA080416	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Roughing</i>													

WNMG-MF	WNMG06T304MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	WNMG06T308MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	WNMG06T312MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	WNMG060404MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	WNMG060408MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	WNMG060412MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	WNMG080404MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	WNMG080408MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	WNMG080412MF	■	■	-	■	■	-	-	-	-	-	-	-	-
	<i>Finishing</i>													

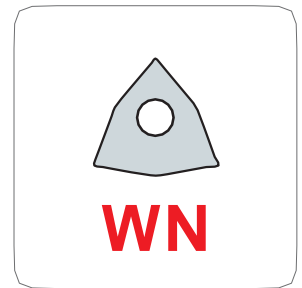
Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,8	3,81	2,50	0,20	4,00	0,35	0,15	0,60	WNMA060408	 Roughing
12,7	4,76	0,4	5,16	2,80	0,20	5,00	0,22	0,15	0,30	WNMA080404	
12,7	4,76	0,8	5,16	3,00	0,20	5,00	0,35	0,15	0,60	WNMA080408	
12,7	4,76	1,2	5,16	3,00	0,30	5,00	0,45	0,20	0,80	WNMA080412	
12,7	4,76	1,6	5,16	3,00	0,30	5,00	0,55	0,20	1,00	WNMA080416	

9,525	3,97	0,4	3,81	0,40	0,10	1,50	0,15	0,05	0,30	WNMG06T304MF	 Finishing
9,525	3,97	0,8	3,81	0,40	0,10	1,50	0,20	0,10	0,40	WNMG06T308MF	
9,525	3,97	1,2	3,81	0,40	0,15	1,50	0,30	0,15	0,60	WNMG06T312MF	
9,525	4,76	0,4	3,81	0,40	0,10	1,50	0,15	0,05	0,30	WNMG060404MF	
9,525	4,76	0,8	3,81	0,40	0,10	1,50	0,20	0,10	0,40	WNMG060408MF	
9,525	4,76	1,2	3,81	0,40	0,15	1,50	0,30	0,15	0,60	WNMG060412MF	
12,7	4,76	0,4	5,16	0,60	0,10	2,00	0,15	0,05	0,30	WNMG080404MF	
12,7	4,76	0,8	5,16	0,60	0,10	2,00	0,20	0,10	0,40	WNMG080408MF	
12,7	4,76	1,2	5,16	0,60	0,15	2,00	0,30	0,15	0,60	WNMG080412MF	

Triggon 80° Negative

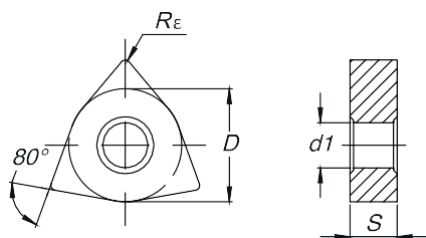


		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
WNMG-MS	WNMG060404MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMG060408MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMG080408MS	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMG080412MS	-	-	-	-	-	-	-	-	-	-	-	-	-



Finishing to Medium

Ordering example: Insert Code + Grade

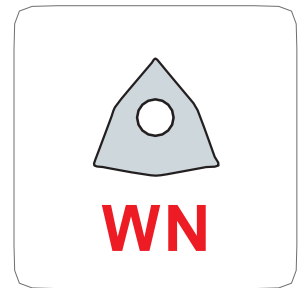


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	3,81	1,20	0,30	2,20	0,15	0,10	0,20	WNMG060404MS	WNMG-MS
9,525	4,76	0,8	3,81	1,20	0,30	2,20	0,25	0,20	0,40	WNMG060408MS	
12,7	4,76	0,8	5,16	2,50	0,70	4,00	0,25	0,20	0,40	WNMG080408MS	
12,7	4,76	1,2	5,16	2,50	1,00	4,00	0,30	0,25	0,55	WNMG080412MS	


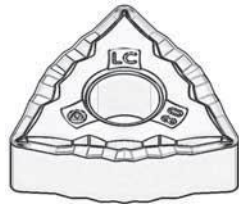


Finishing to Medium

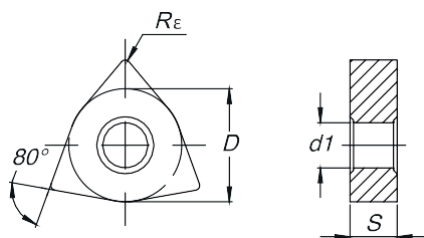
Triggon 80° Negative

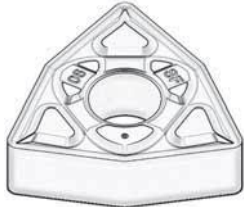


Turning

		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
WNMG-SF	WNMG060404SF	-	-	-	-	-			-	-	-	-		
 Finishing to Medium	WNMG060408SF	-	-	-	-	-			-	-	-	-		
	WNMG060412SF	-	-	-	-	-			-	-	-	-		
	WNMG080404SF	-	-	-	-	-			-	-	-	-		
	WNMG080408SF	-	-	-	-	-			-	-	-	-		
	WNMG080412SF	-	-	-	-	-			-	-	-	-	■	■
WNMG-LC	WNMG080408LC	■	■	-	-	-	-	-	-	-	-	-	-	-
 Finishing to Medium														

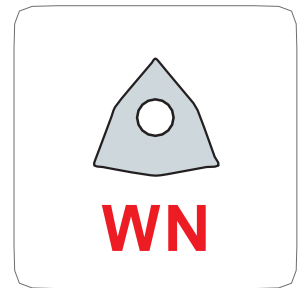
Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23	WNMG060404SF	 Finishing to Medium
9,525	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38	WNMG060408SF	
9,525	4,76	1,2	3,81	1,50	0,60	3,00	0,35	0,15	0,55	WNMG060412SF	
12,7	4,76	0,4	3,81	1,50	0,60	3,00	0,15	0,10	0,23	WNMG080404SF	
12,7	4,76	0,8	3,81	1,50	0,60	3,00	0,25	0,12	0,38	WNMG080408SF	
12,7	4,76	1,2	3,81	1,50	0,60	3,00	0,35	0,15	0,55	WNMG080412SF	

12,7	4,76	0,8	5,16	1,50	0,40	2,50	0,15	0,10	0,40	WNMG080408LC	 Finishing to Medium
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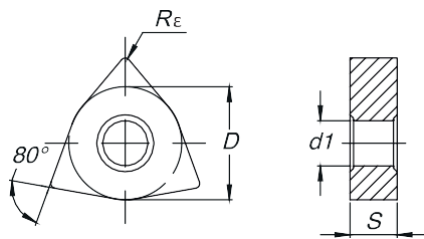
Triggon 80° Negative

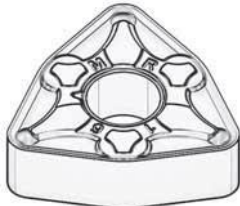



		Grade													
		P			M				K			N	S		
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720	
<p>Medium</p>	WNMG-MR			-	-	-	-	-	-	-	-	-	-	-	
		WNMG06T304MR			-	-	-	-	-	-	-	-	-	-	-
		WNMG06T308MR			-	-	-	-	-	-	-	-	-	-	-
		WNMG06T312MR			-	-	-	-	-	-	-	-	-	-	-
		WNMG060404MR			-	-	-	-	-	-	-	-	-	-	-
		WNMG060408MR			-	-	-	-	-	-	-	-	-	-	-
		WNMG060412MR			-	-	-	-	-	-	-	-	-	-	-
		WNMG080404MR			-	-	-	-	-	-	-	-	-	-	-
		WNMG080408MR			-	-	-	-	-	-	-	-	-	-	-
		WNMG080412MR			-	-	-	-	-	-	-	-	-	-	-
	WNMG080416MR			-	-	-	-	-	-	-	-	-	-	-	
<p>Medium to Roughing</p>	WNMG-SS	-	-	-	■	■	■	■	-	-	-	-	■	■	
		WNMG060404SS	-	-	-	■	■	■	■	-	-	-	-	■	■
		WNMG060408SS	-	-	-	■	■	■	■	-	-	-	-	■	■
		WNMG080404SS	-	-	□	■	■	■	■	-	-	-	-	■	■
		WNMG080408SS	-	-	□	■	■	■	■	-	-	-	-	■	■
	WNMG080412SS	-	-	□	■	■	■	■	-	-	-	-	■	■	

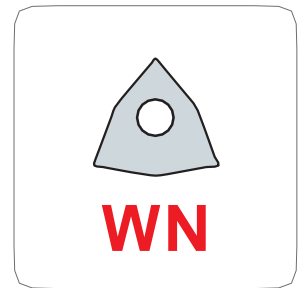
Ordering example: Insert Code + Grade

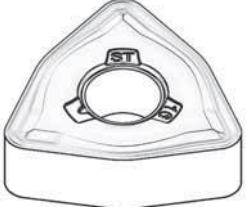
Available on request

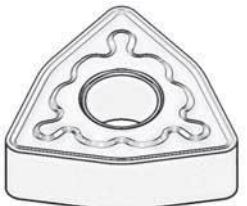


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,97	0,4	3,81	2,00	0,50	3,00	0,22	0,10	0,30	WNMG06T304MR	 Medium
9,525	3,97	0,8	3,81	2,00	0,50	3,00	0,30	0,15	0,50	WNMG06T308MR	
9,525	3,97	1,2	3,81	2,00	0,80	3,00	0,35	0,18	0,60	WNMG06T312MR	
9,525	4,76	0,4	3,81	2,00	0,50	3,00	0,22	0,10	0,30	WNMG060404MR	
9,525	4,76	0,8	3,81	2,00	0,50	3,00	0,30	0,15	0,50	WNMG060408MR	
9,525	4,76	1,2	3,81	2,00	0,80	3,00	0,35	0,18	0,60	WNMG060412MR	
12,7	4,76	0,4	5,16	2,50	0,50	4,00	0,22	0,10	0,30	WNMG080404MR	
12,7	4,76	0,8	5,16	2,50	0,50	4,00	0,30	0,15	0,50	WNMG080408MR	
12,7	4,76	1,2	5,16	2,50	0,80	4,00	0,35	0,18	0,60	WNMG080412MR	
12,7	4,76	1,6	5,16	3,00	1,00	4,00	0,40	0,23	0,65	WNMG080416MR	
9,525	4,76	0,4	3,81	2,00	0,50	3,00	0,20	0,12	0,30	WNMG060404SS	 Medium to Roughing
9,525	4,76	0,8	3,81	2,00	0,50	3,00	0,25	0,12	0,45	WNMG060408SS	
12,7	4,76	0,4	5,16	2,00	0,50	3,00	0,20	0,12	0,30	WNMG080404SS	
12,7	4,76	0,8	5,16	2,50	0,50	4,00	0,25	0,12	0,45	WNMG080408SS	
12,7	4,76	1,2	5,16	2,50	0,50	4,00	0,30	0,15	0,60	WNMG080412SS	

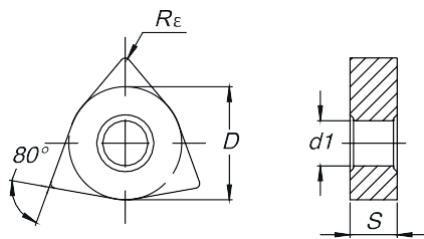
Triggon 80° Negative





		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
 Medium	WNMG-ST WNMG080404ST	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMG080408ST	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMG080412ST	-	-	-	-	-	-	-	-	-	-	-	-	-
	WNMG080416ST	-	-	-	-	-	-	-	-	-	-	-	-	-

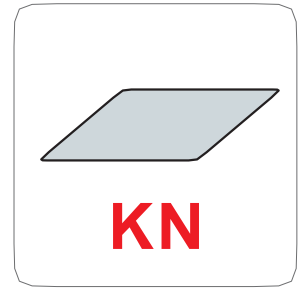
 Roughing	WNMG-HR WNMG080408HR	■	■	■	■	■	-	-	■	■	■	-	-	-
	WNMG080412HR	■	■	■	■	■	-	-	■	■	■	-	-	-

Ordering example: Insert Code + Grade

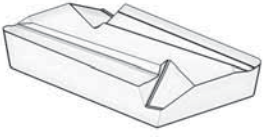
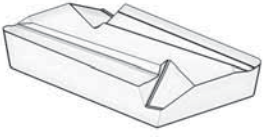


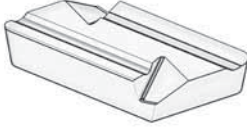
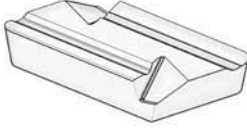
Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
12,7	4,76	0,4	5,16	2,50	0,20	5,00	0,22	0,15	0,30	WNMG080404ST	 Medium
12,7	4,76	0,8	5,16	2,50	0,20	5,00	0,35	0,15	0,50	WNMG080408ST	
12,7	4,76	1,2	5,16	2,50	0,30	5,00	0,40	0,15	0,60	WNMG080412ST	
12,7	4,76	1,6	5,16	2,50	0,30	5,00	0,45	0,20	0,70	WNMG080416ST	
12,7	4,76	0,8	5,16	4,00	0,80	5,00	0,35	0,20	0,55	WNMG080408HR	 Roughing
12,7	4,76	1,2	5,16	4,00	1,50	5,00	0,40	0,25	0,70	WNMG080412HR	

Parrallelogram 55° Negative

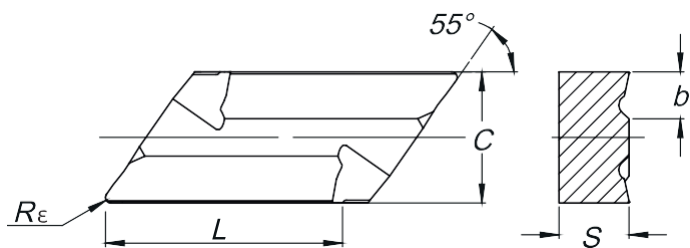


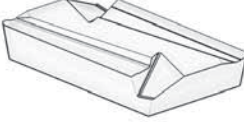
Turning


		Grade												
		P			M				K			N	S	
Inserts	ISO Code	MGU515	MGU525	MGU540	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGU540	MGN010	MGP710	MGM720
	KNUX-01			-			-	-	-	-	-	-	-	-
	KNUX160405L01			-			-	-	-	-	-	-	-	-
				-			-	-	-	-	-	-	-	-
	KNUX160405R01			-			-	-	-	-	-	-	-	-
Finishing				-			-	-	-	-	-	-	-	-

	KNUX-02			-			-	-	-	-	-	-	-	-
	KNUX160410L02	■	■	-	■	■	-	-	-	-	-	-	-	-
				-			-	-	-	-	-	-	-	-
	KNUX160410R02	■	■	-	■	■	-	-	-	-	-	-	-	-
Medium				-			-	-	-	-	-	-	-	-

Ordering example: Insert Code + Grade



Dimension					Cutting Data						ISO Code	Inserts
L	C	R ϵ	S	b	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
16,5	9,525	0,5	4,76	2,5	3,00	1,00	6,00	0,30	0,20	0,35	KNUX160405L01	 Finishing
16,5	9,525	0,5	4,76	2,5	3,00	1,00	6,00	0,30	0,20	0,35	KNUX160405R01	

16,5	9,525	1,0	4,76	3,2	4,00	1,50	6,00	0,50	0,40	0,70	KNUX160410L02	 Medium
16,5	9,525	1,0	4,76	3,2	4,00	1,50	6,00	0,50	0,40	0,70	KNUX160410R02	



Turning



Inserts

Positive

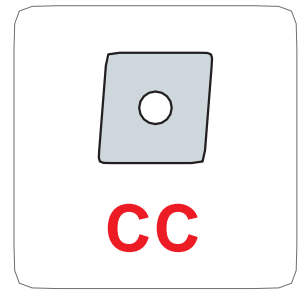


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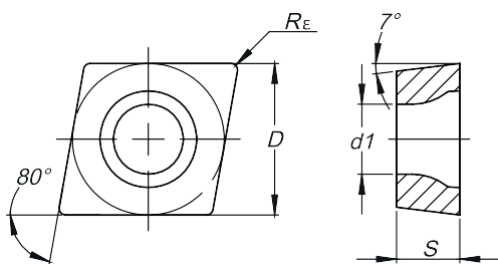
Rhombic 80° Positive





		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGST725	MGK510	MGK520	MGN010	MGP710	MGMT720	MGST725
<p>CCMT-FP</p> <p>Fine Finishing</p>	CCMT060202FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT060204FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T302FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T304FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T308FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT120404FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

<p>CCMT-BO</p> <p>Fine Finishing</p>	CCMT060202BO	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	-
	CCMT060204BO	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	-
	CCMT09T304BO	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	-
	CCMT09T308BO	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	-
	CCMT120404BO	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	-
	CCMT120408BO	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	-

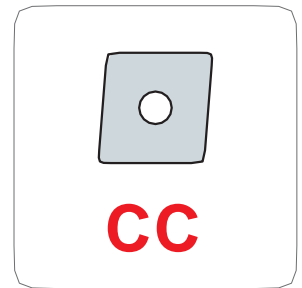
Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,11	CCMT060202FP	 Fine Finishing
6,35	2,38	0,4	2,80	0,30	0,10	1,70	0,08	0,05	0,17	CCMT060204FP	
9,525	3,97	0,2	4,40	0,35	0,08	2,00	0,08	0,04	0,13	CCMT09T302FP	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	CCMT09T304FP	
9,525	3,97	0,8	4,40	0,35	0,15	2,00	0,20	0,08	0,45	CCMT09T308FP	
12,7	4,76	0,4	5,50	0,42	0,14	2,40	0,14	0,07	0,27	CCMT120404FP	

6,35	2,38	0,2	2,80	0,50	0,30	1,00	0,08	0,05	0,13	CCMT060202BO	 Fine Finishing
6,35	2,38	0,4	2,80	0,50	0,30	1,00	0,13	0,08	0,20	CCMT060204BO	
9,525	3,97	0,4	4,40	0,80	0,50	1,20	0,13	0,08	0,20	CCMT09T304BO	
9,525	3,97	0,8	4,40	0,80	0,50	1,20	0,20	0,10	0,30	CCMT09T308BO	
12,7	4,76	0,4	5,50	1,00	0,50	1,50	0,13	0,08	0,20	CCMT120404BO	
12,7	4,76	0,8	5,50	1,00	0,50	1,50	0,20	0,10	0,30	CCMT120408BO	

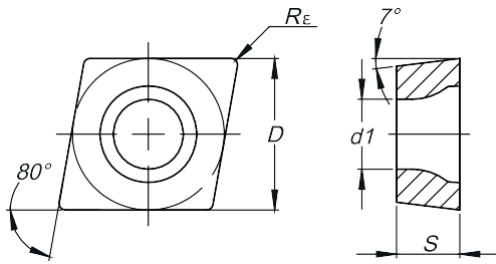
Rhombic 80° Positive





		Grade																				
		P						M					K		N	S						
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGK510	MGK520	MGN010	MGP710	MGMT720	MGU515	
<p>CCMT-FM</p> <p><i>Fine Finishing</i></p>	CCMT060202FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT060204FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T302FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T304FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T308FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT120404FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

<p>CCMT-FK</p> <p><i>Fine Finishing</i></p>	CCMT060202FK	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-	-	-	-	-	
	CCMT060204FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-	-	-	-	
	CCMT09T302FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-	-	-	-	
	CCMT09T304FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-	-	-	-	
	CCMT120404FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-	-	-	-	-

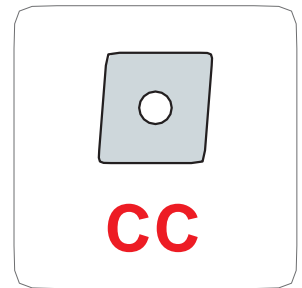
Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,11	CCMT060202FM	 Fine Finishing
6,35	2,38	0,4	2,80	0,30	0,10	1,70	0,08	0,05	0,17	CCMT060204FM	
9,525	3,97	0,2	4,40	0,35	0,08	2,00	0,08	0,04	0,13	CCMT09T302FM	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	CCMT09T304FM	
9,525	3,97	0,8	4,40	0,35	0,15	2,00	0,20	0,08	0,45	CCMT09T308FM	
12,7	4,76	0,4	5,50	0,42	0,14	2,40	0,14	0,07	0,27	CCMT120404FM	

6,35	2,38	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,11	CCMT060202FK	 Fine Finishing
6,35	2,38	0,4	2,80	0,30	0,10	1,70	0,08	0,05	0,17	CCMT060204FK	
9,525	3,97	0,2	4,40	0,35	0,08	2,00	0,08	0,04	0,13	CCMT09T302FK	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	CCMT09T304FK	
12,7	4,76	0,4	5,50	0,42	0,14	2,40	0,14	0,07	0,27	CCMT120404FK	

Rhombic 80° Positive

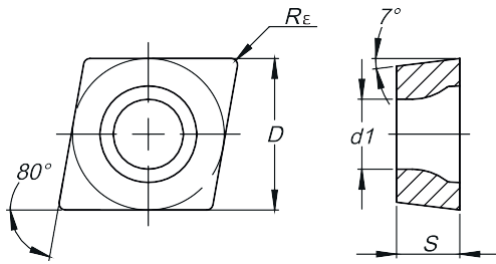




Turning

		Grade																				
		P						M					K		N		S					
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	
<p>Finishing</p>	CCMT-MP CCMT060204MP			-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT060208MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T304MP			-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T308MP			-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT120404MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT120408MP			-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT120412MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

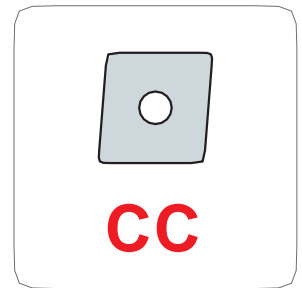
<p>SCHLICHTEN Finishing</p>	CCMT-MM CCMT060204MM	-	-	-	-	-	-	■	-	■	■	-	-	-	-	-	-	■	■	-	-	-	
	CCMT060208MM	-	-	-	-	-	-	■	-	-	-	■	-	-	-	-	-	-	-	■	-	-	■
	CCMT09T304MM	-	-	-	-	-	-	■	-	■	■	-	-	-	-	-	-	-	■	■	-	-	-
	CCMT09T308MM	-	-	-	-	-	-	■	-	■	■	-	-	-	-	-	-	-	■	■	-	-	-
	CCMT120404MM	-	-	-	-	-	-	■	-	-	-	■	-	-	-	-	-	-	-	-	-	-	■
	CCMT120408MM	-	-	-	-	-	-	■	-	■	■	-	-	-	-	-	-	-	■	■	-	-	-
	CCMT120412MM	-	-	-	-	-	-	■	-	-	-	■	-	-	-	-	-	-	-	-	-	-	■

Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,4	2,80	0,64	0,20	2,40	0,11	0,06	0,17	CCMT060204MP	 Finishing
6,35	2,38	0,8	2,80	0,64	0,40	2,40	0,18	0,08	0,35	CCMT060208MP	
9,525	3,97	0,4	4,40	0,64	0,25	3,00	0,15	0,08	0,23	CCMT09T304MP	
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,20	0,10	0,40	CCMT09T308MP	
12,7	4,76	0,4	5,50	0,96	0,30	3,60	0,18	0,09	0,27	CCMT120404MP	
12,7	4,76	0,8	5,50	0,96	0,60	3,60	0,24	0,12	0,45	CCMT120408MP	
12,7	4,76	1,2	5,50	0,96	0,72	3,60	0,35	0,14	0,60	CCMT120412MP	
6,35	2,38	0,4	2,80	0,64	0,20	2,40	0,11	0,06	0,17	CCMT060204MM	 Finishing
6,35	2,38	0,8	2,80	0,64	0,40	2,40	0,18	0,08	0,35	CCMT060208MM	
9,525	3,97	0,4	4,40	0,64	0,25	3,00	0,15	0,08	0,23	CCMT09T304MM	
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,20	0,10	0,40	CCMT09T308MM	
12,7	4,76	0,4	5,50	0,96	0,30	3,60	0,18	0,09	0,27	CCMT120404MM	
12,7	4,76	0,8	5,50	0,96	0,60	3,60	0,24	0,12	0,45	CCMT120408MM	
12,7	4,76	1,2	5,50	0,96	0,72	3,60	0,35	0,14	0,60	CCMT120412MM	

Rhombic 80° Positive

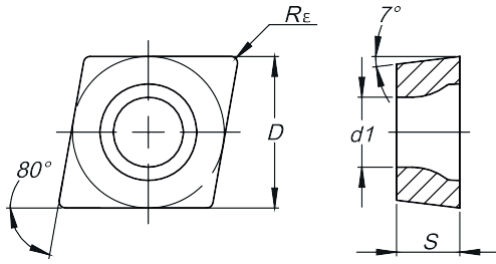



Turning

		Grade																					
		P						M					K		N	S							
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515		
<p>Finishing</p>	CCMT-MK CCMT060204MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CCMT060208MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T304MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT09T308MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT120404MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCMT120408MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

<p>Fine Finishing to Finishing</p>	CCGT-FS CCGT060201FS	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	■	■	-	-	-
	CCGT060202FS	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	■	■	-	-	-
	CCGT060204FS	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	■	■	-	-	-
	CCGT09T301FS	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	■	■	-	-	-
	CCGT09T302FS	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	■	■	-	-	-
	CCGT09T304FS	-	-	-	-	■	■	-	-	■	■	-	-	-	-	-	-	■	■	-	-	-

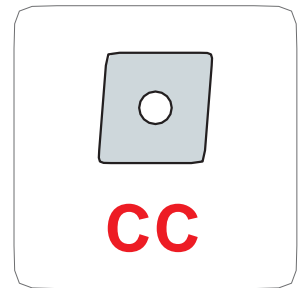
Ordering example: Insert Code + Grade




Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,4	2,80	0,64	0,20	2,40	0,11	0,06	0,17	CCMT060204MK	 Finishing
6,35	2,38	0,8	2,80	0,64	0,40	2,40	0,18	0,08	0,35	CCMT060208MK	
9,525	3,97	0,4	4,40	0,64	0,25	3,00	0,15	0,08	0,23	CCMT09T304MK	
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,20	0,10	0,40	CCMT09T308MK	
12,7	4,76	0,4	5,50	0,96	0,30	3,60	0,18	0,09	0,27	CCMT120404MK	
12,7	4,76	0,8	5,50	0,96	0,60	3,60	0,24	0,12	0,45	CCMT120408MK	

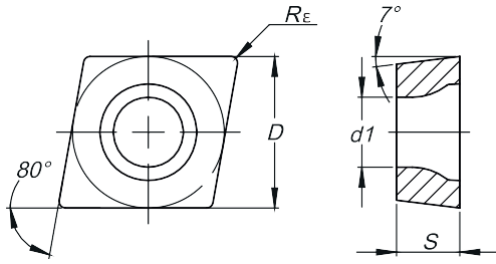
6,35	2,38	0,1	2,80	0,30	0,10	1,00	0,03	0,01	0,06	CCGT060201FS	 Fine Finishing to Finishing
6,35	2,38	0,2	2,80	0,50	0,10	1,50	0,07	0,02	0,12	CCGT060202FS	
6,35	2,38	0,4	2,80	0,80	0,15	1,50	0,20	0,08	0,25	CCGT060204FS	
9,525	3,97	0,1	4,40	0,50	0,10	1,50	0,03	0,01	0,06	CCGT09T301FS	
9,525	3,97	0,2	4,40	1,00	0,10	2,00	0,07	0,02	0,12	CCGT09T302FS	
9,525	3,97	0,4	4,40	1,25	0,15	2,50	0,15	0,08	0,25	CCGT09T304FS	

Rhombic 80° Positive



		Grade																				
		P						M					K		N	S						
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	
CCGT-LN	CCGT060202LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCGT060204LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCGT09T302LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCGT09T304LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCGT09T308LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCGT120402LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCGT120404LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CCGT120408LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
																						
<p>Fine Finishing to Finishing</p>																						

Ordering example: Insert Code + Grade

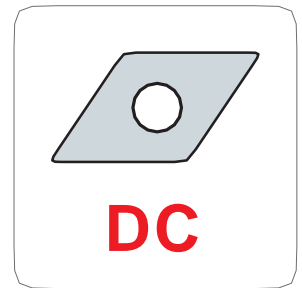


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,2	2,80	1,00	0,05	3,00	0,07	0,05	0,12	CCGT060202LN	CCGT-LN
6,35	2,38	0,4	2,80	1,55	0,10	3,00	0,15	0,10	0,20	CCGT060204LN	
9,525	3,97	0,2	4,40	1,53	0,05	3,00	0,07	0,05	0,12	CCGT09T302LN	
9,525	3,97	0,4	4,40	2,55	0,10	5,00	0,16	0,10	0,22	CCGT09T304LN	
9,525	3,97	0,8	4,40	2,55	0,10	5,00	0,22	0,15	0,45	CCGT09T308LN	
12,7	4,76	0,2	5,50	2,03	0,05	4,00	0,07	0,05	0,12	CCGT120402LN	
12,7	4,76	0,4	5,50	2,55	0,10	5,00	0,17	0,10	0,26	CCGT120404LN	
12,7	4,76	0,8	5,50	2,80	0,10	5,50	0,25	0,15	0,50	CCGT120408LN	



Fine Finishing to
Finishing

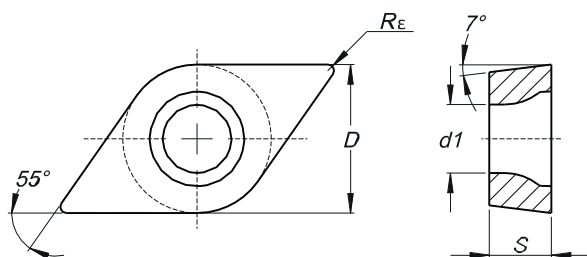
Rhombic 55° Positive





		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGST725	MGK510	MGK520	MGN010	MGP710	MGMT720	MGST725
DCMT-FP	DCMT070202FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT070204FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T302FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T304FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T308FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Fine Finishing</i>																	

DCMT-FM	DCMT070202FM	-	-	-	-	-	-	-	-	-	-	■	-	-	-	-	-	■
	DCMT070204FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	■
	DCMT11T302FM	-	-	-	-	-	-	-	-	■	■	-	-	-	-	■	■	-
	DCMT11T304FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	■
	DCMT11T308FM	-	-	-	-	-	-	-	■	■	■	-	-	-	-	■	■	-
	<i>Fine Finishing</i>																	

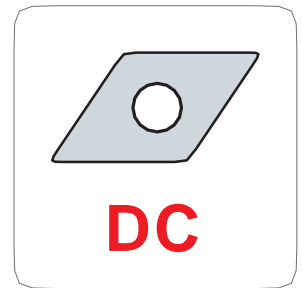
Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,2	2,80	0,26	0,06	1,50	0,06	0,03	0,11	DCMT070202FP	 Fine Finishing
6,35	2,38	0,4	2,80	0,26	0,08	1,50	0,08	0,05	0,17	DCMT070204FP	
9,525	3,97	0,2	4,40	0,35	0,08	2,00	0,08	0,04	0,15	DCMT11T302FP	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	DCMT11T304FP	
9,525	3,97	0,8	4,40	0,35	0,15	2,00	0,15	0,08	0,30	DCMT11T308FP	

6,35	2,38	0,2	2,80	0,26	0,06	1,50	0,06	0,03	0,11	DCMT070202FM	 Fine Finishing
6,35	2,38	0,4	2,80	0,26	0,08	1,50	0,08	0,05	0,17	DCMT070204FM	
9,525	3,97	0,2	4,40	0,35	0,08	2,00	0,08	0,04	0,15	DCMT11T302FM	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	DCMT11T304FM	
9,525	3,97	0,8	4,40	0,35	0,15	2,00	0,15	0,08	0,30	DCMT11T308FM	

Rhombic 55° Positive

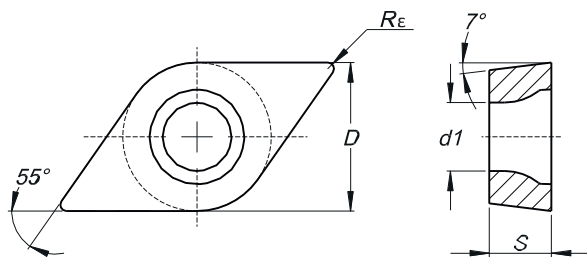



Turning


		Grade																
		P						M					K		N		S	
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGST725	MGK510	MGK520	MGN010	MGP710	MGMT720	MGST725
DCMT-FK	DCMT070202FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT070204FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T302FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T304FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Fine Finishing</i>																	

DCMT-MP	DCMT070204MP	■	■	-	■	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT070208MP	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T304MP	■	■	-	■	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T308MP	■	■	-	■	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T312MP	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Finishing</i>																	

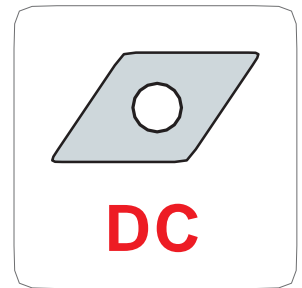
Ordering example: Insert Code + Grade




Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,2	2,80	0,26	0,06	1,50	0,06	0,03	0,11	DCMT070202FK	 Fine Finishing
6,35	2,38	0,4	2,80	0,26	0,08	1,50	0,08	0,05	0,17	DCMT070204FK	
9,525	3,97	0,2	4,40	0,35	0,08	2,00	0,08	0,04	0,15	DCMT11T302FK	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	DCMT11T304FK	


6,35	2,38	0,4	2,80	0,60	0,19	2,25	0,11	0,06	0,17	DCMT070204MP	 Finishing
6,35	2,38	0,8	2,80	0,60	0,38	2,25	0,20	0,08	0,35	DCMT070208MP	
9,525	3,97	0,4	4,40	0,80	0,25	3,00	0,15	0,08	0,23	DCMT11T304MP	
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,25	0,10	0,40	DCMT11T308MP	
9,525	3,97	1,2	4,40	0,80	0,60	3,00	0,35	0,12	0,60	DCMT11T312MP	

Rhombic 55° Positive

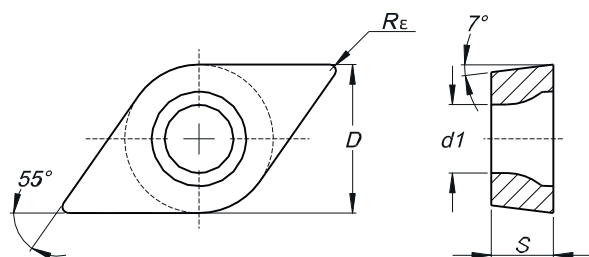



Turning


		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGST725	MGK510	MGK520	MGN010	MGP710	MGMT720	MGST725
DCMT-MM	DCMT070204MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT070208MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T304MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T308MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DCMT11T312MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Fine Finishing</i>																	

DCMT-MK	DCMT070204MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	DCMT070208MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	DCMT11T304MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	DCMT11T308MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	DCMT11T312MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	<i>Finishing</i>																	

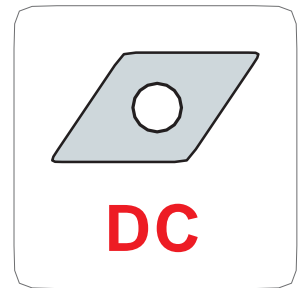
Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,4	2,80	0,60	0,19	2,25	0,11	0,06	0,17	DCMT070204MM	 Fine Finishing
6,35	2,38	0,8	2,80	0,60	0,38	2,25	0,20	0,08	0,35	DCMT070208MM	
9,525	3,97	0,4	4,40	0,80	0,25	3,00	0,15	0,08	0,23	DCMT11T304MM	
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,25	0,10	0,40	DCMT11T308MM	
9,525	3,97	1,2	4,40	0,80	0,60	3,00	0,35	0,12	0,60	DCMT11T312MM	

6,35	2,38	0,4	2,80	0,60	0,19	2,25	0,11	0,06	0,17	DCMT070204MK	 Finishing
6,35	2,38	0,8	2,80	0,60	0,38	2,25	0,20	0,08	0,35	DCMT070208MK	
9,525	3,97	0,4	4,40	0,80	0,25	3,00	0,15	0,08	0,23	DCMT11T304MK	
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,25	0,10	0,40	DCMT11T308MK	
9,525	3,97	1,2	4,40	0,80	0,50	3,00	0,35	0,12	0,60	DCMT11T312MK	

Rhombic 55° Positive

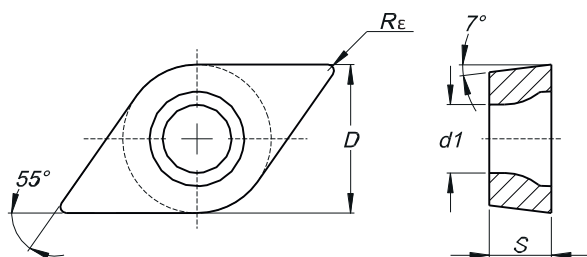




Turning

		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGS725	MGK510	MGK520	MGN010	MGP710	MGM720	MGS725
 Fine Finishing	DCGT-FS DCGT070201FS	-	-	-	-			-	-			-	-	-				-
	DCGT070202FS	-	-	-	-			-	-			-	-	-				-
	DCGT070204FS	-	-	-	-			-	-			-	-	-				-
	DCGT11T301FS	-	-	-	-			-	-			-	-	-				-
	DCGT11T302FS	-	-	-	-			-	-			-	-	-				-
	DCGT11T304FS	-	-	-	-			-	-			-	-	-				-

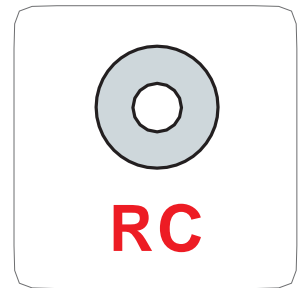
 Fine Finishing	DCGT-LN DCGT070202LN	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-
	DCGT070204LN	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-
	DCGT11T302LN	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-
	DCGT11T304LN	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-
	DCGT11T308LN	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-


Ordering example: Insert Code + Grade




Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	2,38	0,1	2,80	0,30	0,10	1,00	0,03	0,01	0,06	DCGT070201FS	 Fine Finishing
6,35	2,38	0,2	2,80	0,50	0,10	1,50	0,07	0,02	0,12	DCGT070202FS	
6,35	2,38	0,4	2,80	0,80	0,15	1,50	0,15	0,08	0,25	DCGT070204FS	
9,525	3,97	0,1	4,40	0,50	0,10	1,50	0,03	0,01	0,06	DCGT11T301FS	
9,525	3,97	0,2	4,40	1,00	0,10	2,00	0,07	0,02	0,12	DCGT11T302FS	
9,525	3,97	0,4	4,40	1,50	0,15	3,00	0,15	0,08	0,25	DCGT11T304FS	
6,35	2,38	0,2	2,80	1,00	0,05	3,00	0,07	0,05	0,12	DCGT070202LN	 Fine Finishing
6,35	2,38	0,4	2,80	2,05	0,10	4,00	0,15	0,10	0,20	DCGT070204LN	
9,525	3,97	0,2	4,40	2,03	0,05	4,00	0,07	0,05	0,12	DCGT11T302LN	
9,525	3,97	0,4	4,40	2,55	0,10	5,00	0,16	0,10	0,22	DCGT11T304LN	
9,525	3,97	0,8	4,40	2,55	0,10	5,00	0,22	0,15	0,50	DCGT11T308LN	

Round R° Positive

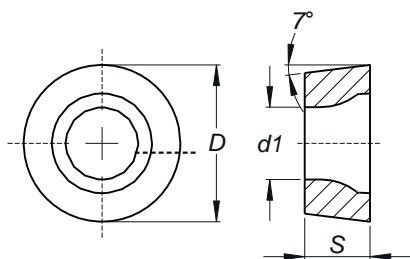



		Grade																				
		P						M					K		N	S						
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	
 Medium to Roughing	RCMT-ST RCMT0803M0ST			-	-	-	-			-	-			-	-	-	-			-	-	-
	RCMT1003M0ST			-	-	-	-			-	-			-	-	-	-			-	-	-
	RCMT10T3M0ST			-	-	-	-			-	-			-	-	-	-			-	-	-
	RCMT1204M0ST			-	-	-	-			-	-			-	-	-	-			-	-	-
	RCMT1606M0ST			-	-	-	-			-	-			-	-	-	-			-	-	-
	RCMT2006M0ST			-	-	-	-			-	-			-	-	-	-			-	-	-


 Fine Finishing	RCGT-LN RCGT0602M0LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<input type="checkbox"/>	-	-	-
	RCGT0803M0LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<input type="checkbox"/>	-	-	-
	RCGT1003M0LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<input type="checkbox"/>	-	-	-
	RCGT1204M0LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<input checked="" type="checkbox"/>	-	-	-

Ordering example: Insert Code + Grade

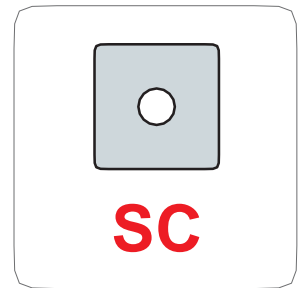
Available on request





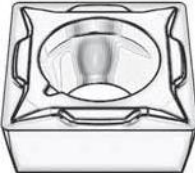
Dimension				Cutting Data						ISO Code	Inserts
D	S	R ϵ	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
8,0	3,18	-	3,40	2,00	0,80	3,20	0,20	0,05	0,25	RCMT0803M0ST	 Medium to Roughing
10,0	3,18	-	3,40	2,50	1,00	4,00	0,25	0,06	0,32	RCMT1003M0ST	
10,0	3,97	-	4,40	2,50	1,00	4,00	0,25	0,06	0,32	RCMT10T3M0ST	
12,0	4,76	-	4,40	3,00	1,20	4,80	0,30	0,08	0,38	RCMT1204M0ST	
16,0	6,35	-	5,50	3,50	1,60	6,40	0,37	0,10	0,51	RCMT1606M0ST	
20,0	6,35	-	6,50	4,00	2,00	8,00	0,45	0,13	0,63	RCMT2006M0ST	

6,0	2,38	-	2,80	1,25	0,50	2,00	0,13	0,05	0,20	RCGT0602M0LN	 Fine Finishing
8,0	3,18	-	3,40	1,50	0,50	2,50	0,15	0,05	0,25	RCGT0803M0LN	
10,0	3,18	-	4,40	2,00	1,00	3,00	0,20	0,10	0,30	RCGT1003M0LN	
12,0	4,76	-	4,40	2,25	1,00	3,50	0,23	0,10	0,35	RCGT1204M0LN	

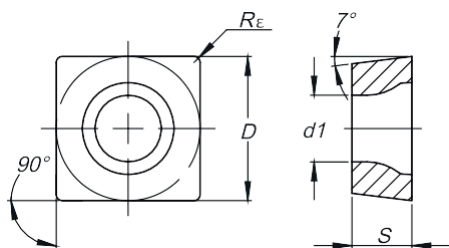
Square 90° Positive






Grade

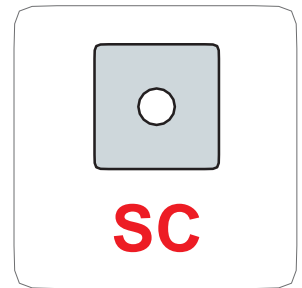
Inserts	ISO Code	Grade																										
		P						M					K		N	S												
		MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720
 <p>Fine Finishing</p>	SCMT09T304FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	SCMT09T308FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
 <p>Fine Finishing</p>	SCMT09T304FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	SCMT09T308FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
 <p>Fine Finishing</p>	SCMT09T304FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	SCMT09T308FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-


Ordering example: Insert Code + Grade




Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	SCMT09T304FP	 Fine Finishing
9,525	3,97	0,8	4,40	0,35	0,15	2,00	0,15	0,08	0,30	SCMT09T308FP	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	SCMT09T304FM	 Fine Finishing
9,525	3,97	0,8	4,40	0,35	0,15	2,00	0,15	0,08	0,30	SCMT09T308FM	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	SCMT09T304FK	 Fine Finishing
9,525	3,97	0,8	4,40	0,35	0,15	2,00	0,15	0,08	0,30	SCMT09T308FK	

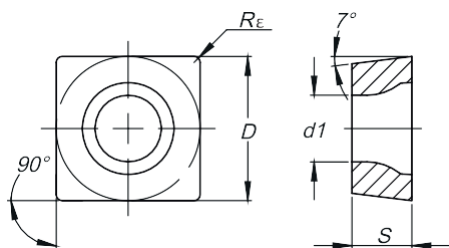
Square 90° Positive





		Grade																				
		P						M					K		N	S						
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	
 <p>Finishing</p>	SCMT-MP SCMT09T304MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT09T308MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT120404MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT120408MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT120412MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

 <p>Finishing</p>	SCMT-MM SCMT09T304MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT09T308MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT120404MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT120408MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT120412MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

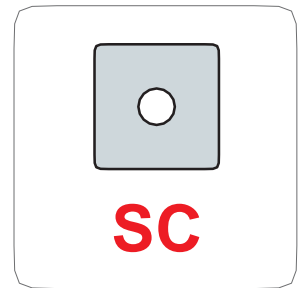
Ordering example: Insert Code + Grade





Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,97	0,4	4,40	0,80	0,25	3,00	0,15	0,08	0,23	SCMT09T304MP	 Finishing
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,25	0,10	0,40	SCMT09T308MP	
12,7	4,76	0,4	5,50	0,96	0,30	3,60	0,18	0,09	0,27	SCMT120404MP	
12,7	4,76	0,8	5,50	0,96	0,60	3,60	0,25	0,12	0,45	SCMT120408MP	
12,7	4,76	1,2	5,50	0,96	0,72	3,60	0,35	0,14	0,60	SCMT120412MP	

9,525	3,97	0,4	4,40	0,80	0,25	3,00	0,15	0,08	0,23	SCMT09T304MM	 Finishing
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,25	0,10	0,40	SCMT09T308MM	
12,7	4,76	0,4	5,50	0,96	0,30	3,60	0,18	0,09	0,27	SCMT120404MM	
12,7	4,76	0,8	5,50	0,96	0,60	3,60	0,25	0,12	0,45	SCMT120408MM	
12,7	4,76	1,2	5,50	0,96	0,72	3,60	0,35	0,14	0,60	SCMT120412MM	

Square 90° Positive

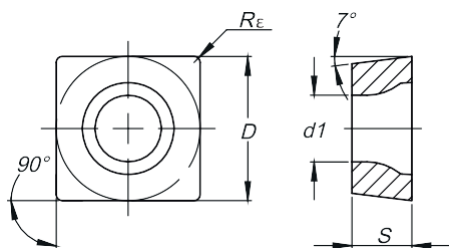



		Grade																	
		P					M					K		N	S				
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGN010	MGP710	MGM720	MGS725
 Finishing	SCMT-MK SCMT09T304MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT09T308MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SCMT120408MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

 Fine Finishing to Finishing	SCGT-LN SCGT09T304LN	-	-	-	-	-	-	-	-	-	-	-	-	-	□	-	-	-
	SCGT09T308LN	-	-	-	-	-	-	-	-	-	-	-	-	-	□	-	-	-
	SCGT120404LN	-	-	-	-	-	-	-	-	-	-	-	-	-	□	-	-	-
	SCGT120408LN	-	-	-	-	-	-	-	-	-	-	-	-	-	■	-	-	-

Ordering example: Insert Code + Grade

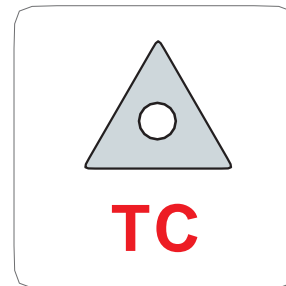
Available on request




Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	3,97	0,4	4,40	0,80	0,25	3,00	0,15	0,08	0,23	SCMT09T304MK	 Finishing
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,25	0,10	0,40	SCMT09T308MK	
12,7	4,76	0,8	5,50	0,96	0,60	3,60	0,25	0,12	0,45	SCMT120408MK	

9,525	3,97	0,4	4,40	2,05	0,10	4,00	0,16	0,10	0,26	SCGT09T304LN	 Fine Finishing to Finishing
9,525	3,97	0,8	4,40	2,55	0,10	5,00	0,22	0,15	0,40	SCGT09T308LN	
12,7	4,76	0,4	5,50	2,55	0,10	5,00	0,20	0,10	0,26	SCGT120404LN	
12,7	4,76	0,8	5,50	2,55	0,10	5,00	0,30	0,15	0,50	SCGT120408LN	

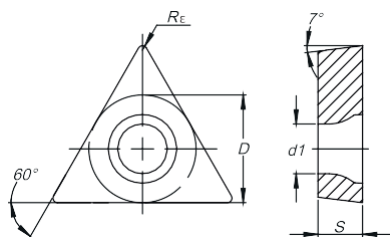
Triangular 60° Positive



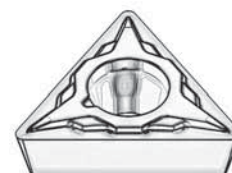
		Grade																			
		P					M					K		N	S						
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515
	TCMT-FP																				
	TCMT06T102FP	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT06T104FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT06T108FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090202FP	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090204FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110202FP	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110204FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110208FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110302FP	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110304FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110308FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TCMT16T304FP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Fine Finishing to Finishing

Ordering example: Insert Code + Grade

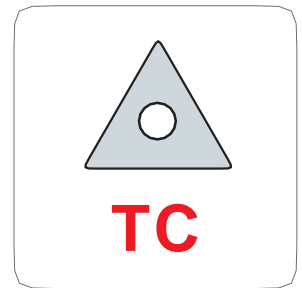


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
3,97	1,98	0,2	2,15	0,26	0,06	1,50	0,06	0,03	0,11	TCMT06T102FP	TCMT-FP
3,97	1,98	0,4	2,15	0,26	0,08	1,50	0,08	0,05	0,17	TCMT06T104FP	
3,97	1,98	0,8	2,15	0,26	0,11	1,50	0,11	0,06	0,23	TCMT06T108FP	
5,56	2,38	0,2	2,50	0,30	0,06	1,70	0,06	0,03	0,13	TCMT090202FP	
5,56	2,38	0,4	2,50	0,30	0,10	1,70	0,10	0,05	0,19	TCMT090204FP	
6,35	2,38	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	TCMT110202FP	
6,35	2,38	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	TCMT110204FP	
6,35	2,38	0,8	2,80	0,30	0,13	1,70	0,13	0,07	0,26	TCMT110208FP	
6,35	3,18	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	TCMT110302FP	
6,35	3,18	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	TCMT110304FP	
6,35	3,18	0,8	2,80	0,30	0,13	1,70	0,13	0,07	0,26	TCMT110308FP	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	TCMT16T304FP	



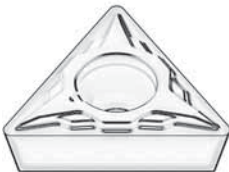
Fine Finishing to
Finishing

Triangular 60° Positive



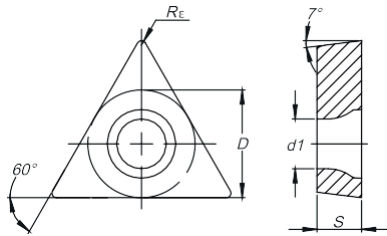
Turning

Grade

Inserts	ISO Code	P						M					K		N		S		
		MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGN010	MGP710	MGM720	MGU515	MGU525	
	TCMT06T102FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT06T104FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT06T108FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090202FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090204FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110202FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110204FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110208FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110302FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110304FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110308FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T304FM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Fine Finishing to Finishing

Ordering example: Insert Code + Grade

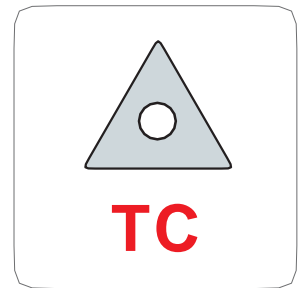


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
3,97	1,98	0,2	2,15	0,26	0,06	1,50	0,06	0,03	0,11	TCMT06T102FM	TCMT-FM
3,97	1,98	0,4	2,15	0,26	0,08	1,50	0,08	0,05	0,17	TCMT06T104FM	
3,97	1,98	0,8	2,15	0,26	0,11	1,50	0,11	0,06	0,23	TCMT06T108FM	
5,56	2,38	0,2	2,50	0,30	0,06	1,70	0,06	0,03	0,13	TCMT090202FM	
5,56	2,38	0,4	2,50	0,30	0,10	1,70	0,10	0,05	0,19	TCMT090204FM	
6,35	2,38	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	TCMT110202FM	
6,35	2,38	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	TCMT110204FM	
6,35	2,38	0,8	2,80	0,30	0,13	1,70	0,13	0,07	0,26	TCMT110208FM	
6,35	3,18	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	TCMT110302FM	
6,35	3,18	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	TCMT110304FM	
6,35	3,18	0,8	2,80	0,30	0,13	1,70	0,13	0,07	0,26	TCMT110308FM	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	TCMT16T304FM	



Fine Finishing to
Finishing

Triangular 60° Positive



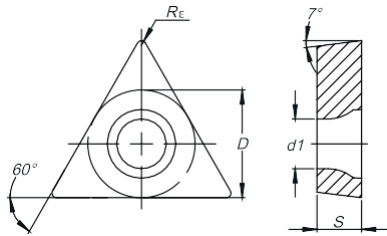
Grade

Inserts	ISO Code	Grade																
		P					M					K		N	S			
		MGU515	MGU525	MGU610	MGU620	MGU710	MGM720	MGU515	MGU525	MGU710	MGM720	MGU725	MGK510	MGK520	MGN010	MGP710	MGM720	MGU725
TCMT-FK	TCMT06T102FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT06T104FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT06T108FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090202FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090204FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110202FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110204FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110302FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110304FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T304FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Fine Finishing to Finishing

Ordering example: Insert Code + Grade

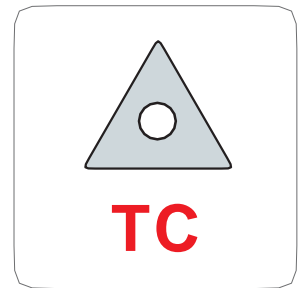


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
3,97	1,98	0,2	2,15	0,26	0,06	1,50	0,06	0,03	0,11	TCMT06T102FK	TCMT-FK
3,97	1,98	0,4	2,15	0,26	0,08	1,50	0,08	0,05	0,17	TCMT06T104FK	
3,97	1,98	0,8	2,15	0,26	0,11	1,50	0,11	0,06	0,23	TCMT06T108FK	
5,56	2,38	0,2	2,50	0,30	0,06	1,70	0,06	0,03	0,13	TCMT090202FK	
5,56	2,38	0,4	2,50	0,30	0,10	1,70	0,10	0,05	0,19	TCMT090204FK	
6,35	2,38	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	TCMT110202FK	
6,35	2,38	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	TCMT110204FK	
6,35	3,18	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	TCMT110302FK	
6,35	3,18	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	TCMT110304FK	
9,525	3,97	0,4	4,40	0,35	0,11	2,00	0,11	0,06	0,23	TCMT16T304FK	




Fine Finishing to
Finishing

Triangular 60° Positive



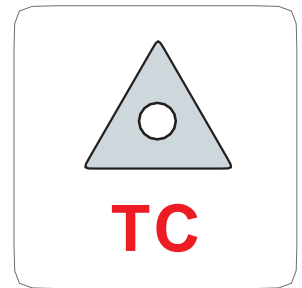
Turning

		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGU710	MGM720	MGU515	MGU525	MGU710	MGM720	MGU725	MGK510	MGK520	MGN010	MGP710	MGM720	MGU725
	TCMT-MP TCMT090204MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090208MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110204MP																	
	TCMT110208MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110212MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110304MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110308MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110312MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T304MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T308MP																	
	TCMT16T312MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT220408MP			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Finishing																	

Ordering example: Insert Code + Grade

Available on request

Triangular 60° Positive



Turning

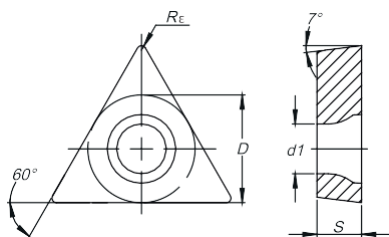
Grade

Inserts	ISO Code	P						M					K		N	S		
		MGU515	MGU525	MGU610	MGU620	MG710	MGM720	MGU515	MGU525	MG710	MGM720	MG725	MGK510	MGK520	MGN010	MG710	MGM720	MG725
TCMT-MM	TCMT090204MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090208MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110204MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110208MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110304MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110308MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T304MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T308MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T312MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT220408MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Finishing

Ordering example: Insert Code + Grade

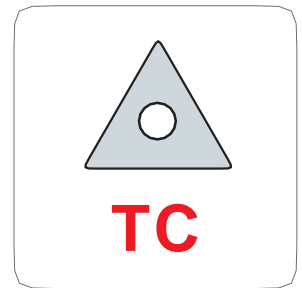


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
5,56	2,38	0,4	2,50	0,60	0,19	2,25	0,11	0,06	0,17	TCMT090204MM	TCMT-MM
5,56	2,38	0,8	2,50	0,60	0,38	2,25	0,15	0,08	0,23	TCMT090208MM	
6,35	2,38	0,4	2,80	0,67	0,21	2,50	0,13	0,06	0,19	TCMT110204MM	
6,35	2,38	0,8	2,80	0,67	0,42	2,50	0,17	0,09	0,26	TCMT110208MM	
6,35	3,18	0,4	2,80	0,67	0,21	2,50	0,13	0,06	0,19	TCMT110304MM	
6,35	3,18	0,8	2,80	0,67	0,42	2,50	0,20	0,09	0,40	TCMT110308MM	
9,525	3,97	0,4	4,40	0,80	0,25	3,00	0,15	0,08	0,23	TCMT16T304MM	
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,22	0,10	0,45	TCMT16T308MM	
9,525	3,97	1,2	4,40	0,80	0,60	3,00	0,35	0,12	0,60	TCMT16T312MM	
12,7	4,76	0,8	5,50	0,96	0,60	3,60	0,25	0,12	0,45	TCMT220408MM	



Finishing

Triangular 60° Positive



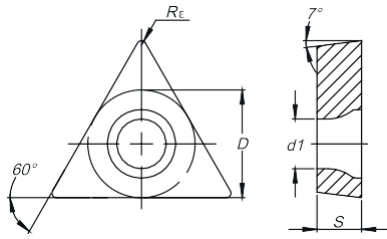
Grade

Inserts	ISO Code	Grade																											
		P					M					K		N	S														
		MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	
TCMT-MK	TCMT090204MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT090208MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110204MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110208MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110304MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT110308MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T304MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T308MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT16T312MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCMT220408MK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Finishing

Ordering example: Insert Code + Grade

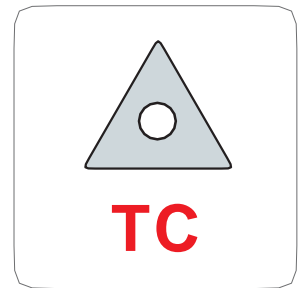



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
5,56	2,38	0,4	2,50	0,60	0,19	2,25	0,11	0,06	0,17	TCMT090204MK	TCMT-MK
5,56	2,38	0,8	2,50	0,60	0,38	2,25	0,15	0,08	0,23	TCMT090208MK	
6,35	2,38	0,4	2,80	0,67	0,21	2,50	0,13	0,06	0,19	TCMT110204MK	
6,35	2,38	0,8	2,80	0,67	0,42	2,50	0,17	0,09	0,26	TCMT110208MK	
6,35	3,18	0,4	2,80	0,67	0,21	2,50	0,13	0,06	0,19	TCMT110304MK	
6,35	3,18	0,8	2,80	0,67	0,42	2,50	0,20	0,09	0,40	TCMT110308MK	
9,525	3,97	0,4	4,40	0,80	0,25	3,00	0,15	0,08	0,23	TCMT16T304MK	
9,525	3,97	0,8	4,40	0,80	0,50	3,00	0,22	0,10	0,45	TCMT16T308MK	
9,525	3,97	1,2	4,40	0,80	0,60	3,00	0,35	0,12	0,60	TCMT16T312MK	
12,7	4,76	0,8	5,50	0,96	0,60	3,60	0,25	0,12	0,45	TCMT220408MK	



Finishing

Triangular 60° Positive

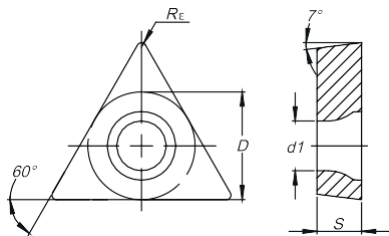


		Grade																				
		P						M					K		N		S					
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	
	TCGT-LN																					
	TCGT090202LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCGT090204LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCGT110202LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCGT110204LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCGT110208LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCGT16T302LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCGT16T304LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCGT16T308LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TCGT16T312LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TCGT16T316LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Fine Finishing to Finishing

Ordering example: Insert Code + Grade

Available on request

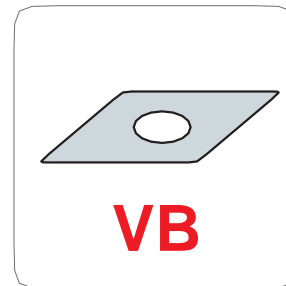


Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
5,56	2,38	0,2	2,50	1,00	0,05	2,50	0,10	0,07	0,15	TCGT090202LN	TCGT-LN
5,56	2,38	0,4	2,50	1,00	0,05	2,50	0,15	0,10	0,20	TCGT090204LN	
6,35	2,38	0,2	2,80	2,03	0,05	4,00	0,12	0,07	0,15	TCGT110202LN	
6,35	2,38	0,4	2,80	2,05	0,10	4,00	0,15	0,10	0,20	TCGT110204LN	
6,35	2,38	0,8	2,80	2,05	0,10	4,00	0,25	0,15	0,50	TCGT110208LN	
9,525	3,97	0,2	4,40	2,53	0,05	5,00	0,10	0,07	0,15	TCGT16T302LN	
9,525	3,97	0,4	4,40	2,80	0,10	5,50	0,15	0,10	0,20	TCGT16T304LN	
9,525	3,97	0,8	4,40	2,80	0,10	5,50	0,25	0,15	0,50	TCGT16T308LN	
9,525	3,97	1,2	4,40	3,00	0,15	5,50	0,45	0,15	0,70	TCGT16T312LN	
9,525	3,97	1,6	4,40	3,00	0,15	5,50	0,65	0,20	0,90	TCGT16T316LN	



Fine Finishing to
Finishing

Rhombic 35° Positive

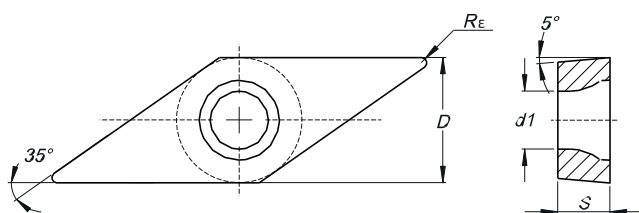



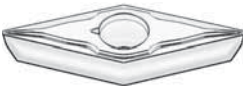
Turning

		Grade																				
		P						M					K		N	S						
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	
<p>Fine Finishing to Finishing</p>	VBMT-FP VBMT110302FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT110304FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT110308FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT110312FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160402FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160404FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160408FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160412FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

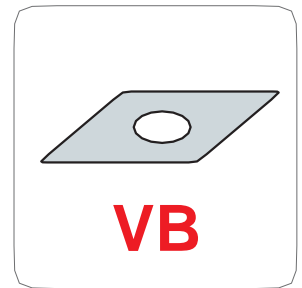
<p>Fine Finishing to Finishing</p>	VBMT-FM VBMT110302FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	-	-	-	-	■
	VBMT110304FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	-	-	-	-	■
	VBMT110308FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	-	-	-	-	■
	VBMT160402FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	-	-	-	-	■
	VBMT160404FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	-	-	-	-	■
	VBMT160408FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	-	-	-	-	■
	VBMT160412FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	-	-	-	-	■

Ordering example: Insert Code + Grade





Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	3,18	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	VBMT110302FP	
6,35	3,18	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	VBMT110304FP	
6,35	3,18	0,8	2,80	0,30	0,13	1,70	0,13	0,07	0,26	VBMT110308FP	
6,35	3,18	1,2	2,80	0,30	0,13	1,70	0,15	0,08	0,31	VBMT110312FP	
9,525	4,76	0,2	4,40	0,32	0,07	1,80	0,07	0,04	0,14	VBMT160402FP	
9,525	4,76	0,4	4,40	0,32	0,10	1,80	0,10	0,05	0,20	VBMT160404FP	
9,525	4,76	0,8	4,40	0,32	0,14	1,80	0,14	0,07	0,27	VBMT160408FP	
9,525	4,76	1,2	4,40	0,32	0,14	1,80	0,16	0,09	0,32	VBMT160412FP	
											<i>Fine Finishing to Finishing</i>
6,35	3,18	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	VBMT110302FM	
6,35	3,18	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	VBMT110304FM	
6,35	3,18	0,8	2,80	0,30	0,13	1,70	0,13	0,07	0,26	VBMT110308FM	
9,525	4,76	0,2	4,40	0,32	0,07	1,80	0,07	0,04	0,14	VBMT160402FM	
9,525	4,76	0,4	4,40	0,32	0,10	1,80	0,10	0,05	0,20	VBMT160404FM	
9,525	4,76	0,8	4,40	0,32	0,14	1,80	0,14	0,07	0,27	VBMT160408FM	
9,525	4,76	1,2	4,40	0,32	0,14	1,80	0,16	0,09	0,32	VBMT160412FM	

Rhombic 35° Positive

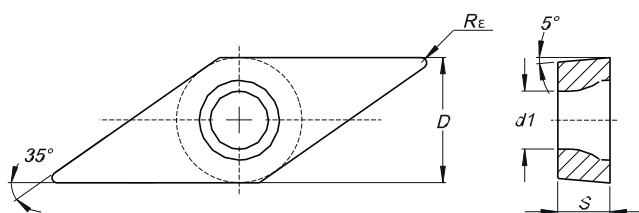




Turning

		Grade																				
		P						M					K		N	S						
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGK510	MGK520	MGN010	MGP710	MGM720	MGU515	
 Fine Finishing to Finishing	VBMT-FK VBMT110302FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT110304FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT110308FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160402FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160404FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160408FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

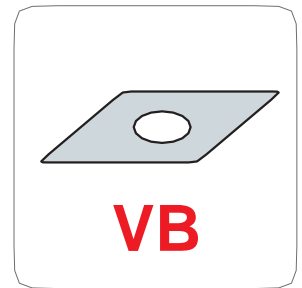
 Finishing	VBMT-MP VBMT160404MP	■	■	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160408MP	■	■	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160412MP	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	3,18	0,2	2,80	0,30	0,06	1,70	0,06	0,03	0,13	VBMT110302FK	 <i>Fine Finishing to Finishing</i>
6,35	3,18	0,4	2,80	0,30	0,10	1,70	0,10	0,05	0,19	VBMT110304FK	
6,35	3,18	0,8	2,80	0,30	0,13	1,70	0,13	0,07	0,26	VBMT110308FK	
9,525	4,76	0,2	4,40	0,32	0,07	1,80	0,07	0,04	0,14	VBMT160402FK	
9,525	4,76	0,4	4,40	0,32	0,10	1,80	0,10	0,05	0,20	VBMT160404FK	
9,525	4,76	0,8	4,40	0,32	0,14	1,80	0,14	0,07	0,27	VBMT160408FK	
9,525	4,76	0,4	4,40	0,72	0,23	2,70	0,14	0,07	0,20	VBMT160404MP	 <i>Finishing</i>
9,525	4,76	0,8	4,40	0,72	0,45	2,70	0,18	0,09	0,27	VBMT160408MP	
9,525	4,76	1,2	4,40	0,72	0,54	2,70	0,22	0,11	0,32	VBMT160412MP	

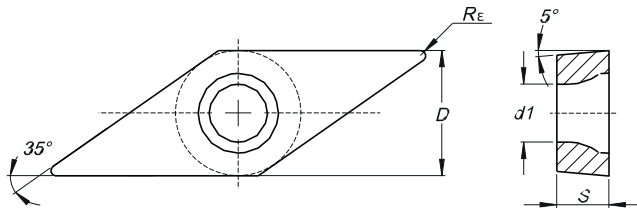
Rhombic 35° Positive





		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGST725	MGK510	MGK520	MGN010	MGP710	MGMT720	MGST725
VBMT-MM	VBMT160404MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160408MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VBMT160412MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

VBMT-MK	VBMT160404MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	VBMT160408MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	VBMT160412MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-

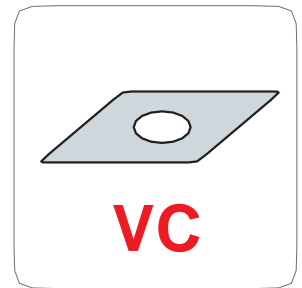
Ordering example: Insert Code + Grade



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
9,525	4,76	0,4	4,40	0,72	0,23	2,70	0,14	0,07	0,20	VBMT160404MM	 Finishing
9,525	4,76	0,8	4,40	0,72	0,45	2,70	0,18	0,09	0,27	VBMT160408MM	
9,525	4,76	1,2	4,40	0,72	0,54	2,70	0,22	0,11	0,32	VBMT160412MM	

9,525	4,76	0,4	4,40	0,72	0,23	2,70	0,14	0,07	0,20	VBMT160404MK	 Finishing
9,525	4,76	0,8	4,40	0,72	0,45	2,70	0,18	0,09	0,27	VBMT160408MK	
9,525	4,76	1,2	4,40	0,72	0,54	2,70	0,22	0,11	0,32	VBMT160412MK	

Rhombic 35° Positive

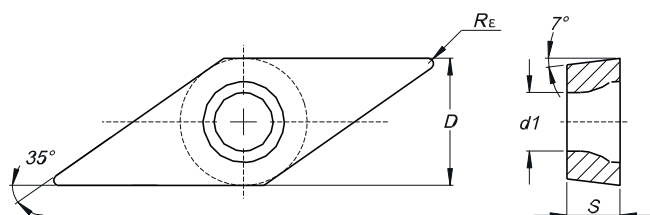




Grade

Inserts	ISO Code	Grade																
		P						M					K		N	S		
		MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGU725	MGK510	MGK520	MGN010	MGP710	MGMT720	MGU725
VCMT-FP	VCMT110302FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT110304FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160402FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160404FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160408FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160412FP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Fine Finishing to Finishing</i>																	

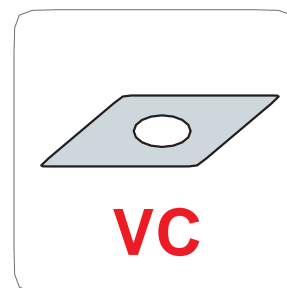
VCMT-FM	VCMT110302FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	■
	VCMT110304FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	■
	VCMT160402FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	■
	VCMT160404FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	■
	VCMT160408FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	■
	VCMT160412FM	-	-	-	-	-	-	-	■	-	-	■	-	-	-	-	-	■
	<i>Fine Finishing to Finishing</i>																	


Ordering example: Insert Code + Grade




ABMESSUNG Dimension				SCHNITTDATEN Cutting Data						ISO BEZEICHNUNG ISO Code	WENDESCHNEIDPLATTEN Inserts
D	S	R ϵ	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	3,18	0,2	2,80	0,30	0,07	1,50	0,07	0,03	0,13	VCMT110302FP	 FEINSCHLICHTEN BIS SCHLICHTEN Fine Finishing to Finishing
6,35	3,18	0,4	2,80	0,30	0,10	1,50	0,10	0,05	0,20	VCMT110304FP	
9,525	4,76	0,2	4,40	0,32	0,07	1,80	0,07	0,04	0,14	VCMT160402FP	
9,525	4,76	0,4	4,40	0,32	0,10	1,80	0,10	0,05	0,20	VCMT160404FP	
9,525	4,76	0,8	4,40	0,32	0,14	1,80	0,14	0,07	0,27	VCMT160408FP	
9,525	4,76	1,2	4,40	0,32	0,14	1,80	0,16	0,09	0,32	VCMT160412FP	
6,35	3,18	0,2	2,80	0,30	0,07	1,50	0,07	0,03	0,13	VCMT110302FM	 FEINSCHLICHTEN BIS SCHLICHTEN Fine Finishing to Finishing
6,35	3,18	0,4	2,80	0,30	0,10	1,50	0,10	0,05	0,20	VCMT110304FM	
9,525	4,76	0,2	4,40	0,32	0,07	1,80	0,07	0,04	0,14	VCMT160402FM	
9,525	4,76	0,4	4,40	0,32	0,10	1,80	0,10	0,05	0,20	VCMT160404FM	
9,525	4,76	0,8	4,40	0,32	0,14	1,80	0,14	0,07	0,27	VCMT160408FM	
9,525	4,76	1,2	4,40	0,32	0,14	1,80	0,16	0,09	0,32	VCMT160412FM	

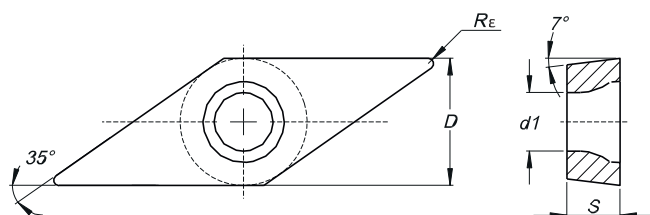
Rhombic 35° Positive





		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGST725	MGK510	MGK520	MGN010	MGP710	MGMT720	MGST725
VCMT-FK	VCMT110304FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160402FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160404FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160408FK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Fine Finishing to Finishing</i>																		

VCMT-MP	VCMT110304MP	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT110308MP	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160404MP	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160408MP	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160412MP	■	■	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<i>Finishing</i>																	

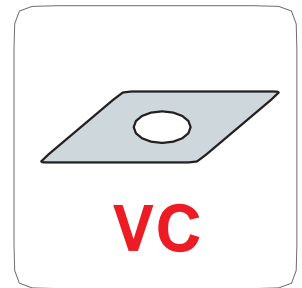
Ordering example: Insert Code + Grade




Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	3,18	0,4	2,80	0,30	0,10	1,50	0,10	0,05	0,20	VCMT110304FK	 Fine Finishing to Finishing
9,525	4,76	0,2	4,40	0,32	0,07	1,80	0,07	0,04	0,14	VCMT160402FK	
9,525	4,76	0,4	4,40	0,32	0,10	1,80	0,10	0,05	0,20	VCMT160404FK	
9,525	4,76	0,8	4,40	0,32	0,14	1,80	0,14	0,07	0,27	VCMT160408FK	


6,35	3,18	0,4	2,80	0,77	0,31	2,55	0,15	0,10	0,25	VCMT110304MP	 Finishing
6,35	3,18	0,8	2,80	0,77	0,61	2,55	0,20	0,13	0,33	VCMT110308MP	
9,525	4,76	0,4	4,40	0,72	0,23	2,70	0,14	0,07	0,20	VCMT160404MP	
9,525	4,76	0,8	4,40	0,72	0,45	2,70	0,18	0,09	0,27	VCMT160408MP	
9,525	4,76	1,2	4,40	0,72	0,54	2,70	0,22	0,11	0,32	VCMT160412MP	

Rhombic 35° Positive

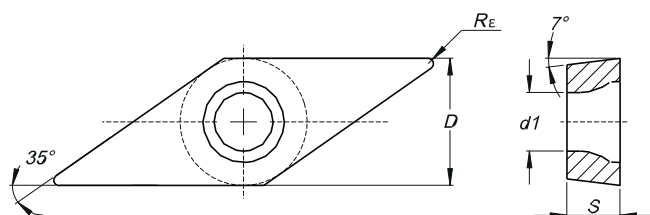



Turning


		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGMT720	MGU515	MGU525	MGP710	MGMT720	MGST725	MGK510	MGK520	MGN010	MGP710	MGMT720	MGST725
VCMT-MM	VCMT110304MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT110308MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160404MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160408MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCMT160412MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Finishing																	

VCMT-MK	VCMT110308MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	VCMT160404MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	VCMT160408MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	VCMT160412MK	-	-	-	-	-	-	-	-	-	-	-	■	■	-	-	-	-
	Finishing																	

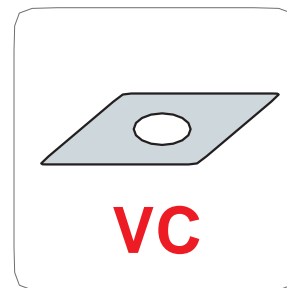
Ordering example: Insert Code + Grade




Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	3,18	0,4	2,80	0,77	0,31	2,55	0,15	0,10	0,25	VCMT110304MM	 Finishing
6,35	3,18	0,8	2,80	0,77	0,61	2,55	0,20	0,13	0,33	VCMT110308MM	
9,525	4,76	0,4	4,40	0,72	0,23	2,70	0,14	0,07	0,20	VCMT160404MM	
9,525	4,76	0,8	4,40	0,72	0,45	2,70	0,18	0,09	0,27	VCMT160408MM	
9,525	4,76	1,2	4,40	0,72	0,54	2,70	0,22	0,11	0,32	VCMT160412MM	

6,35	3,18	0,8	2,80	0,77	0,61	2,55	0,20	0,13	0,33	VCMT110308MK	 Finishing
9,525	4,76	0,4	4,40	0,72	0,23	2,70	0,14	0,07	0,20	VCMT160404MK	
9,525	4,76	0,8	4,40	0,72	0,45	2,70	0,18	0,09	0,27	VCMT160408MK	
9,525	4,76	1,2	4,40	0,72	0,54	2,70	0,22	0,11	0,32	VCMT160412MK	

Rhombic 35° Positive



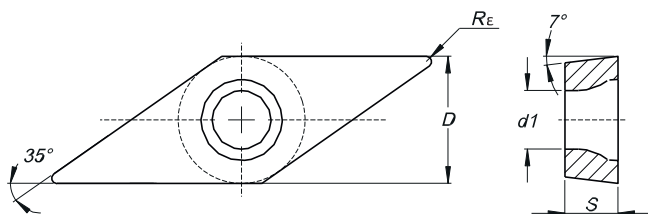
Turning

		Grade																
		P						M					K		N	S		
Inserts	ISO Code	MGU515	MGU525	MGU610	MGU620	MGP710	MGM720	MGU515	MGU525	MGP710	MGM720	MGU725	MGK510	MGK520	MGN010	MGP710	MGM720	MGU725
	VCGT-LN																	
	VCVT110302LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCVT110304LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCVT110308LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCVT130302LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCVT130304LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCVT160402LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCVT160404LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCVT160408LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VCVT160412LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VCVT220530LN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Fine Finishing to Finishing

Ordering example: Insert Code + Grade

Available on request



Dimension				Cutting Data						ISO Code	Inserts
D	S	Rε	d1	ap (mm)	Min	Max	fn (mm/g)	Min	Max		
6,35	3,18	0,2	2,80	1,53	0,05	3,00	0,07	0,05	0,12	VCGT110302LN	VCGT-LN
6,35	3,18	0,4	2,80	1,53	0,05	3,00	0,15	0,10	0,25	VCGT110304LN	
6,35	3,18	0,8	2,80	1,53	0,05	3,00	0,22	0,15	0,45	VCGT110308LN	
7,94	3,18	0,2	3,40	2,00	0,10	4,00	0,07	0,05	0,12	VCGT130302LN	
7,94	3,18	0,4	3,40	2,00	0,10	4,00	0,15	0,10	0,25	VCGT130304LN	
9,525	4,76	0,2	4,40	2,30	0,10	5,00	0,07	0,05	0,12	VCGT160402LN	
9,525	4,76	0,4	4,40	2,55	0,10	5,00	0,15	0,10	0,25	VCGT160404LN	
9,525	4,76	0,8	4,40	2,55	0,10	5,00	0,22	0,15	0,45	VCGT160408LN	
9,525	4,76	1,2	4,40	2,55	0,10	5,00	0,40	0,15	0,60	VCGT160412LN	
12,7	5,56	3,0	5,50	3,55	0,10	7,00	0,80	0,15	1,60	VCGT220530LN	

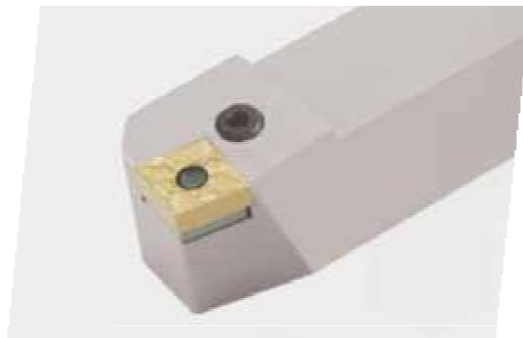
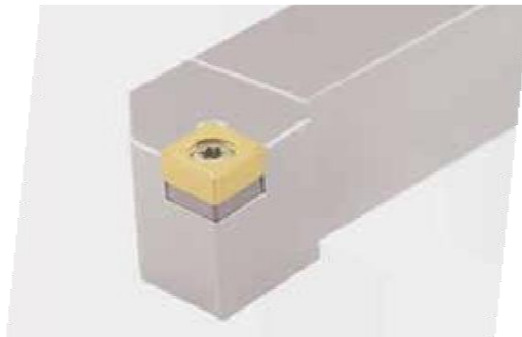


Fine Finishing to
Finishing



DREHEN

Turning



DREHHALTER › Toolholders

FUER AUSSENBEARBEITUNG
WENDESCHNEIDPLATTEN NEGATIV UND POSITIV
*For External Operation
Negative and Positive Inserts*

MEGAcut

ANWENDUNGSBEREICHE

Fields of Competence



MEGAcut

INDEX DREHHALTER

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SVJC 93°	202
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DREHALTER BEZEICHNUNGS SYSTEM

Toolholders Designation System

P¹

S²

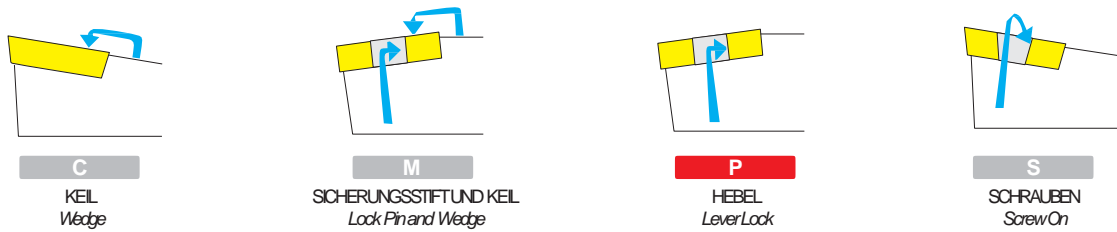
K³

N⁴

R⁵

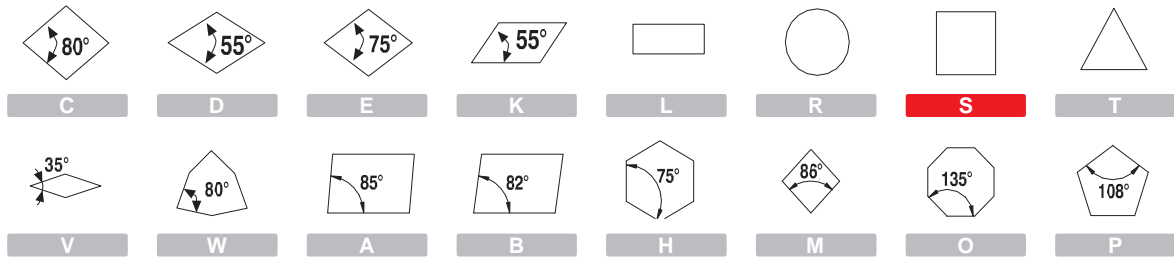
1 WEDESCHNEDPLATTEN SPANN SYSTEM › Insert Clamping System

P S K N R 25 25 - M 12



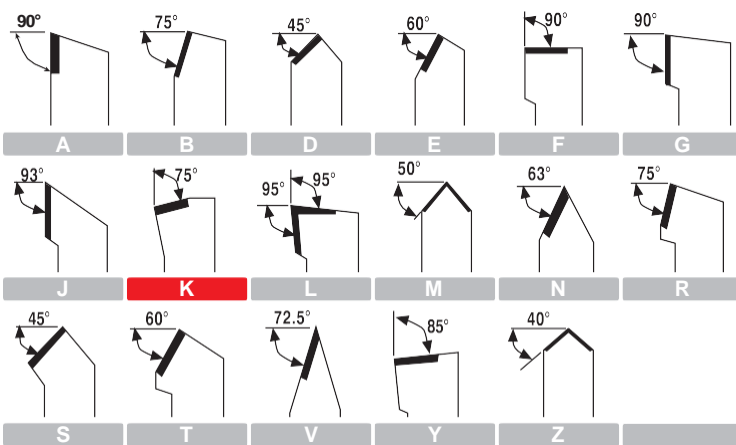
2 WEDESCHNEDPLATTEN FORM › Insert Form

P S K N R 25 25 - M 12



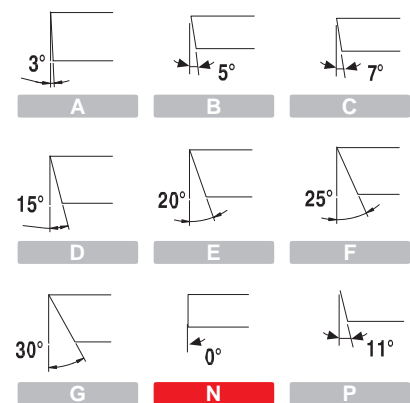
3 EINSATZWINKEL › Lead Angle

P S K N R 25 25 - M 12



4 FREIWINKEL › Clearance angle

P S K N R 25 25 - M 12



DREHHALTER BEZEICHNUNGS SYSTEM

Toolholders Designation System

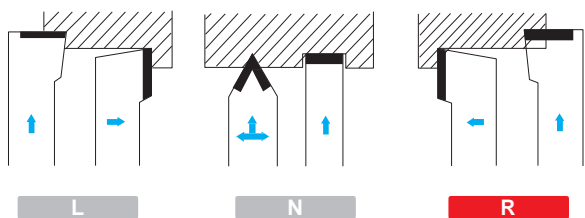
25⁶

25⁷

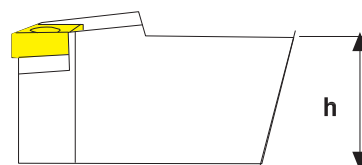
M⁸

12⁹

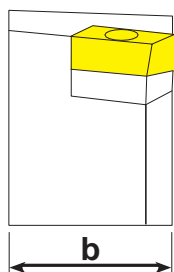
5 SCHNEDRICHTUNG › Cutting Direction
P S K N R 25 25 - M 12



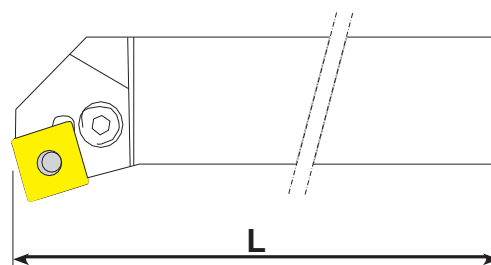
6 SCHAFTHOEHE › Shank height
P S K N R 25 25 - M 12



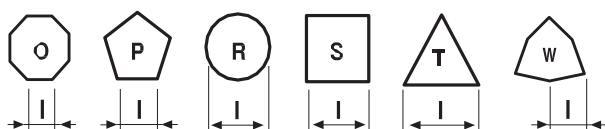
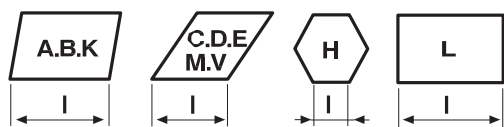
7 SCHAFTBREITE › Shank Width
P S K N R 25 25 - M 12



8 GESAMTLAENGE › Total Length
P S K N R 25 25 - M 12



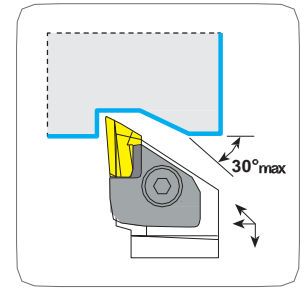
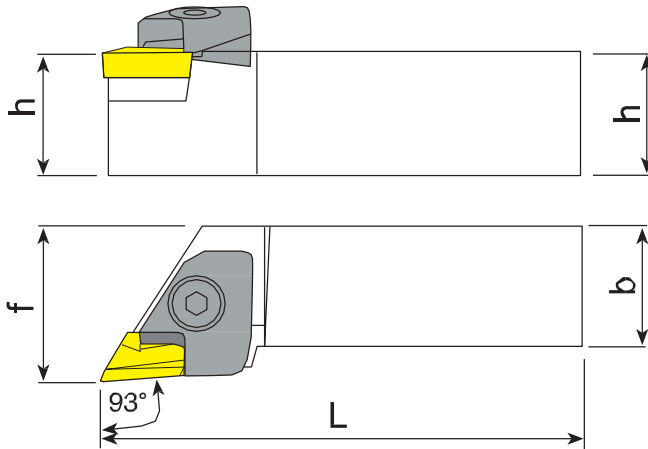
9 WENDESCHNEIDPLATTEN GROESSE › Insert Size
P S K N R 25 25 - M 12



A-32	M-150
B-40	N-160
C-50	P-170
D-60	Q-180
E-70	R-200
F-80	S-125
G-90	L-140
H-100	M-150
J-110	N-160
K-125	P-170
L-140	X-SPECIAL

CKJN 93°

Turning



RECHTS › Right

BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
CKJNR2020K16	20	20	125	25,0	KNUX 1604..
CKJNR2525M16	25	25	150	32,0	KNUX 1604..
CKJNR3232P16	32	32	170	40,0	KNUX 1604..
CKJNR4040S16	40	40	250	50,0	KNUX 1604..

LINKS › Left

CKJNL2020 K16	20	20	125	25,0	KNUX 1604..
CKJNL2525 M16	25	25	150	32,0	KNUX 1604..
CKJNL3232 P16	32	32	170	40,0	KNUX 1604..
CKJNL4040 S16	40	40	250	50,0	KNUX 1604..

BESTELLBESPIEL: CKJNR2020 + K16 › Ordering example: CKJNR2020 + K16

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts

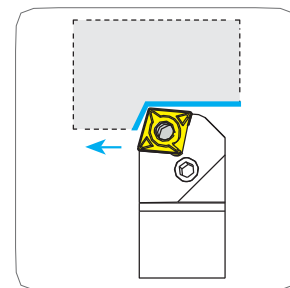
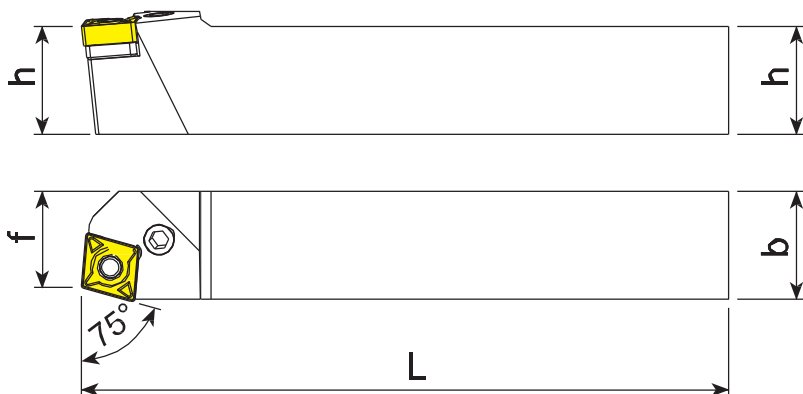


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

KLEMMKEI L Wedge Clamp	KLEMM- SCHRAU BE Clamp Screw	UNTERLAGE N Shim	UNTERLA GEN SCHRAU BE Shim Screw	SPIRA L- FEDE R Spring	SCHEIB EN- FEDER Stamp	SCHLU ES- SEL Key	BEZEICHNUNG Code
TWKT 001	TVWT004	TSKT 001	TVST 005	TMT 001	TAT 001	TCET 003	CKJNR2020 K16
TWKT 001	TVWT004	TSKT 001	TVST 005	TMT 001	TAT 001	TCET 003	CKJNR2525 M16
TWKT 001	TVWT004	TSKT 001	TVST 005	TMT 001	TAT 001	TCET 003	CKJNR3232 P16
TWKT 001	TVWT004	TSKT 001	TVST 005	TMT 001	TAT 001	TCET 003	CKJNR4040 S16
RECHTS › Right							
TWKT 002	TVWT004	TSKT 002	TVST 005	TMT 001	TAT 001	TCET 003	CKJNL2020 K16
TWKT 002	TVWT004	TSKT 002	TVST 005	TMT 001	TAT 001	TCET 003	CKJNL2525 M16
TWKT 002	TVWT004	TSKT 002	TVST 005	TMT 001	TAT 001	TCET 003	CKJNL3232 P16
TWKT 002	TVWT004	TSKT 002	TVST 005	TMT 001	TAT 001	TCET 003	CKJNL4040 S16
LINKS › Left							

PCBN 75°

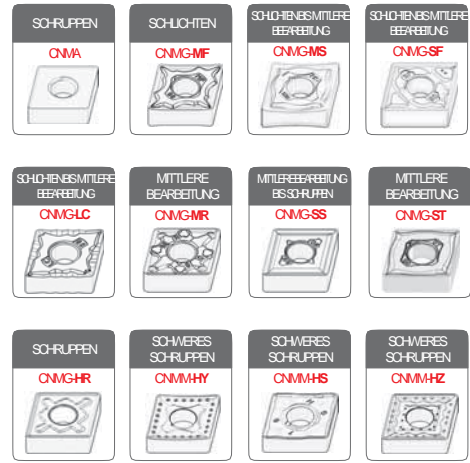


	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
RECHTS › Right	PCBNR2020K12	20	20	125	17.5	CNM. 1204..
	PCBNR2525M12	25	25	150	22.5	CNM. 1204..
	PCBNR3232P12	32	32	170	27.5	CNM. 1204..
	PCBNR2525M16	25	25	150	22,0	CNM. 1606..
	PCBNR3232P16	32	32	170	27,0	CNM. 1606..
	PCBNR3232P19	32	32	170	27,0	CNM. 1906..
	PCBNR4040S19	40	40	250	37,0	CNM. 1906..
	PCBNR4040S25	40	40	250	37,0	CNM. 2509..
	PCBNR5050S25	50	50	250	47,0	CNM. 2509..

LINKS › Left	PCBNL2020K12	20	20	125	17.5	CNM. 1204..
	PCBNL2525M12	25	25	150	22.5	CNM. 1204..
	PCBNL3232P12	32	32	170	27.5	CNM. 1204..
	PCBNL2525M16	25	25	150	22,0	CNM. 1606..
	PCBNL3232P16	32	32	170	27,0	CNM. 1606..
	PCBNL3232P19	32	32	170	27,0	CNM. 1906..
	PCBNL4040S19	40	40	250	37,0	CNM. 1906..
	PCBNL4040S25	40	40	250	37,0	CNM. 2509..
	PCBNL5050S25	50	50	250	47,0	CNM. 2509..

BESTELLBEISPIEL: PCBNR2020 + K12 › Ordering example: PCBNR2020 + K12

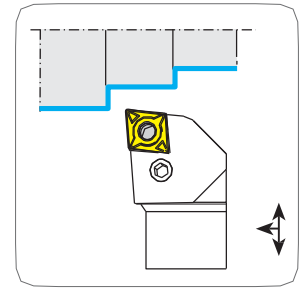
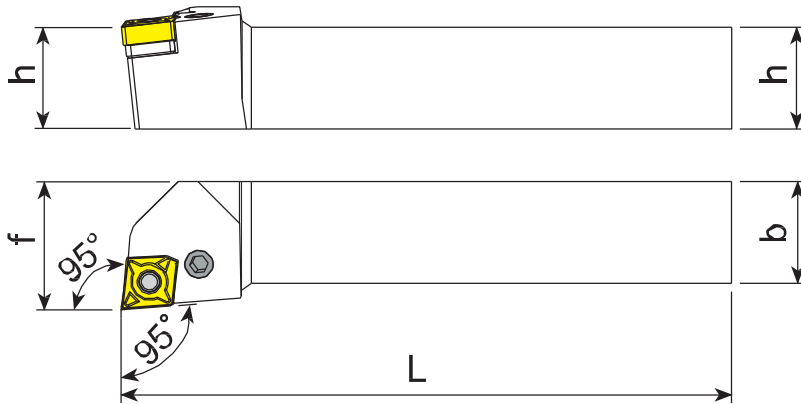
WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



GEEGNETE FORM UND SPANNLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCBNR2020 K12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCBNR2525 M12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCBNR3232 P12
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	PCBNR2525 M16
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	PCBNR3232 P16
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	PCBNR3232 P19
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	PCBNR4040 S19
TLT 006	TVLT 005	TSCT 007	TPST 005	TCET 004	PCBNR4040 S25
TLT 006	TVLT 005	TSCT 007	TPST 005	TCET 004	PCBNR5050 S25
RECHTS › Right					
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCBNL2020 K12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCBNL2525 M12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCBNL3232 P12
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	PCBNL2525 M16
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	PCBNL3232 P16
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	PCBNL3232 P19
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	PCBNL4040 S19
TLT 006	TVLT 005	TSCT 007	TPST 005	TCET 004	PCBNL4040 S25
TLT 006	TVLT 005	TSCT 007	TPST 005	TCET 004	PCBNL5050 S25
LINKS › Left					

PCLN 95°



RECHTS › Right

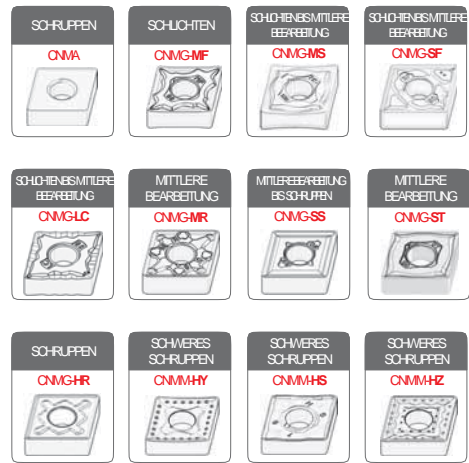
BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
PCLNR1616H12	16	16	100	20,0	CNM. 1204..
PCLNR2020K12	20	20	125	25,0	CNM. 1204..
PCLNR2525M12	25	25	150	32,0	CNM. 1204..
PCLNR3232P12	32	32	170	40,0	CNM. 1204..
PCLNR2525M16	25	25	150	32,0	CNM. 1606..
PCLNR3232P16	32	32	170	40,0	CNM. 1606..
PCLNR2525M19	25	25	150	32,0	CNM. 1906..
PCLNR3232P19	32	32	170	40,0	CNM. 1906..
PCLNR4040S19	40	40	250	50,0	CNM. 1906..
PCLNR4040S25	40	40	250	50,0	CNM. 2509..

LINKS › Left

PCLNL1616H12	16	16	100	20,0	CNM. 1204..
PCLNL2020K12	20	20	125	25,0	CNM. 1204..
PCLNL2525M12	25	25	150	32,0	CNM. 1204..
PCLNL3232P12	32	32	170	40,0	CNM. 1204..
PCLNL2525M16	25	25	150	32,0	CNM. 1606..
PCLNL3232P16	32	32	170	40,0	CNM. 1606..
PCLNL2525M19	25	25	150	32,0	CNM. 1906..
PCLNL3232P19	32	32	170	40,0	CNM. 1906..
PCLNL4040S19	40	40	250	50,0	CNM. 1906..
PCLNL4040S25	40	40	250	50,0	CNM. 2509..

BESTELLBEISPIEL: PCLNR1616 + H12 › Ordering example: PCLNR1616 + H12

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCLNR1616 H12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCLNR2020 K12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCLNR2525 M12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	PCLNR3232 P12
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	PCLNR2525 M16
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	PCLNR3232 P16
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	PCLNR2525 M19
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	PCLNR3232 P19
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	PCLNR4040 S19
TLT 006	TVLT 005	TSCT 007	TPST 005	TCET 004	PCLNR4040 S25

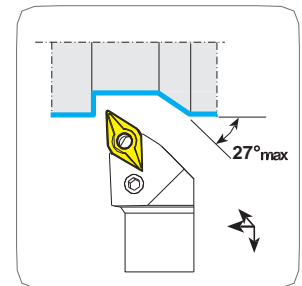
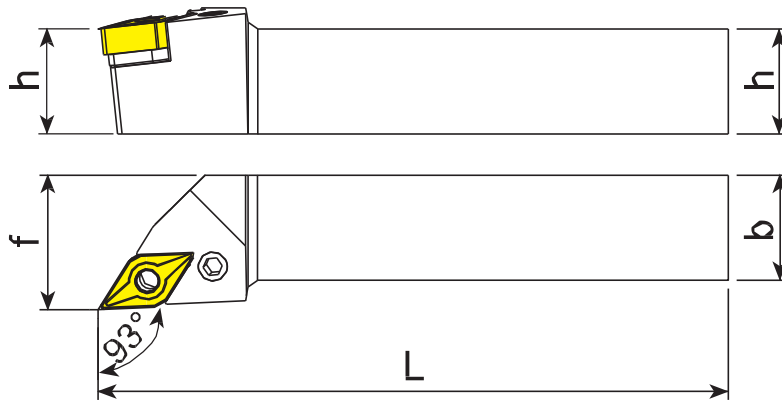
RECHTS › Right

TLT002	TVLT002	TSCT004	TPST002	TCET002	PCLNL1616 H12
TLT002	TVLT002	TSCT004	TPST002	TCET002	PCLNL2020 K12
TLT002	TVLT002	TSCT004	TPST002	TCET002	PCLNL2525 M12
TLT002	TVLT002	TSCT004	TPST002	TCET002	PCLNL3232 P12
TLT004	TVLT003	TSCT005	TPST003	TCET003	PCLNL2525 M16
TLT004	TVLT003	TSCT005	TPST003	TCET003	PCLNL3232 P16
TLT005	TVLT004	TSCT006	TPST004	TCET003	PCLNL2525 M19
TLT005	TVLT004	TSCT006	TPST004	TCET003	PCLNL3232 P19
TLT005	TVLT004	TSCT006	TPST004	TCET003	PCLNL4040 S19
TLT006	TVLT005	TSCT007	TPST005	TCET004	PCLNL4040 S25

LINKS › Left

PDJN 93°

Turning

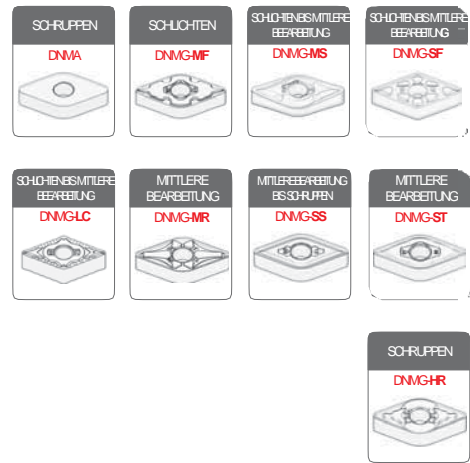


	BEZEICHNUNG	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	Code					
RECHTS › Right	PDJNR1616H11	16	16	100	20,0	DNM. 1104..
	PDJNR2020K11	20	20	125	25,0	DNM. 1104..
	PDJNR2525M11	25	25	150	32,0	DNM. 1104..
	PDJNR2020K15	20	20	125	25,0	DNM. 1506..
	PDJNR2525M15	25	25	150	32,0	DNM. 1506..
	PDJNR3232P15	32	32	170	40,0	DNM. 1506..
	PDJNR4040S15	40	40	250	50,0	DNM. 1506..

LINKS › Left	PDJNL1616 H11	16	16	100	20,0	DNM. 1104..
	PDJNL2020 K11	20	20	125	25,0	DNM. 1104..
	PDJNL2525 M11	25	25	150	32,0	DNM. 1104..
	PDJNL2020 K15	20	20	125	25,0	DNM. 1506..
	PDJNL2525 M15	25	25	150	32,0	DNM. 1506..
	PDJNL3232 P15	32	32	170	40,0	DNM. 1506..
	PDJNL4040 S15	40	40	250	50,0	DNM. 1506..

BESTELLBEISPIEL: PDJNR1616 + H11 › Ordering example: PDJNR1616 + H11

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts

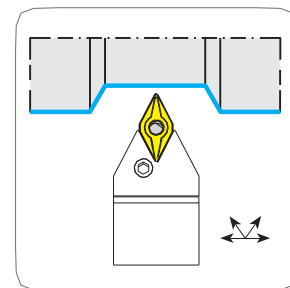
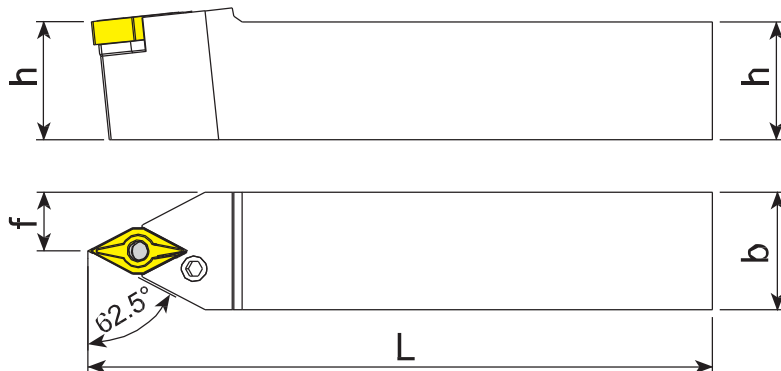


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	PDJNR1616 H11
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	PDJNR2020 K11
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	PDJNR2525 M11
TLT 003	TVLT 002	TSDT 001	TPST 002	TCET 002	PDJNR2020 K15
TLT 003	TVLT 002	TSDT 001	TPST 002	TCET 002	PDJNR2525 M15
TLT 003	TVLT 002	TSDT 001	TPST 002	TCET 002	PDJNR3232 P15
TLT 003	TVLT 002	TSDT 001	TPST 002	TCET 002	PDJNR4040 S15
RECHTS › Right					
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	PDJNL1616 H11
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	PDJNL2020 K11
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	PDJNL2525 M11
TLT 003	TVLT 002	TSDT 001	TPST 002	TCET 002	PDJNL2020 K15
TLT 003	TVLT 002	TSDT 001	TPST 002	TCET 002	PDJNL2525 M15
TLT 003	TVLT 002	TSDT 001	TPST 002	TCET 002	PDJNL3232 P15
TLT 003	TVLT 002	TSDT 001	TPST 002	TCET 002	PDJNL4040 S15
LINKS › Left					

PDNN 62,5°

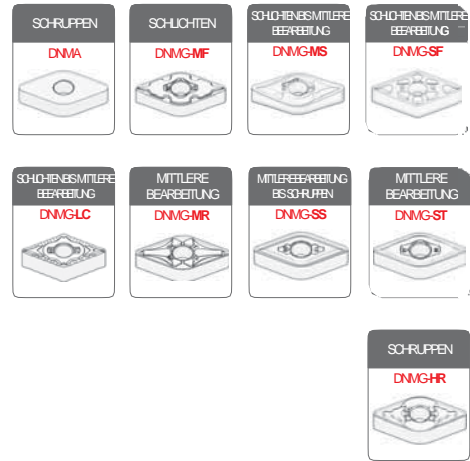


BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
PDNNN1616 H11	16	16	100	8,0	DNM. 1104..
PDNNN2020 K11	20	20	125	10,0	DNM. 1104..
PDNNN2525 M11	25	25	150	12,5	DNM. 1104..
PDNNN2020 K15	20	20	125	10,0	DNM. 1506..
PDNNN2525 M15	25	25	150	12,5	DNM. 1506..
PDNNN3232 P15	32	32	170	16,0	DNM. 1506..

NEUTRAL › Neutral

BESTELLBESPIEL: PDNNN1616 + H11 › Ordering example: PDNNN1616 + H11

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



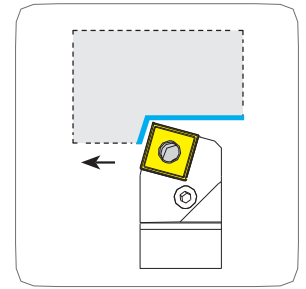
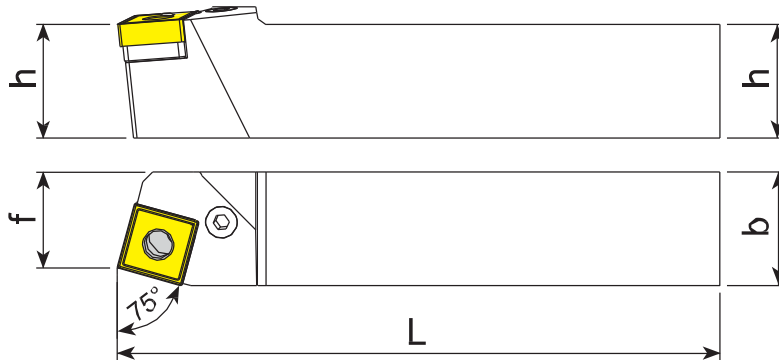
GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBELSCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT001	TMLT001	TSDT004	TPST001	TCET001	PDNNN1616 H11
TLT001	TMLT001	TSDT004	TPST001	TCET001	PDNNN2020 K11
TLT001	TMLT001	TSDT004	TPST001	TCET001	PDNNN2525 M11
TLT003	TMLT002	TSDT003	TPST002	TCET002	PDNNN2020 K15
TLT003	TMLT002	TSDT003	TPST002	TCET002	PDNNN2525 M15
TLT003	TMLT002	TSDT003	TPST002	TCET002	PDNNN3232 P15

NEUTRAL › Neutral

Turning

PSBN 75°



RECHTS › Right

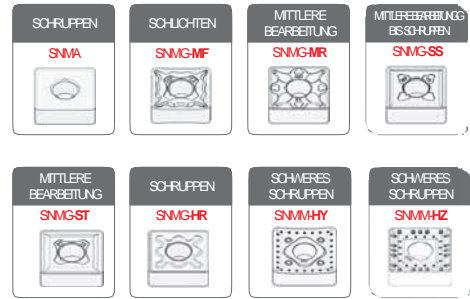
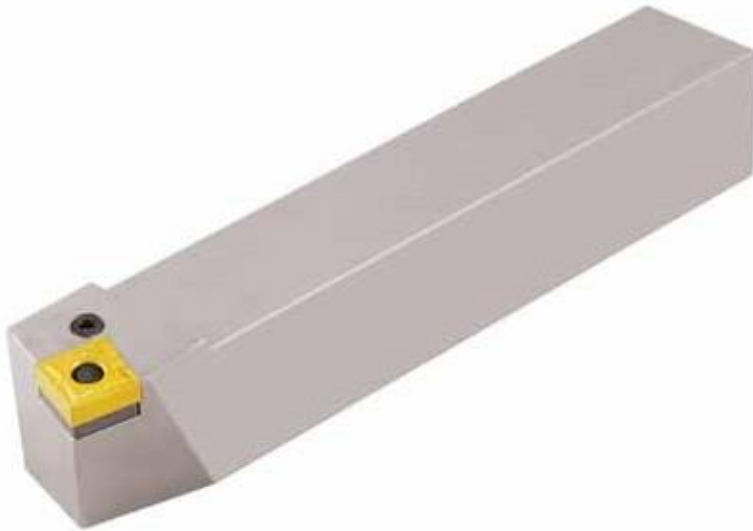
BEZEICHNUNG Code	h	b	L	f	WENDESCHNEDPLATTEN Insert
PSBNR2020 K12	20	20	125	17,0	SNM.1204..
PSBNR2525 M12	25	25	150	22,0	SNM.1204..
PSBNR3232 P19	32	32	170	27,0	SNM.1906..
PSBNR4040 S19	40	40	250	35,0	SNM.1906..

LINKS › Left

PSBNL2020K12	20	20	125	17,0	SNM. 1204..
PSBNL2525M12	25	25	150	22,0	SNM. 1204..
PSBNL3232P19	32	32	170	27,0	SNM. 1906..
PSBNL4040S19	40	40	250	35,0	SNM. 1906..

BESTELLBESPIEL: PSBNR2020 + K12 › Ordering example: PSBNR2020 + K12

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

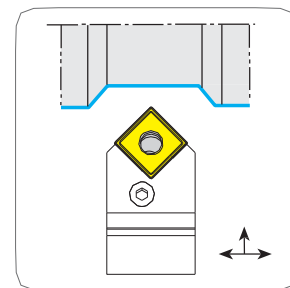
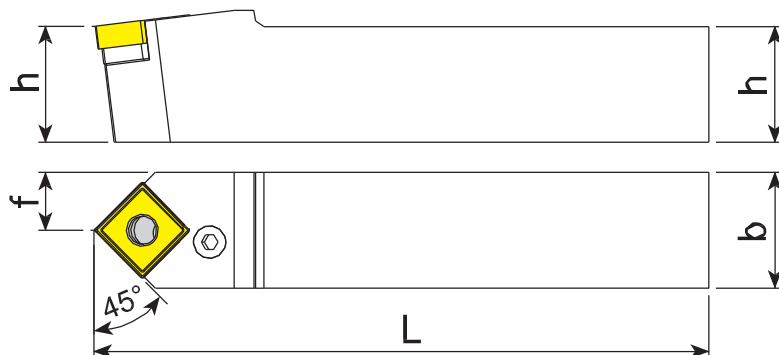
HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSBNR2020 K12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSBNR2525 M12
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSBNR3232 P19
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSBNR4040 S19

RECHTS › Right

TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSBNL2020 K12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSBNL2525 M12
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSBNL3232 P19
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSBNL4040 S19

LINKS › Left

PSDN 45°

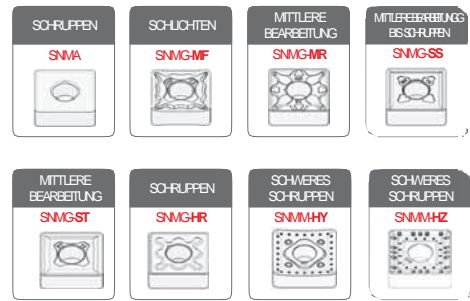


BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
PSDNN2020 K12	20	20	125	10,0	SNM. 1204..
PSDNN2525 M12	25	25	150	12,5	SNM. 1204..
PSDNN3232 P12	32	32	170	16,0	SNM. 1204..
PSDNN2525 M15	25	25	150	12,5	SNM. 1506..
PSDNN3232 P19	32	32	170	16,0	SNM. 1906..

NEUTRAL › Neutral

BESTELLBESPIEL: PSDNN2020 + K12 › Ordering example: PSDNN2020 + K12

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



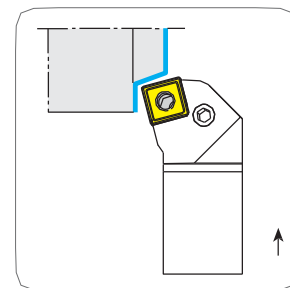
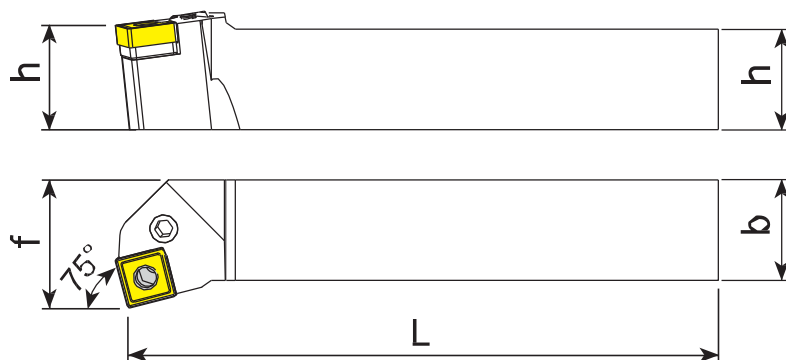
GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSDNN2020 K12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSDNN2525 M12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSDNN3232 P12
TLT 004	TVLT 003	TSST 006	TPST 003	TCET 003	PSDNN2525 M15
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSDNN3232 P19

NEUTRAL › Neutral

PSKN 75°

Turning

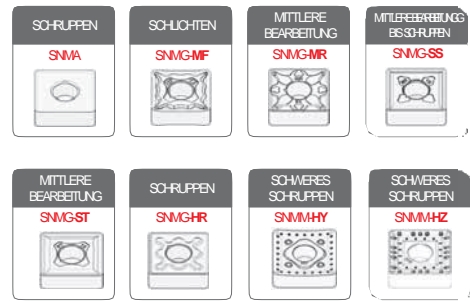


RECHTS › Right	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	PSKNR2020K12	20	20	125	25,0	SNM. 1204..
	PSKNR2525M12	25	25	150	32,0	SNM. 1204..
	PSKNR3232P12	32	32	170	40,0	SNM. 1204..
	PSKNR2525M15	25	25	150	32,0	SNM. 1506..
	PSKNR3232P19	32	32	170	40,0	SNM. 1906..

LINKS › Left	PSKNL2020K12	20	20	125	25,0	SNM. 1204..
	PSKNL2525M12	25	25	150	32,0	SNM. 1204..
	PSKNL3232P12	32	32	170	40,0	SNM. 1204..
	PSKNL2525M15	25	25	150	32,0	SNM. 1506..
	PSKNL3232P19	32	32	170	40,0	SNM. 1906..

BESTELLBESPIEL: PSKNR2020 + K12 › Ordering example: PSKNR2020 + K12

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSKNR2020 K12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSKNR2525 M12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSKNR3232 P12
TLT 004	TVLT 003	TSST 006	TPST 003	TCET 003	PSKNR2525 M15
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSKNR3232 P19

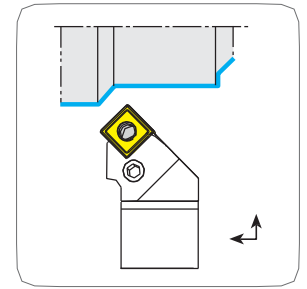
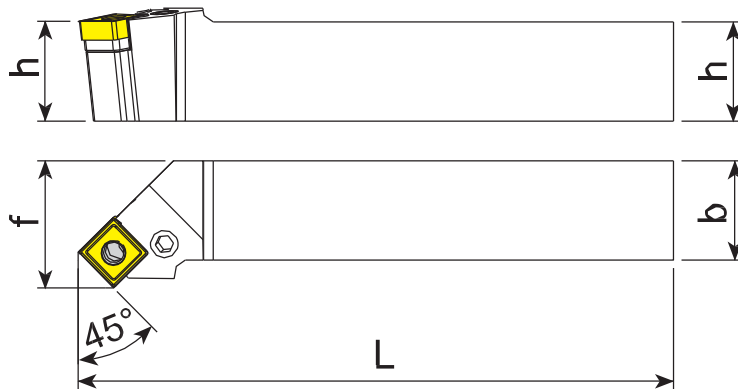
RECHTS › Right

TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSKNL2020 K12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSKNL2525 M12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSKNL3232 P12
TLT 004	TVLT 003	TSST 006	TPST 003	TCET 003	PSKNL2525 M15
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSKNL3232 P19

LINKS › Left

PSSN 45°

Turning



RECHTS › Right

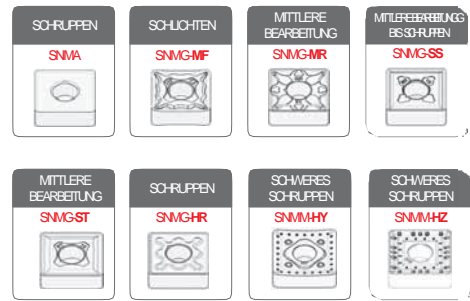
BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
PSSNR2020K12	20	20	125	25,0	SNM. 1204..
PSSNR2525M12	25	25	150	32,0	SNM. 1204..
PSSNR3232P12	32	32	170	40,0	SNM. 1204..
PSSNR3232P19	32	32	170	40,0	SNM. 1906
PSSNR4040S19	40	40	250	50,0	SNM. 1906
PSSNR4040S25	40	40	250	50,0	SNM. 2509..

LINKS › Left

PSSNL2020 K12	20	20	125	25,0	SNM. 1204..
PSSNL2525 M12	25	25	150	32,0	SNM. 1204..
PSSNL3232 P12	32	32	170	40,0	SNM. 1204..
PSSNL3232 P19	32	32	170	40,0	SNM. 1906
PSSNL4040 S19	40	40	250	50,0	SNM. 1906
PSSNL4040 S25	40	40	250	50,0	SNM. 2509..

BESTELLBESPIEL: PSSNR2020 + K12 › Ordering example: PSNR2020 + K12

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts

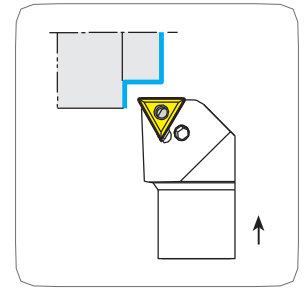
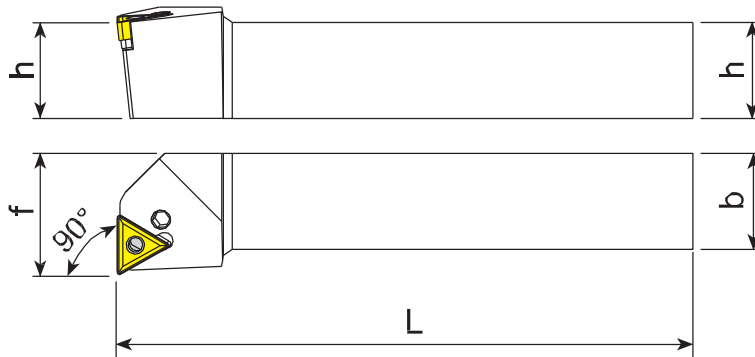


GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code	
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSSNR2020 K12	RECHTS › Right
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSSNR2525 M12	
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSSNR3232 P12	
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSSNR3232 P19	
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSSNR4040 S19	
TLT 006	TVLT 005	TSST 005	TPST 005	TCET 004	PSSNR4040 S25	
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSSNL2020 K12	LINKS › Left
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSSNL2525 M12	
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	PSSNL3232 P12	
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSSNL3232 P19	
TLT 005	TVLT 004	TSST 004	TPST 004	TCET 003	PSSNL4040 S19	
TLT 006	TVLT 005	TSST 005	TPST 005	TCET 004	PSSNL4040 S25	

PTFN 90°

Turning

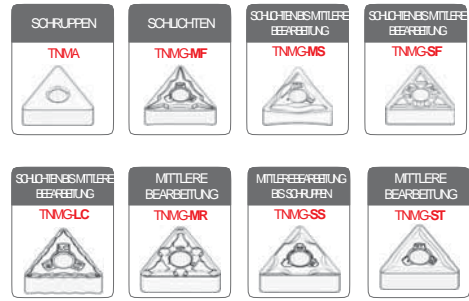


RECHTS › Right	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	PTFNR1616H16	16	16	100	20,0	TNM. 1604..
	PTFNR2020K16	20	20	125	25,0	TNM. 1604..
	PTFNR2525M16	25	25	150	32,0	TNM. 1604..
	PTFNR3232P16	32	32	170	40,0	TNM. 1604..
	PTFNR2525M22	25	25	150	32,0	TNM. 2204..
	PTFNR3232P22	32	32	170	40,0	TNM. 2204..

LINKS › Left	PTFNL1616 H16	16	16	100	20,0	TNM. 1604..
	PTFNL2020 K16	20	20	125	25,0	TNM. 1604..
	PTFNL2525 M16	25	25	150	32,0	TNM. 1604..
	PTFNL3232 P16	32	32	170	40,0	TNM. 1604..
	PTFNL2525 M22	25	25	150	32,0	TNM. 2204..
	PTFNL3232 P22	32	32	170	40,0	TNM. 2204..

BESTELLBESPIEL: PTFNR1616 + H16 › Ordering example: PTFNR1616 + H16

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



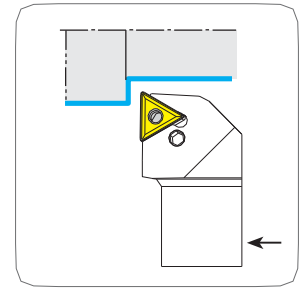
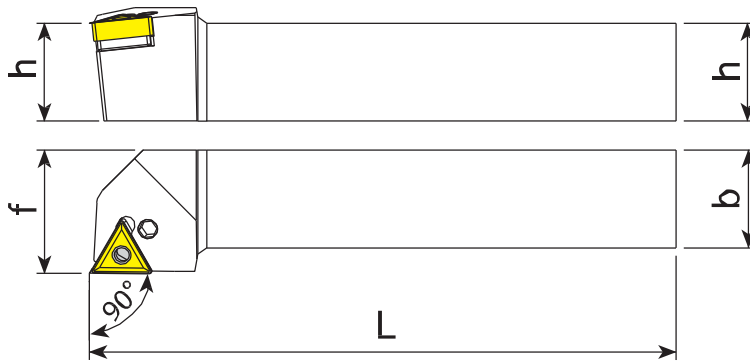
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTFNR1616 H16	RECHTS › Right
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTFNR2020 K16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTFNR2525 M16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTFNR3232 P16	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTFNR2525 M22	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTFNR3232 P22	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTFNL1616 H16	LINKS › Left
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTFNL2020 K16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTFNL2525 M16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTFNL3232 P16	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTFNL2525 M22	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTFNL3232 P22	

PTGN 90°

Turning



RECHTS › Right	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	PTGNR1616H16	16	16	100	20,0	TNM. 1604..
	PTGNR2020K16	20	20	125	25,0	TNM. 1604..
	PTGNR2525M16	25	25	150	32,0	TNM. 1604..
	PTGNR2525M22	25	25	150	32,0	TNM. 2204..

LINKS › Left	PTGNL1616H16	16	16	100	20,0	TNM. 1604..
	PTGNL2020K16	20	20	125	25,0	TNM. 1604..
	PTGNL2525M16	25	25	150	32,0	TNM. 1604..
	PTGNL2525M22	25	25	150	32,0	TNM. 2204..

BESTELLBESPIEL: PTGNR1616 + H16 › Ordering example: PTGNR1616 + H16

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTGNR1616 H16
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTGNR2020 K16
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTGNR2525 M16
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTGNR2525 M22

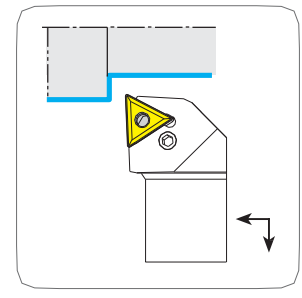
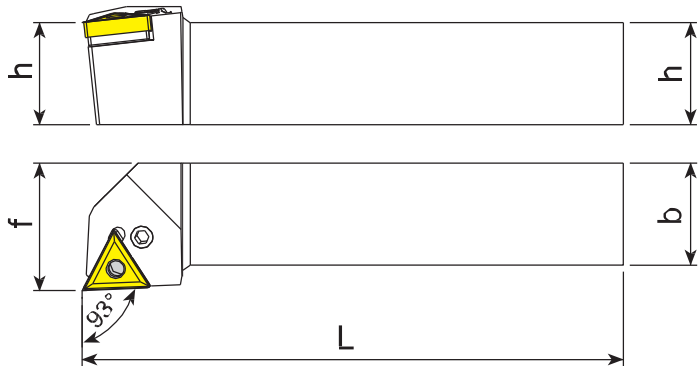
RECHTS › Right

TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTGNL1616 H16
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTGNL2020 K16
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTGNL2525 M16
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTGNL2525 M22

LINKS › Left

PTJN 93°

Turning



RECHTS › Right	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	PTJNR1616 H16	16	16	100	20,0	TNM. 1604..
	PTJNR2020 K16	20	20	125	25,0	TNM. 1604..
	PTJNR2525 M16	25	25	150	32,0	TNM. 1604..
	PTJNR3232 P16	32	32	170	40,0	TNM. 1604..
	PTJNR2525 M22	25	25	150	32,0	TNM. 2204..
	PTJNR3232 P22	32	32	170	40,0	TNM. 2204..

LINKS › Left	PTJNL1616 H16	16	16	100	20,0	TNM. 1604..
	PTJNL2020 K16	20	20	125	25,0	TNM. 1604..
	PTJNL2525 M16	25	25	150	32,0	TNM. 1604..
	PTJNL3232 P16	32	32	170	40,0	TNM. 1604..
	PTJNL2525 M22	25	25	150	32,0	TNM. 2204..
	PTJNL3232 P22	32	32	170	40,0	TNM. 2204..

BESTELLBESPIEL: PTJNR1616 + H16 › Ordering example: PTJNR1616 + H16

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



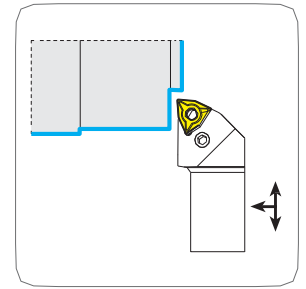
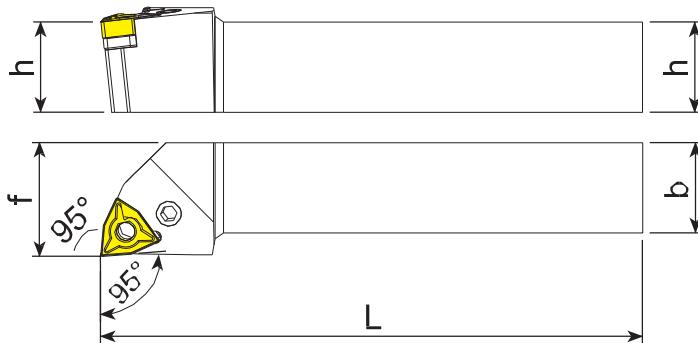
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTJNR1616 H16	RECHTS › Right
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTJNR2020 K16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTJNR2525 M16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTJNR3232 P16	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTJNR2525 M22	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTJNR3232 P22	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTJNL1616 H16	LINKS › Left
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTJNL2020 K16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTJNL2525 M16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	PTJNL3232 P16	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTJNL2525 M22	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	PTJNL3232 P22	

P LN 95°

Turning

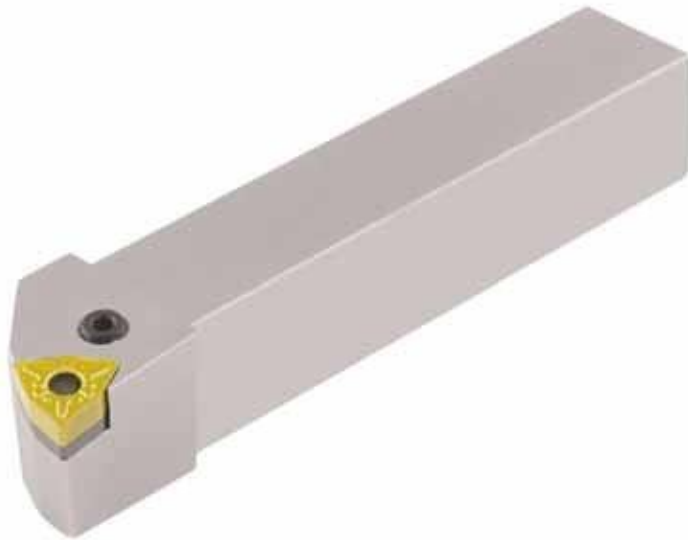


	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
RECHTS › Right	PWLN1616 H06	16	16	100	20,0	WNM. 0604..
	PWLN2020 K06	20	20	125	25,0	WNM. 0604..
	PWLN2525 M06	25	25	150	32,0	WNM. 0604..
	PWLN1616 H08	16	16	100	20,0	WNM. 0804..
	PWLN2020 K08	20	20	125	25,0	WNM. 0804..
	PWLN2525 M08	25	25	150	32,0	WNM. 0804..
	PWLN3232 P08	32	32	170	40,0	WNM. 0804..

LINKS › Left	PWLN1616 H06	16	16	100	20,0	WNM. 0604..
	PWLN2020 K06	20	20	125	25,0	WNM. 0604..
	PWLN2525 M06	25	25	150	32,0	WNM. 0604..
	PWLN1616 H08	16	16	100	20,0	WNM. 0804..
	PWLN2020 K08	20	20	125	25,0	WNM. 0804..
	PWLN2525 M08	25	25	150	32,0	WNM. 0804..
	PWLN3232 P08	32	32	170	40,0	WNM. 0804..

BESTELLBESPIEL: PWLN1616 + H06 › Ordering example: PWLN1616 + H06

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts

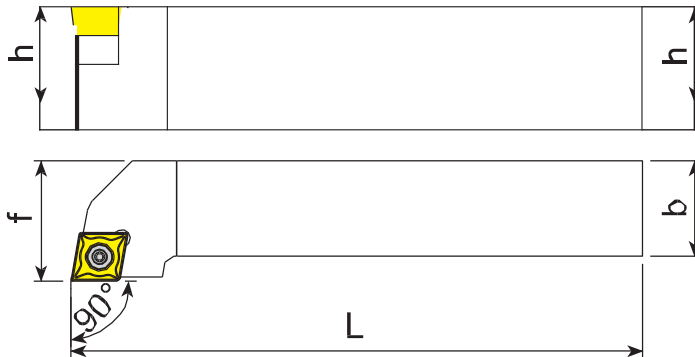
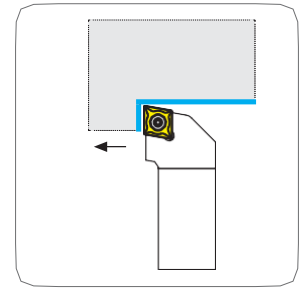


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code	
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	PWLN R1616 H06	RECHTS › Right
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	PWLN R2020 K06	
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	PWLN R2525 M06	
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	PWLN R1616 H08	
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	PWLN R2020 K08	
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	PWLN R2525 M08	
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	PWLN R3232 P08	
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	PWLN L1616 H06	LINKS › Left
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	PWLN L2020 K06	
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	PWLN L2525 M06	
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	PWLN L1616 H08	
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	PWLN L2020 K08	
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	PWLN L2525 M08	
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	PWLN L3232 P08	

SCAC 90°



RECHTS › Right

BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
SCACR0808E06	8	8	70	10,0	CCM. 0602..
SCACR1010E06	10	10	70	12,0	CCM. 0602..
SCACR1212F09	12	12	80	16,0	CCM. 09T3..
SCACR1616H09	16	16	100	20,0	CCM. 09T3..
SCACR2020K09	20	20	125	25,0	CCM. 09T3..
SCACR2020K12	20	20	125	25,0	CCM. 1204..
SCACR2525M12	25	25	150	32,0	CCM. 1204..

LINKS › Left

SCACL0808E06	8	8	70	10,0	CCM. 0602..
SCACL1010E06	10	10	70	12,0	CCM. 0602..
SCACL1212F09	12	12	80	16,0	CCM. 09T3..
SCACL1616H09	16	16	100	20,0	CCM. 09T3..
SCACL2020K09	20	20	125	25,0	CCM. 09T3..
SCACL2020K12	20	20	125	25,0	CCM. 1204..
SCACL2525M12	25	25	150	32,0	CCM. 1204..

BESTELLBESPIEL: SCACR0808 + E06 › Ordering example: SCACR0808 + E06

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



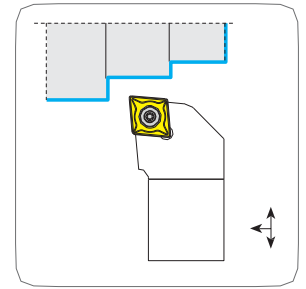
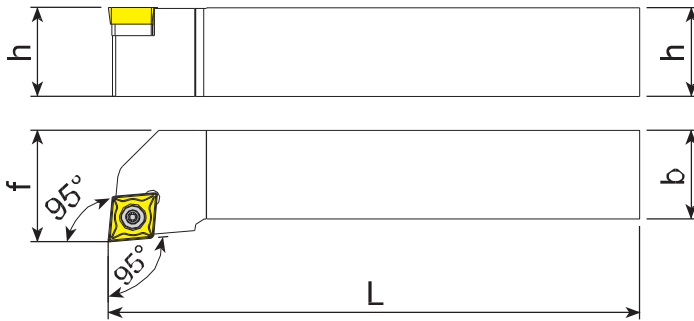
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	SCACR0808 E06	RECHTS › Right
TVTT 010	-	-	TCTT 003	SCACR1010 E06	
TVTT 011	-	-	TCTT 004	SCACR1212 F09	
TVTT 013	TSCT 001	TVST 001	TCTT 004	SCACR1616 H09	
TVTT 013	TSCT 001	TVST 001	TCTT 004	SCACR2020 K09	
TVTT 002	TSCT 003	TVST 002	TCTT 005	SCACR2020 K12	
TVTT 002	TSCT 003	TVST 002	TCTT 005	SCACR2525 M12	
TVTT 010	-	-	TCTT 003	SCACL0808 E06	LINKS › Left
TVTT 010	-	-	TCTT 003	SCACL1010 E06	
TVTT 011	-	-	TCTT 004	SCACL1212 F09	
TVTT 013	TSCT 001	TVST 001	TCTT 004	SCACL1616 H09	
TVTT 013	TSCT 001	TVST 001	TCTT 004	SCACL2020 K09	
TVTT 002	TSCT 003	TVST 002	TCTT 005	SCACL2020 K12	
TVTT 002	TSCT 003	TVST 002	TCTT 005	SCACL2525 M12	

SCLC 95°

Turning



RECHTS › Right	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	SCLCR0808E06	8	8	70	10,0	CCM. 0602..
	SCLCR1010E06	10	10	70	12,0	CCM. 0602..
	SCLCR1212F09	12	12	80	16,0	CCM. 09T3..
	SCLCR1616H09	16	16	100	20,0	CCM. 09T3..
	SCLCR2020K09	20	20	125	25,0	CCM. 09T3..
	SCLCR2020K12	20	20	125	25,0	CCM. 1204..
	SCLCR2525M12	25	25	150	32,0	CCM. 1204..

LINKS › Left	SCLCL0808 E06	8	8	70	10,0	CCM. 0602..
	SCLCL1010 E06	10	10	70	12,0	CCM. 0602..
	SCLCL1212 F09	12	12	80	16,0	CCM. 09T3..
	SCLCL1616 H09	16	16	100	20,0	CCM. 09T3..
	SCLCL2020 K09	20	20	125	25,0	CCM. 09T3..
	SCLCL2020 K12	20	20	125	25,0	CCM. 1204..
	SCLCL2525 M12	25	25	150	32,0	CCM. 1204..

BESTELLBESPIEL: SCLCR0808 + E06 › Ordering example: SCLCR0808 + E06

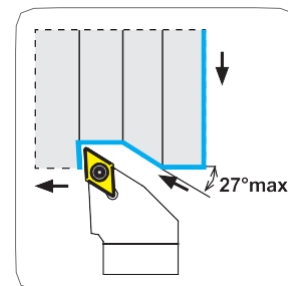
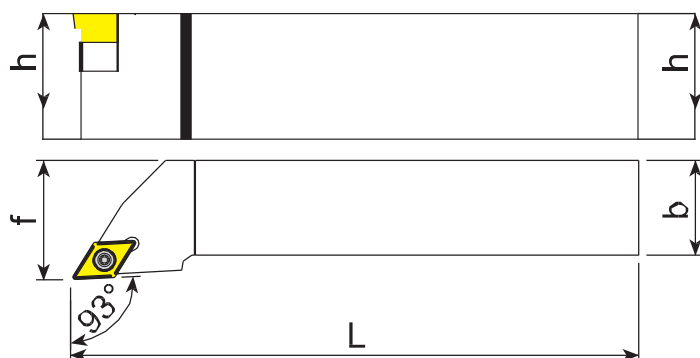
WENDESCHNEIDPLATTE POSITIV › Positive Inserts



GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	SCLCR0808 E06	RECHTS › Right
TVTT 010	-	-	TCTT 003	SCLCR1010 E06	
TVTT 011	-	-	TCTT 004	SCLCR1212 F09	
TVTT 013	TSCT 001	TVST 001	TCTT 004	SCLCR1616 H09	
TVTT 013	TSCT 001	TVST 001	TCTT 004	SCLCR2020 K09	
TVTT 002	TSCT 003	TVST 002	TCTT 005	SCLCR2020 K12	
TVTT 002	TSCT 003	TVST 002	TCTT 005	SCLCR2525 M12	
TVIT010	-	-	TCTT003	SCLCL0808 E06	LINKS › Left
TVIT010	-	-	TCTT003	SCLCL1010 E06	
TVIT011	-	-	TCTT004	SCLCL1212 F09	
TVIT013	TSCT001	TVST001	TCTT004	SCLCL1616 H09	
TVIT013	TSCT001	TVST001	TCTT004	SCLCL2020 K09	
TVIT002	TSCT003	TVST002	TCTT005	SCLCL2020 K12	
TVIT002	TSCT003	TVST002	TCTT005	SCLCL2525 M12	

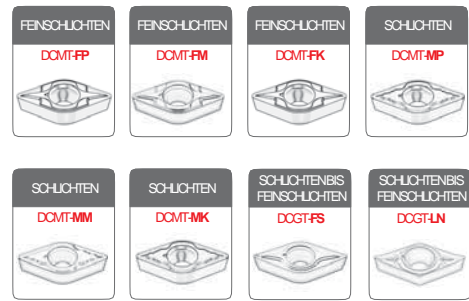
SDJC 93°



	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
RECHTS › Right	SDJCR0808E07	8	8	70	10,0	DCM. 0702..
	SDJCR1010E07	10	10	70	12,0	DCM. 0702..
	SDJCR1212F07	12	12	80	16,0	DCM. 0702..
	SDJCR1616H07	16	16	100	20,0	DCM. 0702..
	SDJCR1616H11	16	16	100	20,0	DCM. 11T3..
	SDJCR2020K11	20	20	125	25,0	DCM. 11T3..
	SDJCR2525M11	25	25	150	32,0	DCM. 11T3..
	SDJCR3232P11	32	32	170	40,0	DCM. 11T3..
LINKS › Left	SDJCL0808 E07	8	8	70	10,0	DCM. 0702..
	SDJCL1010 E07	10	10	70	12,0	DCM. 0702..
	SDJCL1212 F07	12	12	80	16,0	DCM. 0702..
	SDJCL1616 H07	16	16	100	20,0	DCM. 0702..
	SDJCL1616 H11	16	16	100	20,0	DCM. 11T3..
	SDJCL2020 K11	20	20	125	25,0	DCM. 11T3..
	SDJCL2525 M11	25	25	150	32,0	DCM. 11T3..
	SDJCL3232 P11	32	32	170	40,0	DCM. 11T3..

BESTELLBESPIEL: SDJCR0808 + E07 › Ordering example: SDJCR0808 + E07

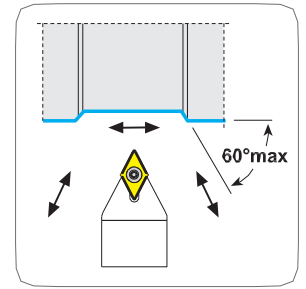
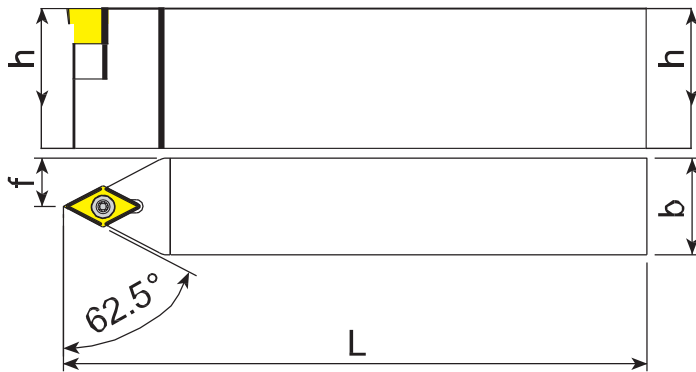
WENDESCHNEIDPLATTE POSITIV › Positive Inserts



GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	SDJCR0808 E07	RECHTS › Right
TVTT 010	-	-	TCTT 003	SDJCR1010 E07	
TVTT 010	-	-	TCTT 003	SDJCR1212 F07	
TVTT 010	-	-	TCTT 003	SDJCR1616 H07	
TVTT 013	TSDT 001	TVST 001	TCTT 004	SDJCR1616 H11	
TVTT 013	TSDT 001	TVST 001	TCTT 004	SDJCR2020 K11	
TVTT 013	TSDT 001	TVST 001	TCTT 004	SDJCR2525 M11	
TVTT 013	TSDT 001	TVST 001	TCTT 004	SDJCR3232 P11	
TVTT 010	-	-	TCTT 003	SDJCL0808 E07	LINKS › Left
TVTT 010	-	-	TCTT 003	SDJCL1010 E07	
TVTT 010	-	-	TCTT 003	SDJCL1212 F07	
TVTT 010	-	-	TCTT 003	SDJCL1616 H07	
TVTT 013	TSDT 001	TVST 001	TCTT 004	SDJCL1616 H11	
TVTT 013	TSDT 001	TVST 001	TCTT 004	SDJCL2020 K11	
TVTT 013	TSDT 001	TVST 001	TCTT 004	SDJCL2525 M11	
TVTT 013	TSDT 001	TVST 001	TCTT 004	SDJCL3232 P11	

SDNCN 62,5°

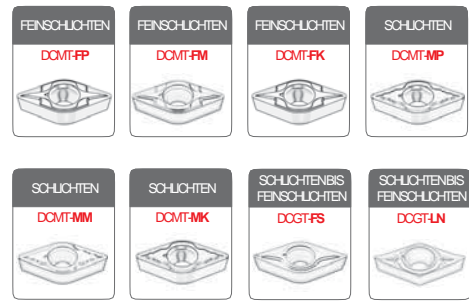
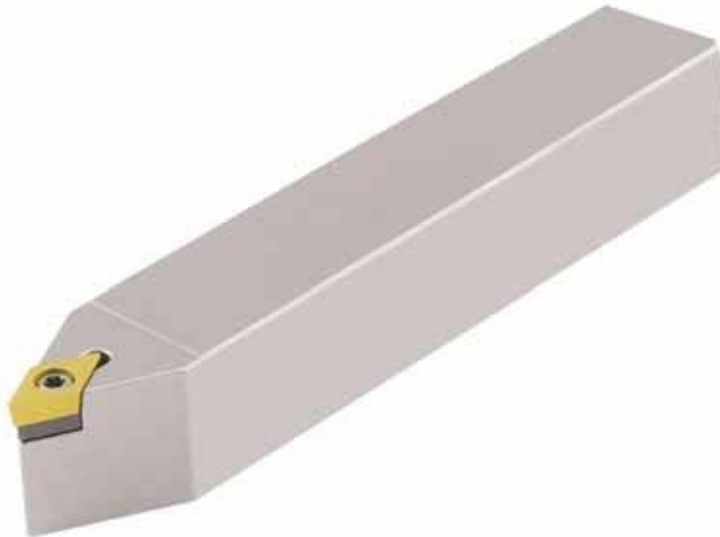


BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
SDNCN0808 E07	08	08	70	4,0	DCM.0702..
SDNCN1010 E07	10	10	70	5,0	DCM.0702..
SDNCN1212 F07	12	12	80	6,0	DCM.0702..
SDNCN1616 H07	16	16	100	8,0	DCM.0702..
SDNCN1616 H11	16	16	100	8,0	DCM.11T3..
SDNCN2020 K11	20	20	125	10,0	DCM.11T3..
SDNCN2525 M11	25	25	150	12,5	DCM.11T3..
SDNCN3232 P11	32	32	170	16,0	DCM.11T3..

NEUTRAL › Neutral

BESTELLBEISPIEL: SDNCN0808 + E07 › Ordering example: SDNCN0808 + E07

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



Turning

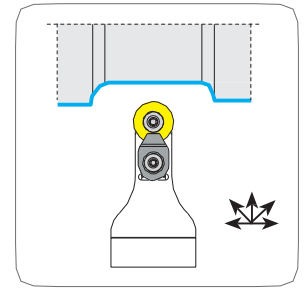
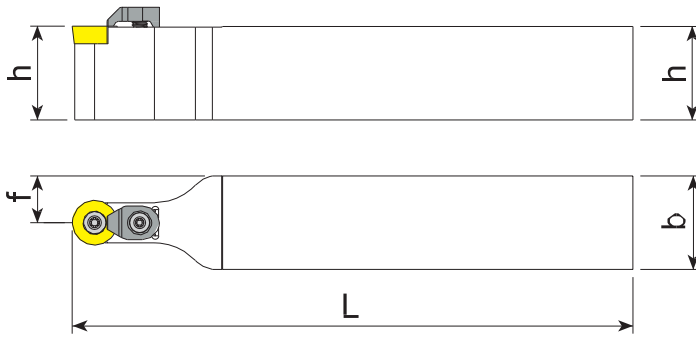
GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL TorxKey	BEZEICHNUNG Code
TVIT010	-	-	TCTT003	SDNCN0808 E07
TVIT010	-	-	TCTT003	SDNCN1010 E07
TVIT010	-	-	TCTT003	SDNCN1212 F07
TVIT010	-	-	TCTT003	SDNCN1616 H07
TVIT013	TSDT001	TVST001	TCTT004	SDNCN1616 H11
TVIT013	TSDT001	TVST001	TCTT004	SDNCN2020 K11
TVIT013	TSDT001	TVST001	TCTT004	SDNCN2525 M11
TVIT013	TSDT001	TVST001	TCTT004	SDNCN3232 P11

NEUTRAL › Neutral

SRDCN

Turning



BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
SRDCN1616 H08	16	16	100	8,0	RC.T 0803..
SRDCN2020 K08	20	20	125	10,0	RC.T 0803..
SRDCN2525 M08	25	25	150	12,5	RC.T 0803..
SRDCN1616 H10	16	16	100	8,0	RC.T 10T3..
SRDCN2020 K10	20	20	125	10,0	RC.T 10T3..
SRDCN2525 M10	25	25	150	12,5	RC.T 10T3..
SRDCN3232 P10	32	32	170	16,0	RC.T 10T3..
SRDCN2020 K12	20	20	125	10,0	RC.T 1204..
SRDCN2525 M12	25	25	150	12,5	RC.T 1204..
SRDCN3232 P12	32	32	170	16,0	RC.T 1204..
SRDCN2525 M16	25	25	150	12,5	RC.T 1605..
SRDCN3232 P16	32	32	170	16,0	RC.T 1605..
SRDCN2525 M20	25	25	150	12,5	RC.T 2006..

NEUTRAL › Neutral

BESTELLBESPIEL: SRDCN1616 + H08 › Ordering example: SRDCN1616 + H08

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



Turning

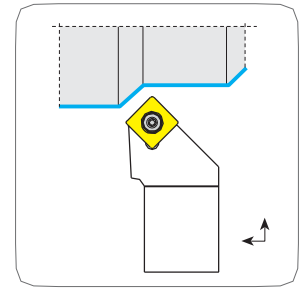
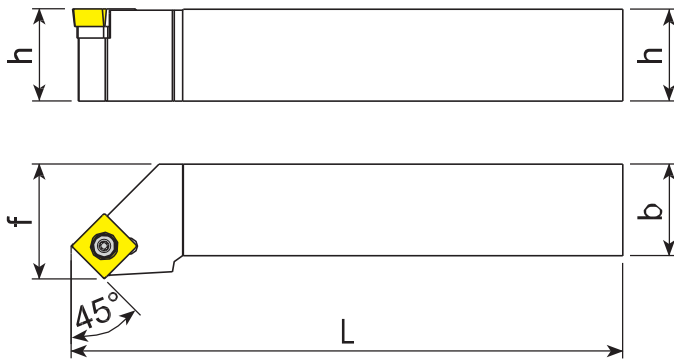
GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	KLEMMKEIL Wedge Clamp	KLEMMSCHRAUBE Clamp Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code
TVTT 001	TWRT 003	TVWT 001	TCTT 003	SRDCN1616 H08
TVTT 001	TWRT 003	TVWT 001	TCTT 003	SRDCN2020 K08
TVTT 001	TWRT 003	TVWT 001	TCTT 003	SRDCN2525 M08
TVTT 011	TWRT 003	TVWT 001	TCTT 004	SRDCN1616 H10
TVTT 011	TWRT 003	TVWT 001	TCTT 004	SRDCN2020 K10
TVTT 011	TWRT 003	TVWT 001	TCTT 004	SRDCN2525 M10
TVTT 011	TWRT 003	TVWT 001	TCTT 004	SRDCN3232 P10
TVTT 011	TWRT 001	TVWT 002	TCTT 004	SRDCN2020 K12
TVTT 011	TWRT 001	TVWT 002	TCTT 004	SRDCN2525 M12
TVTT 011	TWRT 001	TVWT 002	TCTT 004	SRDCN3232 P12
TVTT 003	TWRT 001	TVWT 002	TCTT 005	SRDCN2525 M16
TVTT 003	TWRT 001	TVWT 002	TCTT 005	SRDCN3232 P16
TVTT 004	TWRT 002	TVWT 003	TCTT 005	SRDCN2525 M20

NEUTRAL › Neutral

SSSC 45°

Turning

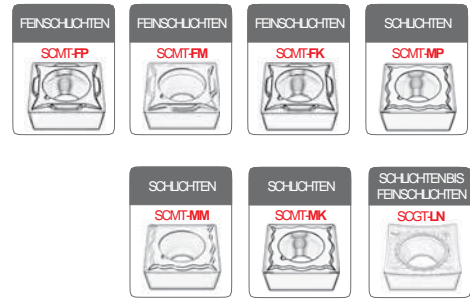


RECHTS › Right	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	SSSCR1212F09	12	12	80	16,0	SCM. 09T3..
	SSSCR1616H09	16	16	100	20,0	SCM. 09T3..
	SSSCR2020K09	20	20	125	25,0	SCM. 09T3..
	SSSCR1616H12	16	16	100	20,0	SCM. 1204..
	SSSCR2020K12	20	20	125	25,0	SCM. 1204..
	SSSCR2525M12	25	25	150	32,0	SCM. 1204..

LINKS › Left	SSSCL1212 F09	12	12	80	16,0	SCM. 09T3..
	SSSCL1616 H09	16	16	100	20,0	SCM. 09T3..
	SSSCL2020 K09	20	20	125	25,0	SCM. 09T3..
	SSSCL1616 H12	16	16	100	20,0	SCM. 1204..
	SSSCL2020 K12	20	20	125	25,0	SCM. 1204..
	SSSCL2525 M12	25	25	150	32,0	SCM. 1204..

BESTELLBEISPIEL: SSSCR1212 + F09 › Ordering example: SSSCR1212 + F09

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

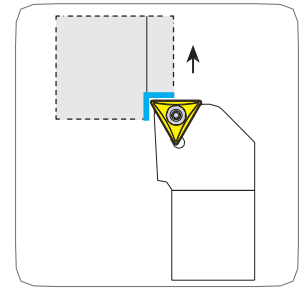
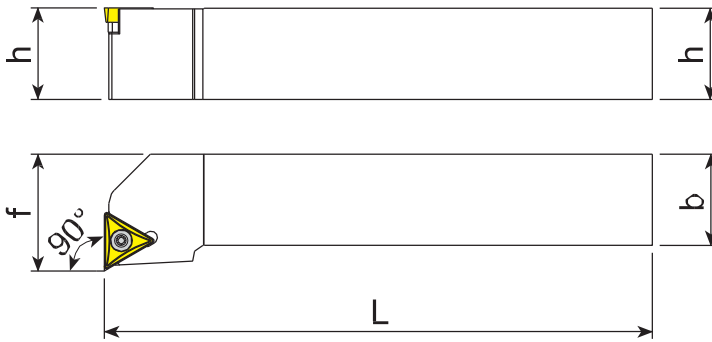


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 011	-	-	TCTT 004	SSSCR1212 F09	RECHTS › Right
TVTT 013	TSST 001	TVST 001	TCTT 004	SSSCR1616 H09	
TVTT 013	TSST 001	TVST 001	TCTT 004	SSSCR2020 K09	
TVTT 016	TSST 002	TVST 004	TCTT 005	SSSCR1616 H12	
TVTT 002	TSST 002	TVST 002	TCTT 005	SSSCR2020 K12	
TVTT 002	TSST 002	TVST 002	TCTT 005	SSSCR2525 M12	
TVTT 011	-	-	TCTT 004	SSSCL1212 F09	LINKS › Left
TVTT 013	TSST 001	TVST 001	TCTT 004	SSSCL1616 H09	
TVTT 013	TSST 001	TVST 001	TCTT 004	SSSCL2020 K09	
TVTT 016	TSST 002	TVST 004	TCTT 005	SSSCL1616 H12	
TVTT 002	TSST 002	TVST 002	TCTT 005	SSSCL2020 K12	
TVTT 002	TSST 002	TVST 002	TCTT 005	SSSCL2525 M12	

STFC 90°



RECHTS › Right

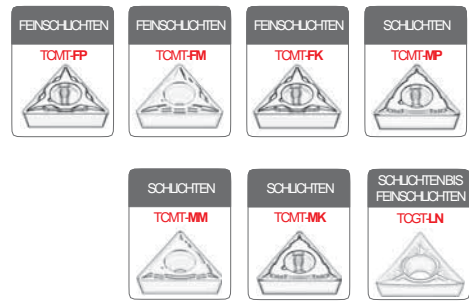
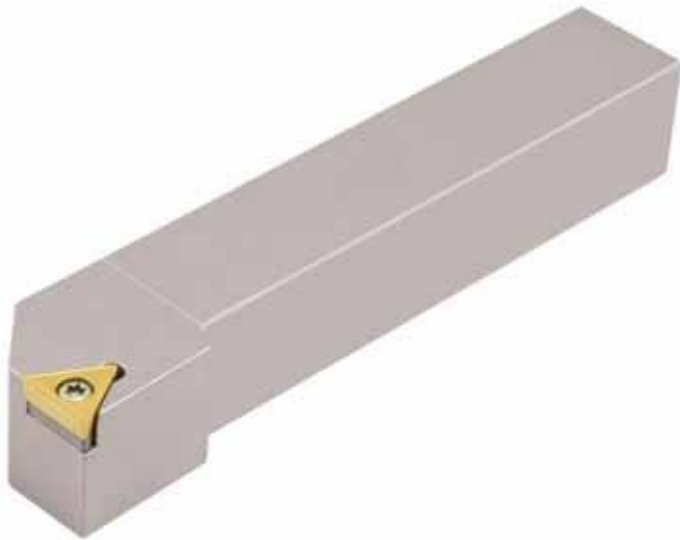
BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
STFCR1010 E09	10	10	70	12,0	TCM. 0902..
STFCR1212 F11	12	12	80	16,0	TCM. 1102..
STFCR1616 H11	16	16	100	20,0	TCM. 1102..
STFCR1616 H16	16	16	100	20,0	TCM. 16T3..
STFCR2020 K16	20	20	125	25,0	TCM. 16T3..
STFCR2525 M16	25	25	150	32,0	TCM. 16T3..

LINKS › Left

STFCL1010 E09	10	10	70	12,0	TCM. 0902..
STFCL1212 F11	12	12	80	16,0	TCM. 1102..
STFCL1616 H11	16	16	100	20,0	TCM. 1102..
STFCL1616 H16	16	16	100	20,0	TCM. 16T3..
STFCL2020 K16	20	20	125	25,0	TCM. 16T3..
STFCL2525 M16	25	25	150	32,0	TCM. 16T3..

BESTELLBESPEL: STFCR1010 + E09 › Ordering example: STFCR1010 + E09

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



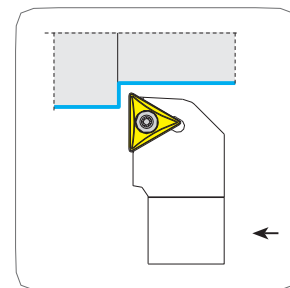
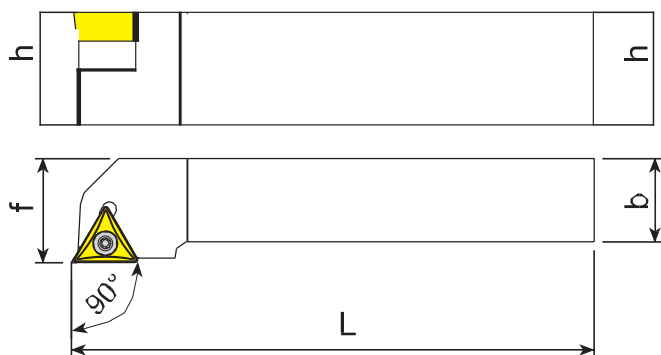
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 007	-	-	TCTT 002	STFCR1010 E09	RECHTS › Right
TVTT 010	-	-	TCTT 003	STFCR1212 F11	
TVTT 010	-	-	TCTT 003	STFCR1616 H11	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STFCR1616 H16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STFCR2020 K16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STFCR2525 M16	
TVTT 007	-	-	TCTT 002	STFCL1010 E09	LINKS › Left
TVTT 010	-	-	TCTT 003	STFCL1212 F11	
TVTT 010	-	-	TCTT 003	STFCL1616 H11	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STFCL1616 H16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STFCL2020 K16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STFCL2525 M16	

STGC 90°

Turning

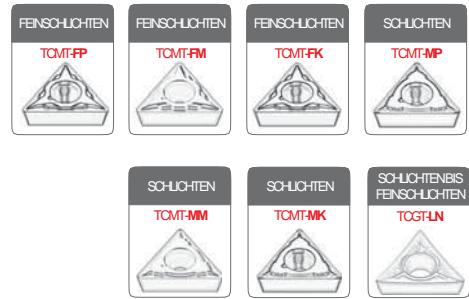
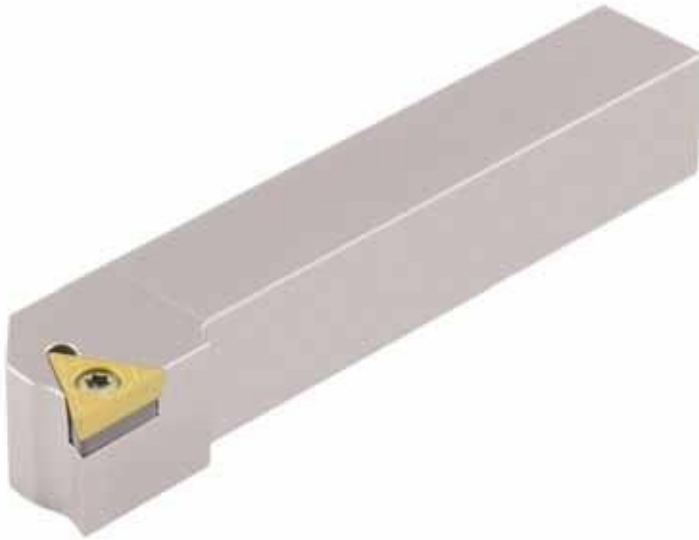


RECHTS › Right	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	STGCR0808E09	8	8	70	10,0	TCM. 0902..
	STGCR1010E09	10	10	70	12,0	TCM. 0902..
	STGCR1212F11	12	12	80	16,0	TCM. 1102..
	STGCR1616H11	16	16	100	20,0	TCM. 1102..
	STGCR2020K16	20	20	125	25,0	TCM. 16T3..
	STGCR2525M16	25	25	150	32,0	TCM. 16T3..

LINKS › Left	STGCL0808E09	8	8	70	10,0	TCM. 0902..
	STGCL1010E09	10	10	70	12,0	TCM. 0902..
	STGCL1212F11	12	12	80	16,0	TCM. 1102..
	STGCL1616H11	16	16	100	20,0	TCM. 1102..
	STGCL2020K16	20	20	125	25,0	TCM. 16T3..
	STGCL2525M16	25	25	150	32,0	TCM. 16T3..

BESTELLBESPIEL: STGCR0808 + E09 › Ordering example: STGCR0808 + E09

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

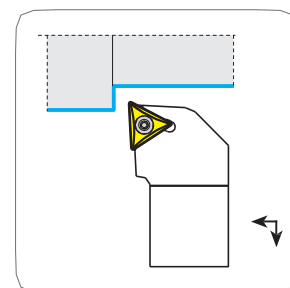
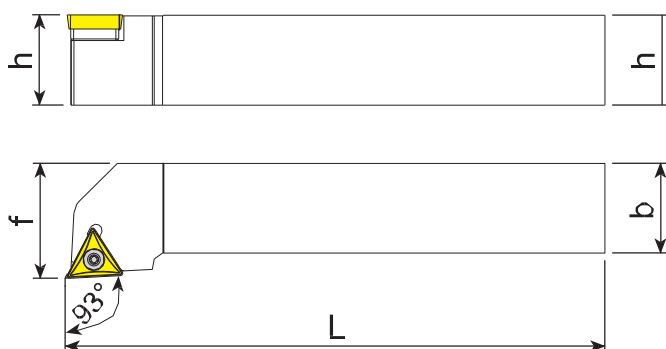


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 007	-	-	TCTT 002	STGCR0808 E09	RECHTS › Right
TVTT 007	-	-	TCTT 002	STGCR1010 E09	
TVTT 010	-	-	TCTT 003	STGCR1212 F11	
TVTT 010	-	-	TCTT 003	STGCR1616 H11	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STGCR2020 K16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STGCR2525 M16	
TVTT 007	-	-	TCTT 002	STGCL0808 E09	LINKS › Left
TVTT 007	-	-	TCTT 002	STGCL1010 E09	
TVTT 010	-	-	TCTT 003	STGCL1212 F11	
TVTT 010	-	-	TCTT 003	STGCL1616 H11	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STGCL2020 K16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STGCL2525 M16	

STJC 93°

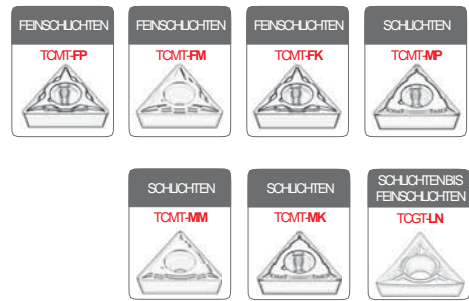


	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
RECHTS › Right	STJCR0808 E09	8	8	70	10,0	TCM. 0902..
	STJCR1010 E09	10	10	70	12,0	TCM. 0902..
	STJCR1212 F11	12	12	80	16,0	TCM. 1102..
	STJCR1616 H11	16	16	100	20,0	TCM. 1102..
	STJCR1616 H16	16	16	100	20,0	TCM. 16T3..
	STJCR2020 K16	20	20	125	25,0	TCM. 16T3..
	STJCR2525 M16	25	25	150	32,0	TCM. 16T3..
	STJCR3232 P16	32	32	170	40,0	TCM. 16T3..

LINKS › Left	STJCL0808 E09	8	8	70	10,0	TCM. 0902..
	STJCL1010 E09	10	10	70	12,0	TCM. 0902..
	STJCL1212 F11	12	12	80	16,0	TCM. 1102..
	STJCL1616 H11	16	16	100	20,0	TCM. 1102..
	STJCL1616 H16	16	16	100	20,0	TCM. 16T3..
	STJCL2020 K16	20	20	125	25,0	TCM. 16T3..
	STJCL2525 M16	25	25	150	32,0	TCM. 16T3..
	STJCL3232 P16	32	32	170	40,0	TCM. 16T3..

BESTELLBESPIEL: STJCR0808 + E09 › Ordering example: STJCR0808 + E09

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

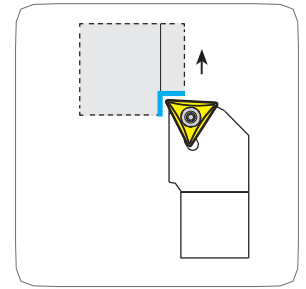
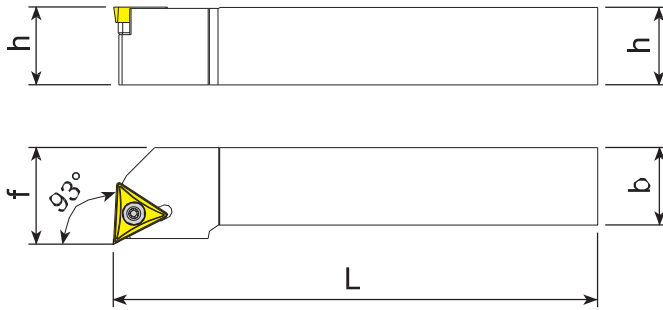


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL TorxKey	BEZEICHNUNG Code	
TVIT007	-	-	TCTT002	STJCR0808 E09	RECHTS › Right
TVIT007	-	-	TCTT002	STJCR1010 E09	
TVIT010	-	-	TCTT003	STJCR1212 F11	
TVIT010	-	-	TCTT003	STJCR1616 H11	
TVIT013	TSIT001	TVST001	TCTT004	STJCR1616 H16	
TVIT013	TSIT001	TVST001	TCTT004	STJCR2020 K16	
TVIT013	TSIT001	TVST001	TCTT004	STJCR2525 M16	
TVIT013	TSIT001	TVST001	TCTT004	STJCR3232 P16	
TVIT007	-	-	TCTT002	STJCL0808 E09	LINKS › Left
TVIT007	-	-	TCTT002	STJCL1010 E09	
TVIT010	-	-	TCTT003	STJCL1212 F11	
TVIT010	-	-	TCTT003	STJCL1616 H11	
TVIT013	TSIT001	TVST001	TCTT004	STJCL1616 H16	
TVIT013	TSIT001	TVST001	TCTT004	STJCL2020 K16	
TVIT013	TSIT001	TVST001	TCTT004	STJCL2525 M16	
TVIT013	TSIT001	TVST001	TCTT004	STJCL3232 P16	

STUC 93°



RECHTS › Right

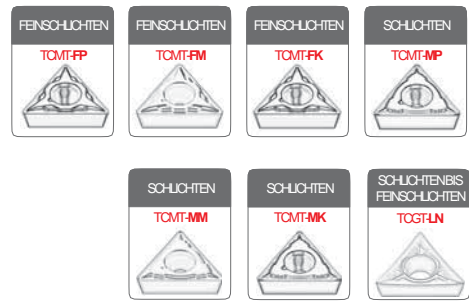
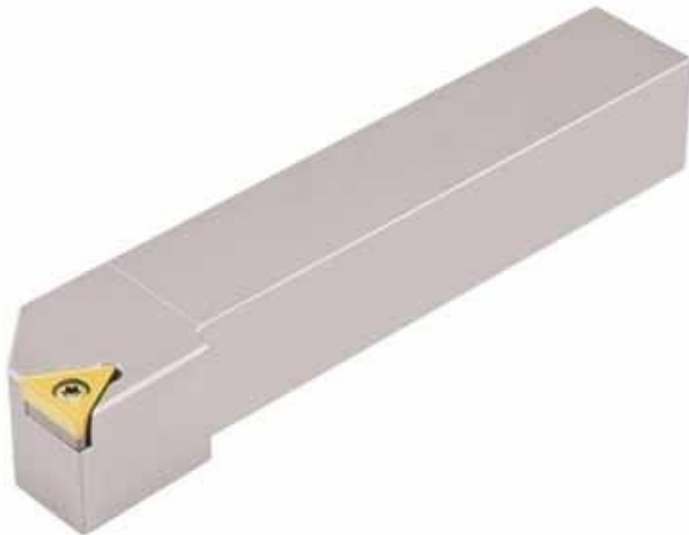
BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
STUCR0808E09	8	8	70	10,0	TCM. 0902..
STUCR1010E09	10	10	70	12,0	TCM. 0902..
STUCR1212F11	12	12	80	16,0	TCM. 1102..
STUCR1616H11	16	16	100	20,0	TCM. 1102..
STUCR2020K16	20	20	125	25,0	TCM. 16T3..
STUCR2525M16	25	25	150	32,0	TCM. 16T3..
STUCR3232P16	32	32	170	40,0	TCM. 16T3..

LINKS › Left

STUCL0808 E09	8	8	70	10,0	TCM. 0902..
STUCL1010 E09	10	10	70	12,0	TCM. 0902..
STUCL1212 F11	12	12	80	16,0	TCM. 1102..
STUCL1616 H11	16	16	100	20,0	TCM. 1102..
STUCL2020 K16	20	20	125	25,0	TCM. 16T3..
STUCL2525 M16	25	25	150	32,0	TCM. 16T3..
STUCL3232 P16	32	32	170	40,0	TCM. 16T3..

BESTELLBESPIEL: STUCR0808 + E09 › Ordering example: STUCR0808 + E09

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



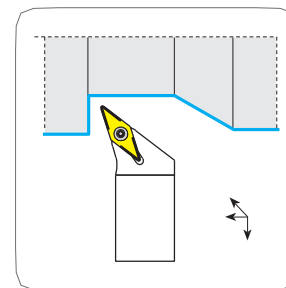
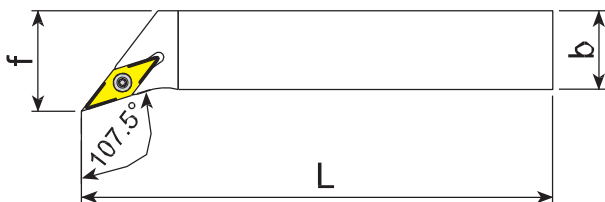
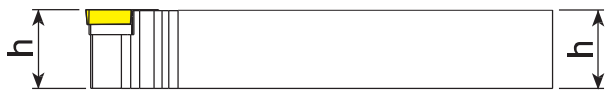
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 007	-	-	TCTT 002	STUCR0808 E09	RECHTS › Right
TVTT 007	-	-	TCTT 002	STUCR1010 E09	
TVTT 010	-	-	TCTT 003	STUCR1212 F11	
TVTT 010	-	-	TCTT 003	STUCR1616 H11	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STUCR2020 K16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STUCR2525 M16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STUCR3232 P16	
TVTT 007	-	-	TCTT 002	STUCL0808 E09	LINKS › Left
TVTT 007	-	-	TCTT 002	STUCL1010 E09	
TVTT 010	-	-	TCTT 003	STUCL1212 F11	
TVTT 010	-	-	TCTT 003	STUCL1616 H11	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STUCL2020 K16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STUCL2525 M16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	STUCL3232 P16	

SVHB 107,5°

Turning

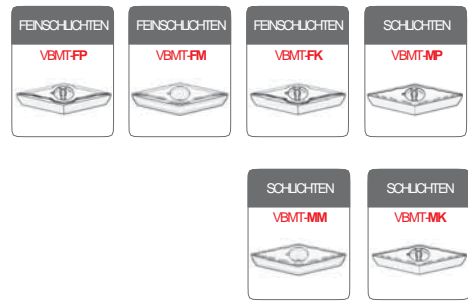
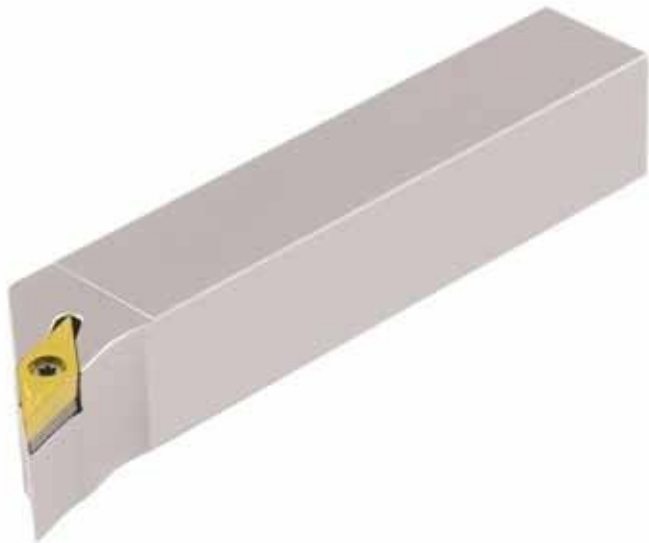


RECHTS › Right	BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
	SVHBR1212F11	12	12	80	16,0	VBM. 1103..
	SVHBR1616H11	16	16	100	20,0	VBM. 1103..
	SVHBR2020K11	20	20	125	25,0	VBM. 1103..
	SVHBR2020K16	20	20	125	25,0	VBM. 1604..
	SVHBR2525M16	25	25	150	32,0	VBM. 1604..
	SVHBR3232P16	32	32	170	40,0	VBM. 1604..

LINKS › Left	SVHBL1212F11	12	12	80	16,0	VBM. 1103..
	SVHBL1616H11	16	16	100	20,0	VBM. 1103..
	SVHBL2020K11	20	20	125	25,0	VBM. 1103..
	SVHBL2020K16	20	20	125	25,0	VBM. 1604..
	SVHBL2525M16	25	25	150	32,0	VBM. 1604..
	SVHBL3232P16	32	32	170	40,0	VBM. 1604..

BESTELLBESPIEL: SVHBR1212 + F11 › Ordering example: SVHBR1212 + F11

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

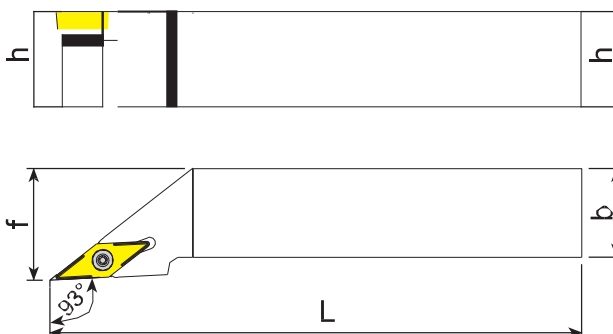
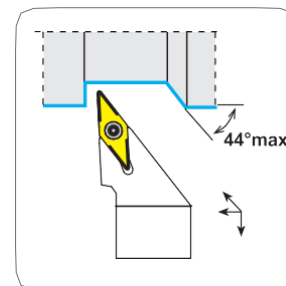


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	SVHBR1212 F11	RECHTS › Right
TVTT 010	-	-	TCTT 003	SVHBR1616 H11	
TVTT 010	-	-	TCTT 003	SVHBR2020 K11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHBR2020 K16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHBR2525 M16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHBR3232 P16	
TVTT 010	-	-	TCTT 003	SVHBL1212 F11	LINKS › Left
TVTT 010	-	-	TCTT 003	SVHBL1616 H11	
TVTT 010	-	-	TCTT 003	SVHBL2020 K11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHBL2020 K16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHBL2525 M16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHBL3232 P16	

SVJB 93°



RECHTS › Right

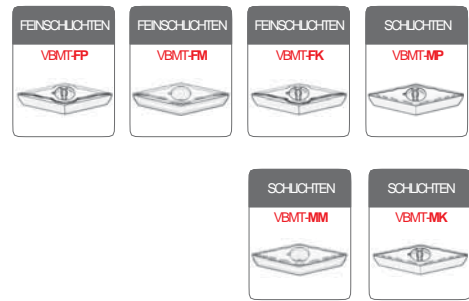
BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
SVJBR1212 F11	12	12	80	16,0	VBM. 1103..
SVJBR1616 H11	16	16	100	20,0	VBM. 1103..
SVJBR2020 K11	20	20	125	25,0	VBM. 1103..
SVJBR2020 K16	20	20	125	25,0	VBM. 1604..
SVJBR2525 M16	25	25	150	32,0	VBM. 1604..
SVJBR3232 P16	32	32	170	40,0	VBM. 1604..

LINKS › Left

SVJBL1212 F11	12	12	80	16,0	VBM. 1103..
SVJBL1616 H11	16	16	100	20,0	VBM. 1103..
SVJBL2020 K11	20	20	125	25,0	VBM. 1103..
SVJBL2020 K16	20	20	125	25,0	VBM. 1604..
SVJBL2525 M16	25	25	150	32,0	VBM. 1604..
SVJBL3232 P16	32	32	170	40,0	VBM. 1604..

BESTELLBESPIEL: SVJBR1212 + F11 › Ordering example: SVJBR1212 + F11

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



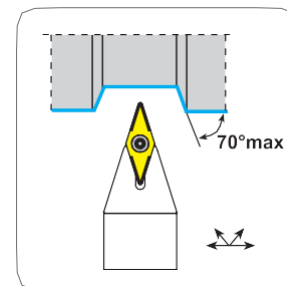
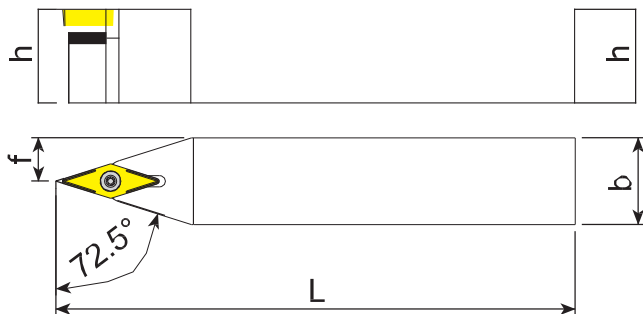
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	SVJBR1212 F11	RECHTS › Right
TVTT 010	-	-	TCTT 003	SVJBR1616 H11	
TVTT 010	-	-	TCTT 003	SVJBR2020 K11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJBR2020 K16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJBR2525 M16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJBR3232 P16	
TVTT 010	-	-	TCTT 003	SVJBL1212 F11	LINKS › Left
TVTT 010	-	-	TCTT 003	SVJBL1616 H11	
TVTT 010	-	-	TCTT 003	SVJBL2020 K11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJBL2020 K16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJBL2525 M16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJBL3232 P16	

SVVBN 72,5°

Turning

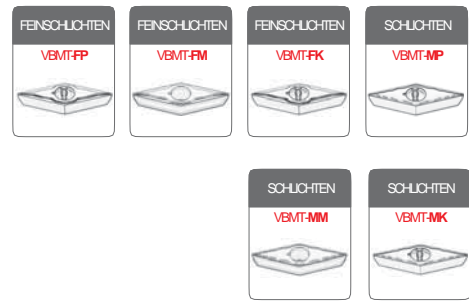
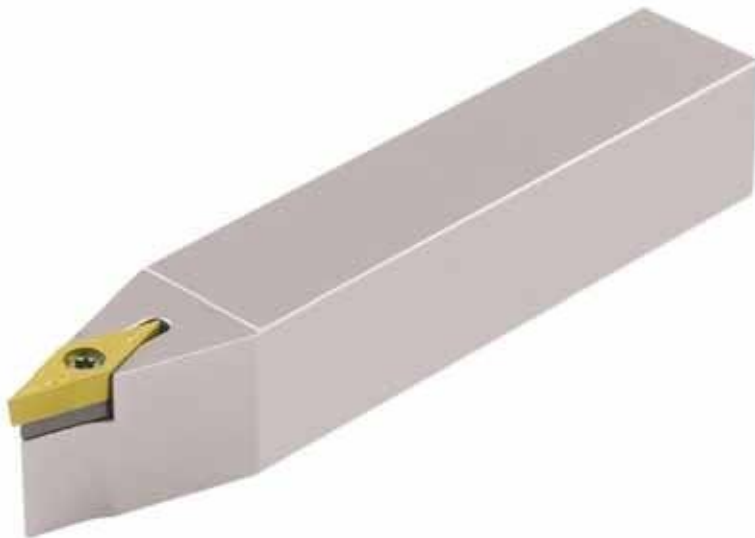


BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
SVVBN1212F11	12	12	80	6,0	VBM. 1103..
SVVBN1616H11	16	16	100	8,0	VBM. 1103..
SVVBN2020K11	20	20	125	10,0	VBM. 1103..
SVVBN2020K16	20	20	125	10,0	VBM. 1604..
SVVBN2525M16	25	25	150	12,5	VBM. 1604..
SVVBN3232P16	32	32	170	16,0	VBM. 1604..

NEUTRAL › Neutral

BESTELLBEISPIEL: SVVBN2525 + F11 › Ordering example: SVVBN2525 + F11

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



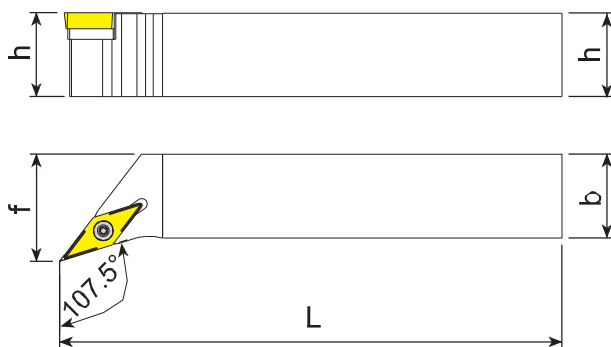
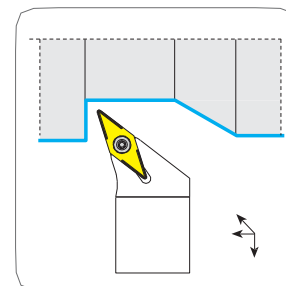
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code
TVTT 010	-	-	TCTT 003	SVVBN1212 F11
TVTT 010	-	-	TCTT 003	SVVBN1616 H11
TVTT 010	-	-	TCTT 003	SVVBN2020 K11
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVVBN2020 K16
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVVBN2525 M16
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVVBN3232 P16

NEUTRAL › Neutral

SVHC 107,5°



RECHTS › Right

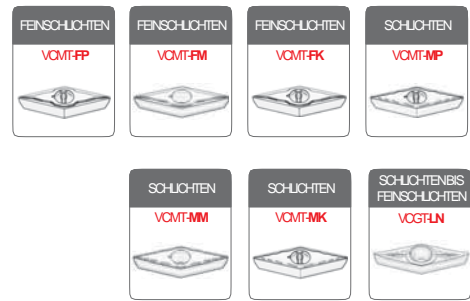
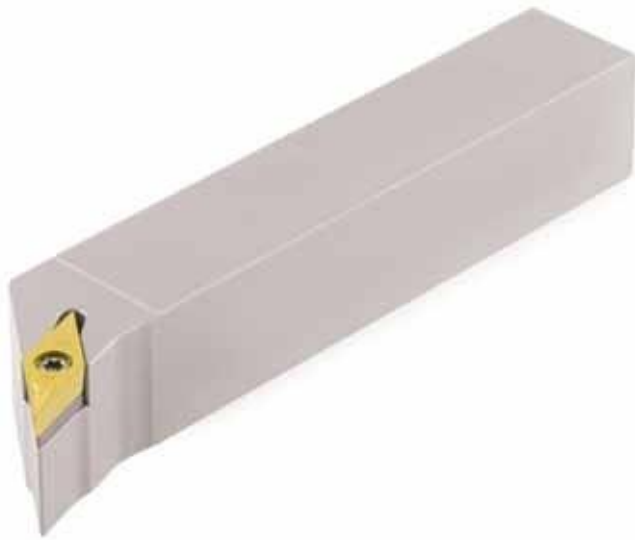
BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
SVHCR1212F11	12	12	80	16,0	VCM. 1103..
SVHCR1616H11	16	16	100	20,0	VCM. 1103..
SVHCR2020K11	20	20	125	25,0	VCM. 1103..
SVHCR2020K16	20	20	125	25,0	VCM. 1604..
SVHCR2525M16	25	25	150	32,0	VCM. 1604..
SVHCR3232P16	32	32	170	40,0	VCM. 1604..

LINKS › Left

SVHCL1212F11	12	12	80	16,0	VCM. 1103..
SVHCL1616H11	16	16	100	20,0	VCM. 1103..
SVHCL2020K11	20	20	125	25,0	VCM. 1103..
SVHCL2020K16	20	20	125	25,0	VCM. 1604..
SVHCL2525M16	25	25	150	32,0	VCM. 1604..
SVHCL3232P16	32	32	170	40,0	VCM. 1604..

BESTELLBESPIEL: SVHCR1212 + F11 › Ordering example: SVHCR1212 + F11

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

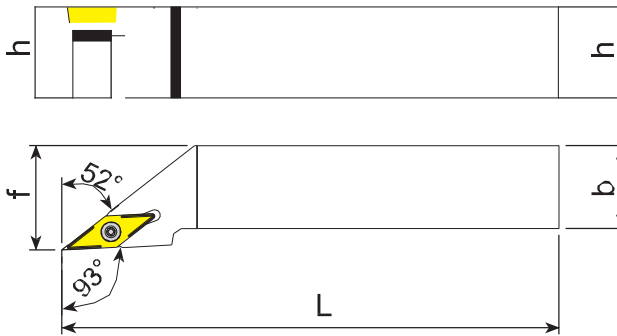
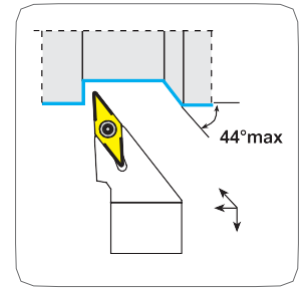


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	SVHCR1212 F11	RECHTS › Right
TVTT 010	-	-	TCTT 003	SVHCR1616 H11	
TVTT 010	-	-	TCTT 003	SVHCR2020 K11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHCR2020 K16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHCR2525 M16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHCR3232 P16	
TVTT 010	-	-	TCTT 003	SVHCL1212 F11	LINKS › Left
TVTT 010	-	-	TCTT 003	SVHCL1616 H11	
TVTT 010	-	-	TCTT 003	SVHCL2020 K11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHCL2020 K16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHCL2525 M16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVHCL3232 P16	

SVJC 93°



RECHTS › Right

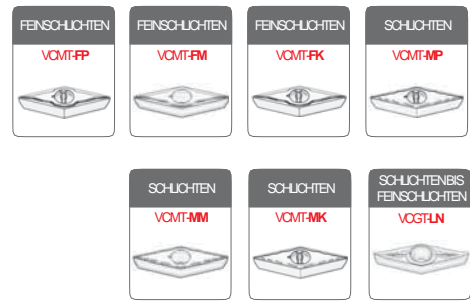
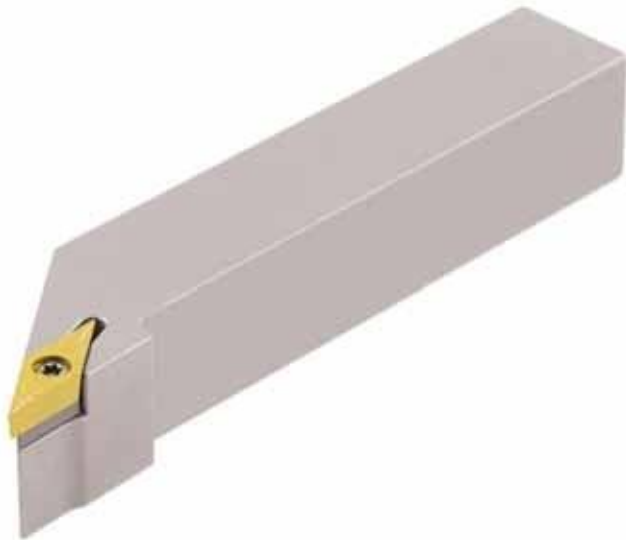
BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
SVJCR1212 F11	12	12	80	16,0	VCM. 1103..
SVJCR1616 H11	16	16	100	20,0	VCM. 1103..
SVJCR2020 K11	20	20	125	25,0	VCM. 1103..
SVJCR2020 K16	20	20	125	25,0	VCM. 1604..
SVJCR2525 M16	25	25	150	32,0	VCM. 1604..
SVJCR3232 P16	32	32	170	40,0	VCM. 1604..

LINKS › Left

SVJCL1212 F11	12	12	80	16,0	VCM. 1103..
SVJCL1616 H11	16	16	100	20,0	VCM. 1103..
SVJCL2020 K11	20	20	125	25,0	VCM. 1103..
SVJCL2020 K16	20	20	125	25,0	VCM. 1604..
SVJCL2525 M16	25	25	150	32,0	VCM. 1604..
SVJCL3232 P16	32	32	170	40,0	VCM. 1604..

BESTELLBESPIEL: SVJCR1212 + F11 › Ordering example: SVJCR1212 + F11

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

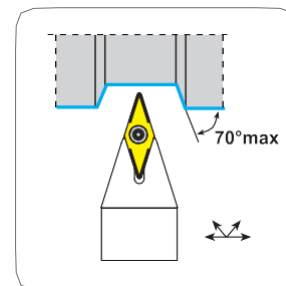
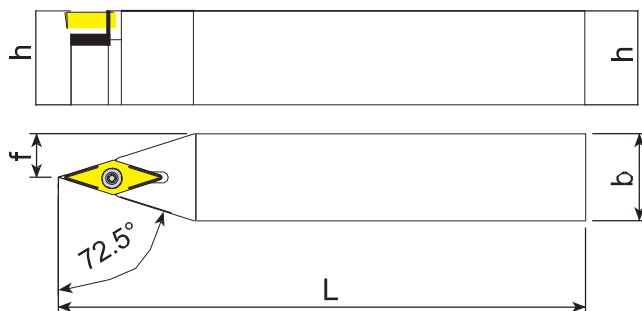


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	SVJCR1212 F11	RECHTS › Right
TVTT 010	-	-	TCTT 003	SVJCR1616 H11	
TVTT 010	-	-	TCTT 003	SVJCR2020 K11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJCR2020 K16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJCR2525 M16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJCR3232 P16	
TVTT 010	-	-	TCTT 003	SVJCL1212 F11	LINKS › Left
TVTT 010	-	-	TCTT 003	SVJCL1616 H11	
TVTT 010	-	-	TCTT 003	SVJCL2020 K11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJCL2020 K16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJCL2525 M16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	SVJCL3232 P16	

SVVCN 72,5°

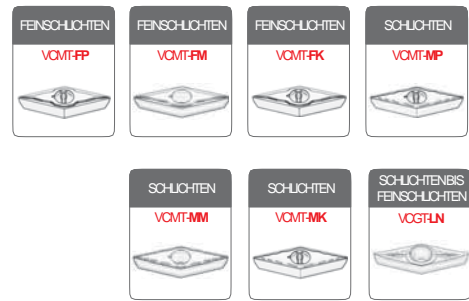


BEZEICHNUNG Code	h	b	L	f	WENDESCHNEIDPLATTEN Insert
SVVCN1212F11	12	12	80	6,0	VCM. 1103..
SVVCN1616H11	16	16	100	8,0	VCM. 1103..
SVVCN2020K11	20	20	125	10,0	VCM. 1103..
SVVCN2020K16	20	20	125	10,0	VCM. 1604..
SVVCN2525M16	25	25	150	12,5	VCM. 1604..
SVVCN3232P16	32	32	170	16,0	VCM. 1604..

NEUTRAL › Neutral

BESTELLBESPIEL: SWCN... + F11 › Ordering example: SWCN... + F11

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



Turning

GEEGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL TorxKey	BEZEICHNUNG Code
TVIT010	-	-	TCTT003	SWCN1212 F11
TVIT010	-	-	TCTT003	SWCN1616 H11
TVIT010	-	-	TCTT003	SWCN2020 K11
TVIT013	TSVT001	TVST001	TCTT004	SWCN2020 K16
TVIT013	TSVT001	TVST001	TCTT004	SWCN2525 M16
TVIT013	TSVT001	TVST001	TCTT004	SWCN3232 P16

NEUTRAL › Neutral



DREHEN

Turning



BOHRSTANGEN › *Toolholders*

FUER INNENBEARBEITUNG
WENDESCHNEIDPLATTEN NEGATIV UND POSITIV
*For Internal Operation
Negative and Positive Inserts*

MEGAcut

UNSER SERVICE IMMER VERFÜGBAR

Our Prompt Services Always
Ready For You



TECHNISCHER SERVICE
Technical Help



**NACHSCHLEIFEN UND
BESCHICHTUNGSDIENST**
*Regrinding and
Coating Service*

DREHEN - BOHRSTANGEN*Toolholders Index*

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SVQC107,5°	244

BOHRSTANGEN BEZEICHNUNGS SYSTEM

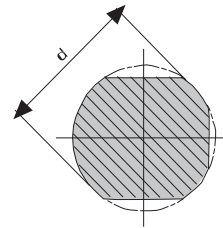
Toolholders Designation System

S¹ **25**² **S**³ **P**⁴ **C**⁵

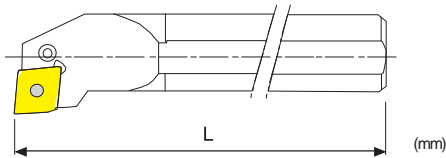
1 ART DER BOHRSTANGE › Type of Boring Bar
S 25 **S** - P C L N R 12

- A** STAHLBOHRSTANGE MIT INNENKUEHLUNG
Steel Bar with internal coolant
- E** VHMBOHRSTANGE MIT INNENKUEHLUNG
Carbide bar with internal coolant
- C** VHMBOHRSTANGE › Carbide Bar
- S** STAHLBOHRSTANGE › Steel Bar

2 SCHAFT DURCHMESSER › Shank Diameter
S 25 **S** - P C L N R 12

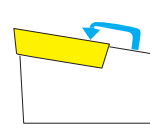


2 BOHRSTANGENLAENGE › Bar Length
S 25 **S** - P C L N R 12

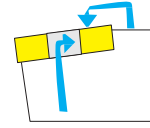


A-32	M-150	X-SPECIAL
B-40	N-160	
C-50	P-170	
D-60	Q-180	
E-70	R-200	
F-80	S-250	
G-90	T-300	
H-100	U-350	
J-110	V-400	
K-125	W-450	
L-140	-	

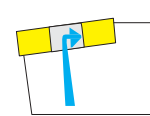
3 WENDESCHNEDPLATTEN SPANN SYSTEM › Insert Mounting System
S 25 **S** - **P** C L N R 12



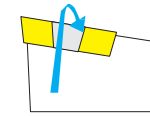
C
KEIL
Wedge



M
SICHERUNGSTIFT UND KEIL
Lock Pin and Wedge

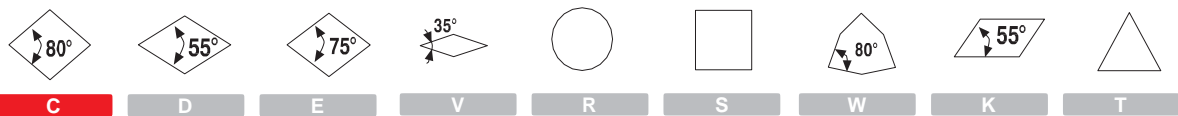


P
HEBEL
Lever Lock



S
SCHRAUBE
Screw On

5 WENDESCHNEDPLATTEN FORM › Insert Form
S 25 **S** - P **C** L N R 12

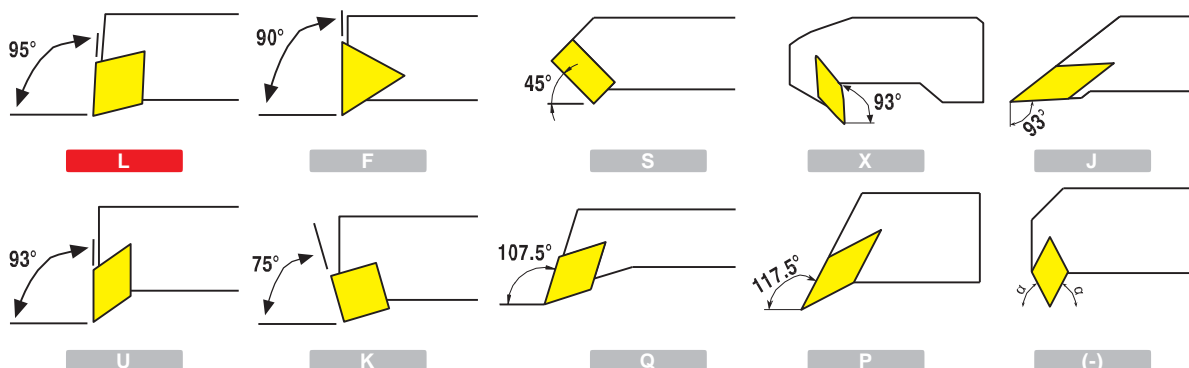


BOHRSTANGEN BEZEICHNUNGS SYSTEM

Toolholders Designation System

L⁶ **N**⁷ **R**⁸ **12**⁹

6 EINSATZWINKEL › Lead Angle
 S 25 S - P C **L** N R 12



7 FREIWINKEL › Clearance Angle
 S 25 S - P C L **N** R 12



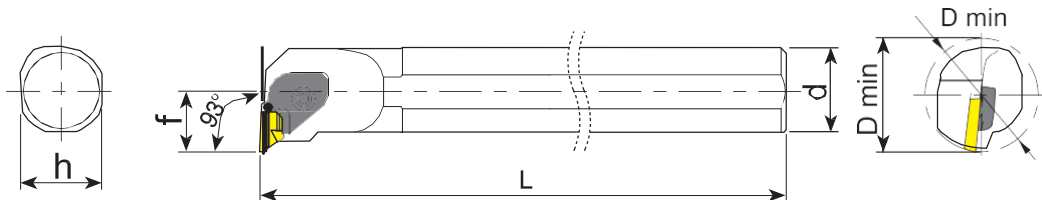
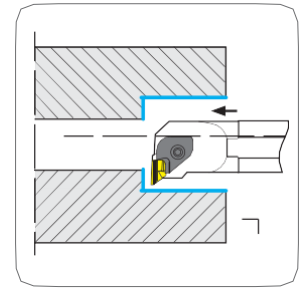
8 SCHNEDRICHTUNG › Cutting Direction
 S 25 S - P C L N **R** 12



9 WENDESCHNEDPLATTEN GROESSE › Insert Size
 S 25 S - P C L N R **12**



CKUN 93°



RECHTS › Right

BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATTEN Insert
S25SCKUNR 16	25	23,0	250	19,0	*38	KNUX 1604..
S32TCKUNR 16	32	30,0	300	22,0	*40	KNUX 1604..
S40UCKUNR 16	40	37,5	350	27,0	*50	KNUX 1604..
S50VCKUNR 16	50	47,0	400	35,0	*63	KNUX 1604..

LINKS › Left

S25SCKUNL 16	25	23,0	250	19,0	*38	KNUX 1604..
S32TCKUNL 16	32	30,0	300	22,0	*40	KNUX 1604..
S40UCKUNL 16	40	37,5	350	27,0	*50	KNUX 1604..
S50VCKUNL 16	50	47,0	400	35,0	*63	KNUX 1604..

BESTELLBESPIEL: S25SCKUNR + 16 › Ordering example: S25SCKUNR + 16

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts

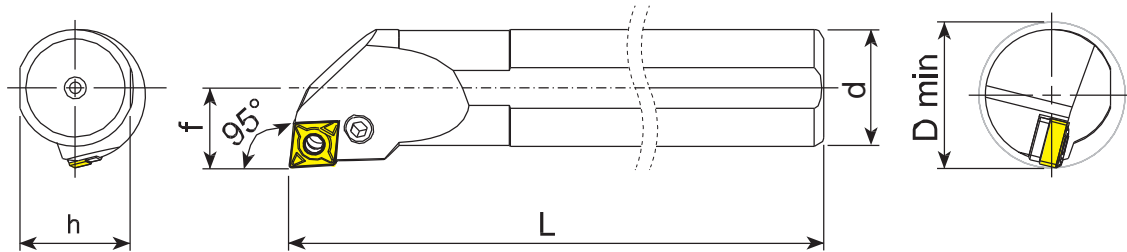
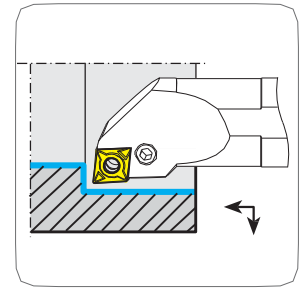


Turning

GEEGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

KLEMMKEI L Wedge Clamp	KLEMM- SCHRAU BE Clamp Screw	UNTERL A- GEN Shim	UNTERLA GEN SCHRAU BE Shim Screw	SPIRA L- FEDE R Spring	SCHEIB EN- FEDER Stamp	SCHLUESSEL Allen Key	BEZEICHNUNG Code
TWKT 001	TVWT 004	TSKT 001	TVST 005	TMT 001	TAT 001	TCET 003	S25SCKUNR 16
TWKT 001	TVWT 004	TSKT 001	TVST 005	TMT 001	TAT 001	TCET 003	S32TCKUNR 16
TWKT 001	TVWT 004	TSKT 001	TVST 005	TMT 001	TAT 001	TCET 003	S40UCKUNR 16
TWKT 001	TVWT 004	TSKT 001	TVST 005	TMT 001	TAT 001	TCET 003	S50VCKUNR 16
RECHTS › Right							
TWKT 002	TVWT 004	TSKT 002	TVST 005	TMT 001	TAT 001	TCET 003	S25SCKUNL 16
TWKT 002	TVWT 004	TSKT 002	TVST 005	TMT 001	TAT 001	TCET 003	S32TCKUNL 16
TWKT 002	TVWT 004	TSKT 002	TVST 005	TMT 001	TAT 001	TCET 003	S40UCKUNL 16
TWKT 002	TVWT 004	TSKT 002	TVST 005	TMT 001	TAT 001	TCET 003	S50VCKUNL 16
LINKS › Left							

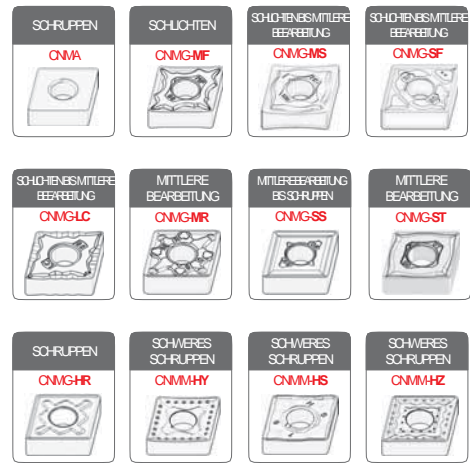
PCLN 95°



		BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATT EN Insert
RECHTS › Right - LINKS › Left	STAHL BOHRSTANGE OHNE INNENKUEHLUNG Steel bar without internal coolant	S16PPCLN R/L 09	16	14,8	170	11,0	*21	CNM. 0903..
		S20RPCLN R/L 09	20	18,3	200	13,0	*25	CNM. 0903..
		S25SPCLN R/L 12	25	23,0	250	17,0	*32	CNM. 1204..
		S32TPCLN R/L 12	32	30,0	300	22,0	*40	CNM. 1204..
		S40UPCLN R/L 12	40	37,5	350	27,0	*50	CNM. 1204..
		S50VPCLN R/L 12	50	47,0	400	35,0	*63	CNM. 1204..
		S32TPCLN R/L 16	32	30,0	300	22,0	*40	CNM. 1606..
		S40UPCLN R/L 16	40	37,5	350	27,0	*50	CNM. 1606..
		S50VPCLN R/L 16	50	47,0	400	35,0	*63	CNM. 1606..
		S40UPCLN R/L 19	40	37,5	350	27,0	*50	CNM. 1906..
S50VPCLN R/L 19	50	47,0	400	35,0	*63	CNM. 1906..		
	STAHL BOHRSTANGE MIT INNENKUEHLUNG Steel bar with internal coolant	A25RPCLN R/L 12	25	23,0	200	17,0	*32	CNM. 1204..
		A32SPCLN R/L 12	32	30,0	250	22,0	*40	CNM. 1204..
		A40TPCLN R/L 12	40	37,5	300	27,0	*50	CNM. 1204..
		A50UPCLN R/L 12	50	47,0	350	35,0	*63	CNM. 1204..
		A32SPCLN R/L 16	32	30,0	250	22,0	*40	CNM. 1606..
		A40TPCLN R/L 16	40	37,5	300	27,0	*50	CNM. 1606..
		A50UPCLN R/L 16	50	47,0	350	35,0	*63	CNM. 1606..
		A40TPCLN R/L 19	40	37,5	300	27,0	*50	CNM. 1906..
		A50UPCLN R/L 19	50	47,0	350	35,0	*63	CNM. 1906..

BESTELLBESPEL: S16PPCLNR + 09 › Ordering example: S16PPCLNR + 09

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts

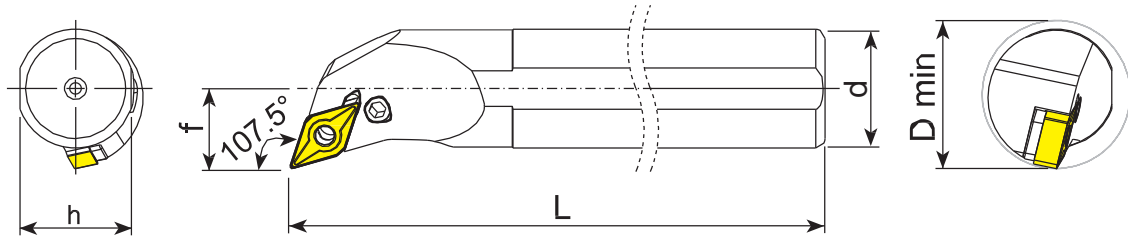
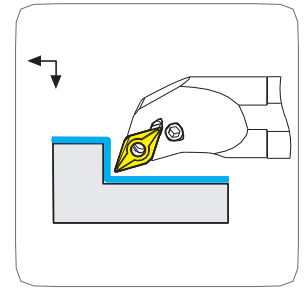


GEEGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 007	TVLT 008	-	-	TCET 001	S16PPCLN R/L 09
TLT 001	TVLT 006	TSCT 002	TPST 001	TCET 001	S20RPCLN R/L 09
TLT 002	TVLT 007	TSCT 004	TPST 002	TCET 002	S25SPCLN R/L 12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	S32TPCLN R/L 12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	S40UPCLN R/L 12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	S50VPCLN R/L 12
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	S32TPCLN R/L 16
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	S40UPCLN R/L 16
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	S50VPCLN R/L 16
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	S40UPCLN R/L 19
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	S50VPCLN R/L 19
TLT 002	TVLT 007	TSCT 004	TPST 002	TCET 002	A25RPCLN R/L 12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	A32SPCLN R/L 12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	A40TPCLN R/L 12
TLT 002	TVLT 002	TSCT 004	TPST 002	TCET 002	A50UPCLN R/L 12
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	A32SPCLN R/L 16
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	A40TPCLN R/L 16
TLT 004	TVLT 003	TSCT 005	TPST 003	TCET 003	A50UPCLN R/L 16
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	A40TPCLN R/L 19
TLT 005	TVLT 004	TSCT 006	TPST 004	TCET 003	A50UPCLN R/L 19

RECHTS › Right - LINKS › Left

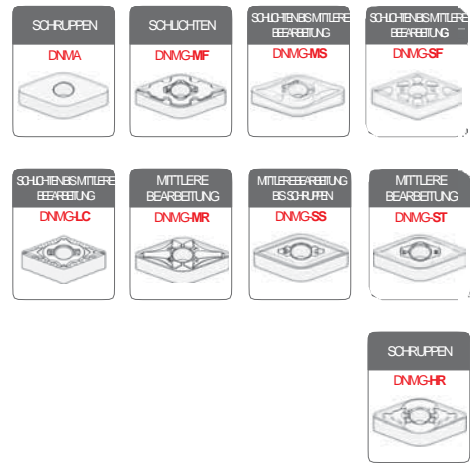
PDQN 107,5°



	BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATT EN Insert	
RECHTS › Right - LINKS › Left	STAHL BOHRSTANGE OHNE INNENKUEHLUNG Steel bar without internal coolant	S25SPDQN R/L 11	25	23,0	250	17,0	*32	DNM. 1104..
		S32TPDQN R/L 15	32	30,0	300	22,0	*40	DNM. 1506..
		S40UPDQN R/L 15	40	37,5	350	27,0	*50	DNM. 1506..
		S50VPDQN R/L 15	50	47,0	400	35,0	*63	DNM. 1506..
		S32TPDQN R/L 1504	32	30,0	300	22,0	*40	DNM. 1504..
		S40UPDQN R/L 1504	40	37,5	350	27,0	*50	DNM. 1504..
		S50VPDQN R/L 1504	50	47,0	400	35,0	*63	DNM. 1504..
	STAHL BOHRSTANGE MIT INNENKUEHLUNG Steel bar with internal coolant	A20PPDQN R/L 11	20	18,3	170	13,0	*25	DNM. 1104..
		A25RPDQN R/L 11	25	23,0	200	17,0	*32	DNM. 1104..
		A32SPDQN R/L 15	32	30,0	250	22,0	*40	DNM. 1506..
		A40TPDQN R/L 15	40	37,5	300	27,0	*50	DNM. 1506..
		A50UPDQN R/L 15	50	47,0	350	35,0	*63	DNM. 1506..
		A32SPDQN R/L 1504	32	30,0	250	22,0	*40	DNM. 1504..
		A40TPDQN R/L 1504	40	37,5	300	27,0	*50	DNM. 1504..

BESTELLBESPIEL: S20RPDQNR + 11 › Ordering example: S20RPDQNR+ 11

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



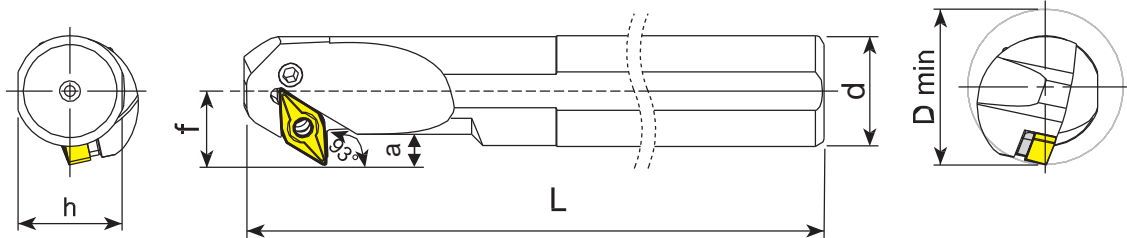
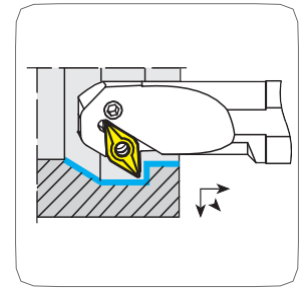
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	S25SPDQN R/L 11
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S32TPDQN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S40UPDQN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S50VPDQN R/L 15
TLT 003	TVLT 002	TSDT 002	TPST 002	TCET 002	S32TPDQN R/L 1504
TLT 003	TVLT 002	TSDT 002	TPST 002	TCET 002	S40UPDQN R/L 1504
TLT 003	TVLT 002	TSDT 002	TPST 002	TCET 002	S50VPDQN R/L 1504
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	A20PPDQN R/L 11
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	A25RPDQN R/L 11
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	A32SPDQN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	A40TPDQN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	A50UPDQN R/L 15
TLT 003	TVLT 002	TSDT 002	TPST 002	TCET 002	A32SPDQN R/L 1504
TLT 003	TVLT 002	TSDT 002	TPST 002	TCET 002	A40TPDQN R/L 1504

RECHTS › Right - LINKS › Left

PDXN 93°



RECHTS › Right

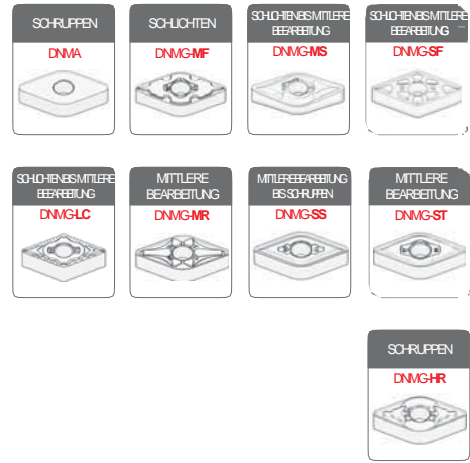
BEZEICHNUNG Code	d	h	L	f	a	D min	WENDESCHNEIDPLATT EN Insert
S32TPDXNR 15	32	30,0	300	25,0	12	*45	DNM. 1506..
S40UPDXNR 15	40	37,5	350	27,0	14	*50	DNM. 1506..
S50VPDXNR 15	50	47,0	400	35,0	19	*63	DNM. 1506..

LINKS › Left

S32TPDXNL15	32	30,0	300	25,0	12	*45	DNM. 1506..
S40UPDXNL 15	40	37,5	350	27,0	14	*50	DNM. 1506..
S50VPDXNL 15	50	47,0	400	35,0	19	*63	DNM. 1506..

BESTELLBESPIEL: S32TPDXNR + 15 › Ordering example: S32TPDXNR + 15

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

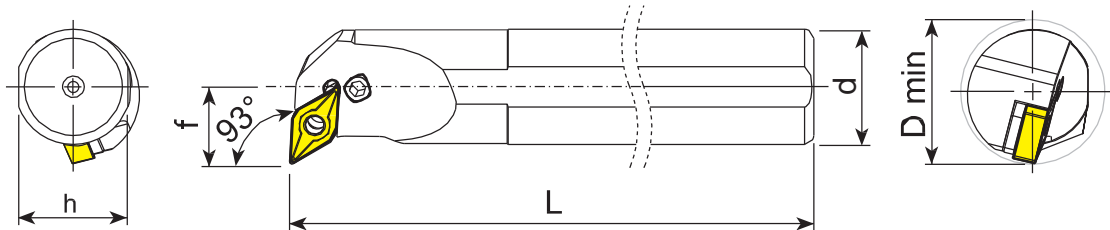
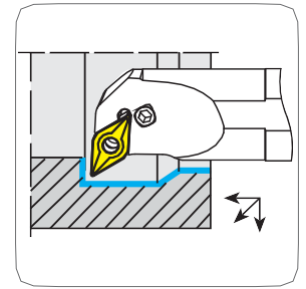
HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 003	TVLT 007	TSDT 003	TPST 002	TCET 002	S32TPDXNR 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S40UPDXNR 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S50VPDXNR 15

RECHTS › Right

TLT 003	TVLT 007	TSDT 003	TPST 002	TCET 002	S32TPDXNL 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S40UPDXNL 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S50VPDXNL 15

LINKS › Left

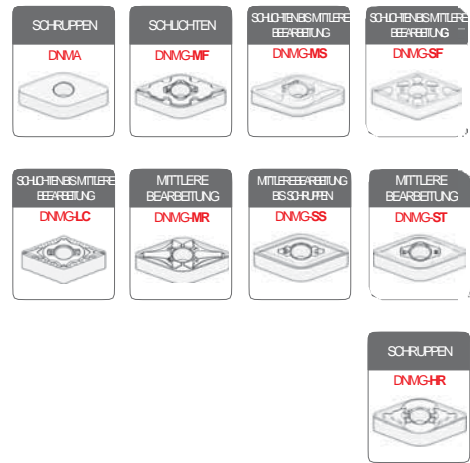
PDUN 93°



		BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATT EN Insert
RECHTS › Right - LINKS › Left	STAHL BOHRSTANGE OHNE INNENKUEHLUNG Steel bar without internal coolant	S20RPDUN R/L 11	20	18,3	200	13,0	*25	DNM. 1104..
		S25SPDUN R/L 11	25	23,0	250	17,0	*32	DNM. 1104..
		S25SPDUN R/L 15	25	23,0	250	17,0	*32	DNM. 1506..
		S32TPDUN R/L 15	32	30,0	300	22,0	*40	DNM. 1506..
		S40UPDUN R/L 15	40	37,5	350	27,0	*50	DNM. 1506..
		S50VPDUN R/L 15	50	47,0	400	35,0	*63	DNM. 1506..
	STAHL BOHRSTANGE MIT INNENKUEHLUNG Steel bar with internal coolant	A20PPDUN R/L 11	20	18,3	170	13,0	*25	DNM. 1104..
		A25RPDUN R/L 11	25	23,0	200	17,0	*32	DNM. 1104..
		A32SPDUN R/L 15	32	30,0	250	22,0	*40	DNM. 1506..
		A40TPDUN R/L 15	40	37,5	300	27,0	*50	DNM. 1506..
		A50UPDUN R/L 15	50	47,0	350	35,0	*63	DNM. 1506..

BESTELLBESPEL: S20RPDUNR + 11 › Ordering example: S20RPDUNR+ 11

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



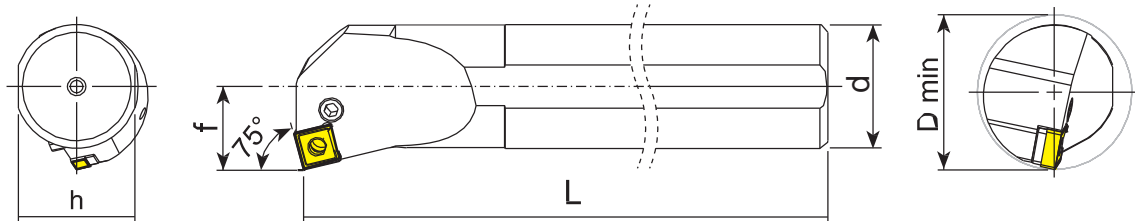
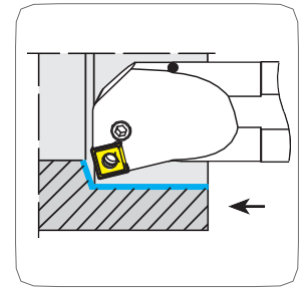
Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG G Code
TLT 001	TVLT 006	TSDT 004	TPST 001	TCET 001	S20RPDUN R/L 11
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	S25SPDUN R/L 11
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S25SPDUN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S32TPDUN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S40UPDUN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	S50VPDUN R/L 15
TLT 001	TVLT 006	TSDT 004	TPST 001	TCET 001	A20PPDUN R/L 11
TLT 001	TVLT 001	TSDT 004	TPST 001	TCET 001	A25RPDUN R/L 11
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	A32SPDUN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	A40TPDUN R/L 15
TLT 003	TVLT 002	TSDT 003	TPST 002	TCET 002	A50UPDUN R/L 15

RECHTS › Right - LINKS › Left

PSKN 75°



RECHTS › Right

BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATTEN Insert
S25SPSKNR 12	25	23,0	250	17,0	*32	SNM. 1204..
S32TPSKNR 12	32	30,0	300	22,0	*40	SNM. 1204..
S40UPSKNR 12	40	37,5	350	27,0	*50	SNM. 1204..
S50VPSKNR 12	50	47,0	400	35,0	*63	SNM. 1204..

LINKS › Left

S25SPSKNL12	25	23,0	250	17,0	*32	SNM. 1204..
S32TPSKNL12	32	30,0	300	22,0	*40	SNM. 1204..
S40UPSKNL12	40	37,5	350	27,0	*50	SNM. 1204..
S50VPSKNL12	50	47,0	400	35,0	*63	SNM. 1204..

BESTELLBESPIEL: S25SPSKNR + 12 › Ordering example: S25SPSKNR+ 12

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

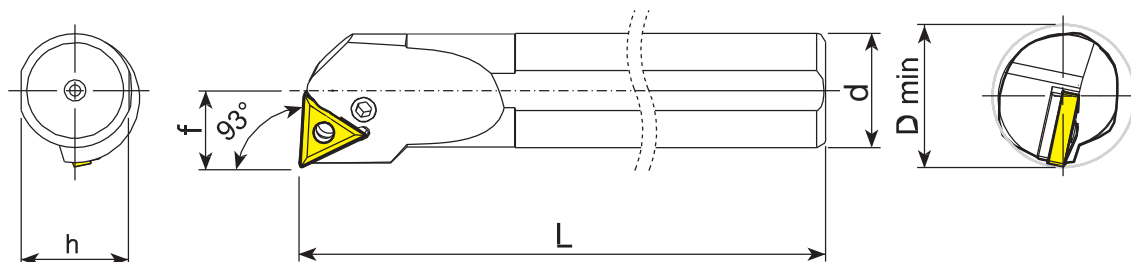
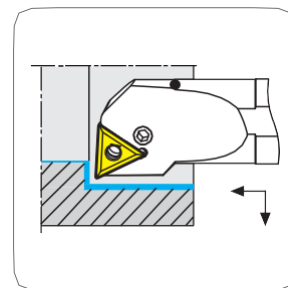
HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG G Code
TLT 002	TVLT 007	TSST 003	TPST 002	TCET 002	S25SPSKNR 12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	S32TPSKNR 12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	S40UPSKNR 12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	S50VPSKNR 12

RECHTS › Right

TLT 002	TVLT 007	TSST 003	TPST 002	TCET 002	S25SPSKNL 12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	S32TPSKNL 12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	S40UPSKNL 12
TLT 002	TVLT 002	TSST 003	TPST 002	TCET 002	S50VPSKNL 12

LINKS › Left

PTUN 93°

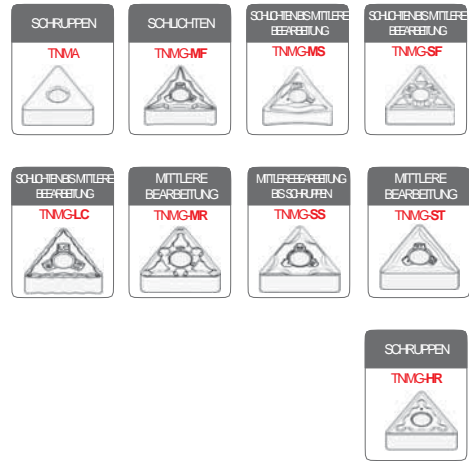


	BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATTEN Insert
RECHTS › Right	S16PPTUNR 16	16	14,8	170	11,0	*21	TNM. 1604..
	S20RPTUNR 16	20	18,3	200	13,0	*25	TNM. 1604..
	S25SPTUNR 16	25	23,0	250	17,0	*32	TNM. 1604..
	S32TPTUNR 16	32	30,0	300	22,0	*40	TNM. 1604..
	S40UPTUNR 16	40	37,5	350	27,0	*50	TNM. 1604..
	S32TPTUNR 22	32	30,0	300	22,0	*40	TNM. 2204..
	S40UPTUNR 22	40	37,5	350	27,0	*50	TNM. 2204..
	S50VPTUNR 22	50	47,0	400	35,0	*63	TNM. 2204..

LINKS › Left	S16PPTUNL 16	16	14,8	170	11,0	*21	TNM. 1604..
	S20RPTUNL 16	20	18,3	200	13,0	*25	TNM. 1604..
	S25SPTUNL 16	25	23,0	250	17,0	*32	TNM. 1604..
	S32TPTUNL 16	32	30,0	300	22,0	*40	TNM. 1604..
	S40UPTUNL 16	40	37,5	350	27,0	*50	TNM. 1604..
	S32TPTUNL 22	32	30,0	300	22,0	*40	TNM. 2204..
	S40UPTUNL 22	40	37,5	350	27,0	*50	TNM. 2204..
	S50VPTUNL 22	50	47,0	400	35,0	*63	TNM. 2204..

BESTELLBESPIEL: S16PPTUNR + 16 › Ordering example: S16PPTUNR+ 16

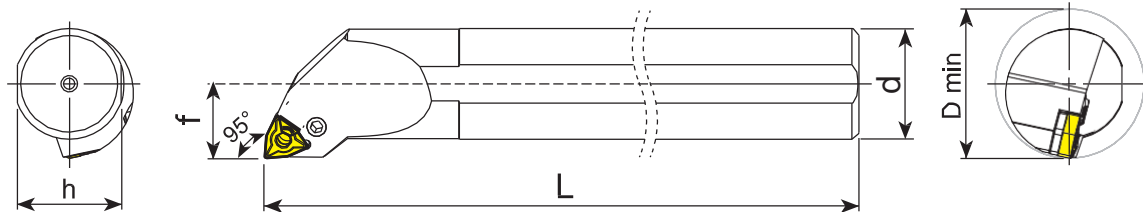
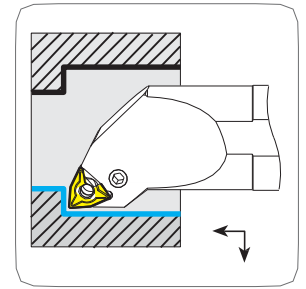
WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts



GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG G Code	
TLT 007	TVLT 008	TSTT 003	TPST 001	TCET 001	S16PPTUNR 16	RECHTS › Right
TLT 001	TVLT 006	TSTT 003	TPST 001	TCET 001	S20RPTUNR 16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	S25SPTUNR 16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	S32TPTUNR 16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	S40UPTUNR 16	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	S32TPTUNR 22	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	S40UPTUNR 22	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	S50VPTUNR 22	
TLT 007	TVLT 008	TSTT 003	TPST 001	TCET 001	S16PPTUNL 16	LINKS › Left
TLT 001	TVLT 006	TSTT 003	TPST 001	TCET 001	S20RPTUNL 16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	S25SPTUNL 16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	S32TPTUNL 16	
TLT 001	TVLT 001	TSTT 003	TPST 001	TCET 001	S40UPTUNL 16	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	S32TPTUNL 22	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	S40UPTUNL 22	
TLT 002	TVLT 002	TSTT 002	TPST 002	TCET 002	S50VPTUNL 22	

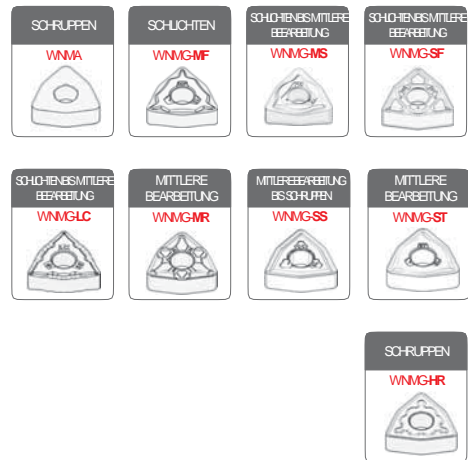
P LN 95°



		BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATT EN Insert
RECHTS › Right - LINKS › Left	STAHL BOHRSTANGE OHNE INNENKUEHLUNG Steel bar without internal coolant	S20RPWLN R/L 06	20	18,3	200	13,0	*25	WNM. 0604..
		S25SPWLN R/L 06	25	23,0	250	17,0	*32	WNM. 0604..
		S32TPWLN R/L 06	32	30,0	300	22,0	*40	WNM. 0604..
		S25SPWLN R/L 08	25	23,0	250	17,0	*32	WNM. 0804..
		S32TPWLN R/L 08	32	30,0	300	22,0	*40	WNM. 0804..
		S40UPWLN R/L 08	40	37,5	350	27,0	*50	WNM. 0804..
		S50VPWLN R/L 08	50	47,0	400	35,0	*63	WNM. 0804..
	STAHL BOHRSTANGE MIT INNENKUEHLUNG Steel bar with internal coolant	A20PPWLN R/L 06	20	18,3	170	13,0	*25	WNM. 0604..
		A25RPWLN R/L 06	25	23,0	200	17,0	*32	WNM. 0604..
		A32SPWLN R/L 06	32	30,0	250	22,0	*40	WNM. 0604..
		A25RPWLN R/L 08	25	23,0	200	17,0	*32	WNM. 0804..
		A32SPWLN R/L 08	32	30,0	250	22,0	*40	WNM. 0804..
		A40TPWLN R/L 08	40	37,5	300	27,0	*50	WNM. 0804..
		A50UPWLN R/L 08	50	47,0	350	22,0	*63	WNM. 0804..

BESTELLBESPEL: S20RPWLN R + 06 › Ordering example: S20RPWLN R + 06

WENDESCHNEIDPLATTEN NEGATIV › Negative Inserts

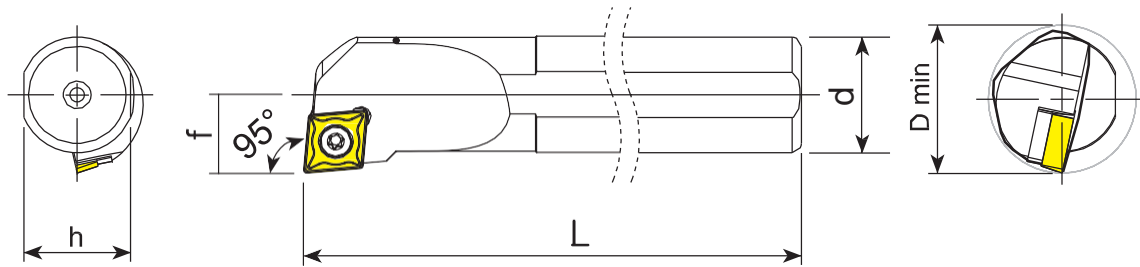
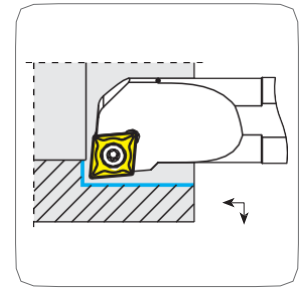


GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

HEBEL Lever	HEBEL SCHRAUBE Lever Screw	UNTERLAGEN Shim	SPANNHUELSE Shim Spring	SCHLUESSEL Key	BEZEICHNUNG Code
TLT 001	TVLT 006	TSWT 002	TPST 001	TCET 001	S20RPWLN R/L 06
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	S25SPWLN R/L 06
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	S32TPWLN R/L 06
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	S25SPWLN R/L 08
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	S32TPWLN R/L 08
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	S40UPWLN R/L 08
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	S50VPWLN R/L 08
TLT 001	TVLT 006	TSWT 002	TPST 001	TCET 001	A20PPWLN R/L 06
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	A25RPWLN R/L 06
TLT 001	TVLT 001	TSWT 002	TPST 001	TCET 001	A32SPWLN R/L 06
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	A25RPWLN R/L 08
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	A32SPWLN R/L 08
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	A40TPWLN R/L 08
TLT 002	TVLT 002	TSWT 001	TPST 002	TCET 002	A50UPWLN R/L 08

RECHTS › Right - LINKS › Left

SCLC 95°



		BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATT EN Insert
RECHTS › Right - LINKS › Left	STAHL BOHRSTANGE OHNE INNENKUEHLUNG Steel bar without internal coolant	S0608HSCLC R/L 06	6	7,3	100	4,5	*8	CCM. 0602..
		S08HSCLC R/L 06	8	7,3	100	6,0	*11	CCM. 0602..
		S10KSCLC R/L 06	10	0,9	125	7,0	*13	CCM. 0602..
		S12KSCLC R/L 06	12	11,0	125	9,0	*16	CCM. 0602..
		S16PSCLC R/L 06	16	14,8	170	11,0	*21	CCM. 0602..
		S12KSCLC R/L 09	12	11,0	125	9,0	*16	CCM. 09T3..
		S16PSCLC R/L 09	16	14,8	170	11,0	*21	CCM. 09T3..
		S20RSCLC R/L 09	20	18,3	200	13,0	*25	CCM. 09T3..
		S25SSCLC R/L 09	25	23,0	250	17,0	*32	CCM. 09T3..
		S32TSCLC R/L 09	32	30,0	300	22,0	*40	CCM. 09T3..
		S25SSCLC R/L 12	25	23,0	250	17,0	*32	CCM. 1204..
		S32TSCLC R/L 12	32	30,0	300	22,0	*40	CCM. 1204..
		S40USCLC R/L 12	40	37,5	350	27,0	*50	CCM. 1204..
		STAHL BOHRSTANGE MIT INNENKUEHLUNG Steel bar with internal coolant	A08HSCLC R/L 06	8	7,3	100	6,0	*11
A10HSCLC R/L 06	10		0,9	100	7,0	*13	CCM. 0602..	
A12HSCLC R/L 06	12		11,0	100	9,0	*16	CCM. 0602..	
A16MSCLC R/L 09	16		14,8	150	11,0	*21	CCM. 09T3..	
A20PSCLC R/L 09	20		18,3	170	13,0	*25	CCM. 09T3..	
A25RSCLC R/L 09	25		23,0	200	17,0	*32	CCM. 09T3..	
A32SSCLC R/L 09	32		30,0	250	22,0	*40	CCM. 09T3..	
A25RSCLC R/L 12	25		23,0	200	17,0	*32	CCM. 1204..	

BESTELLBESPIEL: S0608HSCLCR + 06 › Ordering example: S0608HSCLCR + 06

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

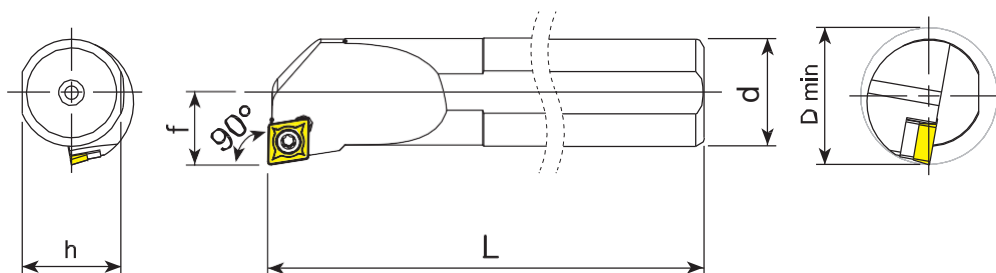
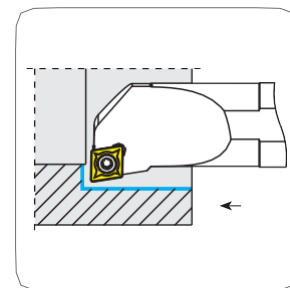


GEEGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code
TVTT 009	-	-	TCTT 003	S0608HSCLC R/L 06
TVTT 010	-	-	TCTT 003	S08HSCLC R/L 06
TVTT 010	-	-	TCTT 003	S10KSCLC R/L 06
TVTT 010	-	-	TCTT 003	S12KSCLC R/L 06
TVTT 010	-	-	TCTT 003	S16PSCLC R/L 06
TVTT 014	-	-	TCTT 004	S12KSCLC R/L 09
TVTT 015	-	-	TCTT 004	S16PSCLC R/L 09
TVTT 015	-	-	TCTT 004	S20RSCLC R/L 09
TVTT 012	TSCT 001	TVST 003	TCTT 004	S25SSCLC R/L 09
TVTT 012	TSCT 001	TVST 003	TCTT 004	S32TSCLC R/L 09
TVTT 016	TSCT 003	TVST 004	TCTT 005	S25SSCLC R/L 12
TVTT 016	TSCT 003	TVST 004	TCTT 005	S32TSCLC R/L 12
TVTT 002	TSCT 003	TVST 002	TCTT 005	S40USCLC R/L 12
TVTT 010	-	-	TCTT 003	A08HSCLC R/L 06
TVTT 010	-	-	TCTT 003	A10HSCLC R/L 06
TVTT 010	-	-	TCTT 003	A12HSCLC R/L 06
TVTT 015	-	-	TCTT 004	A16MSCLC R/L 09
TVTT 015	-	-	TCTT 004	A20PSCLC R/L 09
TVTT 012	TSCT 001	TVST 003	TCTT 004	A25RSCLC R/L 09
TVTT 012	TSCT 001	TVST 003	TCTT 004	A32SSCLC R/L 09
TVTT 016	TSCT 003	TVST 004	TCTT 005	A25RSCLC R/L 12

RECHTS › Right - LINKS › Left

SCFC 90°



	BEZEICHNUNG		d	h	L	f	D min	WENDESCHNEIDPLATTEN Insert
	Code							
RECHTS › Right	S08HSCFCR	06	8	7,3	100	6,0	*11	CCM. 0602..
	S10KSCFCR	06	10	9,0	125	7,0	*13	CCM. 0602..
	S12KSCFCR	06	12	11,0	125	9,0	*16	CCM. 0602..
	S12KSCFCR	09	12	11,0	125	9,0	*16	CCM. 09T3..
	S16PSCFCR	09	16	14,8	170	11,0	*21	CCM. 09T3..
	S20RSCFCR	09	20	18,3	200	13,0	*25	CCM. 09T3..
	S25SSFCR	09	25	23,0	250	17,0	*32	CCM. 09T3..

LINKS › Left	S08HSCFCL	06	8	7,3	100	6,0	*11	CCM. 0602..
	S10KSCFCL	06	10	9,0	125	7,0	*13	CCM. 0602..
	S12KSCFCL	06	12	11,0	125	9,0	*16	CCM. 0602..
	S12KSCFCL	09	12	11,0	125	9,0	*16	CCM. 09T3..
	S16PSCFCL	09	16	14,8	170	11,0	*21	CCM. 09T3..
	S20RSCFCL	09	20	18,3	200	13,0	*25	CCM. 09T3..
	S25SSCFCL	09	25	23,0	250	17,0	*32	CCM. 09T3..

BESTELLBESPIEL: S08HSCFCR + 06 › Ordering example: S08HSCFCR + 06

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

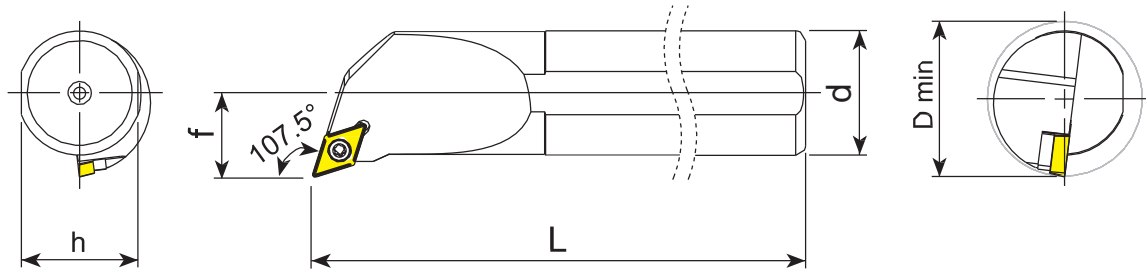
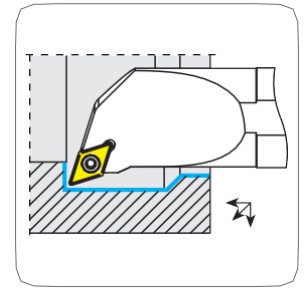


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	S08HSCFCR	06
TVTT 010	-	-	TCTT 003	S10KSCFCR	06
TVTT 010	-	-	TCTT 003	S12KSCFCR	06
TVTT 014	-	-	TCTT 004	S12KSCFCR	09
TVTT 015	-	-	TCTT 004	S16PSCFCR	09
TVTT 015	-	-	TCTT 004	S20RSCFCR	09
TVTT 012	TSCT 001	TVST 003	TCTT 004	S25SSFCR	09
RECHTS › Right					
TVTT 010	-	-	TCTT 003	S08HSCFCL	06
TVTT 010	-	-	TCTT 003	S10KSCFCL	06
TVTT 010	-	-	TCTT 003	S12KSCFCL	06
TVTT 014	-	-	TCTT 004	S12KSCFCL	09
TVTT 015	-	-	TCTT 004	S16PSCFCL	09
TVTT 015	-	-	TCTT 004	S20RSCFCL	09
TVTT 012	TSCT 001	TVST 003	TCTT 004	S25SSCFCL	09
LINKS › Left					

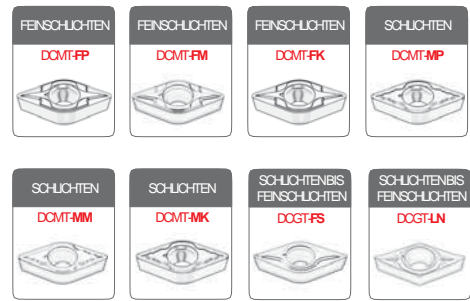
SDQC 107,5°



		BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATT EN Insert
RECHTS › Right - LINKS › Left	STAHL BOHRSTANGE OHNE INNENKUEHLUNG Steel bar without internal coolant	S10KSDQC R/L 07	10	9,0	125	7,0	*13	DCM. 0702..
		S12KSDQC R/L 07	12	11,0	125	9,0	*16	DCM. 0702..
		S16PSDQC R/L 07	16	14,8	170	11,0	*21	DCM. 0702..
		S20RSDQC R/L 07	20	18,3	200	13,0	*25	DCM. 0702..
		S16PSDQC R/L 11	16	14,8	170	11,0	*21	DCM. 11T3..
		S20RSDQC R/L 11	20	18,3	200	13,0	*25	DCM. 11T3..
		S25SSDQC R/L 11	25	23,0	250	17,0	*32	DCM. 11T3..
		S32TSDQC R/L 11	32	30,0	300	22,0	*40	DCM. 11T3..
	STAHL BOHRSTANGE MIT INNENKUEHLUNG Steel bar with internal coolant	A10HSDQCR/L 07	10	9,0	100	7,0	*13	DCM. 0702..
		A12HSDQCR/L 07	12	11,0	100	9,0	*16	DCM. 0702..
		A16MSDQC R/L 07	16	14,8	150	11,0	*21	DCM. 0702..
		A20PSDQC R/L 07	20	18,3	170	13,0	*25	DCM. 0702..
		A16MSDQC R/L 11	16	14,8	150	11,0	*21	DCM. 11T3..
		A20PSDQC R/L 11	20	18,3	170	13,0	*25	DCM. 11T3..
		A25RSDQCR/L 11	25	23,0	200	17,0	*32	DCM. 11T3..
A32SSDQC R/L 11		32	30,0	250	22,0	*40	DCM. 11T3..	

BESTELLBESPEL: A10HSDQCR + 07 › Ordering example: A10HSDQCR+ 07

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

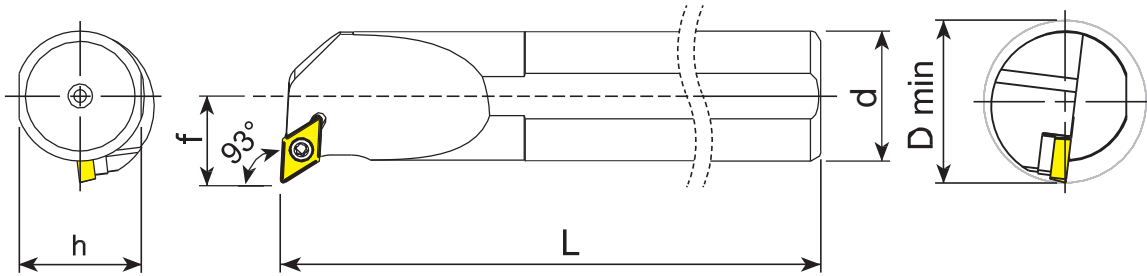
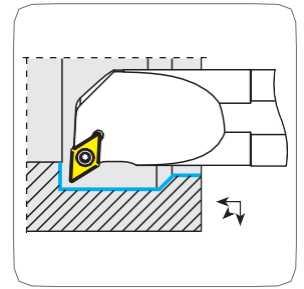


GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code
TVTT 010	-	-	TCTT 003	S10KSDQC R/L 07
TVTT 010	-	-	TCTT 003	S12KSDQC R/L 07
TVTT 010	-	-	TCTT 003	S16PSDQC R/L 07
TVTT 010	-	-	TCTT 003	S20RSDQC R/L 07
TVTT 015	-	-	TCTT 004	S16PSDQC R/L 11
TVTT 011	-	-	TCTT 004	S20RSDQC R/L 11
TVTT 012	TSDT 001	TVST 003	TCTT 004	S25SSDQC R/L 11
TVTT 013	TSDT 001	TVST 001	TCTT 004	S32TSDQC R/L 11
TVTT 010	-	-	TCTT 003	A10HSDQC R/L 07
TVTT 010	-	-	TCTT 003	A12HSDQC R/L 07
TVTT 010	-	-	TCTT 003	A16MSDQC R/L 07
TVTT 010	-	-	TCTT 003	A20PSDQC R/L 07
TVTT 015	-	-	TCTT 004	A16MSDQC R/L 11
TVTT 011	-	-	TCTT 004	A20PSDQC R/L 11
TVTT 012	TSDT 001	TVST 003	TCTT 004	A25RSDQC R/L 11
TVTT 013	TSDT 001	TVST 001	TCTT 004	A32SSDQC R/L 11

RECHTS › Right - LINKS › Left

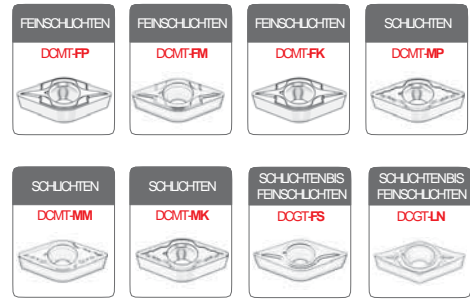
SDUC 93°



	BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHEIDPLATTEN Insert
RECHTS › Right - LINKS › Left STAHL BOHRSTANGE OHNE INNENKUEHLUNG Steel bar without internal coolant	S0810KSDUC R/L 07	8	9,0	125	6,0	*11	DCM. 0702..
	S10KSDUC R/L 07	10	9,0	125	7,0	*13	DCM. 0702..
	S12KSDUC R/L 07	12	11,0	125	9,0	*16	DCM. 0702..
	S16PSDUC R/L 07	16	14,8	170	11,0	*21	DCM. 0702..
	S20RSDUC R/L 07	20	18,3	200	13,0	*25	DCM. 0702..
	S16PSDUC R/L 11	16	14,8	170	11,0	*21	DCM. 11T3..
	S20RSDUC R/L 11	20	18,3	200	13,0	*25	DCM. 11T3..
	S25SSDUC R/L 11	25	23,0	250	17,0	*32	DCM. 11T3..
	S32TSDUC R/L 11	32	30,0	300	22,0	*40	DCM. 11T3..
	S40USDUC R/L 11	40	37,5	350	27,0	*50	DCM. 11T3..
	S50VSDUC R 11	50	47,0	400	35,0	*63	DCM. 11T3..
STAHL BOHRSTANGE MIT INNENKUEHLUNG Steel bar with internal coolant	A0810HSDUC R/L 07	8	9,0	100	6,0	*11	DCM. 0702..
	A10HSDUC R/L 07	10	9,0	100	7,0	*13	DCM. 0702..
	A12HSDUC R/L 07	12	11,0	100	9,0	*16	DCM. 0702..
	A16MSDUC R/L 07	16	14,8	150	11,0	*21	DCM. 0702..
	A20PSDUC R/L 07	20	18,3	170	13,0	*25	DCM. 0702..
	A16MSDUC R/L 11	16	14,8	150	11,0	*21	DCM. 11T3..
	A20PSDUC R/L 11	20	18,3	170	13,0	*25	DCM. 11T3..
	A25RSDUC R/L 11	25	23,0	200	17,0	*32	DCM. 11T3..
	A32SSDUC R/L 11	32	30,0	250	22,0	*40	DCM. 11T3..

BESTELLBESPEL: S0810KSDUCR + 07 › Ordering example: S0810KSDUCR + 07

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

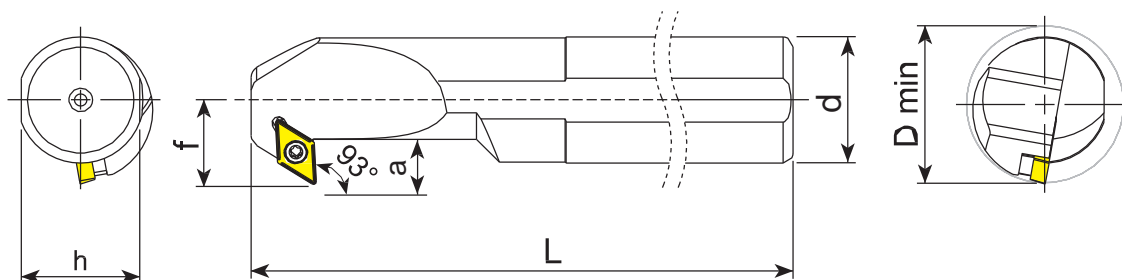
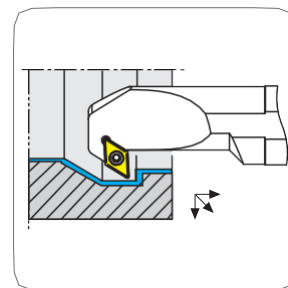


GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	S0810KSDUC R/L	07
TVTT 010	-	-	TCTT 003	S10KSDUC R/L	07
TVTT 010	-	-	TCTT 003	S12KSDUC R/L	07
TVTT 010	-	-	TCTT 003	S16PSDUC R/L	07
TVTT 015	-	-	TCTT 003	S20RSDUC R/L	07
TVTT 011	-	-	TCTT 004	S16PSDUC R/L	11
TVTT 012	-	-	TCTT 004	S20RSDUC R/L	11
TVTT 013	TSDT 001	TVST 003	TCTT 004	S25SSDUC R/L	11
TVTT 010	TSDT 001	TVST 001	TCTT 004	S32TSDUC R/L	11
TVTT 010	TSDT 001	TVST 001	TCTT 004	S40USDUC R/L	11
TVTT 010	TSDT 001	TVST 001	TCTT 004	S50VSDUC R	11
TVTT 010	-	-	TCTT 003	A0810HSDUC R/L	07
TVTT 015	-	-	TCTT 003	A10HSDUC R/L	07
TVTT 011	-	-	TCTT 003	A12HSDUC R/L	07
TVTT 012	-	-	TCTT 003	A16MSDUC R/L	07
TVTT 013	-	-	TCTT 003	A20PSDUC R/L	07
TVTT 013	-	-	TCTT 004	A16MSDUC R/L	11
TVTT 013	-	-	TCTT 004	A20PSDUC R/L	11
TVTT 013	TSDT 001	TVST 003	TCTT 004	A25RSDUC R/L	11
TVTT 013	TSDT 001	TVST 001	TCTT 004	A32SSDUC R/L	11

RECHTS › Right - LINKS › Left

SDXC 93°



RECHTS › Right

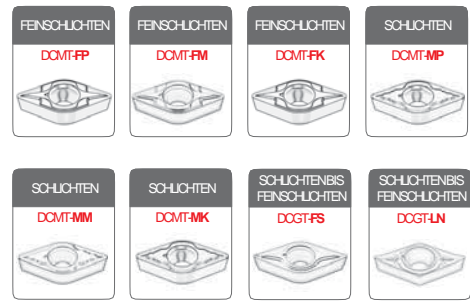
BEZEICHNUNG Code	d	h	L	f	a	D min	WENDESCHNEIDPLATT EN Insert
S12KSDXCR 07	12	11,0	125	9,0	4,0	*17	DCM. 070208
S16PSDXCR 07	16	14,8	170	11,0	6,0	*21	DCM. 070208
S20RSDXCR 11	20	18,3	200	13,0	6,0	*25	DCM. 11T308
S25SSDXCR 11	25	23,0	250	17,0	8,5	*32	DCM. 11T308
S32TSDXCR 11	32	30,0	300	22,0	12,0	*40	DCM. 11T308
S40USDXCR 11	40	37,5	350	27,0	14,0	*50	DCM. 11T308

LINKS › Left

S12KSDXCL 07	12	11,0	125	9,0	4,0	*17	DCM. 070208
S16PSDXCL 07	16	14,8	170	11,0	6,0	*21	DCM. 070208
S20RSDXCL 11	20	18,3	200	13,0	6,0	*25	DCM. 11T308
S25SSDXCL 11	25	23,0	250	17,0	8,5	*32	DCM. 11T308
S32TSDXCL 11	32	30,0	300	22,0	12,0	*40	DCM. 11T308
S40USDXCL 11	40	37,5	350	27,0	14,0	*50	DCM. 11T308

BESTELLBESPIEL: S12KSDXCR + 07 › Ordering example: S12KSDXCR+ 07

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



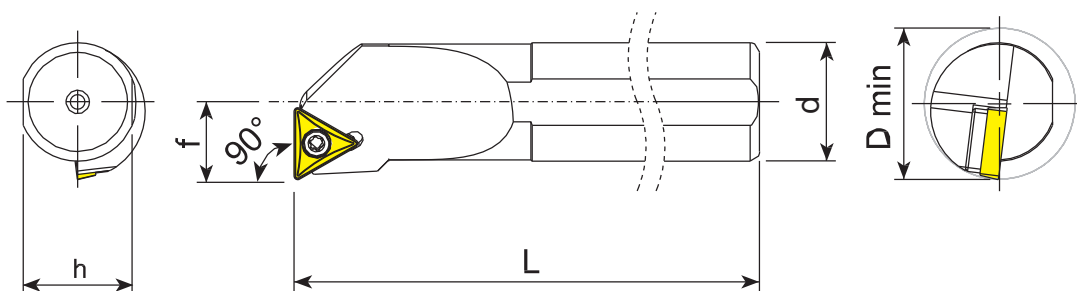
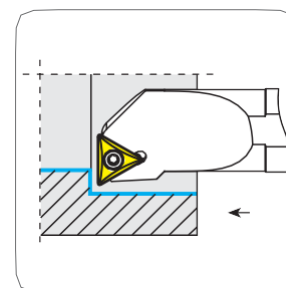
GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	S12KSDXCR	07
TVTT 010	-	-	TCTT 003	S16PSDXCR	07
TVTT 011	-	-	TCTT 004	S20RSDXCR	11
TVTT 012	TSDT 001	TVST 003	TCTT 004	S25SSDXCR	11
TVTT 013	TSDT 001	TVST 001	TCTT 004	S32TSDXCR	11
TVTT 013	TSDT 001	TVST 001	TCTT 004	S40USDXCR	11
TVTT 010	-	-	TCTT 003	S12KSDXCL	07
TVTT 010	-	-	TCTT 003	S16PSDXCL	07
TVTT 011	-	-	TCTT 004	S20RSDXCL	11
TVTT 012	TSDT 001	TVST 003	TCTT 004	S25SSDXCL	11
TVTT 013	TSDT 001	TVST 001	TCTT 004	S32TSDXCL	11
TVTT 013	TSDT 001	TVST 001	TCTT 004	S40USDXCL	11

RECHTS › Right

LINKS › Left

STFC 90°

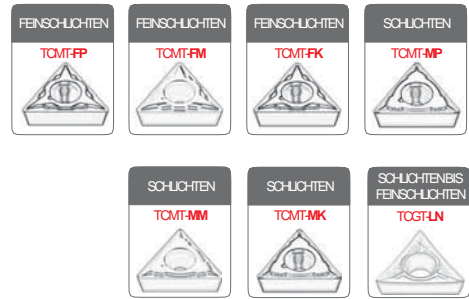


	BEZEICHNUNG		d	h	L	f	D min	WENDESCHNEIDPLATTEN Insert
	Code							
RECHTS › Right	S0610FSTFCR	06	6	9,0	80	4,0	*08	TCM. 06T1..
	S10KSTFCR	09	10	9,0	125	7,0	*13	TCM. 0902..
	S12KSTFCR	09	12	11,0	125	9,0	*17	TCM. 0902..
	S12KSTFCR	11	12	11,0	125	9,0	*17	TCM. 1102..
	S16PSTFCR	11	16	14,8	170	11,0	*21	TCM. 1102..
	S20RSTFCR	11	20	18,3	200	13,0	*25	TCM. 1102..
	S16PSTFCR	16	16	14,8	170	11,0	*21	TCM. 16T3..
	S20RSTFCR	16	20	18,3	200	13,0	*25	TCM. 16T3..
	S25SSTFCR	16	25	23,0	250	17,0	*32	TCM. 16T3..
	S32TSTFCR	16	32	30,0	300	22,0	*40	TCM. 16T3..

LINKS › Left	S0610FSTFCL	06	6	9,0	80	4,0	*08	TCM. 06T1..
	S10KSTFCL	09	10	9,0	125	7,0	*13	TCM. 0902..
	S12KSTFCL	09	12	11,0	125	9,0	*17	TCM. 0902..
	S12KSTFCL	11	12	11,0	125	9,0	*17	TCM. 1102..
	S16PSTFCL	11	16	14,8	170	11,0	*21	TCM. 1102..
	S20RSTFCL	11	20	18,3	200	13,0	*25	TCM. 1102..
	S16PSTFCL	16	16	14,8	170	11,0	*21	TCM. 16T3..
	S20RSTFCL	16	20	18,3	200	13,0	*25	TCM. 16T3..
	S25SSTFCL	16	25	23,0	250	17,0	*32	TCM. 16T3..
	S32TSTFCL	16	32	30,0	300	22,0	*40	TCM. 16T3..

BESTELLBESPIEL: S061FSTFCR + 06 › Ordering example: S061FSTFCR + 06

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

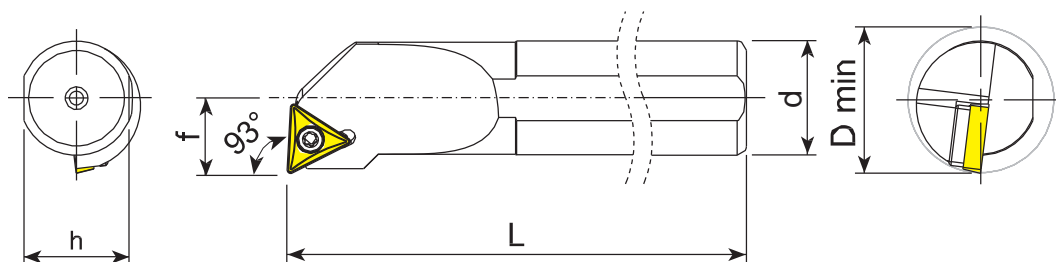
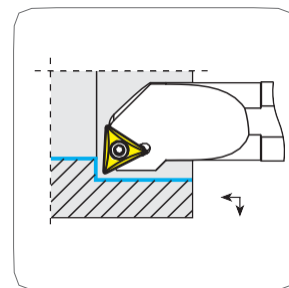


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 006	-	-	TCTT 001	S0610FSTFCR 06	RECHTS › Right
TVTT 007	-	-	TCTT 002	S10KSTFCR 09	
TVTT 007	-	-	TCTT 002	S12KSTFCR 09	
TVTT 010	-	-	TCTT 003	S12KSTFCR 11	
TVTT 010	-	-	TCTT 003	S16PSTFCR 11	
TVTT 010	-	-	TCTT 003	S20RSTFCR 11	
TVTT 015	-	-	TCTT 004	S16PSTFCR 16	
TVTT 011	-	-	TCTT 004	S20RSTFCR 16	
TVTT 012	TSTT 001	TVST 003	TCTT 004	S25SSTFCR 16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	S32TSTFCR 16	
TVTT 006	-	-	TCTT 001	S0610FSTFCL 06	LINKS › Left
TVTT 007	-	-	TCTT 002	S10KSTFCL 09	
TVTT 007	-	-	TCTT 002	S12KSTFCL 09	
TVTT 010	-	-	TCTT 003	S12KSTFCL 11	
TVTT 010	-	-	TCTT 003	S16PSTFCL 11	
TVTT 010	-	-	TCTT 003	S20RSTFCL 11	
TVTT 015	-	-	TCTT 004	S16PSTFCL 16	
TVTT 011	-	-	TCTT 004	S20RSTFCL 16	
TVTT 012	TSTT 001	TVST 003	TCTT 004	S25SSTFCL 16	
TVTT 013	TSTT 001	TVST 001	TCTT 004	S32TSTFCL 16	

STUC 93°

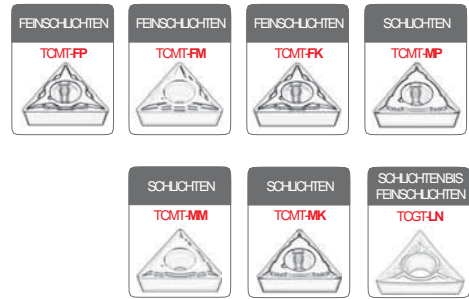


	BEZEICHNUNG		d	h	L	f	D min	WENDESCHNEIDPLATTEN Insert
	Code							
RECHTS › Right	S10KSTUCR	09	10	9,0	125	7,0	*13	TCM. 0902..
	S12KSTUCR	09	12	11,0	125	9,0	*17	TCM. 0902..
	S12KSTUCR	11	12	11,0	125	9,0	*17	TCM. 1102..
	S16PSTUCR	11	16	14,8	170	11,0	*21	TCM. 1102..
	S20RSTUCR	11	20	18,3	200	13,0	*25	TCM. 1102..
	S16PSTUCR	16	16	14,8	170	11,0	*21	TCM. 16T3..
	S20RSTUCR	16	20	18,3	200	13,0	*25	TCM. 16T3..
	S25SSTUCR	16	25	23,0	250	17,0	*32	TCM. 16T3..
	S32TSTUCR	16	32	30,0	300	22,0	*40	TCM. 16T3..
	S40USTUCR	16	40	37,5	350	27,0	*50	TCM. 16T3..

LINKS › Left	S10KSTUCL	09	10	9,0	125	7,0	*13	TCM. 0902..
	S12KSTUCL	09	12	11,0	125	9,0	*17	TCM. 0902..
	S12KSTUCL	11	12	11,0	125	9,0	*17	TCM. 1102..
	S16PSTUCL	11	16	14,8	170	11,0	*21	TCM. 1102..
	S20RSTUCL	11	20	18,3	200	13,0	*25	TCM. 1102..
	S16PSTUCL	16	16	14,8	170	11,0	*21	TCM. 16T3..
	S20RSTUCL	16	20	18,3	200	13,0	*25	TCM. 16T3..
	S25SSTUCL	16	25	23,0	250	17,0	*32	TCM. 16T3..
	S32TSTUCL	16	32	30,0	300	22,0	*40	TCM. 16T3..
	S40USTUCL	16	40	37,5	350	27,0	*50	TCM. 16T3..

BESTELLBESPIEL: S10KSTUCR + 09 › Ordering example: S10KSTUCR + 09

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

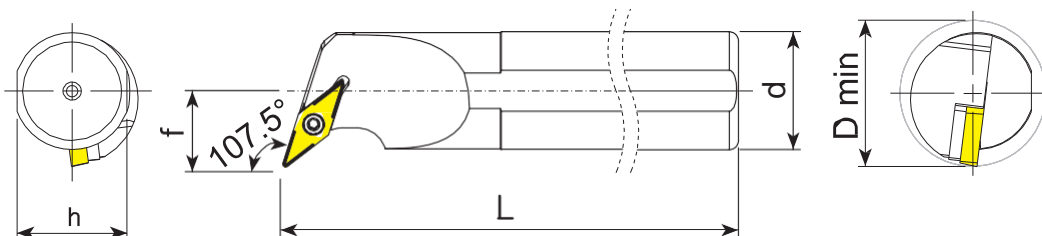
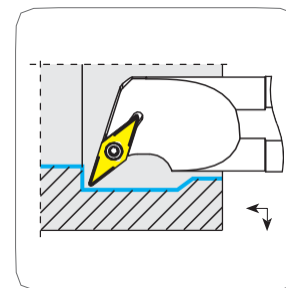


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 007	-	-	TCTT 002	S10KSTUCR	RECHTS › Right
TVTT 007	-	-	TCTT 002	S12KSTUCR	
TVTT 010	-	-	TCTT 003	S12KSTUCR	
TVTT 010	-	-	TCTT 003	S16PSTUCR	
TVTT 010	-	-	TCTT 003	S20RSTUCR	
TVTT 015	-	-	TCTT 004	S16PSTUCR	
TVTT 011	-	-	TCTT 004	S20RSTUCR	
TVTT 012	TSTT 001	TVST 003	TCTT 004	S25SSTUCR	
TVTT 013	TSTT 001	TVST 001	TCTT 004	S32TSTUCR	
TVTT 013	TSTT 001	TVST 001	TCTT 004	S40USTUCR	
TVTT 007	-	-	TCTT 002	S10KSTUCL	LINKS › Left
TVTT 007	-	-	TCTT 002	S12KSTUCL	
TVTT 010	-	-	TCTT 003	S12KSTUCL	
TVTT 010	-	-	TCTT 003	S16PSTUCL	
TVTT 010	-	-	TCTT 003	S20RSTUCL	
TVTT 015	-	-	TCTT 004	S16PSTUCL	
TVTT 011	-	-	TCTT 004	S20RSTUCL	
TVTT 012	TSTT 001	TVST 003	TCTT 004	S25SSTUCL	
TVTT 013	TSTT 001	TVST 001	TCTT 004	S32TSTUCL	
TVTT 013	TSTT 001	TVST 001	TCTT 004	S40USTUCL	

SVQB 107,5°



RECHTS › Right

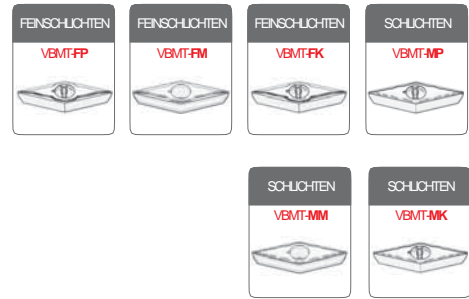
BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATTEN Insert
S16PSVQBR 11	16	14,8	170	11,0	*21	VBM. 1103..
S20RSVQBR 11	20	18,3	200	13,0	*25	VBM. 1103..
S25SSVQBR 16	25	23,0	250	17,0	*32	VBM. 1604..
S32TSVQBR 16	32	30,0	300	22,0	*40	VBM. 1604..
S40USVQBR 16	40	37,5	350	27,0	*50	VBM. 1604..

LINKS › Left

S16PSVQBL 11	16	14,8	170	11,0	*21	VBM. 1103..
S20RSVQBL 11	20	18,3	200	13,0	*25	VBM. 1103..
S25SSVQBL 16	25	23,0	250	17,0	*32	VBM. 1604..
S32TSVQBL 16	32	30,0	300	22,0	*40	VBM. 1604..
S40USVQBL 16	40	37,5	350	27,0	*50	VBM. 1604..

BESTELLBESPIEL: S16PSVQBR + 11 › Ordering example: S16PSVQBR + 11

WENDESCHNEIDPLATTE POSITIV › Positive Inserts

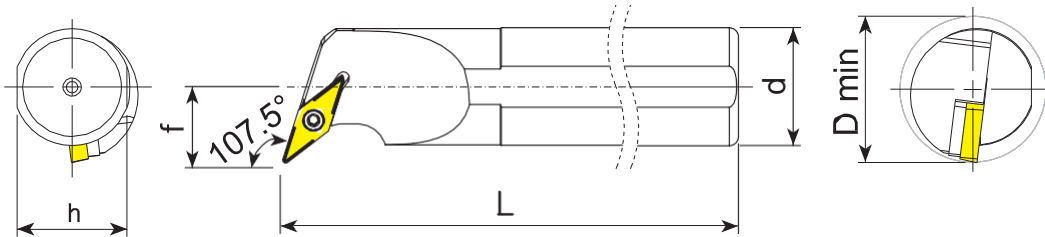
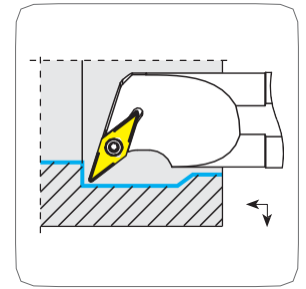


Turning

GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	S16PSVQBR 11	RECHTS › Right
TVTT 010	-	-	TCTT 003	S20RSVQBR 11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S25SSVQBR 16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S32TSVQBR 16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S40USVQBR 16	
TVTT 010	-	-	TCTT 003	S16PSVQBL 11	LINKS › Left
TVTT 010	-	-	TCTT 003	S20RSVQBL 11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S25SSVQBL 16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S32TSVQBL 16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S40USVQBL 16	

SVQC 107,5°



RECHTS › Right

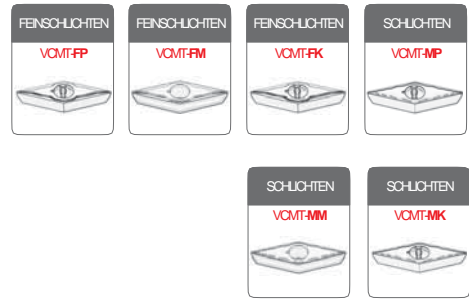
BEZEICHNUNG Code	d	h	L	f	D min	WENDESCHNEIDPLATTEN Insert
S16PSVQCR 11	16	14,8	170	11,0	*21	VCM. 1103..
S20RSVQCR 11	20	18,3	200	13,0	*25	VCM. 1103..
S25SSVQCR 16	25	23,0	250	17,0	*32	VCM. 1604..
S32TSVQCR 16	32	30,0	300	22,0	*40	VCM. 1604..
S40USVQCR 16	40	37,5	350	27,0	*50	VCM. 1604..

LINKS › Left

S16PSVQCL 11	16	14,8	170	11,0	*21	VCM. 1103..
S20RSVQCL 11	20	18,3	200	13,0	*25	VCM. 1103..
S25SSVQCL 16	25	23,0	250	17,0	*32	VCM. 1604..
S32TSVQCL 16	32	30,0	300	22,0	*40	VCM. 1604..
S40USVQCL 16	40	37,5	350	27,0	*50	VCM. 1604..

BESTELLBESPIEL: S16PSVQCR + 11 › Ordering example: S16PSVQCR + 11

WENDESCHNEIDPLATTE POSITIV › Positive Inserts



Turning

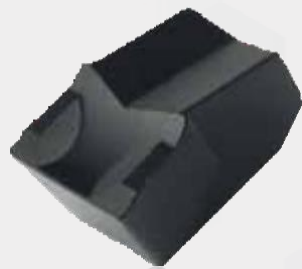
GEEIGNETE FORM UND SPANLEITSTUFE DER WENDESCHNEIDPLATTEN
Suitable Form and Chipbreaker Inserts

SCHRAUBE Screw	UNTERLAGEN Shim	UNTERLAGEN SCHRAUBE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code	
TVTT 010	-	-	TCTT 003	S16PSVQCR 11	RECHTS › Right
TVTT 010	-	-	TCTT 003	S20RSVQCR 11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S25SSVQCR 16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S32TSVQCR 16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S40USVQCR 16	
TVTT 010	-	-	TCTT 003	S16PSVQCL 11	LINKS › Left
TVTT 010	-	-	TCTT 003	S20RSVQCL 11	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S25SSVQCL 16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S32TSVQCL 16	
TVTT 013	TSVT 001	TVST 001	TCTT 004	S40USVQCL 16	



ABSTECHEN **& EINSTECHEN**

Parting Off & Grooving



ANWENDUNGSBEREICHE

Fields of Competence



AUTOMOBILINDUSTRIE › *Automotive*



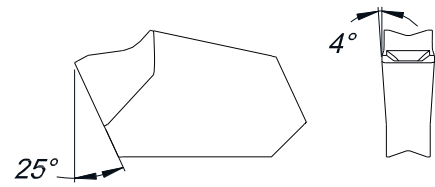
ABSTECHEN

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ABSTECH - PLATTE › Parting Off - Inserts	250
TCMX-N	250
TCMX-R	252
TCMX-L	252
ABSTECH - STECHHALTER › Parting Off - Blade Toolholders	254
TBC	254



TCMX-N

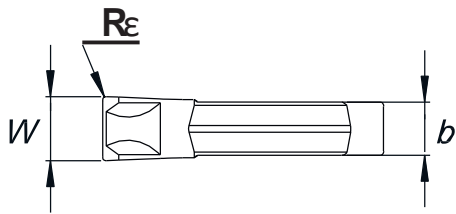


ABSTECHEN › Parting Off

		QUALITÄT Grade				
		P		M		K
EIN/ABSTECHPLATTE Inserts	ISO BEZEICHNUNG ISO Code	MGU515	MGP535	MGU515	MGP535	MGP535
TCMX-N	TCMX2N					
	TCMX3N	■	■	■	■	■
	TCMX4N	■	■	■	■	■
	TCMX5N	■	■	■	■	■
	TCMX6N	■	■	■	■	■



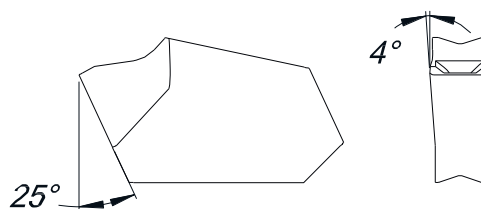
BESTELLBESPIEL: TCMX2N + QUALITÄT › Ordering example: TCMX2N+ Grade




ABMESSUNG <i>Dimension</i>				SCHNITTDATEN <i>Cutting Data</i>			ISO BEZEICHNUNG <i>ISO Code</i>	EIN/ABSTECHEPLATTE <i>Inserts</i>
W	b	Rε	Ö	fn (mm/g)	Min	Max		
2,2	1,8	0,16	-	0,08	0,05	0,16	TCMX2N	TCMX-N
3,1	2,6	0,20	-	0,15	0,10	0,25	TCMX3N	
4,1	3,5	0,25	-	0,18	0,10	0,30	TCMX4N	
5,1	4,5	0,28	-	0,20	0,12	0,35	TCMX5N	
6,4	5,5	0,35	-	0,25	0,15	0,40	TCMX6N	



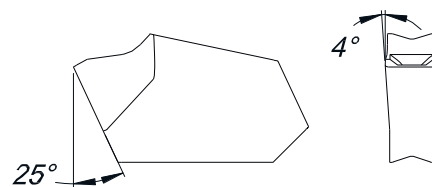
TCMX-R




		QUALITÄT Grade				
		P		M		K
EIN/ABSTECHPLATTE Inserts	ISO BEZEICHNUNG ISO Code	MGU515	MGP535	MGU515	MGP535	MGP535
	TCMX-R TCMX2R8					
	TCMX3R8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TCMX4R8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TCMX5R8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TCMX6R8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

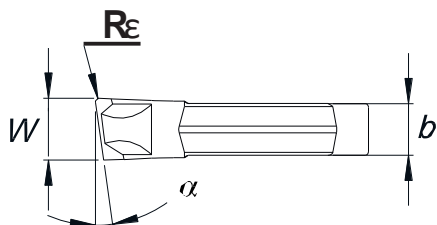
BESTELLBESPIEL: TCMX2R8 › Ordering example: TCMX2R8 AUF ANFRAGE › Available on request


TCMX-L

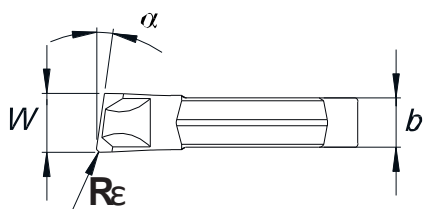



		QUALITÄT Grade				
		P		M		K
EIN/ABSTECHPLATTE Inserts	ISO BEZEICHNUNG ISO Code	TCU515	TCP535	TCU515	TCP535	TCP535
	TCMX-L TCMX2L8					
	TCMX3L8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TCMX4L8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TCMX5L8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TCMX6L8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BESTELLBESPIEL: TCMX2L8 + QUALITÄT › Ordering example: TCMX2L8 + Grade AUF ANFRAGE › Available on request

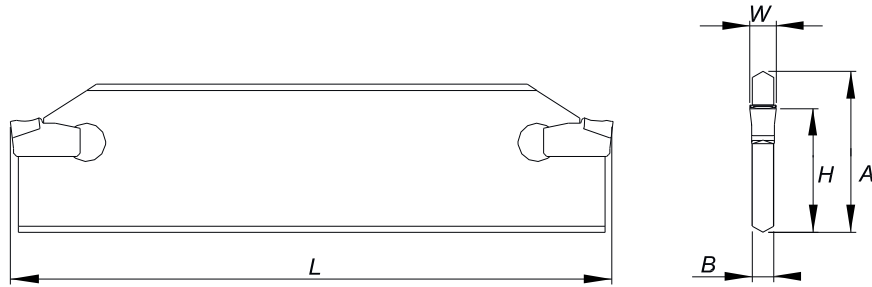
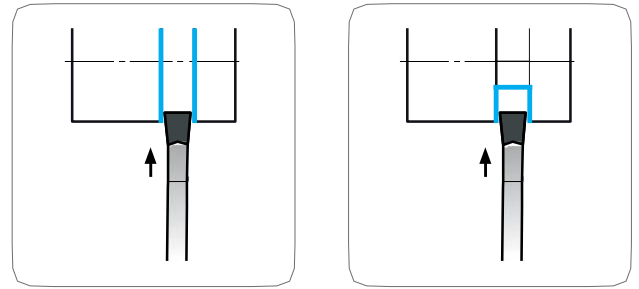


ABMESSUNG <i>Dimension</i>				SCHNITTDATEN <i>Cutting Data</i>			ISO BEZEICHNUNG <i>ISO Code</i>	EIN/ABSTECHPLATTE <i>Inserts</i>
W	b	Rε	Ø	fn (mm/g)	Min	Max		
2,2	1,8	0,16	8	0,06	0,04	0,11	TCMX2R8	
3,1	2,6	0,20	8	0,07	0,05	0,12	TCMX3R8	
4,1	3,5	0,25	8	0,10	0,08	0,12	TCMX4R8	
5,1	4,5	0,28	8	0,13	0,10	0,18	TCMX5R8	
6,4	5,5	0,35	8	0,17	0,12	0,20	TCMX6R8	



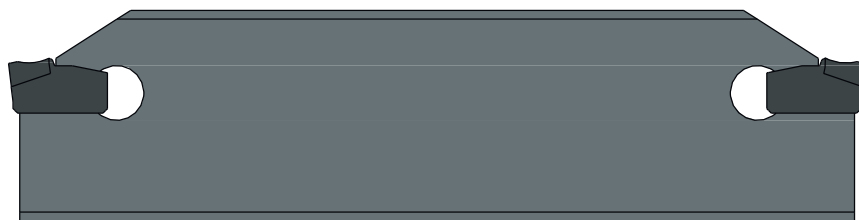
ABMESSUNG <i>Dimension</i>				SCHNITTDATEN <i>Cutting Data</i>			ISO BEZEICHNUNG <i>ISO Code</i>	EIN/ABSTECHPLATTE <i>Inserts</i>
W	b	Rε	Ø	fn (mm/g)	Min	Max		
2,2	1,8	0,16	8	0,06	0,04	0,11	TCMX2L8	
3,1	2,6	0,20	8	0,07	0,05	0,12	TCMX3L8	
4,1	3,5	0,25	8	0,10	0,08	0,12	TCMX4L8	
5,1	4,5	0,28	8	0,13	0,10	0,18	TCMX5L8	
6,4	5,5	0,35	8	0,17	0,12	0,20	TCMX6L8	

TBC



BEZEICHNUNG Code	A	W	H	B	L	Inserto Insert
TBC2 26	26	2	21,4	1,6	110	TCMX-2...
TBC3 26	26	3	21,4	2,4	110	TCMX-3...
TBC4 26	26	4	21,4	3,2	110	TCMX-4...
TBC3 32	32	3	25	2,4	150	TCMX-3...
TBC4 32	32	4	25	3,2	150	TCMX-4...
TBC5 32	32	5	25	4	150	TCMX-5...
TBC6 32	32	6	25	5,2	150	TCMX-6...

BESTELLBEISPIEL: TBC2 + 26 › Ordering example: TBC2 + 26 › TBC= TALICARB EIN/ABSTECHPLATTE/Talcarb Cutting Blade



SCHLUESSEL Wrench	BEZEICHNUNG Code
TCIT 001	TBC2 26
TCIT 001	TBC3 26
TCIT 001	TBC4 26
TCIT 001	TBC3 32
TCIT 001	TBC4 32
TCIT 001	TBC5 32
TCIT 001	TBC6 32



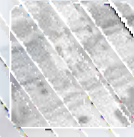
FRAESEN

Milling

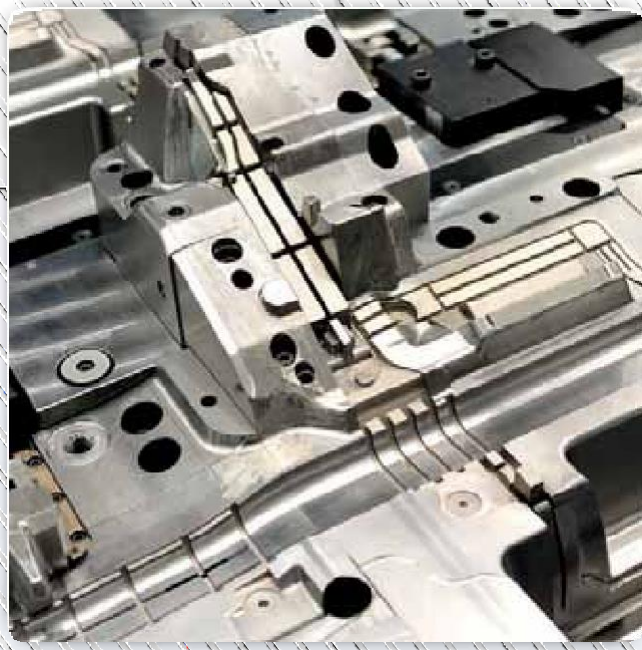


ANWENDUNGSBEREICHE

Fields of Competence



FORMWERKZEUG *Die-Mold*



FRAESEN

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WENDESCHNEIDPLATTEN BEZEICHNUNGS SYSTEM

Insert Designation System

S¹

E²

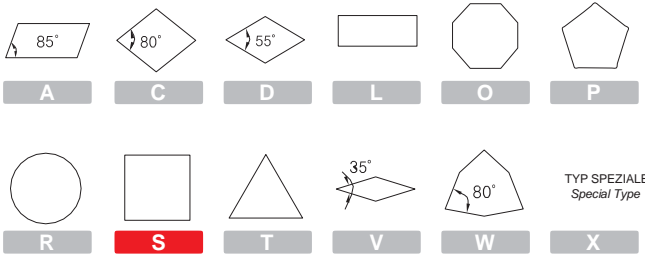
H³

T⁴

13⁵

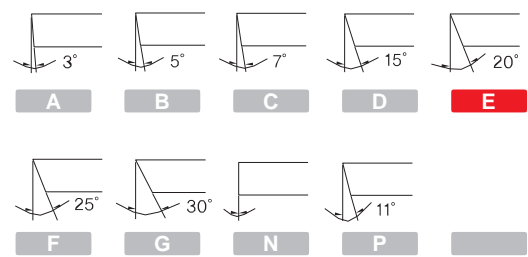
1 WENDESCHNEIDPLATTEN FORM › Insert Shape

S **E** **H** **T** 13 T3 $\frac{AG}{08}$ **F** **N** - **LN**



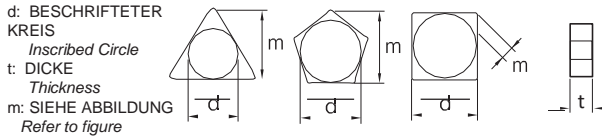
2 FREIWINKEL › Relief Angle

S **E** **H** **T** 13 T3 $\frac{AG}{08}$ **F** **N** - **LN**



3 TOLERANZ › Tolerance

S **E** **H** **T** 13 T3 $\frac{AG}{08}$ **F** **N** - **LN**



KLASSE › Class	d	m	t
A	± 0.025	± 0.005	± 0.025
C	± 0.025	± 0.013	± 0.025
H	± 0.013	± 0.013	± 0.025
E	± 0.025	± 0.025	± 0.025
G	± 0.025	± 0.025	± 0.13
J*	± 0.05 - ± 0.15	± 0.005	± 0.025
K*	± 0.05 - ± 0.15	± 0.013	± 0.025
L*	± 0.05 - ± 0.15	± 0.025	± 0.025
M*	± 0.05 - ± 0.15	± 0.08 - ± 0.20	± 0.13
N*	± 0.05 - ± 0.15	± 0.08 - ± 0.18	± 0.025
U*	± 0.08 - ± 0.25	± 0.13 - ± 0.38	± 0.13

*DIE SEITEN BASIEREN AUF UNGESCHLIFFENEM EINSATZ › Sides are based on unground insert

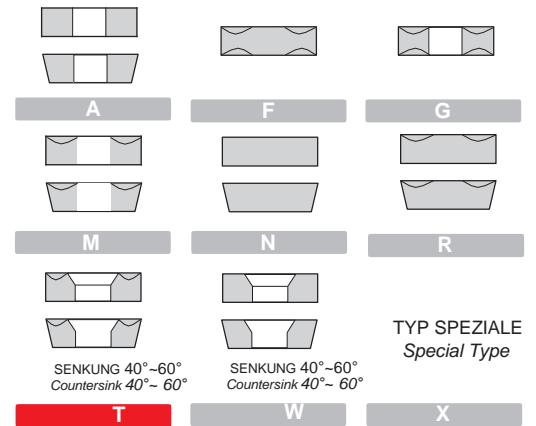
TOLERANZ AN C,E,H,M,O,P,R,S,T,W WENDESCHNEIDPLATTEN FORM

Tolerance on C,E,H,M,O,P,R,S,T,W Insert Shape

d	(d) TOLERANZ › Tolerance		(m) TOLERANZ › Tolerance		
	J,K,L,M,N	U	M,N	U	U
6.350	± 0.05	± 0.08	± 0.08	± 0.13	± 0.13
9.525	± 0.05	± 0.08	± 0.08	± 0.13	± 0.13
12.700	± 0.08	± 0.13	± 0.13	± 0.20	± 0.20
15.875	± 0.10	± 0.18	± 0.15	± 0.27	± 0.27
19.050	± 0.10	± 0.18	± 0.15	± 0.27	± 0.27
25.400	± 0.13	± 0.25	± 0.18	± 0.38	± 0.38

4 FORM UND KLEMMUNG › Form and Clamping

S **E** **H** **T** 13 T3 $\frac{AG}{08}$ **F** **N** - **LN**



5 SCHNEIDKANTENLAENGE DES EINGESCHRIEBENEN KREISES

Cutting Edge Length on Inscribed Circle

S **E** **H** **T** 13 T3 $\frac{AG}{08}$ **F** **N** - **LN**

Form	06	09	11	16	22	27	33	44
△								
○	03	05	06	09	12	15	19	25
55°	04	06	07	11	15	19	23	31
80°	03	05	06	09	12	16	19	25

WENDESCHNEIDPLATTEN BEZEICHNUNGS SYSTEM

Insert Designation System

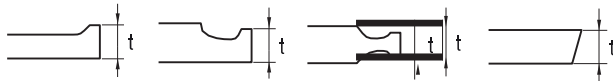
T3⁶

AG(08)⁷

F⁸

N⁹

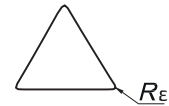
6 HOEHE DER SCHNEIDKANTE › Height of Cutting Edge
S E H T 13 T3 AG 08 F N - LN



SIMBOLO › Symbol METRICO › Metric	SPESSORE › Thickness mm
01	1.59
T0	1.79
T1	1.98
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52
11	11.11
12	12.70

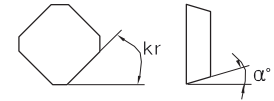
7 WENDESCHNEIDPLATTEN KONFIGURATION › Insert Configuration
S E H T 13 T3 AG F N - LN

ECKENRADIUS
Corner Radius



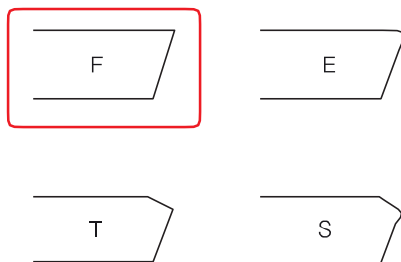
SYMBOL › Symbol	mm	SYMBOL › Symbol	mm
00	0.0	12	1.2
02	0.2	15	1.5
04	0.4	16	1.6
05	0.5	24	2.4
08	0.8	32	3.2
10	1.0	40	4.0

WENDESCHNEIDPLATTEN KONFIGURATION
Insert Configurations

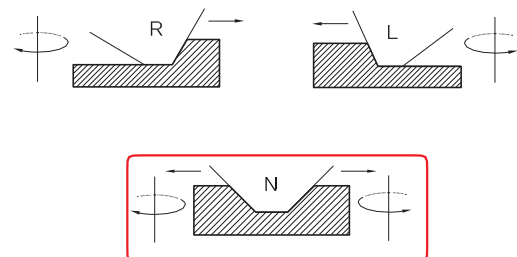


WENDESCHNEIDPLATTEN WINKEL Lead Angle kr	WISCHER RAND ABSTAND Wiper Edge Clearance	
A-45°	A-3°	F-25°
D-60°	B-5°	G-30°
E-75°	C-7°	N-0°
F-85°	D-15°	P-11°
P-90°	E-20°	
Z- SPEZIALE › Special		

8 KANTENAUSFUEHRUNG › Edge Preparation
S E H T 13 T3 AG F N - LN



9 SCHNEIDRICHTUNG › Cutting Direction
S E H T 13 T3 AG 08 F N - LN



HARTMETALL QUALITAET BEZEICHNUNGS SYSTEM

Grade Designation System

T¹ **C**² **M**³ **7**⁴ **20**⁵

1 MARKE (T= TALICARB) › Brand (T= Talicarb)

2 WENDESCHNEIDPLATTEN MATERIAL (C= HARTMETALL) › Insert Material (C= Carbide)

3 MATERIALGRUPPEN › Materials Group

P STAHL › Steel

M ROST- UND SAEUREBESTAENDIGER STAHL › Stainless Steel

K GRAUGUSS › Cast Iron

N NE METALLE › Non Ferrous

S HITZEBESTAENDIGE LEGIERUNGEN › Heat Resistant Alloys

H GEHAERTETE WERKSTOFFE › Hardened Materials

U UNIVERSALBEARBEITUNG › Universal Machining

4 BESCHICHTUNGS TYP › Coating Type

0= UNBESCHICHTET › Uncoated

5= MT-CVD- Al_2O_3

6= PVD TiAlN

7= PVD AlTiN

8= DIAMANT › Diamond

5 ANWENDUNGSBEREICH › Application Range

HART › Hardest

5 FEINSCHLICHTEN › Fine Finishing

10 — SCHLICHTEN › Finishing

15 — MITTLERE BEARBEITUNG BIS SCHRUPPEN › Medium to Roughing

20 —

25 —

30 — SCHRUPPEN › Roughing

35 —

40 —

45 — SCHWERESSCHRUPPEN › Heavy Roughing

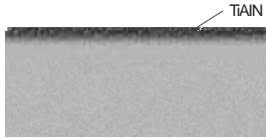
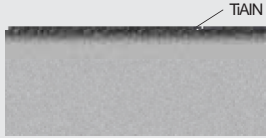

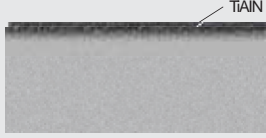

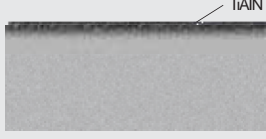
50 —

ZAH › Toughest

SORTENBESCHREIBUNG

Grade Description

PVD


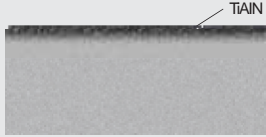

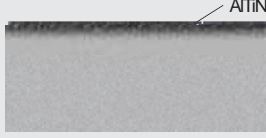
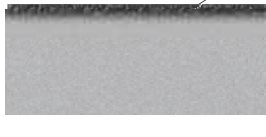
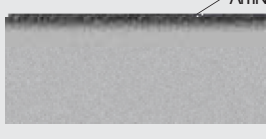
QUALITÄT › Grade	BESCHREIBUNG › Description	
<p>MGP605</p> <p>P01-P15 H10-H20</p>	<p>PVD BESCHICHTETES SUPERFEINKORNSORTE FUER LEICHTE SCHLICHTARBEITEN. BEI DER BEARBEITUNG VON STAHL UND GEHAETETEM STAHL. ERSTE WAHL FUER DIE BEARBEITUNG BEIM SCHLICHTEN VON WERKZEUGSTAHL.</p> <p><i>PVD coated sub micro-grain grade suitable for light finishing operations on steels & hardened steels. This is the first choice for finishing on mould steel.</i></p>	
<p>MGU610</p> <p>P05-P10 K05-K10</p>	<p>PVD TIALN BESCHICHTETES HARTMETALL MIT EINEM SEHR HARTEN FEINKORNSUBSTRAT FUER LEICHTES FRAESEN VON STAHL, GUSSEISEN UND EINIGEN GEHAERTETEN STAELHEN.</p> <p><i>TiAlN PVD coated carbide grade with a very hard micro grain substrate for light milling of steels, cast iron and some hardened steels.</i></p>	
<p>MGU620</p> <p>P10-P35 M10-M25 K10-K30 S10-S30</p>	<p>EINE NEUE, SEHR VERSCHLEISSFESTE FEINKORNSORTE FUER DIE BEARBEITUNG VON ROSTFREIEN STAELHEN UND TITANLEGIERUNGEN.</p> <p><i>An advanced TiAlN PVD coated grade over a tough wear resistance sub-micro substrate for general purpose machining of stainless steels & titanium alloys.</i></p>	
<p>MGU630</p> <p>P20-P40 M20-M30 K20-K40</p>	<p>FEINKORN HARTMATALLSORTE GUT FUER DIE ANWENDUNG BEI INSTABILEN BEDINGUNGEN. AUSGEZEICHNET BEI MITTLEREN SCHNITTGESCHWINDIGKEITEN.</p> <p><i>Micro-grain carbide grade suitable for applications with instability conditions. Excellent solution for medium cutting speed applications.</i></p>	
<p>MGU640</p> <p>P30-P50 M30-M50 K10-K30 S30-S40</p>	<p>HARTMETALLSORTE MIT SEHR DICKER TIALN BESCHICHTUNG FUER SCHWERESCHRUPPEN. KANN FUER ALLE MATERIALIEN, AUCH BEI STARKEN VIBRATIONEN ENGESETZT WERDEN.</p> <p><i>TiAlN PVD large thickness coated grade for heavy roughing applications. Can work on all type of materials and endures a lot of vibration.</i></p>	
<p>MGK610</p> <p>K10-K30</p>	<p>PVD TIALN BESCHICHTETESORTE MIT HARTEM SUBSTRAT UND SEHR GLATTER OBERFLAECHE IDEAL FUER DIE BEARBEITUNG VON GUSSEISEN MIT HOHER SCHNITTGESCHWINDIGKEIT.</p> <p><i>TiAlN PVD coated carbide grade with a hard substrate and very smooth surface. Ideal for high speed cutting of cast irons.</i></p>	

FRAESEN › Milling

SORTENBESCHREIBUNG



Grade Description

PVD

QUALITÄT › Grade	BESCHREIBUNG › Description	
<p>MGP625</p> <p>P20-P30</p>	<p>PVD BESCHICHTETES HARTMETALL FUER LEICHTE BIS SCHWERE FRAESARBEITEN (KUEHLMITTEL ODER TROCKEN) IN STAHL BEI ERHOECHTER TEMPERATUR (Z.B. BEI GEHAERTETEN ODER VORGEHAERTETEN STAHL). AUSGEZEICHNETE QUALITAET UND HOHE PRODUKTAEVITAET BEIM FRAESEN VON WERKZEUGSTAHL (FORMENBAU).</p> <p><i>PVD coated carbide grade for light to heavy milling (wet and dry) in steel at elevates temperature (e.g. in hardened steels or prehardened steels). Excellent grade to milling of mould steels at high productivity.</i></p>	
<p>MGP635</p> <p>P30-P40</p>	<p>PVD BESCHICHTETES HARTMETALL, ZAEHES SUBSTRAT, FUER ANSPRUCHSVOLLES FRAESEN VON STAHL. AUSGEZEICHNET BEI INSTABILEN BEDINGUNGEN UND KANN NASS ODER TROCKEN ANGEWENDET WERDEN.</p> <p><i>PVD coated carbide four toughness demanding operations in milling of steels. Excellent solutions for instable applications and can be apply in wet or dry.</i></p>	
<p>MGK625</p> <p>K10-K30</p>	<p>PVD TIALN BESCHICHTETES HARTMETALL FUER DIE MITTLERE BEARBEITUNG BIS SCHRUPPEN VON GRAUGUSS UND STRITZGUSSTEILEN. HERVORRAGENDE STANDZEIT BEI NIEDRIGEN BIS MITTLEREN SCHNITTGESCHWINDIGKEITEN.</p> <p><i>TiAlN PVD coated carbide grade designed for medium to roughing of grey and nodular cast irons with excellent tool life at low to medium cutting speeds.</i></p>	
<p>MGP710</p> <p>P05-P10 K05-K10</p>	<p>HOCHVERSCHLEISSFESTE PVD BESCHICHTETE SORTEN FUER DIE LEICHTE BEARBEITUNG UND HALBSCHLICHTEN VON STAHL UND GEHAERTETEM STAHL.</p> <p><i>A highly wear-resistant AlTiN PVD coated grade primarily for light machining and semi-finishing in steels and hardened steels.</i></p>	
<p>MGM720</p> <p>P10-P35 M10-M25 K10-K30 S10-S30</p>	<p>VORTEILHAFTES PVD ALTiN BESCHICHTETES HARTMETALL, SEHR VERSCHLEISSFEST DURCH DAS SUBSTRAT FEINSTKORN. SEHR GUT GEEIGNET FUER DIE BEARBEITUNG VON STAHL UND GRUSSEISEN MIT HOHEN SCHNITTGESCHWINDIGKEITEN.</p> <p><i>Advanced AlTiN PVD coated carbide over a tough wear resistance submicro subtrate for general puporse machining of steels and cast irons at high cutting speeds.</i></p>	
<p>MGM730</p> <p>P20-P40 M20-M30 K20-K40 S25-S35</p>	<p>SPEZIELL ENTWICKELTE HARTMETALLSORTE PVD ALTiN BESCHICHTET FUER DIE BEARBEITUNG VON ROSTFREIEM UND HOCHLEGIERTEM STAHL. SEHR HOHE VERSCHLEISSFESTIGKEIT UND BESTAENDIG GEGEN BRUCH.</p> <p><i>AlTiN PVD coated carbide developed to provide better performance in general machining of stainless- steels and high-temp alloys. Resistant to breakage and offer improved wear resistance and increased strength.</i></p>	

FRAESEN › Milling

SORTENBESCHREIBUNG / Grade Description

QUALITÄT › Grade	BESCHREIBUNG › Description	
MGU740	<p>SEHR HARTES, UNIVERSELL EINSETZBARES ALTIN PVD BESCHICHTETES HARTMETALL FUER</p> <p>MITTLERE BIS SCHWERE FRAESANWENDUNGEN UND UNTER INSTABILEN BEDINGUNGEN. EMPFOHLEN FUER HOCHLEGIERUNGEN, ALLE STAEHLE UND GUSSEISEN. KANN NASS ODER TROCKEN EINGESETZT WERDEN.</p> <p><i>Very tough, general-purpose AlTiN PVD-coated carbide grade for medium to heavy milling applications and on instable conditions. Recommended for high-temp alloys, all steels and cast irons. Can be used either wet or dry.</i></p>	<p style="text-align: center;">PVD</p> <p style="text-align: right;">AlTiN</p> 
	<h3>UNBESCHICHTET › Uncoated</h3>	
MGN010 K01-K10 N01-N20	<p>UNBESCHICHTET FEINSTKORNSORTE MIT HOHER ABRIEBFESTIGKEIT UND ZAEHIGKEIT. GEEIGNET FUER DAS SCHLICHTEN BIS ZUM SCHRUPPEN VON HRSA, TITANLEGIERUNGEN, GUSSEISEN UND ALUMINIUMLEGIERUNGEN.</p> <p><i>Uncoated carbide micro-grain grade combining a good abrasive wear resistance and toughness. Suitable for rough to finish operations of HRSA, Titanium alloys, cast irons and Aluminium alloys.</i></p>	

ANWENDUNGSBEREICHE

Fields of Competence



ALLGEMEINER MASCHINENBAU › *General Engineering*



MEGACUT

ANWENDUNG DER HARTMETALLSORTEN

Grade Application

PVD

QUALITÄT › Grade	ANWENDUNG › Application	ISO
MGP605	STAHL / GEHAERTETE STAEHLE Steel / Hard materials	P (01-05), H (10-20)
MGU610	STAHL / GUSSEISEN Steel / Cast Iron	P (05-10), K (05-10)
MGU620	STAHL / ROSTFREIER STAHL / GUSSEISEN / SUPERLEGIE- RUNGEN Steel / Stainless Steel / Cast Iron / Super Alloy	P(10-35), M(10-25), K(10-30), S(10-30)
MGU630	STAHL / ROSTFREIER STAHL / GUSSEISEN Steel / Stainless / Cast Iron	P (20-40), M (20-30), K (20-40)
MGU640	STAHL / ROSTFREIER STAHL / GUSSEISEN / HRSA Steel / Stainless / Cast Iron / Hrsa	P(30-50), M(30-50), K(30-40), S(30-40)
MGK610	GUSSEISEN - Cast Iron	K (05-15)
MGP625	STAHL - Steel	P (20-30)
MGP635	STAHL - Steel	P (30-40)
MGK625	GUSSEISEN - Cast Iron	K (10-30)
MGP710	STAHL / GUSSEISEN Steel / Cast Iron	P(05-10), K(05-10)
MGM720	STAHL / ROSTFREIER STAHL / GUSSEISEN / HRSA Steel / Stainless / Cast Iron / Hrsa	P(10-35), M(10-25), K(10-30), S(10-30)
MGM730	STAHL / ROSTFREIER STAHL / GUSSEISEN / HRSA Steel / Stainless / Cast Iron / Hrsa	P(20-40), M(20-30), K(20-40), S(25-35)
MGU740	STAHL / ROSTFREIER STAHL / GUSSEISEN / HRSA Steel / Stainless / Cast Iron / Hrsa	P(30-50), M(30-50), K(30-40), S(30-40)

UNBESCHICHTET › Uncoated

QUALITÄT › Grade	ANWENDUNG › Application	ISO
MGN010	ALUMINIUM / NE-METALLE Aluminium / Non Ferrous	N (01-20)

FRAESKOERPER BEZEICHNUNG

Milling Tools Designation

080¹ A² 07³ R⁴ 45⁵ 27⁶ ■ ■ SN1206⁷

1 WERKZEUG DURCHMESSER D_1 › *Diameter Tool D_1*

2 KUPPLUNGSTYP › *Couplin Type* _____

3 ANZAHL DER SCHNEIDEN › *Number of Teeth*

4 SCHNEIDRICHTUNG › *Cutter Rotation* _____

R = RECHTS (*Right*)

L = LINKS (*Left*)

5 EINSATZ WINKEL › *Lead Angle*

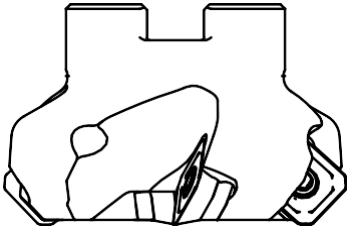
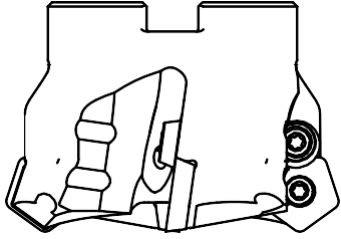
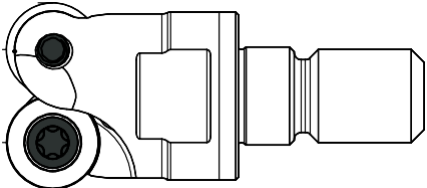
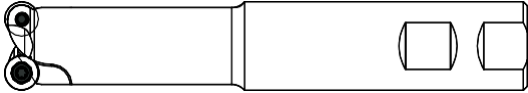
6 KUPPLUNGSDURCHMESSER d_2 › *Coupling Diameter d_2*

■ GESAMTLAENGE (NUR FÜR ZYLINDERSCHAFT) › *Total Length (only Cylindrical Shank)*

7 WENDESCHNEIDPLATTEN TYP › *Insert Type*

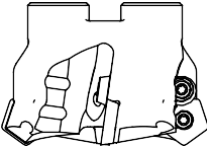

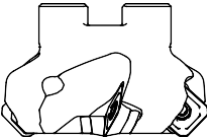
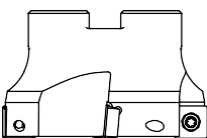
KUPPLUNGSTYP

Coupling Types

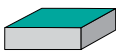
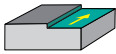
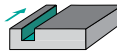
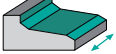
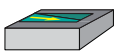
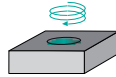
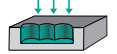
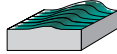




KUPPLUNGSTYP <i>Symbol</i>	WERKZEUG- AUFNAHME <i>Coupling Type</i>	WENDESCHNEIDPLATTEN MONTAGE <i>Insert Mounting</i>
A		 <p>SCHRAUBE <i>Screw</i></p>
	AUFNAHMEBOH- RUNG MONTAGE <i>Arbor mounting</i>	 <p>WENDESCHNEIDPLATTEN SCHRAUBE UND UNTERLEGSSCHEIBE, KLEMMSCHRAUBE ODER KLEMMEN <i>Insert Screw and Washer, Screw Clamping or Clamp</i></p>
R	AUSSENANZUGSGEWIN- DE <i>Threaded coupling</i>	 <p>JEDER TYP <i>Any Type</i></p>
W	WELDON SCHAFT <i>Weldon shank</i>	 <p>JEDER TYP <i>Any Type</i></p>

ANWENDUNG DER FRAESER

Application Selection Guide

SEITE Page	BEZEICHNUNG Designation		WENDE- SCHNEI D- PLATTE Insert	Kr	BEREICH Range Ø	a _p max (mm)	EIGENSCHAFTEN Features
284		36° FUENFECK POSITIV <i>36° Penta Positive</i>	PD... 1204	36°	66 - 160	5,5	<ul style="list-style-type: none"> • GROSSER SPANWINKEL UND NIEDRIGE SCHNITTKRAEFTE • INNERE KUEHLMITTELZUFUHR • <i>High rake angle and low cutting forces</i> • <i>Internal coolant supply</i>
		45° QUADRAT NEGATIV <i>45° Square Negative</i>	SN... 1206	45°	50 - 100	6	<ul style="list-style-type: none"> • HOHE VORSCHUEBE & KOSTENEFFIZIENZ • GROSSE SPANKAMMERN SORGEN FUER EINE GUTE SPANABFUHR • NEGATIVE DOPPELSEITIGE WENDESCHNEIDPLATTE • INNERE KUEHLMITTELZUFUHR • <i>High feed rates & cost/efficiency</i> • <i>Large chipbreaker ensures the efficient chip evacuation</i> • <i>Negative insert double size</i> • <i>Internal coolant supply</i>
288		45° QUADRAT POSITIV <i>45° Square Positive</i>	SE... 13T3	45°	50 - 100	6	<ul style="list-style-type: none"> • NIEDRIGE SCHNITTKRAEFTE • GEEIGNET FUER DIE HOCHGESCHWINDIGKEITSBEARBEITUNG • EXZELENTE SPANABFUHR • HOHE STEIFIGKEIT DURCH DIE DICKE WENDESCHNEIDPLATTE • <i>Low cutting forces</i> • <i>Suitable for high-speed machining</i> • <i>Excellent chip flow.</i> • <i>High rigidity due to carbide shim</i>
290		90° QUADRAT POSITIV <i>90° Square Positive</i>	SPMT 120408	90°	40 - 80	11	<ul style="list-style-type: none"> • VIER SCHNEIDEN PRO WENDESCHNEIDPLATTE • AUSGEZEICHNETE OBERFLAECHENQUALITAETE • NIEDRIGER KRAFTAUFWAND • <i>Four cutting edges per insert</i> • <i>Excellent surface finishes</i> • <i>Low power requirements</i>


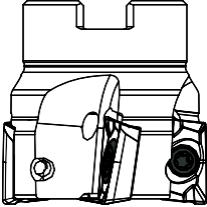

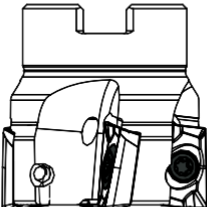
FRAESEN › Milling

								MATERIALGRUPPEN Materials Group
PLANFRAESEN <i>Face Milling</i>	SCHULTERFRAESEN <i>Shoulder Milling</i>	NUTENFRAESEN <i>Slotting</i>	SCHRAEGE SCHULTER & FASEN FRAESEN <i>Slanted Shoulder & Chamfer</i>	SCHRAEGEINTAUCHEN <i>Ramp Down</i>	SPIRALINTERPOLATION <i>Helical Interpolation</i>	TAUCHFRAESEN <i>Plunging</i>	PROFILFRAESEN <i>Profiling</i>	
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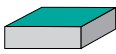
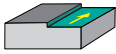
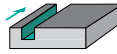
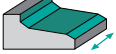
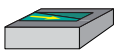
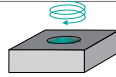
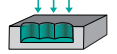
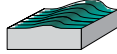
























FRAESEN › Milling

ANWENDUNG DER FRAESER

Application Selection Guide

SEITE Page	BEZEICHNUNG Designation	WEND E- SCHNEI D- PLATTE Insert	Kr	BEREICH Range Ø	a _p max (mm)	EIGENSCHAFTEN Features
292	 90° RECHTECKIG POSITIV 10 <i>90° rectangular Positive 10</i>	AP ... 100 3	90°	16 - 25	9	
292	 90° RECHTECKIG POSITIV 10 <i>90° rectangular Positive 10</i>	AP ... 100 3	90°	40 - 63	9	<ul style="list-style-type: none"> • DAS INNOVATIVE SCHNEIDKANTENPROFIL MIT DEM SPANBRECHERDESIGN SORGEN FUER EINEN EXAKTEN WINKEL VON 90°. • HOHE STANDZEIT DER OPTIMIERTEN WENDESCHNEIDPLATTEN. • DIE BESONDERE GEOMETRIE REDUZIERT DIE SCHNEIDKANTENBELASTUNG UND SORGT FUER EINE GUTE SPANABFUHR. • INNERE KUEHLMITTELZUFUHR. • <i>Innovative curve cutting edge and chip-breaker design ensures ideal 90 degree cutting and lower cutting resistance</i> • <i>Improved tool life insert with optimized on each application</i> • <i>The particular geometries reduce cutting load and improve the chip evacuation</i> • <i>Internal coolant supply</i>
296	 90° RECHTECKIG POSITIV 16 <i>90° rectangular Positive 16</i>	AP ... 160 4	90°	25 - 40	14,5	
296	 90° RECHTECKIG POSITIV 16 <i>90° rectangular Positive 16</i>	AP ... 1604	90°	40 - 80	14,5	

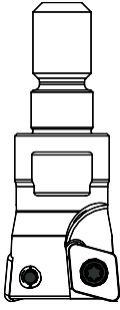
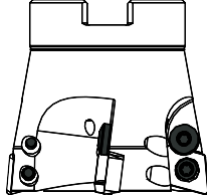
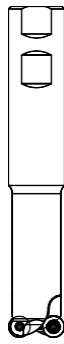
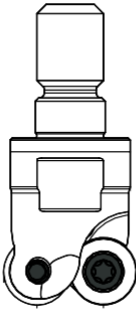
FRAESEN › Milling

								MATERIALGRUPPE N Materials Group
PLANFRAESEN <i>Face Milling</i>	SCHULTE R- FRAESEN <i>Shouldering</i>	NUTEN- FRAESE N <i>Slotting</i>	SCHRAEGE SCHULTER & FASEN FRAESEN <i>Slanted Shoulder & Chamfer</i>	SCHRAEG EINTAUCHE N <i>Ramp Down</i>	SPIRAL INTERPOLATI ON <i>Helical Interpolatio n</i>	TAUCH- FRAESE N <i>Plunging</i>	PROFIL- FRAESE N <i>Profiling</i>	<input checked="" type="checkbox"/>  <input checked="" type="checkbox"/>  <input checked="" type="checkbox"/>  <input checked="" type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/> 
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FRAESEN › Milling

ANWENDUNG DER FRAESER

Application Selection Guide

SEITE Page	BEZEICHNUNG Designation	WENDE- SCHNEI- D- PLATTE Insert	Kr	BEREICH Range Ø	a _p max (mm)	EIGENSCHAFTEN Features
300	 95° ROMBUS POSITIV 4-6-10 <i>95° Rhombic Positive 4-6-10</i>	XD... 040110 060210 10T310	95°	10 - 35	0,8-1	<ul style="list-style-type: none"> • KONZIPIERT ZUM SCHLICHTEN UND PROFILFRAESEN • GERINGE ENERGIEAUFNAHME • INNERE KUEHLMITTELZUFUHR • <i>Designed for Finishing and profile milling</i> • <i>Low energy consumption</i> • <i>Internal coolant supply</i>
300	 95° ROMBUS POSITIV 10 <i>95° Rhombic Positive 10</i>	XD... 10T310	95°	52-66	1	<ul style="list-style-type: none"> • KONZIPIERT ZUM SCHLICHTEN UND PROFILFRAESEN • GERINGE ENERGIEAUFNAHME • INNERE KUEHLMITTELZUFUHR • <i>Designed for Finishing and profile milling</i> • <i>Low energy consumption</i> • <i>Internal coolant supply</i>
302	 RUND POSITIV 10 <i>Round Positive 10</i>	RD... 1003	-	20	5	<ul style="list-style-type: none"> • GEEIGNET FUER DEN WERKZEUG UND FORMENBAU SOWIE FUER ALLGEMEINE ANWENDUNGEN • AUFNAHMEBOHRUNG, WELDONSCHAFT ODER ANZUGSGEWINDE • FUER EINE BREITE ANWENDUNG SIND VERSCHIEDENE WENDESCHNEIDPLATTEN VERFUEGBAR • INNERE KUEHLMITTELZUFUHR
302	 RUND POSITIV 10 <i>Round Positive 10</i>	RD... 1003	-	20-42	5	<ul style="list-style-type: none"> • <i>Dressed to the die and mould and general engineering markets, mainly</i> • <i>Arbor mill, Weldon and straight shank, and Screw-On body cutters</i> • <i>Multiple grades available; wide range of workpieces and applications</i> • <i>Internal coolant supply</i>

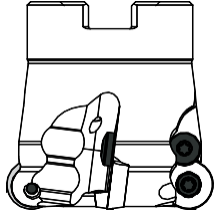
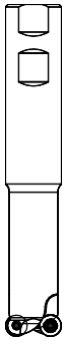
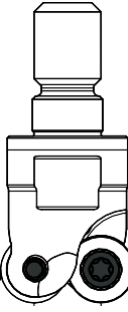
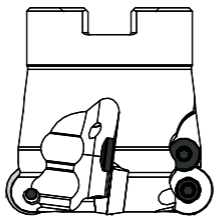
FRAESEN › Milling

								MATERIALGRUPPEN Materials Group
PLANFRAESEN Face Milling	SCHULTERFRAESEN Shouldering	NUTENFRAESEN Slotting	SCHRAEGE SCHULTER & FASEN FRAESEN Slanted Shoulder & Chamfer	SCHRAEGEINTAUCHEN Ramp Down	SPIRALINTERPOLATION Helical Interpolation	TAUCHFRAESEN Plunging	PROFILFRAESEN Profiling	
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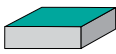
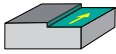
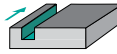
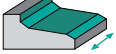
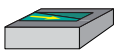
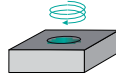
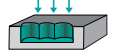
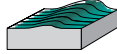
FRAESEN › Milling

ANWENDUNG DER FRAESER

Application Selection Guide

SEITE Page	BEZEICHNUNG Designation	WENDE- SCHNEI- D- PLATTE Insert	Kr	BEREICH Range Ø	a _p max (mm)	EIGENSCHAFTEN Features
302	 RUND POSITIV 10 Round Positive 10	RD ... 100 3	-	42-52	5	
304	 RUND POSITIV 12 Round Positive 12	RD ... 12T 3	-	25	6	<ul style="list-style-type: none"> • GEEGNET FÜR DEN WERKZEUG UND FORMENBAU SOWIE FÜR ALLGEMEINE ANWENDUNGEN • AUFNAHMEBOHRUNG, WELDONSCHAFT ODER ANZUGSGEWINDE • FÜR EINE BREITE ANWENDUNG SIND VERSCHIEDENE WENDESCHNEIDPLATTEN VERFÜGBAR • INNERE KÜHLMITTELZUFÜHR
304	 RUND POSITIV 12 Round Positive 12	RD ... 12T 3	-	24-42	6	<ul style="list-style-type: none"> • Dressed to the die and mould and general engineering markets, mainly • Arbor mill, Weldon and straight shank, and Screw-On body cutters • Multiple grades available; wide range of workpieces and applications • Internal coolant supply
304	 RUND POSITIV 12 Round Positive 12	RD ... 12T3	-	52-80	6	

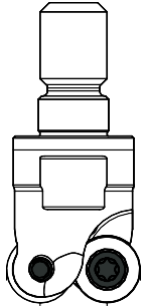
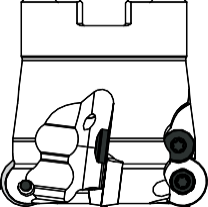
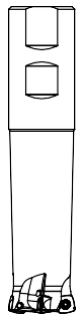
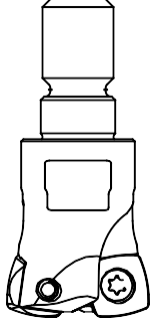
FRAESEN › Milling

								MATERIALGRUPPEN Materials Group
PLANFRAESEN <i>Face Milling</i>	SCHULTERFRAESEN <i>Shoulder Milling</i>	NUTENFRAESEN <i>Slotting</i>	SCHRAEGE SCHULTER & FASEN FRAESEN <i>Slanted Shoulder & Chamfer</i>	SCHRAEGEINTAUCHEN <i>Ramp Down</i>	SPIRALINTERPOLATION <i>Helical Interpolation</i>	TAUCHFRAESEN <i>Plunging</i>	PROFILFRAESEN <i>Profiling</i>	
•	-	-	-	•	•	-	•	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
•	-	-	-	•	•	-	•	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
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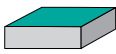
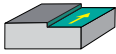
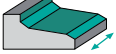
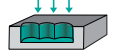
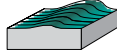
FRAESEN › Milling

ANWENDUNG DER FRAESER

Application Selection Guide

SEITE Page	BEZEICHNUNG Designation	WENDE- SCHNEI- D- PLATTE Insert	Kr	BEREICH Range Ø	a _p max (mm)	EIGENSCHAFTEN Features
304	 RUND POSITIV 16 Round Positive 16	RD... 1604	-	20-42	8	<ul style="list-style-type: none"> • GEEIGNET FUER DEN WERKZEUG UND FORMENBAU SOWIE FUER ALLGEMEINE ANWENDUNGEN • AUFNAHMEBOHRUNG, WELDONSCHAFT ODER ANZUGSGEWINDE • FUER EINE BREITE ANWENDUNG SIND VERSCHIEDENE WENDESCHNEIDPLATTEN VERFUEGBAR • INNERE KUEHLMITTELZUFUHR • dressed to the die and mould and general engineering markets, mainly Arbor mill, Weldon and straight shank, and Screw-On body cutters • Multiple grades available; wide range of workpieces and applications • Internal coolant supply
	 RUND POSITIV 16 Round Positive 16	RD... 1604	-	52-80	8	
312	 HOHER VORSCHUB SP..08 High Feed SP..08	SP... 08T308	10°	20-32	1,2	<ul style="list-style-type: none"> • HOHER VORSCHUB MIT GERINGER SCHNITTBELASTUNG • INNERE KUEHLMITTELZUFUHR • High feed cutting with low cutting load • Internal coolant supply
312	 HOHER VORSCHUB SP..08 High Feed SP..08	SP... 08T308	10°	20-42	1,2	

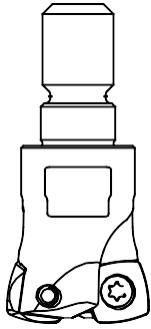
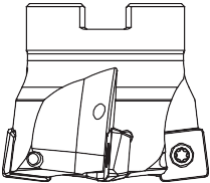
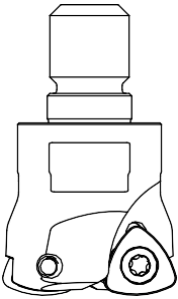
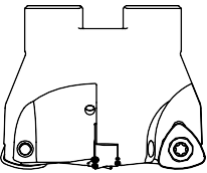
FRAESEN › Milling

								MATERIALGRUPPEN Materials Group
PLANFRAESEN Face Milling	SCHULTERFRAESEN Shoulder Milling	NUTENFRAESEN Slotting	SCHRAEGE SCHULTER & FASEN FRAESEN Slanted Shoulder & Chamfer	SCHRAEGEINTAUCHEN Ramp Down	SPIRALINTERPOLATION Helical Interpolation	TAUCHFRAESEN Plunging	PROFILFRAESEN Profiling	
•	-	•	-	•	•	-	•	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
•	-	•	-	•	•	-	•	<input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
•	-	-	-	•	•	•	-	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
•	-	-	-	•	•	•	-	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

FRAESEN › Milling

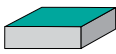
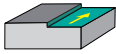
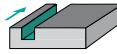
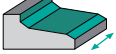
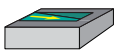
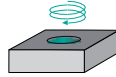
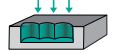
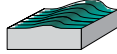




ANWENDUNG DER FRAESER

Application Selection Guide

SEITE Page	BEZEICHNUNG Designation	WENDE- SCHNEI- D- PLATTE Insert	Kr	BEREICH Range Ø	a _p max (mm)	EIGENSCHAFTEN Features
314	 HOHER VORSCHUB SP..13 <i>High Feed SP..13</i>	SP... 1305	10°	32-42	2	<ul style="list-style-type: none"> • HOHER VORSCHUB MIT GERINGER SCHNITTBELASTUNG • INNERE KUEHLMITTELZUFUHR • High feed rate with low cutting forces <ul style="list-style-type: none"> • Internal coolant supply
	 HOHER VORSCHUB SP..13 <i>High Feed SP..13</i>	SP... 1305	10°	50-80	2	
316	 HOHER VORSCHUB WD..12 <i>High Feed WN..12</i>	WN... 1207	7°	35	1,8	<ul style="list-style-type: none"> • HOHER VORSCHUB MIT GERINGER SCHNITTBELASTUNG • AUSGEZEICHNET BEI GROSSEM UE- BERHANG • INNERE KUEHLMITTELZUFUHR • High feed rate with low cutting forces <ul style="list-style-type: none"> • Excellent in high overhang • Internal coolant supply
316	 HOHER VORSCHUB WN.. 12 <i>High Feed WN..12</i>	WN... 1207	7°	52-80	1,8	

FRAESEN › Milling

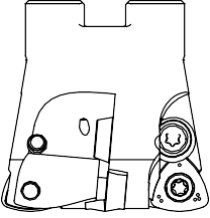

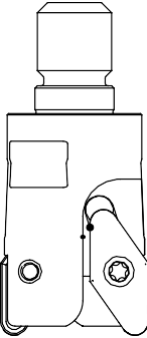
FRAESEN › Milling

								MATERIALGRUPP EN Materials Group
PLANFRAESE N <i>Face Milling</i>	SCHULTER- FRAESE N <i>Shouldering</i>	NUTEN- FRAESEN <i>Slotting</i>	SCHRAEGE SCHULTER & FASEN FRAESEN <i>Slanted Shoulder & Chamfer</i>	SCHRAEG EINTAUCHEN <i>Ramp Down</i>	SPIRAL INTERPOLATION <i>Helical Interpolation</i>	TAUCH- FRAESEN <i>Plunging</i>	PROFIL- FRAESEN <i>Profiling</i>	
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.	-	-	-	
.	-	-	-	
.	-	-	-	

FRAESEN › Milling

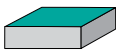
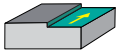
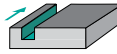
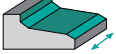
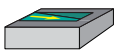
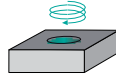
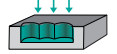
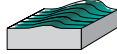




ANWENDUNG DER FRAESER

Application Selection Guide

SEITE Page	BEZEICHNUNG Designation	WENDE- SCHNEI- D- PLATTE Insert	Kr	BEREICH Range Ø	a _p max (mm)	EIGENSCHAFTEN Features
318	 <p>HOHER VORSCHUB WD..12 <i>High Feed WD..12</i></p>	WD... 1204	7°	52-80	1,5	<ul style="list-style-type: none"> • HOHER VORSCHUB MIT GERINGER SCHNITTBELASTUNG • AUSGEZEICHNET BEI GROSSEM UEBERHANG • INNERE KUEHLMITTELZUFUHR • <i>High feed rate with low cutting forces</i> <ul style="list-style-type: none"> • <i>Excellent in high overhang</i> • <i>Internal coolant supply</i>
	 <p>KOPIERFRAES ER 3000 <i>Copy Mill 3000</i></p>	WD... 1204	-	52-80	1,8	<ul style="list-style-type: none"> • DER GROSSE DURCHMESSERBEREICH VON 8-32 MM ERMOEGLICHT EINEN VOLLEN ANWENDUNGSBEREICH • VIELE MATERIALIEN KOENNEN BEARBEITET WERDEN, VON GEHAERTETEM STAHL BIS ALUMINIUM • GROSSES HALTERANGEBOT, ZYLINDERSCHAFT BIS ZUM KONISCHEN SCHAFT • <i>Wide diameter range, from 8–32mm, enables it to be applied in a wide range of machining conditions</i> • <i>Many workpiece materials are possible, from hardened steel to aluminium</i> • <i>Large holder style offering: cylindrical, and tapered steel</i>
320	 <p>ALUMINIUM - FRAESER <i>Alu Cutter</i></p>	VC... 2205	90°	32	15	<ul style="list-style-type: none"> • ALU-FAESER MIT EXZELLENTER SPANABFUHR • INNERE KUEHLMITTELZUFUHR <ul style="list-style-type: none"> • <i>Excellent chip flow</i> • <i>Internal coolant supply</i>

FRAESEN › Milling

FRAESEN › Milling

								MATERIALGRUPPEN Materials Group
FLANFRAESEN <i>Face Milling</i>	SCHULTER - FRAESEN <i>Shoulder Milling</i>	NUTEN-FRAESEN <i>Slotting</i>	SCHRAEGE SCHULTER&FASEN FRAESEN <i>Serrated Shoulder & Chamfer</i>	SCHRAEG EINTAUCHEN <i>Ramp Down</i>	SPIRAL INTERPOLATION <i>Helical Interpolation</i>	TAUCH-FRAESEN <i>Plunging</i>	PROFIL-FRAESEN <i>Profiling</i>	
•	-	-	-	•	•	•	•	
-	-	-	-	-	-	-	•	
•	•	•	-	•	•	-	•	

FRAESEN › Milling

36° FUENFECK POSITIV

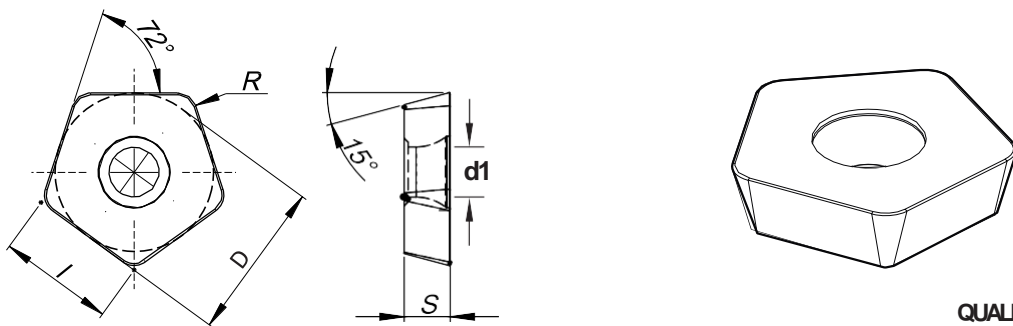
36° Penta Positive



	BEZEICHNUNG Code	∅ D ₁ (mm)	∅ D ₂ (mm)	∅ d ₂ (mm)	∅ d ₃ (mm)	L (mm)		a _p (mm)		Kg
03	066C05R3627PD1204	66	47,5	27	48	55	■	5,5	5	0,520
	080C06R3627PD1204	80	61,5	27	60	55	■	5,5	6	0,940
	100C07R3632PD1204	100	81,5	32	70	55	■	5,5	7	1,400
	125C08R3640PD1204	125	106,5	40	90	55	■	5,5	8	2,420
	160C09R3640PD1204	160	141,5	40	120	55	■	5,5	9	4,590

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

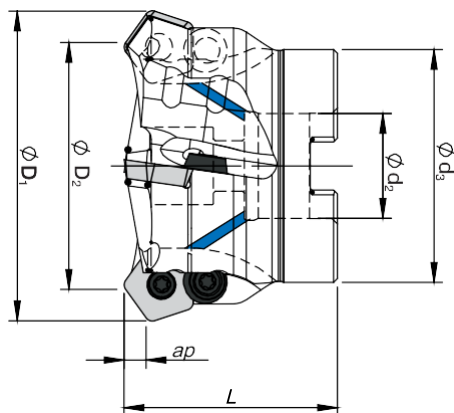
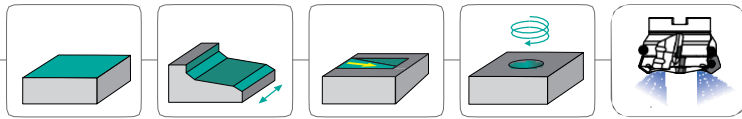
PD..1204 WENDESCHNEIDPLATTEN › Insert



QUALITÄT › Grades

WENDESCHNEID PLAT- TEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F	QUALITÄT › Grades		
							P	K	
							MGU620	MGU635	MGU620
PDMW120420T	16,52	4,76	12	2,00	5,2	-	-	■	-
PDHW120420T	16,52	4,76	12	2,00	5,2	-	■	■	■

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



03 AUFNAHMEBOHRUNG MONTAGE › Arbor Mounting

WENDESCHNEID-PLATTE Insert	SCHRAUBE WENDE-SCHNEIDPLATTE Insert Screw	SCHLUESSE L Key (Torx)	Nm	UNTERLEG-SCHEIBE Washer	SCHRAUBE UNTERLEGS-CHEIBE Washer Screw	BEZEICHNUNG Code	
PD... 1204	TVTF 007	TCTF 005	5	TRF 001	TVTF 007	066C05R3627PD1204	03
PD... 1204	TVTF 007	TCTF 005	5	TRF 001	TVTF 007	080C06R3627PD1204	
PD... 1204	TVTF 007	TCTF 007	5	TRF 001	TVTF 007	100C07R3632PD1204	
PD... 1204	TVTF 007	TCTF 007	5	TRF 001	TVTF 007	125C08R3640PD1204	
PD... 1204	TVTF 007	TCTF 007	5	TRF 001	TVTF 007	160C09R3640PD1204	

SCHNITTDATEN › Cutting Data

ISO	MATERIAL Material	MGU620	MGP635	VORSCHUB fz (mm/d) Feed fz (mm/t)
		Vc (m/min)		
P	< 800 N/mm ²	150-230	150-180	0,25-0,50
	700-1000 N/mm ²	140-220	140-170	0,25-0,50
	1000-1300 N/mm ²	130-180	120-150	0,25-0,40
K	GRAUGUSS › Grey Cast Iron	130-230	-	0,25-0,60
	GRAUGUSS MIT KUGELGRAPHIT › Nodular Cast Iron	80-190	-	0,25-0,60

4545° QUADRAT NEGATIV

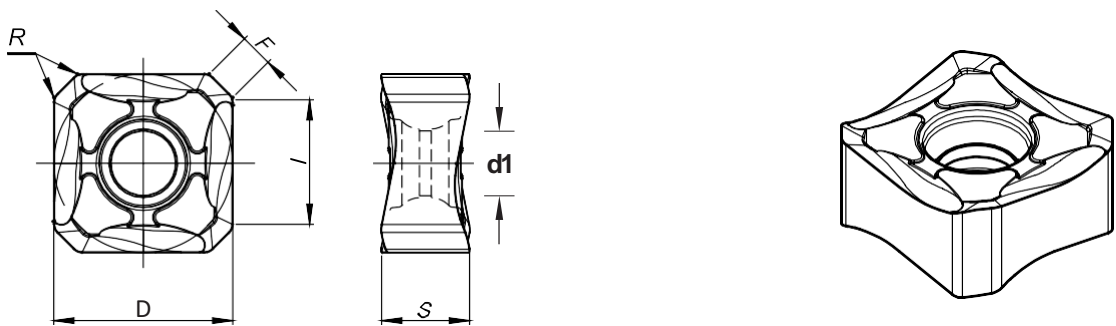
45° Square Negative



	BEZEICHNUNG Code	l (mm)	∅ D ₂ (mm)	∅ d ₂ (mm)	d ₃ (mm)	· (mm)		b (mm)		Kg
03	050A04R4522SN1206	50	63	22	48	40		6	4	0,424
	063A06R4522SN1206	63	76	22	52	40		6	6	0,575
	080A07R4527SN1206	80	93	27	60	50		6	7	0,966
	100A08R4532SN1206	100	113	32	80	50		6	8	1,667

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

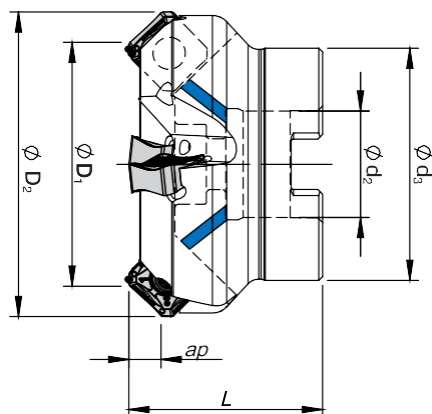
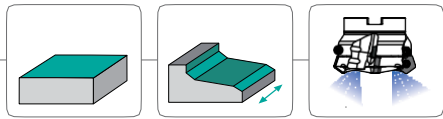
SN..1206 WENDESCHNEIDPLATTEN › Insert



QUALITÄT › Grades

WENDESCHNEID PLAT- TEN BEZEICHNUNG Insert Code	P						M			K			S				
	D	S	I	R	d1	F	MGU610	MGU620	MGU640	MGU620	MGU640	MGU610	MGU620	MGU640	MGU610	MGU620	MGU640
SNKX1206ANSNMM	12,70	6,35	9,3	0,8	4,5	2											

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



03 AUFNAHMEBOHRUNG MONTAGE › Arbor Mounting

WENDESCHNEIDPLATTE Insert	SCHRAUBE WENDESCHNEIDPLATTE Insert Screw	SCHLUESSEL Key (Torx)	Nm	FRAESERSPANNSCHRAUBE Lock Screw Milling Cutter	DIN 6838 SCHLUESSEL Wrench	BEZEICHNUNG Code	
SN... 1206	TVTF 006	TCTF 004	3,0	-	-	050A04R4522SN1206	03
SN... 1206	TVTF 006	TCTF 004	3,0	-	-	063A06R4522SN1206	
SN... 1206	TVTF 006	TCTF 004	3,0	TBDF 001*	TCCF 001*	080A07R4527SN1206	
SN... 1206	TVTF 006	TCTF 006	3,0	TBDF 002*	TCCF 002*	100A08R4532SN1206	

* EXTRA BESTELLEN › Order Separately







SCHNITTDATEN › Cutting Data

ISO	MATERIAL Material	MGU610	MGU620	MGU640	VORSCHUB fz (mm/d) Feed fz (mm/t)
P	< 800 N/mm ²	180-250	150-230	100-200	0,10-0,35
	700-1000 N/mm ²	170-210	140-220	130-200	0,10-0,35
	1000-1300 N/mm ²	160-200	130-180	120-170	0,10-0,35
M	AUSTENITISCH › Austenitic	-	110-170	90-150	0,10-0,30
	DUPLEX	-	100-150	80-130	0,10-0,30
K	GRAUGUSS › Grey Cast Iron	150-250	130-230	130-200	0,10-0,35
	GRAUGUSS MIT KUGELGRAPHIT › Nodular Cast Iron	90-210	80-190	80-170	0,10-0,35
S	HITZEBESTAENDIGE SUPPERLEGIERUNGEN Heat Resistant Super Alloys	-	40-60	40-60	0,08-0,25

45° QUADRAT POSITIV

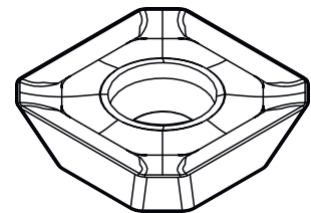
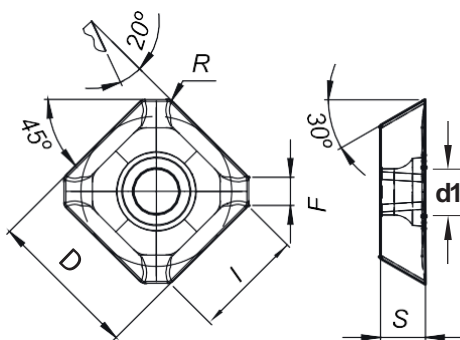
45° Square Positive










	BEZEICHNUNG Code	D (mm)	∅ D ₂ (mm)	∅ d ₂ (mm)	∅ d ₃ (mm)	L (mm)		b (mm)		Kg
03	050A04R4522SE13T3	50	63	22	40	40		6	4	0,350
	063A05R4522SE13T3	63	76	22	48	40		6	5	0,566
	080A06R4527SE13T3	80	93	27	60	50		6	6	0,999
	100A07R4532SE13T3	100	113	32	70	50		6	7	1,517

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

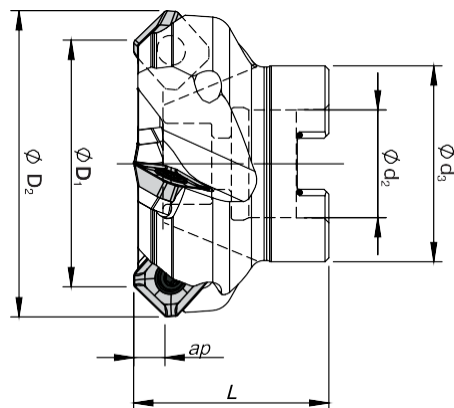
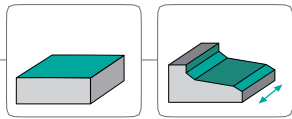
SE.. 13T3 WENDESCHNEIDPLATTEN › Insert



QUALITÄT › Grades

WENDESCHNEID PLATTEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F	QUALITÄT › Grades						
							P	M	K	N			
SEMT13T3AGSN	13,35	3,97	10	-	4,1	2,0							-
SEMT13T3AGFNLN	13,35	3,97	10	-	4,1	2,3	-	-	-	-	-	-	

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



03 AUFNAHMEBOHRUNG MONTAGE › Arbor Mounting

WENDESCHNEIDPLATTE Insert	SCHRAUBE WENDESCHNEIDPLATTE Insert Screw	SCHLUESSEL Key (Torx)	Nm	UNTERLEGLATTE Shim	SCHRAUBE UNTERLEGLATTE Shim Screw	TORX SCHLUESSEL Torx Key	BEZEICHNUNG Code
SE... 13T3	TVTF 010	TCTF 004	3,0	TSSF 001	TVSF 001	TCTF 004	050A04R4522SE13T3
SE... 13T3	TVTF 010	TCTF 004	3,0	TSSF 001	TVSF 001	TCTF 004	063A05R4522SE13T3
SE... 13T3	TVTF 010	TCTF 004	3,0	TSSF 001	TVSF 001	TCTF 004	080A06R4527SE13T3
SE... 13T3	TVTF 010	TCTF 006	3,0	TSSF 001	TVSF 001	TCTF 006	100A07R4532SE13T3

03

FRAESEN › Milling



SCHNITTDATEN › Cutting Data

ISO	MATERIAL Material	MGN010	MGU620	MGU640	VORSCHUB fz (mm/d) Feed fz (mm/t)
P	< 800 N/mm ²	-	150-230	130-160	0,10-0,30
	700-1000 N/mm ²	-	140-220	120-150	0,10-0,25
	1000-1300 N/mm ²	-	130-180	100-130	0,10-0,20
M	AUSTENITISCH › Austenitic	-	100-150	80-110	0,10-0,25
	DUPLEX	-	70-110	70-100	0,10-0,25
K	GRAUGUSS › Grey Cast Iron	-	130-230	110-220	0,10-0,35
	GRAUGUSS MIT KUGELGRAPHIT › Nodular Cast Iron	-	80-190	80-170	0,10-0,30
N	ALUMINIUM UND NE-METALLE Aluminium and Non Ferrous	350-1000	-	-	0,10-0,30

90° QUADRAT POSITIV

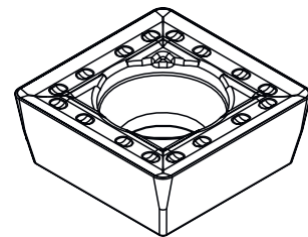
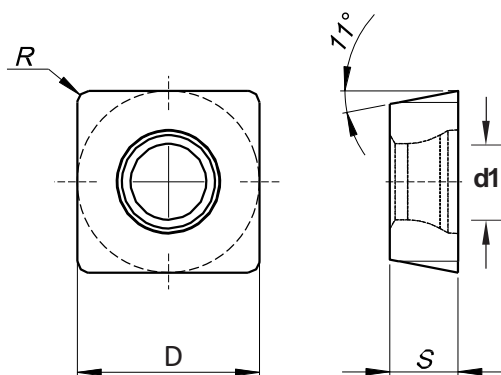
90° Square Positive



BEZEICHNUNG Code	∅ D ₁ (mm)	∅ D ₂ (mm)	∅ d ₂ (mm)	∅ d ₃ (mm)	L (mm)		a _p (mm)		Kg
040A03R9016SP1204	40	-	16	39	40	■	11	3	0,200
050A04R9022SP1204	50	-	22	49	40	■	11	4	0,350
063A05R9027SP1204	63	-	27	60	50	■	11	5	0,700
080A06R9027SP1204	80	-	27	64	50	■	11	6	1,150

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

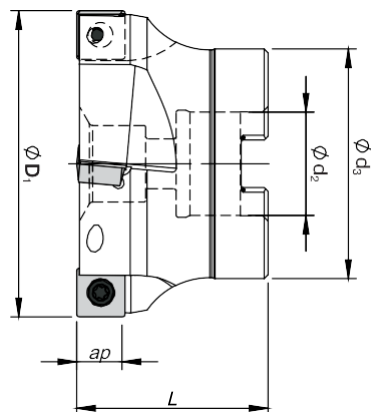
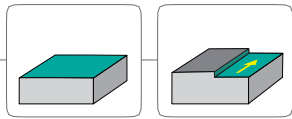
SP.. 1204 WENDESCHNEIDPLATTEN › Insert



QUALITÄT › Grades

WENDESCHNEID PLATTEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F	P		M		K		S	
							MGU620	MGU640	MGU620	MGU640	MGU620	MGU640	MGU620	MGU640
SPMT120408MP	12,70	4,76	-	0,8	5,5	-	■	■	■	■	■	■	■	■

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



03 AUFNAHMEBOHRUNG MONTAGE › Arbor Mounting

WENDESCHNEIDPLATTE Insert	SCHRAUBE WENDESCHNEI- DPLATTE Insert Screw	SCHLUESSEL Key (Torx)	Nm	BEZEICHNUNG Code	
SPMT 120408	TVTF 009	TCTF 007	5,0	040A03R9016SP1204	03
SPMT 120408	TVTF 009	TCTF 007	5,0	050A04R9022SP1204	
SPMT 120408	TVTF 009	TCTF 007	5,0	063A05R9027SP1204	
SPMT 120408	TVTF 009	TCTF 007	5,0	080A06R9027SP1204	

FRAESEN › Milling

SCHNITTDATEN › Cutting Data



ISO	MATERIAL Material	MGU620	MGU640	VORSCHUB fz (mm/d) Feed fz (mm/t)
		Vc (m/min)		
P	< 800 N/mm ²	150-230	130-160	0,08-0,20
	700-1000 N/mm ²	140-220	120-150	0,08-0,20
	1000-1300 N/mm ²	130-180	100-130	0,08-0,15
M	AUSTENITISCH › Austenitic	100-150	80-110	0,08-0,15
	DUPLEX	70-110	70-100	0,07-0,13
K	GRAUGUSS › Grey Cast Iron	130-230	110-220	0,08-0,25
	GRAUGUSS MIT KUGELGRAPHIT › Nodular Cast Iron	80-190	80-170	0,08-0,25
S	HITZEBESTAENDIGE SUPPERLEGIERUNGEN › Heat Resistant Super Alloys	30-60	25-50	0,07-0,13

90° RECHTECKIG POSITIV 10

90° Rectangular Positive 10



01

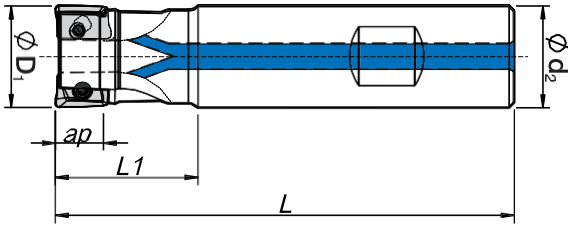
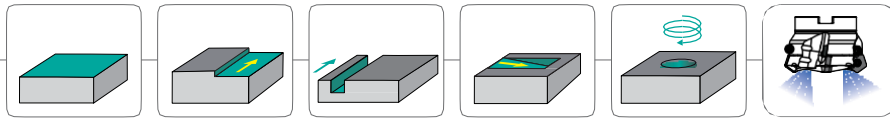
BEZEICHNUNG Code	∅ D ₁ (mm)	∅ d ₂ /M (mm)	∅ d ₃ (mm)	L (mm)	L1 (mm)		a _p (mm)		Kg
016W02R9016100AP1003	16	16	-	100	30	-	9	2	-
016W02R9016150AP1003	16	16	-	150	50	-	9	2	-
016W02R9016200AP1003	16	16	-	200	100	-	9	2	-
016W02R9016250AP1003	16	16	-	250	50	-	9	2	-
020W03R9020100AP1003	20	20	-	100	30	-	9	3	-
020W03R9020150AP1003	20	20	-	150	50	-	9	3	-
020W03R9020200AP1003	20	20	-	200	100	-	9	3	-
025W04R9025100AP1003	25	25	-	100	30	-	9	4	-
025W04R9025150AP1003	25	25	-	150	50	-	9	3	-
025W04R9025200AP1003	25	25	-	200	100	-	9	3	-

02

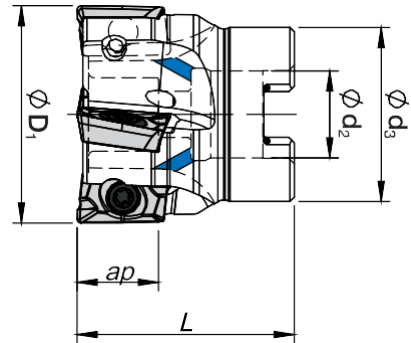
040A06R9022AP1003	40	16	39	40	-	■	9	5	0,207
050A07R9022AP1003	50	22	40	40	-	■	9	6	0,311
063A08R9022AP1003	63	22	48	40	-	■	9	7	0,550

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

FOLGT › Folows >>



01 WELDONSCHAFT › *Weld on Shank*



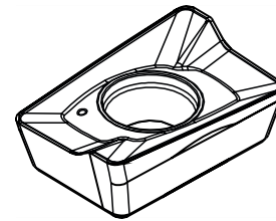
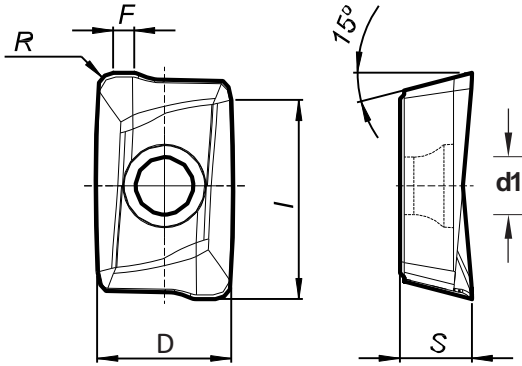
03 AUFNAHMEBOHRUNG MONTAGE › *Arbor Mounting*

WENDESCHNEIDPLATTE <i>Insert</i>	SCHRAUBE WENDESCHNEID PLATTE <i>Insert Screw</i>	SCHLESSEL <i>Key (Tax)</i>	Nm	BEZEICHNUNG Code	
AP...1003	TVIF002	TCTF002	1,2	016W02R9016150AP1003	01
AP...1003	TVIF002	TCTF002	1,2	020W03R9020090AP1003	
AP...1003	TVIF002	TCTF002	1,2	020W03R9020150AP1003	
AP...1003	TVIF002	TCTF002	1,2	025W04R9025095AP1003	
AP...1003	TVIF002	TCTF002	1,2	040A06R9016AP1003	03
AP...1003	TVIF002	TCTF002	1,2	050A07R9022AP1003	
AP...1003	TVIF002	TCTF002	1,2	063A08R9022AP1003	

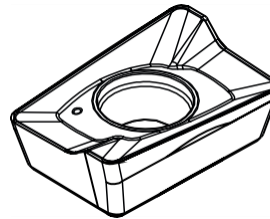
FOLGT › *Follows >>*

AP..1003.. WENDESCHNEIDPLATTEN

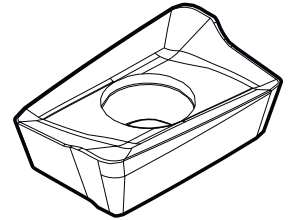
AP..1003.. Insert



APKT 1003...X1



APET 1003...LN



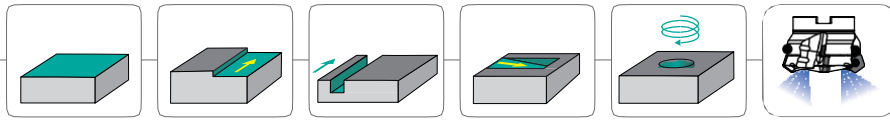
APKT 1003...X

QUALITÄT › Grades

WENDESCHNEIDPLAT - TEN BEZEICHNUNG <i>Insert Code</i>	D	S	I	R	d1	F	QUALITÄT › Grades						
							P	M	K		N		
							MGU620	MGU630	MGU630	MGU620	MGU630	MGU630	MGN010
APET100305PDFRLN	6,70	3,5	10	-	2,8	1,2	-	-	-	-	-	-	■
APKT100305PDERX1	6,70	3,5	10	0,5	2,8	1,2	■	■	■	■	■	■	-
APKT100305PDSRX1	6,70	3,5	10	0,5	2,8	1,2	■	■	■	■	■	■	-
APKT100308PDTR	6,70	3,5	10	0,8	2,8	0,9	■	■	■	■	■	■	-
APKT100308PDSRX	6,70	3,5	10	0,8	2,8	0,9	■	-	-	■	-	-	-
APKT100312PDERX	6,70	3,5	10	1,2	2,8	-	■	■	■	■	■	■	-
APKT100312PDSRX	6,70	3,5	10	1,2	2,8	-	■	-	-	■	-	-	-

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade

FRAESEN › Milling





SCHNITTDATEN › Cutting Data

		MGN010	MGU620	MGU630	APKT10..PDER	APKT10..PDSR	APET10..PDFR
ISO	MATERIAL Material	Vc (m/min)			VORSCHUB fz (mm/d) Feed fz (mm/t)		
P	< 800 N/mm ²	-	150-230	150-180	0,07-0,15	0,10-0,25	-
	700-1000 N/mm ²	-	140-220	140-170	0,07-0,10	0,10-0,20	-
	1000-1300 N/mm ²	-	130-180	120-150	0,07-0,10	0,10-0,20	-
M	AUSTENITISCH Austenitic	-	-	80-130	0,07-0,10	0,10-0,20	-
	DUPLEX	-	-	70-100	0,07-0,10	0,10-0,20	-
K	GRAUGUSS Grey Cast Iron	-	130-230	120-225	0,07-0,15	0,10-0,25	-
	GRAUGUSS MIT KUGELGRAP HIT Nodular Cast Iron	-	80-190	80-180	0,07-0,15	0,10-0,20	-
N	ALUMINIUM UND NE- METALLE Aluminium and Non Ferrous	350-1000	-	-	-	-	0,07-0,20

90° RECHTECKIG POSITIV 16

90° Rectangular Positive 16



BEZEICHNUNG Code	∅ D ₁ (mm)	∅ d ₂ /M (mm)	∅ d ₃ (mm)	L (mm)	L1 (mm)		a _p (mm)		Kg
025W02R9025200AP1604	25	25	-	200	60	-	14,5	2	0,658
032W03R9032200AP1604	32	32	-	200	60	-	14,5	3	1,081
040W04R9032115AP1604	40	32	-	115	40	-	14,5	4	0,656
040W04R9040200AP1604	40	32	-	200	40	-	14,5	4	1,171

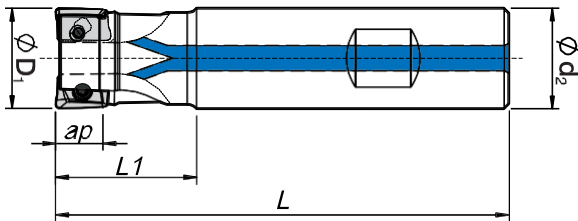
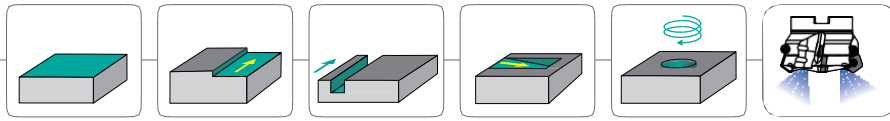
01

040A04R9016AP1604	40	16	32	40	-	■	14,5	4	0,165
050A05R9022AP1604	50	22	42	40	-	■	14,5	5	0,280
063A06R9022AP1604	63	22	52	40	-	■	14,5	6	0,519
080A07R9027AP1604	80	27	60	50	-	■	14,5	7	0,903

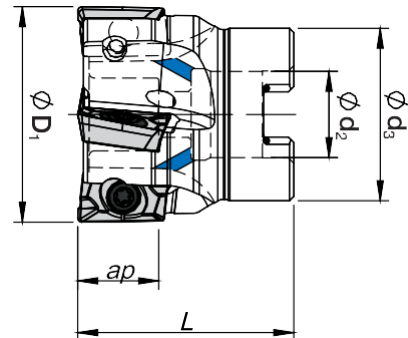
03

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

FOLGT › Folows >>



01 WELDONSCHAFT, *Weld on Shank*



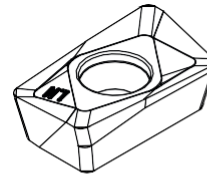
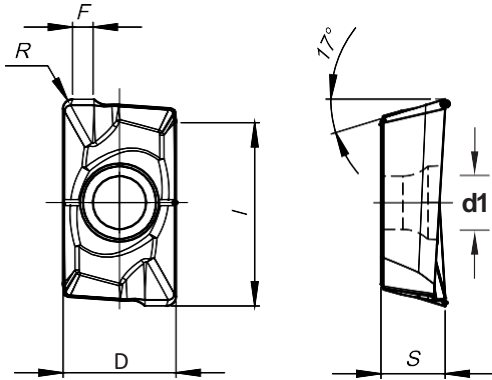
03 AUFNAHMEBOHRUNG MONTAGE, *Arbor Mounting*

WENDESCHNEIDPLATTE <i>Insert</i>	SCHRAUBE WENDESCHNEID PLATTE <i>Insert Screw</i>	SCHLUESSEL <i>Key (Torx)</i>	Nm	BEZEICHNUNG <i>Code</i>	
AP... 1604	TVTF 005	TCTF 004	3	025W02R9025200AP1604	01
AP... 1604	TVTF 005	TCTF 004	3	032W03R9032200AP1604	
AP... 1604	TVTF 005	TCTF 004	3	040W04R9032115AP1604	
AP... 1604	TVTF 005	TCTF 004	3	040W04R9040200AP1604	
AP... 1604	TVTF005	TCTF004	3	040A04R9016AP1604	03
AP... 1604	TVTF005	TCTF004	3	050A05R9022AP1604	
AP... 1604	TVTF005	TCTF004	3	063A06R9022AP1604	
AP... 1604	TVTF005	TCTF004	3	080A07R9027AP1604	

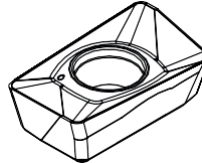
FOLGT › *Follows* >>

AP.. 1604.. WENDESCHNEIDPLATTEN

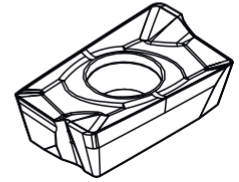
AP.. 1604.. Insert



APKT 1604... LN



APKT 1604... X1



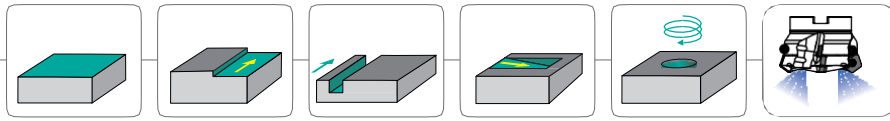
APKT 1604... X

QUALITÄT › Grades

WENDESCHNEIDPLATTEN BEZEICHNUNG Insert Code	P						QUALITÄT › Grades						
	D	S	I	R	d1	F	MGU620	MGU630	M	K	N	S	
APKT160408PDFRLN	9,45	5,35	16	0,8	4,4	1,80	-	-	-	-	-	■	-
APKT160408PDERX1	9,45	5,35	16	0,8	4,4	1,80	■	■	■	■	-	-	■
APKT160408PDSRX1	9,45	5,35	16	0,8	4,4	1,80	■	■	■	■	-	-	■
APKT160416PDERX	9,45	5,35	16	1,6	4,4	1,20	■	-	-	■	-	-	-
APKT160416PDSRX	9,45	5,35	16	1,6	4,4	1,20	■	■	■	■	-	-	■
APKT160432PDERX	9,45	5,35	16	3,2	4,4	-	■	-	-	■	-	-	-
APKT160432PDSRX	9,45	5,35	16	3,2	4,4	-	■	-	-	■	-	-	-

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade

FRAESEN › Milling



SCHNITTDATEN › Cutting Data

		MGN010	MGU620	MGU630	APKT16..PDER	APKT16..PDSR	APKT16..PDFR
ISO	MATERIAL <i>Material</i>	Vc (m/min)			VORSCHUB fz (mm/d) <i>Feed fz (mm/t)</i>		
P	< 800 N/mm ²	-	150-230	150-180	0,07-0,15	0,10-0,25	-
	700-1000 N/mm ²	-	140-220	140-170	0,07-0,10	0,10-0,20	-
	1000-1300 N/mm ²	-	130-180	120-150	0,07-0,10	0,10-0,20	-
M	AUSTENITISCH <i>Austenitic</i>	-	-	80-130	0,07-0,10	0,10-0,20	-
	DUPLEX	-	-	70-100	0,07-0,10	0,10-0,20	-
K	GRAUGUSS <i>Grey Cast Iron</i>	-	130-230	120-225	0,07-0,15	0,10-0,25	-
	GRAUGUSS MIT KUGELGRA PHIT <i>Nodular Cast Iron</i>	-	80-190	80-180	0,07-0,15	0,10-0,20	-
N	ALUMINIUM UND NE- METALLE <i>Aluminium and Non Ferrous</i>	350-1000	-	-	-	-	0,07-0,20

90° ROMBUS POSITIV 4-6-10

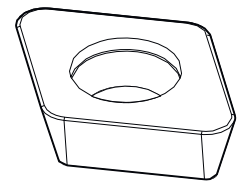
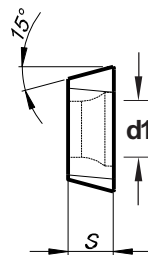
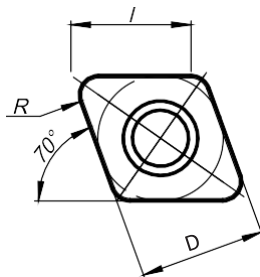
95° Rombic Positive 4-6-10



	BEZEICHNUNG Code	∅ D ₁ (mm)	∅ d ₂ /M (mm)	∅ d ₃ (mm)	L (mm)	L1 (mm)		a _p (mm)		Kg
02	010R02R95M06XD0401	10	M6	9,8	20	-	-	0,8	2	0,010
	012R02R95M06XD0401	12	M6	9,8	20	-	-	0,8	2	0,012
	016R02R95M08XD0602	16	M8	13	23	-	-	1,0	2	0,022
	020R03R95M10XD0602	20	M10	18	28	-	-	1,0	3	0,050
	025R03R95M12XD0602	25	M12	21	30	-	-	1,0	3	0,081
	035R03R95M16XD10T3	35	M16	29	43	-	-	1,0	3	0,200
03	052C05R9522XD10T3	52	22	40	50	-	■	1,0	5	0,342
	066C06R9527XD10T3	66	27	48	50	-	■	1,0	6	0,565

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

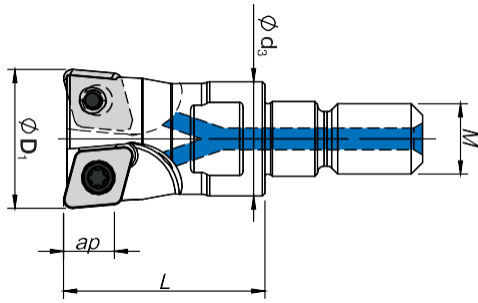
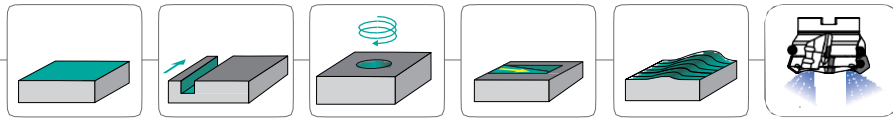
XD.. WENDESCHNEIDPLATTEN › Insert



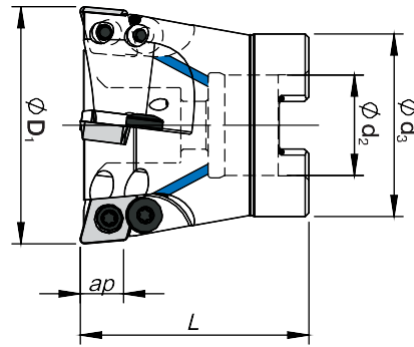
QUALITÄT › Grades

WENDESCHNEIDP LATTEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F	QUALITÄT › Grades			
							P	K	H	
							MGP605	MGU610	MGU610	MGP605
XDHW040110	4,00	1,59	4,0	1,00	2,0	-	■	■	■	■
XDHW060210	6,50	2,38	6,2	1,00	2,9	-	■	■	■	■
XDHW10T310	10,00	3,97	9,9	1,00	4,1	-	■	■	■	■

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



02 ANZUGSGEWINDESCHAFT › Threaded Shank



03 AUFNAHMEBOHRUNG MONTAGE › Arbor Mounting

WENDESCHNEIDPLATTE Insert	SCHRAUBE WENDESCHNEIDPLATTE Insert Screw	SCHLUESSEL Key (Torx)	Nm	SPANNSCHRAUBE Screw Clamping	BEZEICHNUNG Code	
XD... 040110	TVTF 001	TCTF 001	0,3	-	010R02R95M06XD0401	02
XD... 040110	TVTF 001	TCTF 001	0,3	-	012R02R95M06XD0401	
XD... 060210	TVTF 002	TCTF 002	1,2	-	016R02R95M08XD0602	
XD... 060210	TVTF 002	TCTF 002	1,2	-	020R03R95M10XD0602	
XD... 060210	TVTF 002	TCTF 002	1,2	-	025R03R95M12XD0602	
XD... 10T310	TVTF 004	TCTF 004	3	-	035R03R95M16XD10T3	
XD... 10T310	TVTF 004	TCTF 004	3	TFF 001	052C05R9522XD10T3	03
XD... 10T310	TVTF 004	TCTF 004	3	TFF 001	066C06R9527XD10T3	

SCHNITTDATEN › Cutting Data



ISO	MATERIAL Material	Vc (m/min)	
		MGP605	MGU610
P	< 800 N/mm ²	180-300	180-250
	700-1000 N/mm ²	180-250	170-210
	1000-1300 N/mm ²	180-230	160-200
K	GRAUGUSS Grey Cast Iron	-	150-250
	GRAUGUSS MIT KUGELGRAPHIT Nodular Cast Iron	-	90-210
H	GEHAERTETER STAHL (40-55HRc) Hardened Steels (40-55HRc)	120-220	-

WENDESCHNEIDPLATTEN Insert	VORSCHUB fz (mm/d) Feed fz (mm/t)		a _p (mm)
	SCHRUPPEN Roughing	SCHLICHTEN Finishing	
XD..04	0,10-0,20	0,10-0,15	0,10-0,50
XD..06	0,15-0,30	0,10-0,25	0,20-0,80
XD..10	0,15-0,35	0,10-0,30	0,20-0,80
-	-	-	-
-	-	-	-
-	-	-	-

RUND POSITIV 10-12

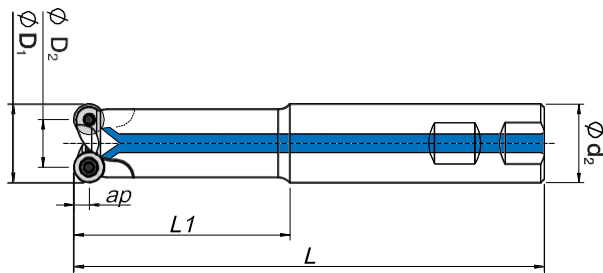
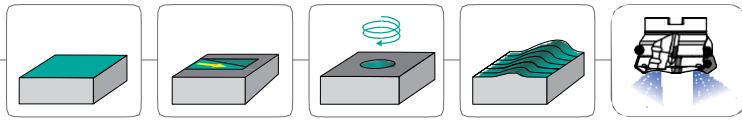
Round Positive 10-12



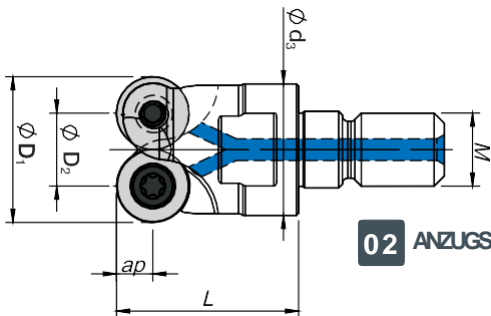
	BEZEICHNUNG Code	∅ D ₁ (mm)	∅ D ₂ (mm)	∅ d ₂ /M (mm)	∅ d ₃ (mm)	L (mm)	L1 (mm)		a _p (mm)		Kg
01	020W02R0020160RD1003	20	10	20	-	160	60	-	5,0	2	0,322
	020W02R0025220RD1003	20	10	25	-	220	120	-	5,0	2	0,610
02	020R02R00M10RD1003	20	10	M10	18	25	-	-	5,0	2	0,041
	025R03R00M12RD1003	25	15	M12	21	30	-	-	5,0	3	0,075
	030R04R00M16RD1003	30	20	M16	29	35	-	-	5,0	4	0,190
	035R05R00M16RD1003	35	25	M16	29	43	-	-	5,0	5	0,240
	042R05R00M16RD1003	42	32	M16	29	40	-	-	5,0	5	0,243
03	042A6R0016RD1003	42	32	16	36	44	-	■	5,0	6	0,254
	052A7R0022RD1003	52	42	22	40	50	-	■	5,0	7	0,395
01	025W02R0025220RD12T3	25	13	25	-	220	120	-	6,0	2	0,678
	025W02R0032230RD12T3	25	13	32	-	230	130	-	6,0	2	1,015
02	024R02R00M12RD12T3	24	12	M12	21	32	-	-	6,0	2	0,072
	035R03R00M16RD12T3	35	23	M16	29	42	-	-	6,0	3	0,205
	042R04R00M16RD12T3	42	30	M16	29	42	-	-	6,0	4	0,232

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

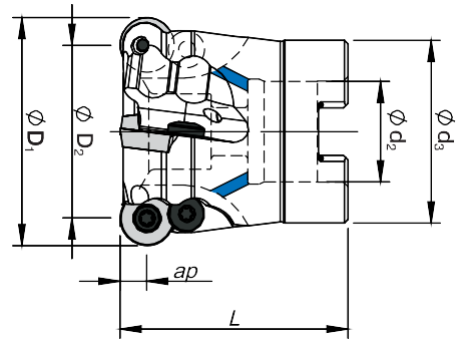
FOLGT › Folows >>



01 WELDONSCHAFT, *Weldon Shank*



02 ANZUGSGEWINDENSCHAFT, *Threaded Shank*



03 AUFNAHMEBOHRUNG MONTAGE, *Arbor Mounting*

WENDESCHNEIDPLATTE Insert	SCHRAUBE WENDESCHNEIDPLATTE Insert Screw	SCHLUESSEL Key (Torx)	Nm	SPANNSCHRAUBE Screw Clamping	UNTERLAGSCHEIBE Washer	SCHRAUBE UNTERLAGSCHEIBE Washer Screw	BEZEICHNUNG Code	
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	-	020W02R0020160RD1003	01
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	020W02R0025220RD1003		
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	-	020R02R00M10RD1003	02
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	-	025R03R00M12RD1003	
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	-	030R04R00M16RD1003	
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	-	035R05R00M16RD1003	
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	-	042R05R00M16RD1003	
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	-	042A6R0016RD1003	03
RD... 1003	TVTF 004	TCTF 004	3,0	-	-	-	052A7R0022RD1003	
RD...12T3	TVTF004	TCIF004	3,0	-	-	-	025W02R0025220RD12T3	01
RD...12T3	TVTF004	TCIF004	3,0	-	-	-	025W02R0032230RD12T3	
RD...12T3	TVTF004	TCIF004	3,0	-	-	-	024R02R00M12RD12T3	02
RD...12T3	TVTF004	TCIF004	3,0	-	-	-	035R03R00M16RD12T3	
RD...12T3	TVTF004	TCIF004	3,0	-	-	-	042R04R00M16RD12T3	

FOLGT Folios >>

RUND POSITIV 12-16

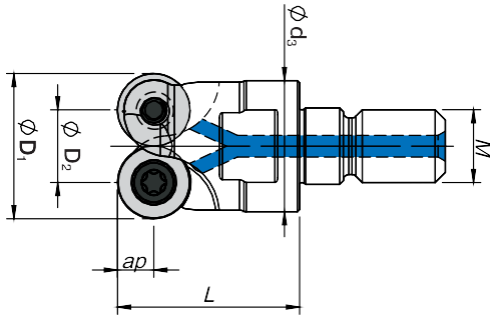
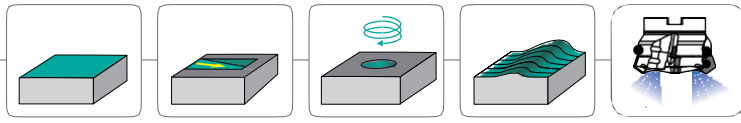
Round Positive 12-16



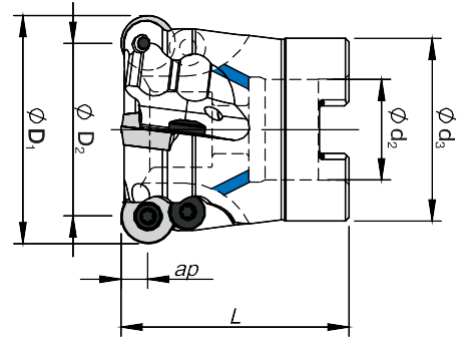
	BEZEICHNUNG Code	$\varnothing D_1$ (mm)	$\varnothing D_2$ (mm)	$\varnothing d_2/M$ (mm)	$\varnothing d_3$ (mm)	L (mm)	L1 (mm)		a_p (mm)		Kg
03	052C05R0022RD12T3	52	40	22	40	50	-	■	6,0	5	0,337
	052C05R002207RD12T3*	52	40	22	40	50	-	■	6,0	5	0,337
	066C06R0027RD12T3	66	54	27	48	50	-	■	6,0	6	0,550
	066C06R002707RD12T3*	66	54	27	48	50	-	■	6,0	6	0,550
	080C07R0027RD12T3	80	68	27	60	50	-	■	6,0	7	1,000
	080C07R002707RD12T3*	80	68	27	60	50	-	■	6,0	7	1,000
02	032R02R00M16RD1604	32	16	M16	29	40	-	-	8,0	2	0,162
	035R03R00M16RD1604	35	19	M16	29	42	-	-	8,0	3	0,230
03	052C04R0022RD1604	52	36	22	40	50	-	■	8,0	4	0,305
	052C04R002207RD1604*	52	36	22	40	50	-	■	8,0	4	0,305
	066C05R0027RD1604	66	50	27	48	50	-	■	8,0	5	0,550
	066C05R002707RD1604*	66	50	27	48	50	-	■	8,0	5	0,550
	080C06R0027RD1604	80	64	27	60	52	-	■	8,0	6	0,910
	080C06R002707RD1604*	80	64	27	60	52	-	■	8,0	6	0,910

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02 ANZUGSGEWINDESCHAFT › *Threaded Shank*



03 AUFNAHMEBOHRUNG MONTAGE › *Arbor Mounting*

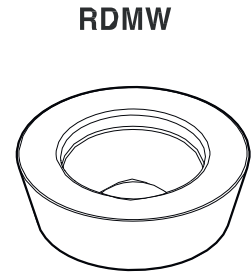
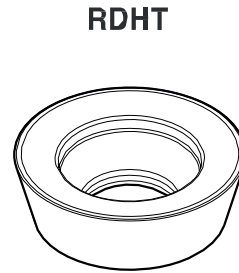
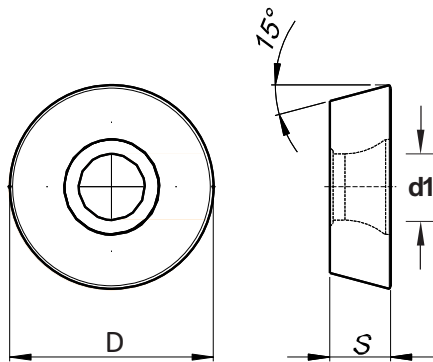
WENDESCHNEID-PLATTE <i>Insert</i>	SCHRAUBE WENDESCHNEIDPLATTE <i>Insert Screw</i>	SCHLUESSEL <i>Key (Torx)</i>	Nm	SPANNSCHRAUBE <i>Screw Clamping</i>	UNTERLAGSCHEIBE <i>Washer</i>	SCHRAUBE UNTERLAGSCHEIBE <i>Washer Screw</i>	BEZEICHNUNG <i>Code</i>	
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	052C05R0022RD12T3	03
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	052C05R002207RD12T3*	
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	066C06R0027RD12T3	
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	066C06R002707RD12T3*	
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	080C07R0027RD12T3	
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	080C07R002707RD12T3*	
RD... 1604	TVTF 007	TCTF 005	5,0	-	-	-	032R02R00M16RD1604	02
RD... 1604	TVTF 007	TCTF 005	5,0	-	-	-	035R03R00M16RD1604	
RD... 1604	TVTF 007	TCTF 005	5,0	-	TRF 001	TVTF 007	052C04R0022RD1604	03
RD... 1604	TVTF 007	TCTF 005	5,0	-	TRF 001	TVTF 007	052C04R002207RD1604*	
RD... 1604	TVTF 007	TCTF 005	5,0	-	TRF 001	TVTF 007	066C05R0027RD1604	
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	066C05R002707RD1604*	
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	080C06R0027RD1604	
RD... 12T3	TVTF 004	TCTF 004	3,0	TFF 001	-	-	080C06R002707RD1604*	

* AXIALER SPANWINKEL +7° › * Axial rake angle +7°

FOLGT › *Folows* >>

RD.. WENDESCHNEIDPLATTEN

RD.. Insert

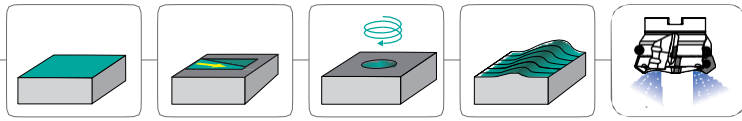


QUALITÄT › Grades

WENDESCHNEID PLATTEN BEZEICHNUNG <i>Insert Code</i>	D	S	I	R	d1	F	QUALITÄT › Grades											
							P					M	K		S		H	
							MGP605	MGU610	MGU620	MGP625	MGP635	MGU620	MGU610	MGU620	MGU610	MGU620	MGP605	
RDHW1003M0T	10,00	3,18	-	-	4,1	-	■	■	■	-	■	■	■	■	■	■	■	■
RDHW12T3M0T	12,00	3,97	-	-	4,1	-	■	■	■	-	■	■	■	■	■	■	■	■
RDHW1604M0T	16,00	4,76	-	-	5,2	-	■	■	■	-	■	-	■	-	■	■	■	■
RDHT1003M0T	10,00	3,18	-	-	4,1	-	-	-	-	■	■	-	-	-	-	-	-	-
RDHT12T3M0T	12,00	3,97	-	-	4,1	-	-	-	-	■	■	-	-	-	-	-	-	-
RDHT1604M0T	16,00	4,76	-	-	5,2	-	-	-	-	■	■	-	-	-	-	-	-	-
RDMT1003M0T	10,00	3,18	-	-	4,1	-	-	-	-	■	■	-	-	-	-	-	-	-
RDMT12T3M0T	12,00	3,97	-	-	4,1	-	-	-	-	■	■	-	-	-	-	-	-	-
RDMT1604M0T	16,00	4,76	-	-	5,2	-	-	-	-	■	■	-	-	-	-	-	-	-
RDMW1003M0T	10,00	3,18	-	-	4,1	-	-	-	■	■	■	■	-	■	-	-	-	-
RDMW12T3M0T	12,00	3,97	-	-	4,1	-	-	-	■	■	■	■	-	■	-	-	-	-
RDMW1604M0T	16,00	4,76	-	-	5,2	-	-	-	■	■	■	■	-	■	-	-	-	-

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade

FRAESEN › Milling



SCHNITTDATEN › Cutting Data

				MGP605	MGU610	MGU620	MGP625	MGP635
ISO	MATERIAL <i>Material</i>			Vc (m/min)				
P	< 800 N/mm ²			180-300	180-250	150-230	160-190	150-180
	700-1000 N/mm ²			180-250	170-210	140-220	140-180	140-170
	1000-1300 N/mm ²			180-230	160-200	130-180	130-160	120-150
K	GRAUGUSS <i>Grey Cast Iron</i>			-	150-250	130-230	-	-
	GRAUGUSS MIT KUGELGRAPHIT <i>Nodular Cast Iron</i>			-	90-210	80-190	-	-
H	GEHAERTETER STAHL (40-55 HRC) <i>Hardened Steels (40-55 HRC)</i>			120-200	-	-	-	-


VORSCHUB X ZAHN fz › Feed x tooth fz

				RADIALEZUSTELLUNG (a _e) <i>Radial Working Engagement (a_e)</i>					
ABMESSUNG WENDESCHNEIDPL ATTEN <i>Insert Dimension</i>				10%	20%	30%	40%	50%	75%
RD..10	RD..12	RD..16	ap = 1,0	-	1,50	1,22	1,06	0,95	0,82
RD..10	RD..12	RD..16	ap = 2,0	1,50	1,06	0,87	0,75	0,67	0,57
RD..10	RD..12	RD..16	ap = 3,0	1,22	0,87	0,71	0,61	0,55	0,50
-	RD..12	RD..16	ap = 4,0	1,06	0,75	0,61	0,53	0,47	0,42
-	-	RD..16	ap = 5,0	0,95	0,67	0,55	0,47	0,42	0,38
-	-	RD..16	ap = 6,0	0,87	0,61	0,50	0,43	0,39	0,35

KOPIERFRAESER 3000

Copy Mill 3000

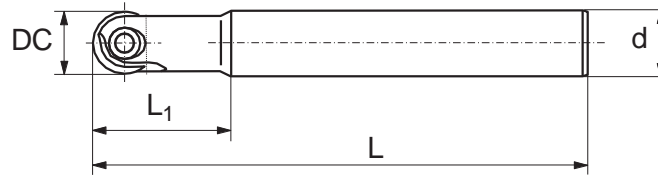
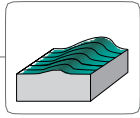


BEZEICHNUNG Code		∅ DC (mm)	∅ d (mm)	R	L (mm)	L ₁ (mm)	a _p (mm)		Kg
ZYLINDRISCHER HALS › Straight Neck	3000 12x130	12	12	-	130	32	6,0	1	0,103
	3000 12x150	12	12	-	150	46	6,0	1	0,118
	3000 16x140	16	16	-	140	36	8,0	1	0,198
	3000 16x160	16	16	-	160	53	8,0	1	0,222
	3000 20x160	20	20	-	160	45	10,0	1	0,353
	3000 20x175	20	20	-	175	61	10,0	1	0,353
	3000 25x160	25	25	-	160	45	12,5	1	0,545
	3000 25x190	25	25	-	190	70	12,5	1	0,646
	3000 32x175	32	32	-	175	56	16,0	1	0,968
	3000 32x210	32	32	-	210	80	16,0	1	1,159

KONISCHER HALS › Taper Neck	3000 8x140	8	12	3°	140	48,5	4,0	1	0,103
	3000 10x150	10	12	3°	150	35,0	5,0	1	0,117
	3000 12x160	12	16	3°	160	58,5	6,0	1	0,210
	3000 16x175	16	20	3°	175	65,0	8,0	1	0,362
	3000 20x190	20	25	3°	190	76,0	10,0	1	0,610
	3000 25x210	25	32	3°	210	98,0	12,5	1	1,072
	3000 32x240	32	40	3°	240	121,0	16,0	1	1,900

BESTELLBEISPIEL: 3000 + 12X130 › Ordering example: 3000 + 12x130

FOLGT › Folws >>

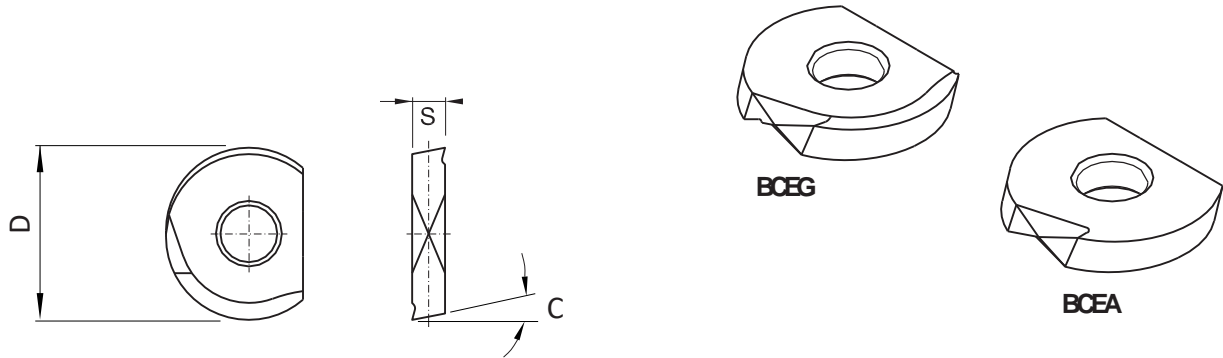


WENDESCHNEIDPLATTE <i>Insert</i>	SCHRAUB E WENDESCHNEI DPLATTE <i>Insert Screw</i>	SCHLUESS EL <i>Key (Torx)</i>	Nm	PRODUKTBEZEICHNUN G <i>Product Code</i>	
BCEG/A - 12	GWS 12	TX 15	4,0	3000E012-130-S12MR	ZYLINDRISCHER HALS › Straight Neck
BCEG/A - 12	GWS 12	TX 15	4,0	3000E012-150-S12MR	
BCEG/A - 16	GWS 16	TX 15	5,0	3000E016-140-S16MR	
BCEG/A - 16	GWS 16	TX 15	5,0	3000E016-160-S16MR	
BCEG/A - 20	GWS 20	TX 20	6,0	3000E020-160-S20MR	
BCEG/A - 20	GWS 20	TX 20	6,0	3000E020-175-S20MR	
BCEG/A - 25	GWS 25	TX 25	6,5	3000E025-160-S25MR	
BCEG/A - 25	GWS 25	TX 25	6,5	3000E025-190-S25MR	
BCEG/A - 32	GWS 32	TX 25	6,5	3000E032-175-S32MR	
BCEG/A - 32	GWS 32	TX 25	6,5	3000E032-210-S32MR	
BCEG/A - 08	GWS 08	TX 08	2,0	3000E008-140-S12MR-T	KONISCHER HALS › Taper Neck
BCEG/A - 10	GWS 10	TX 10	3,0	3000E010-150-S12MR-T	
BCEG/A - 12	GWS 12	TX 15	4,0	3000E012-160-S16MR-T	
BCEG/A - 16	GWS 16	TX 15	5,0	3000E016-175-S20MR-T	
BCEG/A - 20	GWS 20	TX 20	6,0	3000E020-190-S25MR-T	
BCEG/A - 25	GWS 25	TX 25	6,5	3000E025-210-S32MR-T	
BCEG/A - 32	GWS 32	TX 25	6,5	3000E032-240-S40MR-T	

FOLGT › Folows >>

P3200.. WENDESCHNEIDPLATTEN

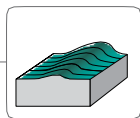
P3200.. Insert



QUALITÄT › Grades

WENDESCHNEIDP LATTEN BEZEICHNUNG <i>Insert Code</i>	P									M			K			N			
	D	S	R	C	MG10	MG14	MGR58	MGR60	MGR90	MG10	MGR90	MGR58	MG10	MGR90	MGR58	MG10	MGR90	MGR58	
P3200 - 8	8,00	2,00	4	7°	■	-	■	-	-	-	■	-	-	-	-	-	-	-	-
P3200 - 10	10,00	2,50	5	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 10	10,00	2,50	5	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 12	12,00	2,50	6	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 12	12,00	2,50	6	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 16	16,00	3,00	8	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 16	16,00	3,00	8	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 20	20,00	3,00	10	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 20	20,00	3,00	10	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 25	25,00	4,00	12,5	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 25	25,00	4,00	12,5	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 32	32,00	5,00	16	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
P3200 - 32	32,00	5,00	16	7°	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



WENDESCHNEIDPLATTEN TYP <i>Insert Type</i>	STIL <i>Style</i>	ANWENDUNG <i>Application</i>
P3200	MIT SPANBRECHER / <i>With chipbraker</i>	UNLEGIERTER STAHL - ROSTFERER STAHL -NE-METALLE <i>Unalloyed Steel - Stainless Steel - Non Ferrous</i>
P3200	OHNE SPANBRECHER / <i>Without chipbraker</i>	HOCHLEGIERTER STAHL <i>High Steel</i>

QUALITÄT <i>Insert Type</i>	STIL <i>Style</i>	ANWENDUNG <i>Application</i>
MG10	K10-20 UNBESCHICHTET / <i>K10-20 Uncoated</i>	NE-METALLE / <i>Non ferrous</i>
MG14	P15-30 UNBESCHICHTET / <i>KP15-30 Uncoated</i>	MITTEL UND HOCHLEGIERTER STAHL <i>Medium and High Steel</i>
MGR58	K10-20 BESCHICHTET TiAlN <i>KK10-20 TiAlN Coated</i>	HALB SCHLICHTEN / SCHLICHTEN STAHL UND NE-METALLE <i>Semifinish / Finished Steel and Non Ferrous</i>
MGR60	P15-30 BESCHICHTET TiAlN <i>KP15-30 TiAlN Coated</i>	SCHRUPPEN STAHL UND NE-METALLE <i>Steel Roughing and Non Ferrous</i>
MGR90	K10-20 BESCHICHTET TiCN <i>KK10-20 TiAlN Coated</i>	HALB SCHRUPPEN STAHL <i>Semi Roughing Steel</i>

SCHNITTDATEN > *Cutting Data*

ISO	MATERIAL <i>Material</i>	ANWENDUNG <i>Application</i>	MG10	MG14	MGR58	MGR60	MGR90	VORSCHUB fz (mm/d) <i>Feed fz (mm/t)</i>	
			Vc (m/min)					D 8+12	D 16+32
P	KOHLENSTOFFSTAHL, LEGIERTER WERKZEUGSTAHL <i>Carbon steel, alloyed tool steel</i>	SCHLICHTEN <i>Finishing</i>	90-170	-	-	-	-	0,1+0,2	0,25+0,4
		SCHLICHTEN <i>Finishing</i>	-	-	120-210	-	-	0,1+0,2	0,25+0,4
		SCHLICHTEN <i>Finishing</i>	-	-	-	-	120-210	0,1+0,2	0,25+0,4
		SCHRUPPEN <i>Roughing</i>	-	90-140	-	-	-	0,15+0,35	0,4+0,6
		SCHRUPPEN <i>Roughing</i>	-	-	-	100-180	-	0,15+0,35	0,4+0,6
M	AUSTENITISCH (P3200 WENDESCHNEIDPLATTEN/Insert) <i>Austenitic</i>	-	70-100	-	90-110	-	90-110	0,1+0,15	0,2+0,4
K	GRAUGUSS MIT KUGELGRAP HIT <i>Grey Cast Iron Nodular Cast Iron</i>	-	100-170	-	120-200	-	120-200	0,2+0,3	0,4+0,5
N	ALUMINIUM (P3200 WENDESCHNEIDPLATTEN/Insert) <i>Aluminium</i>	-	200-460	-	> 300	-	> 300	0,3+0,5	0,6+0,8
	KUPFER, MESSING, BRONZE (P3200 WENDESCHNEIDPLATTEN/Insert) <i>Copper, Brass, Bronze</i>	-	120-180	-	140-240	-	140-240	0,2+0,4	0,5+0,7
	GRAPHIT > <i>Graphite</i>	-	200-400	-	300-460	-	300-460	0,2+0,35	0,4+0,6

HOHER VORSCHUB SP..08

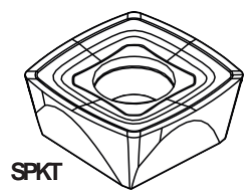
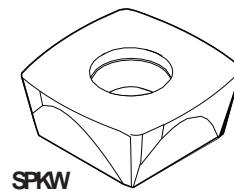
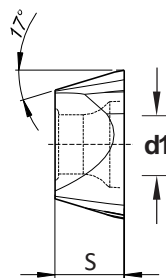
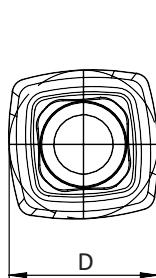
High Feed SP..08



	BEZEICHNUNG Code	∅ D ₁ (mm)	∅ d ₂ /M (mm)	∅ d ₃ (mm)	L (mm)	L1 (mm)		a _p (mm)		Kg
01	020W02R0020190SP08T3	20	20	-	190	110	-	1,2	2	0,380
	025W03R0025200SP08T3	25	25	-	200	130	-	1,2	3	0,611
	032W04R0032200SP08T3	32	32	-	200	130	-	1,2	4	1,040
02	020R02R00M10SP08T3	20	M10	16	25	-	-	1,2	2	0,040
	025R03R00M12SP08T3	25	M12	21	28	-	-	1,2	3	0,071
	032R04R00M16SP08T3	32	M16	29	35	-	-	1,2	4	0,162
	035R04R00M16SP08T3	35	M16	29	35	-	-	1,2	4	0,176
	042R05R00M16SP08T3	42	M16	29	35	-	-	1,2	5	0,215

BESTELLBEISPIEL: BEZEICHNUNG + ∅D₁ › Ordering example: Code + ∅D₁

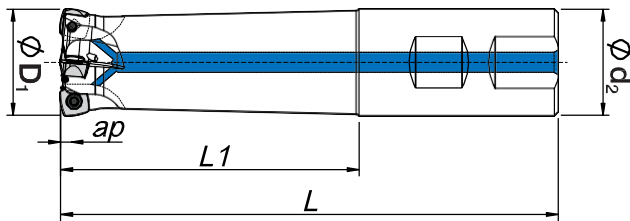
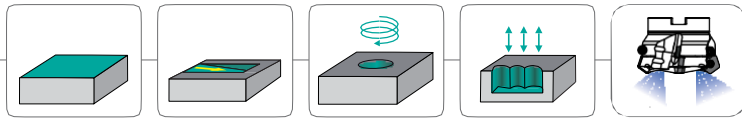
SP..08T3 WENDESCHNEIDPLATTEN › Insert



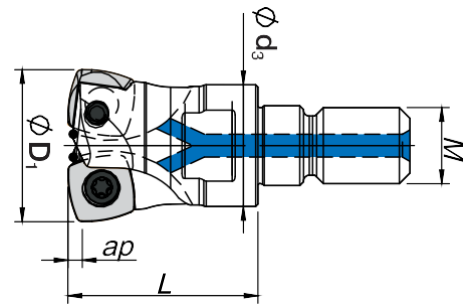
QUALITÄT › Grades

WENDESCHNEIDP LATTEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F	QUALITÄT › Grades			
							P	M	K	S
SPKW08T308E	8,50	3,97	-	-	3,4	-	MGU620	MGU620	MGU620	MGU620
SPKW08T308S	8,50	3,97	-	-	3,4	-	MGU620	-	MGU620	-
SPKT08T308E	8,50	3,97	-	-	3,4	-	MGU620	MGU620	MGU620	MGU620

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



01 WELDON SCHAFT › *Weldon Shank*



02 ANZUGSGEWINDESCHAFT › *Threaded Shank*

WENDESCHNEIDPLATTE <i>Insert</i>	SCHRAUBE WENDESCHNEID PLATTE <i>Insert Screw</i>	SCHLESSEL <i>Key (Tax)</i>	Nm	BEZEICHNUNG Code	
SP...08T308	TVIF003	TCTF003	1,4	020W02R0020190SP08T3	01
SP...08T308	TVIF003	TCTF003	1,4	025W03R0025200SP08T3	
SP...08T308	TVIF003	TCTF003	1,4	032W04R0032200SP08T3	
SP...08T308	TVIF003	TCTF003	1,4	020R02R00M10SP08T3	02
SP...08T308	TVIF003	TCTF003	1,4	025R03R00M12SP08T3	
SP...08T308	TVIF003	TCTF003	1,4	032R04R00M16SP08T3	
SP...08T308	TVIF003	TCTF003	1,4	035R04R00M16SP08T3	
SP...08T308	TVIF003	TCTF003	1,4	042R05R00M16SP08T3	

SCHNITTDATEN › *Cutting Data*

ISO	MATERIAL <i>Material</i>	TCU620	
		Vc (m/min)	VORSCHUB fz (mm/d) <i>Feed fz (mm/t)</i>
P	< 800 N/mm ²	150-230	0,30-1,50
	700-1000 N/mm ²	140-220	0,30-1,50
	1000-1300 N/mm ²	130-180	0,30-1,30
M	AUSTENITISCH › <i>Austenitic</i>	100-150	0,30-1,40
K	DUPLEX	70-110	0,30-1,20
	GRAUGUSS › <i>Grey Cast Iron</i>	130-230	0,30-1,50
	GRAUGUSS MIT KUGELGRAPHIT › <i>Nodular Cast Iron</i>	80-190	0,30-1,40

HOHER VORSCHUB SP..13

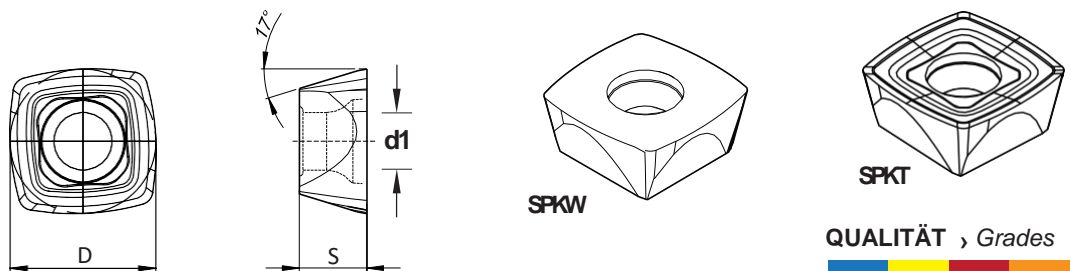
High Feed SP..13



	BEZEICHNUNG Code	∅ D ₁ (mm)	∅ d ₂ /M (mm)	∅ d ₃ (mm)	L (mm)	L1 (mm)		a _p (mm)		Kg
02	032R03R00M16SP1305	32	M16	29	35	-	-	2	3	0,145
	035R03R00M16SP1305	35	M16	29	35	-	-	2	3	0,163
	042R04R00M16SP1305	42	M16	29	35	-	-	2	4	0,194
03	050A04R0022SP1305	50	22	40	45	-	■	2	4	0,274
	052A04R0022SP1305	52	22	40	45	-	■	2	4	0,290
	063A05R0027SP1305	63	27	48	50	-	■	2	5	0,500
	066A05R0027SP1305	66	27	48	50	-	■	2	5	0,550
	080A06R0027SP1305	80	27	60	50	-	■	2	6	0,955

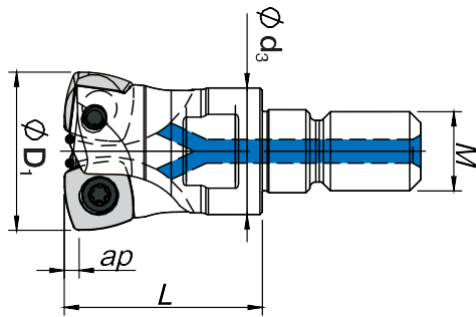
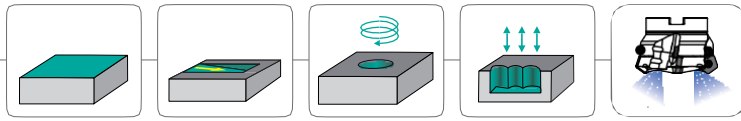
BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

SP..1305 WENDESCHNEIDPLATTEN › Insert

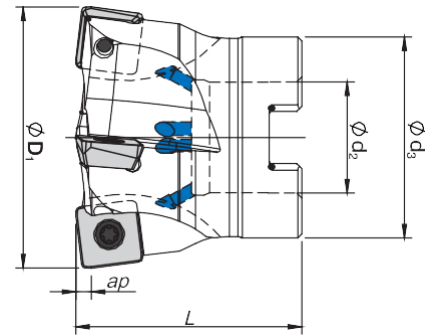


WENDESCHNEIDP LATTEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F	QUALITÄT › Grades			
							P	M	K	S
SPKW130510S	13,00	5,56	-	-	4,5	-	■	■	■	■
SPKW130510E	13,00	5,56	-	-	4,5	-	■	■	■	■
SPKT130510E	13,00	5,56	-	-	4,5	-	■	■	■	■

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



02 ANZUGSGEWINDESCHAFT › Threaded Shank



03 AUFNAHMEBOHRUNG MONTAGE › Arbor Mounting

WENDESCHNEIDPLATTE Insert	SCHRAUBE WENDESCHNEID PLATTE Insert Screw	SCHLUESSEL Key (Torx)	Nm	BEZEICHNUNG Code	
SP.. 1305	TVTF 006	TCTF 004	3,0	032R03R00M16SP1305	02
SP.. 1305	TVTF 006	TCTF 004	3,0	035R03R00M16SP1305	
SP.. 1305	TVTF 006	TCTF 004	3,0	042R04R00M16SP1305	
SP.. 1305	TVTF 006	TCTF 004	3,0	050A04R0022SP1305	03
SP.. 1305	TVTF 006	TCTF 004	3,0	052A04R0022SP1305	
SP.. 1305	TVTF 006	TCTF 004	3,0	063A05R0027SP1305	
SP.. 1305	TVTF 006	TCTF 004	3,0	066A05R0027SP1305	
SP.. 1305	TVTF 006	TCTF 004	3,0	080A06R0027SP1305	

SCHNITTDATEN › Cutting Data

ISO	MATERIAL Material	MGU620	
		Vc (m/min)	VORSCHUB fz (mm/d) Feed fz (mm/t)
P	< 800 N/mm ²	150-230	0,50-2,20
	700-1000 N/mm ²	140-220	0,50-2,20
	1000-1300 N/mm ²	130-180	0,50-2,20
M	AUSTENITISCH › Austenitic	110-170	0,50-1,80
K	DUPLEX	60-120	0,50-1,50
	GRAUGUSS › Grey Cast Iron	140-260	0,50-2,20
	GRAUGUSS MIT KUGELGRAPHIT › Nodular Cast Iron	100-220	0,50-2,20

HOHER VORSCHUB WN..12

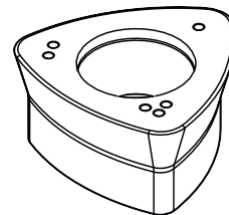
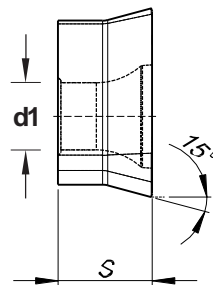
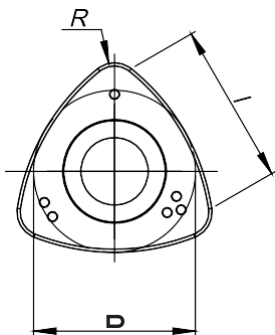
High Feed WN..12



	BEZEICHNUNG Code	∅ D ₁ (mm)	∅ d ₂ /M (mm)	∅ d ₃ (mm)	L (mm)	L1 (mm)		a _p (mm)		Kg
02	035R02R00M16WN1207	35	M16	29	35	-	-	1,8	2	0,166
03	052A03R0022WN1207	52	22	40	45	-	■	1,8	3	0,320
	066A04R0027WN1207	66	27	48	50	-	■	1,8	4	0,597
	066A05R0027WN1207	66	27	48	50	-	■	1,8	5	0,610
	080A05R0027WN1207	80	27	60	50	-	■	1,8	5	1,000

BESTELLBEISPIEL: BEZEICHNUNG + ∅ D₁ › Ordering example: Code + ∅ D₁

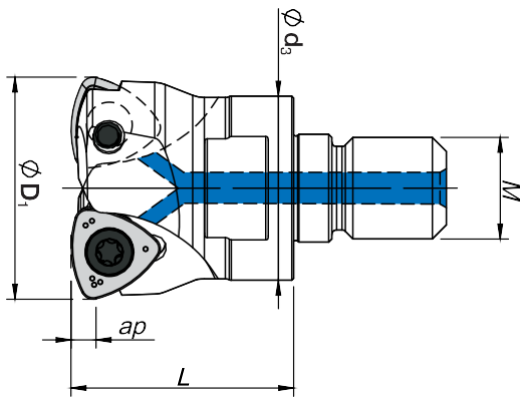
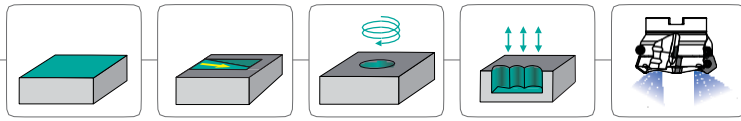
WN..1207 WENDESCHNEIDPLATTEN › Insert



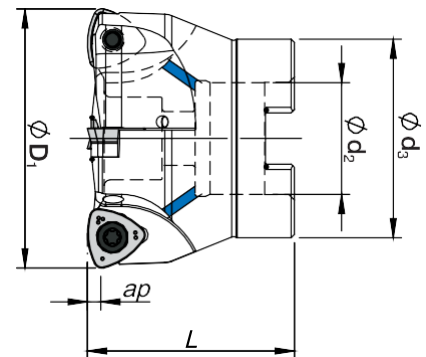
QUALITÄT › Grades

WENDESCHNEIDP LATTEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F	QUALITÄT › Grades		
							P	K	
WNMW1207SP	12,00	7,00	11,9	2,00	5,0	-	MGP625	MGP635	MGM720
							■	■	■

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



02 ANZUGSGEWINDESCHAFT, *Threaded Shank*



03 AUFNAHMEBOHRUNG MONTAGE, *Arbor Mounting*

WENDESCHNEIDPLATTE <i>Insert</i>	SCHRAUBE WENDESCHNEID PLATTE <i>Insert Screw</i>	SCHLUESSEL <i>Key (Torx)</i>	Nm	BEZEICHNUNG <i>Code</i>	
WN... 1207	TVTF 008	TCTF 005	5,0	035R02R00M16WN1207	02
WN... 1207	TVTF 008	TCTF 005	5,0	052A03R0022WN1207	03
WN... 1207	TVTF 008	TCTF 005	5,0	066A04R0027WN1207	
WN... 1207	TVTF 008	TCTF 005	5,0	066A05R0027WN1207	
WN... 1207	TVTF 008	TCTF 005	5,0	080A05R0027WN1207	



SCHNITTDATEN › *Cutting Data*

		MGP625	MGP635	MGM720	
ISO	MATERIAL <i>Material</i>	Vc (m/min)			VORSCHUB fz (mm/d) <i>Feed fz (mm/t)</i>
P	< 800 N/mm ²	160-190	150-180	-	0,30-1,50
	700-1000 N/mm ²	140-180	140-170	-	0,30-1,50
	1000-1300 N/mm ²	130-160	120-150	-	0,30-1,30
K	GRAUGUSS › <i>Grey Cast Iron</i>	-	-	140-220	0,30-1,50
	GRAUGUSS MIT KUGELGRAPHIT <i>Nodular Cast Iron</i>	-	-	100-160	0,30-1,50

HOHER VORSCHUB WD..12

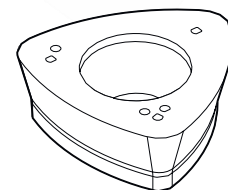
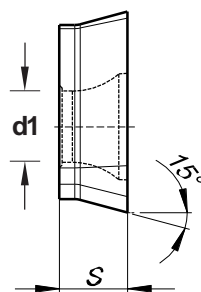
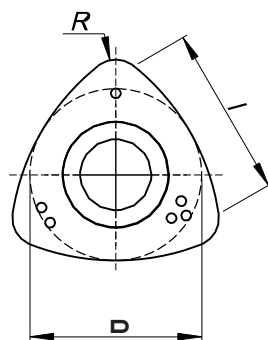
High Feed WD..12



	BEZEICHNUNG Code	$\varnothing D_1$ (mm)	$\varnothing d_2/M$ (mm)	$\varnothing d_3$ (mm)	L (mm)	L1 (mm)		a_p (mm)		Kg
03	052C04R0022WD1204	52	22	-	40	53	■	1,5	4	0,390
	066C05R0027WD1204	66	27	-	48	53	■	1,5	5	0,640
	080C06R0027WD1204	80	27	-	60	53	■	1,5	6	1,060

BESTELLBESPIEL: BEZEICHNUNG + $\varnothing D_1$ › Ordering example: Code + $\varnothing D_1$

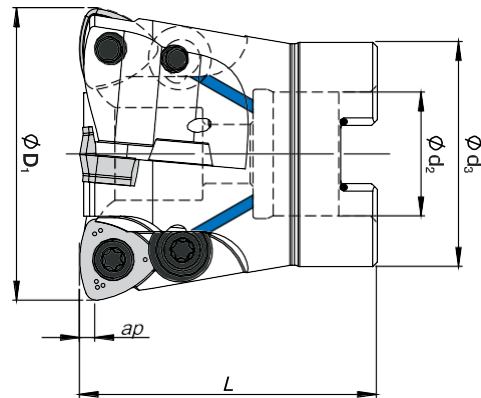
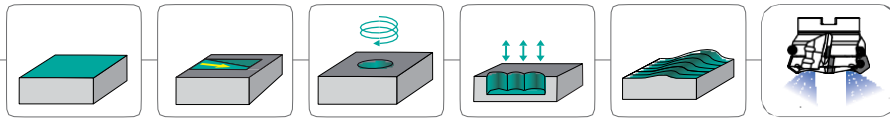
WD..1204 WENDESCHNEIDPLATTEN › Insert



QUALITÄT › Grades

WENDESCHNEIDPLATTEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F	QUALITÄT › Grades			
							P	M	K	
WDMW120420T	12,00	4,76	11,9	2,00	4,7	-	MGP625	MGM720	MGM720	MGM720
							■	■	■	■

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



03 AUFNAHMEBOHRUNG MONTAGE › Arbor Mounting

WENDESCHNEIDPLATTE Insert	SCHRAUBE WENDESCHNEIDPLATTE Insert Screw	SCHLUESSEL Key (Torx)	Nm	UNTERLEGSCHEIBE Washer	SCHRAUBE UNTERLEGS CHEIBE Washer Screw	BEZEICHNUNG Code	
WD... 1204	TVTF 007	TCTF 005	5,0	TRF 001	TVTF 007	052C04R0022WD1204	03
WD... 1204	TVTF 007	TCTF 005	5,0	TRF 001	TVTF 007	066C05R0027WD1204	
WD... 1204	TVTF 007	TCTF 005	5,0	TRF 001	TVTF 007	080C06R0027WD1204	

SCHNITTDATEN › Cutting Data

ISO	MATERIAL Material	MGP625	MGM720	VORSCHUB Feed fz (mm/d) fz (mm/t)
		Vc (m/min)		
P	< 800 N/mm ²	160-190	150-230	0,30-1,30
	700-1000 N/mm ²	140-180	140-220	0,30-1,30
	1000-1300 N/mm ²	130-160	130-180	0,30-1,30
M	AUSTENITISCH › Austenitic	-	120-180	0,30-1,30
	DUPLEX	-	70-120	0,30-1,30
K	GRAUGUSS › Grey Cast Iron	-	140-260	0,30-1,50
	GRAUGUSS MIT KUGELGRAPHIT › Nodular Cast Iron	-	100-220	0,30-1,50

ALU FRAESER

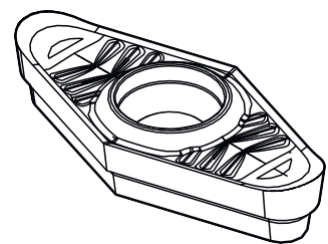
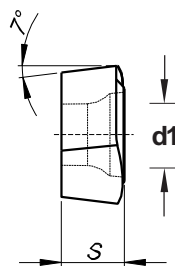
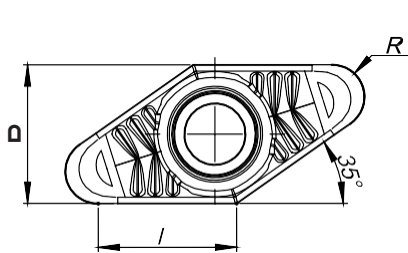
Alu Cutter



	BEZEICHNUNG Code	$\varnothing D_1$ (mm)	$\varnothing d_2/M$ (mm)	$\varnothing d_3$ (mm)	L (mm)		a_p (mm)		Kg
02	032R02R90M16VC2205	32	M16	29	48	-	15	2	0,19

BESTELLBEISPIEL: BEZEICHNUNG + $\varnothing D_1$ › Ordering example: Code + $\varnothing D_1$

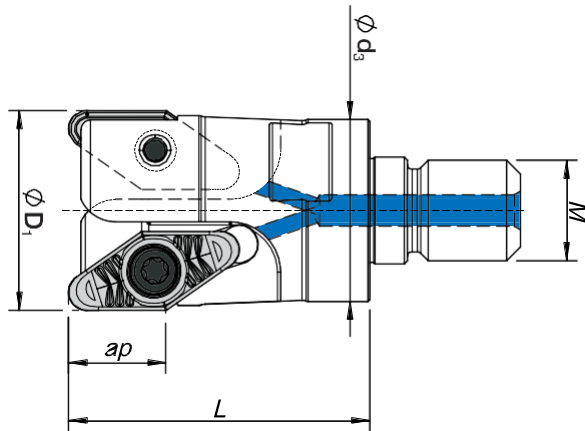
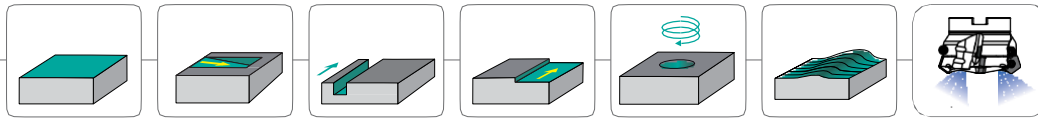
VCGX 220530 WENDESCHNEIDPLATTEN › Insert



QUALITÄT › Grades

WENDESCHNEIDP LATTEN BEZEICHNUNG Insert Code	D	S	I	R	d1	F		N
VCGX220530LN	12,70	5,60	12,7	3,00	5,5	-		MGN010

BESTELLBEISPIEL: BEZEICHNUNG WENDESCHNEIDPLATTE + QUALITÄT › Ordering example: Insert Code + Grade



02 ANZUGSGEWINDESCHAFT, *Threaded Shank*

WENDESCHNEIDPLATTE <i>Insert</i>	SCHRAUBE WENDE- SCHNEIDPLAT TE <i>Insert Screw</i>	SCHLUESSE L <i>Key (Torx)</i>	Nm	BEZEICHNUNG Code	
VC... 2205	TVTF 007	TCTF 005	5	032R02R90M16VC2205	02

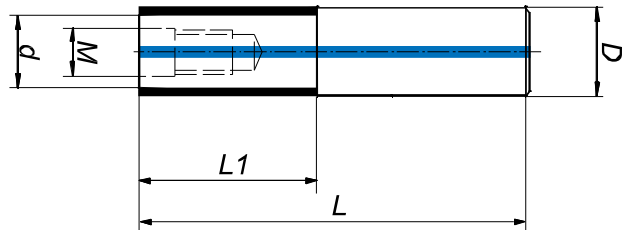
FRAESEN › Milling

SCHNITTDATEN › *Cutting Data*

		MGN010	
ISO	MATERIAL <i>Material</i>	Vc (m/min)	VORSCHUB fz (mm/d) <i>Feed fz (mm/t)</i>
N	ALUMINIUM UND NE-METALLE › <i>Aluminium and Non Ferrous</i>	350-1000	0,20-0,50

ANTI-VIBRATION SCHAFT

Anti-Vibration Bars



STAHLSCHAEFTE MIT WOLFRAM UND INTERNER KUEHLMITTELZUFUHR

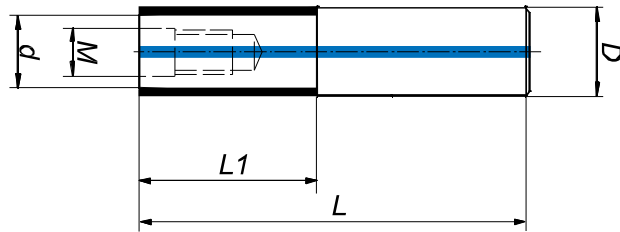
Steel bars with tungsten and Internal coolant supply

BEZEICHNUNG Code	Ø D (mm)	L1 (mm)	L (mm)	Ø d (mm)	M (mm)
BAVD12M06 L100	12	40	100	9,8	6
BAVD12M06 L110	12	60	110	9,8	6
BAVD12M06 L130	12	80	130	9,8	6
BAVD16M08 L100	16	40	100	12,8	8
BAVD16M08 L100	16	40	100	12,8	8
BAVD16M08 L130	16	70	130	12,8	8
BAVD16M08 L150	16	70	150	12,8	8
BAVD16M08 L200	16	120	200	12,8	8
BAVD20M10 L130	20	70	130	15,8	10
BAVD20M10 L160	20	80	160	15,8	10
BAVD20M10 L200	20	120	200	15,8	10
BAVD20M10 L140	20	80	140	17,8	10
BAVD20M10 L160	20	100	160	15,8	10
BAVD20M10 L160M*	20	100	160	17,8	10
BAVD20M10 L180	20	120	180	15,8	10
BAVD20M10 L180M*	20	120	180	17,8	10
BAVD25M12 L125	25	60	125	20,8	12
BAVD25M12 L145	25	80	145	20,8	12
BAVD25M12 L165	25	100	165	20,8	12

BESTELLBEISPIEL: BAVD12M06 + L090 › Ordering example: BAVD12M06 + L090 * M = "d" UEBERGROESSE › Oversize

STAHL SCHAFT

Steel Bars



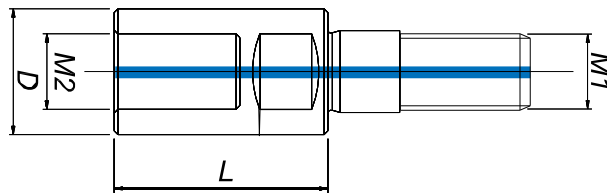
**STAHLSCHAEFTE MIT INTERNER
KUEHLMITTELZUFUHR**
Steel bars and Internal coolant supply

BEZEICHNUNG Code	∅ D (mm)	L1 (mm)	L (mm)	∅ d (mm)	M (mm)
BCS12M06 L065	12	20	65	9,8	6
BCS12M08 L088	16	40	88	12,8	8
BCS12M10 L095	20	45	95	17,8	10
BCS12M12 L106	25	50	106	20,8	12
BCS12M16 L110	32	50	110	28,8	16

BESTELLBEISPIEL: BCS12M06 + L065 › Ordering example: BCS12M06 + L065

STAHL VERLAENGERUNGS SCHAFT

Steel Extension Bars



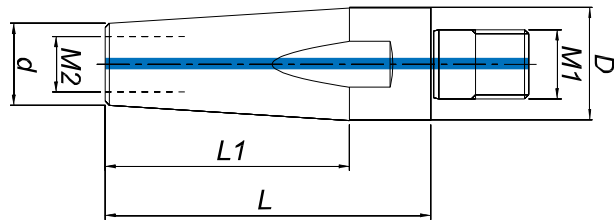
STAHLSCHAEFTE MIT INTERNER KUEHLMITTELZUFUHR
Steel bars and Internal coolant supply

EZEC NUNG	M1 (mm)	M2 (mm)	ø D (mm)	L (mm)
BEM08L040 M08	8	8	13,8	40
BEM10L060 M10	10	10	18,0	60
BEM12L060 M12	12	12	21,0	60
BEM16L060 M16	16	16	29,0	60

BESTELLBEISPIEL: BEM08L040 + M08 › Ordering example: BEM08L040 + M08

STAHL REDUZIERUNGS SCHAFT

Steel Reduction Bars



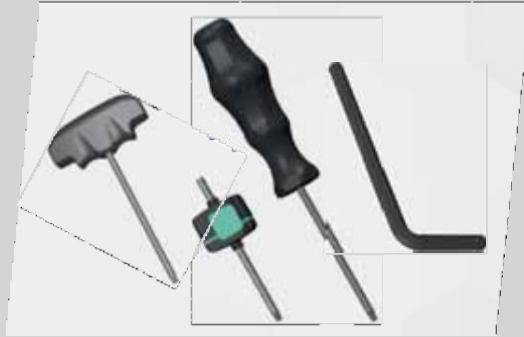
**STAHLSCHAEFTE MIT INTERNER
KUEHLMITTELZUFUHR**
Steel bars and Internal coolant supply

BEZEICH Code	M1	M1 (mm)					
BMM08L040 M06	8	6	13,8	13,0			
BMM10L040 M08	10	8	18,0	13,8	40	25	
BMM12L040 M10	12	10	21,0	18,0	40	15	
BMM16L040 M12	16	12	29,0	21,0	40	19	

BESTELLBEISPIEL: BMM08L040 + M06 › Ordering example: BMM08L040 + M06




ERSATZTEILE *Spare Parts*



DREHEN

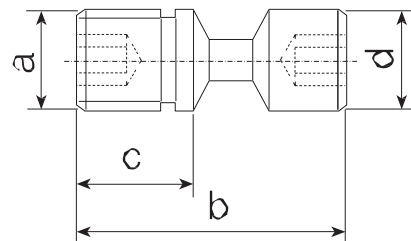
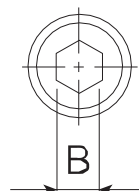
Turning

HEBEL › Lever

BEZEICHNUNG › Code	FUER WENDESCHNEIDPLATTE › Product Detail	
TLT 001	CNMG 09, DNMG 11, SNMG 09, TNMG 16, WNMG 06	
TLT 002	CNMG 12, SNMG 12, TNMG 22, WNMG 08	
TLT 003	DNMG 15	
TLT 004	CNMG 16, SNMG 15	
TLT 005	CNMG 19, SNMG 19	
TLT 006	CNMG 25, SNMG 25	
TLT 007	S16P PCLNR/L 09, S16P PTUNR/L 16	








HEBELSCHRAUBE › Lever Screw

BEZEICHNUNG › Code	FUER WENDESCHNEIDPLATTE › Product Detail	a (M)	b	c	d	B
TVLT 001	S20R PCLNR/L 09, S20R PDUNR/L 11, S20R PDQNR/L 11, S20R PWLNR/L 06, S20R PTUNR/L 16	M6x1.0	14	10	5.85	2.5
TVLT 002	CNMG 09, DNMG 11, SNMG 09, TNMG 16, WNMG 06	M6x1.0	17	10	5.85	2.5
TVLT 003	CNMG 12, SNMG 12, TNMG 22, WNMG 08, DNMG 15	M8x1.0	19.8	11	7.9	3
TVLT 004	CNMG 16, SNMG 15	M8x1.0	21.5	13	7.75	3
TVLT 005	CNMG 19, SNMG 19	M10x1.0	27.5	15	9.9	4
TVLT 006	CNMG 25, SNMG 25	M12x1.0	36	20	12	5
TVLT 007	S16P PCLNR/L 09, S16P PCTUR/L 16	M6x1.0	12.6	6.5	5.9	2.5
TVLT 008	S25S PCLNR/L 12, S25S PDUNR/L 15, S25S PSKNR/L 12	M8x1.0	15	10	7.9	3



ERSATZTEILE › Spare Parts
ERSATZTEILE › Spare Parts

DREHEN*Turning***UNTERLEGPLATTEN › Shims**

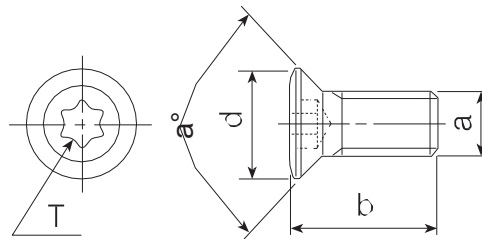
BEZEICHNUNG <i>Code</i>	SPANNSYSTEM <i>Clamping System</i>	FUER WENDESCHNEIDPLATTE <i>Product Detail</i>	
TSCT001	Tipo-S	CCMT09	
TSCT002	Tipo-P	CNMG09	
TSCT003	Tipo-S	CCMT12	
TSCT004	Tipo-P	CNMG12	
TSCT005	Tipo-P	CNMG16	
TSCT006	Tipo-P	CNMG19	
TSCT007	Tipo-P	CNMG25	
TSDT001	Tipo-S	DCMT11	
TSDT002	Tipo-P	DNMG1504	
TSDT003	Tipo-P	DNMG1506	
TSDT004	Tipo-P	DNMG11	
TSST001	Tipo-S	SCMT09	
TSST002	Tipo-S	SCMT12	
TSST003	Tipo-P	SNMG12	
TSST004	Tipo-P	SNMG19	
TSST005	Tipo-P	SNMG25	
TSST006	Tipo-P	SNMG15	
TSIT001	Tipo-S	TCMT16	
TSIT002	Tipo-P	TNMG22	
TSIT003	Tipo-P	TNMG16	
TSVT001	Tipo-S	VBMT 16, VCMT 16	
TSWT001	Tipo-P	WNMG08	
TSWT002	Tipo-P	WNMG06	
TSKT001	Tipo-C	KNLX16	
TSKT002	Tipo-C	KNLX16	

DREHEN

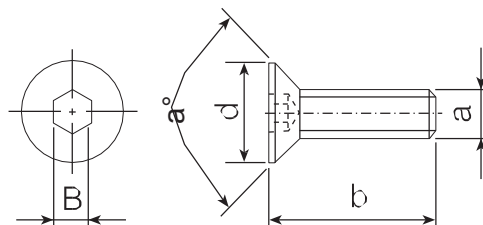
Turning

KELLSCHRAUBE › Wedge Screw

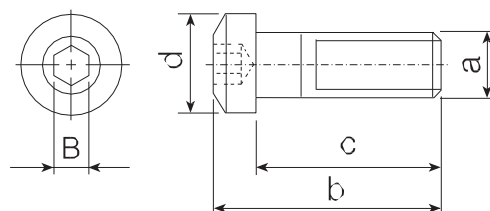
BEZEICHNUNG › Code	FUER WENDESCHNEIDPLATTE › Product Detail	a (M)	b	T	d	a°
TWWT001	-	M3.5x0.6	11.1	15	5.3	60
TWWT002	-	M4x0.7	11.1	15	5.6	55



BEZEICHNUNG › Code	FUER WENDESCHNEIDPLATTE › Product Detail	a (M)	b	d	B	a°
TWWT003	-	M6x1.0	16	9	4	60



BEZEICHNUNG › Code	FUER WENDESCHNEIDPLATTE › Product Detail	a (M)	b	c	d	B
TWWT004	-	M6x1.0	26.5	20	10.6	4





ERSATZTEILE › Spare Parts

DREHEN

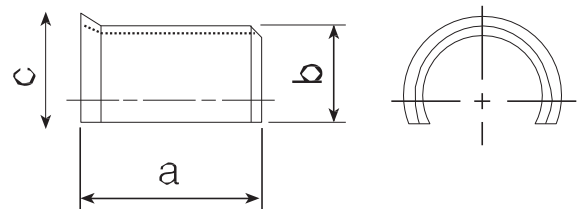
Turning

SPANNKEIL › Wedge Clamp

BEZEICHNUNG Code	SPANNSYSTEM Clamping System	FUER WENDESCHNEIDPLATTE Product Detail	
TWRT 001	Tipo-S	RC...1204 - RC...1605	
TWRT 002	Tipo-	RC...2006	
TWRT 003	S Tipo-	RC...0803 - RC...10T3	
TWKT 001	Tipo-C	KNUX - R	
TWKT 002	Tipo-C	KNUX- L	

SPANNHUELSE › Shim Springs

BEZEICHNUNG Code	FUER WENDESCHNEIDPLATTE › Product Detail	a	b	c
TPST 001	CNMG 09 ,DNMG 11, SNMG 09, TNMG 16, WNMG 06	5.6	4.9	6
TPST 002	CNMG 12, SNMG 12, TNMG 22, WNMG 08, DNMG 15	6	6.9	7.9
TPST 003	CNMG 16, SNMG 15	8.9	8	9.5
TPST 004	CNMG 19, SNMG 19	11	9.8	10.7
TPST 005	CNMG 25, SNMG 25	12	13	15

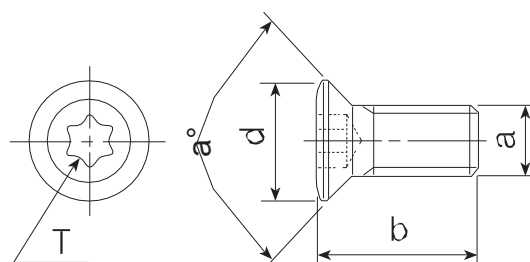


DREHEN

Turning

WENDESCHNEIDPLATTEN SCHRAUBE › Insert Screw

BEZEICHNUNG Code	SPANNSYSTEM Block System	a (M)	b	T	d	a°
TVTT 001	Tipo-S	M3x0.5	8	8	3.9	45
TVTT 002	Tipo-S	M4.5x0.75	16	20	6.5	45
TVTT 003	Tipo-S	M5x0.8	11	20	6.6	50
TVTT 004	Tipo-S	M6x1.0	16	20	7.6	50
TVTT 006	Tipo-S	M2x0.4	4.3	6	2.7	60
TVTT 007	Tipo-S	M2.2x0.45	5.2	7	3.15	60
TVTT 009	Tipo-S	M2.5x0.45	4.5	8	3.5	45
TVTT 010	Tipo-S	M2.5x0.45	5.8	8	3.5	45
TVTT 011	Tipo-S	M3.5x0.6	10.7	15	5.3	60
TVTT 012	Tipo-S	M3.5x0.6	12	15	5.3	60
TVTT 013	Tipo-S	M3.5x0.6	13.7	15	5.3	60
TVTT 014	Tipo-S	M3.5x0.6	7.9	15	5.3	55
TVTT 015	Tipo-S	M3.5x0.6	8.7	15	5.3	60
TVTT 016	Tipo-S	M4.5x12	12	20	6.6	60

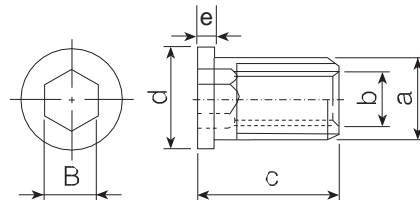


DREHEN

Turning

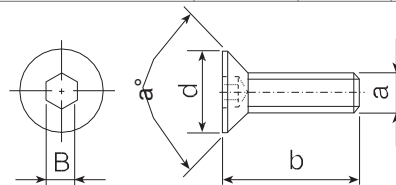
SCHRAUBE UNTERLEGPLATTEN › Shim Screw

BEZEICHNUNG Code	SPANNSYSTEM Block System	FUER WENDESCHNEIDPLATTE Product Detail	a (M)	b	c	d	B	e
TVST 001	Tipo-S	CCMT 09, DCMT 11, VBMT 16, VCMT 16, TCMT 16, SCMT 09, 16ER/L, 16IR/L	M5x0.5	M3.5x0.6	11.3	6	3.5	1.2
TVST 002	Tipo-S	CCMT 12, SCMT 12, 22 ER/L, 22 IR/L	M6X0.75	M4.5X0.75	12	7.5	4.5	1.6
TVST 003	Tipo-S	Ø25 DCMT 11, Ø25-Ø32 CCMT 09, Ø25 TCMT 16, S25S-S32T SVJBR/L 16	M5X0.5	M3.5x0.6	8	6	3.5	1.2
TVST 004	Tipo-S	Ø25-Ø32 CCMT 12, Ø25-Ø32 SCMT 12, SSDCN 1616H12, SSSCR/L 1616H12, SIR/L S25R 22	M6X0.75	M4.5X0.75	8	7.5	4.5	1.05



SCHRAUBE UNTERLEGPLATTEN › Shim Screw

BEZEICHNUNG Code	SPANNSYSTEM Block System	FUER WENDESCHNEIDPLATTE Product Detail	a (M)	b	d	B	a°
TVST 005	Tipo-C	KNUX 16	M3x0.5	10	5.9	2	90°



SECHSKANTINBUSSCHUESSEL › Allen Keys

BEZEICHNUNG Code	ABMESSUNG › Dimension
TCET 001	2.5
TCET 002	3
TCET 003	4
TCET 004	5



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**NACHSCHLEIFEN UND
BESCHICHTUNGSDIENST**
*Regrinding and
Coating Service*

DREHEN

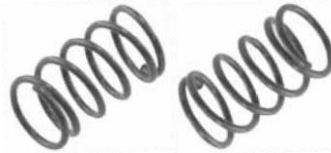
Turning

TORX SCHLUESSEL › Torx Keys

BEZEICHNUNG G › Code	ABMESSUNG › Dimension	
TCTT 001	T06	
TCTT 002	T07	
TCTT 003	T08	
TCTT 004	T15	
TCTT 005	T20	

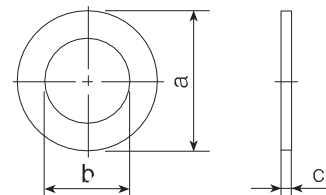
SPIRALFEDER › Clamp Springs

BEZEICHNUNG › Code	FUER WENDESCHNEIDPLATTE › Product Detail	a (M)	a	b	c
TMT 001	KNUX 16	-	8.5	13.5	0.7




FEDERSCHEIBE › Stamp

BEZEICHNUNG › Code	FUER WENDESCHNEIDPLATTE › Product Detail	a (M)	a	b	c
TAT 001	-	-	11	6.5	0.5



SCHUESSEL FUER ABSTECHHALTER › Wrench

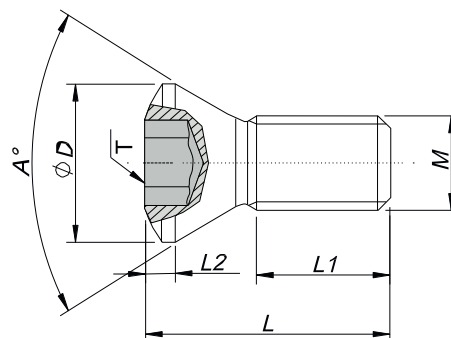
BEZEICHNUNG G › Code	ABMESSUNG › Dimension	
TCIT 001	T06	

FRAESEN


Milling

WENDESCHNEIDPLATTEN SCHRAUBE › Insert Screw

BEZEICHNUNG › Code	a (Metrico)	Ø D	A°	L	L1	L2	T
TVTF 001	M1,8 x 0,35	2,75	55°	3,6	1,9	0,4	6
TVTF 002	M2,5 x 0,45	3,45	60°	5,5	2,8	0,7	8
TVTF 003	M3 x 0,5	4,40	60°	7,4	4,2	0,8	9
TVTF 004	M3,5 x 0,6	5,50	60°	7,7	3,7	1,0	15
TVTF 005	M4 x 0,7	5,50	60°	9,0	5,5	1,0	15
TVTF 006	M4 x 0,7	5,50	60°	11,0	6,0	1,2	15
TVTF 007	M4,5 x 0,75	6,60	55°	10,5	5,5	1,0	20
TVTF 008	M4,5 x 0,75	7,20	60°	14,0	9,0	1,0	20
TVTF 009	M5 x 0,8	6,40	43°	11,0	5,9	0,5	20
TVTF 010	M3,5 x 0,6	5,30	60°	12,0	8,0	1,4	15




UNTERLEGSCHIEBE › Washer

BEZEICHNUNG G › Code	ABMESSUNG › Dimension	
TRF 001	-	

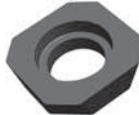
FRAESEN

Milling

SPANNSCHRAUBE FUER FRAESKOERPER › Lock Screw Mill Cutter

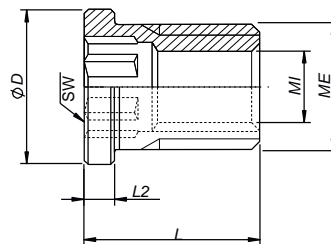
BEZEICHNUNG G › Code	ABMESSUNG › Dimension	
TBDF 001	-	
TBDF 002	-	

UNTERLEGPLATTE › Locking plate

BEZEICHNUNG G › Code	ABMESSUNG › Dimension	
TSSF 001	-	

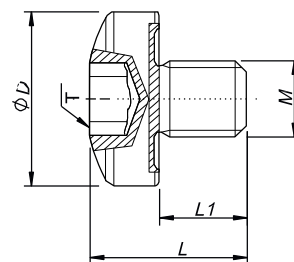
SCHRAUBE UNTERLEGPLATTEN › Shim Screw

BEZEICHNUNG › Code	SW	MI	ME	Ø D	L	L2
TVSF 001	3,5	M3,5 x 0,6	M5,0 x 0,5	6,3	7	1,2



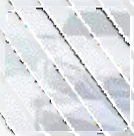
SPANNSCHRAUBE › Clamping Screw

BEZEICHNUNG › Code	a (M)	Ø D	L	L1	T
TFF 001	M3,5 x 0,6	8,00	7,2	4,0	15



ANWENDUNGSBEREICHE

Fields of Competence




AUTOMOBILINDUSTRIE › *Automotive*




FRAESEN

Milling

TORX SCHLUESSEL › Torx Key

BEZEICHNUNG G › Code	ABMESSUNG › Dimension	
TCTF 001	T06	
TCTF 002	T08	
TCTF 003	T09	
TCTF 004	T15	
TCTF 005	T20	
TCTF 006	T15	
TCTF 007	T20	

SPANNSCHLUESSEL FÜR FRAESKOERPER › Clamping Wrench for Body Mill

BEZEICHNUNG G › Code	ABMESSUNG › Dimension	
TCCF 001	-	
TCCF 002	-	



TECHNISCHE DATEN

Technical Guide



SCHNITTGESCHWINDIGKEIT (DREHEN)

Cutting Speed (Turning)

ISO	MATERIAL Material	CVD					
		← VERSCHLEISSFESTIGKEIT › Wear Resistance			ZAEHIGKEIT › Toughness →		
		MGU515		MGU525		MGU540	
	f (mm/g)	0.2	0.4	0.2	0.4	0.2	0.4
P	< 800 N/mm ²	250-350	180-270	200-295	170-240	135-230	120-210
	700-1000 N/mm ²	190-250	170-230	170-230	140-210	125-205	105-185
	1000-1300 N/mm ²	135-220	120-205	125-215	110-185	105-205	75-175

ISO	MATERIAL Material	PVD							
		← VERSCHLEISSFESTIGKEIT › Wear Resistance				ZAEHIGKEIT › Toughness →			
		VMGP710		MGU610		MGM720		MGU620	
	f (mm/g)	0.2	0.4	0.2	0.4	0.2	0.4	0.2	0.4
P	< 800 N/mm ²	140-245	130-225	140-230	130-225	130-230	120-220	120-225	105-220
	700-1000 N/mm ²	130-230	125-225	130-220	125-215	125-220	115-210	110-215	100-210
	1000-1300 N/mm ²	-	-	-	-	-	-	-	-

ISO	MATERIAL Material	CVD			
		← VERSCHLEISSFESTIGKEIT › Wear Resistance		ZAEHIGKEIT › Toughness →	
		MGU515		MGU525	
	f (mm/g)	0.2	0.4	0.2	0.4
M	AUSTENITISCH › Austenitic	130-290	100-240	100-240	70-175
	DUPLEX	190-220	150-185	150-190	120-150

ISO	MATERIAL Material	PVD					
		← VERSCHLEISSFESTIGKEIT › Wear Resistance			ZAEHIGKEIT › Toughness →		
		MGP710		MGM720		MGS725	
	f (mm/g)	0.2	0.4	0.2	0.4	0.2	0.4
M	AUSTENITISCH › Austenitic	130-230	130-230	120-220	125-220	120-220	120-200
	DUPLEX	130-220	120-210	120-210	115-210	120-210	105-195

ISO	MATERIAL Material	CVD					
		← VERSCHLEISSFESTIGKEIT › Wear Resistance			ZAEHIGKEIT › Toughness →		
		MGK510		MGK520		MGU540	
	f (mm/g)	0.2	0.4	0.2	0.4	0.2	0.4
K	GRAUGUSS › Grey Cast Iron	220-380	190-330	200-330	170-280	150-230	140-220
	GUSSEISEN MIT KUGELGRAPHIT › Nodular Cast Iron	150-280	135-265	140-250	125-230	125-220	115-205

ISO	MATERIAL › Material	UNBESCHICHTET › Uncoated	
		MGN010	
	f (mm/g)	0.2	0.4
N	ALUMINIUM LEGIERUNGEN › Aluminium Alloy	200-1000	200-800
	KUPFER - MESSING - ZINK LEGIERUNGEN › Copper-Brass-Zinc Alloys	150-600	100-400

ISO	MATERIAL Material	PVD					
		← VERSCHLEISSFESTIGKEIT › Wear Resistance			ZAEHIGKEIT › Toughness →		
		MGP710		MGM720		MGS725	
	f (mm/g)	0.2	0.4	0.2	0.4	0.2	0.4
S	SUPPERLEGIERUNGEN › Hrsa	50-90	30-80	30-70	25-60	25-60	25-60
	TITAN › Titanium	60-150	50-140	55-130	40-120	45-100	40-100

SCHNITTGESCHWINDIGKEIT (ABSTECHEN)

Cutting Speed (Parting Off)

ISO	MATERIAL <i>Material</i>	CVD	
		← VERSCHLEISSFESTIGKEIT › <i>Wear Resistance</i>	ZÄHIGKEIT › <i>Toughness</i> →
		MGU515	MGU535
	f (mm/g)	0.04/0.30	0.04/0.30
P	< 800 N/mm ²	85-165	70-140
	700-1000 N/mm ²	60-140	55-125
	1000-1300 N/mm ²	50-130	45-115

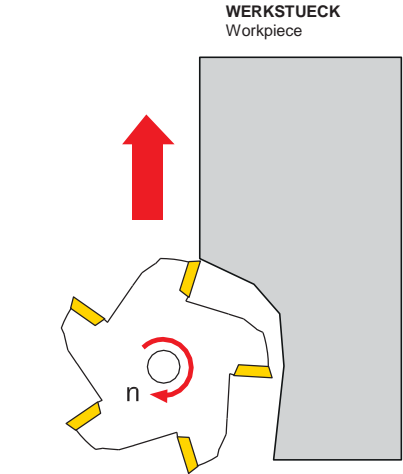
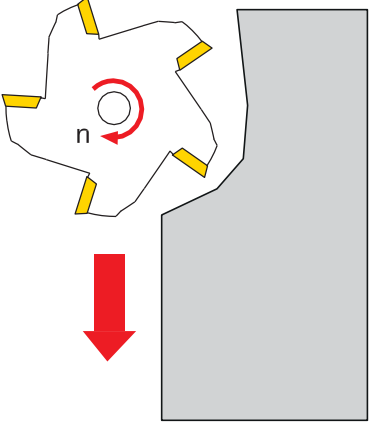
ISO	MATERIAL <i>Material</i>	CVD	
		← VERSCHLEISSFESTIGKEIT › <i>Wear Resistance</i>	ZÄHIGKEIT › <i>Toughness</i> →
		MGU515	MGU535
	f (mm/g)	0.04/0.30	0.04/0.30
M	AUSTENITISCH › <i>Austenitic</i>	65-150	50-130
	DUPLEX	65-140	50-125

ISO	MATERIAL <i>Material</i>	CVD	
		← VERSCHLEISSFESTIGKEIT › <i>Wear Resistance</i>	ZÄHIGKEIT › <i>Toughness</i> →
		MGP535	
	f (mm/g)	0.04/0.30	
K	GRAUGUSS › <i>Grey Cast Iron</i>		70-140
	GUSSEISEN MIT KUGELGRAPHIT › <i>Nodular Cast Iron</i>		45-125

TIPS ZUR BEARBEITUNG

Machining Suggestions

TABELLE 1 › Table 1

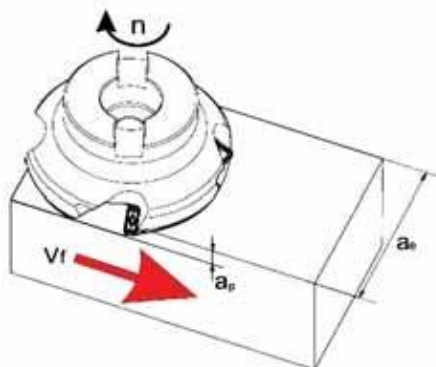
ARBEITSBEDINGUNGEN › Working Conditions	ERGEBNIS › Results	
<p style="text-align: center;">WERKSTUECK Workpiece</p>  <p style="text-align: center;">GLEICHLAUF- Climb</p> <p>SPANDICKE - Chip thickness</p> <p>... WENN DIE WENDESCHNEIDPLATTE IN DAS MATERIAL EINTRITT</p> <p>... When the insert enter the workpiece</p>	<p style="text-align: center;">GLEICHLAUF FRAESEN</p> <p>GLEICHLAUF FRAESEN IST IMMER BEVORZUGT WO DIE WERKZEUGMASCHINE, AUFSPANNUNG UND WERKSTUECK ES ZULASSEN.</p> <p>DIE GROSSE SPANDICKE IST VORTEILHAFT, UND DIE SCHNEIDKRAEFTE NEIGEN DAZU, DASS WERKSTUECK IN DIE SCHNEIDE ZU ZIEHEN, UND HALTEN DIE SCHNEIDEN IM SCHNITT.</p>	<p style="text-align: center;">CLIMB MILLING</p> <p><i>Climb milling is always preferred wherever the machine tool, fixture and workpiece will allow.</i></p> <p><i>The large chip thickness is advantageous, and the cutting forces tend to pull the workpiece into the cutter, holding the cutting edge in the cut.</i></p>
 <p style="text-align: center;">KONVENTIONELL- Conventional</p> <p>SPANDICKE - Chip thickness</p> <p>... WENN DIE WENDESCHNEIDPLATTE DAS WERKSTUECK VERLAEST</p> <p>... When the insert leave the workpiece</p>	<p style="text-align: center;">KONVENTIONELL FRAESEN</p> <p>DIE SPANDICKE BEGINNT BEI NULL UND NIMMT ZU GEGEN ENDE DES SCHNITTES. SCHNEIDKRAEFTE NEIGEN DAZU DEN FRAESER UND DAS WERKSTUECK WEG ZU SCHIEBEN.</p> <p>DIE SCHNEIDE DRUECKT IN DER SCHNEIDZONE WO DURCH EINE UEBERMAESSIGE REIBUNG ERZEUGT WIRD UND HOHE TEMPERATUREN. ALL DIES REDUZIERT DIE STANDZEIT DES WERKZEUGES.</p> <p>DIESE KRAEFTE, VORWIEGEND RADIAL, NEIGEN DAZU DAS WERKSTUECK VOM TISCH ZU HEBEN.</p>	<p style="text-align: center;">CONVENTIONAL MILLING</p> <p><i>The chip thickness starts at zero and increases toward the end of the cut. Cutting forces tend to push the cutter and workpiece away from each other.</i></p> <p><i>The cutting edge "pushed" in the cutting zone, producing excessive friction thereby increasing temperatures. All this reduces the tool life.</i></p> <p><i>Forces, mainly radial, will tend to lift the workpiece from the table.</i></p>

FORMELN

Formulas

TABELLE 2 › Table 2

FORMELN › Formulas	ZEICHENERKLAERUNG › Legend
<p>SCHNITTGESCHWINDIGKEIT (m/min) Cutting Speed (m/min)</p> $v_c = \frac{d_1 \cdot n \cdot \pi}{1000}$	<p>v_c SCHNITTGESCHWINDIGKEIT (m/min) Cutting Speed (m/min)</p>
<p>SPINDEL DREHZAHL (U/min) Spindle Speed (rpm)</p> $n = \frac{v_c \cdot 1000}{d_1 \cdot \pi}$	<p>n SPINDEL DREHZAHL (U/min) Spindle Speed (rpm)</p>
<p>VORSCHUB PRO ZAHN (mm/Z) Feed Tooth (mm/t)</p> $f_z = \frac{v_f}{n \cdot z}$	<p>f_z VORSCHUB PRO ZAHN (mm/Z) Feed Tooth (mm/t)</p>
<p>VORSCHUB (mm/min) Feed Speed (mm/min)</p> $v_f = f_z \cdot n \cdot z$	<p>v_f VORSCHUB (mm/min) Feed Speed (mm/min)</p>
<p>VORSCHUB PRO UMDREHUNG (mm/1) Feed Revolution(mm/r)</p> $f = f_z \cdot z$	<p>z ANZAHL DER ZAEHNE Number of teeth</p>
<p>SPANVOLUMEN (cm³/min) Chip Removal (cm³/min) $Q = \frac{a_p \cdot a_e \cdot v_f}{1000}$</p>	<p>a_e SCHNITTBREITE (mm) Width of Cut (mm)</p>
<p>DURCHSCHNITTLICHE SPANDICKE (mm) Average Chip Thickness (mm)</p> $h_m = \frac{\sin(\alpha) \cdot 180 \cdot a_e \cdot f_z}{\pi \cdot d_1 \cdot \arcsin\left(\frac{a_e}{d_1}\right)}$	<p>a_p SCHNITT-TIEFE (mm) Depth of Cut (mm)</p>
	<p>d_1 FRAESERDURCHMESSER (mm) Cutter Diameter (mm)</p>
	<p>h_m DURCHSCHNITTLICHE SPANDICKE (mm) Average Chip Thickness (mm)</p>
	<p>Q SPANVOLUMEN (cm³/min) Chip Removal (cm³/min)</p>
	<p>P_c LEISTUNG (KW) Power Requirement (kW)</p>
	<p>α EINGRIFFSWINKEL (°) Lead Angle (°)</p>
	<p>\downarrow WIRKUNGSGRAT DER MASCHINE Machine Coefficient</p>



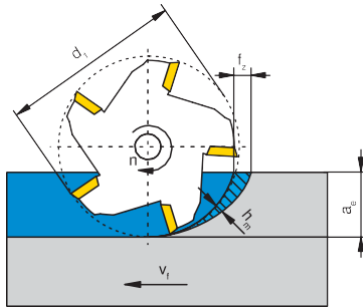
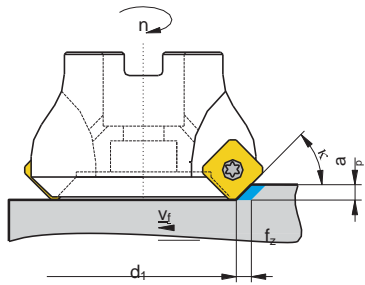
TECHNISCHE DATEN › Technical Guide

FORMELN

Formulas

TABELLE 3 › Table 3

BERECHNUNGSBEISPIEL › Calculation Example



FRAESERTYP:
050A04R4522SE13T3
WENDESCHNEIDPLATTE:
..SEHT13T3AGSN
FRAESERDURCHMESSER: ... 50
mm ZAEHNEZAHL: ... 4
SCHNITT-TIEFE a_p: ... 2
mm SCHNITTBREITE
a_e: ... 34 mm
SCHNITTBREITE K: ...
45°

WAHL DER SCHNITTGESCHWINDIGKEIT
V_c: ... 225 m/min

KALKULATION DREHZAHL:

$$n = \frac{225 \cdot 1000}{50 \cdot \Lambda} = 1430 \text{ U/min}$$

ZAHNVORSCHUB: ... 0,15 mm

KALKULATION VORSCHUBGESCHWINDIGKEIT

$$v_f = 0,15 \cdot 1430 \cdot 4 = 860 \text{ mm/min}$$

KALKULATION SPANVOLUMEN:

$$Q = 1000 = 58 \text{ cm}^3/\text{min}$$

Cutter type: 050A04R4522SE13T3
Insert: ..SEHT13T3AGSN
Cutter diameter: ... 50
mm Number of teeth:
... 4 Depth of cut a_p:
... 2 mm Width of cut
a_e: ... 34 mm Lead
angle K: ... 45°

Cutting speed choice
v_c: ... 225 m/min

Revolution calculation:

$$n = \frac{225 \cdot 1000}{50 \cdot \Lambda} = 1430 \text{ rpm}$$

Feed tooth: ... 0,15 mm

Feed speed calculation:

$$v_f = 0,15 \cdot 1430 \cdot 4 = 860 \text{ mm/min}$$

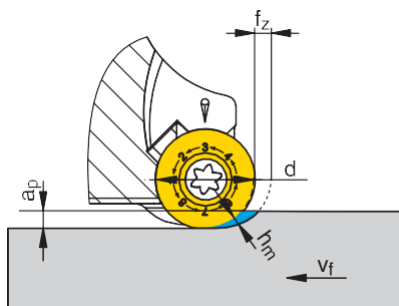
$$\frac{2 \cdot 34 \cdot 860}{1000}$$

Chip removal calculation:

$$Q = 1000 = 58 \text{ cm}^3/\text{min}$$

$$h_m = f_z \cdot \sqrt{\frac{d}{a_p}}$$

$$= \frac{f_z}{d} \cdot \sqrt{\frac{d^3}{a_p}}$$



FRAESER MIT RUNDER
WENDESCHNEIDPLATTE

FRAESERTYP: ... 052C05R0022...
WENDESCHNEIDPLATTE: ... RDMT
12T3M0T
FRAESERDURCHMESSER d: ... 12
mm SCHNITT-TIEFE a_p: ... 2 mm
DURCHSCHNITTLICHE SPANDICKE
h_m: ... 0,15 mm

$$h_m = 0,15 \cdot \sqrt{\frac{12}{2}} = 0,37 \text{ mm}$$

$$= \frac{0,15}{12} \cdot \sqrt{\frac{12^3}{2}} =$$

Cutter with round inserts

Cutter Type: ... 052C05R0022...
Insert: ... RDMT 12T3M0T
Insert diameter d: ... 12
mm Depth of cut a_p: ...
2 mm Average chip
thickness
h_m: ... 0,15 mm

FORMELN

Formulas

TABELLE 4 › Table 4

BEKANNTEN DATEN › Known Data

d_1 : 80 (mm)	f_z : 0,3 (mm/d)
z : 6	n : 477 (g/min)
v_c : 120 (m/min)	v_f : 859 (mm/min)
a_e : 62 (mm)	k_c : 2350 (N/mm ²)
a_p : 3 (mm)	λ : 80%

$$P_c = \frac{a_p \cdot a_e \cdot v_f \cdot k_c}{60 \cdot 10^6 \cdot \eta} \quad P_c = \frac{3 \cdot 62 \cdot 859 \cdot 2350}{60 \cdot 10^6 \cdot 0.8} = 7.82 \text{ kW}$$

		SPEZIFISCHE SCHNITTKRAFT k_c (N/mm ²) Specific Cutting Force k_c (N/mm ²)				
MATERIAL Workpiece	HAERTE (HB) Hardness (HB)	0.1 mm ZAHN 0.1 mm Tooth	0.2 mm ZAHN 0.2 mm Tooth	0.3 mm ZAHN 0.3 mm Tooth	0.4 mm ZAHN 0.4 mm Tooth	0.5 mm ZAHN 0.5 mm Tooth
BAUSTAHL Mild Steel	125 HB	2200	1950	1820	1700	1580
UNLEGIERTER STAHL Medium Steel	280 HB	1980	1800	1730	1600	1570
LEGIERTER STAHL Alloy Steel	330 HB	2540	2250	2140	2000	1800
WERKZEUG STAHL Tool Steel	360 HB	2710	2410	2240	2120	2030
ROSTFREIER STAHL Stainless Steel	230 HB	3070	3650	2350	2200	1980
GRAUGUSS Grey Cast Iron	180 HB	1750	1400	1240	1050	970
GUSSEISEN MIT KUGELGRAPHIT Nodular Cast Iron	250 HB	1910	1650	1400	1240	1050
ALUMINIUM LEGIERUNGEN Aluminum Alloy	90 HB	700	600	490	450	390
MESSING - KUPFER Brass - Copper	100 HB	1150	880	760	680	610
HITZE BESTAENDIGE SUPER LEGIERUNGEN Heat resistant Super Alloy	300 HB	3310	2900	2580	2400	2200
TITAN LEGIERUNGEN Titanium Alloy	250 HB	1750	1400	1240	1050	970

FORMELN

Formulas

TABELLE 5 › Table 5 EINSTECH FRAESEN IN DER Z ACHSE › Z-axis Plunge Mill



SP..08T3

FRAESERDURCHMESSER SER Mill Diameter	20	25	32	35	42	SCHNITTBREITE a_e Width of Cut a_e	WELLENHOEHE (h) Scallop Height (h) mm
STUFE (P) Stepover	4,36	4,90	5,57	5,83	6,40	1,00	0,25
	6,00	6,78	7,75	8,12	8,94	2,00	0,48
	7,14	8,12	9,33	9,80	10,82	3,00	0,71
	8,00	9,17	10,58	11,14	12,33	4,00	0,93
	8,66	10,00	11,62	12,25	13,60	5,00	1,13
	9,17	10,68	12,49	13,19	14,70	6,00	1,33

SP..1305

FRAESERDURCHMESSER Mill Diameter	32	35	42	50	52	63	66	80	a_e	WELLENHOEHE (h) Scallop Height (h)
STUFE (P) Stepover	5,57	5,83	6,40	7,00	7,14	7,87	8,06	8,89	1,00	0,25
	7,75	8,12	8,94	9,80	10,00	11,05	11,31	12,49	2,00	0,48
	9,33	9,80	10,82	11,87	12,12	13,42	13,75	15,20	3,00	0,70
	10,58	11,14	12,33	13,56	13,86	15,36	15,75	17,44	4,00	0,92
	11,62	12,25	13,60	15,00	15,33	17,03	17,46	19,36	5,00	1,13
	12,49	13,19	14,70	16,25	16,61	18,49	18,97	21,07	6,00	1,32
	13,23	14,00	15,65	17,35	17,75	19,80	20,32	22,61	7,00	1,63
	13,86	14,70	16,49	18,33	18,76	20,98	21,54	24,00	8,00	1,84
	14,39	15,30	17,23	19,21	19,67	22,05	22,65	25,28	9,00	2,05
14,83	15,81	17,89	20,00	20,49	23,02	23,66	26,46	10,00	2,25	

WN..1207

FRAESERDURCHMESSER Mill Diameter	35	42	50	52	63	66	80	a_e	WELLENHOEHE (h) Scallop Height (h)
STUFE (P) Stepover	5,83	6,40	7,00	7,14	7,87	8,06	8,89	1,00	0,25
	8,12	8,94	9,80	10,00	11,05	11,31	12,49	2,00	0,48
	9,80	10,82	11,87	12,12	13,42	13,75	15,20	3,00	0,70
	11,14	12,33	13,56	13,86	15,36	15,75	17,44	4,00	0,92
	12,25	13,60	15,00	15,33	17,03	17,46	19,36	5,00	1,13
	13,19	14,70	16,25	16,61	18,49	18,97	21,07	6,00	1,32
	14,00	15,65	17,35	17,75	19,80	20,32	22,61	7,00	1,63
	14,70	16,49	18,33	18,76	20,98	21,54	24,00	8,00	1,84
	15,30	17,23	19,21	19,67	22,05	22,65	25,28	9,00	2,05


WD..1204


FRAESERDURCHMESSER Mill Diameter	52	63	66	80	a_e	WELLENHOEHE (h) Scallop Height (h)
STUFE (P) Stepover	7,14	7,87	8,06	8,89	1,00	0,25
	10,00	11,05	11,31	12,49	2,00	0,48
	12,12	13,42	13,75	15,20	3,00	0,70
	13,86	15,36	15,75	17,44	4,00	0,92
	15,33	17,03	17,46	19,36	5,00	1,13
	16,61	18,49	18,97	21,07	6,00	1,32
	17,75	19,80	20,32	22,61	7,00	1,63
	18,76	20,98	21,54	24,00	8,00	1,84
	19,67	22,05	22,65	25,28	9,00	2,05

FEHLER

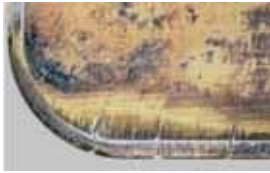
Failure

SCHNEIDKANTEN VERSCHLEISS › *Edge Wear*

	URSACHE › <i>Cause</i>	MOEGLICHE LOESUNG › <i>Possible Solution</i>
 <p>ABRIEB AUF DER FLANKE, NORMALER VERSCHLEISS NACH EINER GEWISSEN BEARBEITUNGS ZEIT</p> <p><i>Abrasion on flank, normal wear after a certain machining</i></p>	<ul style="list-style-type: none"> • SCHNITTGESCHWINDIGKEIT ZU HOCH • HARTMETALLQUALITAET MIT UNZUREICHENDER VERSCHLEISSFESTIGKEIT • FALSCHER VORSCHUB <ul style="list-style-type: none"> • <i>Cutting speed too high</i> • <i>Carbide grade with insufficient wear resistance</i> • <i>Incorrect feed rate</i> <p>ABPLATZUNGEN › <i>Chipping</i></p>	<ul style="list-style-type: none"> • SCHNITTGESCHWINDIGKEIT REDUZIEREN • WAEHLLEN SIE VERSCHLEISSFESTERE HARTMETALLQUALITAET • ANPASSUNG DER VORSCHUBGESCHWINDIGKEIT ZUR SCHNITTGESCHWINDIGKEIT UND SCHNITTITIEFE (ERHOEHUNG DER VORSCHUBGESCHWINDIGKEIT) <ul style="list-style-type: none"> • <i>Reduce cutting speed</i> • <i>Select more wear resistant carbide grade</i> • <i>Adapt feed rate to cutting speed and cutting depth (increase feed rate)</i>

	URSACHE › <i>Cause</i>	MOEGLICHE LOESUNG › <i>Possible Solution</i>
 <p>DURCH UEBERMAESSIGE MECHANISCHE BELASTUNG BEIM SCHNEIDEN KOENNEN KANTENBRUCH UND ABSPLITTERN AUF TRETEN</p> <p><i>Through excessive mechanical stress at the cutting edge fracture and chipping can occur</i></p>	<ul style="list-style-type: none"> • QUALITAET MIT ZU HOHER VERSCHLEISSFESTIGKEIT • VIBRATIONEN • VORSCHUB ZU HOCH ODER ZU GROSSE SCHNITTITIEFE • AUFBAUSCHNEIDE, SPANVERSTOPFUNGSSCHNEIDEN GEOMETRIE ZU POSITIV <ul style="list-style-type: none"> • <i>Grade with too high wear resistance</i> • <i>Vibration</i> • <i>Feed rate too high or too large cutting depth</i> • <i>Built-up edge, chip clogging</i> • <i>Cutting edge geometry too positive</i> 	<ul style="list-style-type: none"> • VERWENDEN SIE HAERTERE QUALITAET • NEGATIVE SCHNEIDENGEOMETRIE MIT SPANNUT VERWENDEN • VERBESSERUNG DER STABILITAET (WERKZEUG, WERKSTUECK) • SCHNITTGESCHWINDIGKEIT ERHOEHEN <ul style="list-style-type: none"> • <i>Use tougher grade</i> • <i>Use negative cutting edge geometry with chip groove</i> • <i>Improve stability (tool, work piece)</i> • <i>Increase cutting speed</i> • <i>Reduce feed rate</i>


TERMISCHE RISSE › *Thermal Cracking*

	URSACHE › <i>Cause</i>	MOEGLICHE LOESUNG › <i>Possible Solution</i>
 <p>KLEINE RISSE BEI 90° AN DER SCHNEIDKANTE</p> <p><i>Small cracks at 90° to cutting edge</i></p>	<ul style="list-style-type: none"> • UNTERSCHIEDLICHE TEMPERATUREN AN DER SCHNEIDE, THERMOSCHOCK • FALSCHES KUEHLUNG • HOCHFESTE MATERIALIEN • SCHNITTGESCHWINDIGKEIT ZU HOCH <ul style="list-style-type: none"> • <i>Varying temperature of cutting edge, thermal shock</i> • <i>Incorrect cooling</i> • <i>High tensile materials</i> • <i>Cutting speed to high</i> 	<ul style="list-style-type: none"> • VERWENDEN SIE EINE QUALITAET DIE AUF THERMISCHE RISSE RESISTENT IST • REICHLICH KUEHLMITTEL VERWENDEN ODER TROCKENFRAESEN • SCHNITTGESCHWINDIGKEIT VERRINGERN • VORSCHUBGESCHWINDIGKEIT VERRINGERN <ul style="list-style-type: none"> • <i>Use grade that is resistant to thermal cracking</i> • <i>Apply cooling lubricant abundantly or use dry milling</i> • <i>Reduce cutting speed</i> • <i>Decrease feed rate</i>


FEHLER

Failure


AUFBAUSCHNEIDEN › *Built-up edge*

	URSACHE › <i>Cause</i>	MOEGLICHE LOESUNG › <i>Possible Solution</i>
 <p>AUFBAUSCHNEIDEN BILDEN SICH WENN DER SPAN NICHT RICHTIG ABTRANSPORTIERT WIRD UND ZU HOHER TEMPERATUR AN DER SCHNEIDE</p> <p><i>Built-Up edge occurs when the chip is not evacuated properly due to insufficient cutting temperature</i></p>	<ul style="list-style-type: none"> • ZU NIEDRIGE SCHNITTGESCHWINDIGKEIT • EIN ZU GERINGER SPANWINKEL • FALSCHES WENDESCHNEIDPLATTE • MANGELNDE KUEHLUNG/ SCHMIERUNG <ul style="list-style-type: none"> • <i>Too low cutting speed</i> • <i>Too small rake angle</i> • <i>Wrong cutting material</i> • <i>Lack of cooling/lubrication</i> 	<ul style="list-style-type: none"> • ERHOEHUNG DER SCHNITTGESCHWINDIGKEIT • VERGROESSERN DES SPANWINKEL • NEHMEN SIE TIN-BESCHICHTUNG • VERWENDEN SIE EMULSION MIT HOEHERER KONZENTRATION <ul style="list-style-type: none"> • <i>Increase cutting speed</i> • <i>Enlarge rake angle</i> • <i>Apply TiN-Coating</i> • <i>Use emulsion with higher concentration</i>

KERBEN › *Notching*

	URSACHE › <i>Cause</i>	MOEGLICHE LOESUNG › <i>Possible Solution</i>
 <p>KERBEN BEI MAXIMALER SCHNITTIEFE</p> <p><i>Notch at the maximum cutting depth</i></p>	<ul style="list-style-type: none"> • MATERIAL KALTVERFESTIGUNG (Z.B. SUPERLEGIERUNGEN) • ABGUSS UND SCHMIEDEHAUT • GRATBILDUNG <ul style="list-style-type: none"> • <i>Cold work hardening materials (e.g. super alloys)</i> • <i>Cast and forging skin</i> • <i>Formation of burrs</i> 	<ul style="list-style-type: none"> • SCHNITTGESCHWINDIGKEIT VERRINGERN • GLEICHLAUFFRAESEN • FRAESER ORIENTIERUNG AENDERN ZUR BEARBEITUNG • EINGRIFFSWINKEL REDUZIEREN <ul style="list-style-type: none"> • <i>Decrease cutting speed</i> • <i>Climb milling</i> • <i>Change working orientation of the milling cutter</i> • <i>Reduce approach angle</i>


WENDESCHNEIDPLATTEN BRUCH › *Insert breakage*

	URSACHE › <i>Cause</i>	MOEGLICHE LOESUNG › <i>Possible Solution</i>
 <p>ÜBERMAESSIGE BELASTUNG DER WENDESCHNEIDPLATTE VERURSACHT BRUCH</p> <p><i>Excessive stress of the insert causes breakage</i></p>	<ul style="list-style-type: none"> • ÜBERMAESSIGE BELASTUNG DER HARTMETALLQUALITAET • MANGEL AN STABILITAET • ECKWINKEL ZU KLEIN • UEBERMAESSIGES KERBEN • PLOETZLICHE AENDERUNG DER SCHNEIDKRAEFTE <ul style="list-style-type: none"> • <i>Excessive stress of the carbide grade</i> • <i>Lack of stability</i> • <i>Corner angle too small</i> • <i>Excessive notching</i> • <i>Sudden changes of cutting forces</i> 	<ul style="list-style-type: none"> • VERWENDEN SIE HAERTERES SCHNEIDMATERIAL • SCHUTZKANTENFASE VERWENDEN • SCHUTZKANTE VERWENDEN • STABILE GEOMETRIE VERWENDEN • VORSCHUB REDUZIEREN <ul style="list-style-type: none"> • <i>Use tougher cutting material</i> • <i>Use protective edge chamfer</i> • <i>Use protective edge hone</i> • <i>Use more stable geometry</i> • <i>Reduce feed rate</i>


FEHLER

Failure

KRATER BILDUNG › *Crater Wear*

	URSACHE › <i>Cause</i>	MOEGLICHE LOESUNG › <i>Possible Solution</i>
 <p>DER HEISSE SPAN DER ABGEFUEHRT WIRD VERURSACHT EINEN KRATER AN DER SPANFLAECHE DER SCHNEIDE</p> <p><i>The hot chip which is being evacuated causes cratering at the rake face of the cutting edge</i></p>	<ul style="list-style-type: none"> • SCHNITTGESCHWINDIGKEIT ZU HOCH • HARTMETALLQUALITAET MIT UNZUREICHENDER VERSCHLEISSFESTIGKEIT • FALSCHER VORSCHUB <ul style="list-style-type: none"> • <i>Cutting speed too high</i> • <i>Carbide grade with insufficient wear resistance</i> • <i>Incorrect feed rate</i> 	<ul style="list-style-type: none"> • SCHNITTGESCHWINDIGKEIT REDUZIEREN • WAEHLEN SIE EINE VERSCHLEISSFESTERE HARTMETALLQUALITAET • VORSCHUBGESCHWINDIGKEIT UND SCHNITTGESCHWINDIGKEIT AUF SCHNITTIEFE ANPASSEN <p>(ERHOEHEN DER VORSCHUBGESCHWINDIGKEIT)</p> <ul style="list-style-type: none"> • <i>Reduce cutting speed</i> • <i>Select more wear resistant carbide grade</i> • <i>Adapt feed rate to cutting speed and cutting depth (increase feed rate)</i>

WAERMEVERFORMUNG › *Heat Deformation*

	URSACHE › <i>Cause</i>	MOEGLICHE LOESUNG › <i>Possible Solution</i>
 <p>HOHE BEARBEITUNGSTEMPERATUR UND GLEICHZEITIG MECHANISCHE BELASTUNG KANN ZU PLASTISCHER VERFORMUNG FUEHREN</p> <p><i>High machining temperature and simultaneous mechanical stress can lead to plastic deformation</i></p>	<ul style="list-style-type: none"> • QUALITAET MIT ZU HOHER VERSCHLEISSFESTIGKEIT • VIBRATION • VORSCHUB ZU HOCH ODER ZU GROSSE SCHNITTIEFE • AUFBAUSCHNEIDE, SPANVERSTOPFUNG • SCHNEIDENGEOMETRIE ZU POSITIV <ul style="list-style-type: none"> • <i>Grade with too high wear resistance</i> • <i>Vibration</i> • <i>Feed rate too high or too large cutting depth</i> • <i>Built-up edge, chip clogging</i> • <i>Cutting edge geometry too positive</i> 	<ul style="list-style-type: none"> • VERWENDEN SIE EINE HAERTERE QUALITAET • NEGATIVE SCHNEIDENGEOMETRIE MIT SPANNUT VERWENDEN • VERBESSERUNG DER STABILITAET (WERKZEUG, WERKSTUECK) • SCHNITTGESCHWINDIGKEIT ERHOEHEN • VORSCHUB REDUZIEREN <ul style="list-style-type: none"> • <i>Use tougher grade</i> • <i>Use negative cutting edge geometry with chip groove</i> • <i>Improve stability (tool, work piece)</i> <ul style="list-style-type: none"> • <i>Increase cutting speed</i> • <i>Reduce feed rate</i>

MATERIAL

Materials

D		UK		USA		UK		F		IT		S		E		J	
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS							

UNLEGIERTER STAHL › Unalloyed Steel < 800N/mm²

1.0035	St 33					A 33	Fe 320		AE 235-B	
1.0036	USt 37-2		A 570 Gr. 33	K 02502	4360-40 B	E 24-2	Fe 360 B FU	1311	AE 235-B	SS 34
1.0037	St 37-2									
1.0038	RSt 37-2		A 570 Gr. 36	K 02502	4260-40 C	E 24-2 NE	Fe 360 B FN	1312		SS 34
1.0044	St 44-2		A 570 Gr. 40	K 02502	4360-43 B	E 28-2	Fe 430 BFN	1412	AE 275-B	SM 41 B
1.0050	St 50-2		A 570 Gr. 50		4360-50 B	A 50-2	Fe 490	2172	A 490-2	SS 50
1.0060	St 60-2				4360-55 E	A 60-2	Fe 60-2		A 590-2	SM 58
1.0070	St 70-2					A 70-2	Fe 70-2		A 690-2	
1.0116	St 37-3		A 570 Gr. 36		4360-40 C	E 24-3	Fe 37-3	1312	A 360 C	
1.0144	St 44-3		A 573 Gr. 70		4360-43 C	E 28-3	Fe 430 D FF	1414	AE 275-D	
1.0301	C 10		1010	G10100	045 M 10	XC 10	C 10		F.151	S 10 C
1.0401	C 15		1015	G10170	080 M 15	CC 12	C 15	1350	F.111	S 15 C
1.0402	C 22	1 C 22	1020	G10200	050 A 20	CC 20	C 20	1450	F.112	S 22 C
1.0405	St45.8									
1.0406	C 25	1 C 25	1025	G10250	070 M 26	CC 25	C 25		C 25 k	
1.0420	GS-38	GE 200				230-400M		1306		
1.0446	GS-45	GE 230			A1	E23-45M		1305	F.221	
1.0461	StE 255			K01800						
1.0462	WStE 255			K01800						
1.0463	TStE 255			K01800						
1.0482	19 Mn 5			K03102	224-460	A 52 CP; AP; FP				
1.0486	StE 285			K01802			Fe E 285 KG		AE 285 KG	
1.0487	WStE 285			K01802			Fe E 285 KW		AE 285 KW	
1.0488	TStE 285			K01803			Fe E 285 KT		AE 285 KT	
1.0501	C 35	1 C 35	1035	G10350	060 A 35	CC 35	C 35	1550	F.113	
1.0503	C 45	1 C 45	1045	G10450	080 M 46	CC 45	C 45	1650	C 45 k	
1.0505	StE 315									
1.0506	WStE 315									
1.0508	TStE 315									
1.0511	C 40	1 C 40	1040	G10400	080 M 40				F.114.A	
1.0528	C 30	1 C 30	1030	G10300	080 M 30	CC 32	C 30			
1.0532	St 52-2									
1.0535	C 55	1 C 55	1055		070 M 55		C 55	1655		
1.0540	C 50	1 C 50	1050	G10500	080 M 50			1674		
1.0552	GS-52	GE 260								
1.0558	GS-60	GE 300			A3	320-560M	C 45	1606		
1.0562	StE 355		A 633 Gr. C	K12000		E 355 R/FP	Fe E 355 KG	2132	AE 355 KG	SM 50 YB
1.0565	WStE 355									
1.0566	TStE 355									
1.0570	St 52-3	S 355 J 2 G 3			4360-50 B	E 36-3	Fe 510 B	2132	A 510 C	SM 50 YB
1.0601	C 60	1 C 60	1060	G10600	080 A 62	AF 70 C 55	C 60			
1.0619	GS-C25									
1.0710	15 S 10									
1.0711	9 S 20		1212	G12120	220 M 07		CF 9 S 22			SUM 21
1.0715	9 SMn 28	11 SMn 28	1213	G12130	230 M 07	S 250	CF 9 SMn 28	1912	11 SMn 28	SUM 22
1.0718	9 SMnPb 28	11 SMnPb 28	12 L 13	G12134		S 250 Pb	CF 9 SMnPb 28	1914	11 SMnPb 28	SUM 22 L
1.0721	10 S 20	10 S 20	1108	G11080	210 M 15	10 F 1	CF 10 S 20		10 S 20	
1.0722	10 SPb 20	10 SPb 20	11 L 08	G11084		10 Pb F 2	CF 10 SPb 20		10 SPb 20	
1.0726	35 S 20	35 S 20	1140	G11400	212 M 36	35 MF 4		1957	F.210G	
1.0727	45 S 20	45 S 20	1146	G11460	212 M 44	45 MF 4		1973		
1.0728	60 S 20	60 S 20				60 MF 4				
1.0736	9 SMn 36		1215	G12150	240 M 07	S 300	CF 9 SMn 36		12 SMn 35	
1.0737	9 SMnPb 36		12 L 14	G12144		S 300 Pb	CF 9 SMnPb 36	1926	12 SMnPb 35	
1.0903	51 Si 7		9255	G92550	250 A 53	51 S 7	48 Si 7	2090	50 Si 7	
1.0904	55 Si 7		9255	G92550	250 A 53	55 S 7	55 Si 8	2085	56 Si 7	
1.0906	65 Si 7				250 A 61					
1.0961	60 SiCr 7		9262	G92620	250 A 61	60 SC 7	60 SiCr 8		60 SiCr 8	SUP 7
1.0966	QStE 690 TM									
1.0971	QStE 260 N									
1.0973	QStE 300 N									
1.0974	QStE 340 TM					E 335 D				
1.0975	QStE 340 N						Fe E 355 TD			
1.0976	QStE 360 TM						Fe E 355 TM			
1.0977	QStE 360 N									

MATERIAL

Materials

D		UK	USA		UK	F	IT	S	E	J
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

UNLEGIERTER STAHL › *Unalloyed Steel* < 800 N/mm²

1.0978	QStE 380 TM						E 390 D			
1.0979	QStE 380 N						Fe E 380 TD			
1.0980	QStE 420 TM						E 430 D	Fe E 420 TM		
1.0981	QStE 420 N						Fe E 420 TD			
1.0982	QStE 460 TM				50/45 HR		E 445 D			
1.0983	QStE 460 N						Fe E 460 TD			
1.0984	QStE 500 TM						E 490 D	Fe E 490 TM		
1.0985	QStE 500 N									
1.0986	QStE 550 TM				60/55 HS		Fe E 560 TM			
1.0987	QStE 550 N									
1.1103	ESiE 255									
1.1104	ESiE 285									
1.1105	ESiE 315									
1.1106	ESiE 355									
1.1120	GS-20 Mn 5									
1.1121	Ck 10	2 C 10	1010	G10100	040 A 10		XC 10	C 10	1265	C 10 k S 10 C
1.1127	36 Mn 6		1141	G11410	212 M 36					SMn 443
1.1131	GS-16 Mn 5									
1.1132	Cq15									
1.1133	20 Mn 5		1022	G10220	120 M 19			G 22 Mn 3		20 Mn 6 SMn 420
1.1141	Ck 15	2 C 15	1015	G10150	080 M 15		XC 15	C 15	1370	C 16 k S 15 C
1.1149	Cm 22	3 C 22			070 M 20		XC 18 u			
1.1151	Ck 22	2 C 22	1023	G10230	050 A 20		XC 25	C 20		C 25 k S 22 C
1.1152	Cq 22	C 21 KD								
1.1157	40_Mn_4		1039	G10390	150 M 36		35 M 5			
1.1157	40_Mn_4		1039	G10390	150 M 36		35 M 5			
1.1158	Ck_25	2 C 25	1025	G10250	070 M 26		XC 25	C 25		C 25 k S 25 C
1.1165	GS-30_Mn_5		1330							30 Mn 5
1.1167	36_Mn_5		1335	G13350	150 M 36		40 M 5		2120	36 Mn 5 SMn 438(H)
1.1169	20 Mn 6				150 M 19		20 M 5	20 Mn 6		
1.1170	28_Mn_6	28 Mn 6	1330	G13300	150 M 28		35 M 5	C 28 Mn		36 Mn 6 SCMn 1
1.1172	Cq_35	C 35 KD	1030	G10300						
1.1178	Ck_30	2 C 30	1030	G10300	080 M 30		XC 32	C 30		S 30 C
1.1180	Cm_35	3 C 35	1035	G10350	080 M 36		38 H1 k		1572-03	C 33 k-1
1.1181	Ck_35	2 C 35	1034	G10340	080 M 36		XC 38 H1	C 35	1572	C 35 k S 35 C
1.1183	Cf_35		1035	G10350	060 A 35		XC 38 TS	C 35	1572	S 35 C
1.1186	Ck_40	2 C 40	1040	G10400	080 A 40		XC 42 H1	C 40		S 40 C
1.1191	Ck_45	2 C 45	1045	G10450	080 M 46		XC 42	C 40		C 45 k S 45 C
1.1192	Cq_45	C 45 KD	1045	G10450						
1.1193	Cf_45		1045	G10450	060 A 47		XC 42 TS	C 43	1672	S 45 C
1.1199	49 MnVS 3									
1.1201	Cm 45	3 C 45	1045	G10450	080 M 46		XC 48 H1u		1672	C 45 k-1 S 50 C
1.1203	Ck 55	2 C 55	1055	G10550	070 M 55		XC 55 H1	C 55		C 55 k S 55 C
1.1206	Ck 50	2 C 50	1050	G10500	080 M 50			C 50	1674	S 50 C
1.1209	Cm 55	3 C 55	1055	G10550	070 M 55		XC 55 H1			C 55 k-1
1.1210	Ck 53 N		1050	G10500						S 53 C
1.1213	Cf 53		1050	G10500	060 A 57		XC 48 TS	C 48	1674	S 50 C
1.1221	Ck 60	2 C 60	1060	G10640	060 A 62		XC 60	C 60	1678	S 58 C
1.1223	Cm 60	3 C 60			080 A 67					
1.1231	Ck 67		1070	G10700	060 A 67		XC 68	C 70	1770	
1.1248	Ck 75		1080	G10800	060 A 78		XC 75	C 75	1774	
1.1249	Cf 70		1070	G10700			XC 70			
1.1269	Ck 85		1086	G10860			XC 90	C 90		
1.1273	90 Mn 4		1090	G10900	060 A 96					SUP4
1.1274	Ck 101		1095	G10950	060 A 96		XC_100	C 100	1870	SUP_4
1.1520	C 70 W1							C 70 KU		
1.1525	C 80 W1	C 80 U	W 108	T72301			Y1 90	C 80 KU		F.513
1.1545	C 105 W1	C 105 U	W 110	T72301			Y1 105	C 100 KU	1880	F.515
1.1620	C 70 W2	C 70 U								
1.1625	C 80 W2		W 1		BW 1B		Y1 90			C 80 SKC 3
1.1645	C 105 W2									C 102 SK 3

MATERIAL

Materials

D		UK	USA		UK	F	IT	S	E	J
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

NEDERIG UND MITTEL LEGERTER STAHL › Low and Medium Steel 700/1000 N/mm²

1.1654	C110W									
1.1663	C125W	C120U	W 112	T72301		Y2 120	C120KU		C 120	SK 2
1.1673	C135W					Y2 140	C140KU			SK 1
1.1730	C45W	C45U				Y3 42				
1.1740	C60W					Y3 55				SK 7
1.1744	C67W					Y1 70			F512	
1.1750	C75W		W 1		BW 1A					
1.1820	C85W									
1.1830	C85W	C90U				Y3 90				SK 5
1.2002	125Cr1					Y2120C				
1.2003	75Cr1									
1.2004	85Cr1					Y1100C2				
1.2008	140Cr3					Y2140C				SKS 8
1.2066	90Cr3									
1.2067	105Cr4								F.120J	SKC 11
1.2063	145Cr6									
1.2067	100Cr6	99Cr6	L3		BL 3	Y100Cr6			100Cr6	
1.2101	62SiMnCr4									
1.2103	58SiCr8									
1.2108	90CrS5									
1.2109	125CrS5									
1.2127	105MnCr4						100CrMn4KU			SUJ 3
1.2129	200CrMn8									
1.2162	21MnCr5	21MnCr5				20NC5				SCR420H
1.2206	140CrV1					130C3				
1.2208	31CrV3									
1.2210	115CrV3		L2	T61202			107CrV3KU		F520L	
1.2235	80CrV2								F520J	
1.2241	51CrV4	51CrMnV4					51CrMnV4KU			
1.2242	59CrV4									
1.2243	61CrSiV5									
1.2248	38SiCrV6									
1.2249	45SiCrV6									
1.2303	100CrMn5		L 7						F520F	
1.2307	29CrMoV_9									
1.2311	40CrMnVb7						35CrMn8KU			
1.2312	40CrMnVbS86									
1.2313	21CrMn10									
1.2323	48CrMnVb67					45CrV6				
1.2328	45CrMnV7									
1.2414	120W4								F532	
1.2419	105WCr6	105WCr5				105WCr13	107WCr5KU	2140	105WCr5	SKS 31
1.2442	115W8								F520P	
1.2510	100MnCrW4	(95MnWCr5)	O1	T31501	BO 1		95MnWCr5KU		95MnCrW5	
1.2511	80WCr3									
1.2515	100W4									SKS 21
1.2516	120W4						110W4KU			
1.2519	110WCr5								102WCr5	
1.2542	45WCr7	45WCr8	S1	T41901	BS 1		45WCr8KU	2710	45WCr8	
1.2550	60WCr7	60WCr8				55WCr20	55WCr8KU			
1.2552	80WCr8								60WCr8	
1.2562	142WM3									
1.2710	45NiCr6									
1.2711	54NiCrMnV6					55NiCrV6				
1.2713	55NiCrMnV6	55NiCrMnV7	L6	T61206		55NiCrV7			F520S	SKT 4
1.2714	56NiCrMnV7	55NiCrMnV7								
1.2718	55NiCr10									
1.2721	50NiCr13									
1.2726	26NiCrMnV5									
1.2735	15NiCr14		P 6	T51606		10NiCr12				SNC 22
1.2737	28NiCrV15									
1.2740	28NiCrMnV10									
1.2743	60NiCrMnV124									
1.2744	57NiCrMnV77									

MATERIAL

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D		UK		USA		UK		F		IT		S		E		J	
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS							

NIEDERIG UND MITTEL LEGIERTER STAHL › Low and Medium Steel

700/1000 N/mm²

1.2745	14 NiCr 18																
1.2747	28 NiMo 17																
1.2762	75 CrMoNiW 6 7																
1.2823	70 Si 7																
1.2826	60 MnSi 4																
1.2833	100 V 1		W210	T72302	BW 2	Y1 105 V	102 V 2 KU										SKS 43
1.2838	145 V 33																
1.2842	90 MnCrV 8		O 2	T31502	BO 2	90 MV 8	90 MnVCr 8 KU										
1.2851	34 CrAl 6																
1.2766	35 NiCrMo 16																
1.3501	100 Cr 2		E 50100	G50986		100 C 2											
1.3503	105 Cr 4		E 51100	G51986													
1.3505	100 Cr 6	100 Cr 6	E 52100	G52986	535 A 99	100 C 6	100 Cr 6	2258	100 Cr 6								SUJ 2
1.3520	100 CrMn 6	100 CrMn 6				100 CM 6											100 CrMn 6
1.3536	100 CrMn 7 3	100 CrMnMo 7				100 CD 7											100 CrMnMo 7
1.3551	80 MoCrV 42 16		M 50			80 DCV 40	X 80 MoCrV 4 4										80 MoCrV 40-16
1.3561	44 Cr 2																
1.3563	43 CrMo 4																
1.3565	48 CrMo 4																
1.4700	8 CrSi 7 7																
1.2369	81 MoCrV 42 16																
1.2603	45 CrVMoW 5 8																
1.2604	73 WCrMoV 2 2																
1.5022	38 Si 6																
1.5023	38 Si 7																
1.5024	46 Si 7					45 S 7											46 Si 7
1.5025	51 Si 7																
1.5026	55 Si 7																
1.5028	65 Si 7																
1.5029	71 Si 7																SUP 7
1.5120	38 MnSi 4																
1.5121	46 MnSi 4																
1.5122	37 MnSi 5					38 MS 5		F.130.A									
1.5131	50 MnSi 4																
1.5141	53 MnSi 4																
1.5142	60 SiMn 5																
1.5223	42 MnV 7																
1.5225	51 MnV 7																
1.5231	38 MnSiV 5																
1.5232	27 MnSiV 6																
1.5233	44 MnSiV 6																
1.5310	8 SiTi 4																
1.5403	17 MnMoV 6 4				1501-261												
1.5404	21 MoV 5 3																
1.5406	17 MoV 8 4																
1.5415	15 Mo 3		A 204 Gr. A	K11820	1501-240	15 D3	16 Mo 3 KW	2912	16 Mo 3								
1.5419	GS 22 Mo 4		4419	G44190	243-430		G 22 Mo 5										SCPH 11
1.5423	16 Mo 5		4520	K11522	1503-245-420		16 Mo 5										16 Mo 5
1.5508	22 B 2	C 22 BE 69															21 B 3 DF
1.5510	28 B 2	C 30 B															
1.5511	35 B 2	C 35 B															35 B 3 DF
1.5523	19 MnB 4					170 H 20											20 MnB 4 DF
1.5622	14 Ni 6		A 350-LF 5	K22103		15 N 6	14 Ni 6										15 Ni 6
1.5633	24 Ni 8			J22501		22 N 8											
1.5637	10 Ni 14		A 350-LF 5	K31718	503		18 Ni 14 KT										SL 3 N 26
1.5662	X 8 Ni 9		A 353	K81340	509	9 Ni	X 10 Ni 9										X 8 Ni 09 SL 9 N 53
1.5680	12 Ni 19		E 2515	K41583		Z 18 N 5											
1.5710	36 NiCr 6		3135		640 A 35	30 NC 6											SNC 236
1.5732	14 NiCr 10		3415			14 NC 11	16 NiCr 11										15 NiCr 11 SNC 415 H
1.5736	36 NiCr 10		3435			30 NC 11	35 NiCr 9										SNC 631 H
1.5752	14 NiCr 14		E3310	G33106	655 M 13	16 NC 12											SNC 815 H
1.5755	31 NiCr 14				653 M 31	18 NC 13											SNC 836
1.5860	14 NiCr 18																F.153
1.5864	35 NiCr 18																

TECHNISCHE DATEN › Technical Guide

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Materials

D		UK	USA		UK	F	IT	S	E	J
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

NIEDERIG UND MITTEL LEGIERTER STAHL › *Low and Medium Steel*

700/1000 N/mm²

1.5919	15 CrNi 6					S107	16 NC 6	16 CrNi 4		
1.5920	18 CrNi 8						20 NC 6		F.150.E	
1.6311	20 MnMoNi 4 5			K12539						SQV 2 B
1.6368	15 NiCuMoNb 5			K12039	3604-591					SBV 2
1.6511	36 CrNiMo 4	36 CrNiMo 4	9840	G98400	816 M 40		40 NCD 3	38 NiCrMo 4 KB	35 NiCrMo 4	
1.6513	28 NiCrMo 4									
1.6523	21 NiCrMo 2	20 NiCrMo 2 KD	8620	G86200	805 M 20		20 NCD 2	20 NiCrMo 2	2506	20 NiCrMo 2
1.6580	30 CrNiMo 8	30 CrNiMo 8 KD			823 M 30		30 CND 8	30 NiCrMo 8		SNCM 431
1.6582	34 CrNiMo 6	34 CrNiMo 6	4340		817 M 40		35 NCD 6	35 NiCrMo 6 KB	2541	40 NiCrMo 7
1.6587	17 CrNiMo 6				820 A 16		18 NCD 6	18 NiCrMo 7		14 NiCrMo 13
1.6971	79 Ni 1									
1.6972	83 Ni 1									
1.7001	38 Cr 1							38 Cr 1 KB		
1.7002	46 Cr 1									
1.7003	38 Cr 2	38 Cr 2 KD					38 C 2	38 Cr 2	38 Cr 3	
1.7005	45 Cr 2							45 Cr 2		
1.7006	46 Cr 2	46 Cr 2 KD	5045				42 C 2	45 Cr 2		
1.7012	13 Cr 2									
1.7015	15 Cr 3		5015	G50150	523 M15		12 C 3			SCr 415 H
1.7016	17 Cr 3	(15 Cr 2 KD)	5117	G51170			18 C 3			
1.7020	32 Cr 2									
1.7030	28 Cr 4		5130	G51300	530 A 30					
1.7030	28 Cr 4		5130	G51300	530 A 30					
1.7033	34 Cr 4	34 Cr 4 KD	5130 H	G51300	530 A 32		32 C 4	34 Cr 4 KB	35 Cr 4	SCr 430 H
1.7034	37 Cr 4	37 Cr 4	5132 H	G51320	530 A 36		38 C 4	36 CrMn 4	38 Cr 4	SCr 435 H
1.7035	41 Cr 4	41 Cr 4	5140	G51400	530 M 40		42 C 4	41 Cr 4	42 Cr 4	SCr 440 H
1.7037	34 CrS 4	34 CrS 4								
1.7038	37 CrS 4	37 CrS 4								
1.7039	41 CrS 4	41 CrS 4								
1.7043	38 Cr 4							38 Cr 4		
1.7045	42 Cr 4		5140		530 A 40		42 C 4 TS	41 Cr 4	2245	42 Cr 4
1.7103	67 SiCr 5							67 SiCr 5		
1.7108	60 SiCr 7									
1.7131	16 MnCr 5	16 MnCr 5 KD	5115	G 51150	527 M 17		16 MC 5	16 MnCr 5	2173	16 MnCr 5
1.7138	52 MnCrB 3		50 B 50 H	H50501						SCR 415
1.7139	16 MnCrS 5									SUP 11
1.7147	20 MnCr 5		5120	G51200			20 MC 5	20 MnCr 5		F.150.D
1.7149	20 MnCrS 5									SMnC 420 H
1.7176	55 Cr 3		5155	G51550	527 A 60		55 C 3	55 Cr 3	2253	55 Cr 3
1.7218	25 CrMo 4	25 CrMo 4 KD	4130	G41300	708 A 25		25 CD 4	25 CrMo 4 (KB)	2225	25 CrMo 4
1.7219	26 CrMo 4			K13047						SCM 420
1.7220	34 CrMo 4	34 CrMo 4 KD	4135 H	H41350	708 A 37		35 CD 4	35 CrMo 4	2234	35 CrMo 4
1.7223	41 CrMo 4		4142	G41420	708 M 40		42 CD 4 TS	41 CrMo 4	2244	42 CrMo 4
1.7223	41 CrMo 4		4142	G41420	708 M 40		42 CD 4 TS	41 CrMo 4	2244	42 CrMo 4
1.7225	42 CrMo 4	42 CrMo 4	4140	G41400	708 A 42		42 CD 4	42 CrMo 4	2244	40 CrMo 4
1.7226	34 CrMoS 4	34 CrMoS 4								SCM 440 H
1.7227	42 CrMoS 4	42 CrMoS 4			708 H 42					35 CrMo 4-1
1.7228	50 CrMo 4		4150	G41500	708 A 47					40 CrMo 4
1.7238	49 CrMo 4									SCM 445 H
1.7242	16 CrMo 4						15 CD 3.5	18 CrMo 4		SCM 445
1.7258	24 CrMo 5									SCM 418 H
1.7259	26 CrMo 7									SCM 822 H
1.7262	15 CrMo 5						12 CD 4			SCM 415 H
1.7264	20 CrMo 5						18 CD 4			18 CrMo 4-1
1.7271	23 CrMoB 3 3									SCM 421
1.7273	24 CrMo 10									
1.7276	10 CrMo 11						12 CD 10			
1.7281	16 CrMo 9 3						20 CD 8			
1.7311	20 CrMo 2									
1.7321	20 MoCr 4								20 MoCr 4	
1.7323	20 MoCrS 4									
1.7325	25 MoCr 4									
1.7326	25 MoCrS 4									
1.7335	13 CrMo 4 4		A182-F11	K11562	1501-621		15 CD 4.05	14 CrMo 4 5	2216	14 CrMo 4 5
										SFVA F 12

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W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

NEDERIG UND MITTEL LEGERTER STAHL › Low and Medium Steel 700/1000 N/mm²

1.7337	16QMb44		A387Gr.12Cl.2	K11564			A18QMb45KW			
1.7350	22QMb44									
1.7357	GS17QMb55			J11872			G15QMb55		AM18QMb05-05	SCPH 21
1.7361	32QMb12				722M24	30CD12	32QMb12	2240	F.124A	
1.7362	12QMb195			K41545	3606-625	Z10CD5.05	16QMb205			SCMV 6
1.7379	GS18QMb910									
1.7380	10QMb910		A182-F22	J21890	1502-622	10CD9.10	12QMb910	2218		SCMV 4
1.7561	42QV6									
1.7701	51QMbV4					51QV4	51QMbV4			
1.7706	GS17QMbV511			J21610						SCPH 23
1.7707	30QMbV9									
1.7709	21QMbV57									
1.7711	40QMbV47			K14072	1506-670-860					SNB21-1-5
1.7715	14MbV63			K11591	1503-660-440				13MtQV6	
1.7725	GS30QMbV64									
1.7733	24QMbV55					20QV6	24QMbV55			
1.7735	14QMbV69									
1.7755	GS45QMbV104									
1.7766	17QMbV10									
1.7779	20QMbV135									
1.8070	21QMbV511						21QMbV511			
1.8159	50QV4	51QV4	6150	G61500	735A50	50QV4	50QV4	2230	51QV4	SUP 10
1.8161	58QV4									
1.8212	21QMbV12									
1.8504	34CrAl6									
1.8506	34CrAl5									
1.8506	34CrAl5									
1.8507	34CrAlMb5	(34CrAlMb5)	A355Q1D	K23510	905M31	30CrAlD6.12	34CrAlMb7		34CrAlMb5	
1.8509	41CrAlMb7		A355QA	J24056	905M39		41CrAlMb7	2940	41CrAlMb7	SACM 645
1.8515	31QMb12	31QMb12			722M24		31QMb12		31QMb12	
1.8519	31QMbV9						31QMbV10		31QMbV10	
1.8521	15QMbV59									
1.8523	39QMbV139				897M39					
1.8550	34CrAlN7			K52440						
1.8900	StE 380						FeE390KG		AE390GrabKG	SM50B
1.8902	StE 420		A633Gr.E	K02002		E 420-I	FeE420KG		AE420GrabKG	SM50C
1.8905	StE 460		A633Gr.E	K02900		E 460-I	FeE460KG		AE460GrabKG	SM53B
1.8907	StE 500			K02001						SM 58
1.8910	TSE380						FeE390KT	2117	AE390GrabKT	
1.8911	ESIE 380									
1.8912	TSE420			K02002		E420T-I	FeE420KT		AE420GrabKT	
1.8913	ESIE 420									
1.8915	TSE460			K02900		E460T-I	FeE460KT		AE460GrabKT	
1.8917	TSE500			K02001		E500T-I				
1.8918	ESIE 460									
1.8919	ESIE 500									
1.8930	WSE380						FeE390KW	2116	AE390GrabKW	
1.8932	WSE420			K02002			FeE420KW		AE420GrabKW	
1.8935	WSE460			K02900			FeE460KW		AE460GrabKW	
1.8937	WSE500			K02001						
1.8960	WTS37-2				WF50B	E24W-2				SMA41A
1.8961	WTS37-3						Fe360DFF			SMA50A
1.8962	9QNDQP324			K11430	WF50A					SPA4
1.8963	WTS52-3			K11430	WF50C	E36WA-2				SMA 58

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D		UK	USA		UK	F	IT	S	E	J
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

HOCH LEGERTER STAHL › High-Alloyed Steel 1000/1300 N/mm²

12080	X210Cr12	X210Cr12	D8	T30403	BD 3	Z200C12	X205Cr12KU		X210Cr12	SKD 1
12082	X20Cr13	X20Cr13							X20Cr13	
12083	X42Cr13	X42Cr13				Z40C14	X41Cr13KU			SUS420J2
12201	X165CrV12									
12316	X38CrMo17	X38CrMo17					X38CrMo161 KU		X38CrMo16	
12341	X6CrMo4	X6CrMo4	P 4	T51604						
12343	X38CrMoV51	X38CrMoV51	H 11	T20811	BH 11	Z38CrV5	X37CrMoV51 KU		X37CrMoV5	SKD 6
12344	X40CrMoV51	X40CrMoV51	H 13	T20813	BH 13	Z40CrV5	X40CrMoV511 KU	2242	X40CrMoV5	SKD 61
12362	X63CrMoV51									
12363	X100CrMoV51	X100CrMoV51	A 2	T30102	BA 2	Z100CrV5	X100CrMoV51 KU	2260	X100CrMoV5	SKD 12
12365	X32CrMoV33	X32CrMoV12H28	H 10	T20810	BH 10	32CrV28	30CrMoV1227 KU		30CrMoV12	SKD 7
12367	X38CrMoV53									
12376	X96CrMoV12									
12378	X220CrMo122									
12379	X155CrMo121	X153CrMoV12	D 2	T30402	BD 2	Z160CrV12	X155CrMo121 KU			SKD 11
12436	X210CrW12	X210CrW12					X215CrW121 KU	2312	X210CrW12	SKD 2
12453	X130W5									
12564	X30WCrV41								F527	
12567	X30WCrV53	X30WCrV53				Z32WCrV5	X30WCrV53 KU			SKD 4
12581	X30WCrV93	X30WCrV93	H 21	T20821	BH 21	Z30WCrV9	X30WCrV93 KU		X30WCrV9	SKD 5
12601	X165CrMoV12	X165CrMoV12					X165CrMoV12 KU	2310	X160CrMoV12	
12606	X37CrMoV51		H 12	T20812	BH 12	Z35CrMoV5	X35CrMoV05 KU		F537	SKD 62
12622	X60WCrMoV94									
12631	X50CrMoV91 1									
12662	X30WCrCoV93									
12678	X45CrCoW55 5									
12709	X3NiCrMoTi189 5									
12731	X50NiCrW1313									
12764	X19NiCrMo4									
12767	X45NiCrMo4	40NiCrMo4				Y35NiCr16	42NiCrMo157 KU			
12786	X13NiCrSi36 15									
12787	X23CrNi17									
12880	X165CrCoMo12									
12884	X210CrCoW12									
12888	X20CrCoMoV109									
12889	X45CrCoMoV55 3									
13202	S12-1-45	(HS12-1-55)	T 15	T12015	BT 15		HS12-1-55		12-1-55	
13207	S10-4-3-10	HS10-4-3-10			BT 42	Z130WCrCoV10-100404	HS10-4-3-10		10-4-3-10	SKH 57
13243	S6-5-2-5	(HS6-5-2-5)	M 35			HCV06-05-05-04-02	HS6-5-2-5	2723	6-5-2-5	SKH 55
13246	S7-4-2-5	HS1-8-1	M 41	T11341		Z110WCrCoV07-05-04	HS7-4-2-5		7-4-2-5	
13247	S2-10-1-8	HS2-9-1-8	M 42	T11342	BM 42	Z110CrCoW09-08-04	HS2-9-1-8		2-10-1-8	
13249	S2-9-2-8				BM 34				2-9-2-8	
13255	S18-1-2-5	(HS18-1-1-5)	T 4	T12004	BT 4	Z80WCrV18-05-04-01	HS18-1-1-5		18-1-1-5	SKH 3
13257	S18-1-2-15									
13265	S18-1-2-10	(HS18-0-1-10)	T 5	T12005	BT 5		HS18-0-1-10		18-0-2-10	SKH 4A
13302	S12-1-4						(X150WCr1305KU)			
13318	S12-1-2									
13333	S3-3-2						HS 3-3-2			
13342	SC6-5-2	(HS6-5-2)	M 3	T11313		Z90WCrCoV06-05-04-02	HS06-5-3			
13343	S6-5-2	HS6-5-3	M 2	T11302	BM 2	Z85WCrCoV06-05-04-02	HS 6-5-2	2722	6-5-2	SKH 51
13344	S6-5-3		M3Cr2	T11323		Z120WCrCoV06-05-04-03			6-5-3	SKH 52
13346	S2-9-1	HS1-8-1	M 1	T20842	BM 1	Z85CrCoV08-04-02-01	HS 1-8-1			
13348	S2-9-2	HS2-9-2	M 7	T11307		Z100CrCoV09-04-02-02	HS 2-9-2	2782	2-9-2	
13355	S18-0-1	HS18-0-1	T 1	T12001	BT 1	Z80WCrV18-04-01	HS18-0-1		18-0-1	SKH 2
13401	X120Mn 12		A 128	J91109		Z120M12	XG120Mh12		AMX120Mh12	SCMH1
13543	X102CrMo17			J91639			X105CrMo17		X100CrMo17	
13549	X89CrMoV181									
13802	X120Mh13									
13805	X35Mh18									
13813	X40MhCr19									
13815	X40MhCr182									
13817	X40MhCr18									
13819	X50MhCrV2014									
13941	X4CrNi18 13									

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Materials

D		UK	USA		UK	F	IT	S	E	J
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

HOCH LEGIERTER STAHL › High-Alloyed Steel 1000/1300 N/mm²

1.3949	X5MnCr1813									
1.3952	X40NiMoN1814									
1.3953	X2CrNiMo1815									
1.3958	X5CrNi1811									
1.3960	X45MnCrV1376									
1.3962	X15CrNiMo1210									
1.3964	X40CrNiMoN19165									
1.3965	X8CrNiN188									
1.3967	X50CrNiN229									
1.3968	X12MnCr1812									
1.3974	X30CrNiMoN2317									
1.4704	X45Cr4		HNv 2	S6406						
1.4710	GX30CrSi6									
1.4712	X10CrSi6									
1.4713	X10CrA7								X10CrA7	
1.4716	X8Cr9									
1.4718	X45CrSi93	X45CrSi8	HNv 3	S6507	401S45	Z45CrSi9	X45CrSi8	X45CrSi09-03	SUH 1	
1.4721	215Cr12									
1.4722	X10CrSi13								X10CrSi13	
1.4725	CrAl144									
1.4731	X40CrSiMo102					Z40CrSi10		X40CrSiMo10-02	SUH 3	
1.4732	X80CrSiMoV152									
1.4741	X10CrSi18									
1.4743	GX160CrSi18									
1.4748	X85CrMoV182					Z85CrMoV18.02	X85CrMoV193	X85CrMoV18-02		
1.4748	X85CrMoV182					Z85CrMoV18.02	X85CrMoV193			
1.4765	CrAl255									
1.4767	CrAl205									
1.4773	X8Cr30									
1.4777	GX130CrSi29									
1.4785	X60CrMoVNiN2110									
1.4820	X12CrNi254									
1.4822	GX40CrNi245									
1.4829	X12CrNi2212			S30980			X16CrNi2314		SUS309	
1.4832	GX25CrNiSi2014									
1.4842	X12CrNi2520			S31080	310S94					
1.4843	CrNi2520			J94202					SCS 18	
1.4846	X40CrNi2521				310S98				SCH 13	
1.4860	NCr3020									
1.4861	X10NiCr3220									
1.4873	X45CrNiW189				331S40	Z35CrNiSi14.14	X45CrNiW189	X45CrNiSiW18-09	SUH 31	
1.4875	X55CrNiN208		EV 12	S63012				X55CrNiN20-08		
1.4882	X50CrNiN219					Z50CrNiN21.09				
1.4911	X8CrNiMo106				S152					
1.4913	X19CrMoNiN111									
1.4920	X15CrMoV121									
1.4921	X19CrMoV121									
1.4922	X20CrMoV121									
1.4935	X20CrMoW121		422	S42200			X22CrMoW121		SUH 616	
1.4936	X24CrMoV121									
1.4945	X6CrNiMo1616									
1.4960	X40CrNiNb1313									
1.4962	X12CrNiTi1613									
1.4971	X12CrCoNi2120		661	R30155					SUH 661	
1.4978	X50CrCoNi2020									
1.4986	X8CrNiMoNb1616									
1.6903	X10CrNiTi1810									
1.6905	X10CrNiNb1810									
1.6906	X5CrNi1810									

MATERIAL

Materials

D		UK	USA		UK	F	IT	S	E	J
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

Stainless Steel - Ferritic/Martensitic

1.2780	X16CrNi20 12	X16CrNi20 12					Z15CrNi24.13			SUS309S
1.2782	X16CrNi25 20	X16CrNi25 20					Z15CrNi24.13			SUS309S
1.4000	X6Cr13	X6Cr13	403	S40300	403S17	Z6Cr13	X6Cr13	2301	X6Cr13	SUS 403
1.4002	X6CrAl13	X6CrAl13	405	S40500	405S17	Z6CrAl13	X6CrAl13	2302	X6CrAl13	SUS 405
1.4005	X12CrS13	X12CrS13	416	S41600	416S21	Z12CrF13	X12CrS13	2380	X12CrS13	SUS 416
1.4006	X10Cr13	(X12Cr13KD)	410	S41000	410S21	Z12Cr13	X12Cr13	2302	X12Cr13	SUS 410
1.4008	GX8CrNi13				410C21	Z12CrNi13M	GX12Cr13			SCS 1
1.4009	X8Cr14									
1.4015	X8Cr18									
1.4016	X6Cr17		430	S43000	430S15	Z8Cr17	X8Cr17KD	2320	X8Cr17	SUS 430
1.4021	X20Cr13	X20Cr13	420	S42000	420S37	Z20Cr13	X20Cr13	2303	X20Cr13	SUS420J1
1.4024	X15Cr13	X15Cr13			420S29		X12Cr13			SUS410J1
1.4024	X15Cr13	X15Cr13			420S29		X12Cr13			SUS410J1
1.4027	GX20Cr14				420C29	Z20Cr13M				SCS 2
1.4028	X30Cr13	X30Cr13			420S45	Z30Cr13	X30Cr13	2304	X30Cr13	SUS420J2
1.4031	X38Cr13	X40Cr13				Z40Cr14	X40Cr14	2304	X40Cr13	SUS420J2
1.4034	X46Cr13	X45Cr13			(420S45)	Z40Cr14	X40Cr14		X46Cr13	
1.4057	X20CrNi17 2	X19CrNi17 2	431	S43100	431S29	Z15CrNi16.02	X16CrNi16	2321	X15CrNi16	SUS 431
1.4059	GX22CrNi17					Z20CrNi17.2M				
1.4085	GX70Cr29									
1.4086	GX120Cr29									
1.4104	X12CrNiMo17	X14CrNiMo17	430 F	S43020		Z10CrF17	X10CrS17	2383	X10CrS17	SUS430F
1.4105	X40CrNiMo18									
1.4106	X10CrNiMo13									
1.4107	GX8CrNi12									
1.4108	X100CrNiMo13									
1.4109	X65CrNiMo14					Z70CrD14				
1.4110	X55CrNiMo14					Z50CrD13				
1.4111	X110CrNiMo15									
1.4112	X90CrNiMo18		440 B	S44003						SUS440B
1.4113	X6CrNiMo17 1	(X8CrNiMo17)	434	S43400	434S17	Z8CrD17.01	X8CrNiMo17	2325		SUS 434
1.4115	X20CrNiMo17 1									
1.4116	X45CrNiMo15								X46CrNiMo16	
1.4117	X38CrNiMo15									
1.4119	X15CrNiMo13									
1.4120	X20CrNiMo13					Z20CrD14				
1.4122	X35CrNiMo17						X35CrNiMo17			
1.4125	X105CrNiMo17		440 C	S44004		Z100CrD17				SUS440C
1.4136	GX70CrNiMo29 2					Z60CrD29.2M				
1.4510	X6CrTi17	X8CrTi17	430 Ti	S 43036		Z8CrTi17	X6CrTi17		X8CrTi17	SUS430LX
1.4511	X6CrNb17		430 Nb			Z8CrNb17	X6CrNb17			SUS430LX
1.4512	X6CrTi12		409	S40900	409S19	Z6CrTi12	X6CrTi12			SUH 409
1.4742	X10CrAl18		430	S43000	(430S15)	Z10CrS18	(X8Cr17)		X10CrAl18	SUH 21
1.4747	X80CrNiS20		HNV 6	S65006	443S65	Z80CrNi20.02	X80CrNi20		X80CrNi20.02	SUH 4
1.4762	X10CrAl24		446	S44600		Z10CrS24	X16Cr26		X10CrAl24	SUH 442

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Materials

D		UK	USA		UK	F	IT	S	E	J
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

NITI SCH › Stainless Steel - Austenitic

1.4301	X5QN1810	X6QN1810 KD	304 H		304S15	Z6QN1809	X5QN1810	2332	X5QN1811	SUS 304
1.4302	X5QN199									
1.4303	X5QN1812	X8QN1812 KD	308	S30500	305S19	Z8QN1812	X8QN1910		X8QN1812	SUS 305
1.4305	X10QNS189	X10QNS189	303	S30300	303S21	Z10QNF1809	X10QNS1809	2346	X10QNS189	SUS 303
1.4306	X2QN1911	(X3QN1810 KD)	304 L	S30403	304S11	Z2QN1809	X2QN1811	2352	X2QN1910	SCS 19
1.4308	GX6QN189		CF-8		304C15	Z6QN1810M		2333		SCS 13
1.4310	X12QN177	X12QN177	301	S30100	301S21	Z12QN1707	X12QN1707		X12QN1707	SUS 301
1.4311	X2QNN1810	X2QNN1810	304 LN	S30453	304S62	Z8QN1812	X8QN1910	2371	X8QN1812	SL5304LN
1.4312	GX10QN188				302C25	Z10QN189M				SCS 12
1.4313	X5QN134		CA 6-NM			Z4QDN134	X6QN1304	2385		
1.4316	X2QN199					Z2QN2010				
1.4321	X2NQ1816									
1.4332	X2QN2412					Z2QN2413				
1.4337	X10QN309									
1.4340	GX40QN274						GX6QN2805			
1.4347	GX8QN267									
1.4351	X3QN134									
1.4370	X15QNM188									
1.4401	X5QNMb17122	X6QNMb17122 KD	316	S31600	316S16	Z6QND1711	X5QNMb1712	2347	X5QNMb17-12	SUS 316
1.4403	X5QNMb1911			S30882						
1.4404	GX2QNMb1810	GX3QNMb17122 KD	316 L	S31603	316S12	Z3QND1910M	GX2QNMb1911	2348	X2QNMb17-12-03	SL5316L
1.4404	X2QNMb17132	X3QNMb17122 KD	316 L	S31603	316S11	Z2QND1712	X2QNMb1712	2348	X2QNMb17-12-03	SL5316L
1.4405	GX5QNMb165									
1.4406	X2QNMb17122	X3QNMb17122	316 LN	S31653	316S61	Z2QND1712Az	X2QNMb1712			SL5316LN
1.4408	GX6QNMb1810		CF-8M	J82900	316C16			2343	X7QNMb2010	SCS 14
1.4429	X2QNMb17133	X3QNMb17133	316 LN	S31653	316S62	Z2QND1713Az	X2QNMb1713	2375		SL5316LN
1.4430	X2QNMb1912			S31683	316S93	Z2QND1912				
1.4435	X2QNMb18143		316 L	S31603	316S11	Z2QND1713	X2QNMb1713	2353	X2QNMb17-12-03	SCS 16
1.4436	X5QNMb18133	X6QNMb18133 KD	316	S31600	316S16	Z6QND1712	X5QNMb1713	2343	X6QNMb17-12-03	SUS 316
1.4437	GX6QNMb1812				317C12					
1.4438	X2QNMb18164	X3QNMb18164	317 L	S31703	317S12	Z2QND1915	X2QNMb1815	2367		SL5317L
1.4439	X2QNMb17135									
1.4440	X2QNMb18165			S31780						
1.4446	GX2QNMb17132									
1.4448	GX6QNMb1713			J83000	317C16					
1.4449	X5QNMb1713		317	S31700	317S16		X5QNMb1815			SUS 317
1.4455	X2QNMb182016									
1.4463	GX6QNMb2482									
1.4465	X1QNMb25252									
1.4502	X8QNTi18									
1.4503	X3NQCuMoTi2723									
1.4505	X5NQMoCuNb2018									
1.4506	X5NQMoCuTi2018									
1.4523	X8QNTi17									
1.4528	X105QCuMo182									
1.4529	X1NQMoCu25206									
1.4531	GX2NQMoCuN2018									
1.4535	X90QCuMoV17									
1.4536	GX2NQMoCuN2520									
1.4539	X1NQMoCu25205			N08904		Z1NDU2520		2662		
1.4541	X6QNTi1810	X6QNTi1810	321	S32100	321S12	Z6QNT1810	X6QNTi1811	2337	X7QNTi18-11	SUS 321
1.4543	X5QNNb189						X6QNNb1811			
1.4550	X6QNNb1810	X6QNNb1810	347	S34700	347S17	Z6QNNb1810	X6QNNb1811	2338	X6QNNb18-11	SUS 347
1.4551	X5QNNb199			S34780						
1.4552	GX5QNNb189				347C17	Z4QNNb1910M				SCS 21
1.4571	X6QNMbTi17122		316 Ti		320S31	Z6QNDT1712	X6QNMbTi1712	2350	X6QNMbTi17-12-03	
1.4573	X10QNMbTi1812		316 Ti		320S33		X6QNMbTi1713			
1.4575	X1QNMb2842									
1.4576	X5QNMbNb1912			S31980	318S96					
1.4577	X3QNMbTi2525									
1.4580	X6QNMbNb17122		316 Nb			Z6QDNb1712	X6QNMbNb1712			
1.4581	GX5QNMbNb1810				318C17	Z4QDNb1812M	GX6QNMbNb2011			
1.4582	X4QNMbNb257									SCS 22
1.4583	X10QNMbNb1812		318				X6QNMbNb1713			

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Materials

D		UK		USA		UK		F		IT		S		E		J	
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS							

EDELSTAHL FERRITISCH/MARTENSITISCH › Stainless Steel - Ferritic/Martensitic

1.4585	GX70NiMoNb 1818																
1.4586	X50NiMoNb 22 18																
1.4724	X10CrAl13					(403S17)	Z10C13	X10CrAl12		X10CrAl13							
1.4776	GX40CrSi29							G35Cr28								SCH 2	
1.4821	X20CrNiSi25 4						Z20CrNiSi25 04	X20CrNiSi25 4		X20CrNiSi25 04							
1.4823	GX40CrNiSi27 4				J92605												
1.4825	GX25CrNiSi18 9				J92603												
1.4826	GX40CrNiSi22 9				J92603											SCH 12	
1.4828	X12CrNi20 12		309	S30900	309S24	Z15CrNi20.12	X16CrNi25.20	X16CrNi25.20		X15CrNi20.12					SUH 309		
1.4833	X7CrNi23 14		309 S	J93400	309S24	Z15CrNi24.13	X6CrNi23 14	X6CrNi23 14							SUS309S		
1.4837	GX40CrNiSi25 12				J93503	309C30		G35CrNi25 12							SCS 17		
1.4841	X15CrNi25 20		310	S31000		Z15CrNi25.20	X16CrNi25.20	X16CrNi25.20		X15CrNi25.20					SUH 310		
1.4845	X12CrNi25 21		310 S	S31008	310S24	Z12CrNi25.20	X6CrNi25 20	X6CrNi25 20	2361	F331					SUS310S		
1.4848	GX40CrNiSi25 20		HK	J94204	310C40		G40CrNi26 20	G40CrNi26 20		X40CrNi25 20					SCH 21		
1.4871	X53CrNiN21 9		EV 8	S63008	349S54	Z52CrNi21.09	X53CrNiN21 9	X53CrNiN21 9		X53CrNiN21 09					SUH 35		
1.4878	X12CrNiTi18 9		321		321 S20	Z6CrNiTi18.12	X6CrNiTi18.11	X6CrNiTi18.11	2337	X6CrNiTi18 11					SUS 321		
1.4910	X3CrNiMoN1713							X2CrNiMoN17 12									
1.4919	X6CrNiMo17 13		316 H	S31609	316S51												
1.4923	X22CrMoV121							X22CrMoV121									
1.4931	GX22CrMoV121																
1.4941	X8CrNiTi18 10																
1.4948	X6CrNi18 11					304S51											

Stainless Steel - Austenitic/Ferritic (Duplex)

1.4949	X3CrNiN18 11	X2CrNiN18 11						Duplex									
1.4410	GX10CrNiMo189						Z5CrNi20.10 M	SuperDuplex								SCS14A	
1.4462	X2CrNiMoN225 3	X2CrNiMoN225 3	F51 Q22	S31803	318S13	Z2CrNi24.08 M		Duplex	2377								
1.4460	X3CrNiMoN275 2		329	S32900		Z3CrNi25.09 M		Duplex	2324	X8CrNiMo27-05					SUS329J1		
1.4501	X2CrNiMoW1N2574		F55	S32760		Z3CrNi25.06		Duplex									
1.4542	X5CrNiNb16 4	X5CrNiNb16 4	17-4PH	S17400		Z7CrNi16.04									SUS 630		
1.4961	X8CrNi16 13									X7CrNi16-13							
1.4980	X6NCrTiMoB25152			S66286		Z5NCrTiMoB25 15 B									SUS 660		
1.4981	X8CrNiMo16 16									X7CrNiMo16-16							
1.4988	X8CrNiMo16 13																
2.4537	GNiMo16CrW																
1.4539	X1NiMoCu25 205		904L	N 08904	904S13	Z2NiCu25.205											
2.4631	Ni20TiAl																

TECHNISCHE DATEN › Technical Guide

MATERIAL

Materials

D		UK		USA		UK		F		IT		S		E		J	
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS							

GRAUGUSS › Gray Cast Iron

0.6012	GG150HB	GLHB170															
0.6015	GG 15	GL-150	A48-25 B	F11701	Grade 150	FGL 150	G 15	0115-00	FG 15	FC 15							
0.6017	GG170HB	GLHB205															
0.6020	GG 20	GL-200	A48-30 B		Grade 200	R20D	G 20	0120-00	FG 20	FC 200							
0.6022	GG190HB	GLHB195															
0.6025	GG 25	GL-250	A48-40 B		Grade 260	FGL 250	G 25	0125-00	FG 25	FC 250							
0.6027	GG220HB	GLHB250															
0.6030	GG 30	GL-300	A48-45 B		Grade 300	R30D	G 30	0130-00	FG 30	FC 30							
0.6032	GG240HB	GLHB275															
0.6035	GG 35	GL-350	A48-50 B		Grade 350	R35D	G 35	0135-00	FG 35	FC 35							
0.6037	GG260HB	GLHB_275															
0.6040	GG 40	GL-400	A48-60 B		Grade 400	R40D		0140-00									
0.6652	GGLNMh137	GLA>XNMh13-7				LNMh137	LNM137										
0.6655	GGLNQC1562	GLA>XNQC15-6-2	A436Type1			LNQC156 2	LNQC1562										
0.6656	GGLNQC1563	GLA>XNQC15-6-3	A436 Type1b			LNQC156 3	LNQC1563										
0.6660	GGLNC202	GLA>XNC20-2	A436 Type2			LNC202	LNC202	0523-00									
0.6661	GGLNC203	GLA>XNC20-3	A436 Type2b			LNC203											
0.6667	GGLNSC2053	GLA>XNSC20-5-3				LNSC205 3	LNSC2053										

GUSSEISEN MIT KUGELGRAPHIT › Nodular Cast Iron

0.7033	GGG353																
0.7040	GGG40		60-40-18		420/12	FGS 400-12	GS 400-12	0717-02		FCD 40							
0.7043	GGG403				370/17	FGS 370-17	GS3042/15	0717-15									
0.7050	GGG60		65-45-12		500/7	FGS500-7	GS 500/7	0727-02		FCD 50							
0.7060	GGG60		80-55-06		600/3	FGS600-3	GS 600/3	0732-03		FCD 60							
0.7070	GGG70		100-70-03		700/2	FGS700-2	GS700-2	0737-01		FCD 70							
0.7080	GGG80		120-90-02		800/2	FGS800-2	GS800-2										
0.7652	GGGNMh137	GSA>XNMh13-7				SNMh137	SMh137	0772-00									
0.7659	GGGNb202	GSA>XNOb20-2															
0.7660	GGGNC202	GSA>XNC20-2	A439 TypeD-2			LNC202	LNC202	0523-00									
0.7661	GGGNC203	GSA>XNC20-3	A439 TypeD-2B			SNQC203											
0.7665	GGGNSC2052	GSA>XNSC20-5-2				SNSC205 2	SNSC2052										
0.7670	GGGN22	GSA>XN22	A439 TypeD-2C			S-Ni 22	S-N 22										
0.7673	GGGNMh234	GSA>XNMh23-4	A571 TypeD-2M			SNMh234											

TEMPERGUSS › Ductile & Austempered Cast Iron

0.8035	GTW3504	GJMW-3504															
0.8038	GTW338-12	GJMW-338-12															
0.8040	GTW4005	GJMW-4005				MB40-10	GMB 40										
0.8045	GTW4507	GJMW-4507					GMB 45										
0.8055	GTW65						GMB 55										
0.8065	GTW65						GMB 65										
0.8135	GTS35-10	GJMB-350-10	32510		B 340/12	MN35-10		0815		FCMW 330							
0.8145	GTS45-06	GJMB-450-6	40010		P 440/7			0852		FCMW 440							
0.8155	GTS55-04	GJMB-550-4	50005		P 510/4	MP 50-5		0854		FCMW 490							
0.8165	GTS65-02	GJMB-650-2	70003		P 570/3	MP 60-3		0858		FCMW 540							
0.8170	GTS70-02	GJMB-700-2	90001		P 690/2	Mh700-2	GMN 70	0862									

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MATERIAL

Materials

D		UK	USA		UK	F	IT	S	E	J
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS

MESSUNG UND KUPFER LEGIERUNGEN › *Brass and Copper Alloys*

2.0040	OF-Cu									
2.0060	E-Cu 57		B-120							
2.0065	E-Cu 58		C 11000		C 101	Cn-a2				
2.0070	SE-Cu		C 10300		C 101	Cu-c1				
2.0082	G-CuL45		C 81100		HCC 1					
2.0085	G-CuL50		C 81100		HCC 1					
2.0220	CuZn 5									
2.0240	CuZn 15		C 23000			CuZn 15				C 2300
2.0241	G-CuZn 40 MnPb									
2.0265	CuZn 30		C 26000		CZ 102	CuZn 30				C 2600
2.0290	G-CuZn 33 Pb									
2.0321	CuZn 37		C 27200		CZ 108	CuZn 37	C 2720			
2.0330	CuZn 36 Pb 1,5									
2.0331	CuZn 36 Pb 1,5									
2.0340	G-CuZn 37 Pb									
2.0380	CuZn 39 Pb 2									
2.0401	CuZn 39 Pb 3									
2.0402	CuZn 39 Pb 2									
2.0460	CuZn 20 Al 2									
2.0492	G-CuZn 15 Si 4		B-198							
2.0510	CuZn 37 Al 1									
2.0550	CuZn 40 Al 2									
2.0561	CuZn 40 Al 1									
2.0590	G-CuZn 40 Fe									
2.0591	GK-CuZn 38 Al									
2.0592	G-CuZn 35 Al 1		C 86500		HTB 1	U-Z 36 N 3				
2.0595	GK-CuZn 37 Al 1									
2.0596	G-CuZn 34 Al 2		C 86200		HTB 1	U-Z 36 N 3				
2.0598	G-CuZn 25 Al 5									
2.0872	CuNi 10 Fe 1 Mn									
2.0882	CuNi 30 Mn 1 Fe									
2.0936	CuAl 10 Fe 3 Mn 2				CA 103	U-A 10 Fe				
2.0940	G-CuAl 10 Fe									
2.0966	CuAl 10 Ni 5 Fe 4		C 63000		Ca 104	U-A 10 N				
2.0975	G-CuAl 10 Ni		B-148-52							
2.1050	G-CuSn 10		C 90700		CT 1					
2.1052	G-CuSn 12		C 90800		Pb 2	UE 12 P				
2.1060	G-CuSn 12 Ni		C 91700							
2.1061	G-CuSn 12 Pb									
2.1086	G-CuSn 10 Zn									
2.1090	G-CuSn 7 ZnPb		C 93200			U-E 7 Z 5 Pb 4				
2.1093	G-CuSn 6 ZnNi				LG 4					
2.1096	G-CuSn 5 ZnPb		C 83600		LG 2	U-E 5 Pb 5 Z 5				
2.1098	G-CuSn 2 ZnPb									
2.1176	G-CuPb 10 Sn		C 93700		LB 2	U-E 10 Pb 10				
2.1182	G-CuPb 15 Sn		C 93800		LB 1	U-Pb 15 E 8				
2.1188	G-CuPb 20 Sn		C 94100		LB 5	U-Pb 20				
2.1292	G-CuCrF 35		C 81500		CC1-FF					
2.1293	CuCrZr		C 18200		CC 102	U-Cr 0,8 Zr				
2.1871	G-AlCu 4 TiMg									

MATERIAL

Materials

D		UK		USA		UK		F		IT		S		E		J	
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS							

ALUMINIUM & ALUMINIUM LEGERUNGEN › *Aluminum & Aluminum Alloys*

3.0255	Al99.5		1000		L 31	A 59050 C											
3.0280	Al99.8																
3.0515	G-Al99.5																
3.0615	AlMgSiPb																
3.1325	AlCuMg 1	AW-2017 A															
3.1355	AlCuMg 2	AW-2024															
3.1371	G-AlCu 4 Ti Mg																
3.1645	AlCuMgPb																
3.1655	AlCuBiPb																
3.1754	G-AlCu 5 Ni 1.5																
3.1841	G-AlCu 4 Ti																
3.2151	G-AlSi 6 Cu 4																
3.2163	GD-AlSi 9 Cu 3																
3.2211	G-AlSi 11																
3.2315	AlMgSi 1	AW-6005 A															
3.2341	GK-AlSi 5 Mg																
3.2371	G-AlSi 7 Mg		4218 B														
3.2373	G-AlSi 9 Mg																
3.2381	G-AlSi 10 Mg																
3.2382	GD-AlSi 10 Mg																
3.2383	GK-AlSi 10 Mg (Cu)		A 360.2		LM 9			4253									
3.2581	G-AlSi 12		A 413.2		LM 6			4261									
3.2582	GD-AlSi 12		A 413.0					4247									
3.2583	G-AlSi 12 (Cu)		A 413.1		LM 20			4260									
3.2982	GD-AlSi 12 (Cu)																
3.3206	AlMgSi 0.5																
3.3241	G-AlMg 3 Si																
3.3261	G-AlMg 5 Si																
3.3292	GD-AlMg 9																
3.3315	AlMg 1	AW-6082															
3.3535	AlMg 3																
3.3541	G-AlMg 3																
3.3555	AlMg 5																
3.3561	G-AlMg 5																
3.4345	AlZnMgCu 0,5		7050		L 86	AZ 4 GU/9051	811-04										
3.5101	G-MgZn 4 Se 1 Zr 1	MCMgZn 4 RE 1 Zr	ZE 41		MAG 5	G-Z 4 TR											
3.5102	G-MgZn 5 Th 2 Zr 1																
3.5103	MgSe 3 Zn 2 Zr 1	MCMgRE 3 Zn 2 Zr	EZ 33		MAG 6	G-TR 3 Z 2											
3.5105	G-MgTh 3 Zn 2 Zr 1																
3.5106	G-MgAg 3 Se 2 Zr 1	MCMgRE 2 Ag 2 Zr	QE 22		MAG 12	G-Ag 22.5											
3.5200	G-MgAl 3 Se 2 Zr 1																
3.5470	GD-MgAl 4 Si 1		AS 41														
3.5612	GD-MgAl 6 Zn 1																
3.5662	GD-MgAl 6																
3.5812	G-MgAl 8 Zn 1	MCMgAl 8 Zn 1	AZ 81		MAG 1	G-A 9											
3.5912	G-MgAl 9 Zn 1	MCMgAl 9 Zn 1	AZ 91		MAG 7	G-A 9 Z 1											

MATERIAL

Materials

D		UK		USA		UK		F		IT		S		E		J	
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS							

HITZBESTÄNDIGE SUPER LEGERUNGEN HRSA › *Heat Resistant Super Alloys HRSA*

0.6676	GGL-NiCr 30 3	GJLA-XNiCr 30-3	A 436 Type 3			L-NiCr 30 3	L-NC 30 3										
0.6680	GGL-NiSiCr 30 5 5	GJLA-XNiSiCr 30-5-5	A 436 Type 4			L-NiSiCr 30 5 5	L-NSC 30 5 5										
0.7676	GGG-NiCr 30 3	GJSA-XNiCr 30-3	A 439 Type D-3			S-NiCr 30 3	S-NC 30 3										
0.7677	GGG-NiCr 30 1	GJSA-XNiCr 30-1	A 439 Type D-3A			S-NiCr 30 1	S-NC 30 1										
0.7679	GGG-NiSiCr 30 5 5	GJSA-XNiSiCr 30-5-5															
0.7680	GGG-NiSiCr 30 5 3	GJSA-XNiSiCr 30-5-3	A 439 Type D-4			S-NiSiCr 30 5 5	S-NSC 30 5 5										
0.7683	GGG-Ni 35	GJSA-XNi 35	A 439 Type D-5			S-Ni 35	S-N 35										
0.7685	GGG-NiCr 35 3	GJSA-XNiCr 35-3	A 439 Type D-5A			S-NiCr 35 3	S-NC 35 3										
0.7688	GGG-NiSiCr 35 5 2	GJSA-XNiSiCr 35-5-2															
1.4335	X 2 CrNi 25 20																
1.4361	X 2 CrNiSi 18 15						Z 1 CNS 18.15										
1.4558	X2 NiCrAlTi 32 20																NCF 800 TB
1.4562	X1 NiCrMoCu 32 28 7																
1.4563	X1 NiCrMoCuN 31 27 4				N08028		Z2 NCDU 31.27.03			2584							
1.4857	G-X 40 CrNiSi 35 25				J95705			GX 50 NiCr 35 25									
1.4862	X 8 CrNiSi 38 18																
1.4864	X 12 NiCrSi 36 16		330			NA 17	Z 12 NCS 37.18					X 12 CrNiSi 36-16					SUH 330
1.4864	Incoloy																
1.4865	G-X 40 NiCrSi 38 18				J94605	330 C 40		GX 50 NiCr 39 19									SCH 15
1.4876	X 10 NiCrAlTi 32 20		B 163			NA 15	Z 8 NC 32.21					X 10 NiCrAlTi 32-30					NCF 800
1.4939	X 12 CrNiMo 12					S.151											
1.4944	A 286																SUH 660
1.4958	X 5 NiCrAlTi 31 20																
1.4959	X 5 NiCrAlTi 32 21																
1.4977	X 40 CoCrNi 20 20							Z 42 CNKDWNb									
1.4980	X 5 CrNiTi 26 15		660	S66286	286 S 31		Z 6 NCTDV 25.15 B										
2.4060	Ni 99,6																
2.4066	Ni 99,2		N 02200			NA 11											
2.4170	G-Ni 95		SZ-100														
2.4175	G-Ni 93 C		CZ-100														
2.4180	G-Ni 93 Si																
2.4360	NiCu 30 Fe		N 04400			NA 13	NU 30	Monel 400									
2.4365	G-NiCu 30 Nb		M 35-1/2														
2.4367	G-NiCu 30 Si 3		M 30-H														
2.4368	G-NiCu 30 Si 4		M-255														
2.4375	NiCu 30 Al		N 05500			NA 18	NU 30 AT										
2.4375	NiCu 30 Al		N 05500			NA 18	NU 30 AT										
2.4602	NiCr 21 Mo 14 W																
2.4610	NiMo 16 Cr 16 Ti		N 06455														
2.4617	NiMo 28		N 10665				NiMo 28										
2.4619	NiCr 22 Mo 7 Cu		N 06985														
2.4630	NiCr 20 Ti		N 06075			HR5	NC 20 T	Nimonic 75									
2.4632	NiCr 20 Co 18 Ti							Nimonic 90									
2.4634	NiCo 20 Cr 15 MoAlTi							Nimonic 105									
2.4642	NiCr 29 Fe		N 06690				NC 30 Fe										
2.4650	NiCo 20 Cr 20 MoTi		N 07263			HR 10	NCK 20 D	Nimonic C-263									
2.4654	NiCr20Co14MoTi						NC20K14	Waspaloy									
2.4658	NiCr 70 30																
2.4660	NiCr 20 CuMo		N 08020														
2.4663	NiCr 23 Co 12 Mo		N 06617														
2.4665	NiCr 22 Fe 18 Mo																
2.4668	NiCr 19 FeNbMo		N 07718				NC 19 Fe Nb	Inconel 718									
2.4669	NiCr 15 Fe 7 TiAl		N 07750				NC 15 Tnb A										
2.4685	G-NiMo 28		N-7 M														
2.4686	G-NiMo 17 CrW		CW-12 MW														
2.4694	NiCr 16 Fe 7 TiAl																
2.4778	G-CoCr 28																
2.4810	G-NiMo 30		N-12 MV														
2.4816	NiCr 15 Fe		N 06600			NA 14	NC 15 Fe										NCF 600
2.4819	NiMo 16 Cr 15 W		N 10276				NC 17 D										
2.4851	NiCr 23 Fe		N 06601				NC 23 Fe A										
2.4856	NiCr 22 Mo 9 Nb		N 06625			NA 21	NC 22 Fe DNb	Inconel 625									
2.4858	NiCr 21 Mo		N 08825			NA 16	NC 21 Fe DU										NCF 825
2.4867	NiCr 60 15																

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Materials

D		UK		USA		UK		F		IT		S		E		J	
W.-NR.	DIN	EN	AISI	UNS	BS	AFNOR	UNI	SS	UNE	JIS							

HITZEBESTAENDIGE SUPER LEGERUNGEN HRSA › *Heat Resistant Super Alloys HRSA*

2.4869	NCr8020																
2.4879	GNCr28W																
2.4883	GNMn16QW																
2.4951	NCr20Ti			N 06075		HR 5	NC20T										
2.4952	NCr20TiAl			N 07080		NA 20	NC20TA										
2.4955	NFe25Cr20NbTi																
2.4964	CoCr20W15N			R 30605		HR 240	HC22WN										
2.4969	NCr20Co18Ti																
2.4973	NCr19Co11Mn10TiB			AMS 5399			NC19KDT										
2.4975	NFeCr12Mn																
2.4976	NCr20Mn																
2.4982	NCr20CoMn																
2.4983	NCr18Co18MnTi																
2.4989	CoCr20NiW																

TITAN UND TITAN LEGERUNGEN › *Titanium and Titanium Alloys*

3.7025	Ti 1			R 50250		2TA1											
3.7035	Ti 2			R 50400		2TA2-5											
3.7065	Ti 3			R 50550		TA 3											
3.7065	Ti 4			R 50700		2TA6-9											
3.7105	TiNi0.8Mn0.3																
3.7110	TiAl5Fe2.5																
3.7115	TiAl5Sn2																
3.7124	TiAl2						2TA21-24										
3.7145	TiAl6Sn2Zr4MnSi			R 54620													
3.7155	TiAl6ZrMn0.5					TA 43											
3.7165	TiAl6V4			R 56400		TA10-13	TA6V										
3.7175	TiAl6V6Sn2																
3.7185	TiAl4Mn4Sn2					TA45-51											
3.7195	TiAl3V2.5																
3.7225	Ti1Pd			R 52250		TP 1											
3.7235	Ti2Pd			R 52400													
3.7255	Ti3Pd																

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010R02R95M06XD0401	300	050A07R9022AP1003	292	300020x160	308	A20PSDUCR11	234
012R02R95M06XD0401	300	052A03R0022WV1207	316	300020x175	308	A25RPCLN12	214
016R02R95M08XD0602	300	052A04R0022SP1305	314	300020x190	308	A25RPCLNR12	214
016W02R9016150AP1003	292	052A7R0022RD1003	302	300025x160	308	A25RPDQNL11	216
020R02R00M10RD1003	302	052C04R002207RD1604	304	300025x190	308	A25RPDQNR11	216
020R02R00M10SP08T3	312	052C04R0022RD1604	304	300025x210	308	A25RPDUNL11	220
020R03R95M10XD0602	300	052C04R0022WD1204	318	300032x175	308	A25RPDUNR11	220
020W02R0020160RD1003	302	052C05R002207RD12T3	304	300032x210	308	A25RPWLNL06	226
020W02R0020190SP08T3	312	052C05R0022RD12T3	304	300032x240	308	A25RPWLNL08	226
020W02R0025220RD1003	302	052C05R9522XD10T3	300	30008x140	308	A25RPWLNR06	226
020W03R9020090AP1003	292	063A05R0027SP1305	314	A0810HSDUC RL.07	234	A25RPWLNR08	226
020W03R9020150AP1003	292	063A05R4522SE13T3	288	A08H-SCLCL06	228	A25RSCLCL09	228
024R02R00M12RD12T3	302	063A05R9027SP1204	290	A08H-SCLCR06	228	A25RSCLCL12	228
025R03R00M12RD1003	302	063A06R4522SN1206	286	A10H-SCLCL06	228	A25RSCLCR09	228
025R03R00M12SP08T3	312	063A06R9022AP1604	296	A10H-SCLCR06	228	A25RSCLCR12	228
025R03R95M12XD0602	300	063A08R9022AP1003	292	A10H-SDQQL07	232	A25RSDQCL11	232
025W02R0025220RD12T3	302	066A04R0027WV1207	316	A10H-SDQCR07	232	A25RSDQCR11	232
025W02R0032230RD12T3	302	066A05R0027SP1305	314	A10H-SDUCL07	234	A25RSDUCL11	234
025W02R9025200AP1604	296	066A05R0027WV1207	316	A10H-SDUCR07	234	A25RSDUCR11	234
025W03R0025200SP08T3	312	066C05R002707RD1604	304	A12H-SCLCL06	228	A32SPCLN12	214
025W04R9025095AP1003	292	066C05R0027RD1604	304	A12H-SCLCR06	228	A32SPCLN16	214
030R04R00M16RD1003	302	066C05R0027WD1204	318	A12H-SDQQL07	232	A32SPCLNR12	214
032R02R00M16RD1604	304	066C05R3627PD1204	284	A12H-SDQCR07	232	A32SPCLNR16	214
032R02R90M16VC2205	320	066C06R002707RD12T3	304	A12H-SDUCL07	234	A32SPDQNL15	216
032R03R00M16SP1305	314	066C06R0027RD12T3	304	A12H-SDUCR07	234	A32SPDQNL1504	216
032R04R00M16SP08T3	312	066C06R9527XD10T3	300	A16V-SCLCL09	228	A32SPDQNR15	216
032W04R0032200SP08T3	312	080A05R0027WV1207	316	A16V-SCLCR09	228	A32SPDQNR1504	216
032W03R9032200AP1604	296	080A06R0027SP1305	314	A16V-SDQQL07	232	A32SPDUNL15	220
035R02R00M16WV1207	316	080A06R4527SE13T3	288	A16V-SDQCL11	232	A32SPDUNR15	220
035R03R00M16RD12T3	302	080A06R9027SP1204	290	A16V-SDQCR07	232	A32SPWLNL06	226
035R03R00M16RD1604	304	080A07R4527SN1206	286	A16V-SDQCR11	232	A32SPWLNL08	226
035R03R00M16SP1305	314	080A07R9027AP1604	296	A16V-SDUCL07	234	A32SPWLNR06	226
035R03R95M16XD10T3	300	080C06R002707RD1604	304	A16V-SDUCL11	234	A32SPWLNR08	226
035R04R00M16SP08T3	312	080C06R0027RD1604	304	A16V-SDUCR07	234	A32SSCLCL09	228
035R05R00M16RD1003	302	080C06R0027WD1204	318	A16V-SDUCR11	234	A32SSCLCR09	228
040A03R9016SP1204	290	080C06R3627PD1204	284	A20PPDQNL11	216	A32SSDQCL11	232
040A04R9016AP1604	296	080C07R002707RD12T3	304	A20PPDQNR11	216	A32SSDQCR11	232
040A06R9022AP1003	292	080C07R0027RD12T3	304	A20PPDUNL11	220	A32SSDUCL11	234
040W04R9032115AP1604	296	100A07R4532SE13T3	288	A20PPDUNR11	220	A32SSDUCR11	234
040W04R9040200AP1604	296	100A08R4532SN1206	286	A20PPWLNL06	226	A40TPCLN12	214
042A6R0016RD1003	302	100C07R3632PD1204	284	A20PPWLNR06	226	A40TPCLN16	214
042R04R00M16RD12T3	302	125C06R3640PD1204	284	A20P-SCLCL09	228	A40TPCLN19	214
042R04R00M16SP1305	314	160C09R3640PD1204	284	A20P-SCLCR09	228	A40TPCLN12	214
042R05R00M16RD1003	302	300010x150	308	A20PSDQCL07	232	A40TPCLN16	214
042R05R00M16SP08T3	312	300012x130	308	A20PSDQCL11	232	A40TPCLN19	214
050A04R0022SP1305	314	300012x150	308	A20PSDQCR07	232	A40TPDQNL15	216
050A04R4522SE13T3	288	300012x160	308	A20PSDQCR11	232	A40TPDQNL1504	216
050A04R4522SN1206	286	300016x140	308	A20PSDUCL07	234	A40TPDQNR15	216
050A04R9022SP1204	290	300016x160	308	A20PSDUCL11	234	A40TPDQNR1504	216
050A05R9022AP1604	296	300016x175	308	A20PSDUCR07	234	A40TPDUNL15	220

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A40TPDUNR15	220	BCEA16	310	CCMT060208MM	92	CNMG090304SS	28
A40TPWLNLO8	226	BCEA20	310	CCMT060208MP	92	CNMG090308MF	22
A40TPWLNRO8	226	BCEA25	310	CCMT09T302FK	90	CNMG090308MR	26
A50UPCLNL12	214	BCEA32	310	CCMT09T302FM	90	CNMG090308SS	28
A50UPCLNL16	214	BCEG10	310	CCMT09T302FP	88	CNMG09T304MF	22
A50UPCLNL19	214	BCEG12	310	CCMT09T304BO	88	CNMG09T308MF	22
A50UPCLNR12	214	BCEG16	310	CCMT09T304FK	90	CNMG120404LC	24
A50UPCLNR16	214	BCEG20	310	CCMT09T304FM	90	CNMG120404MF	22
A50UPCLNR19	214	BCEG25	310	CCMT09T304FP	88	CNMG120404MR	26
A60UPDQNL15	216	BCEG32	310	CCMT09T304MK	94	CNMG120404MS	24
A60UPDQNR15	216	BCEG38	310	CCMT09T304MM	92	CNMG120404SF	24
A60UPDUNL15	220	BCS12M08L065	323	CCMT09T304MP	92	CNMG120404SS	28
A60UPDUNR15	220	BCS12M08L088	323	CCMT09T308BO	88	CNMG120404ST	28
A60UPWLNLO8	226	BCS12M10L095	323	CCMT09T308FM	90	CNMG120408HR	30
A60UPWLNRO8	226	BCS12M12L106	323	CCMT09T308FP	88	CNMG120408LC	24
APET100305PDFRLN	294	BCS12M16L110	323	CCMT09T308MK	94	CNMG120408MF	22
APKT100305PDERX1	294	BEM08L040M08	324	CCMT09T308MM	92	CNMG120408MR	26
APKT100305PDSRX1	294	BEM10L060M10	324	CCMT09T308MP	92	CNMG120408MS	24
APKT100308PDERX	294	BEM12L060M12	324	CCMT120404BO	88	CNMG120408SF	24
APKT100308PDSRX	294	BEM16L060M16	324	CCMT120404FK	90	CNMG120408SS	28
APKT100312PDERX	294	BMM08L040M06	325	CCMT120404FM	90	CNMG120408ST	28
APKT100312PDSRX	294	BMM10L040M08	325	CCMT120404FP	88	CNMG120412HR	30
APKT160408PDERX1	298	BMM12L040M10	325	CCMT120404MK	94	CNMG120412MF	22
APKT160408PDFRLN	298	BMM16L040M12	325	CCMT120404MM	92	CNMG120412MR	26
APKT160408PDSRX1	298	CCGT060201FS	94	CCMT120404MP	92	CNMG120412MS	24
APKT160416PDERX	298	CCGT060202FS	94	CCMT120408BO	88	CNMG120412SF	24
APKT160416PDSRX	298	CCGT060202LN	96	CCMT120408MK	94	CNMG120412SS	28
APKT160432PDERX	298	CCGT060204FS	94	CCMT120408MM	92	CNMG120412ST	28
APKT160432PDSRX	298	CCGT060204LN	96	CCMT120408MP	92	CNMG120416HR	30
BAVD12M08L090	322	CCGT09T301FS	94	CCMT120412MM	92	CNMG120416MR	26
BAVD12M08L110	322	CCGT09T302FS	94	CCMT120412MP	92	CNMG120416MS	24
BAVD12M08L130	322	CCGT09T302LN	96	CKJNL2020K16	148	CNMG120416SS	28
BAVD16M08L095	322	CCGT09T304FS	94	CKJNL2525M16	148	CNMG120416ST	28
BAVD16M08L115	322	CCGT09T304LN	96	CKJNL3232P16	148	CNMG160608HR	30
BAVD16M08L135	322	CCGT09T308LN	96	CKJNL4040S16	148	CNMG160608MR	26
BAVD16M08L155	322	CCGT120402LN	96	CKJNR2020K16	148	CNMG160608SS	28
BAVD16M08L175	322	CCGT120404LN	96	CKJNR2525M16	148	CNMG160608ST	28
BAVD20M10L100	322	CCGT120408LN	96	CKJNR3232P16	148	CNMG160612HR	30
BAVD20M10L120	322	CCMT060202BO	88	CKJNR4040S16	148	CNMG160612MR	26
BAVD20M10L140	322	CCMT060202FK	90	CNMA120404	22	CNMG160612SS	28
BAVD20M10L140M	322	CCMT060202FM	90	CNMA120408	22	CNMG160612ST	28
BAVD20M10L160	322	CCMT060202FP	88	CNMA120412	22	CNMG160616HR	30
BAVD20M10L160M	322	CCMT060204BO	88	CNMA120416	22	CNMG160616MR	26
BAVD20M10L180	322	CCMT060204FK	90	CNMA160608	22	CNMG160616ST	28
BAVD20M10L180M	322	CCMT060204FM	90	CNMA160612	22	CNMG190612HR	30
BAVD25M12L125	322	CCMT060204FP	88	CNMA160616	22	CNMG190612MR	26
BAVD25M12L145	322	CCMT060204MK	94	CNMA190612	22	CNMG190612SS	28
BAVD25M12L165	322	CCMT060204MM	92	CNMA190616	22	CNMG190616HR	30
BCEA10	310	CCMT060204MP	92	CNMG090304MF	22	CNMG190616MR	26
BCEA12	310	CCMT060208MK	94	CNMG090304MR	26	CNMG190616SS	28

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CNMG250924HR	30	DCMT11T312MM	102	DNMG150604SS	40	PCLNL3232P16	152
CNMM190612HY	32	DCMT11T312MP	100	DNMG150604ST	40	PCLNL3232P19	152
CNMM190612HZ	32	DNMA110404	34	DNMG150608HR	42	PCLNL4040S19	152
CNMM190616HS	32	DNMA150404	34	DNMG150608LC	38	PCLNL4040S25	152
CNMM190616HY	32	DNMA150408	34	DNMG150608MF	34	PCLNR1616H12	152
CNMM190616HZ	32	DNMA150412	34	DNMG150608MR	38	PCLNR2020K12	152
CNMM190624HS	32	DNMA150416	34	DNMG150608MS	36	PCLNR2525M12	152
CNMM190624HY	32	DNMA150604	34	DNMG150608SF	36	PCLNR2525M16	152
CNMM190624HZ	32	DNMA150608	34	DNMG150608SS	40	PCLNR2525M19	152
CNMM250924HS	32	DNMA150612	34	DNMG150608ST	40	PCLNR3232P12	152
CNMM250924HY	32	DNMA150616	34	DNMG150612HR	42	PCLNR3232P16	152
CNMM250924HZ	32	DNMG110404MF	34	DNMG150612LC	38	PCLNR3232P19	152
DOGT070201FS	104	DNMG110404MR	38	DNMG150612MF	34	PCLNR4040S19	152
DOGT070202FS	104	DNMG110404SF	36	DNMG150612MR	38	PCLNR4040S25	152
DOGT070202LN	104	DNMG110404ST	40	DNMG150612MS	36	PDHW120420T	284
DOGT070204FS	104	DNMG110408MF	34	DNMG150612SF	36	PDJNL1616H11	154
DOGT070204LN	104	DNMG110408MR	38	DNMG150612SS	40	PDJNL2020K11	154
DOGT11T301FS	104	DNMG110408SF	36	DNMG150612ST	40	PDJNL2020K15	154
DOGT11T302FS	104	DNMG110408SS	40	DNMG150616HR	42	PDJNL2525M11	154
DOGT11T302LN	104	DNMG110408ST	40	DNMG150616MR	38	PDJNL2525M15	154
DOGT11T304FS	104	DNMG150404LC	38	DNMG150616SS	40	PDJNL3232P15	154
DOGT11T304LN	104	DNMG150404MF	34	DNMG150616ST	40	PDJNL4040S15	154
DOGT11T308LN	104	DNMG150404MR	38	KNUX160405L01	82	PDJNR1616H11	154
DCMT070202FK	100	DNMG150404MS	36	KNUX160406R01	82	PDJNR2020K11	154
DCMT070202FM	98	DNMG150404SF	36	KNUX160410L02	82	PDJNR2020K15	154
DCMT070202FP	98	DNMG150404SS	40	KNUX160410R02	82	PDJNR2525M11	154
DCMT070204FK	100	DNMG150404ST	40	PCBNL2020K12	150	PDJNR2525M15	154
DCMT070204FM	98	DNMG150408HR	42	PCBNL2525M12	150	PDJNR3232P15	154
DCMT070204FP	98	DNMG150408LC	38	PCBNL2525M16	150	PDJNR4040S15	154
DCMT070204MK	102	DNMG150408MF	34	PCBNL3232P12	150	PDMM120420T	284
DCMT070204MM	102	DNMG150408MR	38	PCBNL3232P16	150	PDNN1616H11	156
DCMT070204MP	100	DNMG150408MS	36	PCBNL3232P19	150	PDNN2020K11	156
DCMT070208MK	102	DNMG150408SF	36	PCBNL4040S19	150	PDNN2020K15	156
DCMT070208MM	102	DNMG150408SS	40	PCBNL4040S25	150	PDNN2525M11	156
DCMT070208MP	100	DNMG150408ST	40	PCBNL5050S25	150	PDNN2525M15	156
DCMT11T302FK	100	DNMG150412HR	42	PCBNR2020K12	150	PDNN3232P15	156
DCMT11T302FM	98	DNMG150412LC	38	PCBNR2525M12	150	PSBNL2020K12	158
DCMT11T302FP	98	DNMG150412MF	34	PCBNR2525M16	150	PSBNL2525M12	158
DCMT11T304FK	100	DNMG150412MR	38	PCBNR3232P12	150	PSBNL3232P19	158
DCMT11T304FM	98	DNMG150412MS	36	PCBNR3232P16	150	PSBNL4040S19	158
DCMT11T304FP	98	DNMG150412SF	36	PCBNR3232P19	150	PSBNR2020K12	158
DCMT11T304MK	102	DNMG150412SS	40	PCBNR4040S19	150	PSBNR2525M12	158
DCMT11T304MM	102	DNMG150412ST	40	PCBNR4040S25	150	PSBNR3232P19	158
DCMT11T304MP	100	DNMG150416MS	36	PCBNR5050S25	150	PSBNR4040S19	158
DCMT11T308FM	98	DNMG150416ST	40	PCLNL1616H12	152	PSDNN2020K12	160
DCMT11T308FP	98	DNMG150604LC	38	PCLNL2020K12	152	PSDNN2525M12	160
DCMT11T308MK	102	DNMG150604MF	34	PCLNL2525M12	152	PSDNN2525M15	160
DCMT11T308MM	102	DNMG150604MR	38	PCLNL2525M16	152	PSDNN3232P12	160
DCMT11T308MP	100	DNMG150604MS	36	PCLNL2525M19	152	PSDNN3232P19	160
DCMT11T312MK	102	DNMG150604SF	36	PCLNL3232P12	152	PSQLR3232P19	162

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PSKNL2020K12	162	PTJNR2525M22	170	S08HSCFOR06	230	S16PSDQCR11	232
PSKNL2525M12	162	PTJNR3232P16	170	S08HSCLCL06	228	S16PSDUCL07	234
PSKNL2525M15	162	PTJNR3232P22	170	S08HSCLCR06	228	S16PSDUCL11	234
PSKNL3232P12	162	PWLNL1616H06	172	S10KSCFCL06	230	S16PSDUCR07	234
PSKNR2020K12	162	PWLNL1616H08	172	S10KSCFOR06	230	S16PSDUCR11	234
PSKNR2525M12	162	PWLNL2020K06	172	S10KSCLCL06	228	S16PSDXCL07	236
PSKNR2525M15	162	PWLNL2020K08	172	S10KSCLCR06	228	S16PSDXCR07	236
PSKNR3232P12	162	PWLNL2525M06	172	S10KSDQCL07	232	S16PSTFCL11	238
PSKNR3232P19	162	PWLNL2525M08	172	S10KSDQCR07	232	S16PSTFCL16	238
PSSNL2020K12	164	PWLNL3232P08	172	S10KSDUCL07	234	S16PSTFOR11	238
PSSNL2525M12	164	PWLNR1616H06	172	S10KSDUCR07	234	S16PSTFOR16	238
PSSNL3232P12	164	PWLNR1616H08	172	S10KSTFCL09	238	S16PSTUCL11	240
PSSNL3232P19	164	PWLNR2020K06	172	S10KSTFOR09	238	S16PSTUCL16	240
PSSNL4040S19	164	PWLNR2020K08	172	S10KSTUCL09	240	S16PSTUCR11	240
PSSNL4040S25	164	PWLNR2525M06	172	S10KSTUCR09	240	S16PSTUCR16	240
PSSNR2020K12	164	PWLNR2525M08	172	S12KSCFCL06	230	S16PSVQBL11	242
PSSNR2525M12	164	PWLNR3232P08	172	S12KSCFCL09	230	S16PSVQBR11	242
PSSNR3232P12	164	RCGT0802M0LN	106	S12KSCFOR06	230	S16PSVQCL11	244
PSSNR3232P19	164	RCGT0803M0LN	106	S12KSCFOR09	230	S16PSVQCR11	244
PSSNR4040S19	164	RCGT1003M0LN	106	S12KSCLCL06	228	S20RPFCLN09	214
PSSNR4040S25	164	RCGT1204M0LN	106	S12KSCLCL09	228	S20RPFCLNR09	214
PTFNL1616H16	166	RCMT0803M0ST	106	S12KSCLCR06	228	S20RPFUNL11	220
PTFNL2020K16	166	RCMT1003M0ST	106	S12KSCLCR09	228	S20RPFUNR11	220
PTFNL2525M16	166	RCMT10T3M0ST	106	S12KSDQCL07	232	S20RPTUNL16	224
PTFNL2525M22	166	RCMT1204M0ST	106	S12KSDQCR07	232	S20RPTUNR16	224
PTFNL3232P16	166	RCMT1608M0ST	106	S12KSDUCL07	234	S20RPWLN06	226
PTFNL3232P22	166	RCMT2006M0ST	106	S12KSDUCR07	234	S20RPWLN06	226
PTFNR1616H16	166	RDHT1003M0T	306	S12KSDXCL07	236	S20RSCFCL09	230
PTFNR2020K16	166	RDHT12T3M0T	306	S12KSDXCR07	236	S20RSCFOR09	230
PTFNR2525M16	166	RDHT1604M0T	306	S12KSTFCL09	238	S20RSCCL09	228
PTFNR2525M22	166	RDHW1003M0T	306	S12KSTFCL11	238	S20RSCLCR09	228
PTFNR3232P16	166	RDHW12T3M0T	306	S12KSTFOR09	238	S20RSDQCL07	232
PTFNR3232P22	166	RDHW1604M0T	306	S12KSTFOR11	238	S20RSDQCL11	232
PTGNL1616H16	168	RDMT1003M0T	306	S12KSTUCL09	240	S20RSDQCR07	232
PTGNL2020K16	168	RDMT12T3M0T	306	S12KSTUCL11	240	S20RSDQCR11	232
PTGNL2525M16	168	RDMT1604M0T	306	S12KSTUCR09	240	S20RSDUCL07	234
PTGNL2525M22	168	RDMW1003M0T	306	S12KSTUCR11	240	S20RSDUCL11	234
PTGNR1616H16	168	RDMW12T3M0T	306	S16PFCLN09	214	S20RSDUCR07	234
PTGNR2020K16	168	RDMW1604M0T	306	S16PFCLNR09	214	S20RSDUCR11	234
PTGNR2525M16	168	RNMG090300ST	44	S16PPTUNL16	224	S20RSDXCL11	236
PTGNR2525M22	168	RNMG120400ST	44	S16PPTUNR16	224	S20RSDXCR11	236
PTJNL1616H16	170	RNMG150600ST	44	S16PSCFCL09	230	S20RSTFCL11	238
PTJNL2020K16	170	RNMG190600ST	44	S16PSCFOR09	230	S20RSTFCL16	238
PTJNL2525M16	170	RNMG250900ST	44	S16PSCCL06	228	S20RSTFOR11	238
PTJNL2525M22	170	S0608HISCLCL06	228	S16PSCCL09	228	S20RSTFOR16	238
PTJNL3232P16	170	S0608HISCLCR06	228	S16PSCLCR06	228	S20RSTUCL11	240
PTJNL3232P22	170	S0610FSTFCL06	238	S16PSCLCR09	228	S20RSTUCL16	240
PTJNR1616H16	170	S0610FSTFOR06	238	S16PSDQCL07	232	S20RSTUCR11	240
PTJNR2020K16	170	S0810KSDUC RL 07	234	S16PSDQCL11	232	S20RSTUCR16	240
PTJNR2525M16	170	S08HSCFCL06	230	S16PSDQCR07	232	S20RSVQBL11	242

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S20RSVQBR11	242	S32TPDQNR1504	216	S40UPSKNR12	222	SCACR0808E06	174
S20RSVQCL11	244	S32TPDUNL15	220	S40UPTUNL16	224	SCACR1010E06	174
S20RSVQCR11	244	S32TPDUNR15	220	S40UPTUNL22	224	SCACR1212F09	174
S25SCKUNL16	212	S32TPDXNL15	218	S40UPTUNR16	224	SCACR1616H09	174
S25SCKUNR16	212	S32TPDXNR15	218	S40UPTUNR22	224	SCACR2020K09	174
S25SPCUNL12	214	S32TPSKNL12	222	S40UFWLNL08	226	SCACR2020K12	174
S25SPCUNR12	214	S32TPSKNR12	222	S40UFWLNR08	226	SCACR2525M12	174
S25SPDQNL11	216	S32TPTUNL16	224	S40USQL12	228	SCGT09T304LN	112
S25SPDQNR11	216	S32TPTUNL22	224	S40USQLR12	228	SCGT09T308LN	112
S25SPDUNL11	220	S32TPTUNR16	224	S40USDUCL11	234	SCGT120404LN	112
S25SPDUNL15	220	S32TPTUNR22	224	S40USDUCL11	234	SCGT120408LN	112
S25SPDUNR11	220	S32TPWUNL06	226	S40USDVCL11	236	SCLCL0808E06	176
S25SPDUNR15	220	S32TPWUNL08	226	S40USDVCR11	236	SCLCL1010E06	176
S25SPSKNL12	222	S32TPWLNRO6	226	S40USTUCL16	240	SCLCL1212F09	176
S25SPSKNR12	222	S32TPWLNRO8	226	S40USTUCR16	240	SCLCL1616H09	176
S25SPTUNL16	224	S32TSQCL09	228	S40USVQBL16	242	SCLCL2020K09	176
S25SPTUNR16	224	S32TSQCL12	228	S40USVQBR16	242	SCLCL2020K12	176
S25SPWUNL06	226	S32TSQCLR09	228	S40USVQCL16	244	SCLCL2525M12	176
S25SPWUNL08	226	S32TSQCLR12	228	S40USVQCR16	244	SCLCR0808E06	176
S25SPWLNRO6	226	S32TSDQCL11	232	S60VCKUNL16	212	SCLCR1010E06	176
S25SPWLNRO8	226	S32TSDQCR11	232	S60VCKUNR16	212	SCLCR1212F09	176
S25SSFCLO9	230	S32TSDUCL11	234	S60VPCNL12	214	SCLCR1616H09	176
S25SSFCRO9	230	S32TSDUCR11	234	S60VPCNL16	214	SCLCR2020K09	176
S25SSQCL09	228	S32TSDXCL11	236	S60VPCNL19	214	SCLCR2020K12	176
S25SSQCL12	228	S32TSDXCR11	236	S60VPCNR12	214	SCLCR2525M12	176
S25SSQCLR09	228	S32TSTFCL16	238	S60VPCNR16	214	SCMT09T304FK	108
S25SSQCLR12	228	S32TSTFOR16	238	S60VPCNR19	214	SCMT09T304FM	108
S25SSDQCL11	232	S32TSTUCL16	240	S60VFDQNL15	216	SCMT09T304FP	108
S25SSDQCR11	232	S32TSTUCR16	240	S60VFDQNL1504	216	SCMT09T304MK	112
S25SSDUCL11	234	S32TSVQBL16	242	S60VFDQNR15	216	SCMT09T304MM	110
S25SSDUCL11	234	S32TSVQBR16	242	S60VFDQNR1504	216	SCMT09T304MP	110
S25SSDXCL11	236	S32TSVQCL16	244	S60VFDUNL15	220	SCMT09T308FK	108
S25SSDXCR11	236	S32TSVQCR16	244	S60VFDUNR15	220	SCMT09T308FM	108
S25SSTFCL16	238	S40UCKUNL16	212	S60VFDXNL15	218	SCMT09T308FP	108
S25SSTFOR16	238	S40UCKUNR16	212	S60VFDXNR15	218	SCMT09T308MK	112
S25SSTUCL16	240	S40UPCLNL12	214	S60VPSKNL12	222	SCMT09T308MM	110
S25SSTUCR16	240	S40UPCLNL16	214	S60VPSKNR12	222	SCMT09T308MP	110
S25SSVQBL16	242	S40UPCLNL19	214	S60VPTUNL22	224	SCMT120404MM	110
S25SSVQBR16	242	S40UPCLNR12	214	S60VPTUNR22	224	SCMT120404MP	110
S25SSVQCL16	244	S40UPCLNR16	214	S60PVWLNLO8	226	SCMT120408MK	112
S25SSVQCR16	244	S40UPCLNR19	214	S60PVWLNRO8	226	SCMT120408MM	110
S32TCKUNL16	212	S40UPDQNL15	216	S60VSDUCR11	234	SCMT120408MP	110
S32TCKUNR16	212	S40UPDQNL1504	216	S60VSDUCR11	234	SCMT120412MM	110
S32TPCUNL12	214	S40UPDQNR15	216	SCACL0808E06	174	SCMT120412MP	110
S32TPCUNL16	214	S40UPDQNR1504	216	SCACL1010E06	174	SDJCL0808E07	178
S32TPCUNR12	214	S40UPDUNL15	220	SCACL1212F09	174	SDJCL1010E07	178
S32TPCUNR16	214	S40UPDUNR15	220	SCACL1616H09	174	SDJCL1212F07	178
S32TPDQNL15	216	S40UPDXNL15	218	SCACL2020K09	174	SDJCL1616H07	178
S32TPDQNL1504	216	S40UPDXNR15	218	SCACL2020K12	174	SDJCL1616H11	178
S32TPDQNR15	216	S40UPSKNL12	222	SCACL2525M12	174	SDJCL2020K11	178

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SDJCL2525M11	178	SNMG120416MR	48	SSSCL1616H09	184	STJCR3232P16	190
SDJCL3232P11	178	SNMG120416SS	50	SSSCL1616H12	184	STUCL0808E09	192
SDJCR0808E07	178	SNMG120416ST	50	SSSCL2020K09	184	STUCL1010E09	192
SDJCR1010E07	178	SNMG150608MR	48	SSSCL2020K12	184	STUCL1212F11	192
SDJCR1212F07	178	SNMG150608SS	50	SSSCL2525M12	184	STUCL1616H11	192
SDJCR1616H07	178	SNMG150612HR	52	SSSCR1212F09	184	STUCL2020K16	192
SDJCR1616H11	178	SNMG150612MR	48	SSSCR1616H09	184	STUCL2525M16	192
SDJCR2020K11	178	SNMG150612SS	50	SSSCR1616H12	184	STUCL3232P16	192
SDJCR2525M11	178	SNMG150616HR	52	SSSCR2020K09	184	STUCR0808E09	192
SDJCR3232P11	178	SNMG150616MR	48	SSSCR2020K12	184	STUCR1010E09	192
SDNCN0808E07	180	SNMG190612HR	52	SSSCR2525M12	184	STUCR1212F11	192
SDNCN1010E07	180	SNMG190612MR	48	STFCL1010E09	186	STUCR1616H11	192
SDNCN1212F07	180	SNMG190612ST	50	STFCL1212F11	186	STUCR2020K16	192
SDNCN1616H07	180	SNMG190616HR	52	STFCL1616H11	186	STUCR2525M16	192
SDNCN1616H11	180	SNMG190616MR	48	STFCL1616H16	186	STUCR3232P16	192
SDNCN2020K11	180	SNMG190616SS	50	STFCL2020K16	186	SVHBL1212F11	194
SDNCN2525M11	180	SNMG190616ST	50	STFCL2525M16	186	SVHBL1616H11	194
SDNCN3232P11	180	SNMG250924HM	52	STFCR1010E09	186	SVHBL2020K11	194
SEHT13T3AGRNLN	288	SNMG250924HR	52	STFCR1212F11	186	SVHBL2020K16	194
SEHT13T3AGSN	288	SNMM190612HY	54	STFCR1616H11	186	SVHBL2525M16	194
SNX1206ANSNMM	286	SNMM190612HZ	54	STFCR1616H16	186	SVHBL3232P16	194
SNMA090304	46	SNMM190616HY	54	STFCR2020K16	186	SVHR1212F11	194
SNMA090308	46	SNMM190616HZ	54	STFCR2525M16	186	SVHR1616H11	194
SNMA120404	46	SNMM190624HY	54	STGCL0808E09	188	SVHR2020K11	194
SNMA120408	46	SNMM190624HZ	54	STGCL1010E09	188	SVHR2020K16	194
SNMA120412	46	SNMM250724HY	54	STGCL1212F11	188	SVHR2525M16	194
SNMA120416	46	SNMM250724HZ	54	STGCL1616H11	188	SVHR3232P16	194
SNMA150412	46	SNMM250924HY	54	STGCL2020K16	188	SVHCL1212F11	200
SNMA150612	46	SNMM250924HZ	54	STGCL2525M16	188	SVHCL1616H11	200
SNMA190612	46	SPKT08T308E	312	STGCR0808E09	188	SVHCL2020K11	200
SNMA190616	46	SPKT130510E	314	STGCR1010E09	188	SVHCL2020K16	200
SNMA190624	46	SPKW08T308E	312	STGCR1212F11	188	SVHCL2525M16	200
SNMA250724	46	SPKW08T308S	312	STGCR1616H11	188	SVHCL3232P16	200
SNMG090304SS	50	SPKW130510E	314	STGCR2020K16	188	SVHCR1212F11	200
SNMG090308SS	50	SPKW130510S	314	STGCR2525M16	188	SVHCR1616H11	200
SNMG090308ST	50	SPMT120408MP	290	STJCL0808E09	190	SVHCR2020K11	200
SNMG120404MF	48	SRDCN1616H08	182	STJCL1010E09	190	SVHCR2020K16	200
SNMG120404MR	48	SRDCN1616H10	182	STJCL1212F11	190	SVHCR2525M16	200
SNMG120404SS	50	SRDCN2020K08	182	STJCL1616H11	190	SVHCR3232P16	200
SNMG120408HR	52	SRDCN2020K10	182	STJCL1616H16	190	SVJBL1212F11	196
SNMG120408MF	48	SRDCN2020K12	182	STJCL2020K16	190	SVJBL1616H11	196
SNMG120408MR	48	SRDCN2525M08	182	STJCL2525M16	190	SVJBL2020K11	196
SNMG120408SS	50	SRDCN2525M10	182	STJCL3232P16	190	SVJBL2020K16	196
SNMG120408ST	50	SRDCN2525M12	182	STJCR0808E09	190	SVJBL2525M16	196
SNMG120412HR	52	SRDCN2525M16	182	STJCR1010E09	190	SVJBL3232P16	196
SNMG120412MF	48	SRDCN2525M20	182	STJCR1212F11	190	SVJBR1212F11	196
SNMG120412MR	48	SRDCN3232P10	182	STJCR1616H11	190	SVJBR1616H11	196
SNMG120412SS	50	SRDCN3232P12	182	STJCR1616H16	190	SVJBR2020K11	196
SNMG120412ST	50	SRDCN3232P16	182	STJCR2020K16	190	SVJBR2020K16	196
SNMG120416HR	52	SSSCL1212F09	184	STJCR2525M16	190	SVJBR2525M16	196

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SVJBR3232P16	196	TCMT06T108FP	114	TCMT16T308MM	122	TNMG160408HR	64
SVJCL1212F11	202	TCMT090202FK	118	TCMT16T308MP	120	TNMG160408LC	60
SVJCL1616H11	202	TCMT090202FM	116	TCMT16T312MK	124	TNMG160408MF	58
SVJCL2020K11	202	TCMT090202FP	114	TCMT16T312MM	122	TNMG160408MR	60
SVJCL2020K16	202	TCMT090204FK	118	TCMT16T312MP	120	TNMG160408MS	58
SVJCL2525M16	202	TCMT090204FM	116	TCMT220408MK	124	TNMG160408SF	58
SVJCL3232P16	202	TCMT090204FP	114	TCMT220408MM	122	TNMG160408SS	62
SVJCR1212F11	202	TCMT090204MK	124	TCMT220408MP	120	TNMG160408ST	62
SVJCR1616H11	202	TCMT090204MM	122	TCMX2L8	252	TNMG160412HR	64
SVJCR2020K11	202	TCMT090204MP	120	TCMX2N	250	TNMG160412LC	60
SVJCR2020K16	202	TCMT090208MK	124	TCMX2R8	252	TNMG160412MF	58
SVJCR2525M16	202	TCMT090208MM	122	TCMX3L8	252	TNMG160412MR	60
SVJCR3232P16	202	TCMT090208MP	120	TCMX3N	250	TNMG160412MS	58
SWBN1212F11	198	TCMT110202FK	118	TCMX3R8	252	TNMG160412SF	58
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SWBN2020K16	198	TCMT110204FK	118	TCMX4R8	252	TNMG160416ST	62
SWBN2525M16	198	TCMT110204FM	116	TCMX5L8	252	TNMG220404MR	60
SWBN3232P16	198	TCMT110204FP	114	TCMX6N	250	TNMG220404ST	62
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TBC426	254	TCMT110302FK	118	TNMA160408	56	TNMG220412MR	60
TBC432	254	TCMT110302FM	116	TNMA160412	56	TNMG220412SS	62
TBC532	254	TCMT110302FP	114	TNMA160416	56	TNMG220412ST	62
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VCGT110308LN	140	VNMG160408MS	66	WNMG080412ST	80		
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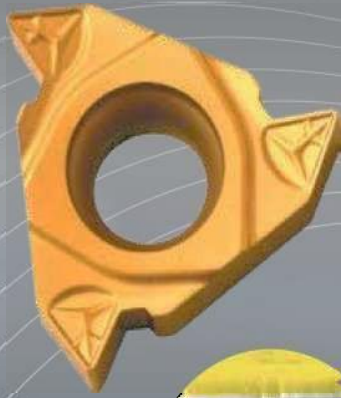


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THREADING INSERT

Carbide Inserts Laydown Thread Turning





The golden TiN Coating reduces friction and provides wear identification.

Inner layer nc-TiAlN coating provides an excellent wear resistance.

MGM720

Carbide with PVD coating of TiN + nano-TiAlN has good toughness and wear resistance, it's the unique threading grade for machining of carbon steel, stainless steel and cast iron etc.

Hartmetall mit PVD Multibeschichtung von TiN + nano-TiAlN mit hoher

Reduction of machining processes.

The threading diameter will be machined during threading operation. Good quality and dimensions.



The MEGACUT Chip-breaker

The special chip breaker design ensured an excellent chip controlled, during machining different materials.

MGM720

PVD nano- TiAlN coated fine grain carbide grade. Good performance in combination of toughness and wear resistance, suitable for threading turning, parting, grooving of steel, stainless steel and high-temperature alloys in finishing and semi-finishing machining.

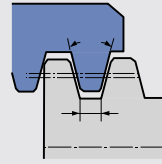
MGM720

Fine grain carbide with PVD coating of nano-TiAlN adopted from high temperature resistant element. Excellent wear resistance and chemical resistance suitable for turning of stainless steel under higher cutting speed.

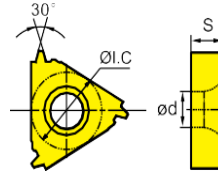
Threading Insert

TR (ISO trapezoid thread 30°)

ISO 2901-2904
Tolerance: 7



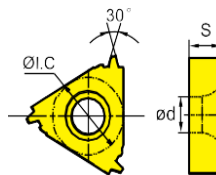
R



Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
External	16ER 1.5TR	1.50	3.52	9.525	4.0	•	•
	16ER 2.0TR	2.00	3.52	9.525	4.0	•	•
	16ER 3.0TR	3.00	3.52	9.525	4.0	•	•
	22ER 4.0TR	4.00	4.65	12.7	5.0	•	•
	22ER 5.0TR	5.00	4.65	12.7	5.0	•	•
	22ER 6.0TR	6.00	4.65	12.7	5.0	•	•



R



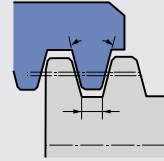
Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
Internal	16IR 1.5TR	1.50	3.52	9.525	4.0	•	•
	16IR 2.0TR	2.00	3.52	9.525	4.0	•	•
	16IR 3.0TR	3.00	3.52	9.525	4.0	•	•
	22IR 4.0TR	4.00	4.65	12.7	5.0	•	•
	22IR 5.0TR	5.00	4.65	12.7	5.0	•	•
	22IR 6.0TR	6.00	4.65	12.7	5.0	•	•

THREADED INSERT

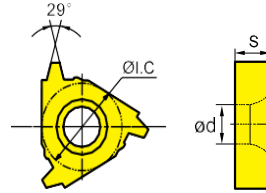
Threading Insert

ACME 29°

ANSI B1.5-1988 ANSI B1.5-1988
Tolerance: 2G



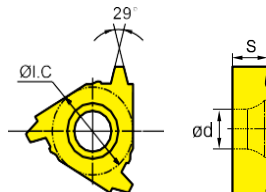
R



Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
External	16ER 8AC	8	3.52	9.525	4.0	•	•
	16ER 10AC	10	3.52	9.525	4.0	•	•
	16ER 12AC	12	3.52	9.525	4.0	•	•
	16ER 14AC	14	3.52	9.525	4.0	•	•
	16ER 16AC	16	3.52	9.525	4.0	•	•



R



Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
Internal	16IR 8AC	8	3.52	9.525	4.0	•	•
	16IR 10AC	10	3.52	9.525	4.0	•	•
	16IR 12AC	12	3.52	9.525	4.0	•	•
	16IR 14AC	14	3.52	9.525	4.0	•	•
	16IR 16AC	16	3.52	9.525	4.0	•	•

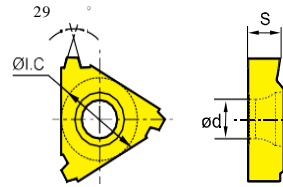
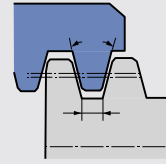
THREADING INSERT

Threading Insert

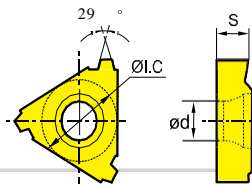
STUB - ACME Short teeth

ANSI B1.8-1988

Tolerance: 2G



Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØLC	ød	MGU540	MGM720
External	16 ER 8STAC	8	3.52	9.525	4.0	•	•
	16ER 10STAC	10	3.52	9.525	4.0	•	•
	16ER 12STAC	12	3.52	9.525	4.0	•	•
	16ER 14STAC	14	3.52	9.525	4.0	•	•
	16ER 16STAC	16	3.52	9.525	4.0	•	•



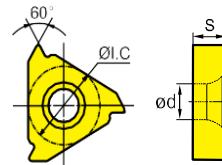
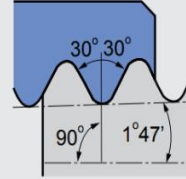
Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØLC	ød	MGU540	MGM720
Internal	16IR 8STAC	8	3.52	9.525	4.0	•	•
	16IR 10STAC	10	3.52	9.525	4.0	•	•
	16IR 12STAC	12	3.52	9.525	4.0	•	•
	16IR 14STAC	14	3.52	9.525	4.0	•	•
	16IR 16STAC	16	3.52	9.525	4.0	•	•

THREADED INSERT

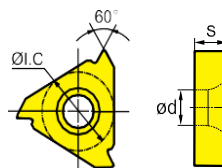
Threading Insert

API (round)

API spec.5B Tolerance: API - RD



Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
External	16ER 8RD	8	3.52	9.525	4.0	•	•
	16ER 10RD	10	3.52	9.525	4.0	•	•
	22ER 8RD	8	5.56	12.7	5.5	•	•
	22ER 10RD	10	5.56	12.7	5.5	•	•

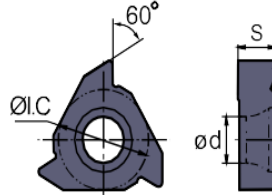
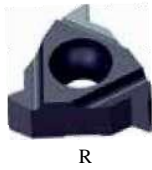
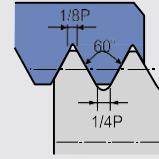


Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
Internal	16IR 8RD	8	3.52	9.525	4.0	•	•
	16IR 10RD	10	3.52	9.525	4.0	•	•
	22IR 8RD	8	4.65	12.7	5.0	•	•
	22IR 10RD	10	4.65	12.7	5.0	•	•

Threading Insert

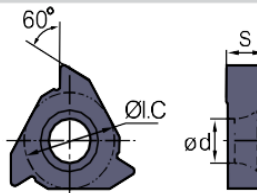
ISO metric thread insert (full profile)

ISO 965-1980, DIN 13, GB/T 197-2003
Tolerances: 6g/6H



*Inserts with chip-breakers

Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MG515	MG720
External	16ER 0.5ISO	0.50	3.52	9.525	4.0	●	●
	16ER 0.75ISO	0.75	3.52	9.525	4.0	●	●
	16ER 1.00ISO	1.00	3.52	9.525	4.0	●	●
	16ER 1.25ISO	1.25	3.52	9.525	4.0	●	●
	16ER 1.50ISO	1.50	3.52	9.525	4.0	●	●
	16ER 1.75ISO	1.75	3.52	9.525	4.0	●	●
	16ER 2.00ISO	2.00	3.52	9.525	4.0	●	●
	16ER 2.50ISO	2.50	3.52	9.525	4.0	●	●
	16ER 3.00ISO	3.00	3.52	9.525	4.0	●	●

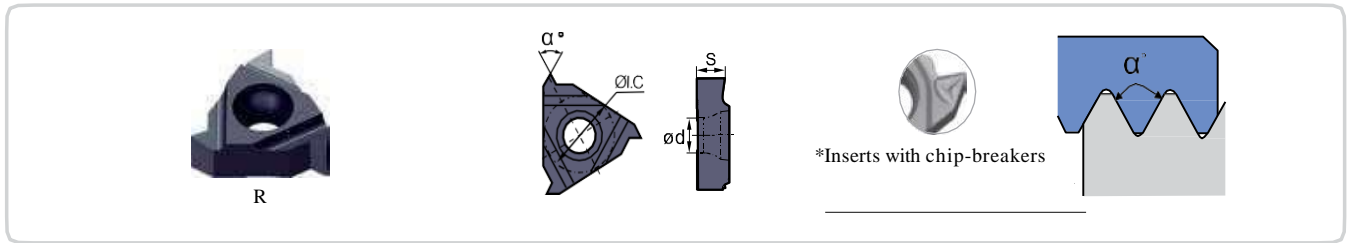


*Inserts with chip-breakers

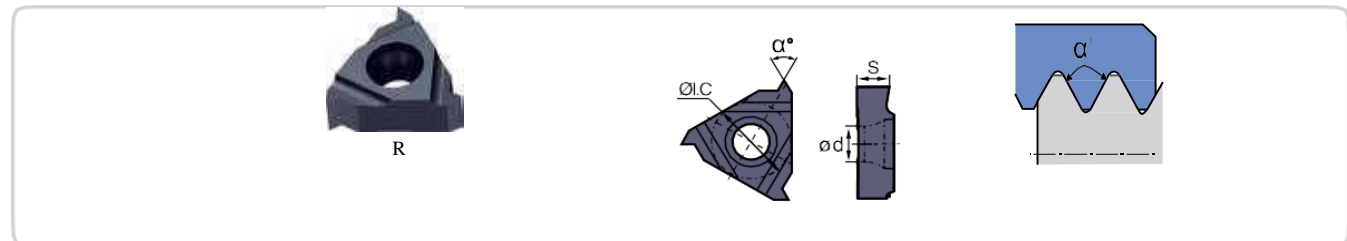
Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MG515	MG720
Internal	16IR 0.50ISO	0.50	3.52	9.525	4.0	●	●
	16IR 0.75ISO	0.75	3.52	9.525	4.0	●	●
	16IR 1.00ISO	1.00	3.52	9.525	4.0	●	●
	16IR 1.25ISO	1.25	3.52	9.525	4.0	●	●
	16IR 1.50ISO	1.50	3.52	9.525	4.0	●	●
	16IR 1.75ISO	1.75	3.52	9.525	4.0	●	●
	16IR 2.00ISO	2.00	3.52	9.525	4.0	●	●
	16IR 2.50ISO	2.50	3.52	9.525	4.0	●	●
	16IR 3.00ISO	3.00	3.52	9.525	4.0	●	●

Threading Insert

General pitch thread insert (partical pro le) Allgemeiner Einsat (Teilpro l)



Type		Dimension (mm)					Grade		
	Right hand	Pitch (T.P.i)	S	ØLC	ød	o	MGU540	MGM720	
External	60°	16ER A60	0.5-1.5(48-16)	3.52	9.525	4.0	60°	•	•
		16ER G60	1.75-3.0(14-8)	3.52	9.525	4.0	60°	•	•
		16ER AG60	0.5-3.0(48-8)	3.52	9.525	4.0	60°	•	•
		16ER AG60U	0.5-3.0(48-8)	3.52	9.525	4.0	60°	•	•
	55°	16ER A55	0.5-1.5(48-16)	3.52	9.525	4.0	55°	•	•
		16ER G55	1.75-3.0(14-8)	3.52	9.525	4.0	55°	•	•
		16ER AG55	0.5-3.0(48-8)	3.52	9.525	4.0	55°	•	•
		16ER AG55U	0.5-3.0(48-8)	3.52	9.525	4.0	55°	•	•

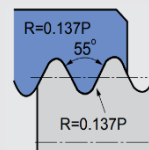


Type		Dimension (mm)					Grade		
	Right hand	Pitch (T.P.i)	S	ØLC	ød	o	MGU540	MGM720	
Internal	60°	16IR A60	0.5-1.5(48-16)	3.52	9.525	4.0	60°	•	•
		16IR G60	1.75-3.0(14-8)	3.52	9.525	4.0	60°	•	•
		16IR AG60	0.5-3.0(48-8)	3.52	9.525	4.0	60°	•	•
	55°	16IR A55	0.5-1.5(48-16)	3.52	9.525	4.0	55°	•	•
		16IR G55	1.75-3.0(14-8)	3.52	9.525	4.0	55°	•	•
		16IR AG55	0.5-3.0(48-8)	3.52	9.525	4.0	55°	•	•

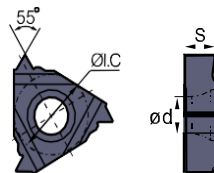
Threading Insert

Whitworth thread insert

ISO 228/1:1982, DIN 259, B.S.84:1956
Tolerance: Medium class A



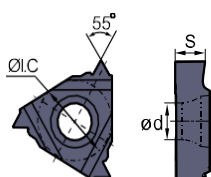
R



Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
External	16ER 8W	8	3.52	9.525	4.0	●	●
	16ER 9W	9	3.52	9.525	4.0	●	●
	16ER 10W	10	3.52	9.525	4.0	●	●
	16ER 11W	11	3.52	9.525	4.0	●	●
	16ER 12W	12	3.52	9.525	4.0	●	●
	16ER 14W	14	3.52	9.525	4.0	●	●
	16ER 16W	16	3.52	9.525	4.0	●	●



R



*Inserts with chip-breakers

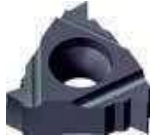
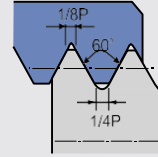
Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
Internal	16ER 8W	8	3.52	9.525	4.0	●	●
	16ER 9W	9	3.52	9.525	4.0	●	●
	16ER 10W	10	3.52	9.525	4.0	●	●
	16ER 11W	11	3.52	9.525	4.0	●	●
	16ER 11WU	11	3.52	9.525	4.0	●	●
	16ER 12W	12	3.52	9.525	4.0	●	●
	16ER 14W	14	3.52	9.525	4.0	●	●
	16ER 14WU	14	3.52	9.525	4.0	●	●
	16ER 16W	16	3.52	9.525	4.0	●	●

Threading Insert

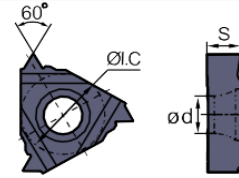
UN full profile

ASME B1.1-1989

Tolerances: 2A/2B Toleranz



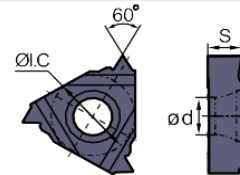
R



Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
External	16ER 8UN	8	3.52	9.525	4.0	●	●
	16ER 10UN	10	3.52	9.525	4.0	●	●
	16ER 12UN	12	3.52	9.525	4.0	●	●
	16ER 14UN	14	3.52	9.525	4.0	●	●
	16ER 16UN	16	3.52	9.525	4.0	●	●
	16ER 18UN	18	3.52	9.525	4.0	●	●
	16ER 20UN	20	3.52	9.525	4.0	●	●



R



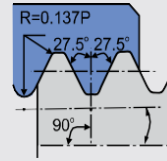
Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
Internal	16IR 8UN	8	3.52	9.525	4.0	●	●
	16IR 10UN	10	3.52	9.525	4.0	●	●
	16IR 12UN	12	3.52	9.525	4.0	●	●
	16IR 14UN	14	3.52	9.525	4.0	●	●
	16IR 16UN	16	3.52	9.525	4.0	●	●
	16IR 18UN	18	3.52	9.525	4.0	●	●
	16IR 20UN	20	3.52	9.525	4.0	●	●
	16IR 24UN	24	3.52	9.525	4.0	●	●

THREADING INSERT

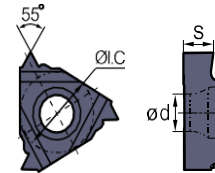
Threading Insert

British standard taper pipe thread insert

ISO 7/1:1994, B.S.21:1985 . Standard BSPT



R

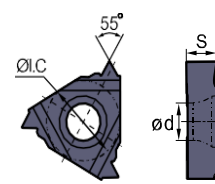


*Inserts with chip-breakers

Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
External	16ER 11BSPT	11	3.52	9.525	4.0	•	•
	16ER 14BSPT	14	3.52	9.525	4.0	•	•
	16ER 14BSPT-U	14	3.52	9.525	4.0	•	•
	16ER 19BSPT	19	3.52	9.525	4.0	•	•
	16ER 28BSPT	28	3.52	9.525	4.0	•	•



R



*Inserts with chip-breakers

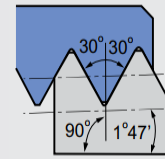
Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
Internal	16IR 11BSPT	11	3.52	9.525	4.0	•	•
	16IR 14BSPT	14	3.52	9.525	4.0	•	•
	16IR 14BSPT-U	14	3.52	9.525	4.0	•	•
	16IR 19BSPT	19	3.52	9.525	4.0	•	•
	16IR 28BSPT	28	3.52	9.525	4.0	•	•

THREADING INSERT

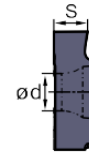
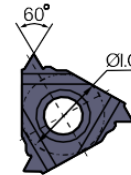
Threading Insert

NPT American standard taper pipe with a shoulder

ASME B1.20.1-1983 . Standard NPT



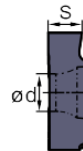
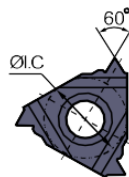
R



Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
EXternal	16ER 8NPT	8	3.52	9.525	4.0	•	•
	16ER 11.5NPT	11.5	3.52	9.525	4.0	•	•
	16ER 14NPT	14	3.52	9.525	4.0	•	•
	16ER 18NPT	18	3.52	9.525	4.0	•	•
	16ER 27NPT	27	3.52	9.525	4.0	•	•



R



*Inserts with chip-breakers

Type		Dimension (mm)				Grade	
	Right hand	Pitch (T.P.i)	S	ØI.C	ød	MGU540	MGM720
Internal	16IR 8NPT	8	3.52	9.525	4.0	•	•
	16IR 11.5NPT	11.5	3.52	9.525	4.0	•	•
	16IR 11.5NPTU	11.5	3.52	9.525	4.0	•	•
	16IR 14NPT	14	3.52	9.525	4.0	•	•
	16IR 14NPTU	14	3.52	9.525	4.0	•	•
	16IR 18NPT	18	3.52	9.525	4.0	•	•
	16IR 27NPT	27	3.52	9.525	4.0	•	•

THREADING INSERT

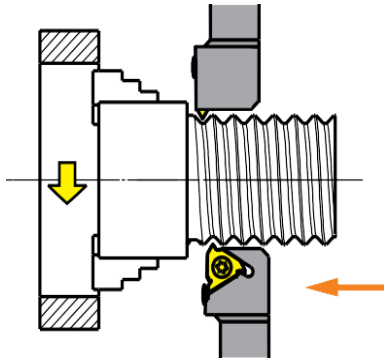
Threading Insert

Steps to get the best threading result:

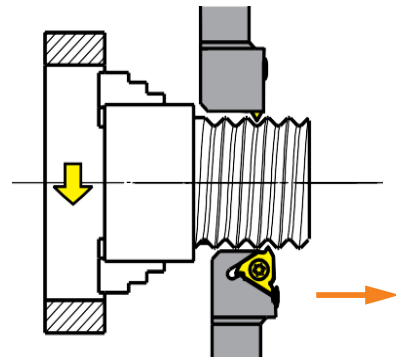
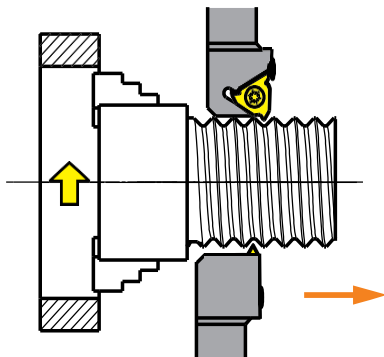
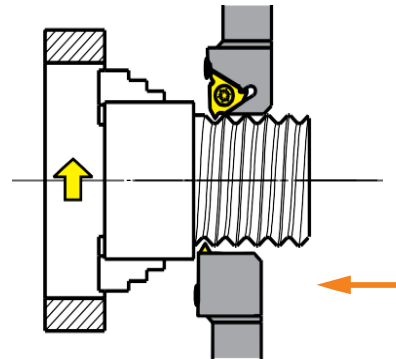
- 1 Select thread machining method
- 2 Decide helical angle, select shim
- 3 Choose insert and toolholder size
- 4 By checking reference table of standard threading program, select feasible cutting parameters.
- 5 Select feed way

Thread machining method

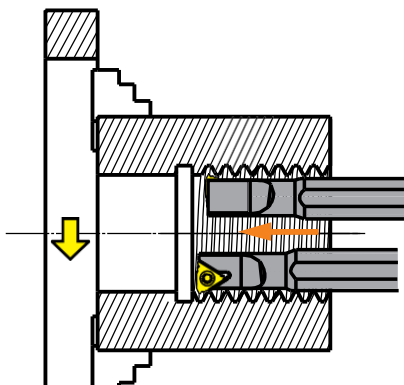
External threading machining (Right thread)
Außenbearbeitung (Rechtsausführung)



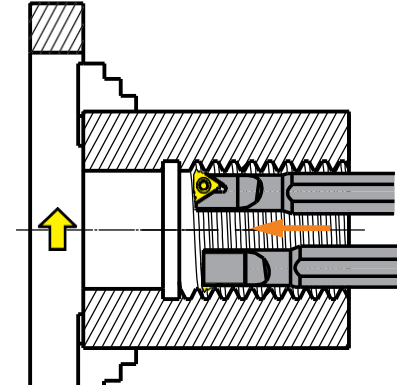
External threading machining (Left thread)
Außenbearbeitung (Linksausführung)



Internal threading machining (Right thread)
Innenbearbeitung (Rechtsausführung)



Internal threading machining (Left thread)
Innenbearbeitung (Linksausführung)



Threading Insert

Recommended Cutting parameters · Empfohlene Schnittparameter

ISO	Workpiece Material Werkstück Material		Hardness HB Härte HB		Grade	
					MGU540 / MGM720	
					Cutting speed (m·min)	
P	Carbon steel	C=0.15%		125		150-175
		C=0.35%		150		140-155
		C=0.60%		200		130-145
	Alloy steel	Anneal		180		110-130
		Tempered		275		80-100
		Tempered		300		70-90
		Tempered		350		60-80
	High alloy steel	Anneal		200		90-115
		Hardened		325		70-90
	Cast steel	Non-alloy		180		180-210
Low alloy			200		90-115	
High alloy			225		90-115	
Martensite steel 12%Mn Martensit Stahl 12%Mn			250		40-50	
M	Stainless steel	Austenite		180		110-130
		Martensite		200		130-170
K	Malleable cast iron	Ferrite		130		110-140
		Pearlite		230		85-105
	Grey cast iron	Martensite /Martensitisch		180		110-140
		Ferrite		260		90-115
Nodular cast iron	Ferrite / Ferritisch		160		110-130	
	Pearlite / Perlitisch		250		80-100	
	Al alloy Aluminiumlegierung	Non-aging treatment Unbehandelt		60		1300-1450
		Aging treatment Vergütet		100		450-500
	Cast aluminum alloy Aluminium- Gusslegierung	Non-aging treatment Unbehandelt		75		430-470
		Aging treatment Vergütet		90		250-290
	Heat resistant alloy Hitzebeständige Legierung	Iron Base Eisen Basis	Geglüht	200		35-50
			Aging Vergütet	280		25-35
		Ni- Or Co- Base Basis	Anneal	250		15-25
			Geglüht Aging Vergütet Casting Guss	350		10-20
			320		10-15	
H	Hardened steel Gehärteter Stahl	Hardened Gehärtet		HRC55		40-50

GROOVING INSERT

3-Corner Grooving & Parting Tools for High Speed,
High Feed and Interrupted Machining

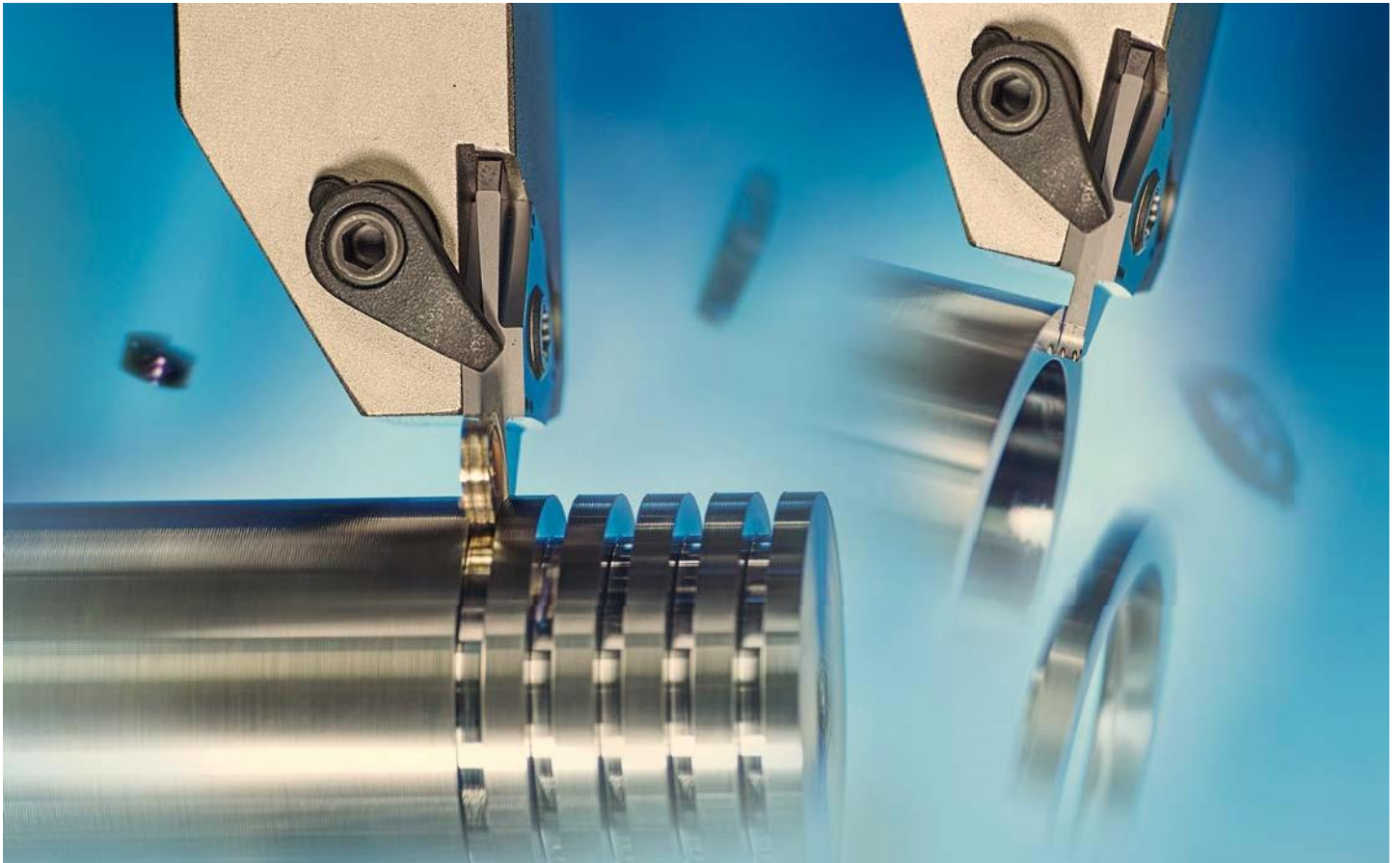
GBA

- **Machining Stability**

Strong clamping prevents tool vibration to produce high quality finishes and longer tool life

- **Chip Control**

Stable chip control boosts productivity at high speeds and high feeds

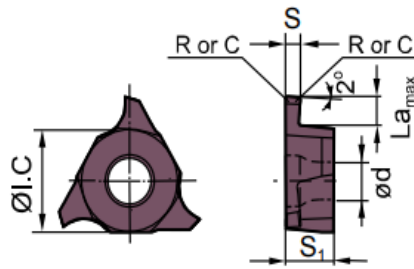


GROOVING Insert

GBA Inserts



right hand style
Rechtsausführung



R/L Shown

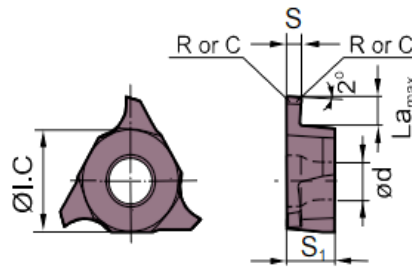
GBA32								
Description	MGC500	MGM720	S	La max	R/C	ØI.C	S1	Ød
GBA32R130-010	•	•	1.3	2.0	R0.1	9.525	3.18	4.4
GBA32L130-010	•	•	1.3	2.0	R0.1	9.525	3.18	4.4
GBA32R140-010	•	•	1.4	2.0	R0.1	9.525	3.18	4.4
GBA32R145-010	•	•	1.45	2.0	R0.1	9.525	3.18	4.4
GBA32L145-010	•	•	1.45	2.0	R0.1	9.525	3.18	4.4
GBA32R150-010	•	•	1.50	2.0	R0.1	9.525	3.18	4.4
GBA32R150-010	•	•	1.50	2.0	R0.1	9.525	3.18	4.4
GBA32R160-010	•	•	1.60	2.0	R0.1	9.525	3.18	4.4
GBA32L160-010	•	•	1.60	2.0	R0.1	9.525	3.18	4.4
GBA32R165-010	•	•	1.65	2.0	R0.1	9.525	3.18	4.4
GBA32L165-010	•	•	1.65	2.0	R0.1	9.525	3.18	4.4
GBA32L170-010	•	•	1.7	2.0	R0.1	9.525	3.18	4.4
GBA32R170-010	•	•	1.7	2.0	R0.1	9.525	3.18	4.4
GBA32R175-010	•	•	1.75	2.0	R0.1	9.525	3.18	4.4
GBA32L175-010	•	•	1.75	2.0	R0.1	9.525	3.18	4.4
GBA32R180-010	•	•	1.8	2.0	R0.1	9.525	3.18	4.4
GBA32R185-010	•	•	1.85	2.5	R0.1	9.525	3.18	4.4
GBA32L185-010	•	•	1.85	2.5	R0.1	9.525	3.18	4.4

GROOVING Insert

GBA Inserts



right hand style
Rechtsausführung



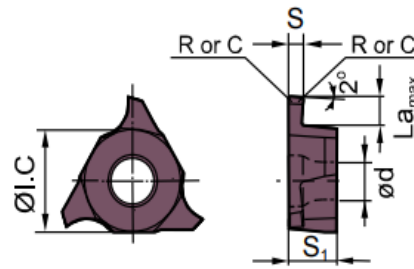
R/L Shown

GBA32								
Description	MGC500	MGM720	S	La max	R/C	ØI.C	S1	Ød
GBA32R200-010	•	•	2.0	2.5	R0.1	9.525	3.18	4.4
GBA32L200-010	•	•	2.0	2.5	R0.1	9.525	3.18	4.4
GBA32R210-010	•	•	2.1	2.5	R0.1	9.525	3.18	4.4
GBA32L210-010	•	•	2.1	2.5	R0.1	9.525	3.18	4.4
GBA32L220-010	•	•	2.2	2.5	R0.1	9.525	3.18	4.4
GBA32R220-010	•	•	2.2	2.5	R0.1	9.525	3.18	4.4
GBA32R225-010	•	•	2.25	2.5	R0.1	9.525	3.18	4.4
GBA32R250-010	•	•	2.5	2.5	R0.1	9.525	3.18	4.4
GBA32L250-010	•	•	2.5	2.5	R0.1	9.525	3.18	4.4
GBA32R300-010	•	•	3.0	3.0	R0.1	9.525	3.18	4.4
GBA32L300-010	•	•	3.0	3.0	R0.1	9.525	3.18	4.4

GROOVING Insert



right hand style
Rechtsausführung



R/L Shown

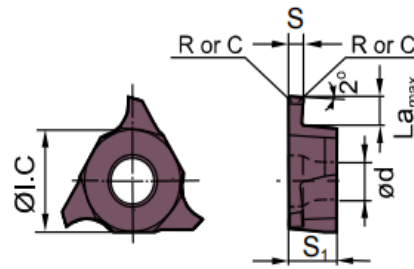
GBA43								
Description	MGC500	MGM720	S	La max	R/C	ØI.C	S1	Ød
GBA43L100-020	•	•	1.00	2.00	R0.2	12.70	4.76	5.5
GBA43R125-020	•	•	1.25	2.00	R0.2	12.70	4.76	5.5
GBA43L125-020	•	•	1.25	2.00	R0.2	12.70	4.76	5.5
GBA43R145-020	•	•	1.45	2.00	R0.2	12.70	4.76	5.5
GBA43L145-020	•	•	1.45	3.50	R0.2	12.70	4.76	5.5
GBA43R150-020	•	•	1.50	3.50	R0.2	12.70	4.76	5.5
GBA43L150-020	•	•	1.50	3.50	R0.2	12.70	4.76	5.5
GBA43R163-020	•	•	1.63	3.50	R0.2	12.70	4.76	5.5
GBA43R163-020	•	•	1.63	3.50	R0.2	12.70	4.76	5.5
GBA43R175-020	•	•	1.75	3.50	R0.2	12.70	4.76	5.5
GBA43L175-020	•	•	1.75	3.50	R0.2	12.70	4.76	5.5
GBA43R185-020	•	•	1.85	3.50	R0.2	12.70	4.76	5.5
GBA43L185-020	•	•	1.85	3.50	R0.2	12.70	4.76	5.5
GBA43R195-020	•	•	1.95	3.50	R0.2	12.70	4.76	5.5
GBA43R200-020	•	•	2.0	3.50	R0.2	12.70	4.76	5.5
GBA43L200-020	•	•	2.0	3.50	R0.2	12.70	4.76	5.5
GBA43R225-020	•	•	2.25	3.50	R0.2	12.70	4.76	5.5

GROOVING Insert

GBA43 Inserts



right hand style
Rechtsausführung



R/L Shown

GBA43								
Description	MGC500	MGM720	S	La max	R/C	ØI.C	S1	Ød
GBA43R230-020	•	•	2.3	3.50	R0.2	12.70	4.76	5.5
GBA43L230-020	•	•	2.3	3.50	R0.2	12.70	4.76	5.5
GBA43R250-030	•	•	2.5	4.00	R0.3	12.70	4.76	5.5
GBA43L250-030	•	•	2.5	4.00	R0.3	12.70	4.76	5.5
GBA43R265-030	•	•	2.65	4.00	R0.3	12.70	4.76	5.5
GBA43L265-030	•	•	2.65	4.00	R0.3	12.70	4.76	5.5
GBA43R280-030	•	•	2.8	4.00	R0.3	12.70	4.76	5.5
GBA43L280-030	•	•	2.8	4.00	R0.3	12.70	4.76	5.5
GBA43R300-030	•	•	3.0	4.00	R0.3	12.70	4.76	5.5
GBA43L300-030	•	•	3.0	4.00	R0.3	12.70	4.76	5.5
GBA43R320-030	•	•	3.2	4.00	R0.3	12.70	4.76	5.5
GBA43L320-030	•	•	3.2	4.00	R0.3	12.70	4.76	5.5
GBA43R330-030	•	•	3.3	4.00	R0.3	12.70	4.76	5.5
GBA43L330-030	•	•	3.3	4.00	R0.3	12.70	4.76	5.5
GBA43R350-030	•	•	3.5	5.00	R0.3	12.70	4.76	5.5
GBA43L350-030	•	•	3.5	5.00	R0.3	12.70	4.76	5.5
GBA43R400-040	•	•	4.0	5.00	R0.4	12.70	4.76	5.5

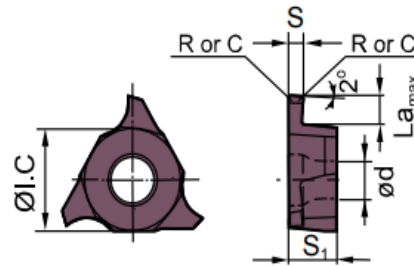
GROOVING Insert

GBA43 Inserts



right hand style
Rechtsausführung

R/L Shown



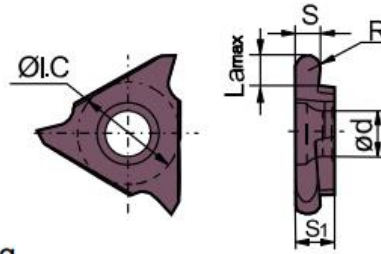
GBA43								
Description	MGC500	MGM720	S	La max	R/C	ØI.C	S1	Ød
GBA43L400-040	•	•	4.0	5.00	R0.4	12.70	4.76	5.5
GBA43R430-040	•	•	4.3	5.00	R0.4	12.70	4.76	5.5
GBA43L430-040	•	•	4.3	5.00	R0.4	12.70	4.76	5.5
GBA43R450-040	•	•	4.5	5.00	R0.4	12.70	4.76	5.5
GBA43L450-040	•	•	4.5	5.00	R0.4	12.70	4.76	5.5
GBA43R480-040	•	•	4.8	5.00	R0.4	12.70	4.76	5.5
GBA43L480-040	•	•	4.8	5.00	R0.4	12.70	4.76	5.5

GROOVING Insert

GBA32..R Round grooving insert



right hand style
Rechtsausführung



R/L Shown

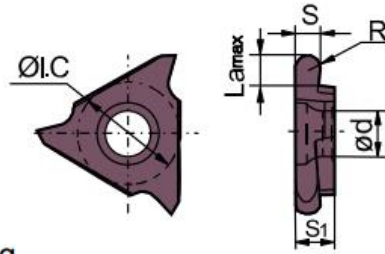
GBA32...R								
Description	MGC500	MGM720	S	La max	R/C	ØI.C	S1	Ød
GBA32R100R		•	1.0	2.0	0.50	12.70	3.18	5.5
GBA32R120R		•	1.2	2.0	0.60	12.70	3.18	5.5
GBA32R150R		•	1.5	2.0	0.75	12.70	3.18	5.5
GBA32R200R		•	2.0	2.5	1.0	12.70	3.18	5.5
GBA32L200R		•	2.0	2.5	1.0	12.70	3.18	5.5
GBA32L222R		•	2.2	2.5	1.11	12.70	3.18	5.5
GBA32R222R		•	2.2	2.5	1.11	12.70	3.18	5.5
GBA32R250R		•	2.5	2.5	1.25	12.70	3.18	5.5
GBA32L280R		•	2.8	2.5	1.4	12.70	3.18	5.5
GBA32R280R		•	2.8	2.5	1.4	12.70	3.18	5.5
GBA32R300R		•	3.0	2.5	1.5	12.70	3.18	5.5
GBA32L300R		•	3.0	2.5	1.6	12.70	3.18	5.5

GROOVING Insert

GBA43..R Round grooving insert



right hand style
Rechtsausführung



R/L Shown

GBA43..R								
Description	MGC500	MGM720	S	La max	R/C	ØI.C	S1	Ød
GBA43R100R			1.0	2.0	0.5	12.70	4.76	5.5
GBA43L100R			1.0	2.0	0.5	12.70	4.76	5.5
GBA43R150R			1.5	3.6	0.75	12.70	4.76	5.5
GBA43L150R			1.5	3.6	0.75	12.70	4.76	5.5
GBA43R170R			1.7	3.6	0.85	12.70	4.76	5.5
GBA43R200R			2.0	3.6	1.0	12.70	4.76	5.5
GBA43L200R			2.0	3.6	1.0	12.70	4.76	5.5
GBA43R250R			2.5	4.00	1.75	12.70	4.76	5.5
GBA43L250R			2.5	4.00	1.75	12.70	4.76	5.5
GBA43R300R			3.0	4.00	1.5	12.70	4.76	5.5
GBA43L300R			3.0	4.00	1.5	12.70	4.76	5.5
GBA43R320R			3.2	4.00	1.6	12.70	4.76	5.5
GBA43R400R			4.0	5.00	2.0	12.70	4.76	5.5
GBA43L400R			4.0	5.00	2.0	12.70	4.76	5.5

GROOVING Insert

Recommended cutting conditions

ISO	Grade	Cutting Speed (Vc m/min)		Feed, fn (mm/rev)	
		MGC500	MGM720	MGC500	MGM720
P	SM...C	150(100-220)	130(80-180)	0.05-0.20	0.05-0.20
	SCM	150(100-220)	130(80-180)	0.05-0.20	0.05-0.20
M	STS		80(40-150)		0.05-0.12
K	GC,GCD		130(80-180)		0.05-0.15

Guide for GBA32 , GBA43

Cutting edge width W	TB			Recommended feed rate (mm/rev)	GBA32	GBA43
	Depth of cut T-MAX					
	GBA32	GBA43				
0.50	-	-		0.05 (0.03~0.1)	•	-
0.80	-	-			•	-
1.00	-	-			•	•
1.04	-	-			•	•
1.20	-	-			•	•
1.25	2.0	-			•	•
1.40	2.0	-		•	-	
1.45	2.0	-		•	-	
1.47	-	-		-	-	
1.50	3.5	3.5		•	•	
1.57	-	-		-	-	
1.70	-	-		-	-	
1.75	3.5	3.5		•	•	
1.78	-	-		-	-	
1.85	3.5	3.5		•	•	
1.96	-	-		-	-	
2.00	3.5	3.5		•	•	
2.15	3.5	3.5		•	•	
2.22	6.5	-		-	-	
2.30	3.5	3.5		•	•	
2.39	-	-		-	-	
2.47	-	-		-	-	
2.50	4.0	4.0		•	•	
2.65	4.0	4.0		•	•	
2.70	-	-		-	-	
2.80	4.0	4.0		•	•	
2.87	-	-		-	-	
3.00	4.0	4.0		•	•	
3.15	-	-		-	-	
3.18	-	-		-	-	
3.30	4.0	-		•	-	
3.50	5.0	5.0		•	•	
4.00	5.0	5.0		•	•	
4.30	5.0	5.0		•	•	
4.50	5.0	5.0		•	•	

CERAMICS CERMET



MEGAcut

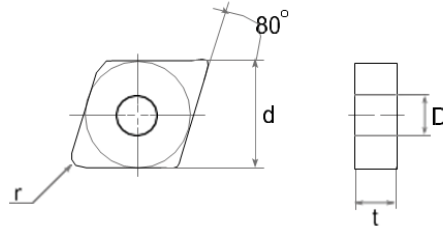
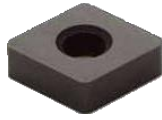
CERAMIC Insert

Choice of Ceramic Grade for Workpiece

Application	Grade	Workpiece	Speed (V) (m/min)	Feed (f) (mm/rev)	Depth (DOC) (mm)
Turning CERAMICS	MGC100	Cast iron	150 ~ 800	0.2 ~ 0.5	3 ~ 6
		Chilled Cast Iron	30 ~ 200	0.05 ~ 0.2	0.10 ~ 1.50
		Carbon Steel	150 ~ 800	0.05 ~ 0.50	0.10 ~ 0.50
		High hardened steel (finishing, >HRC 45)	20 ~ 100	0.10 ~ 0.20	0.1 ~ 1.5
	MGC300	Gray Cast Iron (FC)	200 ~ 700	0.2 ~ 0.40	2.0 ~ 5.0
		Steel (HRC 45≤)	300 ~ 1200	0.05 ~ 0.30	0.1 ~ 0.5
	MGC400	Malleable (FCMB)	250 ~ 1200	0.15 ~ 0.40	< 1.0
		Chilled Cast Iron	30 ~ 200	0.05 ~ 0.2	0.10 ~ 1.50
		Bearing Steel	150 ~ 800	0.05 ~ 0.50	0.10 ~ 0.50
	MGC500	Cast iron	150 ~ 800	0.2 ~ 0.5	3 ~ 6
		Ductile cast iron	90 ~ 500	0.10 ~ 0.30	< 5.0
		Hard cast iron (HRC 59)	50 ~ 150	0.10 ~ 1.00	<0.5
	MGC600	Ductile Cast Iron	90 ~ 500	0.10 ~ 0.30	< 5.0
		Gray Cast Iron (FC)	200 ~ 700	0.2 ~ 0.40	2.0 ~ 5.0
	MGC700 MGC800 MGC900	Ni-Based Alloy High temperature alloys Inconel Stellite	180 ~ 1,000	0.05 ~ 0.15 / tooth	0.5 ~ 2.5

CERAMIC Insert

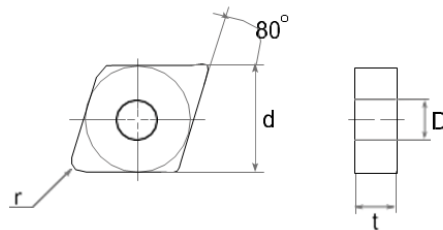
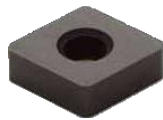
CNGA



TURNING CERAMICS

Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
CNGA 120404	CNGA 431	12.7	4.76	0.4	5.16									
CNGA 120408	CNGA 432	12.7	4.76	0.8	5.16									
CNGA 120412	CNGA 433	12.7	4.76	1.2	5.16									
CNGA 120416	CNGA 434	12.7	4.76	1.6	5.16									
CNGA 120704	CNGA 451	12.7	7.94	0.4	5.16									
CNGA 120708	CNGA 452	12.7	7.94	0.8	5.16									
CNGA 120712	CNGA 453	12.7	7.94	1.2	5.16									
CNGA 120716	CNGA 454	12.7	7.94	1.6	5.16									
CNGA 160608	CNGA 542	15.87	6.35	0.8	6.35									
CNGA 160612	CNGA 543	15.87	6.35	1.2	6.35									
CNGA 160616	CNGA 544	15.87	6.35	1.6	6.35									
CNGA 160708	CNGA 552	15.87	7.94	0.8	6.35									
CNGA 160712	CNGA 553	15.87	7.94	1.2	6.35									
CNGA 160716	CNGA 554	15.87	7.94	1.6	6.35									
CNGA 190608	CNGA 642	19.05	6.35	0.8	7.93									
CNGA 190612	CNGA 643	19.05	6.35	1.2	7.93									
CNGA 190616	CNGA 644	19.05	6.35	1.6	7.93									
CNGA 190712	CNGA 653	19.05	7.94	1.2	7.93									
CNGA 190716	CNGA 654	19.05	7.94	1.6	7.93									

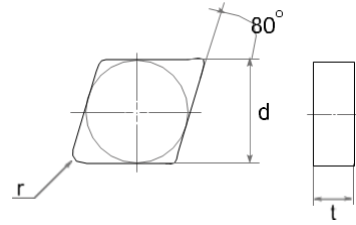
CNMA



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
CNMA 120408	CNMA 432	12.7	4.76	0.8	5.16									
CNMA 120412	CNMA 433	12.7	4.76	1.2	5.16									
CNMA 120416	CNMA 434	12.7	4.76	1.6	5.16									
CNMA 160612	CNMA 543	15.87	6.35	1.2	6.35									
CNMA 160616	CNMA 544	15.87	6.35	1.6	6.35									

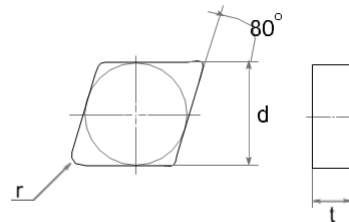
CERAMIC Insert

CNGN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
CNGN 090304	CNGN 321	9.52	3.18	0.4									
CNGN 090308	CNGN 322	9.52	3.18	0.8									
CNGN 090312	CNGN 323	9.52	3.18	1.2									
CNGN 120304	CNGN 421	12.7	3.18	0.4									
CNGN 120308	CNGN 422	12.7	3.18	0.8									
CNGN 120312	CNGN 423	12.7	3.18	1.2									
CNGN 120404	CNGN 431	12.7	4.76	0.4									
CNGN 120408	CNGN 432	12.7	4.76	0.8									
CNGN 120412	CNGN 433	12.7	4.76	1.2									
CNGN 120416	CNGN 434	12.7	4.76	1.6									
CNGN 120704	CNGN 451	12.7	7.94	0.4									
CNGN 120708	CNGN 452	12.7	7.94	0.8									
CNGN 120712	CNGN 453	12.7	7.94	1.2									
CNGN 120716	CNGN 454	12.7	7.94	1.6									
CNGN 160608	CNGN 542	15.87	6.35	0.8									
CNGN 160612	CNGN 543	15.87	6.35	1.2									
CNGN 160616	CNGN 544	15.87	6.35	1.6									
CNGN 160708	CNGN 552	15.87	7.94	0.8									
CNGN 160712	CNGN 553	15.87	7.94	1.2									
CNGN 160716	CNGN 554	15.87	7.94	1.6									
CNGN 160720	CNGN 555	15.87	7.94	2									
CNGN 190612	CNGN 643	19.05	6.35	1.2									
CNGN 190616	CNGN 644	19.05	6.35	1.6									
CNGN 190712	CNGN 653	19.05	7.94	1.2									
CNGN 190716	CNGN 654	19.05	7.94	1.6									
CNGN 190720	CNGN 655	19.05	7.94	2									
CNGN 250724	CNGN 856	25.4	7.94	2.4									
CNGN 250924	CNGN 866	25.4	9.52	2.4									

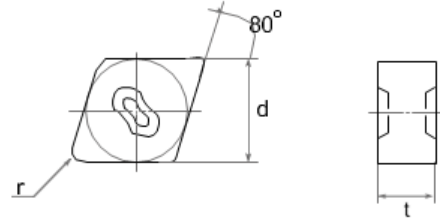
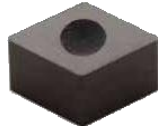
CNMN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
CNMN 120412	CNMN 433	12.7	4.76	1.2									
CNMN 120416	CNMN 434	12.7	4.76	1.6									

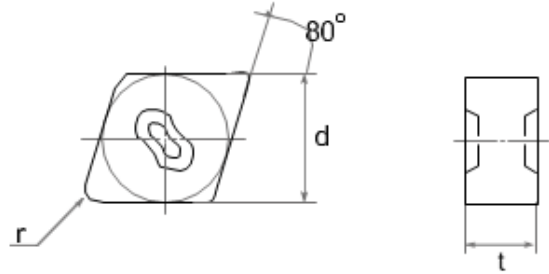
CERAMIC Insert

CNGX



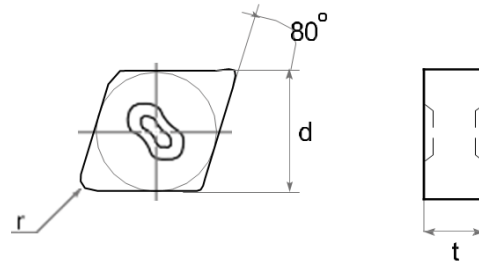
Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
CNGX 120412	CNGX 433	12.7	4.76	1.2									
CNGX 120416	CNGX 434	12.7	4.76	1.6									
CNGX 120708	CNGX 452	12.7	7.94	0.8									
CNGX 120712	CNGX 453	12.7	7.94	1.2									
CNGX 120716	CNGX 454	12.7	7.94	1.6									
CNGX 160708	CNGX 552	15.87	7.94	0.8									
CNGX 160712	CNGX 553	15.87	7.94	1.2									
CNGX 160716	CNGX 554	15.87	7.94	1.6									

CNVX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
CNVX 120412	CNVX 433	12.7	4.76	1.2									
CNVX 120416	CNVX 434	12.7	4.76	1.6									
CNVX 120708	CNVX 452	12.7	7.94	0.8									
CNVX 120712	CNVX 453	12.7	7.94	1.2									
CNVX 120716	CNVX 454	12.7	7.94	1.6									

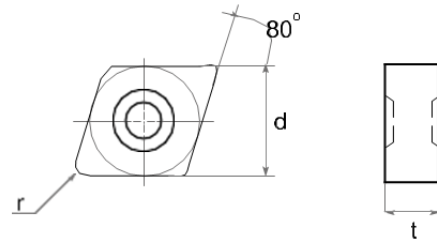
CNMX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
CNMX 120712	CNMX 453	12.7	7.94	1.2									
CNMX 120716	CNMX 454	12.7	7.94	1.6									

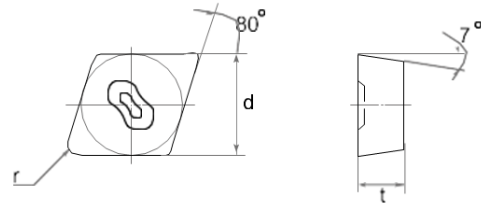
CERAMIC Insert

CNMX..RD



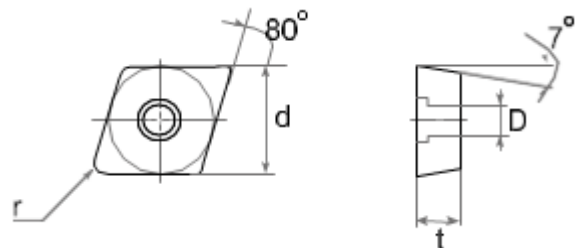
Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
CNMX 120716 RD	CNMX 454 RD	12.7	7.94	1.6									

CCGX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
CCGX 120608	CCGX 442	12.7	6.35	0.8									
CCGX 120612	CCGX 443	12.7	6.35	1.2									
CCGX 120616	CCGX 444	12.7	6.35	1.6									

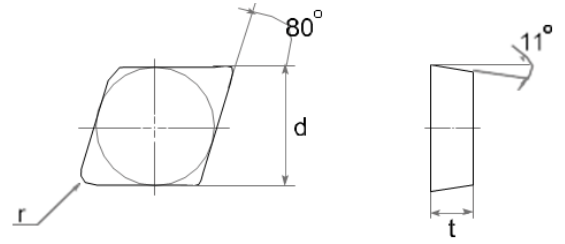
CCGW



Type	Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	d	t	r	D									
CCGW 09T304	9.52	3.97	0.4	4.4									
CCGW 09T308	9.52	3.97	0.8	4.4									
CCGW 09T312	9.52	3.97	1.2	4.4									
CCGW 120408	12.7	4.76	0.8	5.5									
CCGW 120412	12.7	4.76	1.2	5.5									

CERAMIC Insert

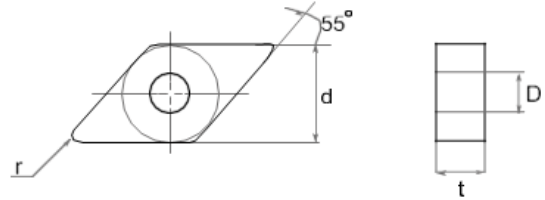
CNGN



TURNING CERAMICS

Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
CPGN 090304	CPGN 321	9.52	3.18	0.4									
CPGN 090308	CPGN 322	9.52	3.18	0.8									
CPGN 120408	CPGN 432	12.7	4.76	0.8									
CPGN 120412	CPGN 433	12.7	4.76	1.2									
CPGN 120416	CPGN 434	12.7	4.76	1.6									

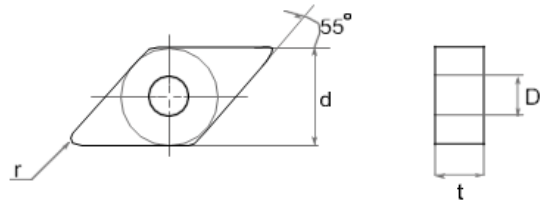
DNGA



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
DNGA 150404	DNGA 431	12.7	4.76	0.4	5.2									
DNGA 150408	DNGA 432	12.7	4.76	0.8	5.2									
DNGA 150412	DNGA 433	12.7	4.76	1.2	5.2									
DNGA 150416	DNGA 434	12.7	4.76	1.6	5.2									
DNGA 150604	DNGA 441	12.7	6.35	0.4	5.2									
DNGA 150608	DNGA 442	12.7	6.35	0.8	5.2									
DNGA 150612	DNGA 443	12.7	6.35	1.2	5.2									
DNGA 150616	DNGA 444	12.7	6.35	1.6	5.2									
DNGA 150704	DNGA 451	12.7	7.94	0.4	5.2									
DNGA 150708	DNGA 452	12.7	7.94	0.8	5.2									
DNGA 150712	DNGA 453	12.7	7.94	1.2	5.2									
DNGA 150716	DNGA 454	12.7	7.94	1.6	5.2									
DNGA 190608	DNGA 542	15.87	6.35	0.8	6.4									
DNGA 190612	DNGA 543	15.87	6.35	1.2	6.4									
DNGA 190616	DNGA 544	15.87	6.35	1.6	6.4									

CERAMIC Insert

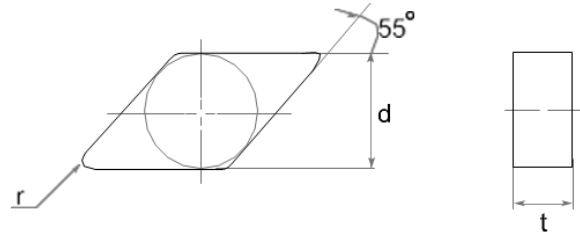
DNMA



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
DNMA 150612	DNMA 443	12.7	6.35	1.2	5.2									
DNMA 150616	DNMA 444	12.7	6.35	1.6	5.2									

TURMING CERAMICS

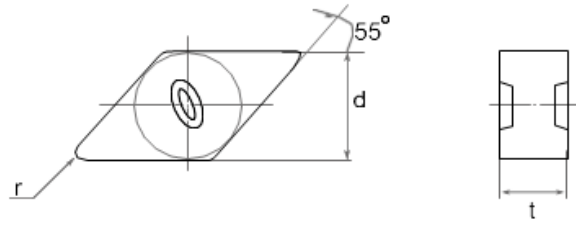
DNGN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
DNGN 150404	DNGN 431	12.7	4.76	0.4									
DNGN 150408	DNGN 432	12.7	4.76	0.8									
DNGN 150412	DNGN 433	12.7	4.76	1.2									
DNGN 150416	DNGN 434	12.7	4.76	1.6									
DNGN 150604	DNGN 441	12.7	6.35	0.4									
DNGN 150608	DNGN 442	12.7	6.35	0.8									
DNGN 150612	DNGN 443	12.7	6.35	1.2									
DNGN 150616	DNGN 444	12.7	6.35	1.6									
DNGN 150704	DNGN 451	12.7	7.94	0.4									
DNGN 150708	DNGN 452	12.7	7.94	0.8									
DNGN 150712	DNGN 453	12.7	7.94	1.2									
DNGN 150716	DNGN 454	12.7	7.94	1.6									

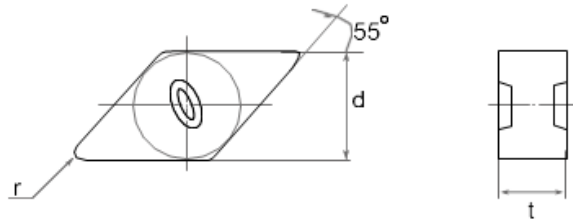
CERAMIC Insert

DNGX



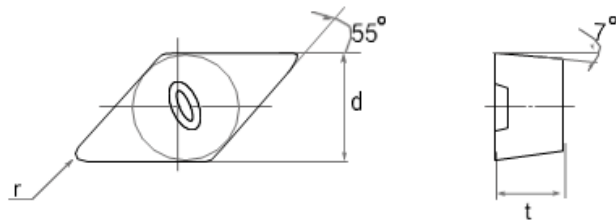
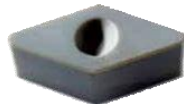
Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
DNGX 120708	DNGX 352	10	7.94	0.8									
DNGX 120712	DNGX 353	10	7.94	1.2									
DNGX 120716	DNGX 354	10	7.94	1.6									
DNGX 150708	DNGX 452	12.7	7.94	0.8									
DNGX 150712	DNGX 453	12.7	7.94	1.2									
DNGX 150716	DNGX 454	12.7	7.94	1.6									

DNGX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
DCGX 150612	DCGX 443	12.7	6.35	1.2									
DCGX 150616	DCGX 444	12.7	6.35	1.6									

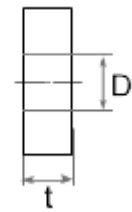
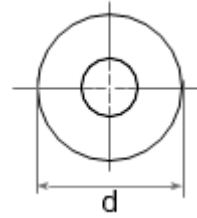
DCGX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
DCGX 150612	DCGX 443	12.7	6.35	1.2									
DCGX 150616	DCGX 444	12.7	6.35	1.6									

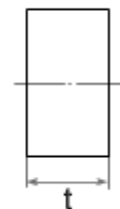
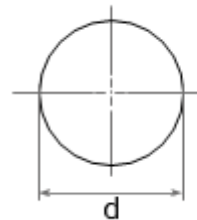
CERAMIC Insert

RNGA



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	D									
RNGA 120400	RNGA 430	12.7	4.76	5.16									
RNGA 120700	RNGA 450	12.7	7.94	5.16									

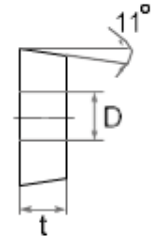
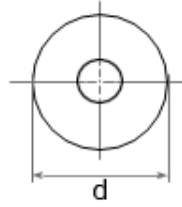
RNGN



Type		Dimensions (mm)		MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t									
RNGN 060300	RNGN 220	6.35	3.18									
RNGN 060400	RNGN 230	6.35	4.76									
RNGN 090300	RNGN 320	9.52	3.18									
RNGN 090400	RNGN 330	9.52	4.76									
RNGN 120300	RNGN 420	12.7	3.18									
RNGN 120400	RNGN 430	12.7	4.76									
RNGN 120600	RNGN 440	12.7	6.35									
RNGN 120700	RNGN 450	12.7	7.94									
RNGN 150700	RNGN 550	15.87	7.94									
RNGN 190600	RNGN 640	19.05	6.35									
RNGN 190700	RNGN 650	19.05	7.94									
RNGN 250700	RNGN 850	25.4	7.94									
RNGN 250900	RNGN 860	25.4	9.52									
RNGN 320900	RNGN 106	31.75	9.52									
RNGN 0807MO		8	7.94									
RNGN 1007MO		10	7.94									
RNGN 1207MO		12	7.94									

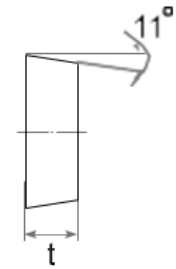
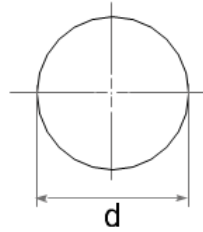
CERAMIC Insert

RPGA



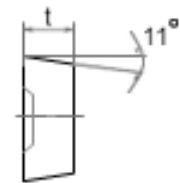
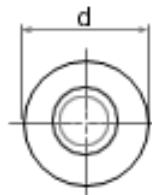
Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	D									
RPGA 120400	RPGA 430	12.7	4.76	5.2									
RPGA 120700	RPGA 450	12.7	7.94	5.2									

RPGN



Type		Dimensions (mm)		MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t									
RPGN 090300	RPGN 320	9.52	3.18									
RPGN 090400	RPGN 330	9.52	4.76									
RPGN 120300	RPGN 420	12.7	3.18									
RPGN 120400	RPGN 430	12.7	4.76									
RPGN 120700	RPGN 450	12.7	7.94									
RPGN 150700	RPGN 550	15.87	7.94									
RPGN 190700	RPGN 650	19.05	7.94									

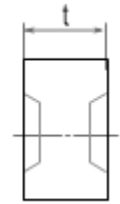
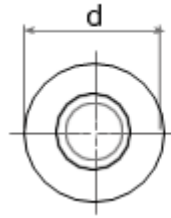
RPGX..DP



Type		Dimensions (mm)		MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t									
RPGX 1204 DP	RPGX 43 DP	12.7	4.76									
RPGX 1207 DP	RPGX 45 DP	12.7	7.94									

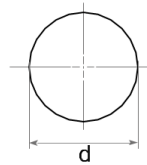
CERAMIC Insert

RNGX..DP



Type		Dimensions (mm)		MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t									
RNGX 1207 DP	RNGX 45 DP	12.7	7.94									

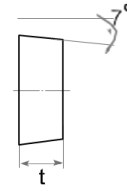
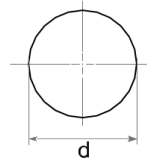
RBGN



Type		Dimensions (mm)		MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t									
RBGN 060300	RBGN 220	6.35	3.18									
RBGN 060400	RBGN 230	6.35	4.76									
RBGN 090300	RBGN 320	9.52	3.18									
RBGN 090400	RBGN 330	9.52	4.76									
RBGN 120400	RBGN 430	12.7	4.76									
RBGN 120600	RBGN 440	12.7	6.35									
RBGN 120700	RBGN 450	12.7	7.94									
RBGN 0604MO		6	4.76									
RBGN 0804MO		8	4.76									
RBGN 1007MO		10	7.94									
RBGN 1207MO		12	7.94									
RBGN 1607MO		16	7.94									

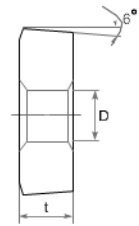
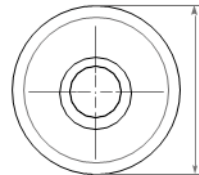
CERAMIC Insert

RCGN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO		d	t										
RCGN 060400		6.35	4.76										
RCGN 060600		6.35	6.35										
RCGN 060700		6.35	7.94										
RCGN 070400		7.94	4.76										
RCGN 090700		9.52	7.94										
RCGN 120700		12.7	7.94										
RCGN 151000		15.87	10										
RCGN 191000		19.05	10										
RCGN 251200		25.4	12.7										

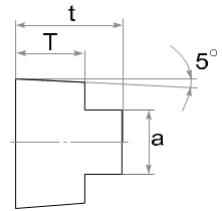
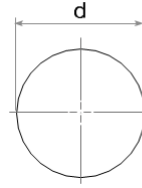
CDH



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	D									
CDH 120600	CDH 22	12.7	6.4	3.2									
CDH 120900	CDH 23	12.7	9.5	3.2									
CDH 190900	CDH 33	19.05	9.5	6.4									
CDH 191200	CDH 34	19.05	13	6.4									
CDH 251200	CDH 42	25.4	13	6.8									
CDH 251900	CDH 43	25.4	19	6.8									
CDH 320900	CDH 515	31.75	9.5	10									
CDH 321900	CDH 53	31.75	19	10									
CDH 381100		38.1	11	9.9									

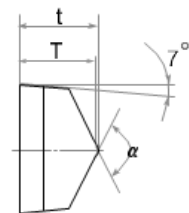
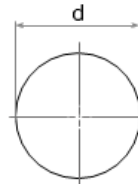
CERAMIC Insert

RBGX



Type	Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
	ISO	d	t	T									
RBGX 06T	6	5	3	3									
RBGX 08T	8	6.5	4	4									
RBGX 10T	10	9	6	6									
RBGX 12T	12	9	6	6									
RBGX 16T	16	13	8	8									
RBGX 20T	20	15	10	10									
RBGX 26T	26	15	10	14									

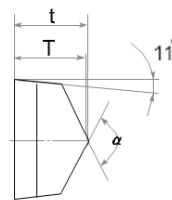
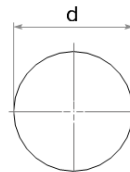
RCGX



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	T	α									
RCGX 060400	RCGX 102	6.35	4.76	4.57	120°									
RCGX 060600	RCGX 102	6.35	6.35	6.2	120°									
RCGX 060700	RCGX 102	6.35	7.94	7.7	120°									
RCGX 090700	RCGX 103	9.52	7.94	7.7	120°									
RCGX 120700	RCGX 104	12.7	7.94	7.7	120°									
RCGX 151000	RCGX 105	15.87	10	9.77	120°									
RCGX 191000	RCGX 106	19.05	10	9.77	120°									
RCGX 251200	RCGX 108	25.4	12	11.9	140°									

CERAMIC Insert

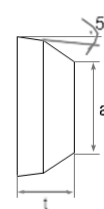
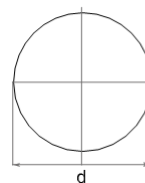
RPGX



TURNING CERAMICS

Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	T	α									
RPGX 060400	RPGX 102	6.35	4.76	4.57	120°									
RPGX 090700	RPGX 103	9.52	7.94	7.7	120°									
RPGX 120700	RPGX 104	12.7	7.94	7.7	120°									

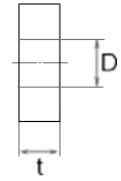
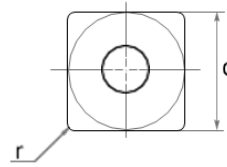
RXGX



Type	Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	d	t	a									
RXGX 1207MO	12	7.94	6.9									
RXGX 1608MO	16	8	9.5									
RXGX 2508MO	25	8	18.2									

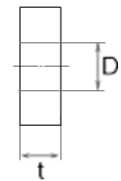
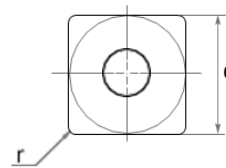
CERAMIC Insert

SNGA



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
SNGA 090304	SNGA 321	9.52	3.18	0.4	3.81									
SNGA 090308	SNGA 322	9.52	3.18	0.8	3.81									
SNGA 090312	SNGA 323	9.52	3.18	1.2	3.81									
SNGA 090404	SNGA 331	9.52	4.76	0.4	3.81									
SNGA 090408	SNGA 332	9.52	4.76	0.8	3.81									
SNGA 090412	SNGA 333	9.52	4.76	1.2	3.81									
SNGA 090416	SNGA 334	9.52	4.76	1.6	3.81									
SNGA 120404	SNGA 431	12.7	4.76	0.4	5.16									
SNGA 120408	SNGA 432	12.7	4.76	0.8	5.16									
SNGA 120412	SNGA 433	12.7	4.76	1.2	5.16									
SNGA 120416	SNGA 434	12.7	4.76	1.6	5.16									
SNGA 120708	SNGA 452	12.7	7.94	0.8	5.16									
SNGA 120712	SNGA 453	12.7	7.94	1.2	5.16									
SNGA 120716	SNGA 454	12.7	7.94	1.6	5.16									
SNGA 150608	SNGA 542	15.87	6.35	0.8	6.35									
SNGA 150612	SNGA 543	15.87	6.35	1.2	6.35									
SNGA 150616	SNGA 544	15.87	6.35	1.6	6.35									
SNGA 190612	SNGA 643	19.05	6.35	1.2	7.94									
SNGA 190616	SNGA 644	19.05	6.35	1.6	7.94									

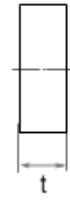
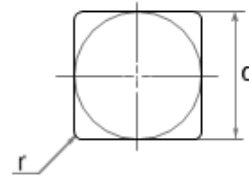
SNMA



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
SNMA 120408	SNMA 432	12.7	4.76	0.8	5.16									
SNMA 120412	SNMA 433	12.7	4.76	1.2	5.16									
SNMA 120416	SNMA 434	12.7	4.76	1.6	5.16									
SNMA 150616	SNMA 544	15.87	6.35	1.6	6.35									

CERAMIC Insert

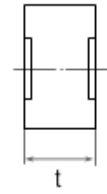
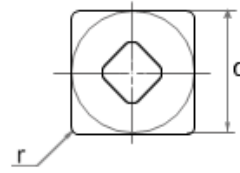
SNGN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
SNGN 090304	SNGN 321	9.52	3.18	0.4									
SNGN 090308	SNGN 322	9.52	3.18	0.8									
SNGN 090312	SNGN 323	9.52	3.18	1.2									
SNGN 090404	SNGN 331	9.52	4.76	0.4									
SNGN 090408	SNGN 332	9.52	4.76	0.8									
SNGN 090412	SNGN 333	9.52	4.76	1.2									
SNGN 120404	SNGN 431	12.7	4.76	0.4									
SNGN 120408	SNGN 432	12.7	4.76	0.8									
SNGN 120412	SNGN 433	12.7	4.76	1.2									
SNGN 120416	SNGN 434	12.7	4.76	1.6									
SNGN 120420	SNGN 435	12.7	4.76	2									
SNGN 120604	SNGN 441	12.7	6.35	0.4									
SNGN 120608	SNGN 442	12.7	6.35	0.8									
SNGN 120612	SNGN 443	12.7	6.35	1.2									
SNGN 120616	SNGN 444	12.7	6.35	1.6									
SNGN 120704	SNGN 451	12.7	7.94	0.4									
SNGN 120708	SNGN 452	12.7	7.94	0.8									
SNGN 120712	SNGN 453	12.7	7.94	1.2									
SNGN 120716	SNGN 454	12.7	7.94	1.6									
SNGN 120720	SNGN 455	12.7	7.94	2									
SNGN 150404	SNGN 531	15.87	4.76	0.4									
SNGN 150408	SNGN 532	15.87	4.76	0.8									
SNGN 150412	SNGN 533	15.87	4.76	1.2									
SNGN 150416	SNGN 534	15.87	4.76	1.6									
SNGN 150708	SNGN 552	15.87	7.94	0.8									
SNGN 150712	SNGN 553	15.87	7.94	1.2									
SNGN 150716	SNGN 554	15.87	7.94	1.6									
SNGN 190608	SNGN 642	19.05	6.35	0.8									
SNGN 190612	SNGN 643	19.05	6.35	1.2									
SNGN 190616	SNGN 644	19.05	6.35	1.6									
SNGN 190712	SNGN 653	19.05	7.94	1.2									
SNGN 190716	SNGN 654	19.05	7.94	1.6									
SNGN 190720	SNGN 655	19.05	7.94	2									
SNGN 250720	SNGN 854	25.4	7.94	2									
SNGN 250724	SNGN 856	25.4	7.94	2.4									
SNGN 250924	SNGN 866	25.4	9.52	2.4									

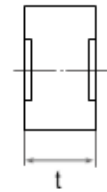
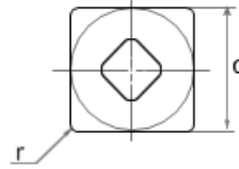
CERAMIC Insert

SNGX



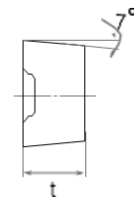
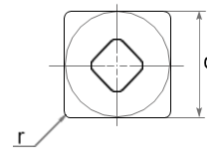
Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
SNGX 120408	SNGX 432	12.7	4.76	0.8									
SNGX 120412	SNGX 433	12.7	4.76	1.2									
SNGX 120416	SNGX 434	12.7	4.76	1.6									
SNGX 120708	SNGX 452	12.7	7.94	0.8									
SNGX 120712	SNGX 453	12.7	7.94	1.2									
SNGX 120716	SNGX 454	12.7	7.94	1.6									
SNGX 150708	SNGX 552	15.87	7.94	0.8									
SNGX 150712	SNGX 553	15.87	7.94	1.2									
SNGX 150716	SNGX 554	15.87	7.94	1.6									

SNMX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
SNMX 120712	SNMX 453	12.7	7.94	1.2									
SNMX 120716	SNMX 454	12.7	7.94	1.6									

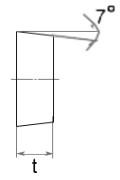
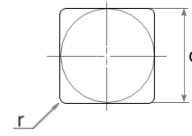
SCGX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
SCGX 120408	SCGX 432	12.7	4.76	0.8									
SCGX 120616	SCGX 444	12.7	6.35	1.6									
SCGX 120716	SCGX 454	12.7	7.94	1.6									

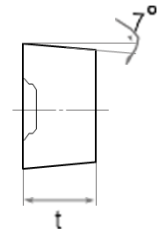
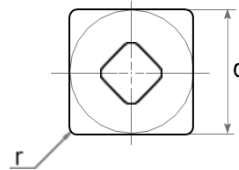
CERAMIC Insert

SCGN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
SCGN 090412	SCGN 333	9.52	4.76	1.2									
SCGN 090416	SCGN 334	9.52	4.76	1.6									
SCGN 120404	SCGN 431	12.7	4.76	0.4									
SCGN 120408	SCGN 432	12.7	4.76	0.8									
SCGN 120412	SCGN 433	12.7	4.76	1.2									
SCGN 120416	SCGN 434	12.7	4.76	1.6									

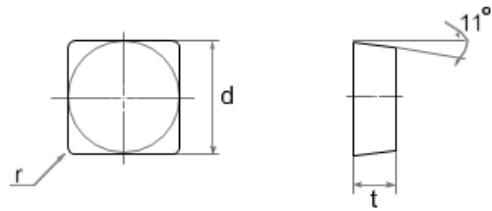
SCGW



Type	Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	d	t	r	D									
SCGW 09T304	9.52	3.97	0.4	4.4									
SCGW 09T308	9.52	3.97	0.8	4.4									
SCGW 120408	12.7	4.76	0.8	5.5									

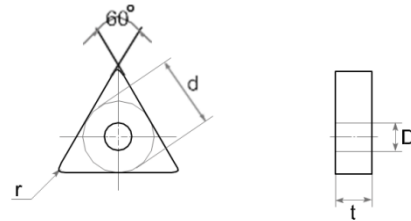
CERAMIC Insert

SPGN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
SPGN 090304	SPGN 321	9.52	3.18	0.4									
SPGN 090308	SPGN 322	9.52	3.18	0.8									
SPGN 090312	SPGN 323	9.52	3.18	1.2									
SPGN 120304	SPGN 421	12.7	3.18	0.4									
SPGN 120308	SPGN 422	12.7	3.18	0.8									
SPGN 120312	SPGN 423	12.7	3.18	1.2									
SPGN 120404	SPGN 431	12.7	4.76	0.4									
SPGN 120408	SPGN 432	12.7	4.76	0.8									
SPGN 120412	SPGN 433	12.7	4.76	1.2									
SPGN 120416	SPGN 434	12.7	4.76	1.6									
SPGN 150408	SPGN 532	15.87	4.76	0.8									
SPGN 150412	SPGN 533	15.87	4.76	1.2									
SPGN 190412	SPGN 633	19.05	4.76	1.2									
SPGN 190416	SPGN 634	19.05	4.76	1.6									

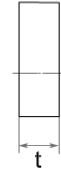
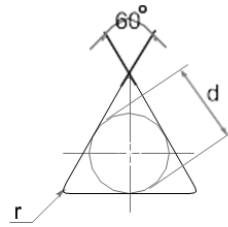
TNGA



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
TNGA 110304	TNGA 221	6.35	3.18	0.4	2.26									
TNGA 110308	TNGA 222	6.35	3.18	0.8	2.26									
TNGA 160304	TNGA 321	9.52	3.18	0.4	3.81									
TNGA 160308	TNGA 322	9.52	3.18	0.8	3.81									
TNGA 160312	TNGA 323	9.52	3.18	1.2	3.81									
TNGA 160404	TNGA 331	9.52	4.76	0.4	3.81									
TNGA 160408	TNGA 332	9.52	4.76	0.8	3.81									
TNGA 160412	TNGA 333	9.52	4.76	1.2	3.81									
TNGA 160416	TNGA 334	9.52	4.76	1.6	3.81									
TNGA 220404	TNGA 431	12.7	4.76	0.4	5.16									
TNGA 220408	TNGA 432	12.7	4.76	0.8	5.16									
TNGA 220412	TNGA 433	12.7	4.76	1.2	5.16									
TNGA 220416	TNGA 434	12.7	4.76	1.6	5.16									
TNGA 220708	TNGA 452	12.7	7.94	0.8	5.16									
TNGA 220712	TNGA 453	12.7	7.94	1.2	5.16									
TNGA 270608	TNGA 542	15.87	6.35	0.8	6.35									
TNGA 270612	TNGA 543	15.87	6.35	1.2	6.35									
TNGA 330924	TNGA 666	19.05	9.52	2.4	7.94									

CERAMIC Insert

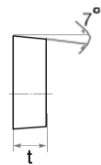
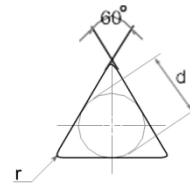
TNGN



TURNING CERAMICS

Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
TNGN 110304	TNGN 221	6.35	3.18	0.4									
TNGN 110308	TNGN 222	6.35	3.18	0.8									
TNGN 160404	TNGN 331	9.52	4.76	0.4									
TNGN 160408	TNGN 332	9.52	4.76	0.8									
TNGN 160412	TNGN 333	9.52	4.76	1.2									
TNGN 160416	TNGN 334	9.52	4.76	1.6									
TNGN 160704	TNGN 351	9.52	7.94	0.4									
TNGN 160708	TNGN 352	9.52	7.94	0.8									
TNGN 160712	TNGN 353	9.52	7.94	1.2									
TNGN 160716	TNGN 354	9.52	7.94	1.6									
TNGN 220404	TNGN 431	12.7	4.76	0.4									
TNGN 220408	TNGN 432	12.7	4.76	0.8									
TNGN 220412	TNGN 433	12.7	4.76	1.2									
TNGN 220416	TNGN 434	12.7	4.76	1.6									
TNGN 220708	TNGN 452	12.7	7.94	0.8									
TNGN 220712	TNGN 453	12.7	7.94	1.2									
TNGN 220716	TNGN 454	12.7	7.94	1.6									
TNGN 270608	TNGN 542	15.87	6.35	0.8									
TNGN 270612	TNGN 543	15.87	6.35	1.2									
TNGN 270616	TNGN 544	15.87	6.35	1.6									
TNGN 330924	TNGN 666	19.05	9.52	2.4									
TNGN 440932	TNGN 868	25.4	9.52	3.2									

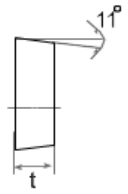
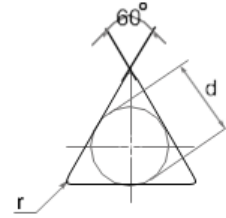
TCUN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
TCUN 160408	TCUN 332	9.52	4.76	0.8									
TCUN 160412	TCUN 333	9.52	4.76	1.2									
TCUN 160416	TCUN 334	9.52	4.76	1.6									

CERAMIC Insert

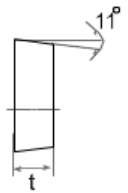
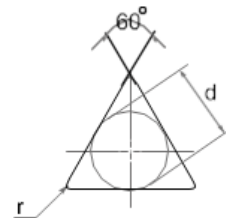
TPGN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
TPGN 090204	TPGN 731	5.56	2.38	0.4									
TPGN 090208	TPGN 732	5.56	2.38	0.8									
TPGN 110304	TPGN 221	6.35	3.18	0.4									
TPGN 110308	TPGN 222	6.35	3.18	0.8									
TPGN 160304	TPGN 321	9.52	3.18	0.4									
TPGN 160308	TPGN 322	9.52	3.18	0.8									
TPGN 160312	TPGN 323	9.52	3.18	1.2									
TPGN 160404	TPGN 331	9.52	4.76	0.4									
TPGN 160408	TPGN 332	9.52	4.76	0.8									
TPGN 160412	TPGN 333	9.52	4.76	1.2									
TPGN 160416	TPGN 334	9.52	4.76	1.6									
TPGN 220404	TPGN 431	12.7	4.76	0.4									
TPGN 220408	TPGN 432	12.7	4.76	0.8									
TPGN 220412	TPGN 433	12.7	4.76	1.2									
TPGN 220416	TPGN 434	12.7	4.76	1.6									
TPGN 220712	TPGN 453	12.7	7.94	1.2									
TPGN 220716	TPGN 454	12.7	7.94	1.6									
TPGN 271232	TPGN 588	15.87	12.7	3.2									

TURMING CERAMICS

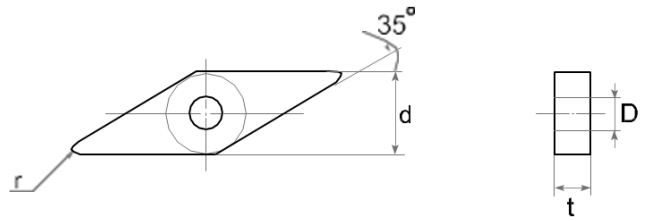
TPUN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
TPUN 110308	TPUN 222	6.35	3.18	0.8									
TPUN 110312	TPUN 223	6.35	3.18	1.2									

CERAMIC Insert

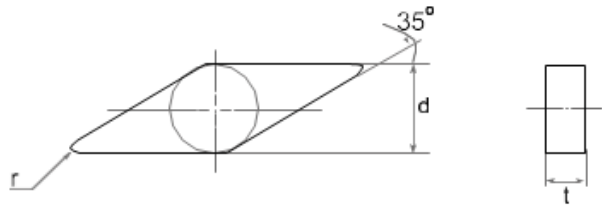
VNGA



TURNING CERAMICS

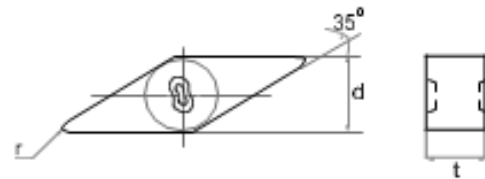
Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
VNGA 160404	VNGA 331	9.52	4.76	0.4	3.8									
VNGA 160408	VNGA 332	9.52	4.76	0.8	3.8									
VNGA 160412	VNGA 333	9.52	4.76	1.2	3.8									
VNGA 160604	VNGA 341	9.52	6.35	0.4	3.8									
VNGA 160608	VNGA 342	9.52	6.35	0.8	3.8									
VNGA 160612	VNGA 343	9.52	6.35	1.2	3.8									
VNGA 220404	VNGA 431	12.7	4.76	0.4	5.2									
VNGA 220408	VNGA 432	12.7	4.76	0.8	5.2									
VNGA 220412	VNGA 433	12.7	4.76	1.2	5.2									
VNGA 220424	VNGA 436	12.7	4.76	2.4	5.2									

VNGN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
VNGN 160404	VNGN 331	9.52	4.76	0.4									
VNGN 160408	VNGN 332	9.52	4.76	0.8									
VNGN 160704	VNGN 351	9.52	7.94	0.4									
VNGN 160708	VNGN 352	9.52	7.94	0.8									
VNGN 160712	VNGN 353	9.52	7.94	1.2									
VNGN 160716	VNGN 354	9.52	7.94	1.6									

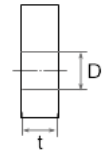
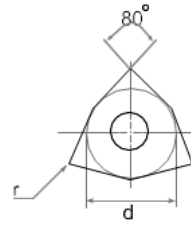
VNGX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
VNGX 160708	VNGX 352	9.52	7.94	0.8									
VNGX 160712	VNGX 353	9.52	7.94	1.2									
VNGX 160716	VNGX 354	9.52	7.94	1.6									

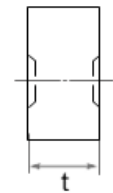
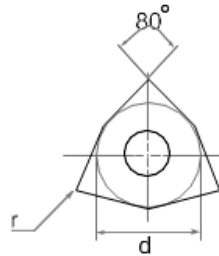
CERAMIC Insert

WNGA



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r	D									
WNGA 080404	WNGA 431	12.7	4.76	0.4	5.2									
WNGA 080408	WNGA 432	12.7	4.76	0.8	5.2									
WNGA 080412	WNGA 433	12.7	4.76	1.2	5.2									

WNGX



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	r									
WNGX 080708	WNGX 452	12.7	7.94	0.8									
WNGX 080712	WNGX 453	12.7	7.94	1.2									
WNGX 080716	WNGX 454	12.7	7.94	1.6									

CERAMIC Insert

TURNING CERAMICS



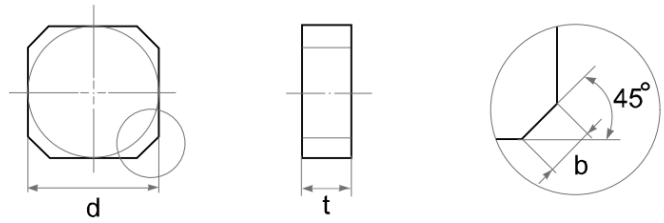
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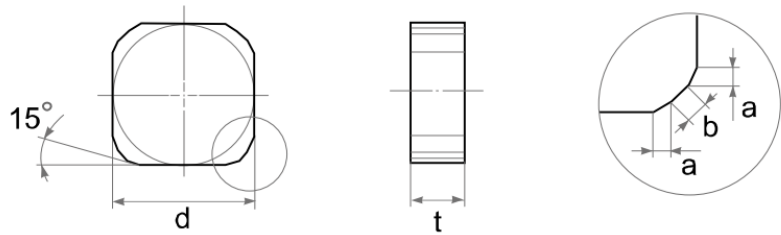
TURMING CERAMICS

CERAMIC Insert

SNCN

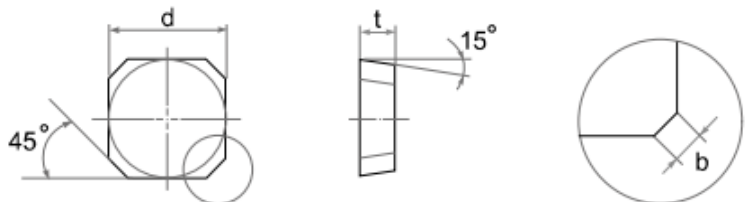


Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	b									
SNCN 1204 AN	SNCN 43 AN	12.7	4.76	2.5									
SNCN 1204 ZN	SNCN 43 ZN	12.7	4.76	1.1									



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	a	b									
SNCN 1204 ENTN	SNCN 43 ENTN	12.7	4.76	1.4	1									
SNCN 1504 ENTN	SNCN 53 ENTN	15.87	4.76	1.4	1									

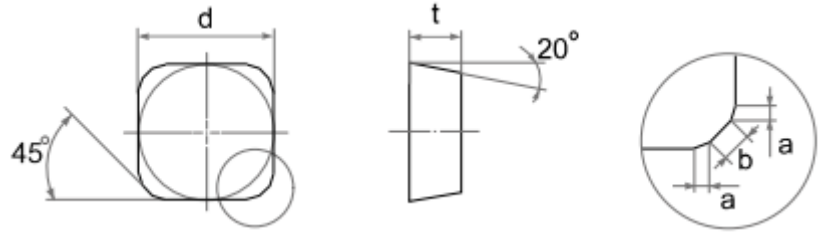
SDCN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	b									
SDCN 1203 AETN 12	SDCN 42 AETN 12	12.7	3.18	1.2									
SDCN 1203 AETN	SDCN 42 AETN	12.7	3.18	2									
SDCN 1504 AETN	SDCN 53 AETN	15.87	4.76	2									

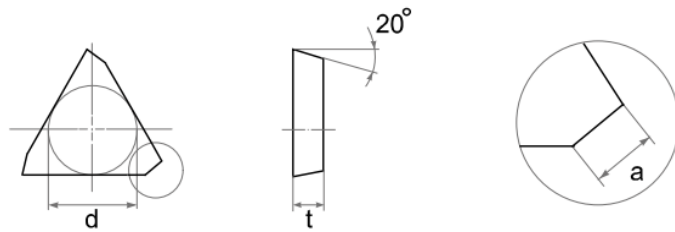
CERAMIC Insert

SEAN



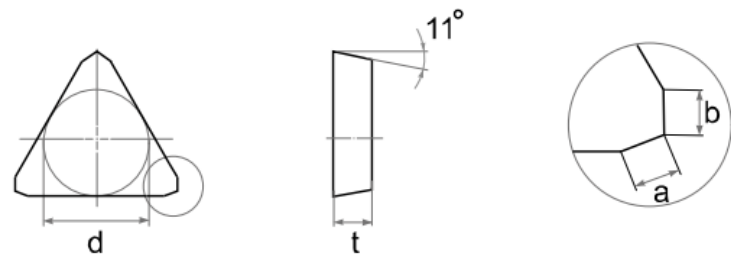
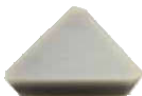
Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	a	b									
SEAN 1203 AFTN	SEAN 42 AFTN	12.7	3.18	0.5	1.8									
SEAN 1504 AFTN	SEAN 53 AFTN	12.7	4.76	0.7	2									

TEKN



Type		Dimensions (mm)			MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	a									
TEKN 1603 PFTR	TEKN 32 PFTR	9.52	3.18	1.4									
TEKN 2204 PFTR	TEKN 43 PFTR	12.7	4.76	2.1									

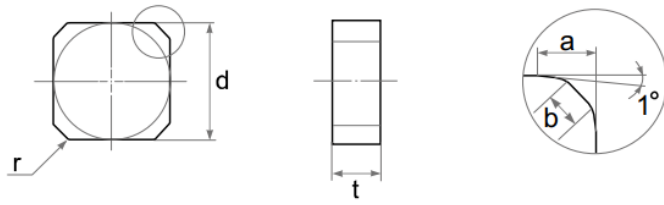
TPKN



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	a	b									
TPKN 1603 PDTR	TPKN 32 PDTR	9.52	3.18	1.2	1									
TPKN 2204 PDTR	TPKN 43 PDTR	12.7	4.76	1.4	0.7									

CERAMIC Insert

SNCN



Type		Dimensions (mm)				MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
ISO	ASA	d	t	a	b									
SNCN 0904 ZZT	SNCN 33 ZZT	9.52	4.76	1.3	1.1									
SNCN 1204 ZZT	SNCN 43 ZZT	12.7	4.76	3.25	1.1									

RPGX



type		dimensions (mm)		MGC100	MGC200	MGC300	MGC400	MGC500	MGC600	MGC700	MGC800	MGC900
iSo	ASA	d	t									
RPGX 1204 DP	RPGX 43 DP	12.7	4.76									

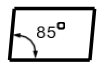
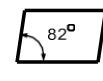

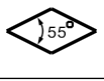
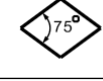
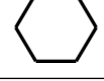
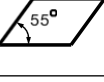
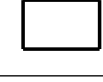
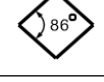
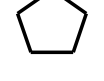




CBN – PCD INSERT

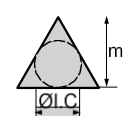

MEGAcut




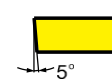
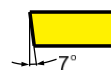
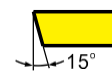
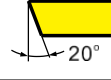
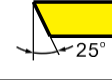


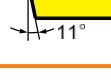
CBN-PCD Insert



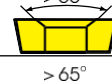

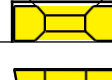

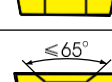

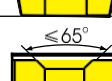

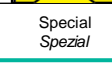
CBN-PCD INSERT

Insert shape Schneidplattenform		
 A	 B	 C
 D	 E	 H
 K	 L	 M
 P	 S	 T
 V	 W	Others Andere Z

Tolerance Toleranzklasse							
							
Code	Tolerance Toleranzklasse	Tolerance Toleranzklasse Ø1.C	Thickness S Dicke	Code	Tolerance Toleranzklasse	Tolerance Toleranzklasse Ø1.C	Thickness S Dicke
A	±0.005	±0.025	±0.025	J	±0.005	±0.05-±0.13	±0.025
F	±0.005	±0.013	±0.025	K	±0.013	±0.05-±0.13	±0.025
C	±0.013	±0.025	±0.025	L	±0.025	±0.05-±0.13	±0.025
H	±0.013	±0.013	±0.025	M	±0.08-±0.18	±0.05-±0.13	±0.13
E	±0.025	±0.025	±0.025	N	±0.08-±0.18	±0.05-±0.13	±0.025
G	±0.025	±0.025	±0.13	U	±0.13-±0.38	±0.08-±0.25	±0.13

C N G A

Clearance angle of main cutting edge Freiwinkel der Hauptschneide			
Code	Angle Winkel	Code	Angle Winkel
A	 3°	B	 5°
C	 7°	D	 15°
E	 20°	F	 25°
G	 30°	N	 0°
P	 11°	O	Others Andere

Inserttype Plattentyp		
Code	Hole Loch	InsertSection Ausführung
N	---	
B		 >65°
C		 >65°
A		
W		 ≤65°
Q		 ≤65°
X	---	Special Spezial

CBN-PCD Insert

Diameter of incircle Eingeschriebener Kreis (mm)	Cutting edge length Schneidenlänge (mm)					
	Insert Shape Plattenform					
	C	D	S	T	V	W
3.97				06		
5.0						
5.56				09		
6.0						
6.35	06	07		11	11	
8.0						
9.525	09	11	09	16	16	06
10.0						
12.0						
12.7	12	15	12	22	22	08
15.875	16		15	27		
16.0		19				
19.05	19		19	33		
20.0						
25.0	25	25				
25.4			25			
31.75						
32						

Insert thickness Dicke (mm)			
Code	Insert Thickness Dicke(mm)	Code	Insert Thickness Dicke(mm)
02	2.38	06	6.35
T2	2.58	T6	6.75
03	3.18	07	7.94
T3	3.97	09	9.52
04	4.76	T9	9.72
T4	4.96	11	11.11
05	5.56	12	12.70
T5	5.95		

Nose radius Eckenradius (mm)	
Code	Radius (mm)
00	-
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
32	3.2
X	Others Andere
Mo	Round Insert Runde Platten

CBN-PCD INSERT

12 04 08 T 020 20-2 W

Profile of cutting edges Schneidkantenausführung		
Code	Cutting Edge Schneidkante	Shape Form Plattenform
F	Sharp edge Scharfe Kante	
E	Honing Verrundung	
T	Chamfering Fase	
S	Chamfering Fase + Honing Verrundung	

Width of chamfer Breite der Fase			
010	0.10	040	0.40
015	0.15	045	0.45
020	0.20	050	0.50
025	0.25	100	1.00
030	0.30	200	2.00
035	0.35		

Angle of chamfer Winkel der Fase	
05	5°
10	10°
15	15°
20	20°
25	25°
30	30°

Number of cutting edges Anzahl der Schneidkanten		
Code	Number of edges s. Anzahl der Schneidkanten	
1	1	

Wiper edge Wiperfase
W

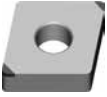
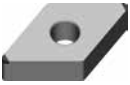

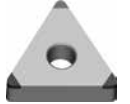




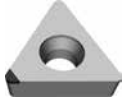


Standard edge preparation
Standard Fasenausführung

	CBN				Solid CBN Voll CBN			PCD PKD
	MG111	MG121	MG131	MG211	MGS121	MGS221	MGS231	MG421
Radius = 0.4	S01020	S01020	S01020	S01020	S01020	T02020	T02025	F
Radius ≥ 0.8	S02020	S02020	S02020	S02020	S01020	T02020	T02025	F

* other edge preparation on demand
andere Fasenausführung auf Anfrage

CBN-PCD Insert

CBN

	Insert Shape Schneidplattenform	Type Typ	Grade Sorte				
			MG111	MG121	MG131	MG211	
Negative Inserts WSP		C6	CNGA120404-2	○	○	○	○
		C6	CNGA120408-2	○	○	○	○
		C6	CNGA120412-2	○	○	○	○
		C6	CNGA120408-2W	○	○		
		C6	CNGA120412-2W	○	○		
		C7	DNGA150604-2	○	○	○	○
		C7	DNGA150608-2	○	○	●	○
		C7	DNGA150612-2	○	●	○	
		C8	SNGA120408-2	○	○	○	○
		C8	SNGA120412-2	○	○	○	○
		C9	TNGA160404-3	○	○		
C9		TNGA160408-3	○	○	○	○	
C9		TNGA160412-3	○	○	○	○	
	C10	VNGA160404-2	○	●			
	C10	VNGA160408-2	○	○			
	C11	WNGA080404-3	○	○	○		
	C11	WNGA080408-3	○	○	○		
	C11	WNGA080412-3	○	○	○	○	
Positive Inserts WSP		A142	CCGW060204-1	○	○		
		A142	CCGW060208-1		○		
		A142	CCGW09T304-2	○	○	○	○
		A142	CCGW09T308-2	○	○	○	○
		A142	CCGW120404-2	○	○	○	
		A142	CCGW120408-2	○	○	○	
		C12	DCGW070202-1	○	●		
		C12	DCGW070204-1	○	●		
		C12	DCGW070208-1	○	●		
		C12	DCGW11T304-2	○	○	○	○
		C12	DCGW11T308-2	○	●	○	○
		C13	TCGW110204-1	○	○	○	○
		C13	TCGW110208-1	○	○	○	
		C13	TCGW16T304-3	○	○	○	○
		C13	TCGW16T308-3	○	○	○	○
		C14	VBGW160404-2	○	○		○
		C14	VBGW160408-2	○	○		○
	C14	VCGW160404-2	○	○		○	
	C14	VCGW160408-2	○	○		○	

CBN-PCD Insert

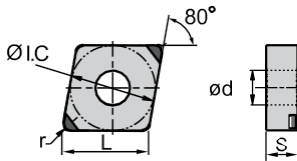
PCD

Insert Shape <i>Schneidplattenform</i>	Type <i>Typ</i>	Grade <i>Sorte</i>
		MG421
 C18	CCGT060202**	●
	CCGT060204**	●
	CCGT09T304**	●
	CCGT09T308**	○
	CCGT120404**	●
	CCGT120408**	○
 C19	CCGW060202**	●
	CCGW060204**	●
	CCGW09T304**	●
	CCGW09T308**	●
	CCGW120404**	●
	CCGW120408**	●
 C20	DCGT070202**	●
	DCGT070204**	●
	DCGT11T302**	●
	DCGT11T304**	●
	DCGT11T308**	●
 C21	DCGW070202**	●
	DCGW070204**	●
	DCGW070208**	●
	DCGW11T302**	●
	DCGW11T304**	●
	DCGW11T308**	●
 C22	TCGT110202**	○
	TCGT110204**	○
	TCGT110208**	○
	TCGT16T304**	○
	TCGT16T308**	○
 C23	TCGW110208**	○
	TCGW16T302**	○
	TCGW16T304**	○
	TCGW16T308**	○
 C26	VBGT160402**	○
	VBGT160404**	○
	VBGT160408**	○
 C26	VBGW160404**	●
	VBGW160408**	●
 C27	VCGT160402**	○
	VCGT160404**	●
	VCGT160408**	●
 C27	VCGW160404**	●
	VCGW160408**	●

F= Standart edge preparation (sharp edge) F= Standart Fasen Ausführung (Scharfkantig)

CBN-PCD Insert

CN**



- Continuous cutting
Vollschnitt
- ✶ Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- ✶ Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H Hardened material Gehärteter Werkstoff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	K Cast iron Gusseisen				<input checked="" type="checkbox"/>		
	N Non-ferrous material Nichtmetalle						

CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	CBN					
		MG111	MG121	MG131	MG211		
	CNGA120404-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	CNGA120408-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	CNGA120412-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	CNGA120404-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	CNGA120408-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	CNGA120412-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Tool Holder · Klemmhalter

DCLNR/L
Kr:95°



PCLNR/L
Kr:95°



PCLNR/L
Kr:95°

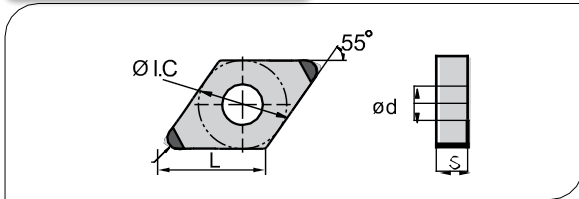


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage


CBN-PCD Insert

DN**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H Hardened material Gehärteter Werkstoff					
	K Castiron Gusseisen					
	N Non-ferrite material Ne Metalle					

Insert Shape Schneid- plattenform	Type	CBN					
		MG111	MG121	MG131	MG211		
	DNGA150404-2	○	○	○	○		
	DNGA150408-2	○	○	○	○		
	DNGA150412-2	○	○	○	○		
	DNGA150604-2	○	○	○	○		
	DNGA150608-2	○	○	○	○		
	DNGA150612-2	○	○	○	○		
	DNGA150404-4	○	○	○	○		
	DNGA150408-4	○	○	○	○		
	DNGA150412-4	○	○	○	○		
	DNGA150604-4	○	○	○	○		
	DNGA150608-4	○	○	○	○		
	DNGA150612-4	○	○	○	○		

CBN-PCD INSERT

Tool Holder · Klemmhalter

DDJNR/L
Kr:93°



PDJNR/L
Kr:93°



PDNNR/L
Kr:63°



PDSNR/L
Kr:62°30'



PDUNR/L
Kr:93°

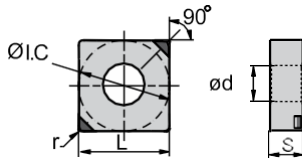


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

SN**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	CBN					
	H	K	N			
H Hardened material Gehärteter Werkstoff						
K Castiron Gusseisen						
N Non-ferrite material Ne Metalle						

CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	CBN					
		MG111	MG121	MG131	MG211		
	SNGA120404-2	○	○	○	○		
	SNGA120408-2	○	○	○	○		
	SNGA120412-2	○	○	○	○		
	SNGA120404-4	○	○	○	○		
	SNGA120408-4	○	○	○	○		
	SNGA120412-4	○	○	○	○		
	SNGA120404-8	○	○	○	○		
	SNGA120408-8	○	○	○	○		
	SNGA120412-8	○	○	○	○		

Tool Holder · Klemmhalter

DSBNR/L
Kr:75°



PSBNR/L
Kr:75°



PSDNN
Kr:45°



PSKNR/L
Kr:75°



PSSNR/L
Kr:45°



PSKNR/L
Kr:75°

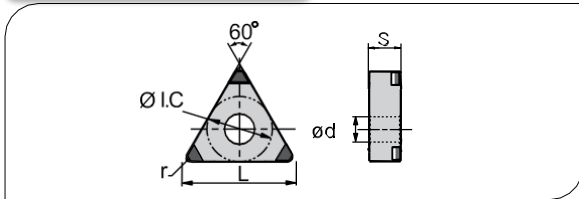


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

TN**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff	●	●	●			
	K	Cast iron Gusseisen				●		
	N	Non-ferrous material Nichtmetalle						

Insert Shape Schneid- plattenform	Type	CBN					
		MG111	MG121	MG131	MG211		
	TNGA160404-3	○	○	○	○		
	TNGA160408-3	○	○	○	○		
	TNGA160412-3	○	○	○	○		
	TNGA160404-6	○	○	○	○		
	TNGA160408-6	○	○	○	○		
	TNGA160412-6	○	○	○	○		

CBN-PCD INSERT

Tool Holder · Klemmhalter

DTGNR/L
Kr:91°



PTFNR/L
Kr:90°



PTTNR/L
Kr:60°



PTGNR/L
Kr:90°



PTFNR/L
Kr:90°

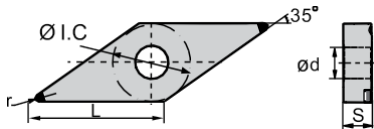


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

- Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

VN**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	K	Cast iron Gusseisen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	N	Non-ferrous material Nichte Metalle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	CBN					
		MG111	MG121	MG131	MG211		
	VNGA160404-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	VNGA160408-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	VNGA160404-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	VNGA160408-4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Tool Holder · Klemmhalter

DVVNN
Kr:72°30'



DVJNR/L
Kr:93°



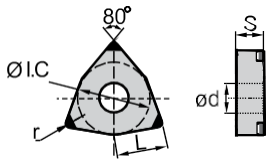
MVVNN
Kr:72°30'



MVJNR/L
Kr:93°



WN**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	K	Cast iron Gusseisen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	N	Non-ferrous material Nichte Metalle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Insert Shape Schneid- plattenform	Type	CBN					
		MG111	MG121	MG131	MG211		
	WNGA080404-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	WNGA080408-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	WNGA080412-3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	WNGA080404-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	WNGA080408-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	WNGA080412-6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Tool Holder · Klemmhalter

DWLNRL
Kr:95°



PWLNRL
Kr:95°



PWLNRL
Kr:95°

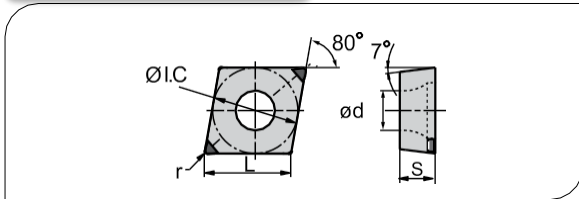


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

CC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff	●	●	●			
	K	Cast iron Gusseisen					●	
	N	Non-ferrous material Nichtmetalle						

Insert Shape Schneid- plattenform	Type	CBN					
		MG111	MG121	MG131	MG211		
	CCGW060204-1	○	○	○	○		
	CCGW060208-1	○	○	○	○		
	CCGW060204-2	○	○	○	○		
	CCGW060208-2	○	○	○	○		
	CCGW09T304-1	○	○	○	○		
	CCGW09T308-1	○	○	○	○		
	CCGW09T304-2	○	○	○	○		
	CCGW09T308-2	○	○	○	○		
	CCGW120404-1	○	○	○	○		
	CCGW120408-1	○	○	○	○		
	CCGW120404-2	○	○	○	○		
	CCGW120408-2	○	○	○	○		

CBN-PCD INSERT

Tool Holder · Klemmhalter

SCACR/L
Kr:90°



SCLCR/L
Kr:95°



SCLCR/L
Kr:95°



SCFCR
Kr:90°



SCLCR
Kr:95°

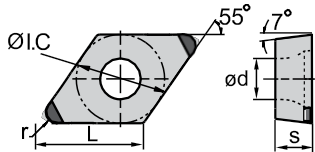


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

DC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H Hardened material Gehärteter Werkstoff						
	K Cast iron Gusseisen						
	N Non-ferrous material Nichte Metalle						

CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	CBN					
		MG111	MG121	MG131	MG211		
	DCGW070204-1	○	○	○	○		
	DCGW070208-1	○	○	○	○		
	DCGW070204-2	○	○	○	○		
	DCGW070208-2	○	○	○	○		
	DCGW11T304-1	○	○	○	○		
	DCGW11T308-1	○	○	○	○		
	DCGW11T304-2	○	○	○	○		
	DCGW11T308-2	○	○	○	○		

Tool Holder · Klemmhalter

SDACR/L
Kr:90°



SDJCR/L
Kr:93°



SDNCN
Kr:62°30'



SDQCR/L
Kr:107°30'



SDUCR/L
Kr:93°



SDZCR/L
Kr:85°

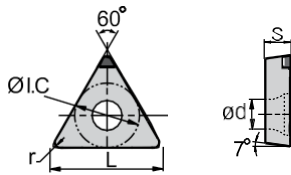


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

TC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

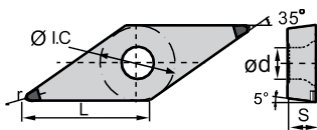
Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff	●	●	●			
	K	Castiron Gusseisen					●	
	N	Non-ferrite material Ne Metalle						

Insert Shape Schneid- plattenform	Type	CBN				
		MG111	MG121	MG131	MG211	
	TCGW110204-1	○	○	○	○	
	TCGW110204-1	○	○	○	○	
	TCGW110204-3	○	○	○	○	
	TCGW110204-3	○	○	○	○	
	TCGW16T304-1	○	○	○	○	
	TCGW16T308-1	○	○	○	○	
	TCGW16T304-3	○	○	○	○	
	TCGW16T308-3	○	○	○	○	

Tool Holder · Klemmhalter



VB**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff	●	●	●			
	K	Castiron Gusseisen					●	
	N	Non-ferrite material Ne Metalle						

Insert Shape Schneid- plattenform	Type	CBN				
		MG111	MG121	MG131	MG211	
	VBGW110304-1	○	○	○	○	
	VBGW110304-2	○	○	○	○	

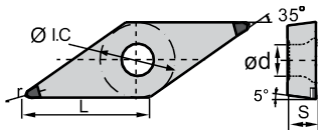
Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD INSERT

CBN-PCD Insert

VB**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H Hardened material Gehärteter Werkstoff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	K Castiron Gusseisen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	N Non-ferrite material Ne Metalle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

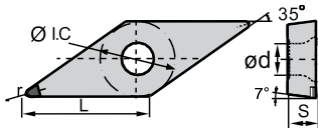
CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	CBN				
		MG111	MG121	MG131	MG211	
	VBGW160404-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	VBGW160408-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Tool Holder · Klemmhalter



VC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H Hardened material Gehärteter Werkstoff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	K Castiron Gusseisen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	N Non-ferrite material Ne Metalle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Insert Shape Schneid- plattenform	Type	CBN				
		MG111	MG121	MG131	MG211	
	VCGW160404-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	VCGW160408-2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Tool Holder · Klemmhalter

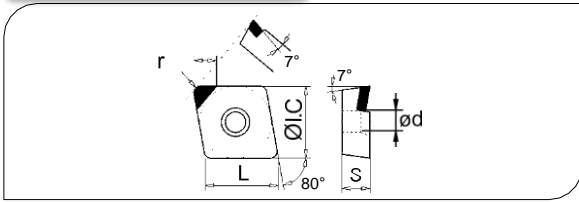


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

CC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Castiron Gusseisen							
	N	Non-ferrite material Ne Metalle							

Insert Shape Schneid- plattenform	Type	PCD							
		MGS121							
	CCGT060202**	○							
	CCGT060204**	○							
	CCGT060208**	○							
	CCGT09T302**	○							
	CCGT09T304**	○							
	CCGT09T308**	○							
	CCGT120404**	○							
	CCGT120408**	○							

CBN-PCD INSERT

Tool Holder - Klemmhalter

SCACR/L
Kr:90°



SCLCR/L
Kr:95°



SCLCR/L
Kr:95°



SCFCR
Kr:90°



SCLCR
Kr:95°

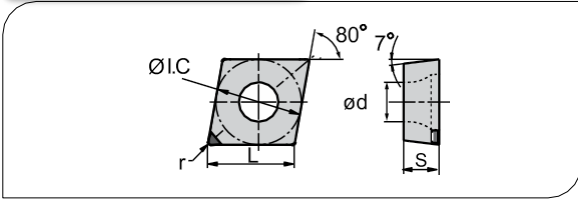


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

CC**



- Continuous cutting
Vollschnitt
- ⊗ Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- ⊗ Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H Hardened material Gehärteter Werkstoff										
	K Cast iron Gusseisen										
	N Non-ferrous material Nichte Metalle	●									

CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	CBN									
		MGS121									
	CCGW060202**	○									
	CCGW060204**	○									
	CCGW060208**	○									
	CCGW09T302**	○									
	CCGW09T304**	○									
	CCGW09T308**	○									
	CCGW120404**	○									
	CCGW120408**	○									

Tool Holder · Klemmhalter

SCACR/L
Kr:90°



SCLCR/L
Kr:95°



SCLCR/L
Kr:95°



SCFCR
Kr:90°



SCLCR
Kr:95°

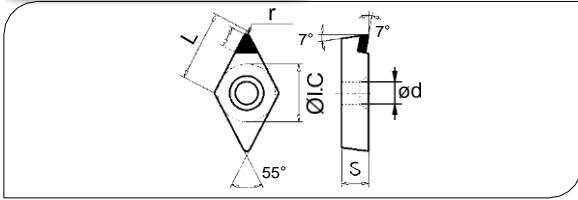


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage


CBN-PCD Insert

DC**



- Continuous cutting
Vollschnitt
- ⊕ Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- ⊗ Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Cast iron Gusseisen							
	N	Non-ferrous material Nichtmetalle	●						

Insert Shape Schneid- plattenform	Type	CBN							
		MGS121							
	DCGT070202**	○							
	DCGT070204**	○							
	DCGT11T302**	○							
	DCGT11T304**	○							
	DCGT11T308**	○							

CBN-PCD INSERT

Tool Holder · Klemmhalter

SDACR/L
Kr:90°



SDJCR/L
Kr:93°



SDNCN
Kr:62°30'



SDQCR/L
Kr:107°30'



SDUCR/L
Kr:93°



SDZCR/L
Kr:85°

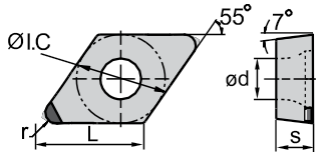


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

DC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Cast iron Gusseisen							
	N	Non-ferrous material Nichte Metalle							

CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	CBN							
		MGS121							
	DCGW070202**	○							
	DCGW070204**	○							
	DCGW070208**	○							
	DCGW11T302**	○							
	DCGW11T304**	○							

Tool Holder · Klemmhalter

SDACR/L
Kr:90°



SDJCR/L
Kr:93°



SDNCN
Kr:62°30'



SDQCR/L
Kr:107°30'



SDUCR/L
Kr:93°



SDZCR/L
Kr:85°

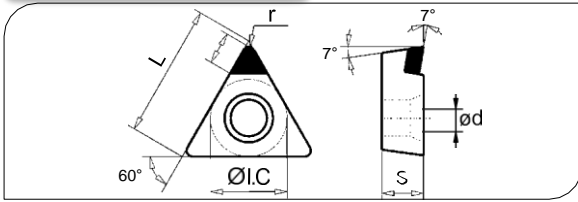


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

TC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Cast iron Gusseisen							
	N	Non-ferrous material Nichte Metalle	●						

Insert Shape Schneid- plattenform	Type	CBN							
		MGS121							
	TCGT110202**	○							
	TCGT110204**	○							
	TCGT110208**	○							
	TCGT16T304**	○							
	TCGT16T308**	○							

CBN-PCD INSERT

Tool Holder - Klemmhalter

STACR/L
Kr:90°



STFCR/L
Kr:91°



STGCR/L
Kr:91°



STTCR/L
Kr:60°



STFCR/L
Kr:90°

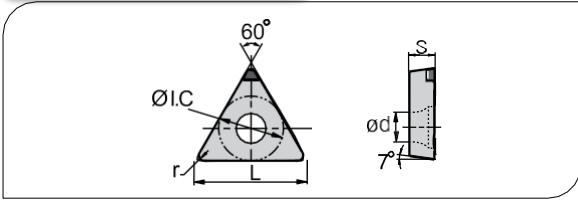


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

TC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H Hardened material Gehärteter Werkstoff								
	K Castiron Gusseisen								
	N Non-ferrite material Ne Metalle								

CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	CBN							
		MGS121							
	TCGW110208**	○							
	TCGW16T302**	○							
	TCGW16T304**	○							
	TCGW16T308**	○							

Tool Holder · Klemmhalter

STACR/L
Kr:90°



STFCR/L
Kr:91°



STGCR/L
Kr:91°



STTCR/L
Kr:60°



STFCR/L
Kr:90°

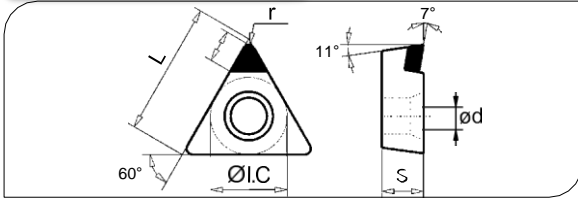


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

- Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

TP**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Voll und leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Cast iron Gusseisen							
	N	Non-ferrous material Nichte Metalle	●						

Insert Shape Schneid- plattenform	Type	PCD							
		MGS121							
	TPMW110202**	○							
	TPMW110204**	○							
	TPMW110208**	○							
	TPMW16T304**	○							

CBN-PCD INSERT

Tool Holder · Klemmhalter

STAPR/L
Kr:90°



STFPR/L
Kr:91°



STGPR/L
Kr:91°



STTPR/L
Kr:60°



STFPR/L
Kr:90°

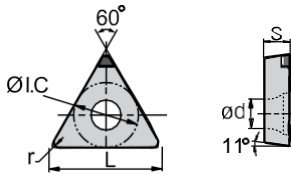


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

TP**



- Continuous cutting
Vollschnitt
- ⊗ Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- ⊗ Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Castiron Gusseisen							
	N	Non-ferrite material Ne Metalle	●						

Insert Shape
Schneid-
plattenform

Type

PCD

MGS121



TPMW110302**

○

TPMW110304**

○

TPMW110308**

○

Tool Holder · Klemmhalter

STAPR/L Kr:90°



STFPR/L Kr:91°



STGPR/L Kr:91°



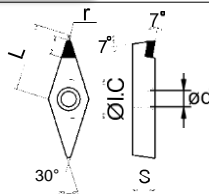
STTPR/L Kr:60°



STFPR/L Kr:90°



VB**



- Continuous cutting
Vollschnitt
- ⊗ Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- ⊗ Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Castiron Gusseisen							
	N	Non-ferrite material Ne Metalle	●						

Insert Shape
Schneid-
plattenform

Type

PCD

MGS121



VBGT110302**

○

VBGT110304**

○

VBGT110308**

○

VBGT160402**

○

VBGT160404**

○

VBGT160408**

○

Tool Holder · Klemmhalter

SVJBR/L Kr:93°



SVABR/L Kr:90°



SVVBN Kr:72°30'



SVQBR/L Kr:107°30'



SVUBR/L Kr:93°

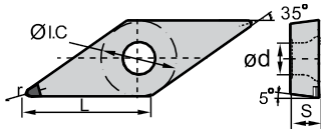


Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

VB**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoff	H								
	K								
	N	●							

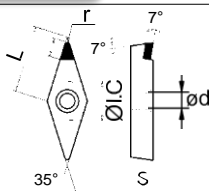
Insert Shape Schneid- plattenform	Type	PCD							
		MGS121							
	VBGW110302**	○							
	VBGW110304**	○							
	VBGW110308**	○							
	VBGW160402**	○							
	VBGW160404**	○							
	VBGW160408**	○							

CBN-PCD INSERT

Tool Holder - Klemmhalter



VC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Castiron Gusseisen							
	N	Non-ferrite material Ne Metalle	●						

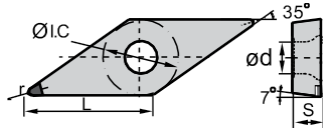
Insert Shape Schneid- plattenform	Type	PCD							
		MGS121							
	VCGT110302**	○							
	VCGT110304**	○							
	VCGT110308**	○							
	VCGT160402**	○							
	VCGT160404**	○							
	VCGT160408**	○							

Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

CBN-PCD Insert

VC**



- Continuous cutting
Vollschnitt
- Continuous and light interrupted cutting
Vollund leicht unterbrochener Schnitt
- Interrupted cutting
Stark unterbrochener Schnitt

Workpiece Material Werkstoffe	H	Hardened material Gehärteter Werkstoff							
	K	Cast iron Gusseisen							
	N	Non-ferrous material Nichte Metalle							

CBN-PCD INSERT

Insert Shape Schneid- plattenform	Type	PCD							
		MG5121							
	VCGW110302**								
	VCGW110304**								
	VCGW110308**								
	VCGW160402**								
	VCGW160404**								
	VCGW160408**								

Tool Holder · Klemmhalter

SVJBR/L
Kr:93°



SVABR/L
Kr:90°



SVVBN
Kr:72°30'



SVQBR/L
Kr:107°30'



SVUBR/L
Kr:93°



Further insert size, edge preparation, special inserts and grade on demand possible.
Weitere Größen, Fasenausführungen, Sonderplatten und Sondersorten auf Anfrage möglich.

● Ex Stock / ab Lager ○ On demand / auf Anfrage

Troubleshooting - PCBN Cutting Materials Problembehandlung - PCBN Schneidstoffe

For investigation please send us used inserts. If breakage is problem please use inserts only 80-90% of expected tool life because broken inserts almost have no information.

Für eine genaue Untersuchung schicken Sie uns bitte die gebrauchten WSP zu. Sollte Bruch das Problem sein, setzen Sie die Platte nur 80-90% der eigentlichen Standzeit ein, denn eine gebrochene Platte enthält keine Informationen mehr.

Wear phenomenon	Solution	
	Geometry	Cutting condition
Flank wear	Sharp cutting edge to reduce cutting force - smaller negative lend - change to positive inserts	Reduce cutting speed - increase feed rate to minimise contact time
Notch wear	Bigger nose radius	Use method of altering feed rate
Crater wear/ Breakage due to crater wear	Crater wear - due to crater wear	Reduce cutting speed - increase feed rate to minimise contact time and increase distance between cutting edge and crater
Chipping due to rough condition or vibration	Bigger negative lend; angle and - or honing	Increase feed rate to reduce number of hits
Flaking	Sharp cutting edge to reduce cutting force - smaller negative lend - change to positive inserts	Increase feed rate to reduce cutting time
Thermal crack	Sharp cutting edge to reduce cutting force - smaller negative lend - change to positive inserts	Reduce cutting speed, feed rate and depth of cut. Use dry machining.
Chipping	Bigger negative lend	Increase cutting speed to reduce cutting force

Verschleißbild	Gegenmaßnahmen	
	Geometrie	Schnittbedingungen
Freiflächenverschleiß	Schärfere Schneidkante für weniger Schnittkraft - kleinere Negativfase - positive Platten verwenden	Schnittgeschwindigkeit reduzieren - Vorschub erhöhen, um Eingriffszeit zu reduzieren
Kerbverschleiß	Größerer Radius	"Methode des variierenden Vorschubs" verwenden
Kolkverschleiß/ Kolkbruch		-Schnittgeschwindigkeit reduzieren -Vorschub erhöhen, um Kontaktzeit zu verringern und den Abstand zwischen Schneidkante und Kolk tasche zu vergrößern.
Ausbrüche durch Schlagwirkung oder Vibrationen	Größere Negativfase Winkel und - oder gehonte Fase	- Vorschub erhöhen, um die Anzahl der Schläge zu reduzieren
Schalenförmige Ausplatzungen	Schärfere Schneidkante für weniger Schnittkraft - kleinere Negativfase - positive Platten verwenden	- Vorschub erhöhen, um Eingriffszeit zu reduzieren
Thermische Risse - Bruch	Schärfere Schneidkante für weniger Schnittkraft - kleinere Negativfase - positive Platten verwenden	Schnittgeschwindigkeit, Vorschub und Schnitttiefe reduzieren. Trockenbearbeitung
Ausbrüche	Größere Negativfase	Schnittgeschwindigkeit erhöhen, um Schnittkraft zu reduzieren

CARBIDE MILLING



MEGAcut

MILLING

GRADE	ISO RANGE	FEATURES & APPLICATION
CB500 CERMET	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="background-color: #00AEEF; color: white; padding: 2px 5px;">P05</div> <div style="background-color: #00AEEF; color: white; padding: 2px 5px;">P25</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">M05</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">M15</div> </div>	Finishing & Semi finishing of Steel, Cast Iron and Stainless Steel General turning in Steel machining Covering wide application range
CB200 CVD COATED	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="background-color: #00AEEF; color: white; padding: 2px 5px;">P30</div> <div style="background-color: #00AEEF; color: white; padding: 2px 5px;">P45</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">M30</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">M40</div> <div style="background-color: #FF0000; color: white; padding: 2px 5px;">K20</div> <div style="background-color: #FF0000; color: white; padding: 2px 5px;">K40</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">S20</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">S30</div> <div style="background-color: #008000; color: white; padding: 2px 5px;">N15</div> <div style="background-color: #008000; color: white; padding: 2px 5px;">N30</div> </div>	First recommendation for high speed machining in Steel Good combinaton wear resistance and toughness TiN-TiCN-Al2O3-TiN
CB15 PVD COATED	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="background-color: #00AEEF; color: white; padding: 2px 5px;">P30</div> <div style="background-color: #00AEEF; color: white; padding: 2px 5px;">P45</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">M30</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">M40</div> <div style="background-color: #FF0000; color: white; padding: 2px 5px;">K20</div> <div style="background-color: #FF0000; color: white; padding: 2px 5px;">K40</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">S20</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">S30</div> <div style="background-color: #808080; color: white; padding: 2px 5px;">H15</div> <div style="background-color: #808080; color: white; padding: 2px 5px;">H30</div> </div>	For Steel and Stainless Steel Improved tool life TiAlN
CB50K CVD COATED	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="background-color: #FF0000; color: white; padding: 2px 5px;">K20</div> <div style="background-color: #FF0000; color: white; padding: 2px 5px;">K40</div> </div>	High speed machining in Cast Iron machining Combination thick Al2O3 coating layer and high wear resistant substrate for extreme wear resistance. TiCN-Al2O3-TiN
CB10 UNCOATED	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="background-color: #00AEEF; color: white; padding: 2px 5px;">P05</div> <div style="background-color: #00AEEF; color: white; padding: 2px 5px;">P25</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">M05</div> <div style="background-color: #FFD700; color: black; padding: 2px 5px;">M05</div> </div>	For interrupted cutting and medium & low cutting of Stainless Steel, Heat Resistance Alloy, Low Carbon Steel, Low Carbon Alloy Steel Highest Toughness in turning grade TiCN
CB01 UNCOATED	<div style="display: flex; flex-wrap: wrap; gap: 5px;"> <div style="background-color: #008000; color: white; padding: 2px 5px;">N10</div> <div style="background-color: #008000; color: white; padding: 2px 5px;">N25</div> </div>	For Aluminum machining Uncoated grade

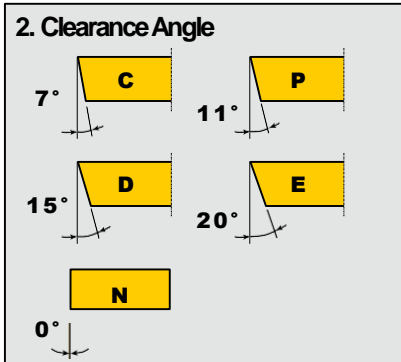
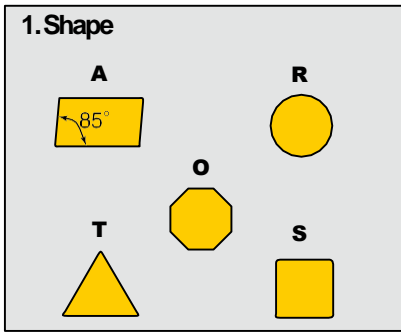
CARBIRE MILLING INSERT



CARBIDE

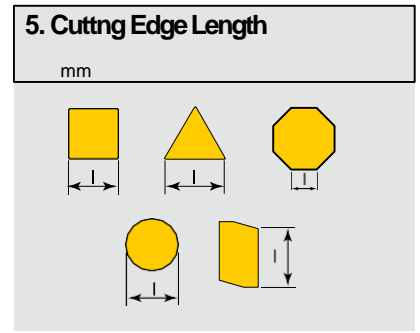
Designation System of Insert

CARBIDE MILLING INSERT



3. Tolerance

Symbol	±Δm	±Δs	±Δd
A	0.005	0.025	0.025
C	0.013	0.025	0.025
E	0.025	0.025	0.025
K	0.013	0.025	0.05 d=9.525
			0.08 d=12.70
			0.10 d=15.87
M	0.07	0.13	0.05 d=9.525
			0.08 d=12.70
U	0.15	0.025	0.10 d=15.87
			0.013



6. Thickness

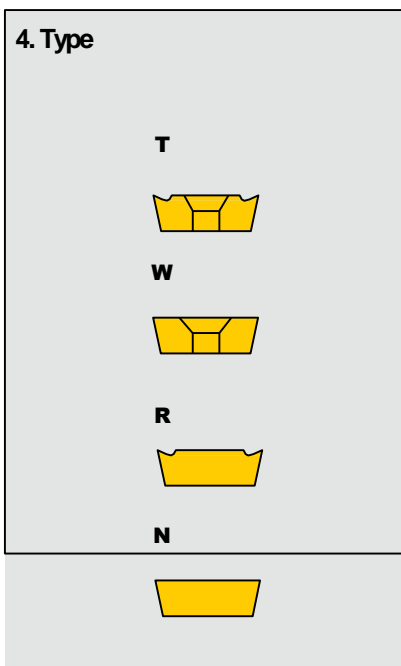
01t=1.59	05t=5.56
02t=2.38	06t=6.35
03t=3.18	07t=7.94
T3t=3.97	09t=9.52
04t=4.76	

A P K T 1 6 0 4 □ □

1 2 3 4 5 6 7

P D □ **R**

8 9 10



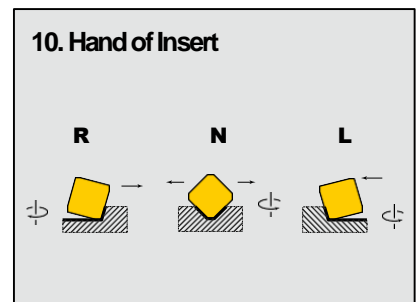
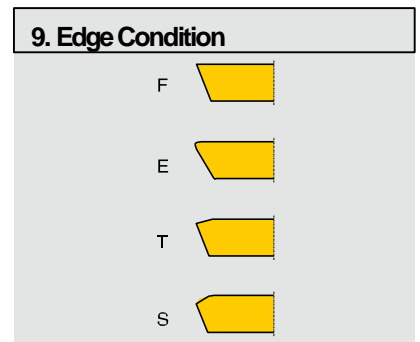
7. Corner Radius

Symbol	Radius(mm)
04	0.4
08	0.8
16	1.6
24	2.4
32	3.2
48	4.8
64	6.35


8. Parallel Land

Entering Angle (K) Clearance Angle (a°)

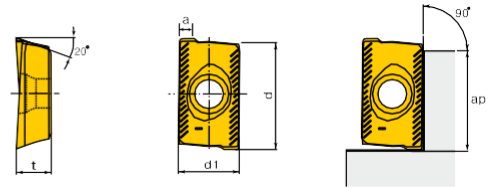
A=45°	C=7°
D=60°	P=11°
E=75°	D=15°
P=90°	E=20°
	F=25°





Milling Program

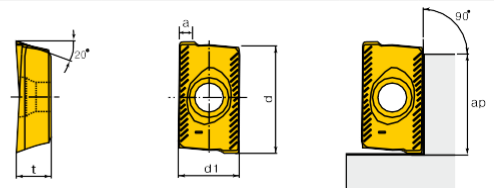
Designation	Features•Application	Edge Geometry & Picture		Cutter Designation
APKT 10 APKT 16	• High positive geometry for lower cutting force	APKT		• 90° Endmill • 90° Facemill
APMT 11 APMT 16	• High positive geometry for lower cutting force	APMT		• 90° Endmill • 90° Facemill
OFMR 07	• For Stainless Steel & low machine power	OFMR		• 43° Facemill
ODMT 06	• For Stainless Steel & low machine power	ODMT		• 43° Facemill
SPKN 12 SPKN 15	• For Steel and Stainless	SPKN		• 75° ISO Facemill
SEKN 12 SEKN 15 SDKN	• For Steel and Stainless	SEKN		• 45° ISO Facemill
SNMX 12	• For Steel and Stainless	SNMX		• 45° ISO Facemill
SEKT SEMT13	• For Steel and Stainless	SEKT SEMT		• 45° ISO Facemill
TPKN 16 TPKN 22	• For Steel and Stainless	TPKN		• 90° ISO Facemill
RPMT08 RPMT10 RPMT12	• High positive geometry for lower cutting force	RPMT		• MOE Type
WNMX06 WNMX09 WNMX12	• High Speed cutting	WNMX		• HIGH SPEED Type



APKT 1604 PDTR / APKT 1003 PDTR



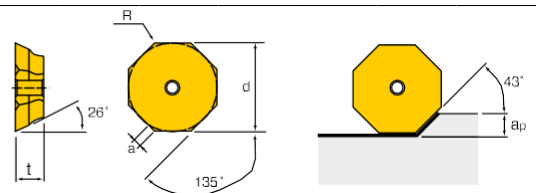
Insert	Designation	Dimension(mm)						Cermet	Coated				Uncoated	
		d	d1	a	t	R	ap		CB500	CB15	CB200	CB50K	CB10	CB01
	APKT 1604 PDTR Z7	16.4	9.45	1.7	5.25	0.8	13		•	•				•
	APKT 1003 PDTR Z7					0.8			•	•				•
	APKT 1604 PDTR Z8	16.4	9.45	1.7	5.25	0.8	13		•	•				•
	APKT 1003 PDTR Z8					0.8			•	•				•


APMT 1604 PDTR / APMT 1135 PDTR



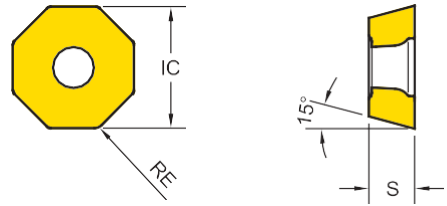
Insert	Designation	Dimension(mm)						Cermet	Coated				Uncoated	
		d	d1	a	t	R	ap		CB500	CB15	CB200	CB50K	CB10	CB01
	APMT 1604 PDTR Z7	14.6	9.2		4.67	0.8	13		•	•				•
	APMT 1135 PDTR Z7					0.8			•	•				•
	APMT 1604 PDTR Z8	14.6	9.2		4.67	0.8	13		•	•				•
	APMT 1135 PDTR Z8	9.5	6.2		3.5	0.8			•	•				•



OFMR 07



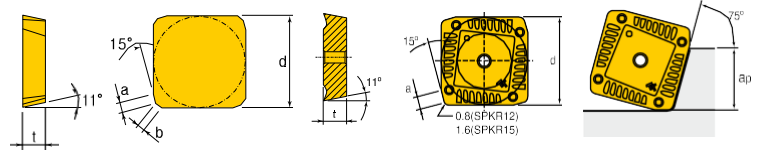
Insert	Designation	Dimension(mm)					Cermet	Coated				Uncoated	
		d	t	a	R	ap		CB500	CB15	CB200	CB50K	CB10	CB01
	OFMR 0704	17.94	5.1	1.7	0.8	5		•	•	•			•


ODMT0605



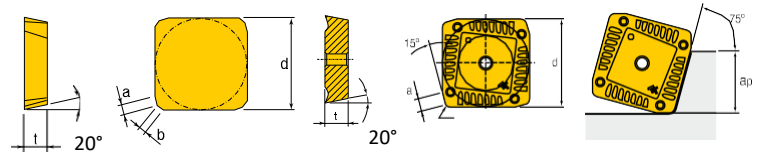
Insert	Designation	Dimension(mm)					Cermet		Coated				Uncoated	
		IC	S	a	R	ap	CB500	CB15	CB200	CB50K	CB10	CB01		
	ODMT0605FN	15.8	5.6	1.7	0.8			•	•					
	ODMT0605TN	15.8	5.6	1.7	0.8			•	•					


SPKN



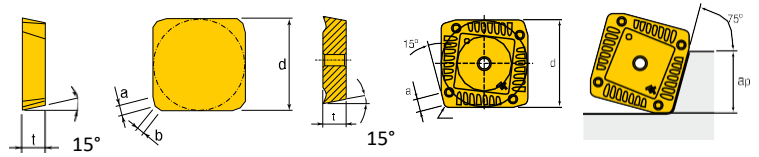
Insert	Designation	Dimension(mm)						Cermet		Coated				Uncoated	
		d	t	a	b	R	ap	CB500	CB15	CB200	CB60K	CB10	CB01		
	SPKN 1203 EDSR	12.7	3.18	1.33	1.0	-	8	•	•	•	•	•	•		
	SPKN 1203 EDSR - MU	12.7	3.18	1.33	1.0	-	8	•	•	•	•	•	•		
	SPKN 1504 EDSR	15.875	4.76	1.34	1.0	-	10	•	•	•	•	•	•		
	SPKN 1504 EDSR - MU	15.875	4.76	1.34	1.0	-	10	•	•	•	•	•	•		


SEKN



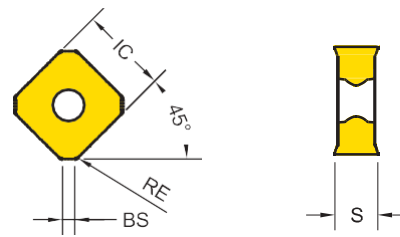
Insert	Designation	Dimension(mm)						Cermet		Coated				Uncoated	
		d	t	a	b	R	ap	CB500	CB15	CB200	CB50K	CB10	CB01		
	SEKN 1203 AFTN	12.7	3.18	1.4	1.0	-	8	•	•	•	•	•	•		
	SEKN 1203 AFTN - MU	12.7	3.18	1.4	1.0	-	8	•	•	•	•	•	•		
	SEKN 1504 AFTN	15.875	4.76	-	1.0	-	10	•	•	•	•	•	•		
	SEKN 1504 AFTN - MU	15.875	4.76	-	1.0	-	10	•	•	•	•	•	•		

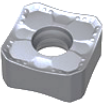
SDKN



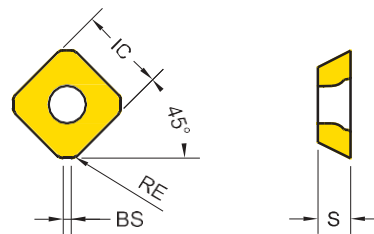
Insert	Designation	Dimension(mm)						Cermet		Coated				Uncoated	
		d	t	a	b	R	ap	CB500	CB15	CB200	CB50K	CB10	CB01		
	SDKN 1203 AFTN	12.7	3.18	1.4	1.0	-	8	•	•	•			•	•	
	SDKN 1203 AFTN - MU	12.7	3.18	1.4	1.0	-	8	•	•	•	•				
	SDKN 1504 AFTN	15.875	4.76	-	1.0	-	10	•	•	•			•	•	
	SDKN 1504 AFTN - MU	15.875	4.76	-	1.0	-	10	•	•	•	•				


SNMX 1206



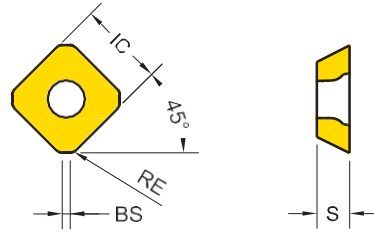
Insert	Designation	Dimension(mm)					Cermet		Coated				Uncoated		
		IC	S	BS	d	ap	CB500	CB15	CB200	CB50K	CB10	CB01			
	SNMX 1206 ANN	12.7	6.35	2.36	4.5					•	•	•		•	•


SEKT 1204



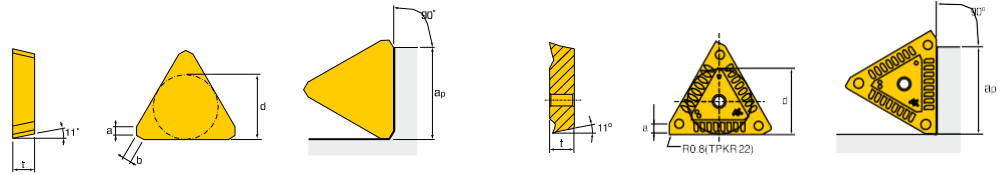
Insert	Designation	Dimension(mm)					Cermet		Coated				Uncoated		
		IC	S	BS	RE	ap	CB500	CB15	CB200	CB50K	CB10	CB01			
	SEKT 1204 AFTN	12.7	4.9	1.18	1.1					•	•	•		•	•



SEMT 13T3



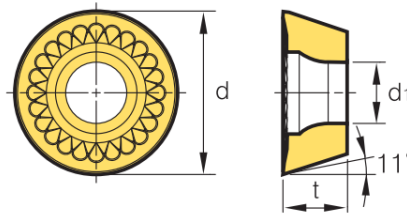
Insert	Designation	Dimension(mm)					ap	Cermet				Coated			Uncoated	
		IC	S	BS	RE	ap		CB500	CB15	CB200	CB50K	CB10	CB01			
	SEMT 13T3AFTN	13.4	3.98	1.3	1.5			•	•							



TPKN



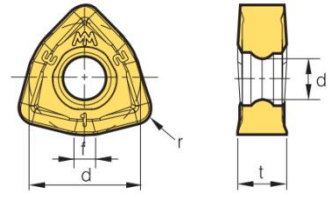
Insert	Designation	Dimension(mm)					ap	Cermet				Coated			Uncoated	
		d	t	a	b	ap		CB500	CB15	CB200	CB50K	CB10	CB01			
	TPKN 1603 PDSR TPKN 1603 PDSR - MU	9.525	3.18	1.4	0.7	14		•	•				•			
	TPKN 2204 PDR	12.7	4.76	1.8	0.7	18		•	•				•			
	TPKN 2204 PDSR - MU	12.7	4.76	1.8	0.7	18		•	•							



RPMT



Insert	Designation	Dimension(mm)					ap	Cermet				Coated			Uncoated	
		d	d1	t	b	ap		CB500	CB15	CB200	CB50K	CB10	CB01			
	RPMT 08T2 MOE - JS	8	3.4	2.78				•	•							
	RPMT 10T3 MOE - JS	10	4.0	3.97				•	•							
	RPMT 1204 MOE - JS	12	4.5	4.76				•	•							

WNMX (High speed insert)

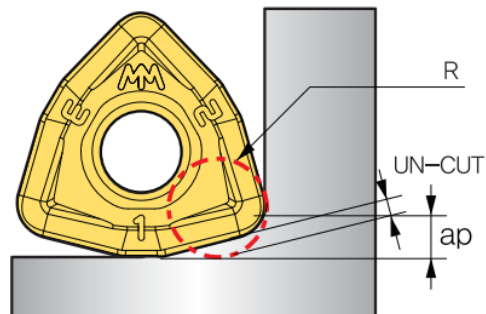


Insert	Designation	Dimension(mm)					ap	Coated				Uncoated	
		d	d1	t	r	CB500		CB15	CB200	CB50K	CB10	CB01	
	WNMX060212AZZ-MM	6,35	2.86	3.18	1.2			•	•				
	WNMX09T316AZZ-MM	9.52	3.6	3.97	1.6			•	•				
	WNMX130520AZZ-MM	12.7	4.7	5.56	2.0			•	•				

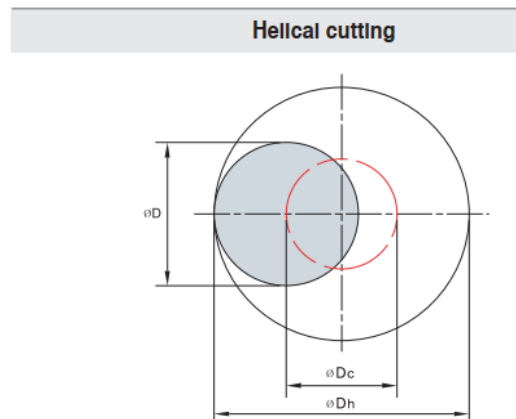
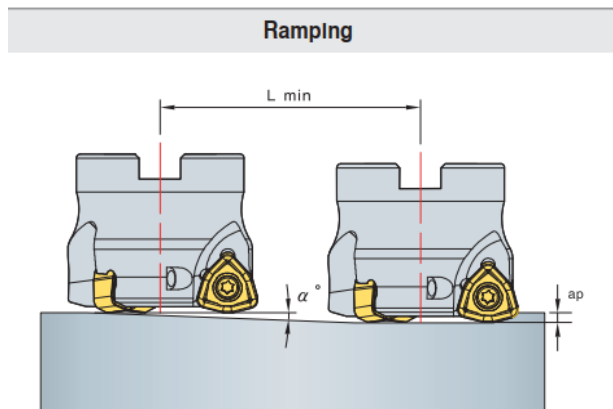
** Corner R programming

Designation	Cutting condition		Approx. R (mm)	
	Max.ap(mm)	Max.fz(mm/t)	Input. R	Uncut
WNMX060212AZZ-MM	1.0	1.2	1.8	0.4
WNMX09T316AZZ-MM	1.5	2.0	2.5	0.6
WNMX130520AZZ-MM	2.0	3.0	3.0	0.8

Vc : 105-280mm/min



·Uncut part can be changed by poor machine condition or weak clamp of workpiece, etc



Recommended Condition for SPKN 12,15, SEKN , SDKN , SEKT , SEMT , TPKN 16, 22 for 75°, 90° Facemill

ISO	Material	Hardness (HB)	Ap (mm)	Speed (m/min)	Recommended Grade***	Fz (mm/tooth) SPKN(R)/TPKN(R)/SEKN/ SDKN/SEKT/SEMT/TEEN
P	Low Carbon Steel	85 - 175	1.0	305	CB500 , CB10	0.10 - 0.15
			2.5	275	CB15, CB200	0.10 - 0.15
			7.5	240		0.10 - 0.15
	High Carbon Steel	175 - 225	1.0	245	CB500 , CB10	0.10 - 0.15
			2.5	210	CB15, CB200	0.10 - 0.15
			7.5	180		0.10 - 0.15
	Alloy Steel	275 - 325	1.0	210	CB500 , CB10	0.10 - 0.15
			2.5	180	CB15, CB200	0.10 - 0.15
			7.5	135		0.10 - 0.12
	Tool Steel	200 - 250	1.0	125	CB500 , CB10	0.05 - 0.15
			2.5	110	CB15, CB200	0.10 - 0.15
			7.5	90		0.10 - 0.12
M	Stainless Steel 300 Series	-	1.0	210	CB500 , CB10	0.10 - 0.15
			2.5	180	CB15, CB200	0.10 - 0.15
			7.5	150		0.10 - 0.12
	Stainless Steel 400 Series	-	1.0	275	CB500 , CB10	0.10 - 0.15
			2.5	230	CB15, CB200	0.10 - 0.15
			7.5	210		0.10 - 0.12
S	Heat-Resistance Alloy	-	1.0	45		0.10 - 0.12
			2.5	30	CB15	0.10 - 0.12
			7.5	25		0.10 - 0.12
	Titanium Alloy	-	1.0	75		0.10 - 0.12
			2.5	50	CB15	0.10 - 0.12
			7.5	35		0.10 - 0.12
K	Grey Cast Iron	190 - 220	1.0	260		0.10 - 0.15
			2.5	230	CB15 , CB50K	0.10 - 0.15
			7.5	200		0.10 - 0.15
	Ductile Cast Iron	140 - 200	1.0	230		0.10 - 0.15
			2.5	200	CB15 , CB50K	0.10 - 0.15
			7.5	170		0.10 - 0.15
N	Aluminum Alloy	-	1.0	500+		0.15 - 0.50
			2.5	450+	CB01	0.15 - 0.35
			7.5	360+		0.15 - 0.35

Reduce speed by 20% when channel milling

***In order of preference, uncoated carbide reduce speed 20%

Technical information

Recommended condition of OFMR , ODMT0605 , SNMX12 for 43° Facemill

ISO	Material	Hardness (HB)	Ap (mm)	Speed (m/min)	Recommended Grade***	Fz (mm/tooth)** OFMR , ODMT , SNMX
P	Low Carbon Steel	85 - 175	1.0	360	CB15 , CB200	0.15 - 0.35
			2.5	300		0.15 - 0.30
			6.5	270		0.15 - 0.30
	High Carbon Steel	175 - 225	1.0	260	CB15 , CB200	0.10 - 0.30
			2.5	180		0.10 - 0.25
			6.5	210		0.10 - 0.25
	Alloy Steel	275 - 325	1.0	210	CB15 , CB200	0.10 - 0.18
			2.5	180		0.10 - 0.16
			6.5	135		0.10 - 0.16
	Tool Steel	200 - 250	1.0	130	CB15 , CB200	0.10 - 0.18
			2.5	110		0.10 - 0.16
			6.5	100		0.10 - 0.16
K	Grey Cast Iron	190 - 220	1.0	300	CB15 , CB50K	0.15 - 0.35
			2.5	250		0.15 - 0.35
			6.5	210		0.15 - 0.30
	Ductile Cast Iron	140 - 200	1.0	270	CB15 , CB50K	0.10 - 0.25
			2.5	240		0.10 - 0.25
			6.5	210		0.10 - 0.25

Reduce speed by 20% when channel milling

***In order of preference, uncoated carbide reduce speed 20%

**Feed(mm/tooth) adjusted to compensate for radial chip thinning

Technical information

Recommended Condition APKT , APMT for 90° Facemill

ISO	Material	Hardness (HB)	Ap (mm)	Speed (m/min)	Recommended Grade	Fz (mm/tooth) APKT 16
P	Low Carbon Steel	85 - 175	1.0	350	CB15 , CB200	0.10 - 0.25
			3.5	320		0.10 - 0.22
			7.0	280		0.10 - 0.20
	High Carbon Steel	175 - 225	1.0	260	CB15 , CB200	0.10 - 0.22
			3.5	230		0.10 - 0.20
			7.0	180		0.10 - 0.20
	Alloy Steel	275 - 325	1.0	230	CB15 , CB200	0.10 - 0.20
			3.5	180		0.10 - 0.15
			7.0	150		0.10 - 0.12
	Tool Steel	200 – 250	1.0	140	CB15 , CB200	0.10 - 0.18
			3.5	120		0.10 - 0.15
			7.0	90		0.10 - 0.12
K	Grey Cast Iron	190 – 220	1.0	300	CB15 , CB200	0.10 - 0.25
			3.5	250		0.10 - 0.20
			7.0	200		0.10 - 0.15
	Ductile Cast Iron	140 – 200	1.0	280	CB15 , CB200	0.10 - 0.22
			3.5	220		0.10 - 0.18
			7.0	150		0.10 - 0.15

Technical information

Recommended Condition RPMT for 90° Facemill

ISO	Material	Hardness (HB)	Ap (mm)	Speed (m/min)	Recommended Grade	Fz (mm/tooth) RPMT
P	Low Carbon Steel	85 - 175	1.0	350	CB15 , CB200	0.10 - 0.25
			3.5	320		0.10 - 0.22
			7.0	280		0.10 - 0.20
	High Carbon Steel	175 - 225	1.0	260	CB15 , CB200	0.10 - 0.22
			3.5	230		0.10 - 0.20
			7.0	180		0.10 - 0.20
	Alloy Steel	275 - 325	1.0	230	CB15 , CB200	0.10 - 0.20
			3.5	180		0.10 - 0.15
			7.0	150		0.10 - 0.12
	Tool Steel	200 - 250	1.0	140	CB15 , CB200	0.10 - 0.18
			3.5	120		0.10 - 0.15
			7.0	90		0.10 - 0.12
K	Grey Cast Iron	190 - 220	1.0	300	CB15 , CB50K	0.10 - 0.25
			3.5	250		0.10 - 0.20
			7.0	200		0.10 - 0.15
	Ductile Cast Iron	140 - 200	1.0	280	CB15 , CB50K	0.10 - 0.22
			3.5	220		0.10 - 0.18
			7.0	150		0.10 - 0.15



CARBIRE MILLING INSERT

PIPE INSERT



MEGACUT

PIPE INSERT

	Insert Shape <i>Schneidplattenform</i>	Type <i>Typ</i>	Grade <i>Sorte</i>	
			MGN5340	MGP5300
Negative Inserts WSP		SNMG1507	○	○
		SNMG1907	○	○

PIPE INSERT

Example 1



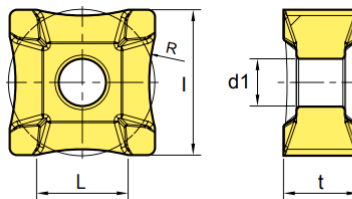
1. Used grade : MGN5340
2. Failure Type : Tool life is normal without any problem
 - (1) Wear without damage on the coating film
 - A tiny deformation occurs without any problem on the coating film
 - (2) If used continuously, it leads to serious wear because of plastic deformation

Example 2



1. Used grade : MGN5340
 2. Failure Type : Breakage before causing Normal WearDeformation
 3. Solution
 - (1) Prevent wear by using tougher grade - MGP5300
 - (2) Increase cutting speed & feed to reduce shock power
 - (3) Changing edge treatment(Detailed examination needed)
- Application guide for each process [Bead Trimming]

SNMG150708-R**

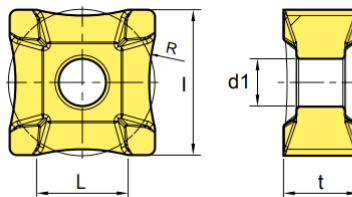


(mm)

Insert Shape Schneid- plattenform	Type	DIMENSION					COATING
		I	L	t	R	d1	MGN5340
	SNMG150708-R07	15.875	10	7.94	7	5.16	●
	SNMG150708-R09	15.875	10	7.94	9	5.16	●
	SNMG150708-R10	15.875	10	7.94	10	5.16	●
	SNMG150708-R11	15.875	10	7.94	11	5.16	●
	SNMG150708-R12	15.875	10	7.94	12	5.16	●
	SNMG150708-R13	15.875	10	7.94	13	5.16	●
	SNMG150708-R15	15.875	10	7.94	15	5.16	●
	SNMG150708-R18	15.875	10	7.94	18	5.16	●
	SNMG150708-R20	15.875	10	7.94	20	5.16	●
	SNMG150708-R22	15.875	10	7.94	22	5.16	●
	SNMG150708-R25	15.875	10	7.94	25	5.16	●
	SNMG150708-R27	15.875	10	7.94	27	5.16	●
	SNMG150708-R30	15.875	10	7.94	30	5.16	●
	SNMG150708-R35	15.875	10	7.94	35	5.16	●
	SNMG150708-R36	15.875	10	7.94	36	5.16	●
	SNMG150708-R40	15.875	10	7.94	40	5.16	●
	SNMG150708-R45	15.875	10	7.94	45	5.16	●
	SNMG150708-R50	15.875	10	7.94	50	5.16	●
	SNMG150708-R55	15.875	10	7.94	55	5.16	●
	SNMG150708-R60	15.875	10	7.94	60	5.16	●
	SNMG150708-R65	15.875	10	7.94	65	5.16	●
	SNMG150708-R70	15.875	10	7.94	70	5.16	●
	SNMG150708-R75	15.875	10	7.94	75	5.16	●
	SNMG150708-R80	15.875	10	7.94	80	5.16	●
	SNMG150708-R90	15.875	10	7.94	90	5.16	●
	SNMG150708-R100	15.875	10	7.94	100	5.16	●



SNMG150708-R**



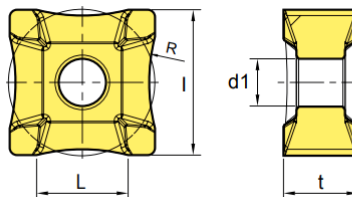
(mm)

PIPE INSERT

Insert Shape Schneid- plattenform	Type	DIMENSION					COATING
		I	L	t	R	d1	MGP5300
	SNMG150708-R07	15.875	10	7.94	7	5.16	O
	SNMG150708-R09	15.875	10	7.94	9	5.16	O
	SNMG150708-R10	15.875	10	7.94	10	5.16	O
	SNMG150708-R11	15.875	10	7.94	11	5.16	O
	SNMG150708-R12	15.875	10	7.94	12	5.16	O
	SNMG150708-R13	15.875	10	7.94	13	5.16	O
	SNMG150708-R15	15.875	10	7.94	15	5.16	O
	SNMG150708-R18	15.875	10	7.94	18	5.16	O
	SNMG150708-R20	15.875	10	7.94	20	5.16	O
	SNMG150708-R22	15.875	10	7.94	22	5.16	O
	SNMG150708-R25	15.875	10	7.94	25	5.16	O
	SNMG150708-R27	15.875	10	7.94	27	5.16	O
	SNMG150708-R30	15.875	10	7.94	30	5.16	O
	SNMG150708-R35	15.875	10	7.94	35	5.16	O
	SNMG150708-R36	15.875	10	7.94	36	5.16	O
	SNMG150708-R40	15.875	10	7.94	40	5.16	O
	SNMG150708-R45	15.875	10	7.94	45	5.16	O
	SNMG150708-R50	15.875	10	7.94	50	5.16	O
	SNMG150708-R55	15.875	10	7.94	55	5.16	O
	SNMG150708-R60	15.875	10	7.94	60	5.16	O
	SNMG150708-R65	15.875	10	7.94	65	5.16	O
	SNMG150708-R70	15.875	10	7.94	70	5.16	O
	SNMG150708-R75	15.875	10	7.94	75	5.16	O
	SNMG150708-R80	15.875	10	7.94	80	5.16	O
	SNMG150708-R90	15.875	10	7.94	90	5.16	O
	SNMG150708-R100	15.875	10	7.94	100	5.16	O



SNMX150708-R**



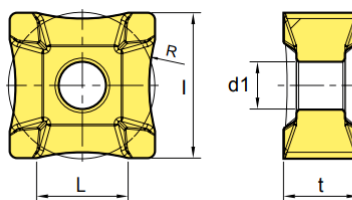
(mm)

Insert Shape Schneid- plattenform	Type	DIMENSION					COATING
		I	L	t	R	d1	MGN5340
	SNMX150708-R07	15.875	10	7.94	7	5.16	●
	SNMX150708-R09	15.875	10	7.94	9	5.16	●
	SNMX150708-R10	15.875	10	7.94	10	5.16	●
	SNMX150708-R11	15.875	10	7.94	11	5.16	●
	SNMX150708-R12	15.875	10	7.94	12	5.16	●
	SNMX150708-R13	15.875	10	7.94	13	5.16	●
	SNMX150708-R15	15.875	10	7.94	15	5.16	●
	SNMX150708-R18	15.875	10	7.94	18	5.16	●
	SNMX150708-R20	15.875	10	7.94	20	5.16	●
	SNMX150708-R22	15.875	10	7.94	22	5.16	●
	SNMX150708-R25	15.875	10	7.94	25	5.16	●
	SNMX150708-R27	15.875	10	7.94	27	5.16	●
	SNMX150708-R30	15.875	10	7.94	30	5.16	●
	SNMC150708-R35	15.875	10	7.94	35	5.16	●
	SNMC150708-R36	15.875	10	7.94	36	5.16	●
	SNMX150708-R40	15.875	10	7.94	40	5.16	●
	SNMX150708-R45	15.875	10	7.94	45	5.16	●
	SNMX150708-R50	15.875	10	7.94	50	5.16	●
	SNMX150708-R55	15.875	10	7.94	55	5.16	●
	SNMX150708-R60	15.875	10	7.94	60	5.16	●
	SNMX150708-R65	15.875	10	7.94	65	5.16	●
	SNMX150708-R70	15.875	10	7.94	70	5.16	●
	SNMX150708-R75	15.875	10	7.94	75	5.16	●
	SNMX150708-R80	15.875	10	7.94	80	5.16	●
	SNMX150708-R90	15.875	10	7.94	90	5.16	●
	SNMX150708-R100	15.875	10	7.94	100	5.16	●



PIPE INSERT

SNMX150708-R**



(mm)

Insert Shape
Schneid-
plattenform

Type

DIMESION

COATING

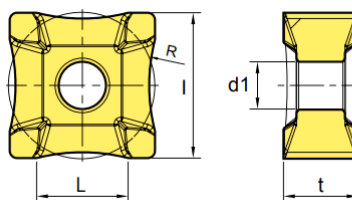
I L t R d1 MGP5300

SNMX150708-R07	15.875	10	7.94	7	5.16	O
SNMX150708-R09	15.875	10	7.94	9	5.16	O
SNMX150708-R10	15.875	10	7.94	10	5.16	O
SNMX150708-R11	15.875	10	7.94	11	5.16	O
SNMX150708-R12	15.875	10	7.94	12	5.16	O
SNMX150708-R13	15.875	10	7.94	13	5.16	O
SNMX150708-R15	15.875	10	7.94	15	5.16	O
SNMX150708-R18	15.875	10	7.94	18	5.16	O
SNMX150708-R20	15.875	10	7.94	20	5.16	O
SNMX150708-R22	15.875	10	7.94	22	5.16	O
SNMX150708-R25	15.875	10	7.94	25	5.16	O
SNMX150708-R27	15.875	10	7.94	27	5.16	O
SNMX150708-R30	15.875	10	7.94	30	5.16	O
SNMX150708-R35	15.875	10	7.94	35	5.16	O
SNMX150708-R36	15.875	10	7.94	36	5.16	O
SNMX150708-R40	15.875	10	7.94	40	5.16	O
SNMX150708-R45	15.875	10	7.94	45	5.16	O
SNMX150708-R50	15.875	10	7.94	50	5.16	O
SNMX150708-R55	15.875	10	7.94	55	5.16	O
SNMX150708-R60	15.875	10	7.94	60	5.16	O
SNMX150708-R65	15.875	10	7.94	65	5.16	O
SNMX150708-R70	15.875	10	7.94	70	5.16	O
SNMX150708-R75	15.875	10	7.94	75	5.16	O
SNMX150708-R80	15.875	10	7.94	80	5.16	O
SNMX150708-R90	15.875	10	7.94	90	5.16	O
SNMX150708-R100	15.875	10	7.94	100	5.16	O



PIPE INSERT

SNMM190708-R**



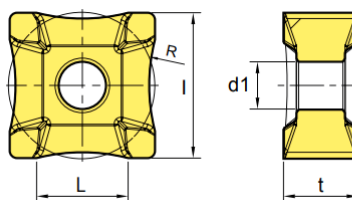
(mm)

Insert Shape Schneid- plattenform	Type	DIMENSION					COATING
		I	L	t	R	d1	MGN5340
	SNMG190708-R00	19.05	12	8.35	7	8.0	●
	SNMG190708-R09	19.05	12	8.35	9	8.0	●
	SNMG190708-R10	19.05	12	8.35	10	8.0	●
	SNMG190708-R11	19.05	12	8.35	11	8.0	●
	SNMG190708-R12	19.05	12	8.35	12	8.0	●
	SNMG190708-R13	19.05	12	8.35	13	8.0	●
	SNMG190708-R15	19.05	12	8.35	15	8.0	●
	SNMG190708-R18	19.05	12	8.35	18	8.0	●
	SNMG190708-R20	19.05	12	8.35	20	8.0	●
	SNMG190708-R22	19.05	12	8.35	22	8.0	●
	SNMG190708-R25	19.05	12	8.35	25	8.0	●
	SNMG190708-R27	19.05	12	8.35	27	8.0	●
	SNMG190708-R30	19.05	12	8.35	30	8.0	●
	SNMG190708-R35	19.05	12	8.35	35	8.0	●
	SNMG190708-R40	19.05	12	8.35	40	8.0	●
	SNMG190708-R45	19.05	12	8.35	45	8.0	●
	SNMG190708-R50	19.05	12	8.35	50	8.0	●
	SNMG190708-R55	19.05	12	8.35	55	8.0	●
	SNMG190708-R60	19.05	12	8.35	60	8.0	●
	SNMG190708-R65	19.05	12	8.35	65	8.0	●
	SNMG190708-R70	19.05	12	8.35	70	8.0	●
	SNMG190708-R80	19.05	12	8.35	80	8.0	●
	SNMG190708-R90	19.05	12	8.35	90	8.0	●
	SNMG190708-R100	19.05	12	8.35	100	8.0	●



PIPE INSERT

SNMX190708-R**



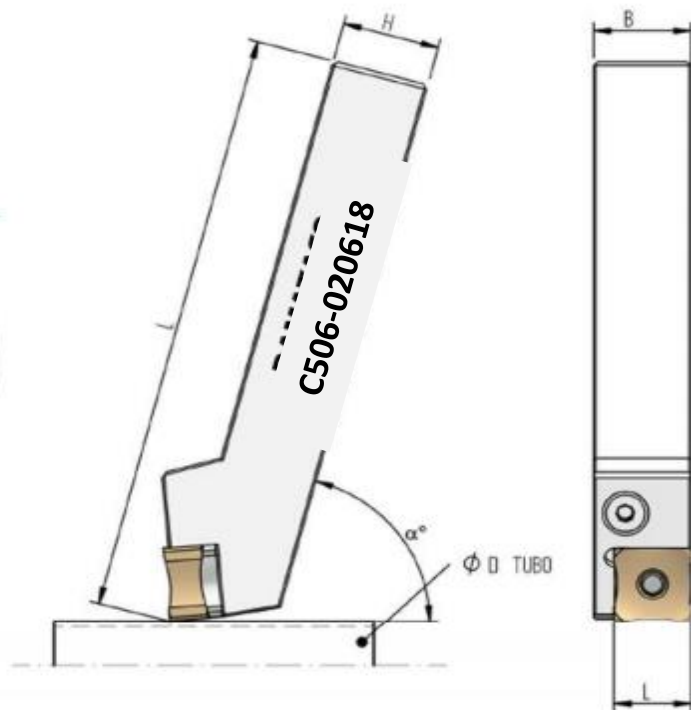
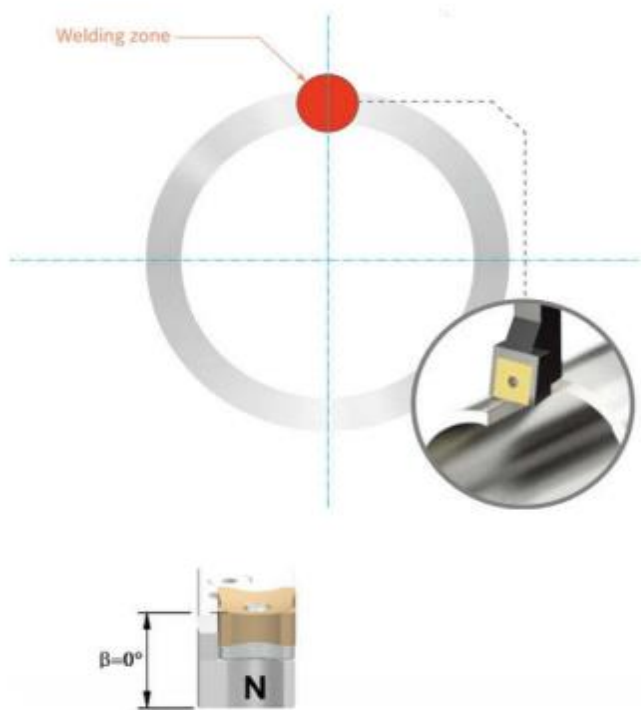
(mm)

PIPE INSERT

Insert Shape Schneid- plattenform	Type	DIMESION					COATING
		I	L	t	R	d1	MGP5300
	SNMX190708-R00	19.05	12	8.35	7	8.0	O
	SNMX190708-R09	19.05	12	8.35	9	8.0	O
	SNMX190708-R10	19.05	12	8.35	10	8.0	O
	SNMX190708-R11	19.05	12	8.35	11	8.0	O
	SNMX190708-R12	19.05	12	8.35	12	8.0	O
	SNMX190708-R13	19.05	12	8.35	13	8.0	O
	SNMX190708-R15	19.05	12	8.35	15	8.0	O
	SNMX190708-R18	19.05	12	8.35	18	8.0	O
	SNMX190708-R20	19.05	12	8.35	20	8.0	O
	SNMX190708-R22	19.05	12	8.35	22	8.0	O
	SNMX190708-R25	19.05	12	8.35	25	8.0	O
	SNMX190708-R27	19.05	12	8.35	27	8.0	O
	SNMX190708-R30	19.05	12	8.35	30	8.0	O
	SNMX190708-R35	19.05	12	8.35	35	8.0	O
	SNMX190708-R40	19.05	12	8.35	40	8.0	O
	SNMX190708-R45	19.05	12	8.35	45	8.0	O
	SNMX190708-R50	19.05	12	8.35	50	8.0	O
	SNMX190708-R55	19.05	12	8.35	55	8.0	O
	SNMX190708-R60	19.05	12	8.35	60	8.0	O
	SNMX190708-R65	19.05	12	8.35	65	8.0	O
	SNMX190708-R70	19.05	12	8.35	70	8.0	O
	SNMX190708-R80	19.05	12	8.35	80	8.0	O
	SNMX190708-R90	19.05	12	8.35	90	8.0	O
	SNMX190708-R100	19.05	12	8.35	100	8.0	O

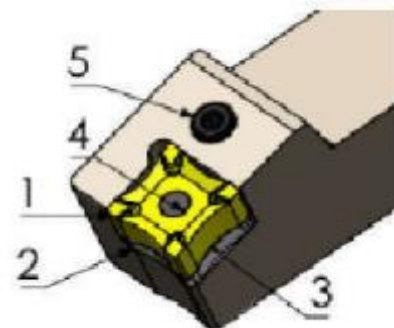


Tools Holder



PIPE INSERT

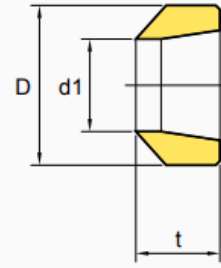
Tools Holder Code	Dimension	Insert
C506-020618-01	202015-75 (L=200mm)	SNMG150708
C506-020618-02	252515-75 (L=200mm)	



DIMENSIONS	DESCRIPTION
B	SHANK WIDTH
H	SHANK HEIGHT
L	SHANK LENGTH
15/19/25	INSERT DIMENSIONS
β°	TOP RAKE ANGLE
α°	HEAD INCLINATION (75° or 90°)
R/N/L	DIRECTION (RIGHT/NEUTRAL/LEFT)

5	Lever Screw	ALV-04	1
4	Lever	APL-09	1
3	Shim Spring	AAV-06	1
2	Shim	PSX315.10	1
1	Insert	SNMX 150705-04	1
NO.	PARTS NAME	PARTS CODE	PIECE

SRO-AR **

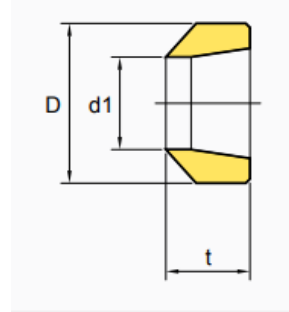


PIPE INSERT



Insert Shape Schneid- plattenform	Type	DIMESION				COATING
		ØD	d1	t		MGN5340
	AR 4.5	8	5	4.5		O
	AR 6.5	10	6	4.5		O
	AR 7	13	6	6		O
	AR 8	13	7	6		O
	AR 9	13	8	6		O
	AR 9.5	13	8.5	6		O
	AR 1	19	10	10		O
	AR 12	19	11	10		O
	AR 13	19	11.5	10		O
	AR 14	22	12	12		O
	AR 15	22	13	12		O
	AR 15.5	22	13.5	12		O
	AR 16	22	14	12		O
	AR 17	22	15	12		O
	AR 18	28	14	12		O
	AR 19	35	17	12		O
	AR 20	35	17.5	12		O
	AR 21	35	18	12		O
	AR 22	35	19	12		O
	AR 23	35	20	12		O
	AR 24	35	21	12		O
	AR 25	35	22	12		O
	AR 26	35	23	12		O
	AR 27	35	24	12		O
	AR 28	35	25	15		O
	AR 30	45	27	15		O

SR0-AR**



Insert Shape Schneid- plattenform	Type	DIMENSION				COATING
		ØD	d1	t		MGN5340
	AR 31	45	28	15		●
	AR 32	45	28.5	15		●
	AR 33	45	29	15		●
	AR 34	45	30	15		●
	AR 35	50	31	15		●
	AR 36	50	32	15		●
	AR 37	50	33	15		●
	AR 38	50	34	15		●
	AR 39	50	35	15		●
	AR 40	50	36	15		●
	AR 41	55	37	18		●
	AR 42	55	38	18		●
	AR 44	55	39	18		●
	AR 46	55	40	18		●
	AR 47	55	43	18		●
	AR 52	65	46	20		●
	AR 56	65	49	20		●

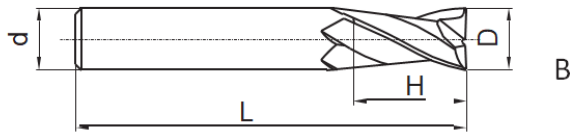
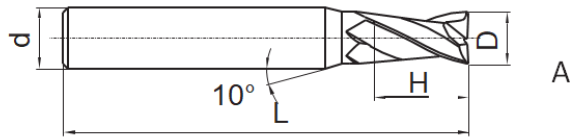
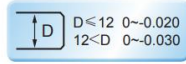
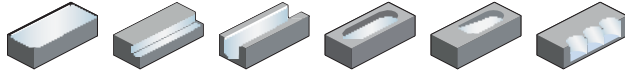
PIPE INSERT

MEGACUT

ENDMIL CARBIDE



MG-2E



Type	*	Basic dimension(mm)				Number of teeth Z	Geometry	Stock	
		D	d (h6)	H	L			Tialn	
MG-2E-D1.0S		1	4	3	50	2	A	•	
MG-2E-D1.5S		1,5	4	4	50	2	A	•	
MG-2E-D2.0S		2	4	6	50	2	A	•	
MG-2E-D2.5S		2,5	4	8	50	2	A	•	
MG-2E-D3.0S		3	4	8	50	2	A	•	
MG-2E-D4.0S		4	4	11	50	2	B	•	
MG-2E-D1.0		1	6	3	50	2	A	•	
MG-2E-D1.5		1,5	6	4	50	2	A	•	
MG-2E-D2.0		2	6	6	50	2	A	•	
MG-2E-D2.5		2,5	6	8	50	2	A	•	
MG-2E-D3.0		3	6	8	50	2	A	•	
MG-2E-D3.5		3,5	6	10	50	2	A	•	
MG-2E-D4.0		4	6	11	50	2	A	•	
MG-2E-D4.5		4,5	6	11	50	2	A	•	
MG-2E-D5.0		5	6	13	50	2	A	•	
MG-2E-D5.5		5,5	6	16	50	2	A	•	
MG-2E-D6.0		6	6	16	50	2	B	•	
MG-2E-D7.0		7	8	20	60	2	A	•	
MG-2E-D8.0		8	8	20	60	2	B	•	
MG-2E-D9.0		9	10	22	75	2	A	•	
MG-2E-D10.0		10	10	25	75	2	B	•	
MG-2E-D11.0		11	12	26	75	2	A	•	
MG-2E-D12.0		12	12	30	75	2	B	•	
MG-2E-D14.0		14	14	32	75	2	B	•	
MG-2E-D16.0		16	16	45	100	2	B	•	
MG-2E-D18.0		18	18	45	100	2	B	•	
MG-2E-D20.0		20	20	45	100	2	B	•	

• Ab Lager ○ Auf Anfrage

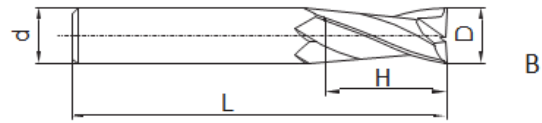
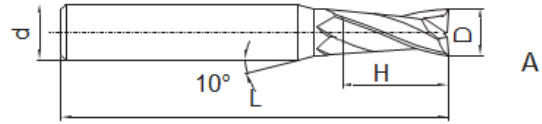
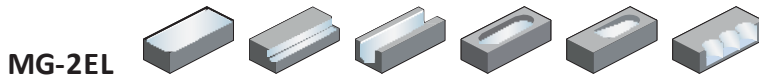
* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet

✓ Geeignet

ENDMILL



Type	*	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
		D	d (h6)	H	L			Tialn
MG-2EL-D3.0		3	6	12	75	2	A	●
MG-2EL-D4.0		4	6	15	75	2	A	●
MG-2EL-D5.0		5	6	20	75	2	A	●
MG-2EL-D6.0		6	6	20	75	2	B	●
MG-2EL-D8.0		8	8	25	100	2	B	●
MG-2EL-D10.0		10	10	30	100	2	B	●
MG-2EL-D12.0		12	12	35	100	2	B	●
MG-2EL-D14.0		14	14	40	100	2	B	●
MG-2EL-D16.0		16	16	50	150	2	B	●
MG-2EL-D20.0		20	20	55	150	2	B	●

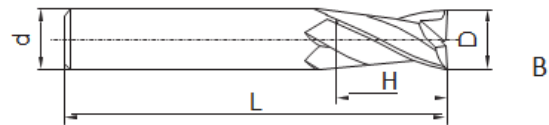
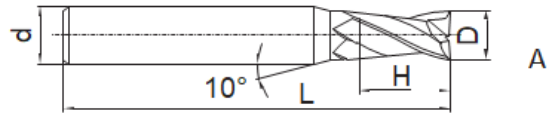
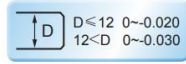
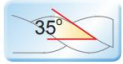
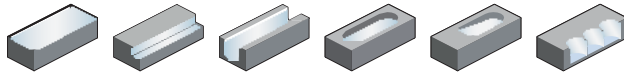
- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

MG-2F



Type	*	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
		D	d(h6)	H	L			
MG-2F-D1.0S		1	4	3	50	2	A	○
MG-2F-D1.5S		1,5	4	4	50	2	A	○
MG-2F-D2.0S		2	4	6	50	2	A	○
MG-2F-D2.5S		2,5	4	8	50	2	A	○
MG-2F-D3.0S		3	4	8	50	2	A	○
MG-2F-D4.0S		4	4	11	50	2	B	○
MG-2F-D1.0		1	6	3	50	2	A	○
MG-2F-D1.5		1,5	6	4	50	2	A	○
MG-2F-D2.0		2	6	6	50	2	A	○
MG-2F-D2.5		2,5	6	8	50	2	A	○
MG-2F-D3.0		3	6	8	50	2	A	●
MG-2F-D3.5		3,5	6	10	50	2	A	○
MG-2F-D4.0		4	6	11	50	2	A	●
MG-2F-D4.5		4,5	6	11	50	2	A	○
MG-2F-D5.0		5	6	13	50	2	A	●
MG-2F-D5.5		5,5	6	16	50	2	A	○
MG-2F-D6.0		6	6	16	50	2	B	●
MG-2F-D7.0		7	8	20	60	2	A	○
MG-2F-D8.0		8	8	20	60	2	B	●
MG-2F-D9.0		9	10	22	75	2	A	○
MG-2F-D10.0		10	10	25	75	2	B	○
MG-2F-D11.0		11	12	26	75	2	A	○
MG-2F-D12.0		12	12	30	75	2	B	●
MG-2F-D14.0		14	14	32	75	2	B	○
MG-2F-D16.0		16	16	45	100	2	B	○
MG-2F-D18.0		18	18	45	100	2	B	○
MG-2F-D20.0		20	20	45	100	2	B	○

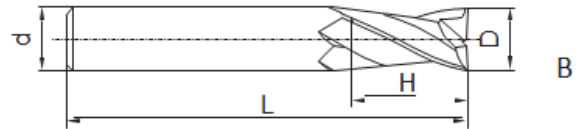
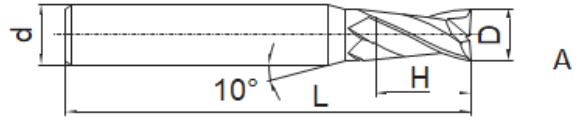
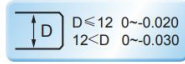
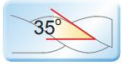
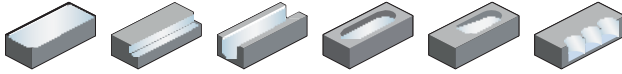
- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

MG-2FL



ENDMILL

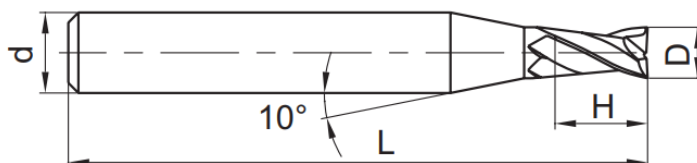
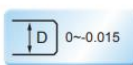
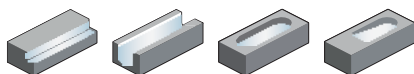
TYPE	*	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
		D	d(h6)	H	L			
MG-2FL-D3.0		3	6	12	75	2	A	○
MG-2FL-D4.0		4	6	15	75	2	A	○
MG-2FL-D5.0		5	6	20	75	2	A	○
MG-2FL-D6.0		6	6	20	75	2	B	○
MG-2FL-D8.0		8	8	25	100	2	B	○
MG-2FL-D10.0		10	10	30	100	2	B	○
MG-2FL-D12.0		12	12	35	100	2	B	○
MG-2FL-D14.0		14	14	40	100	2	B	○
MG-2FL-D16.0		16	16	50	150	2	B	○
MG-2FL-D20.0		20	20	55	150	2	B	○

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehrgeeignet
- ✓ Geeignet

MG-2ES



TYPE	*	Basic dimension(mm)				Number of teeth Z	STOCK
		D	d (h6)	H	L		
MG-2ES-D0.3		0,3	4	0,6	50	2	●
MG-2ES-D0.4		0,4	4	0,8	50	2	●
MG-2ES-D0.5		0,5	4	1	50	2	●
MG-2ES-D0.6		0,6	4	1,2	50	2	●
MG-2ES-D0.7		0,7	4	1,4	50	2	●
MG-2ES-D0.8		0,8	4	1,6	50	2	●
MG-2ES-D0.9		0,9	4	1,8	50	2	●
MG-2ES-D1.0		1	4	2	50	2	●
MG-2ES-D1.1		1,1	4	2	50	2	●
MG-2ES-D1.2		1,2	4	2,5	50	2	●
MG-2ES-D1.3		1,3	4	2,5	50	2	●
MG-2ES-D1.4		1,4	4	3	50	2	●
MG-2ES-D1.5		1,5	4	3	50	2	●
MG-2ES-D1.6		1,6	4	3,5	50	2	●
MG-2ES-D1.7		1,7	4	3,5	50	2	●
MG-2ES-D1.8		1,8	4	4	50	2	●
MG-2ES-D1.9		1,9	4	4	50	2	●
MG-2ES-D2.0		2	4	4	50	2	●
MG-2ES-D2.1		2,1	4	4	50	2	●
MG-2ES-D2.2		2,2	4	4,5	50	2	●
MG-2ES-D2.3		2,3	4	4,5	50	2	●
MG-2ES-D2.4		2,4	4	5	50	2	●
MG-2ES-D2.5		2,5	4	5	50	2	●
MG-2ES-D2.6		2,6	4	5	50	2	●
MG-2ES-D2.7		2,7	4	5,5	50	2	●
MG-2ES-D2.8		2,8	4	5,5	50	2	●
MG-2ES-D2.9		2,9	4	6	50	2	●
MG-2ES-D3.0		3	4	6	50	2	●

● Ab Lager ○ Auf Anfrage

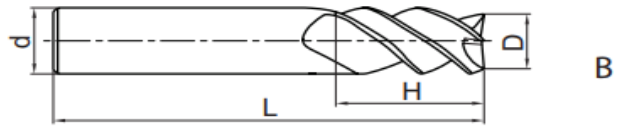
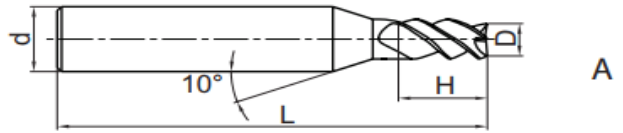
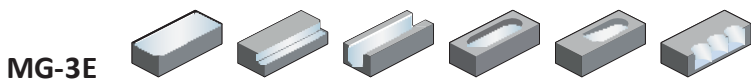
* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet

✓ Geeignet

ENDMILL



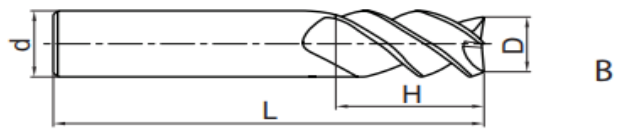
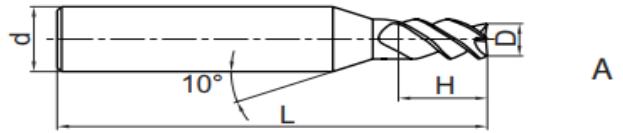
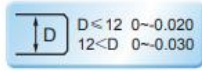
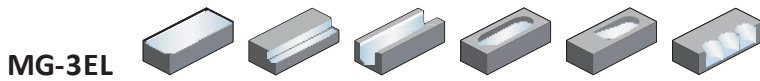
ENDMILL

TYPE	*	Basic dimension(mm)				Number of teeth Z	Geometrie	STOCK
		D	d (h6)	H	L			
MG-3E-D1.0S		1	4	3	50	3	A	○
MG-3E-D1.5S		1,5	4	4	50	3	A	●
MG-3E-D2.0S		2	4	6	50	3	A	●
MG-3E-D2.5S		2,5	4	8	50	3	A	●
MG-3E-D3.0S		3	4	8	50	3	A	●
MG-3E-D4.0S		4	4	11	50	3	B	●
MG-3E-D1.0		1	6	3	50	3	A	○
MG-3E-D1.5		1,5	6	4	50	3	A	●
MG-3E-D2.0		2	6	6	50	3	A	●
MG-3E-D2.5		2,5	6	8	50	3	A	●
MG-3E-D3.0		3	6	8	50	3	A	●
MG-3E-D3.5		3,5	6	10	50	3	A	●
MG-3E-D4.0		4	6	11	50	3	A	●
MG-3E-D4.5		4,5	6	11	50	3	A	●
MG-3E-D5.0		5	6	13	50	3	A	●
MG-3E-D5.5		5,5	6	16	50	3	A	●
MG-3E-D6.0		6	6	16	50	3	B	●
MG-3E-D7.0		7	8	20	60	3	A	●
MG-3E-D8.0		8	8	20	60	3	B	●
MG-3E-D9.0		9	10	22	75	3	A	○
MG-3E-D10.0		10	10	25	75	3	B	●
MG-3E-D11.0		11	12	26	75	3	A	○
MG-3E-D12.0		12	12	30	75	3	B	○
MG-3E-D14.0		14	14	32	75	3	B	○
MG-3E-D16.0		16	16	45	100	3	B	●
MG-3E-D18.0		18	18	45	100	3	B	●
MG-3E-D20.0		20	20	45	100	3	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet



TYPE	*	Basic dimension(mm)				Number of teeth Z	Geometry	STOCK
		D	d(h6)	H	L			
MG-3EL-D3.0		3	6	12	75	3	A	●
MG-3EL-D4.0		4	6	15	75	3	A	●
MG-3EL-D5.0		5	6	20	75	3	A	●
MG-3EL-D6.0		6	6	20	75	3	B	●
MG-3EL-D8.0		8	8	25	100	3	B	●
MG-3EL-D10.0		10	10	30	100	3	B	●
MG-3EL-D12.0		12	12	35	100	3	B	●
MG-3EL-D14.0		14	14	40	100	3	B	●
MG-3EL-D16.0		16	16	50	150	3	B	●
MG-3EL-D20.0		20	20	55	150	3	B	●

● Ab Lager ○ Auf Anfrage

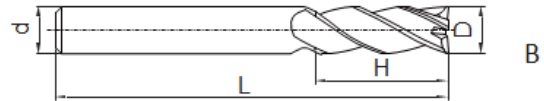
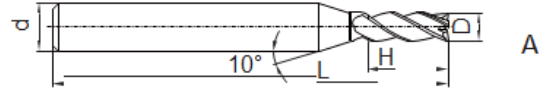
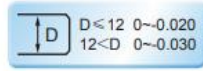
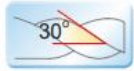
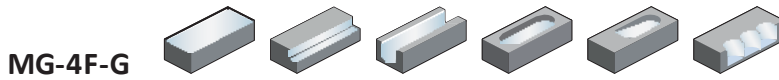
* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet

✓ Geeignet

ENDMILL



ENDMILL

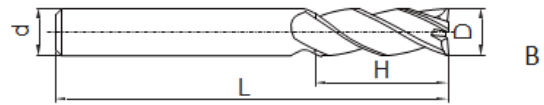
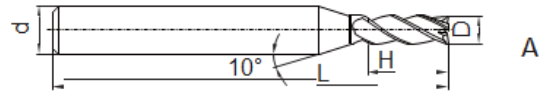
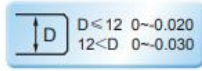
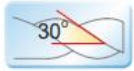
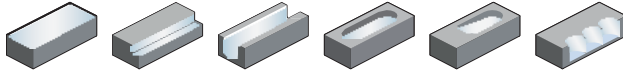
TYPE	Basic dimension(mm)				Number of teeth Z	Geometrie	Stock
	D	d (h6)	H	L			
MG-4F-D1.0S-G	1	4	3	50	4	A	○
MG-4F-D1.5S-G	1,5	4	4	50	4	A	○
MG-4F-D2.0S-G	2	4	6	50	4	A	○
MG-4F-D2.5S-G	2,5	4	8	50	4	A	○
MG-4F-D3.0S-G	3	4	8	50	4	A	○
MG-4F-D4.0S-G	4	4	11	50	4	B	○
MG-4F-D1.0-G	1	6	3	50	4	A	○
MG-4F-D1.5-G	1,5	6	4	50	4	A	○
MG-4F-D2.0-G	2	6	6	50	4	A	○
MG-4F-D2.5-G	2,5	6	8	50	4	A	○
MG-4F-D3.0-G	3	6	8	50	4	A	○
MG-4F-D3.5-G	3,5	6	10	50	4	A	○
MG-4F-D4.0-G	4	6	11	50	4	A	○
MG-4F-D4.5-G	4,5	6	11	50	4	A	○
MG-4F-D5.0-G	5	6	13	50	4	A	○
MG-4F-D5.5-G	5,5	6	16	50	4	A	○
MG-4F-D6.0-G	6	6	16	50	4	B	○
MG-4F-D7.0-G	7	8	20	60	4	A	○
MG-4F-D8.0-G	8	8	20	60	4	B	○
MG-4F-D9.0-G	9	10	22	75	4	A	○
MG-4F-D10.0-G	10	10	25	75	4	B	○
MG-4F-D11.0-G	11	12	26	75	4	A	○
MG-4F-D12.0-G	12	12	30	75	4	B	○
MG-4F-D14.0-G	14	14	32	75	4	B	○
MG-4F-D16.0-G	16	16	45	100	4	B	○
MG-4F-D18.0-G	18	18	45	100	4	B	○
MG-4F-D20.0-G	20	20	45	100	4	B	○

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

MG-4EL-G



TYPE	*	Basic dimension(mm)				Number of teeth Z	Geometrie	STOCK
		D	d (h6)	H	L			
MG-4EL-D3.0-G		3	6	12	75	4	A	○
MG-4EL-D4.0-G		4	6	15	75	4	A	○
MG-4EL-D5.0-G		5	6	20	75	4	A	○
MG-4EL-D6.0-G		6	6	20	75	4	B	○
MG-4EL-D8.0-G		8	8	25	100	4	B	○
MG-4EL-D10.0-G		10	10	30	100	4	B	○
MG-4EL-D12.0-G		12	12	35	100	4	B	○
MG-4EL-D14.0-G		14	14	40	100	4	B	○
MG-4EL-D16.0-G		16	16	50	150	4	B	○
MG-4EL-D20.0-G		20	20	55	150	4	B	○

● Ab Lager ○ Auf Anfrage

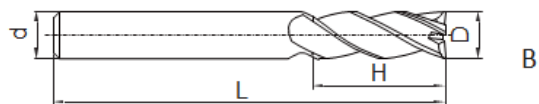
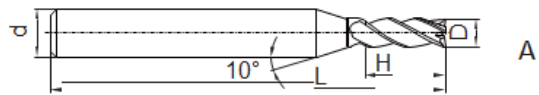
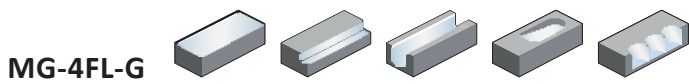
* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet

✓ Geeignet

ENDMILL



ENDMILL

TYPE	*	Basic dimension(mm)				Number of teeth Z	Geometrie	STOCK
		D	d (h6)	H	L			
MG-4FL-D3.0-G		3	6	12	75	4	A	○
MG-4FL-D4.0-G		4	6	15	75	4	A	○
MG-4FL-D5.0-G		5	6	20	75	4	A	●
MG-4FL-D6.0-G		6	6	20	75	4	B	●
MG-4FL-D8.0-G		8	8	25	100	4	B	●
MG-4FL-D10.0-G		10	10	30	100	4	B	●
MG-4FL-D12.0-G		12	12	35	100	4	B	●
MG-4FL-D14.0-G		14	14	40	100	4	B	○
MG-4FL-D16.0-G		16	16	50	150	4	B	○

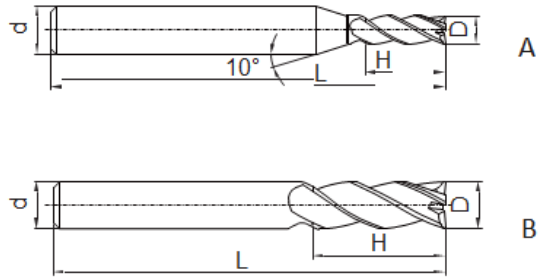
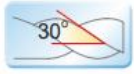
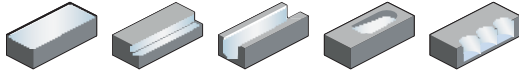
● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet
 ✓ Geeignet

MG-4EX-G



TYPE	*	Basic dimension(mm)				Number of teeth Z	Geometrie	STOCK
		D	d (h6)	H	L			
MG-4EX-D3.0-G		3	6	20	75	4	A	●
MG-4EX-D4.0-G		4	6	25	75	4	A	●
MG-4EX-D5.0-G		5	6	30	75	4	A	●
MG-4EX-D6.0-G		6	6	30	75	4	B	●
MG-4EX-D8.0-G		8	8	40	100	4	B	●
MG-4EX-D10.0-G		10	10	50	110	4	B	●
MG-4EX-D12.0-G		12	12	50	110	4	B	●
MG-4EX-D16.0-G		16	16	70	150	4	B	●
MG-4EX-D20.0-G		20	20	75	150	4	B	●
MG-4FL-D20.0-G		20	20	55	150	4	B	○

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

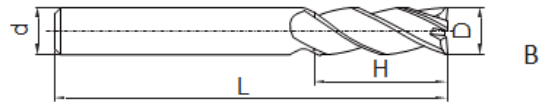
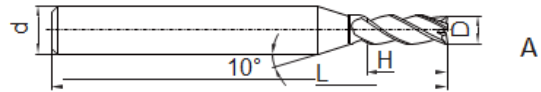
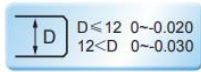
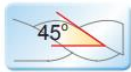
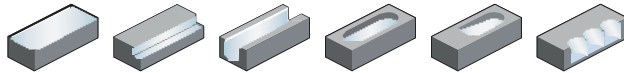
Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet

✓ Geeignet

ENDMILL

MG-4E



ENDMILL

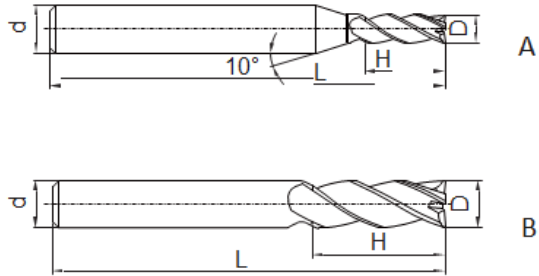
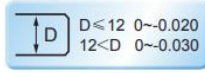
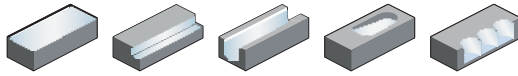
TYPE	*	Basic dimension(mm)				Number of teeth Z	Geometrie	STOCK
		D	d (h6)	H	L			
MG-4E-D1.0S		1	4	3	50	4	A	●
MG-4E-D1.5S		1,5	4	4	50	4	A	●
MG-4E-D2.0S		2	4	6	50	4	A	●
MG-4E-D2.5S		2,5	4	8	50	4	A	●
MG-4E-D3.0S		3	4	8	50	4	A	●
MG-4E-D4.0S		4	4	11	50	4	B	●
MG-4E-D1.0		1	6	3	50	4	A	●
MG-4E-D1.5		1,5	6	4	50	4	A	●
MG-4E-D2.0		2	6	6	50	4	A	●
MG-4E-D2.5		2,5	6	8	50	4	A	●
MG-4E-D3.0		3	6	8	50	4	A	●
MG-4E-D3.5		3,5	6	10	50	4	A	●
MG-4E-D4.0		4	6	11	50	4	A	●
MG-4E-D4.5		4,5	6	11	50	4	A	●
MG-4E-D5.0		5	6	13	50	4	A	●
MG-4E-D5.5		5,5	6	16	50	4	A	●
MG-4E-D6.0		6	6	16	50	4	B	●
MG-4E-D7.0		7	8	20	60	4	A	●
MG-4E-D8.0		8	8	20	60	4	B	●
MG-4E-D9.0		9	10	22	75	4	A	●
MG-4E-D10.0		10	10	25	75	4	B	●
MG-4E-D11.0		11	12	26	75	4	A	●
MG-4E-D12.0		12	12	30	75	4	B	●
MG-4E-D14.0		14	14	32	75	4	B	●
MG-4E-D16.0		16	16	45	100	4	B	●
MG-4E-D18.0		18	18	45	100	4	B	●
MG-4E-D20.0		20	20	45	100	4	B	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

MG-4E-G



TYPE	*	Basic dimension(mm)				Number of teeth Z	Geometry	STOCK
		D	d (h6)	H	L			
MG-4E-D1.0S-G		1	4	3	50	4	A	●
MG-4E-D1.5S-G		1,5	4	4	50	4	A	●
MG-4E-D2.0S-G		2	4	6	50	4	A	●
MG-4E-D2.5S-G		2,5	4	8	50	4	A	●
MG-4E-D3.0S-G		3	4	8	50	4	A	●
MG-4E-D4.0S-G		4	4	11	50	4	B	●
MG-4E-D1.0-G		1	6	3	50	4	A	●
MG-4E-D1.5-G		1,5	6	4	50	4	A	●
MG-4E-D2.0-G		2	6	6	50	4	A	●
MG-4E-D2.5-G		2,5	6	8	50	4	A	●
MG-4E-D3.0-G		3	6	8	50	4	A	●
MG-4E-D3.5-G		3,5	6	10	50	4	A	●
MG-4E-D4.0-G		4	6	11	50	4	A	●
MG-4E-D4.5-G		4,5	6	11	50	4	A	○
MG-4E-D5.0-G		5	6	13	50	4	A	●
MG-4E-D5.5-G		5,5	6	16	50	4	A	●
MG-4E-D6.0-G		6	6	16	50	4	B	●
MG-4E-D7.0-G		7	8	20	60	4	A	●
MG-4E-D8.0-G		8	8	20	60	4	B	●
MG-4E-D9.0-G		9	10	22	75	4	A	●
MG-4E-D10.0-G		10	10	25	75	4	B	●
MG-4E-D11.0-G		11	12	26	75	4	A	●
MG-4E-D12.0-G		12	12	30	75	4	B	●
MG-4E-D14.0-G		14	14	32	75	4	B	●
MG-4E-D16.0-G		16	16	45	100	4	B	●
MG-4E-D18.0-G		18	18	45	100	4	B	●
MG-4E-D20.0-G		20	20	45	100	4	B	●

● Ab Lager ○ Auf Anfrage

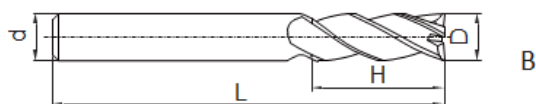
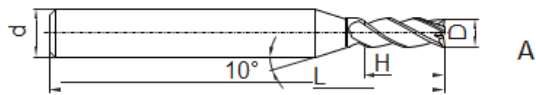
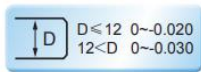
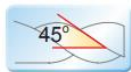
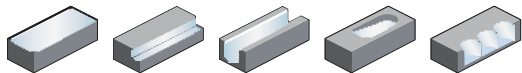
* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet
✓ Geeignet

ENDMILL

MG-4EL



ENDMILL

Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH50
MG-4EL-D3.0		3	6	12	75	4	A	●
MG-4EL-D4.0		4	6	15	75	4	A	●
MG-4EL-D5.0		5	6	20	75	4	A	●
MG-4EL-D6.0		6	6	20	75	4	B	●
MG-4EL-D8.0		8	8	25	100	4	B	●
MG-4EL-D10.0		10	10	30	100	4	B	●
MG-4EL-D12.0		12	12	35	100	4	B	●
MG-4EL-D14.0		14	14	40	100	4	B	●
MG-4EL-D16.0		16	16	50	150	4	B	●
MG-4EL-D20.0		20	20	55	150	4	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

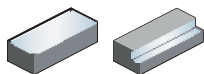
Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehrgeeignet
- ✓ Geeignet

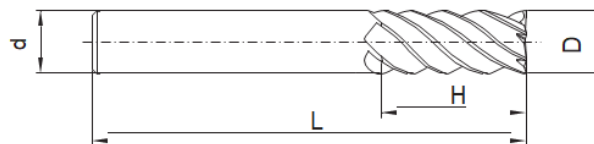
Schaftfräser

Mittlere Bearbeitung

MG-6E



- nicht über Mitteschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Sorte
		D	d (h6)	H	L		MGH50
MG-6E-D6.0		6	6	18	60	6	●
MG-6E-D8.0		8	8	20	60	6	●
MG-6E-D10.0		10	10	30	75	6	●
MG-6E-D12.0		12	12	32	75	6	●
MG-6E-D16.0		16	16	40	100	6	●
MG-6E-D20.0		20	20	45	100	6	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet

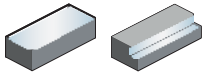
✓ Geeignet

ENDMILL

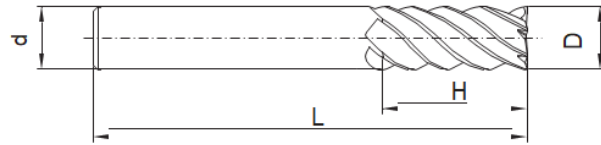
Schaftfräser lange Schneide

Mittlere Bearbeitung

MG-6EL



- nicht über Mitteschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Sorte
		D	d (h6)	H	L		MGH50
MG-6EL-D6.0		6	6	24	75	6	●
MG-6EL-D8.0		8	8	32	75	6	●
MG-6EL-D10.0		10	10	40	100	6	●
MG-6EL-D12.0		12	12	45	100	6	●
MG-6EL-D16.0		16	16	64	150	6	●
MG-6EL-D20.0		20	20	75	150	6	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

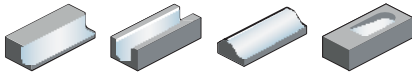
Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

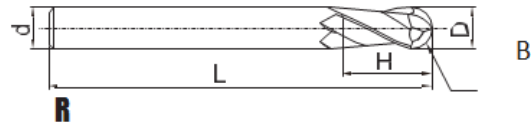
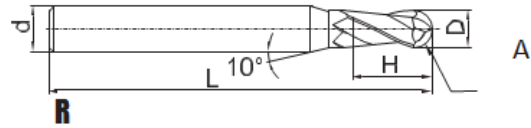
Kugelfräser langer Schaft

Mittlere Bearbeitung

MG-2BL



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH50
MG-2BL-R1.0		2	1	6	4	75	2	A	●
MG-2BL-R1.25		2,5	1,25	6	5	75	2	A	●
MG-2BL-R1.5		3	1,5	6	6	75	2	A	●
MG-2BL-R1.75		3,5	1,75	6	8	75	2	A	●
MG-2BL-R2.0		4	2	6	8	75	2	A	●
MG-2BL-R2.5		5	2,5	6	10	75	2	A	●
MG-2BL-R2.75		5,5	2,75	6	12	75	2	A	●
MG-2BL-R3.0		6	3	6	12	75	2	B	●
MG-2BL-R3.5		7	3,5	8	14	75	2	A	●
MG-2BL-R4.0		8	4	8	16	100	2	B	●
MG-2BL-R4.5		9	4,5	10	18	100	2	A	●
MG-2BL-R5.0		10	5	10	20	100	2	B	●
MG-2BL-R6.0		12	6	12	24	100	2	B	●
MG-2BL-R7.0		14	7	14	28	100	2	B	●
MG-2BL-R8.0		16	8	16	32	150	2	B	●
MG-2BL-R10.0		20	10	20	40	150	2	B	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

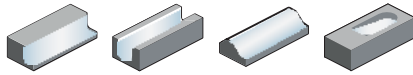
✓ Sehr geeignet

✓ Geeignet

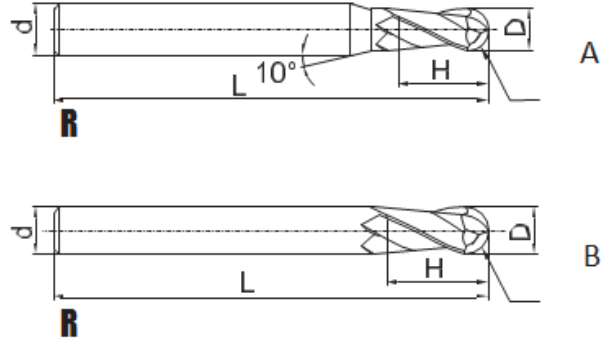
ENDMILL

Kugelfräser **Mittlere Bearbeitung**

MG-2B



- über Mitteschneidend
- Spiralwinkel 35°



ENDMILL

Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH50
MG-2B-R0.5S		1	0,5	4	2	50	2	A	●
MG-2B-R0.75S		1,5	0,75	4	3	50	2	A	●
MG-2B-R1.0S		2	1	4	4	50	2	A	●
MG-2B-R1.25S		2,5	1,25	4	5	50	2	A	●
MG-2B-R1.5S		3	1,5	4	6	50	2	A	●
MG-2B-R2.0S		4	2	4	8	50	2	B	●
MG-2B-R0.5		1	0,5	6	2	50	2	A	●
MG-2B-R0.75		1,5	0,75	6	3	50	2	A	●
MG-2B-R1.0		2	1	6	4	50	2	A	●
MG-2B-R1.25		2,5	1,25	6	5	50	2	A	○
MG-2B-R1.5		3	1,5	6	6	50	2	A	●
MG-2B-R1.75		3,5	1,75	6	8	50	2	A	○
MG-2B-R2.0		4	2	6	8	50	2	A	●
MG-2B-R2.5		5	2,5	6	10	50	2	A	●
MG-2B-R2.75		5,5	2,75	6	12	50	2	A	○
MG-2B-R3.0		6	3	6	12	50	2	B	●
MG-2B-R3.5		7	3,5	8	14	60	2	A	○
MG-2B-R4.0		8	4	8	16	60	2	B	●
MG-2B-R4.5		9	4,5	10	18	75	2	A	●
MG-2B-R5.0		10	5	10	20	75	2	B	●
MG-2B-R6.0		12	6	12	24	75	2	B	●
MG-2B-R7.0		14	7	14	28	75	2	B	●
MG-2B-R8.0		16	8	16	32	100	2	B	●
MG-2B-R10.0		20	10	20	40	100	2	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

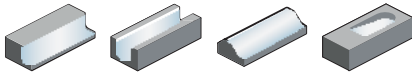
Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

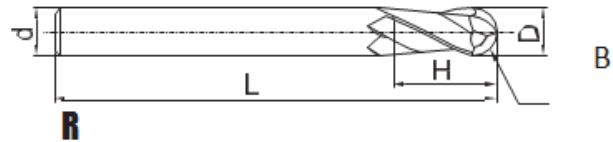
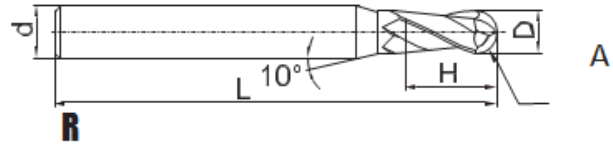
Kugelfräser langer Schaft

Mittlere Bearbeitung

MG-2BL



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MHG50
MG-2BL-R1.0		2	1	6	4	75	2	A	●
MG-2BL-R1.25		2,5	1,25	6	5	75	2	A	●
MG-2BL-R1.5		3	1,5	6	6	75	2	A	●
MG-2BL-R1.75		3,5	1,75	6	8	75	2	A	●
MG-2BL-R2.0		4	2	6	8	75	2	A	●
MG-2BL-R2.5		5	2,5	6	10	75	2	A	●
MG-2BL-R2.75		5,5	2,75	6	12	75	2	A	●
MG-2BL-R3.0		6	3	6	12	75	2	B	●
MG-2BL-R3.5		7	3,5	8	14	75	2	A	●
MG-2BL-R4.0		8	4	8	16	100	2	B	●
MG-2BL-R4.5		9	4,5	10	18	100	2	A	●
MG-2BL-R5.0		10	5	10	20	100	2	B	●
MG-2BL-R6.0		12	6	12	24	100	2	B	●
MG-2BL-R7.0		14	7	14	28	100	2	B	●
MG-2BL-R8.0		16	8	16	32	150	2	B	●
MG-2BL-R10.0		20	10	20	40	150	2	B	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet

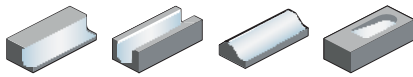
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ENDMILL

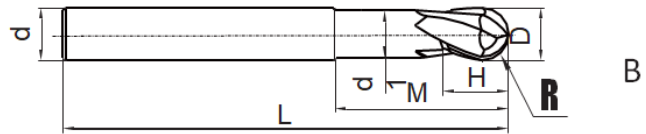
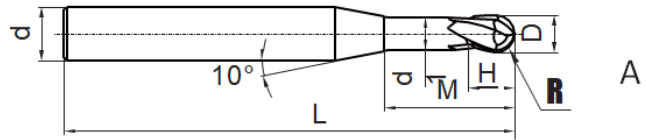
Kugelfräser kurze Schneide

Mittlere Bearbeitung

MG-2BFP



- über Mittschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]							Zähne	Geometrie	Sorte
		D	R	d (h6)	d ₁	H	M	L			MGH50
MG-2BFP-R0.5		1	0,5	6	0,95	1	2,5	75	2	A	●
MG-2BFP-R0.75		1,5	0,75	6	1,45	1	3	75	2	A	○
MG-2BFP-R1.0		2	1	6	1,95	2	4	75	2	A	●
MG-2BFP-R1.5		3	1,5	6	2,85	3	6	75	2	A	○
MG-2BFP-R2.0		4	2	6	3,85	4	8	75	2	A	○
MG-2BFP-R2.5		5	2,5	6	4,85	5	10	75	2	A	○
MG-2BFP-R3.0		6	3	6	5,8	6	12	75	2	B	○
MG-2BFP-R4.0		8	4	8	7,8	8	16	100	2	B	○
MG-2BFP-R5.0		10	5	10	9,6	10	20	100	2	B	○
MG-2BFP-R6.0		12	6	12	11,5	12	24	100	2	B	○
MG-2BFP-R8.0		16	8	16	15,5	16	32	150	2	B	○
MG-2BFP-R10.0		20	10	20	19,5	20	40	150	2	B	○

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

✓ Sehr geeignet

✓ Geeignet

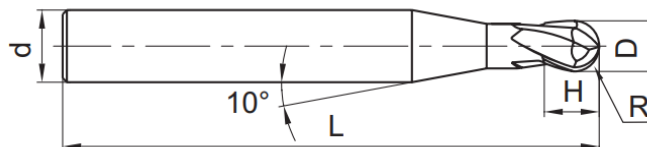
Kugelfräser

Mittlere Bearbeitung

MG-2BS



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Sorte
		D	R	d (h6)	H	L		MGH50
MG-2BS-R0.15		0,3	0,15	4	0,5	50	2	●
MG-2BS-R0.20		0,4	0,2	4	0,6	50	2	●
MG-2BS-R0.25		0,5	0,25	4	0,8	50	2	●
MG-2BS-R0.30		0,6	0,3	4	0,9	50	2	●
MG-2BS-R0.35		0,7	0,35	4	1	50	2	●
MG-2BS-R0.40		0,8	0,4	4	1,2	50	2	●
MG-2BS-R0.45		0,9	0,45	4	1,3	50	2	●
MG-2BS-R0.50		1	0,5	4	1,5	50	2	●
MG-2BS-R0.60		1,2	0,6	4	1,8	50	2	●
MG-2BS-R0.70		1,4	0,7	4	2	50	2	●
MG-2BS-R0.75		1,5	0,75	4	2,3	50	2	●
MG-2BS-R0.80		1,6	0,8	4	2,5	50	2	●
MG-2BS-R0.90		1,8	0,9	4	2,7	50	2	●
MG-2BS-R1.00		2	1	4	3	50	2	●
MG-2BS-R1.25		2,5	1,25	4	3,7	50	2	●
MG-2BS-R1.50		3	1,5	4	4,5	50	2	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

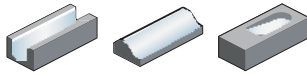
Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

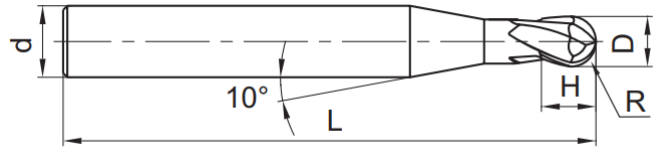
ENDMILL

Kugelfräser **Mittlere Bearbeitung**

MG-2BP



- über Mitteschneidend
- Spiralwinkel 35°



ENDMILL

Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d (h6)	d ₁	H	M	L		MGH50
MG-2BP-R0.25-M04		0,5	0,25	4	0,45	0,7	4	50	2	●
MG-2BP-R0.25-M06		0,5	0,25	4	0,45	0,7	6	50	2	●
MG-2BP-R0.3-M04		0,6	0,3	4	0,55	0,9	4	50	2	●
MG-2BP-R0.3-M06		0,6	0,3	4	0,55	0,9	6	50	2	●
MG-2BP-R0.3-M08		0,6	0,3	4	0,55	0,9	8	50	2	●
MG-2BP-R0.4-M04		0,8	0,4	4	0,75	1,2	4	50	2	●
MG-2BP-R0.4-M06		0,8	0,4	4	0,75	1,2	6	50	2	●
MG-2BP-R0.4-M08		0,8	0,4	4	0,75	1,2	8	50	2	●
MG-2BP-R0.4-M10		0,8	0,4	4	0,75	1,2	10	50	2	●
MG-2BP-R0.5-M04		1	0,5	4	0,95	1,5	4	50	2	●
MG-2BP-R0.5-M06		1	0,5	4	0,95	1,5	6	50	2	●
MG-2BP-R0.5-M08		1	0,5	4	0,95	1,5	8	50	2	●
MG-2BP-R0.5-M10		1	0,5	4	0,95	1,5	10	50	2	●
MG-2BP-R0.5-M12		1	0,5	4	0,95	1,5	12	50	2	●
MG-2BP-R0.6-M06		1,2	0,6	4	1,15	1,8	6	50	2	●
MG-2BP-R0.6-M08		1,2	0,6	4	1,15	1,8	8	50	2	●
MG-2BP-R0.6-M12		1,2	0,6	4	1,15	1,8	12	50	2	●
MG-2BP-R0.6-M16		1,2	0,6	4	1,15	1,8	16	50	2	●
MG-2BP-R0.75-M08		1,5	0,75	4	1,45	2,3	8	50	2	●
MG-2BP-R0.75-M12		1,5	0,75	4	1,45	2,3	12	50	2	●
MG-2BP-R0.75-M16		1,5	0,75	4	1,45	2,3	16	50	2	●
MG-2BP-R1.0-M06		2	1	4	1,95	3	6	50	2	●
MG-2BP-R1.0-M08		2	1	4	1,95	3	8	50	2	●
MG-2BP-R1.0-M10		2	1	4	1,95	3	10	50	2	●
MG-2BP-R1.0-M12		2	1	4	1,95	3	12	50	2	●
MG-2BP-R1.0-M16		2	1	4	1,95	3	16	50	2	●
MG-2BP-R1.0-M20		2	1	4	1,95	3	20	50	2	●
MG-2BP-R1.25-M08		2,5	1,25	4	2,4	3,7	8	50	2	●
MG-2BP-R1.25-M12		2,5	1,25	4	2,4	3,7	12	50	2	●
MG-2BP-R1.25-M16		2,5	1,25	4	2,4	3,7	16	60	2	●
MG-2BP-R1.25-M20		2,5	1,25	4	2,4	3,7	20	60	2	●
MG-2BP-R1.5-M08		3	1,5	6	2,85	4,5	8	50	2	●
MG-2BP-R1.5-M10		3	1,5	6	2,85	4,5	10	50	2	●
MG-2BP-R1.5-M12		3	1,5	6	2,85	4,5	12	50	2	●
MG-2BP-R1.5-M16		3	1,5	6	2,85	4,5	16	60	2	●
MG-2BP-R1.5-M20		3	1,5	6	2,85	4,5	20	60	2	●
MG-2BP-R2.0-M10		4	2	6	3,85	6	10	60	2	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

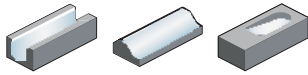
Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehrgeeignet
- ✓ Geeignet

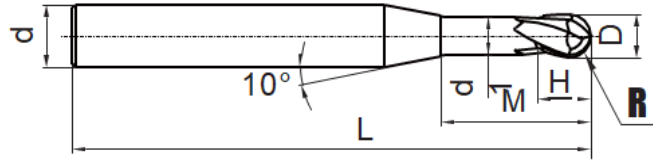
Kugelfräser

Mittlere Bearbeitung

MG-2BP



- über Mittschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d (h6)	d ₁	H	M	L		MGH50
MG-2BP-R2.0-M16		4	2	6	3,85	6	16	60	2	●
MG-2BP-R2.0-M20		4	2	6	3,85	6	20	60	2	●
MG-2BP-R2.0-M25		4	2	6	3,85	6	25	60	2	●
MG-2BP-R2.5-M16		5	2,5	6	4,85	7,5	16	60	2	●
MG-2BP-R2.5-M25		5	2,5	6	4,85	7,5	25	70	2	●

- Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Workpiece material

P	M	K	N	S	H
✓	✓	✓			

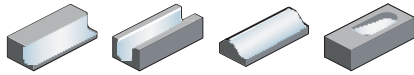
✓ Sehr geeignet

✓ Geeignet

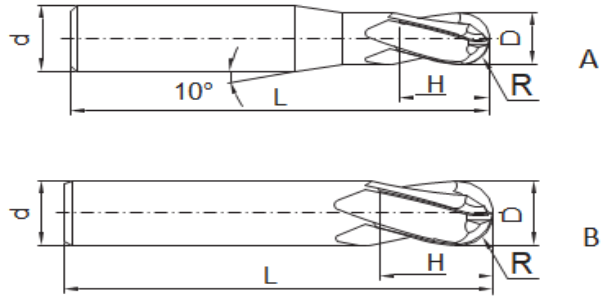
Kugelfräser

Mittlere Bearbeitung

MG-4B



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH50
MG-4B-R1.5		3	1,5	6	6	50	4	A	●
MG-4B-R2.0		4	2	6	8	50	4	A	●
MG-4B-R2.5		5	2,5	6	10	50	4	A	●
MG-4B-R3.0		6	3	6	12	50	4	B	●
MG-4B-R4.0		8	4	8	16	60	4	B	●
MG-4B-R5.0		10	5	10	20	75	4	B	●
MG-4B-R6.0		12	6	12	24	75	4	B	●
MG-4B-R7.0		14	7	14	28	75	4	B	●
MG-4B-R8.0		16	8	16	32	100	4	B	●
MG-4B-R9.0		18	9	18	36	100	4	B	●
MG-4B-R10.0		20	10	20	40	100	4	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

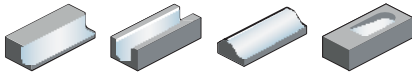
- ✓ Sehrgeeignet
- ✓ Geeignet

ENDMILL

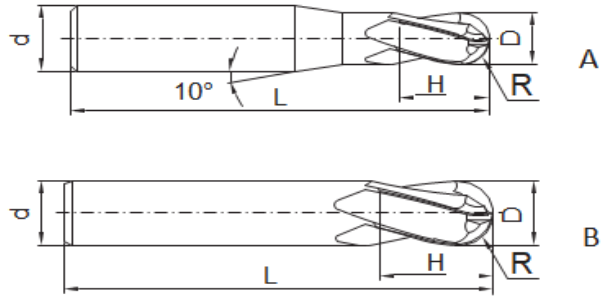
Kugelfräser langer Schaft

Mittlere Bearbeitung

MG-4BL



- über Mittschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH50
MG-4BL-R1.5		3	1,5	6	6	75	4	A	●
MG-4BL-R2.0		4	2	6	8	75	4	A	●
MG-4BL-R2.5		5	2,5	6	10	75	4	A	●
MG-4BL-R3.0		6	3	6	12	75	4	B	●
MG-4BL-R4.0		8	4	8	16	100	4	B	●
MG-4BL-R5.0		10	5	10	20	100	4	B	●
MG-4BL-R6.0		12	6	12	24	100	4	B	●
MG-4BL-R7.0		14	7	14	28	100	4	B	●
MG-4BL-R8.0		16	8	16	32	150	4	B	●
MG-4BL-R9.0		18	9	18	36	150	4	B	●
MG-4BL-R10.0		20	10	20	40	150	4	B	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

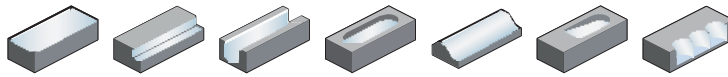
✓ Sehr geeignet

✓ Geeignet

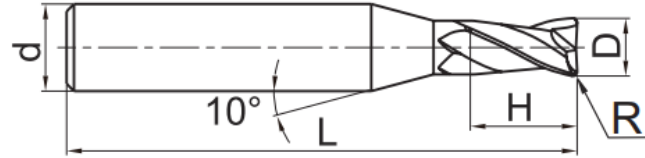
ENDMILL

Torusfräser **Mittlere Bearbeitung**

MG-2R



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Sorte
		D	R	d (h6)	H	L		MGH50
MG-2R-D1.0R0.2		1	0,2	4	3	50	2	●
MG-2R-D1.5R0.2		1,5	0,2	4	4	50	2	●
MG-2R-D2.0R0.2		2	0,2	4	6	50	2	●
MG-2R-D2.0R0.5		2	0,5	4	6	50	2	●
MG-2R-D2.5R0.2		2,5	0,2	4	8	50	2	●
MG-2R-D2.5R0.5		2,5	0,5	4	8	50	2	○
MG-2R-D3.0R0.2		3	0,2	4	8	50	2	●
MG-2R-D3.0R0.3		3	0,3	4	8	50	2	●
MG-2R-D3.0R0.5		3	0,5	4	8	50	2	●
MG-2R-D4.0R0.2		4	0,2	4	11	50	2	●
MG-2R-D4.0R0.3		4	0,3	4	11	50	2	●
MG-2R-D4.0R0.5		4	0,5	4	11	50	2	●
MG-2R-D4.0R1.0		4	1	4	11	50	2	○
MG-2R-D5.0R0.3		5	0,3	6	13	50	2	○
MG-2R-D5.0R0.5		5	0,5	6	13	50	2	●
MG-2R-D5.0R1.0		5	1	6	13	50	2	○
MG-2R-D6.0R0.3		6	0,3	6	16	50	2	●
MG-2R-D6.0R0.5		6	0,5	6	16	50	2	●
MG-2R-D6.0R1.0		6	1	6	16	50	2	●
MG-2R-D8.0R0.3		8	0,3	8	20	60	2	●
MG-2R-D8.0R0.5		8	0,5	8	20	60	2	●
MG-2R-D8.0R1.0		8	1	8	20	60	2	○
MG-2R-D10.0R0.5		10	0,5	10	25	75	2	○
MG-2R-D10.0R1.0		10	1	10	25	75	2	○
MG-2R-D10.0R1.5		10	1,5	10	25	75	2	●
MG-2R-D10.0R2.0		10	2	10	25	75	2	○
MG-2R-D12.0R0.5		12	0,5	12	30	75	2	○
MG-2R-D12.0R1.0		12	1	12	30	75	2	○
MG-2R-D12.0R1.5		12	1,5	12	30	75	2	○
MG-2R-D12.0R2.0		12	2	12	30	75	2	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

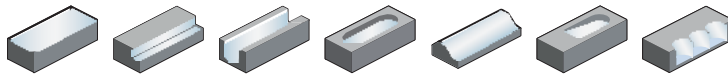
✓ Sehr geeignet

✓ Geeignet

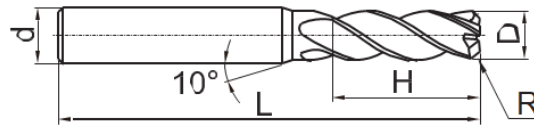
ENDMILL

Torusfräser **Mittlere Bearbeitung**

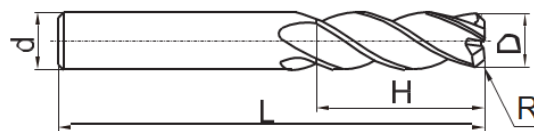
MG-4R



– über Mittschneidend
– Spiralwinkel 35°



A



B

Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH50
MG-4R-D3.0R0.2		3	0,2	4	8	50	4	A	●
MG-4R-D4.0R0.3		4	0,3	4	10	50	4	B	○
MG-4R-D4.0R0.5		4	0,5	4	10	50	4	B	●
MG-4R-D5.0R0.5		5	0,5	6	13	50	4	A	●
MG-4R-D5.0R1.0		5	1	6	13	50	4	A	●
MG-4R-D6.0R0.5		6	0,5	6	16	50	4	B	●
MG-4R-D6.0R1.0		6	1	6	16	50	4	B	●
MG-4R-D8.0R0.5		8	0,5	8	20	60	4	B	●
MG-4R-D8.0R1.0		8	1	8	20	60	4	B	●
MG-4R-D10.0R0.5		10	0,5	10	25	75	4	B	●
MG-4R-D10.0R1.0		10	1	10	25	75	4	B	●
MG-4R-D10.0R2.0		10	2	10	25	75	4	B	●
MG-4R-D10.0R3.0		10	3	10	25	75	4	B	●
MG-4R-D12.0R0.5		12	0,5	12	30	75	4	B	●
MG-4R-D12.0R1.0		12	1	12	30	75	4	B	●
MG-4R-D12.0R2.0		12	2	12	30	75	4	B	●
MG-4R-D12.0R3.0		12	3	12	30	75	4	B	●
MG-4RL-D6.0R1.0		6	1	6	16	75	4	B	●
MG-4RL-D8.0R0.5		8	0,5	8	20	100	4	B	●
MG-4RL-D8.0R1.0		8	1	8	20	100	4	B	●
MG-4RL-D10.0R0.5		10	0,5	10	25	100	4	B	●
MG-4RL-D10.0R1.0		10	1	10	25	100	4	B	●
MG-4RL-D10.0R2.0		10	2	10	25	100	4	B	●
MG-4RL-D12.0R0.5		12	0,5	12	30	100	4	B	●
MG-4RL-D12.0R1.0		12	1	12	30	100	4	B	●
MG-4RL-D12.0R2.0		12	2	12	30	100	4	B	●
MG-4RL-D16.0R1.0		16	1	16	45	150	4	B	●
MG-4RL-D16.0R2.0		16	2	16	45	150	4	B	●
MG-4RL-D6.0R1.0		6	1	6	16	75	4	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

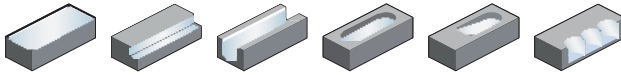
Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

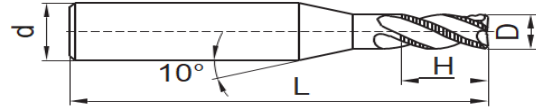
Schaftfräser Schruppverzahnung

Mittlere Bearbeitung

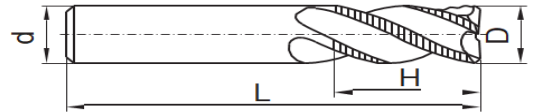
MG-4W



- über Mitteschneidend
- Spiralwinkel 30°



A



B

Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH50
MG-4W-D6.0		6	6	16	50	4	B	●
MG-4W-D7.0		7	8	20	60	4	A	●
MG-4W-D8.0		8	8	20	60	4	B	●
MG-4W-D9.0		9	10	22	75	4	A	●
MG-4W-D10.0		10	10	25	75	4	B	●
MG-4W-D11.0		11	12	26	75	4	A	●
MG-4W-D12.0		12	12	30	75	4	B	●
MG-4W-D16.0		16	16	45	100	4	B	●
MG-4W-D20.0		20	20	45	100	4	B	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

Workpiece material					
P	M	K	N	S	H
✓	✓	✓			

- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

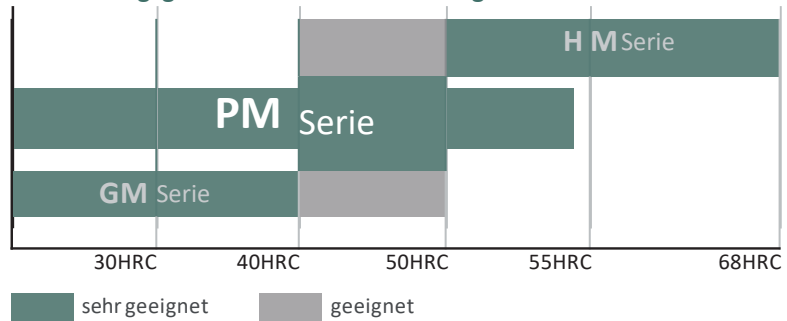


SM Serie

Für die anspruchsvolle Bearbeitung

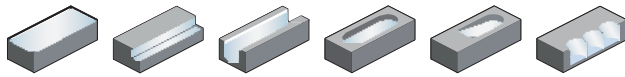
- Für die Bearbeitung von Stahl bis max. 55 HRC und Gusseisen bis hin zu schwerzerspanbaren Werkstoffen.
- Sehr stabile Schneidkante mit hoher Steifigkeit für höhere Schnittgeschwindigkeiten und Vorschübe.
- Schaftfräser, Kugelfräser, Torusfräser und Hochvorschubfräser
- Durchmesserbereich 3,0–20,0 mm

Anwendungsgebiete bei der Bearbeitung von Stahl

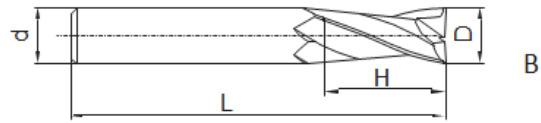
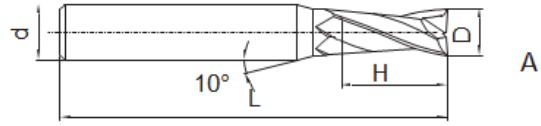


Schaftfräser Hochleistungsbearbeitung

SM-2E



- über Mitteschneidend
- Spiralwinkel 30°



ENDMILL

Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH55
SM-2E-D1.0S		1	4	3	50	2	A	●
SM-2E-D1.5S		1,5	4	4	50	2	A	●
SM-2E-D2.0S		2	4	6	50	2	A	●
SM-2E-D2.5S		2,5	4	8	50	2	A	●
SM-2E-D3.0S		3	4	8	50	2	A	●
SM-2E-D4.0S		4	4	11	50	2	B	●
SM-2E-D1.0		1	6	3	50	2	A	●
SM-2E-D1.5		1,5	6	4	50	2	A	●
SM-2E-D2.0		2	6	6	50	2	A	●
SM-2E-D2.5		2,5	6	8	50	2	A	●
SM-2E-D3.0		3	6	8	50	2	A	●
SM-2E-D3.5		3,5	6	10	50	2	A	●
SM-2E-D4.0		4	6	11	50	2	A	●
SM-2E-D4.5		4,5	6	11	50	2	A	●
SM-2E-D5.0		5	6	13	50	2	A	●
SM-2E-D5.5		5,5	6	16	50	2	A	●
PM-2E-D6.0		6	6	16	50	2	B	●
SM-2E-D7.0		7	8	20	60	2	A	●
SM-2E-D8.0		8	8	20	60	2	B	●
SM-2E-D9.0		9	10	22	75	2	A	●
SM-2E-D10.0		10	10	25	75	2	B	●
SM-2E-D11.0		11	12	26	75	2	A	●
SM-2E-D12.0		12	12	30	75	2	B	●
SM-2E-D14.0		14	14	32	75	2	B	●
SM-2E-D16.0		16	16	45	100	2	B	●
SM-2E-D18.0		18	18	45	100	2	B	○
SM-2E-D20.0		20	20	45	100	2	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

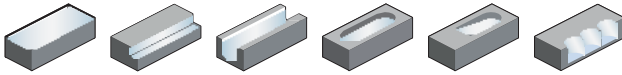
Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

- ✓ Sehr geeignet
- ✓ Geeignet

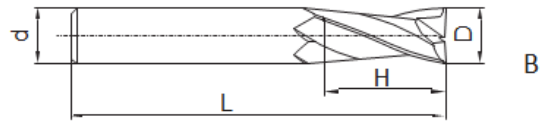
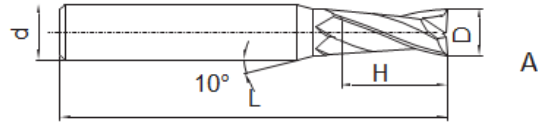
Schaftfräser lange Schneide

Hochleistungsbearbeitung

SM-2EL



- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH55
SM-2EL-D3.0		3	6	12	75	2	A	●
SM-2EL-D4.0		4	6	15	75	2	A	●
SM-2EL-D5.0		5	6	20	75	2	A	●
SM-2EL-D6.0		6	6	20	75	2	B	●
SM-2EL-D8.0		8	8	25	100	2	B	●
SM-2EL-D10.0		10	10	30	100	2	B	●
SM-2EL-D12.0		12	12	35	100	2	B	●
SM-2EL-D14.0		14	14	40	100	2	B	●
SM-2EL-D16.0		16	16	50	150	2	B	●
SM-2EL-D20.0		20	20	55	150	2	B	●

ENDMILL

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

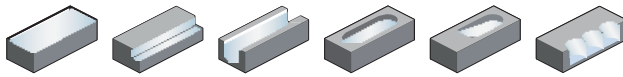
Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

- ✓ Sehr geeignet
- ✓ Geeignet

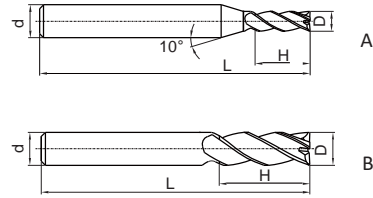
Schaftfräser

Hochleistungsbearbeitung

SM-4E-G



- über Mitteschneidend
- Spiralwinkel 30°



ENDMILL

Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH55
SM-4E-D1.0S-G		1	4	3	50	4	A	●
SM-4E-D1.5S-G		1,5	4	4	50	4	A	●
SM-4E-D2.0S-G		2	4	6	50	4	A	●
SM-4E-D2.5S-G		2,5	4	8	50	4	A	●
SM-4E-D3.0S-G		3	4	8	50	4	A	●
SM-4E-D4.0S-G		4	4	11	50	4	B	●
SM-4E-D1.0-G		1	6	3	50	4	A	●
SM-4E-D1.5-G		1,5	6	4	50	4	A	●
SM-4E-D2.0-G		2	6	6	50	4	A	●
SM-4E-D2.5-G		2,5	6	8	50	4	A	●
SM-4E-D3.0-G		3	6	8	50	4	A	●
SM-4E-D3.5-G		3,5	6	10	50	4	A	●
SM-4E-D4.0-G		4	6	11	50	4	A	●
SM-4E-D4.5-G		4,5	6	11	50	4	A	●
SM-4E-D5.0-G		5	6	13	50	4	A	●
SM-4E-D5.5-G		5,5	6	16	50	4	A	●
SM-4E-D6.0-G		6	6	16	50	4	B	●
SM-4E-D7.0-G		7	8	20	60	4	A	●
SM-4E-D8.0-G		8	8	20	60	4	B	●
SM-4E-D9.0-G		9	10	22	75	4	A	●
SM-4E-D10.0-G		10	10	25	75	4	B	●
SM-4E-D11.0-G		11	12	26	75	4	A	●
SM-4E-D12.0-G		12	12	30	75	4	B	●
SM-4E-D14.0-G		14	14	32	75	4	B	●
SM-4E-D16.0-G		16	16	45	100	4	B	●
SM-4E-D18.0-G		18	18	45	100	4	B	●
SM-4E-D20.0-G		20	20	45	100	4	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

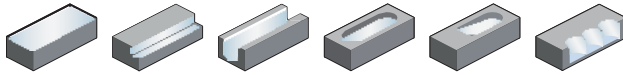
Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

- ✓ Sehr geeignet
- ✓ Geeignet

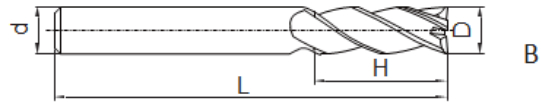
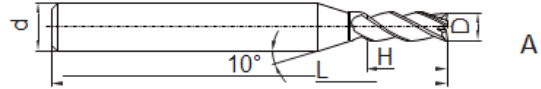
Schaftfräser lange Schneide

Hochleistungsbearbeitung

SM-4EL-G



- über Mittschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH55
SM-4EL-D3.0-G		3	6	12	75	4	A	●
SM-4EL-D4.0-G		4	6	15	75	4	A	●
SM-4EL-D5.0-G		5	6	20	75	4	A	●
SM-4EL-D6.0-G		6	6	20	75	4	B	●
SM-4EL-D8.0-G		8	8	25	100	4	B	●
SM-4EL-D10.0-G		10	10	30	100	4	B	●
SM-4EL-D12.0-G		12	12	35	100	4	B	●
SM-4EL-D14.0-G		14	14	40	100	4	B	●
SM-4EL-D16.0-G		16	16	50	150	4	B	●
SM-4EL-D20.0-G		20	20	55	150	4	B	●

ENDMILL

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

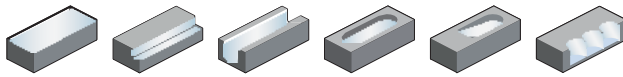
Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

- ✓ Sehr geeignet
- ✓ Geeignet

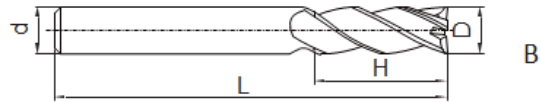
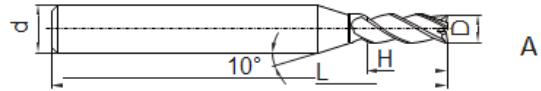
Schaftfräser extra lange Schneide

Hochleistungsbearbeitung

SM-4EX-G



- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH55
SM-4EX-D3.0-G		3	6	20	75	4	A	●
SM-4EX-D4.0-G		4	6	25	75	4	A	●
SM-4EX-D5.0-G		5	6	30	75	4	A	●
SM-4EX-D6.0-G		6	6	30	75	4	B	●
SM-4EX-D8.0-G		8	8	40	100	4	B	●
SM-4EX-D10.0-G		10	10	50	110	4	B	●
SM-4EX-D12.0-G		12	12	50	110	4	B	●
SM-4EX-D16.0-G		16	16	70	150	4	B	●
SM-4EX-D20.0-G		20	20	75	150	4	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

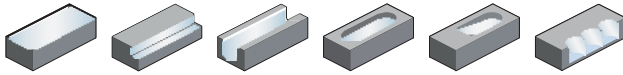
- ✓ Sehrgeeignet
- ✓ Geeignet

ENDMILL

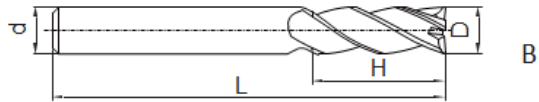
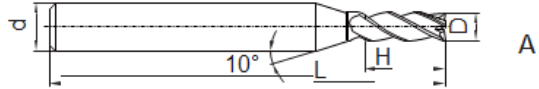
Schaftfräser

Hochleistungsbearbeitung

SM-4E



- über Mitteschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH55
SM-4E-D1.0S		1	4	3	50	4	A	●
SM-4E-D1.5S		1,5	4	4	50	4	A	●
SM-4E-D2.0S		2	4	6	50	4	A	●
SM-4E-D2.5S		2,5	4	8	50	4	A	●
SM-4E-D3.0S		3	4	8	50	4	A	●
SM-4E-D4.0S		4	4	11	50	4	B	●
SM-4E-D1.0		1	6	3	50	4	A	●
SM-4E-D1.5		1,5	6	4	50	4	A	●
SM-4E-D2.0		2	6	6	50	4	A	●
SM-4E-D2.5		2,5	6	8	50	4	A	●
SM-4E-D3.0		3	6	8	50	4	A	●
SM-4E-D3.5		3,5	6	10	50	4	A	●
SM-4E-D4.0		4	6	11	50	4	A	●
SM-4E-D4.5		4,5	6	11	50	4	A	●
SM-4E-D5.0		5	6	13	50	4	A	●
SM-4E-D5.5		5,5	6	16	50	4	A	●
SM-4E-D6.0		6	6	16	50	4	B	●
SM-4E-D7.0		7	8	20	60	4	A	●
SM-4E-D8.0		8	8	20	60	4	B	●
SM-4E-D9.0		9	10	22	75	4	A	●
SM-4E-D10.0		10	10	25	75	4	B	●
SM-4E-D11.0		11	12	26	75	4	A	●
SM-4E-D12.0		12	12	30	75	4	B	●
SM-4E-D14.0		14	14	32	75	4	B	●
SM-4E-D16.0		16	16	45	100	4	B	●
SM-4E-D18.0		18	18	45	100	4	B	●
SM-4E-D20.0		20	20	45	100	4	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

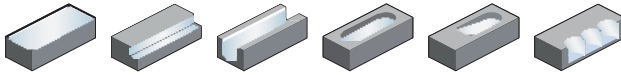
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

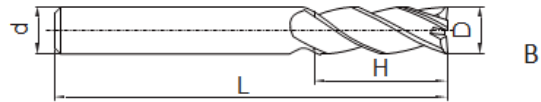
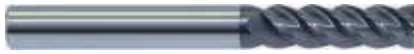
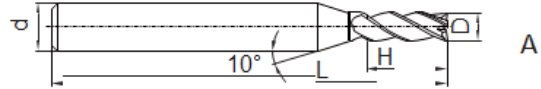
Schaftfräser lange Schneide

Hochleistungsbearbeitung

SM-4EL



- über Mitteschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			MGH55
SM-4EL-D3.0		3	6	12	75	4	A	●
SM-4EL-D4.0		4	6	15	75	4	A	●
SM-4EL-D5.0		5	6	20	75	4	A	●
SM-4EL-D6.0		6	6	20	75	4	B	●
SM-4EL-D8.0		8	8	25	100	4	B	●
SM-4EL-D10.0		10	10	30	100	4	B	●
SM-4EL-D12.0		12	12	35	100	4	B	●
SM-4EL-D14.0		14	14	40	100	4	B	●
SM-4EL-D16.0		16	16	50	150	4	B	●
SM-4EL-D20.0		20	20	55	150	4	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

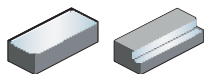
✓ Sehr geeignet

✓ Geeignet

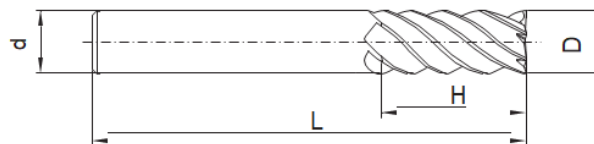
Schaftfräser

Hochleistungsbearbeitung

SM-6E



- nicht über Mitteschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Sorte
		D	d (h6)	H	L		MGH55
SM-6E-D6.0		6	6	18	60	6	●
SM-6E-D8.0		8	8	20	60	6	●
SM-6E-D10.0		10	10	30	75	6	●
SM-6E-D12.0		12	12	32	75	6	●
SM-6E-D16.0		16	16	40	100	6	●
SM-6E-D20.0		20	20	45	100	6	●

- Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
✓	✓	✓			✓

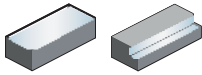
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

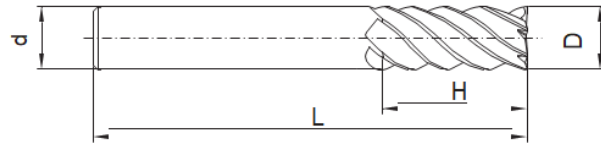
Schaftfräser lange Schneide

Hochleistungsbearbeitung

SM-6EL



- nicht über Mitteschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Sorte
		D	d (h6)	H	L		MGH55
SM-6EL-D6.0		6	6	24	75	6	●
SM-6EL-D8.0		8	8	32	75	6	●
SM-6EL-D10.0		10	10	40	100	6	●
SM-6EL-D12.0		12	12	45	100	6	●
SM-6EL-D16.0		16	16	64	150	6	●
SM-6EL-D20.0		20	20	75	150	6	●

- Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

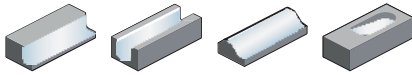
P	M	K	N	S	H
✓	✓	✓			✓

✓ Sehr geeignet

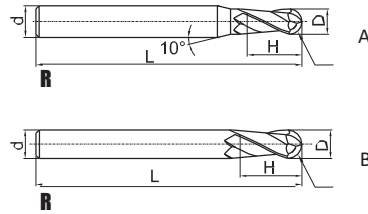
✓ Geeignet

Kugelfräser **Hochleistungsbearbeitung**

SM-2B



- über Mittschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH55
SM-2B-R0.5S		1	0,5	4	2	50	2	A	●
SM-2B-R0.75S		1,5	0,75	4	3	50	2	A	●
SM-2B-R1.0S		2	1	4	4	50	2	A	●
SM-2B-R1.25S		2,5	1,25	4	5	50	2	A	●
SM-2B-R1.5S		3	1,5	4	6	50	2	A	●
SM-2B-R2.0S		4	2	4	8	50	2	B	●
SM-2B-R0.5		1	0,5	6	2	50	2	A	●
SM-2B-R0.75		1,5	0,75	6	3	50	2	A	●
SM-2B-R1.0		2	1	6	4	50	2	A	●
SM-2B-R1.25		2,5	1,25	6	5	50	2	A	●
SM-2B-R1.5		3	1,5	6	6	50	2	A	●
SM-2B-R1.75		3,5	1,75	6	8	50	2	A	●
SM-2B-R2.0		4	2	6	8	50	2	A	●
SM-2B-R2.5		5	2,5	6	10	50	2	A	●
SM-2B-R2.75		5,5	2,75	6	12	50	2	A	●
SM-2B-R3.0		6	3	6	12	50	2	B	●
SM-2B-R3.5		7	3,5	8	14	60	2	A	●
SM-2B-R4.0		8	4	8	16	60	2	B	●
SM-2B-R4.5		9	4,5	10	18	75	2	A	●
SM-2B-R5.0		10	5	10	20	75	2	B	●
SM-2B-R6.0		12	6	12	24	75	2	B	●
SM-2B-R7.0		14	7	14	28	75	2	B	●
SM-2B-R8.0		16	8	16	32	100	2	B	●
SM-2B-R10.0		20	10	20	40	100	2	B	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

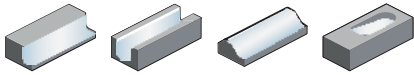
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

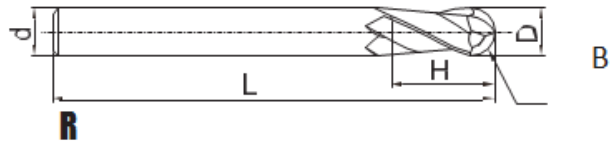
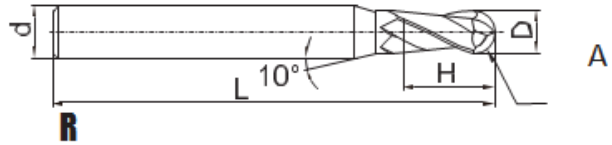
Kugelfräser langer Schaft

Hochleistungsbearbeitung

SM-2BL



- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH55
SM-2BL-R1.0		2	1	6	4	75	2	A	●
SPM-2BL-R1.25		2,5	1,25	6	5	75	2	A	●
SM-2BL-R1.5		3	1,5	6	6	75	2	A	●
SM-2BL-R1.75		3,5	1,75	6	8	75	2	A	●
SM-2BL-R2.0		4	2	6	8	75	2	A	●
SM-2BL-R2.5		5	2,5	6	10	75	2	A	●
SM-2BL-R2.75		5,5	2,75	6	12	75	2	A	●
SM-2BL-R3.0		6	3	6	12	75	2	B	●
SM-2BL-R3.5		7	3,5	8	14	75	2	A	●
SM-2BL-R4.0		8	4	8	16	100	2	B	●
SM-2BL-R4.5		9	4,5	10	18	100	2	A	●
SM-2BL-R5.0		10	5	10	20	100	2	B	●
SM-2BL-R6.0		12	6	12	24	100	2	B	●
SM-2BL-R7.0		14	7	14	28	100	2	B	●
SM-2BL-R8.0		16	8	16	32	150	2	B	●
SM-2BL-R10.0		20	10	20	40	150	2	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

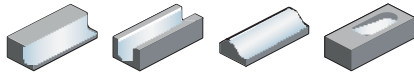
P	M	K	N	S	H
✓	✓	✓			✓

✓ Sehr geeignet

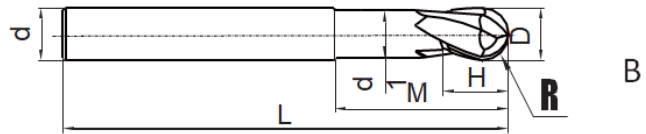
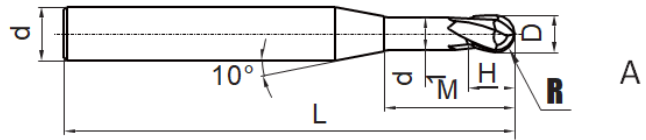
✓ Geeignet

Kugelfräser kurze Schneide **Hochleistungsbearbeitung**

SM-2BFP



- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]							Zähne	Geometrie	Sorte
		D	R	d (h6)	d ₁	H	M	L			MGH55
SM-2BFP-R0.5		1	0,5	6	0,95	1	2,5	75	2	A	●
SM-2BFP-R0.75		1,5	0,75	6	1,45	1,5	3	75	2	A	●
SM-2BFP-R1.0		2	1	6	1,95	2	4	75	2	A	●
SM-2BFP-R1.5		3	1,5	6	2,85	3	6	75	2	A	●
SM-2BFP-R2.0		4	2	6	3,85	4	8	75	2	A	●
SM-2BFP-R2.5		5	2,5	6	4,85	5	10	75	2	A	●
SM-2BFP-R3.0		6	3	6	5,8	6	12	75	2	B	●
SM-2BFP-R4.0		8	4	8	7,8	8	16	100	2	B	●
SM-2BFP-R5.0		10	5	10	9,6	10	20	100	2	B	●
SM-2BFP-R6.0		12	6	12	11,5	12	24	100	2	B	●
SM-2BFP-R8.0		16	8	16	15,5	16	32	150	2	B	●
SM-2BFP-R10.0		20	10	20	19,5	20	40	150	2	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

✓ Sehr geeignet

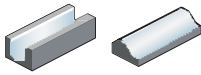
✓ Geeignet

ENDMILL E

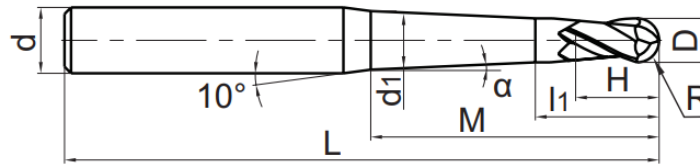
Kugelfräser konischer Hals

Hochleistungsbearbeitung

SM-2BC



- Zylinderschaft
- über Mitteschneidend
- Spiralwinkel 30°



ENDMILL

Artikel	Abmessungen [mm]										Zähne	Sorte MGH55
	D	R	d (h6)	d ₁	M	H	L	α	l ₁			
SM-2BC05-R0.25-M03	0,5	0,25	4	0,49	3	0,5	50	0,5	1,5	2	o	
SM-2BC05-R0.25-M05	0,5	0,25	4	0,53	5	0,5	50	0,5	1,5	2	o	
SM-2BC10-R0.25-M03	0,5	0,25	4	0,52	3	0,5	50	1	1,5	2	o	
SM-2BC10-R0.25-M05	0,5	0,25	4	0,59	5	0,5	50	1	1,5	2	o	
SM-2BC15-R0.25-M03	0,5	0,25	4	0,54	3	0,5	50	1,5	1,5	2	o	
SM-2BC15-R0.25-M05	0,5	0,25	4	0,65	5	0,5	50	1,5	1,5	2	o	
SM-2BC05-R0.30-M05	0,6	0,3	4	0,62	5	0,6	50	0,5	1,6	2	o	
SM-2BC05-R0.30-M08	0,6	0,3	4	0,68	8	0,6	50	0,5	1,6	2	o	
SM-2BC10-R0.30-M05	0,6	0,3	4	0,68	5	0,6	50	1	1,6	2	o	
SM-2BC10-R0.30-M08	0,6	0,3	4	0,79	8	0,6	50	1	1,6	2	o	
SM-2BC10-R0.30-M10	0,6	0,3	4	0,86	10	0,6	50	1	1,6	2	o	
SM-2BC10-R0.30-M12	0,6	0,3	4	0,93	12	0,6	50	1	1,6	2	o	
SM-2BC10-R0.30-M15	0,6	0,3	4	1,03	15	0,6	50	1	1,6	2	o	
SM-2BC15-R0.30-M05	0,6	0,3	4	0,74	5	0,6	50	1,5	1,6	2	o	
SM-2BC15-R0.30-M08	0,6	0,3	4	0,9	8	0,6	50	1,5	1,6	2	o	
SM-2BC05-R0.40-M08	0,8	0,4	4	0,87	8	0,8	50	0,5	1,8	2	o	
SM-2BC10-R0.40-M08	0,8	0,4	4	0,98	8	0,8	50	1	1,8	2	o	
SM-2BC15-R0.40-M08	0,8	0,4	4	1,09	8	0,8	50	1,5	1,8	2	o	
SM-2BC05-R0.40-M12	0,8	0,4	4	0,94	12	0,8	60	0,5	1,8	2	o	
SM-2BC10-R0.40-M12	0,8	0,4	4	1,12	12	0,8	60	1	1,8	2	o	
SM-2BC15-R0.40-M12	0,8	0,4	4	1,3	12	0,8	60	1,5	1,8	2	o	
SM-2BC05-R0.50-M10	1	0,5	6	1,08	10	1	60	0,5	2,5	2	o	
SM-2BC05-R0.50-M15	1	0,5	6	1,16	15	1	60	0,5	2,5	2	o	
SM-2BC10-R0.50-M10	1	0,5	6	1,21	10	1	60	1	2,5	2	o	
SM-2BC10-R0.50-M15	1	0,5	6	1,38	15	1	60	1	2,5	2	o	
SM-2BC15-R0.50-M10	1	0,5	6	1,34	10	1	60	1,5	2,5	2	o	
SM-2BC15-R0.50-M15	1	0,5	6	1,6	15	1	60	1,5	2,5	2	o	
SM-2BC20-R0.50-M15	1	0,5	6	1,82	15	1	60	2	2,5	2	o	
SM-2BC05-R0.50-M20	1	0,5	6	1,25	20	1	70	0,5	2,5	2	o	
SM-2BC05-R0.50-M25	1	0,5	6	1,34	25	1	70	0,5	2,5	2	o	
SM-2BC05-R0.50-M30	1	0,5	6	1,42	30	1	70	0,5	2,5	2	o	
SM-2BC10-R0.50-M20	1	0,5	6	1,56	20	1	70	1	2,5	2	o	
SM-2BC10-R0.50-M25	1	0,5	6	1,73	25	1	70	1	2,5	2	o	
SM-2BC10-R0.50-M30	1	0,5	6	1,91	30	1	70	1	2,5	2	o	
SM-2BC15-R0.50-M20	1	0,5	6	1,86	20	1	70	1,5	2,5	2	o	
SM-2BC20-R0.50-M20	1	0,5	6	2,17	20	1	70	2	2,5	2	o	
SM-2BC30-R0.50-M20	1	0,5	6	2,78	20	1	70	3	2,5	2	o	

* Mit Innenkühlung

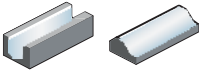
Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

- ✓ Sehr geeignet
- ✓ Geeignet

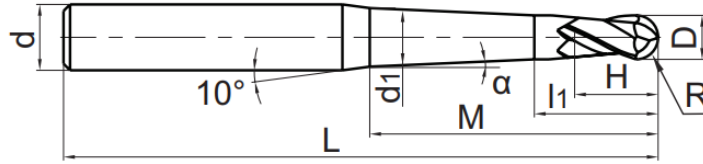
Kugelfräser konischer Hals

Hochleistungsbearbeitung

SM-2BC



- Zylinderschaft
- über Mittescheidend
- Spiralwinkel 30°



Artikel	Abmessungen [mm]										Zähne	Sorte KMG405
	D	R	d (h6)	d ₁	M	H	L	α	l ₁			
SM-2BC50-R0.50-M20	1	0,5	6	4,01	20	1	70	5	2,5	2	○	
SM-2BC10-R0.50-M35	1	0,5	6	2,08	35	1	80	1	2,5	2	○	
SM-2BC05-R0.60-M12	1,2	0,6	6	1,31	12	1,2	60	0,5	2,7	2	○	
SM-2BC10-R0.60-M12	1,2	0,6	6	1,47	12	1,2	60	1	2,7	2	○	
SM-2BC15-R0.60-M12	1,2	0,6	6	1,63	12	1,2	60	1,5	2,7	2	○	
SM-2BC05-R0.60-M24	1,2	0,6	6	1,52	24	1,2	70	0,5	2,7	2	○	
SM-2BC10-R0.60-M24	1,2	0,6	6	1,89	24	1,2	70	1	2,7	2	○	
SM-2BC15-R0.60-M24	1,2	0,6	6	2,26	24	1,2	70	1,5	2,7	2	○	
SM-2BC05-R0.75-M10	1,5	0,75	6	1,57	10	1,5	60	0,5	3	2	○	
SM-2BC05-R0.75-M15	1,5	0,75	6	1,65	15	1,5	60	0,5	3	2	○	
SM-2BC10-R0.75-M10	1,5	0,75	6	1,69	10	1,5	60	1	3	2	○	
SM-2BC10-R0.75-M15	1,5	0,75	6	1,86	15	1,5	60	1	3	2	○	
SM-2BC15-R0.75-M10	1,5	0,75	6	1,81	10	1,5	60	1,5	3	2	○	
SM-2BC15-R0.75-M15	1,5	0,75	6	2,07	15	1,5	60	1,5	3	2	○	
SM-2BC05-R0.75-M30	1,5	0,75	6	1,92	30	1,5	70	0,5	3	2	○	
SM-2BC10-R0.75-M20	1,5	0,75	6	2,04	20	1,5	70	1	3	2	○	
SM-2BC10-R0.75-M30	1,5	0,75	6	2,39	30	1,5	70	1	3	2	○	
SM-2BC15-R0.75-M30	1,5	0,75	6	2,86	30	1,5	70	1,5	3	2	○	
PM-2BC05-R1.0-M20	2	1	6	2,18	20	2	60	0,5	4	2	○	
SM-2BC10-R1.0-M20	2	1	6	2,46	20	2	60	1	4	2	○	
SM-2BC10-R1.0-M25	2	1	6	2,64	25	2	60	1	4	2	○	
SM-2BC15-R1.0-M20	2	1	6	2,74	20	2	60	1,5	4	2	○	
SM-2BC05-R1.0-M30	2	1	6	2,36	30	2	70	0,5	4	2	○	
SM-2BC10-R1.0-M30	2	1	6	2,81	30	2	70	1	4	2	○	
SM-2BC15-R1.0-M30	2	1	6	3,27	30	2	70	1,5	4	2	○	
SM-2BC20-R1.0-M30	2	1	6	3,72	30	2	70	2	4	2	○	
SM-2BC30-R1.0-M30	2	1	6	4,63	30	2	70	3	4	2	○	
SM-2BC05-R1.0-M40	2	1	6	2,53	40	2	80	0,5	4	2	○	
SM-2BC10-R1.0-M35	2	1	6	2,99	35	2	80	1	4	2	○	
SM-2BC10-R1.0-M40	2	1	6	3,16	40	2	80	1	4	2	○	
SM-2BC15-R1.0-M40	2	1	6	3,79	40	2	80	1,5	4	2	○	
SM-2BC20-R1.0-M40	2	1	6	4,42	40	2	80	2	4	2	○	
SM-2BC30-R1.0-M40	2	1	6	5,68	40	2	80	3	4	2	○	
SM-2BC10-R1.0-M50	2	1	6	3,51	50	2	90	1	4	2	○	
SM-2BC05-R1.5-M30	3	1,5	6	3,32	30	3	70	0,5	6	2	○	
SM-2BC10-R1.5-M30	3	1,5	6	3,74	30	3	70	1	6	2	○	
SM-2BC15-R1.5-M30	3	1,5	6	4,16	30	3	70	1,5	6	2	○	

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

Anwendungsgebiet						
P	M	K	N	S	H	
✓	✓	✓				✓

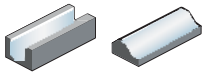
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL E

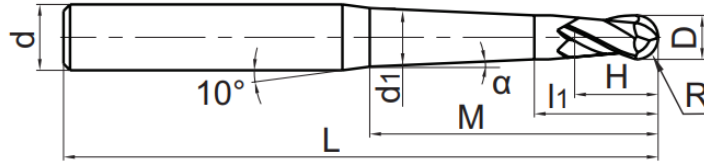
Kugelfräser konischer Hals

Hochleistungsbearbeitung

SM-2BC



- Zylinderschaft
- über Mitteschneidend
- Spiralwinkel 30°



ENDMILL

Artikel	Abmessungen [mm]										Zähne	Sorte
	D	R	d (h6)	d ₁	M	H	L	α	l ₁	MGH55		
SM-2BC05-R1.5-M40	3	1,5	6	3,5	40	3	80	0,5	6	2	○	
SM-2BC10-R1.5-M40	3	1,5	6	4,09	40	3	80	1	6	2	○	
SM-2BC15-R1.5-M40	3	1,5	6	4,69	40	3	80	1,5	6	2	○	
SM-2BC05-R1.5-M50	3	1,5	6	3,67	50	3	90	0,5	6	2	○	
SM-2BC10-R1.5-M50	3	1,5	6	4,44	50	3	90	1	6	2	○	
SM-2BC15-R1.5-M50	3	1,5	6	5,21	50	3	90	1,5	6	2	○	

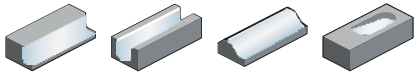
* Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

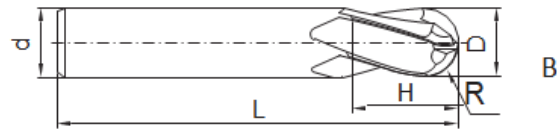
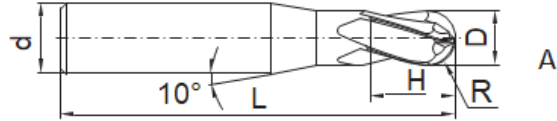
- ✓ Sehr geeignet
- ✓ Geeignet

Kugelfräser Hochleistungsbearbeitung

SM-4B



- über Mittescheidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH55
SM-4B-R1.5		3	1,5	6	6	50	4	A	●
SM-4B-R2.0		4	2	6	8	50	4	A	●
SM-4B-R2.5		5	2,5	6	10	50	4	A	●
SM-4B-R3.0		6	3	6	12	50	4	B	●
SM-4B-R4.0		8	4	8	16	60	4	B	●
SM-4B-R5.0		10	5	10	20	75	4	B	●
SM-4B-R6.0		12	6	12	24	75	4	B	●
SM-4B-R7.0		14	7	14	28	75	4	B	●
SM-4B-R8.0		16	8	16	32	100	4	B	●
SM-4B-R9.0		18	9	18	36	100	4	B	●
SM-4B-R10.0		20	10	20	40	100	4	B	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

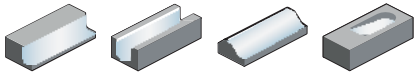
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

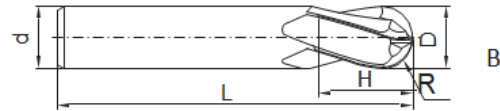
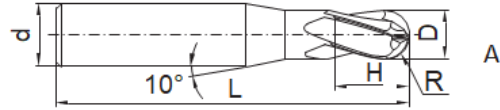
Kugelfräser langer Schaft

Hochleistungsbearbeitung

SM-4BL



- über Mitteschneidend
- Spiralwinkel 30°



ENDMILL

Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH55
SM-4BL-R1.5		3	1,5	6	6	75	4	A	●
SM-4BL-R2.0		4	2	6	8	75	4	A	●
SM-4BL-R2.5		5	2,5	6	10	75	4	A	●
SM-4BL-R3.0		6	3	6	12	75	4	B	●
SM-4BL-R4.0		8	4	8	16	100	4	B	●
SM-4BL-R5.0		10	5	10	20	100	4	B	●
SM-4BL-R6.0		12	6	12	24	100	4	B	●
SM-4BL-R7.0		14	7	14	28	100	4	B	●
SM-4BL-R8.0		16	8	16	32	150	4	B	●
SM-4BL-R9.0		18	9	18	36	150	4	B	●
SM-4BL-R10.0		20	10	20	40	150	4	B	●

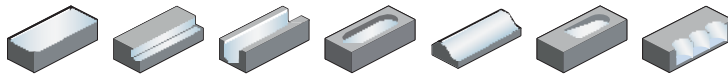
- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

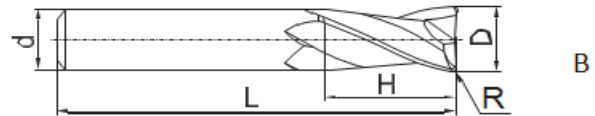
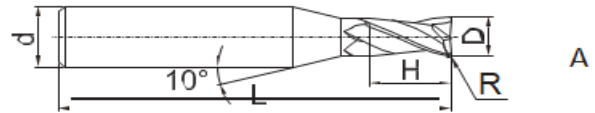
- ✓ Sehr geeignet
- ✓ Geeignet

Torusfräser Hochleistungsbearbeitung

SM-2R



– über Mittescheidend
– Spiralwinkel 30°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH55
SM-2R-D1.0R0.2		1	0,2	4	3	50	2	A	●
SM-2R-D1.5R0.2		1,5	0,2	4	4	50	2	A	●
SM-2R-D2.0R0.2		2	0,2	4	6	50	2	A	●
SM-2R-D2.0R0.5		2	0,5	4	6	50	2	A	●
SM-2R-D2.5R0.2		2,5	0,2	4	8	50	2	A	●
SM-2R-D2.5R0.5		2,5	0,5	4	8	50	2	A	●
SM-2R-D3.0R0.2		3	0,2	4	8	50	2	A	●
SM-2R-D3.0R0.3		3	0,3	4	8	50	2	A	●
SM-2R-D3.0R0.5		3	0,5	4	8	50	2	A	●
SM-2R-D4.0R0.2		4	0,2	4	11	50	2	B	●
SM-2R-D4.0R0.3		4	0,3	4	11	50	2	B	●
SM-2R-D4.0R0.5		4	0,5	4	11	50	2	B	●
SM-2R-D4.0R1.0		4	1	4	11	50	2	B	●
SM-2R-D5.0R0.3		5	0,3	6	13	50	2	A	●
SM-2R-D5.0R0.5		5	0,5	6	13	50	2	A	●
SM-2R-D5.0R1.0		5	1	6	13	50	2	A	●
SM-2R-D6.0R0.3		6	0,3	6	16	50	2	B	●
SM-2R-D6.0R0.5		6	0,5	6	16	50	2	B	●
SM-2R-D6.0R1.0		6	1	6	16	50	2	B	●
SM-2R-D8.0R0.3		8	0,3	8	20	60	2	B	○
SM-2R-D8.0R0.5		8	0,5	8	20	60	2	B	●
SM-2R-D8.0R1.0		8	1	8	20	60	2	B	●
SM-2R-D10.0R0.5		10	0,5	10	25	75	2	B	●
SM-2R-D10.0R1.0		10	1	10	25	75	2	B	●
SM-2R-D10.0R1.5		10	1,5	10	25	75	2	B	●
SM-2R-D10.0R2.0		10	2	10	25	75	2	B	●
SM-2R-D12.0R0.5		12	0,5	12	30	75	2	B	●
SM-2R-D12.0R1.0		12	1	12	30	75	2	B	●
SM-2R-D12.0R1.5		12	1,5	12	30	75	2	B	●
SM-2R-D12.0R2.0		12	2	12	30	75	2	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

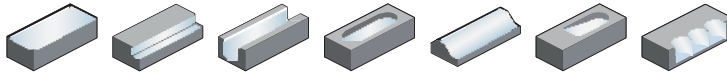
✓ Sehr geeignet

✓ Geeignet

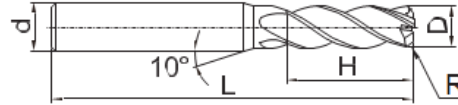
ENDMILL

Torusfräser Hochleistungsbearbeitung

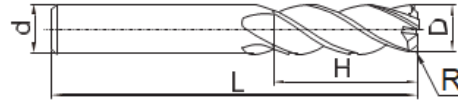
SM-4R



- über Mitteschneidend
- Spiralwinkel 30°



A



B

Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			MGH55
SM-4R-D3.0R0.2		3	0,2	6	8	50	4	A	●
SM-4R-D4.0R0.3		4	0,3	6	10	50	4	A	●
SM-4R-D4.0R0.5		4	0,5	6	10	50	4	A	●
SM-4R-D5.0R0.5		5	0,5	6	13	50	4	A	●
SM-4R-D5.0R1.0		5	1	6	13	50	4	A	●
SM-4R-D6.0R0.5		6	0,5	6	16	50	4	B	●
SM-4R-D6.0R1.0		6	1	6	16	50	4	B	●
SM-4R-D8.0R0.5		8	0,5	8	20	60	4	B	●
SM-4R-D8.0R1.0		8	1	8	20	60	4	B	●
SM-4R-D10.0R0.5		10	0,5	10	25	75	4	B	●
SM-4R-D10.0R1.0		10	1	10	25	75	4	B	●
SM-4R-D10.0R2.0		10	2	10	25	75	4	B	●
SM-4R-D10.0R3.0		10	3	10	25	75	4	B	●
SM-4R-D12.0R0.5		12	0,5	12	30	75	4	B	●
SM-4R-D12.0R1.0		12	1	12	30	75	4	B	●
SM-4R-D12.0R2.0		12	2	12	30	75	4	B	●
SM-4R-D12.0R3.0		12	3	12	30	75	4	B	●
SM-4RL-D6.0R0.5		6	0,5	6	16	75	4	B	●
SM-4RL-D6.0R1.0		6	1	6	16	75	4	B	●
SM-4RL-D8.0R0.5		8	0,5	8	20	100	4	B	●
SM-4RL-D8.0R1.0		8	1	8	20	100	4	B	●
SM-4RL-D10.0R0.5		10	0,5	10	25	100	4	B	●
SM-4RL-D10.0R1.0		10	1	10	25	100	4	B	●
SM-4RL-D10.0R2.0		10	2	10	25	100	4	B	●
SM-4RL-D12.0R0.5		12	0,5	12	30	100	4	B	●
SM-4RL-D12.0R1.0		12	1	12	30	100	4	B	●
SM-4RL-D12.0R2.0		12	2	12	30	100	4	B	●
SM-4RL-D16.0R1.0		16	1	16	45	150	4	B	●
SM-4RL-D16.0R2.0		16	2	16	45	150	4	B	●

● Ab Lager ○ Auf Anfrage
MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
✓	✓	✓			✓

✓ Sehr geeignet
✓ Geeignet

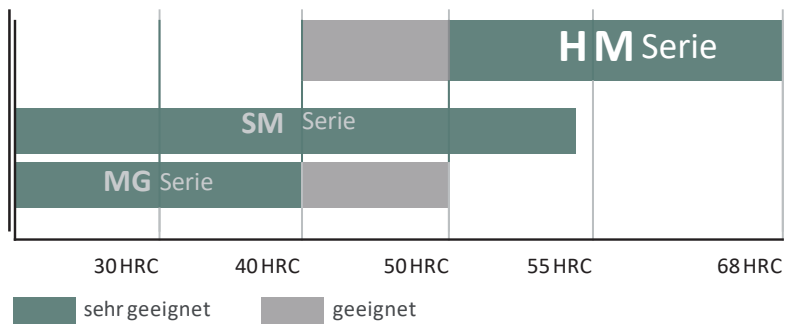
ENDMILL

HM Serie

Für die Bearbeitung von harten Werkstoffen

- Für die Bearbeitung von Stahl bis 68 HRC.
- Sehr stabile Schneidkante mit hoher Steifigkeit und neueste Beschichtungstechnologie, ermöglichen hohe Schnittgeschwindigkeiten und Vorschubwerte.
- Schaftfräser, Kugelfräser, Torusfräser und Minifräser
- Durchmesserbereich 0,3–20,0 mm

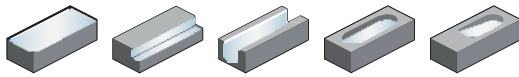
Anwendungsgebiete bei der Bearbeitung von Stahl



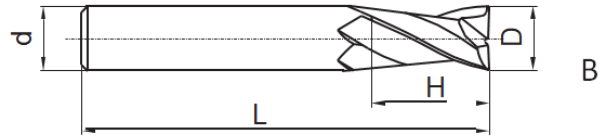
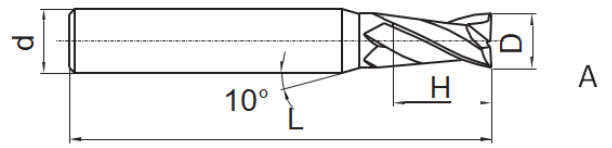
Schaftfräser

Hartbearbeitung

HM-2E



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			KMG555
HM-2E-D1.0S		1	4	3	50	2	A	●
HM-2E-D1.5S		1,5	4	4	50	2	A	●
HM-2E-D2.0S		2	4	6	50	2	A	●
HM-2E-D2.5S		2,5	4	8	50	2	A	●
HM-2E-D3.0S		3	4	8	50	2	A	●
HM-2E-D4.0S		4	4	11	50	2	B	●
HM-2E-D1.0		1	6	3	50	2	A	●
HM-2E-D1.5		1,5	6	4	50	2	A	●
HM-2E-D2.0		2	6	6	50	2	A	●
HM-2E-D2.5		2,5	6	8	50	2	A	●
HM-2E-D3.0		3	6	8	50	2	A	●
HM-2E-D3.5		3,5	6	10	50	2	A	●
HM-2E-D4.0		4	6	11	50	2	A	●
HM-2E-D4.5		4,5	6	11	50	2	A	●
HM-2E-D5.0		5	6	13	50	2	A	●
HM-2E-D5.5		5,5	6	16	50	2	A	●
HM-2E-D6.0		6	6	16	50	2	B	●
HM-2E-D7.0		7	8	20	60	2	A	●
HM-2E-D8.0		8	8	20	60	2	B	●
HM-2E-D9.0		9	10	22	75	2	A	●
HM-2E-D10.0		10	10	25	75	2	B	●
HM-2E-D11.0		11	12	26	75	2	A	○
HM-2E-D12.0		12	12	30	75	2	B	●
HM-2E-D14.0		14	14	32	100	2	B	●
HM-2E-D16.0		16	16	45	100	2	B	●
HM-2E-D18.0		18	18	45	100	2	B	○
HM-2E-D20.0		20	20	45	100	2	B	●

* Ab Lager ○ Auf Anfrage
Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
					✓

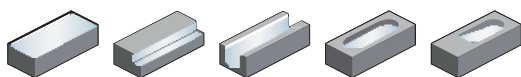
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

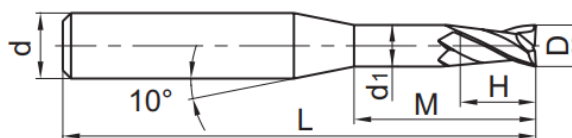
Schaftfräser

Hartbearbeitung

HM-2EP



- Zylinderschaft
- über Mitteschneidend
- Spiralwinkel 35°



Artikel	Abmessungen [mm]							Zähne	Sorte
	D	d (h6)	d ₁	H	M	L			
HM-2EP-D0.5-M04	0,5	4	0,45	0,7	4	50	2	●	
HM-2EP-D0.5-M06	0,5	4	0,45	0,7	6	50	2	●	
HM-2EP-D0.5-M08	0,5	4	0,45	0,7	8	50	2	●	
HM-2EP-D0.8-M04	0,8	4	0,75	1,2	4	50	2	●	
HM-2EP-D0.8-M06	0,8	4	0,75	1,2	6	50	2	●	
HM-2EP-D0.8-M08	0,8	4	0,75	1,2	8	50	2	●	
HM-2EP-D0.8-M10	0,8	4	0,75	1,2	10	50	2	●	
HM-2EP-D1.0-M04	1	4	0,95	1,5	4	50	2	●	
HM-2EP-D1.0-M06	1	4	0,95	1,5	6	50	2	●	
HM-2EP-D1.0-M08	1	4	0,95	1,5	8	50	2	●	
HM-2EP-D1.0-M10	1	4	0,95	1,5	10	50	2	●	
HM-2EP-D1.0-M12	1	4	0,95	1,5	12	50	2	●	
HM-2EP-D1.0-M14	1	4	0,95	1,5	14	50	2	●	
HM-2EP-D1.2-M06	1,2	4	1,15	1,8	6	50	2	●	
HM-2EP-D1.2-M08	1,2	4	1,15	1,8	8	50	2	●	
HM-2EP-D1.2-M10	1,2	4	1,15	1,8	10	50	2	●	
HM-2EP-D1.2-M12	1,2	4	1,15	1,8	12	50	2	●	
HM-2EP-D1.5-M06	1,5	4	1,45	2,3	6	50	2	●	
HM-2EP-D1.5-M08	1,5	4	1,45	2,3	8	50	2	●	
HM-2EP-D1.5-M10	1,5	4	1,45	2,3	10	50	2	●	
HM-2EP-D1.5-M12	1,5	4	1,45	2,3	12	50	2	●	
HM-2EP-D1.5-M14	1,5	4	1,45	2,3	14	50	2	●	
HM-2EP-D2.0-M06	2	4	1,95	3	6	50	2	●	
HM-2EP-D2.0-M08	2	4	1,95	3	8	50	2	●	
HM-2EP-D2.0-M10	2	4	1,95	3	10	50	2	●	
HM-2EP-D2.0-M12	2	4	1,95	3	12	50	2	●	
HM-2EP-D2.0-M14	2	4	1,95	3	14	50	2	●	
HM-2EP-D2.0-M16	2	4	1,95	3	16	50	2	●	
HM-2EP-D2.5-M08	2,5	4	2,4	3,7	8	50	2	●	
HM-2EP-D2.5-M10	2,5	4	2,4	3,7	10	50	2	●	
HM-2EP-D2.5-M12	2,5	4	2,4	3,7	12	50	2	●	
HM-2EP-D2.5-M14	2,5	4	2,4	3,7	14	50	2	●	
HM-2EP-D2.5-M16	2,5	4	2,4	3,7	16	60	2	●	
HM-2EP-D2.5-M18	2,5	4	2,4	3,7	18	60	2	●	
HM-2EP-D2.5-M20	2,5	4	2,4	3,7	20	60	2	●	
HM-2EP-D3.0-M06	3	6	2,85	4,5	6	50	2	●	
HM-2EP-D3.0-M08	3	6	2,85	4,5	8	50	2	●	

- Ab Lager ○ Auf Anfrage
- Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
					✓

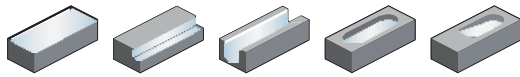
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- ✓ Geeignet

ENDMILL

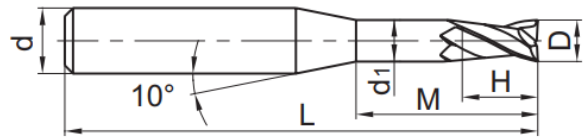
Schaftfräser

Hartbearbeitung

HM-2EP



- Zylinderschaft
- über Mitteschneidend
- Spiralwinkel 35°



ENDMILL

Artikel	Abmessungen [mm]							Sorte
	D	d (h6)	d ₁	H	M	L	Zähne	KMG555
HM-2EP-D3.0-M10	3	6	2,85	4,5	10	50	2	●
HM-2EP-D3.0-M12	3	6	2,85	4,5	12	50	2	●
HM-2EP-D3.0-M14	3	6	2,85	4,5	14	60	2	●
HM-2EP-D3.0-M16	3	6	2,85	4,5	16	60	2	●
HM-2EP-D3.0-M18	3	6	2,85	4,5	18	60	2	●
HM-2EP-D3.0-M20	3	6	2,85	4,5	20	60	2	●
HM-2EP-D4.0-M12	4	6	3,85	6	12	60	2	●
HM-2EP-D4.0-M16	4	6	3,85	6	16	60	2	●
HM-2EP-D4.0-M20	4	6	3,85	6	20	60	2	●
HM-2EP-D4.0-M25	4	6	3,85	6	25	60	2	●
HM-2EP-D5.0-M16	5	6	4,85	7,5	16	60	2	●
HM-2EP-D5.0-M25	5	6	4,85	7,5	25	70	2	●

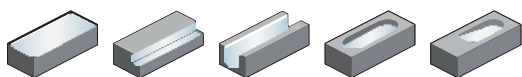
- Ab Lager ○ Auf Anfrage
- Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
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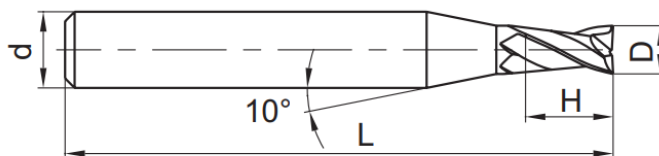
- ✓ Sehr geeignet
- ✓ Geeignet

Schaftfräser Hartbearbeitung

HM-2ES



- Schaftausführung: Zylinderschaft ZCC-CTWerksnorm
- über Mitteschneidend
- Spiralwinkel 35°



Artikel	Abmessungen [mm]						Sorte
		D	d (h6)	H	L	Zähne	
HM-2ES-D0.3		0,3	4	0,6	50	2	●
HM-2ES-D0.4		0,4	4	0,8	50	2	●
HM-2ES-D0.5		0,5	4	1	50	2	●
HM-2ES-D0.6		0,6	4	1,2	50	2	●
HM-2ES-D0.7		0,7	4	1,4	50	2	●
HM-2ES-D0.8		0,8	4	1,6	50	2	●
HM-2ES-D0.9		0,9	4	1,8	50	2	●
HM-2ES-D1.0		1	4	2	50	2	●
HM-2ES-D1.1		1,1	4	2	50	2	●
HM-2ES-D1.2		1,2	4	2,5	50	2	●
HM-2ES-D1.3		1,3	4	2,5	50	2	●
HM-2ES-D1.4		1,4	4	3	50	2	●
HM-2ES-D1.5		1,5	4	3	50	2	●
HM-2ES-D1.6		1,6	4	3,5	50	2	●
HM-2ES-D1.7		1,7	4	3,5	50	2	●
HM-2ES-D1.8		1,8	4	4	50	2	●
HM-2ES-D1.9		1,9	4	4	50	2	●
HM-2ES-D2.0		2	4	4	50	2	●
HM-2ES-D2.1		2,1	4	4	50	2	●
HM-2ES-D2.2		2,2	4	4,5	50	2	●
HM-2ES-D2.3		2,3	4	4,5	50	2	●
HM-2ES-D2.4		2,4	4	5	50	2	●
HM-2ES-D2.5		2,5	4	5	50	2	●
HM-2ES-D2.6		2,6	4	5	50	2	●
HM-2ES-D2.7		2,7	4	5,5	50	2	●
HM-2ES-D2.8		2,8	4	5,5	50	2	●
HM-2ES-D2.9		2,9	4	6	50	2	●
HM-2ES-D3.0		3	4	6	50	2	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
					✓

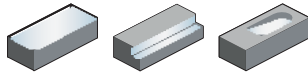
✓ Sehr geeignet

✓ Geeignet

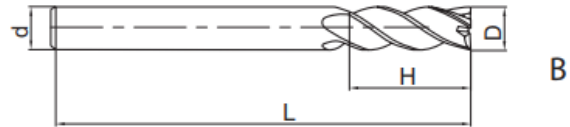
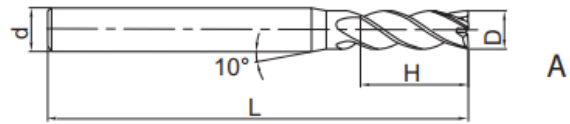
ENDMILL

Schaftfräser Hartbearbeitung

HM-4E



- Schaftausführung: Zylinderschaft ZCC-CTWerksnorm
- über Mitteschneidend
- Spiralwinkel 45°



ENDMILL

Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			KMG555
HM-4E-D1.0S		1	4	3	50	4	A	●
HM-4E-D1.5S		1,5	4	4	50	4	A	●
HM-4E-D2.0S		2	4	6	50	4	A	●
HM-4E-D2.5S		2,5	4	8	50	4	A	●
HM-4E-D3.0S		3	4	8	50	4	A	●
HM-4E-D4.0S		4	4	11	50	4	B	●
HM-4E-D1.0		1	6	3	50	4	A	●
HM-4E-D1.5		1,5	6	4	50	4	A	●
HM-4E-D2.0		2	6	6	50	4	A	●
HM-4E-D2.5		2,5	6	8	50	4	A	●
HM-4E-D3.0		3	6	8	50	4	A	●
HM-4E-D3.5		3,5	6	10	50	4	A	●
HM-4E-D4.0		4	6	11	50	4	A	●
HM-4E-D4.5		4,5	6	11	50	4	A	●
HM-4E-D5.0		5	6	13	50	4	A	●
HM-4E-D5.5		5,5	6	16	50	4	A	●
HM-4E-D6.0		6	6	16	50	4	B	●
HM-4E-D7.0		7	8	20	60	4	A	●
HM-4E-D8.0		8	8	20	60	4	B	●
HM-4E-D9.0		9	10	22	75	4	A	●
HM-4E-D10.0		10	10	25	75	4	B	●
HM-4E-D11.0		11	12	26	75	4	A	●
HM-4E-D12.0		12	12	30	75	4	B	●
HM-4E-D14.0		14	14	32	75	4	B	●
HM-4E-D16.0		16	16	45	100	4	B	●
HM-4E-D18.0		18	18	45	100	4	B	●
HM-4E-D20.0		20	20	45	100	4	B	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
					✓

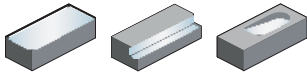
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✓ Geeignet

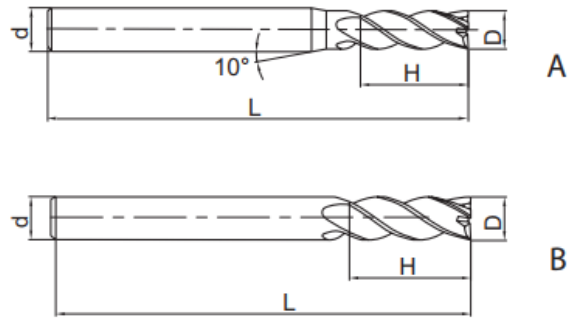
Schaftfräser langer Schaft

Hartbearbeitung

HM-4EL



- über Mitteschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			KMG555
HM-4EL-D3.0		3	6	12	75	4	A	●
HM-4EL-D4.0		4	6	15	75	4	A	●
HM-4EL-D5.0		5	6	20	75	4	A	●
HM-4EL-D6.0		6	6	20	75	4	B	●
HM-4EL-D8.0		8	8	25	100	4	B	●
HM-4EL-D10.0		10	10	30	100	4	B	●
HM-4EL-D12.0		12	12	35	100	4	B	●
HM-4EL-D14.0		14	14	40	100	4	B	●
HM-4EL-D16.0		16	16	50	150	4	B	●
HM-4EL-D20.0		20	20	55	150	4	B	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

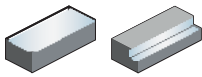
Anwendungsgebiet					
P	M	K	N	S	H
					✓

- ✓ Sehr geeignet
- ✓ Geeignet

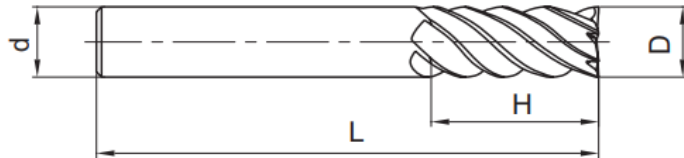
Schaftfräser

Hartbearbeitung

HM-6E



- nicht über Mitteschneidend
- Spiralwinkel 45°



ENDMILL

Artikel	Abmessungen [mm]						Sorte
		D	d (h6)	H	L	Zähne	KMG555
HM-6E-D6.0		6	6	18	60	6	•
HM-6E-D8.0		8	8	20	60	6	•
HM-6E-D10.0		10	10	30	75	6	•
HM-6E-D12.0		12	12	32	75	6	•
HM-6E-D16.0		16	16	40	100	6	•
HM-6E-D20.0		20	20	45	100	6	•
HM-6EL-D6.0		6	6	24	75	6	•
HM-6EL-D8.0		8	8	32	75	6	•
HM-6EL-D10.0		10	10	40	100	6	•
HM-6EL-D12.0		12	12	45	100	6	•
HM-6EL-D16.0		16	16	64	150	6	•
HM-6EL-D20.0		20	20	75	150	6	•

Anwendungsgebiet

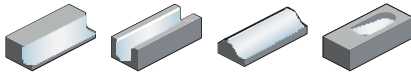
P	M	K	N	S	H
					✓

- ✓ Sehr geeignet
- ✓ Geeignet

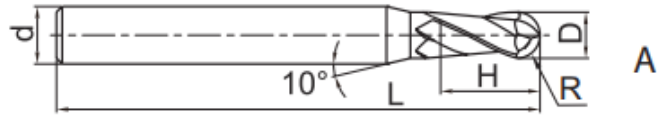
Kugelfräser

Hartbearbeitung

HM-2B



- über Mitteschnäidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d(h6)	H	L			KMG555
HM-2B-R0.5S		1	0,5	4	2	50	2	A	●
HM-2B-R0.75S		1,5	0,75	4	3	50	2	A	●
HM-2B-R1.0S		2	1	4	4	50	2	A	●
HM-2B-R1.25S		2,5	1,25	4	5	50	2	A	●
HM-2B-R1.5S		3	1,5	4	6	50	2	A	●
HM-2B-R2.0S		4	2	4	8	50	2	B	●
HM-2B-R0.5		1	0,5	6	2	50	2	A	●
HM-2B-R0.75		1,5	0,75	6	3	50	2	A	●
HM-2B-R1.0		2	1	6	4	50	2	A	●
HM-2B-R1.25		2,5	1,25	6	5	50	2	A	●
HM-2B-R1.5		3	1,5	6	6	50	2	A	●
HM-2B-R1.75		3,5	1,75	6	8	50	2	A	●
HM-2B-R2.0		4	2	6	8	50	2	A	●
HM-2B-R2.5		5	2,5	6	10	50	2	A	●
HM-2B-R2.75		5,5	2,75	6	12	50	2	A	●
HM-2B-R3.0		6	3	6	12	50	2	B	●
HM-2B-R3.5		7	3,5	8	14	60	2	A	●
HM-2B-R4.0		8	4	8	16	60	2	B	●
HM-2B-R4.5		9	4,5	10	18	75	2	A	●
HM-2B-R5.0		10	5	10	20	75	2	B	●
HM-2B-R6.0		12	6	12	24	75	2	B	●
HM-2B-R7.0		14	7	14	28	75	2	B	●
HM-2B-R8.0		16	8	16	32	100	2	B	●
HM-2B-R10.0		20	10	20	40	100	2	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
					✓

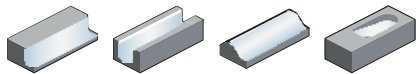
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ENDMILL

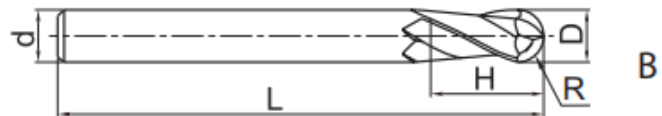
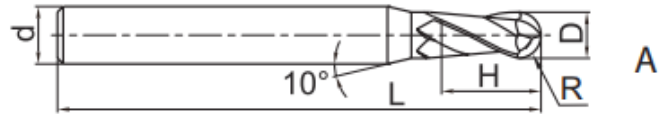
Kugelfräser langer Schaft

Hartbearbeitung

HM-2BL



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			KMG555
HM-2BL-R1.0		2	1	6	4	75	2	A	●
HM-2BL-R1.25		2,5	1,25	6	6	75	2	A	●
HM-2BL-R1.5		3	1,5	6	6	75	2	A	●
HM-2BL-R1.75		3,5	1,75	6	8	75	2	A	●
HM-2BL-R2.0		4	2	6	8	75	2	A	●
HM-2BL-R2.5		5	2,5	6	10	75	2	A	●
HM-2BL-R2.75		5,5	2,75	6	12	75	2	A	●
HM-2BL-R3.0		6	3	6	12	75	2	B	●
HM-2BL-R3.5		7	3,5	8	14	75	2	A	●
HM-2BL-R4.0		8	4	8	16	100	2	B	●
HM-2BL-R4.5		9	4,5	10	18	100	2	A	●
HM-2BL-R5.0		10	5	10	20	100	2	B	●
HM-2BL-R6.0		12	6	12	24	100	2	B	●
HM-2BL-R7.0		14	7	14	28	100	2	B	●
HM-2BL-R8.0		16	8	16	32	150	2	B	●
HM-2BL-R10.0		20	10	20	40	150	2	B	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
					✓

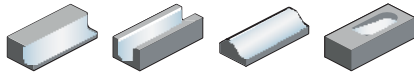
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- ✓ Geeignet

ENDMILL E

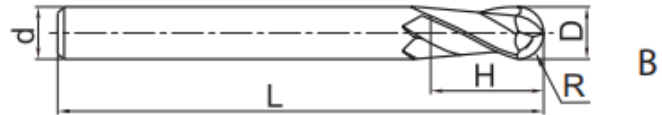
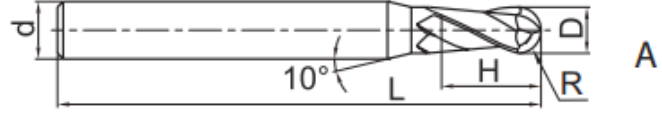
Kugelfräser kurze Schneide

Hartbearbeitung

HM-2BFP



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]							Zähne	Geometrie	Sorte
		D	R	d (h6)	d ₁	H	M	L			KMG555
HM-2BFP-R0.5		1	0,5	6	0,95	1	2,5	75	2	A	●
HM-2BFP-R0.75		1,5	0,75	6	1,45	1,5	3	75	2	A	●
HM-2BFP-R1.0		2	1	6	1,95	2	4	75	2	A	●
HM-2BFP-R1.5		3	1,5	6	2,85	3	6	75	2	A	●
HM-2BFP-R2.0		4	2	6	3,85	4	8	75	2	A	●
HM-2BFP-R2.5		5	2,5	6	4,85	5	10	75	2	A	●
HM-2BFP-R3.0		6	3	6	5,8	6	12	75	2	B	●
HM-2BFP-R4.0		8	4	8	7,8	8	16	100	2	B	●
HM-2BFP-R5.0		10	5	10	9,6	10	20	100	2	B	●
HM-2BFP-R6.0		12	6	12	11,5	12	24	100	2	B	●
HM-2BFP-R8.0		16	8	16	15,5	16	32	150	2	B	●
HM-2BFP-R10.0		20	10	20	19,5	20	40	150	2	B	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
					✓

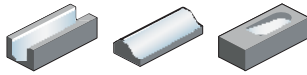
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

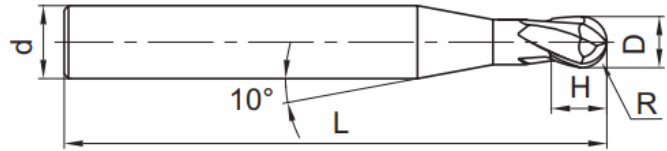
Kugelfräser

Hartbearbeitung

HM-2BS



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	Abmessungen [mm]						Sorte	
	D	R	d (h6)	H	L	Zähne	KMG555	
HM-2BS-R0.15	0,3	0,15	4	0,5	50	2	●	
HM-2BS-R0.20	0,4	0,2	4	0,6	50	2	●	
HM-2BS-R0.25	0,5	0,25	4	0,8	50	2	●	
HM-2BS-R0.30	0,6	0,3	4	0,9	50	2	●	
HM-2BS-R0.35	0,7	0,35	4	1	50	2	●	
HM-2BS-R0.40	0,8	0,4	4	1,2	50	2	●	
HM-2BS-R0.45	0,9	0,45	4	1,3	50	2	●	
HM-2BS-R0.50	1	0,5	4	1,5	50	2	●	
HM-2BS-R0.60	1,2	0,6	4	1,8	50	2	●	
HM-2BS-R0.70	1,4	0,7	4	2	50	2	●	
HM-2BS-R0.75	1,5	0,75	4	2,3	50	2	●	
HM-2BS-R0.80	1,6	0,8	4	2,5	50	2	●	
HM-2BS-R0.90	1,8	0,9	4	2,7	50	2	●	
HM-2BS-R1.00	2	1	4	3	50	2	●	
HM-2BS-R1.25	2,5	1,25	4	3,7	50	2	●	
HM-2BS-R1.50	3	1,5	4	4,5	50	2	●	

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
					✓

- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

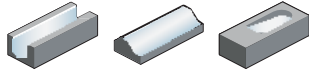
Endmill Carbide

HM Serie Endmill-Fräser

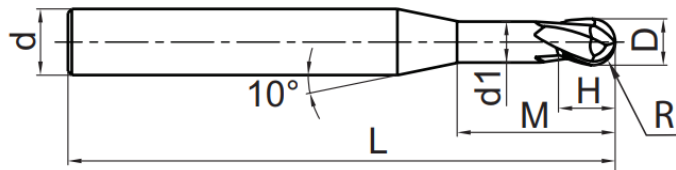
Schaftfräser

Hartbearbeitung

HM-2BP



- Zylinderschaft
- über Mitteschneidend
- Spiralwinkel 35°



Artikel	Abmessungen [mm]									Sorte
	D	R	d (h6)	d1	H	M	L	Zähne	KMG555	
HM-2BP-R0.25-M04	0,5	0,25	4	0,45	0,7	4	50	2	•	
HM-2BP-R0.25-M06	0,5	0,25	4	0,45	0,7	6	50	2	•	
HM-2BP-R0.3-M04	0,6	0,3	4	0,55	0,9	4	50	2	•	
HM-2BP-R0.3-M06	0,6	0,3	4	0,55	0,9	6	50	2	•	
HM-2BP-R0.3-M08	0,6	0,3	4	0,55	0,9	8	50	2	•	
HM-2BP-R0.4-M04	0,8	0,4	4	0,75	1,2	4	50	2	•	
HM-2BP-R0.4-M06	0,8	0,4	4	0,75	1,2	6	50	2	•	
HM-2BP-R0.4-M08	0,8	0,4	4	0,75	1,2	8	50	2	•	
HM-2BP-R0.4-M10	0,8	0,4	4	0,75	1,2	10	50	2	•	
HM-2BP-R0.5-M04	1	0,5	4	0,95	1,5	4	50	2	•	
HM-2BP-R0.5-M06	1	0,5	4	0,95	1,5	6	50	2	•	
HM-2BP-R0.5-M08	1	0,5	4	0,95	1,5	8	50	2	•	
HM-2BP-R0.5-M10	1	0,5	4	0,95	1,5	10	50	2	•	
HM-2BP-R0.5-M12	1	0,5	4	0,95	1,5	12	50	2	•	
HM-2BP-R0.6-M06	1,2	0,6	4	1,15	1,8	6	50	2	•	
HM-2BP-R0.6-M08	1,2	0,6	4	1,15	1,8	8	50	2	•	
HM-2BP-R0.6-M12	1,2	0,6	4	1,15	1,8	12	50	2	•	
HM-2BP-R0.6-M16	1,2	0,6	4	1,15	1,8	16	50	2	•	
HM-2BP-R0.75-M08	1,5	0,75	4	1,45	2,3	8	50	2	•	
HM-2BP-R0.75-M12	1,5	0,75	4	1,45	2,3	12	50	2	•	
HM-2BP-R0.75-M16	1,5	0,75	4	1,45	2,3	16	50	2	•	
HM-2BP-R1.0-M06	2	1	4	1,95	3	6	50	2	•	
HM-2BP-R1.0-M08	2	1	4	1,95	3	8	50	2	•	
HM-2BP-R1.0-M10	2	1	4	1,95	3	10	50	2	•	
HM-2BP-R1.0-M12	2	1	4	1,95	3	12	50	2	•	
HM-2BP-R1.0-M16	2	1	4	1,95	3	16	50	2	•	
HM-2BP-R1.0-M20	2	1	4	1,95	3	20	50	2	•	
HM-2BP-R1.25-M08	2,5	1,25	4	2,4	3,7	8	50	2	•	
HM-2BP-R1.25-M12	2,5	1,25	4	2,4	3,7	12	50	2	•	
HM-2BP-R1.25-M16	2,5	1,25	4	2,4	3,7	16	60	2	•	
HM-2BP-R1.25-M20	2,5	1,25	4	2,4	3,7	20	60	2	•	
HM-2BP-R1.5-M08	3	1,5	6	2,85	4,5	8	50	2	•	
HM-2BP-R1.5-M10	3	1,5	6	2,85	4,5	10	50	2	•	
HM-2BP-R1.5-M12	3	1,5	6	2,85	4,5	12	50	2	•	
HM-2BP-R1.5-M16	3	1,5	6	2,85	4,5	16	60	2	•	
HM-2BP-R1.5-M20	3	1,5	6	2,85	4,5	20	60	2	•	
HM-2BP-R2.0-M10	4	2	6	3,85	6	10	60	2	•	

- Ab Lager ◦ Auf Anfrage
- * Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
					✓

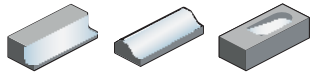
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

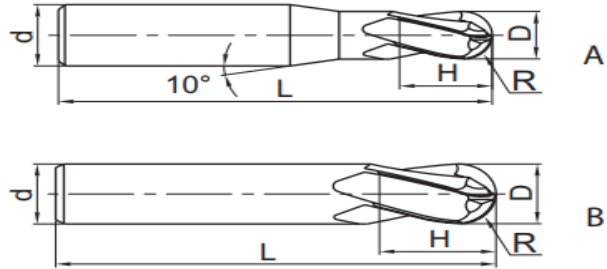
Kugelfräser

Hartbearbeitung

HM-4B



- über Mittescheidend
- Spiralwinkel 35°



ENDMILL

Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			KMG555
HM-4B-R1.5		3	1,5	6	6	50	4	A	●
HM-4B-R2.0		4	2	6	8	50	4	A	●
HM-4B-R2.5		5	2,5	6	10	50	4	A	●
HM-4B-R3.0		6	3	6	12	50	4	B	●
HM-4B-R4.0		8	4	8	16	60	4	B	●
HM-4B-R5.0		10	5	10	20	75	4	B	●
HM-4B-R6.0		12	6	12	24	75	4	B	●
HM-4B-R7.0		14	7	14	28	75	4	B	●
HM-4B-R8.0		16	8	16	32	100	4	B	●
HM-4B-R9.0		18	9	18	36	100	4	B	●
HM-4B-R10.0		20	10	20	40	100	4	B	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

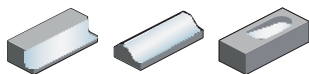
Anwendungsgebiet					
P	M	K	N	S	H
					✓

- ✓ Sehr geeignet
- ✓ Geeignet

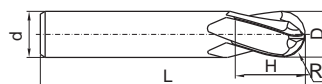
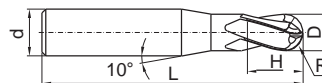
Kugelfräser langer Schaft

Hartbearbeitung

HM-4BL



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			KMG555
HM-4BL-R1.5		3	1,5	6	6	75	4	A	●
HM-4BL-R2.0		4	2	6	8	75	4	A	●
HM-4BL-R2.5		5	2,5	6	10	75	4	A	●
HM-4BL-R3.0		6	3	6	12	75	4	B	●
HM-4BL-R4.0		8	4	8	16	100	4	B	●
HM-4BL-R5.0		10	5	10	20	100	4	B	●
HM-4BL-R6.0		12	6	12	24	100	4	B	●
HM-4BL-R7.0		14	7	14	28	100	4	B	●
HM-4BL-R8.0		16	8	16	32	150	4	B	●
HM-4BL-R9.0		18	9	18	36	150	4	B	●
HM-4BL-R10.0		20	10	20	40	150	4	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

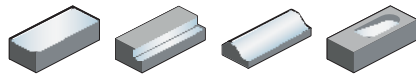
P	M	K	N	S	H
					✓

✓ Sehr geeignet

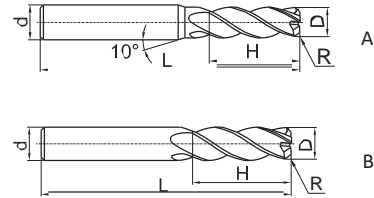
✓ Geeignet

Torusfräser **Hartbearbeitung**

HM-4R



- über Mitteschneidend
- Spiralwinkel 35°



ENDMILL

Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			KMG555
HM-4R-D3.0R0.2		3	0,2	4	8	50	4	A	●
HM-4R-D4.0R0.3		4	0,3	4	10	50	4	B	●
HM-4R-D4.0R0.5		4	0,5	4	10	50	4	B	●
HM-4R-D5.0R0.5		5	0,5	6	13	50	4	A	●
HM-4R-D5.0R1.0		5	1	6	13	50	4	A	●
HM-4R-D6.0R0.5		6	0,5	6	16	50	4	B	●
HM-4R-D6.0R1.0		6	1	6	16	50	4	B	●
HM-4R-D8.0R0.5		8	0,5	8	20	60	4	B	●
HM-4R-D8.0R1.0		8	1	8	20	60	4	B	●
HM-4R-D10.0R0.5		10	0,5	10	25	75	4	B	●
HM-4R-D10.0R1.0		10	1	10	25	75	4	B	●
HM-4R-D10.0R2.0		10	2	10	25	75	4	B	●
HM-4R-D10.0R3.0		10	3	10	25	75	4	B	●
HM-4R-D12.0R0.5		12	0,5	12	30	75	4	B	●
HM-4R-D12.0R1.0		12	1	12	30	75	4	B	●
HM-4R-D12.0R2.0		12	2	12	30	75	4	B	●
HM-4R-D12.0R3.0		12	3	12	30	75	4	B	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

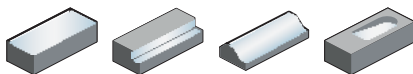
Anwendungsgebiet					
P	M	K	N	S	H
					✓

- ✓ Sehr geeignet
- ✓ Geeignet

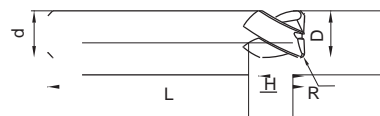
Torusfräser kurze Schneide

Hartbearbeitung

HM-4RF



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Sorte
		D	R	d (h6)	H	L		KMG555
HM-4RF-D6.0R0.5		6	0,5	6	6	50	4	○
HM-4RF-D6.0R1.0		6	1	6	6	50	4	○
HM-4RF-D8.0R0.5		8	0,5	8	8	60	4	○
HM-4RF-D8.0R1.0		8	1	8	8	60	4	○
HM-4RF-10.0R0.5		10	0,5	10	10	75	4	●
HM-4RF-D10.0R1.0		10	1	10	10	75	4	○
HM-4RF-D10.0R2.0		10	2	10	10	75	4	○
HM-4RF-D12.0R0.5		12	0,5	12	12	75	4	○
HM-4RF-D12.0R1.0		12	1	12	12	75	4	○
HM-4RF-D12.0R2.0		12	2	12	12	75	4	○

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
					✓

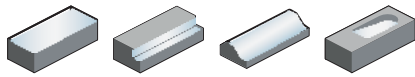
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

Torusfräser langer Schaft

Hartbearbeitung

HM-4RP



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]							Zähne	Sorte KMG555
		D	R	d (h6)	d ₁	H	M	L		
HM-4RP-D6.0R0.5		6	0,5	6	5,8	6	18	75	4	●
HM-4RP-D6.0R1.0		6	1	6	5,8	6	18	75	4	●
HM-4RP-D8.0R0.5		8	0,5	8	7,8	8	24	100	4	●
HM-4RP-D8.0R1.0		8	1	8	7,8	8	24	100	4	●
HM-4RP-D10.0R0.5		10	0,5	10	9,6	10	30	100	4	●
HM-4RP-D10.0R1.0		10	1	10	9,6	10	30	100	4	●
HM-4RP-D10.0R2.0		10	2	10	9,6	10	30	100	4	●
HM-4RP-D12.0R0.5		12	0,5	12	11,5	12	36	100	4	●
HM-4RP-D12.0R1.0		12	1	12	11,5	12	36	100	4	●
HM-4RP-D12.0R2.0		12	2	12	11,5	12	36	100	4	●
HM-4RP-D16.0R1.0		16	1	16	15,5	16	40	150	4	●
HM-4RP-D16.0R2.0		16	2	16	15,5	16	40	150	4	●

- Ab Lager ○ Auf Anfrage
- * MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
					✓

- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

AL Serie

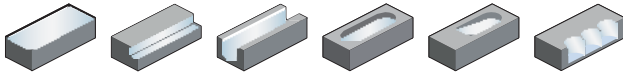
Für die Bearbeitung von Aluminiumlegierungen

- Neu entwickelte Geometrien erweitern unser Standardprogramm:
 - ALP für die Hochleistungsschruppbearbeitung
 - ALG zum Schlichten mit sehr hoher Oberflächenqualität
 - AIR Torusfräser für die Ultra-Highspeed-Bearbeitung
- Schaftfräser, Kugelfräser, Torusfräser und Kordelfräser
- Durchmesserbereich 1,0–20,0 mm

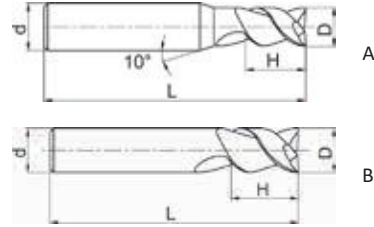


Schaftfräser Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-2E



- über Mitteschneidend
- Spiralwinkel 55°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			YK30F
AL-2E-D1.0		1	4	3	50	2	A	●
AL-2E-D1.5		1,5	4	4	50	2	A	●
AL-2E-D2.0		2	4	6	50	2	A	●
AL-2E-D2.5		2,5	4	7	50	2	A	●
AL-2E-D3.0		3	6	9	50	2	A	●
AL-2E-D4.0		4	6	12	50	2	A	●
AL-2E-D5.0		5	6	15	50	2	A	●
AL-2E-D6.0		6	6	18	60	2	B	●
AL-2E-D8.0		8	8	20	60	2	B	●
AL-2E-D10.0		10	10	30	75	2	B	●
AL-2E-D12.0		12	12	32	75	2	B	●
AL-2E-D16.0		16	16	45	100	2	B	●
AL-2E-D20.0		20	20	45	100	2	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

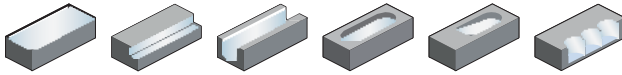
✓ Sehr geeignet

✓ Geeignet

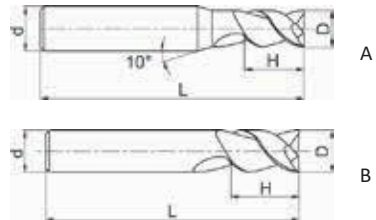
Schaftfräser lange Schneide

Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-2EL



- über Mittschneidend
- Spiralwinkel 55°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			YK30F
AL-2EL-D3.0		3	6	12	60	2	A	●
AL-2EL-D4.0		4	6	16	60	2	A	●
AL-2EL-D5.0		5	6	20	60	2	A	●
AL-2EL-D6.0		6	6	25	75	2	B	●
AL-2EL-D8.0		8	8	32	75	2	B	●
AL-2EL-D10.0		10	10	45	100	2	B	●
AL-2EL-D12.0		12	12	45	100	2	B	●
AL-2EL-D16.0		16	16	65	150	2	B	●
AL-2EL-D20.0		20	20	75	150	2	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

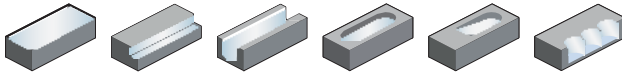
Anwendungsgebiet					
P	M	K	N	S	H
			✓		

- ✓ Sehr geeignet
- ✓ Geeignet

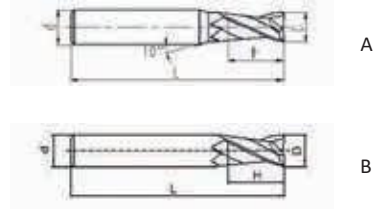
ENDMILL

Schaftfräser Allgemeine Bearbeitung von Al. u. Al. Legierungen

ALG-2E



- über Mitteschneidend
- Spiralwinkel 30°



ENDMILL

Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			YK40F
ALG-2E-D1.0		1	4	3	50	2	A	●
ALG-2E-D1.5		1,5	4	4	50	2	A	●
ALG-2E-D2.0		2	4	6	50	2	A	●
ALG-2E-D2.5		2,5	4	8	50	2	A	●
ALG-2E-D3.0S		3	4	8	50	2	A	●
ALG-2E-D3.5S		3,5	4	10	50	2	A	○
ALG-2E-D4.0S		4	4	11	50	2	B	○
ALG-2E-D3.0		3	6	8	50	2	A	●
ALG-2E-D3.5		3,5	6	10	50	2	A	●
ALG-2E-D4.0		4	6	11	50	2	A	●
ALG-2E-D4.5		4,5	6	11	50	2	A	●
ALG-2E-D5.0		5	6	13	50	2	A	●
ALG-2E-D5.5		5,5	6	16	50	2	A	●
ALG-2E-D6.0		6	6	16	50	2	B	●
ALG-2E-D7.0		7	8	20	60	2	A	●
ALG-2E-D8.0		8	8	20	60	2	B	●
ALG-2E-D9.0		9	10	22	75	2	A	●
ALG-2E-D10.0		10	10	25	75	2	B	●
ALG-2E-D11.0		11	12	26	75	2	A	●
ALG-2E-D12.0		12	12	30	75	2	B	●
ALG-2E-D14.0		14	14	32	75	2	B	●
ALG-2E-D16.0		16	16	45	100	2	B	●
ALG-2E-D18.0		18	18	45	100	2	B	●
ALG-2E-D20.0		20	20	45	100	2	B	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

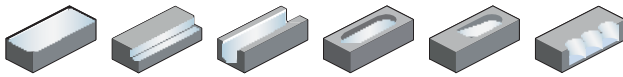
Anwendungsgebiet					
P	M	K	N	S	H
			✓		

- ✓ Sehr geeignet
- ✓ Geeignet

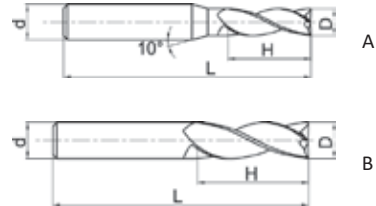
Schaftfräser

Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-3E



- über Mittschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			YK30F
AL-3E-D1.0		1	4	3	50	3	A	●
AL-3E-D1.5		1,5	4	4	50	3	A	●
AL-3E-D2.0		2	4	6	50	3	A	●
AL-3E-D2.5		2,5	4	7	50	3	A	●
AL-3E-D3.0		3	6	9	50	3	A	●
AL-3E-D4.0		4	6	12	50	3	A	●
AL-3E-D5.0		5	6	15	50	3	A	●
AL-3E-D6.0		6	6	18	60	3	B	●
AL-3E-D8.0		8	8	20	60	3	B	●
AL-3E-D10.0		10	10	30	75	3	B	●
AL-3E-D12.0		12	12	32	75	3	B	●
AL-3E-D16.0		16	16	45	100	3	B	●
AL-3E-D20.0		20	20	45	100	3	B	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

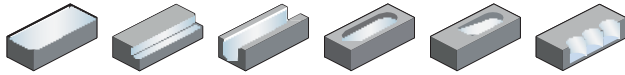
✓ Sehr geeignet

✓ Geeignet

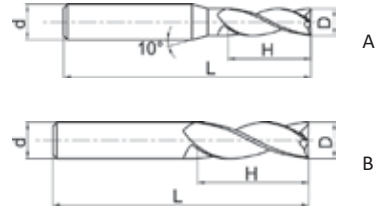
Schaftfräser lange Schneide

Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-3EL



- über Mitteschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			YK30F
AL-3EL-D3.0		3	6	12	60	3	A	●
AL-3EL-D4.0		4	6	16	60	3	A	●
AL-3EL-D5.0		5	6	20	60	3	A	●
AL-3EL-D6.0		6	6	25	75	3	B	●
AL-3EL-D8.0		8	8	32	75	3	B	●
AL-3EL-D10.0		10	10	45	100	3	B	●
AL-3EL-D12.0		12	12	45	100	3	B	●
AL-3EL-D16.0		16	16	65	150	3	B	●
AL-3EL-D20.0		20	20	75	150	3	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
			✓		

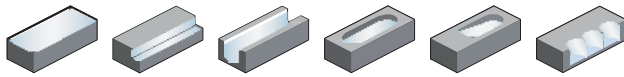
✓ Sehr geeignet

✓ Geeignet

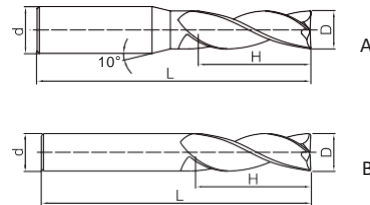
Schaftfräser

Allgemeine Bearbeitung von Al. u. Al. Legierungen

ALG-3E



- über Mittschneidend
- Spiralwinkel 45°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			YK40F
ALG-3E-D1.0		1	4	3	50	3	A	●
ALG-3E-D1.5		1,5	4	4	50	3	A	●
ALG-3E-D2.0		2	4	6	50	3	A	●
ALG-3E-D2.5		2,5	4	8	50	3	A	●
ALG-3E-D3.0S		3	4	8	50	3	A	●
ALG-3E-D3.5S		3,5	4	10	50	3	A	○
ALG-3E-D4.0S		4	4	11	50	3	B	○
ALG-3E-D3.0		3	6	8	50	3	A	●
ALG-3E-D3.5		3,5	6	10	50	3	A	○
ALG-3E-D4.0		4	6	11	50	3	A	●
ALG-3E-D4.5		4,5	6	11	50	3	A	●
ALG-3E-D5.0		5	6	13	50	3	A	●
ALG-3E-D5.5		5,5	6	16	50	3	A	●
ALG-3E-D6.0		6	6	16	50	3	B	●
ALG-3E-D7.0		7	8	20	60	3	A	●
ALG-3E-D8.0		8	8	20	60	3	B	●
ALG-3E-D9.0		9	10	22	75	3	A	●
ALG-3E-D10.0		10	10	25	75	3	B	●
ALG-3E-D11.0		11	12	26	75	3	A	●
ALG-3E-D12.0		12	12	30	75	3	B	●
ALG-3E-D14.0		14	14	32	75	3	B	●
ALG-3E-D16.0		16	16	45	100	3	B	●
ALG-3E-D18.0		18	18	45	100	3	B	●
ALG-3E-D20.0		20	20	45	100	3	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

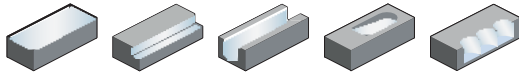
✓ Sehr geeignet

✓ Geeignet

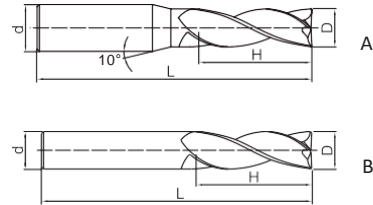
ENDMILL

Schaftfräser Hochleistungsbearbeitung von Al. u. Al. Legierungen

ALP-3E



- über Mitteschneidend
- Spiralwinkel 35°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			YK40F
ALP-3E-D1.0		1	4	3	50	3	A	●
ALP-3E-D1.5		1,5	4	4	50	3	A	●
ALP-3E-D2.0		2	4	6	50	3	A	●
ALP-3E-D2.5		2,5	4	8	50	3	A	●
ALP-3E-D3.0S		3	4	9	50	3	A	●
ALP-3E-D4.0S		4	4	12	50	3	B	●
ALP-3E-D3.0		3	6	8	50	3	A	●
ALP-3E-D4.0		4	6	11	50	3	A	●
ALP-3E-D4.5		4,5	6	11	50	3	A	●
ALP-3E-D5.0		5	6	13	50	3	A	●
ALP-3E-D5.5		5,5	6	16	50	3	A	●
ALP-3E-D6.0		6	6	16	50	3	B	●
ALP-3E-D7.0		7	8	20	60	3	B	○
ALP-3E-D8.0		8	8	20	60	3	B	●
ALP-3E-D9.0		9	10	22	75	3	B	●
ALP-3E-D10.0		10	10	25	75	3	B	●
ALP-3E-D11.0		11	12	26	75	3	B	●
ALP-3E-D12.0		12	12	30	75	3	B	●
ALP-3E-D14.0		14	14	32	75	3	B	●
ALP-3E-D16.0		16	16	45	100	3	B	●
ALP-3E-D20.0		20	20	45	100	3	B	○

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

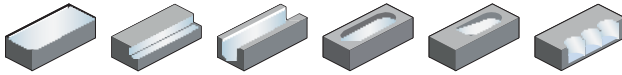
✓ Sehr geeignet

✓ Geeignet

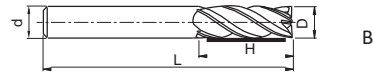
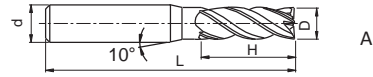
Schaftfräser

Hochleistungsbearbeitung von Al. u. Al. Legierungen

ALP-4E



- über Mittschneidend
- Spiralwinkel 38°



Artikel	*	Abmessungen [mm]				Zähne	Geometrie	Sorte
		D	d (h6)	H	L			YK40F
ALP-4E-D3.0S		3	4	9	50	4	A	●
ALP-4E-D4.0S		4	4	11	50	4	B	●
ALP-4E-D3.0		3	6	9	50	4	A	●
ALP-4E-D4.0		4	6	11	50	4	A	●
ALP-4E-D5.0		5	6	13	50	4	A	●
ALP-4E-D6.0		6	6	16	50	4	B	●
ALP-4E-D8.0		8	8	20	60	4	B	●
ALP-4E-D10.0		10	10	25	75	4	B	●
ALP-4E-D12.0		12	12	30	75	4	B	●
ALP-4E-D16.0		16	16	45	100	4	B	●
ALP-4E-D18.0		18	18	45	100	4	B	●
ALP-4E-D20.0		20	20	45	100	4	B	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

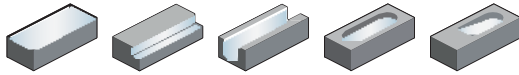
✓ Sehr geeignet

✓ Geeignet

Schaftfräser Schruppverzahnung

Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-3W



- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]				Zähne	Sorte
		D	d (h6)	H	L		YK30F
AL-3W-D6.0		6	6	16	50	3	●
AL-3W-D8.0		8	8	20	60	3	●
AL-3W-D10.0		10	10	25	75	3	●
AL-3W-D12.0		12	12	30	75	3	●
AL-3W-D16.0		16	16	45	100	3	●
*AL-3W-D20.0		20	20	45	100	3	●

- Ab Lager ○ Auf Anfrage
- Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

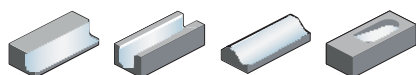
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

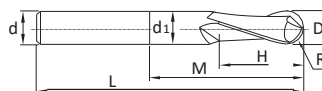
Kugelfräser

Hochleistungsbearbeitung von NE-Metallen

5565R302NH



- Schaftausführung: DIN6535HA
- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d (h6)	d ₁	H	M	L		YK40F
5565R302NH-0300		3	1,5	6	2,8	6	9	57	2	●
5565R302NH-0400		4	2	6	3,7	8	12	57	2	●
5565R302NH-0500		5	2,5	6	4,6	10	15	57	2	●
5565R302NH-0600		6	3	6	5,5	12	20	57	2	●
5565R302NH-0800		8	4	8	7,4	16	26	63	2	●
5565R302NH-1000		10	5	10	9,2	20	31	72	2	●
5565R302NH-1200		12	6	12	11	24	37	83	2	●
5565R302NH-1600		16	8	16	15	32	43	92	2	●

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

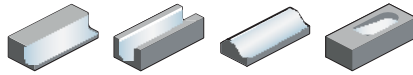
✓ Sehr geeignet

✓ Geeignet

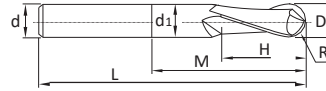
Kugelfräser langer Schaft

Hochleistungsbearbeitung von NE-Metallen

5566R302NH



- Schaftausführung: DIN6535HA
- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d (h6)	d ₁	H	M	L		
5566R302NH-0300		3	1,5	6	2,8	6	9	75	2	●
5566R302NH-0400		4	2	6	3,7	8	12	75	2	●
5566R302NH-0500		5	2,5	6	4,6	10	15	80	2	●
5566R302NH-0600		6	3	6	5,5	12	20	80	2	●
5566R302NH-0800		8	4	8	7,4	16	26	90	2	●
5566R302NH-1000		10	5	10	9,2	20	31	100	2	●
5566R302NH-1200		12	6	12	11	24	37	120	2	●
5566R302NH-1600		16	8	16	15	32	43	140	2	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

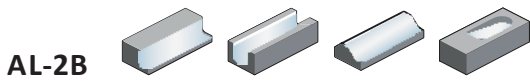
Anwendungsgebiet

P	M	K	N	S	H
			✓		

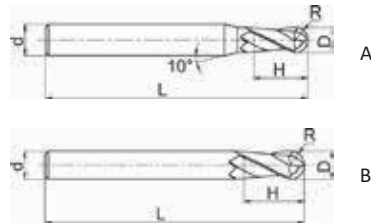
✓ Sehr geeignet

✓ Geeignet

Kugelfräser Allgemeine Bearbeitung von Al. u. Al. Legierungen



– über Mitteschneidend
– Spiralwinkel 35°



Artikel	*	Abmessungen [mm]					Zähne	Geometrie	Sorte
		D	R	d (h6)	H	L			YK30F
AL-2B-R1.0		2	1	6	4	60	2	A	●
AL-2B-R1.5		3	1,5	6	6	60	2	A	●
AL-2B-R2.0		4	2	6	8	60	2	A	●
AL-2B-R2.5		5	2,5	6	10	60	2	A	●
AL-2B-R3.0		6	3	6	12	60	2	B	●
AL-2B-R4.0		8	4	8	16	75	2	B	●
AL-2B-R5.0		10	5	10	20	75	2	B	●
AL-2B-R6.0		12	6	12	24	75	2	B	●

- Ab Lager ○ Auf Anfrage
- * Mit Innenkühlung

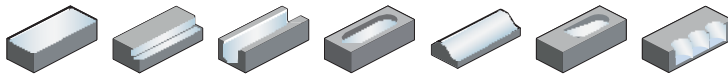
Anwendungsgebiet					
P	M	K	N	S	H
			✓		

- ✓ Sehr geeignet
- ✓ Geeignet

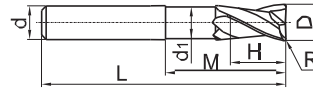
ENDMILL

Torusfräser Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-2R-AIR



- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d(h6)	d ₁	H	M	L		YK40F
AL-2R-D6.0R1.0-AIR		6	1	6	5,5	7	20	57	2	●
AL-2R-D8.0R1.0-AIR		8	1	8	7,4	9	26	63	2	●
AL-2R-D10.0R1.0-AIR		10	1	10	9,2	11	31	72	2	●
AL-2R-D10.0R2.0-AIR		10	2	10	9,2	11	31	72	2	●
AL-2R-D12.0R1.0-AIR		12	1	12	11	12	37	83	2	●
AL-2R-D12.0R2.0-AIR		12	2	12	11	12	37	83	2	●
AL-2R-D12.0R3.0-AIR		12	3	12	11	12	37	83	2	●
AL-2R-D16.0R1.0-AIR		16	1	16	15	16	43	92	2	●
AL-2R-D16.0R2.0-AIR		16	2	16	15	16	43	92	2	●
AL-2R-D16.0R3.0-AIR		16	3	16	15	16	43	92	2	●
AL-2R-D16.0R4.0-AIR		16	4	16	15	16	43	92	2	●
AL-2R-D20.0R1.0-AIR		20	1	20	19	20	53	104	2	●
AL-2R-D20.0R2.0-AIR		20	2	20	19	20	53	104	2	●
AL-2R-D20.0R3.0-AIR		20	3	20	19	20	53	104	2	●
AL-2R-D20.0R4.0-AIR		20	4	20	19	20	53	104	2	●
AL-2R-D20.0R5.0-AIR		20	5	20	19	20	53	104	2	●
AL-2R-D20.0R6.0-AIR		20	6	20	19	20	53	104	2	●

● Ab Lager ○ Auf Anfrage

* Mit Innenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

✓ Sehr geeignet

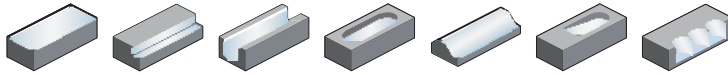
✓ Geeignet

ENDMILL

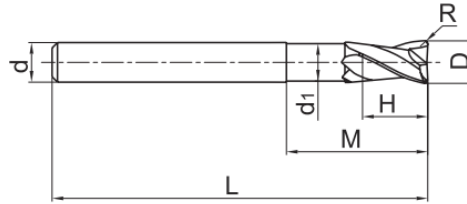
Torusfräser langer Schaft

Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-2RL-AIR



- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d (h6)	d ₁	H	M	L		
AL-2RL-D6.0R1.0-AIR		6	1	6	5,5	7	43	80	2	●
AL-2RL-D8.0R1.0-AIR		8	1	8	7,4	9	53	90	2	●
AL-2RL-D10.0R1.0-AIR		10	1	10	9,2	11	59	100	2	●
AL-2RL-D10.0R2.0-AIR		10	2	10	9,2	11	59	100	2	●
AL-2RL-D12.0R1.0-AIR		12	1	12	11	12	74	120	2	●
AL-2RL-D12.0R2.0-AIR		12	2	12	11	12	74	120	2	●
AL-2RL-D12.0R3.0-AIR		12	3	12	11	12	74	120	2	●
AL-2RL-D16.0R1.0-AIR		16	1	16	15	16	84	140	2	●
AL-2RL-D16.0R2.0-AIR		16	2	16	15	16	84	140	2	●
AL-2RL-D16.0R3.0-AIR		16	3	16	15	16	84	140	2	●
AL-2RL-D16.0R4.0-AIR		16	4	16	15	16	84	140	2	●
AL-2RL-D20.0R1.0-AIR		20	1	20	19	20	89	140	2	○
AL-2RL-D20.0R2.0-AIR		20	2	20	19	20	89	140	2	●
AL-2RL-D20.0R3.0-AIR		20	3	20	19	20	89	140	2	●
AL-2RL-D20.0R4.0-AIR		20	4	20	19	20	89	140	2	●
AL-2RL-D20.0R5.0-AIR		20	5	20	19	20	89	140	2	○
AL-2RL-D20.0R6.0-AIR		20	6	20	19	20	89	140	2	○

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Anwendungsgebiet

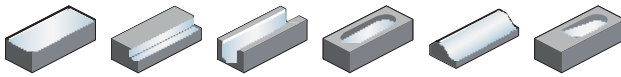
P	M	K	N	S	H
			✓		

✓ Sehr geeignet

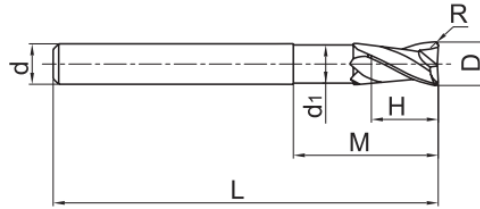
✓ Geeignet

Schaftfräser Allgemeine Bearbeitung von Al. u. Al. Legierungen

ALG-2R



- Zylinderschaft
- über Mittescheidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d (h6)	d ₁	H	M	L		
ALG-2R-D6.0R0.3		6	0,3	6	5,7	8	16	75	2	●
ALG-2R-D6.0R0.5		6	0,5	6	5,7	8	16	75	2	●
ALG-2R-D6.0R1.0		6	1	6	5,7	8	16	75	2	●
ALG-2R-D8.0R0.3		8	0,3	8	7,4	10	20	75	2	●
ALG-2R-D8.0R0.5		8	0,5	8	7,4	10	20	75	2	●
ALG-2R-D8.0R1.0		8	1	8	7,4	10	20	75	2	●
ALG-2R-D10.0R0.5		10	0,5	10	9,4	12	35	100	2	●
ALG-2R-D10.0R1.0		10	1	10	9,4	12	35	100	2	●
ALG-2R-D10.0R1.6		10	1,6	10	9,4	12	35	100	2	●
ALG-2R-D10.0R2.5		10	2,5	10	9,4	12	35	100	2	●
ALG-2R-D12.0R0.5		12	0,5	12	11,4	15	35	100	2	●
ALG-2R-D12.0R1.0		12	1	12	11,4	15	35	100	2	●
ALG-2R-D12.0R1.6		12	1,6	12	11,4	15	35	100	2	●
ALG-2R-D12.0R2.5		12	2,5	12	11,4	15	35	100	2	●
ALG-2R-D12.0R3.2		12	3,2	12	11,4	15	35	100	2	●
ALG-2R-D12.0R4.0		12	4	12	11,4	15	35	100	2	●
ALG-2R-D16.0R1.0		16	1	16	15,4	15	45	125	2	●
ALG-2R-D16.0R1.6		16	1,6	16	15,4	15	45	125	2	●
ALG-2R-D16.0R2.5		16	2,5	16	15,4	15	45	125	2	●
ALG-2R-D16.0R3.2		16	3,2	16	15,4	15	45	125	2	●
ALG-2R-D16.0R4.0		16	4	16	15,4	15	45	125	2	●
ALG-2R-D16.0R6.3		16	6,3	16	15,4	15	45	125	2	○
ALG-2R-D20.0R1.0		20	1	20	18	20	50	125	2	●
ALG-2R-D20.0R1.6		20	1,6	20	18	20	50	125	2	●
ALG-2R-D20.0R2.5		20	2,5	20	18	20	50	125	2	●
ALG-2R-D20.0R3.2		20	3,2	20	18	20	50	125	2	●
ALG-2R-D20.0R4.0		20	4	20	18	20	50	125	2	●
ALG-2R-D20.0R6.3		20	6,3	20	18	20	50	125	2	○
ALG-2R-D25.0R6.3		25	6,3	25	23	25	75	150	2	○

ALG-2R-D25.0R6.3 mit Innenkühlung
 * Mit Innenkühlung

Anwendungsgebiet

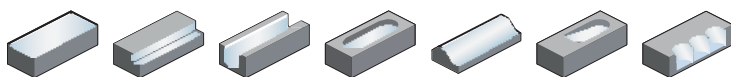
P	M	K	N	S	H
			✓		

- ✓ Sehr geeignet
- ✓ Geeignet

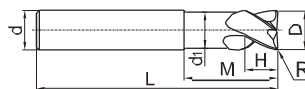
ENDMILL

Torusfräser Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-3R-AIR



- über Mittschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d (h6)	d ₁	H	M	L		YK40F
AL-3R-D12.0R1.0-AIR		12	1	12	11	12	37	83	3	●
AL-3R-D12.0R2.0-AIR		12	2	12	11	12	37	83	3	●
AL-3R-D12.0R3.0-AIR		12	3	12	11	12	37	83	3	●
AL-3R-D16.0R1.0-AIR		16	1	16	15	16	43	92	3	●
AL-3R-D16.0R2.0-AIR		16	2	16	15	16	43	92	3	●
AL-3R-D16.0R3.0-AIR		16	3	16	15	16	43	92	3	●
AL-3R-D16.0R4.0-AIR		16	4	16	15	16	43	92	3	●
AL-3R-D20.0R1.0-AIR		20	1	20	19	20	53	104	3	●
AL-3R-D20.0R2.0-AIR		20	2	20	19	20	53	104	3	○
AL-3R-D20.0R3.0-AIR		20	3	20	19	20	53	104	3	○
AL-3R-D20.0R4.0-AIR		20	4	20	19	20	53	104	3	○
AL-3R-D20.0R5.0-AIR		20	5	20	19	20	53	104	3	●
AL-3R-D20.0R6.0-AIR		20	6	20	19	20	53	104	3	○

- Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Anwendungsgebiet					
P	M	K	N	S	H
			✓		

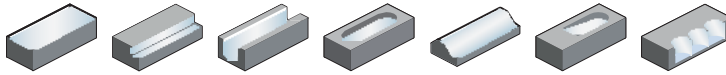
- ✓ Sehr geeignet
- ✓ Geeignet

ENDMILL

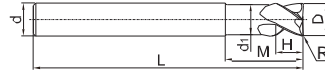
Torusfräser langer Schaft

Allgemeine Bearbeitung von Al. u. Al. Legierungen

AL-3RL-AIR



- über Mitteschneidend
- Spiralwinkel 30°



Artikel	*	Abmessungen [mm]							Zähne	Sorte
		D	R	d (h6)	d ₁	H	M	L		YK40F
AL-3RL-D12.0R1.0-AIR		12	1	12	11	12	74	120	3	●
AL-3RL-D12.0R2.0-AIR		12	2	12	11	12	74	120	3	●
AL-3RL-D12.0R3.0-AIR		12	3	12	11	12	74	120	3	●
AL-3RL-D16.0R1.0-AIR		16	1	16	15	16	84	140	3	●
AL-3RL-D16.0R2.0-AIR		16	2	16	15	16	84	140	3	○
AL-3RL-D16.0R3.0-AIR		16	3	16	15	16	84	140	3	●
AL-3RL-D16.0R4.0-AIR		16	4	16	15	16	84	140	3	●
AL-3RL-D20.0R1.0-AIR		20	1	20	19	20	89	140	3	●
AL-3RL-D20.0R2.0-AIR		20	2	20	19	20	89	140	3	○
AL-3RL-D20.0R3.0-AIR		20	3	20	19	20	89	140	3	○
AL-3RL-D20.0R4.0-AIR		20	4	20	19	20	89	140	3	○
AL-3RL-D20.0R5.0-AIR		20	5	20	19	20	89	140	3	○
AL-3RL-D20.0R6.0-AIR		20	6	20	19	20	89	140	3	○

● Ab Lager ○ Auf Anfrage

* MitInnenkühlung

Anwendungsgebiet

P	M	K	N	S	H
			✓		

✓ Sehr geeignet

✓ Geeignet

Endmill Carbide

Cutting parameters for MG series end mills

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC						
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)					
1	20000	165	20000	165	20000	135	20000	135	20000	50	20000	100					
2	15000	265	15000	265	15000	240	15000	235	11150	70	13000	150					
3	14000	455	14000	455	13000	420	10600	350	7500	100	8500	275					
4	10800	465	10800	465	10000	430	8000	355	5500	110	6500	280					
5	8200	485	8200	485	7600	450	6400	370	4500	110	5000	295					
6	7000	500	7000	500	6400	460	5300	385	3700	115	4200	300					
8	5200	495	5200	495	4800	455	4000	380	2800	115	3200	305					
10	4200	485	4200	485	3800	450	3200	370	2200	115	2500	290					
12	3500	485	3500	485	3200	450	2650	370	1850	115	2100	290					
14	3000	455	3000	455	2700	420	2300	350	1600	110	1800	275					
16	2600	455	2600	455	2400	420	2000	350	1400	100	1600	275					
18	2300	445	2300	445	2100	410	1800	345	1250	100	1400	270					
20	2050	445	2050	445	1900	410	1600	345	1100	100	1250	270					
Maximum cutting depth																	
	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>∅1 ≤ D < ∅3</td> <td>0.15D</td> </tr> <tr> <td>∅3 ≤ D</td> <td>0.3D</td> </tr> </tbody> </table>						Diameter range	Cutting depth a _p	∅1 ≤ D < ∅3	0.15D	∅3 ≤ D	0.3D					
Diameter range	Cutting depth a _p																
∅1 ≤ D < ∅3	0.15D																
∅3 ≤ D	0.3D																

ENDMILL

- The above table shows the standard value of side milling. When milling slot, 50% - 70% of rotating speed and 40% - 60% of feed speed stated above are recommended as standard.
- Please select high-precision machine and tool holder.
- Please use air blow or cutting liquid with high mist retardant property.
- Down milling is recommended in the case of side milling.
- When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
- Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Cutting parameters for MG series end mills

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC						
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)					
1	20000	215	20000	215	20000	175	20000	175	20000	65	20000	130					
2	15000	345	15000	345	15000	310	15000	305	11150	90	13000	195					
3	14000	590	14000	590	13000	546	10600	455	7500	130	8500	360					
4	10800	600	10800	605	10000	560	8000	460	5500	145	6500	365					
5	8200	630	8200	630	7600	585	6400	480	4500	145	5000	380					
6	7000	650	7000	650	6400	600	5300	500	3700	150	4200	390					
8	5200	645	5200	645	4800	590	4000	495	2800	150	3200	400					
10	4200	630	4200	630	3800	585	3200	480	2200	150	2500	380					
12	3500	630	3500	630	3200	585	2650	480	1850	150	2100	380					
14	3000	590	3000	590	2700	545	2300	455	1600	145	1800	360					
16	2600	590	2600	590	2400	545	2000	455	1400	130	1600	360					
18	2300	580	2300	580	2100	530	1800	450	1250	130	1400	350					
20	2050	580	2050	580	1900	530	1600	450	1100	130	1250	350					
Maximum cutting depth																	
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- The above table shows the standard value of side milling. When milling slot, 50% - 70% of rotating speed and 40% - 60% of feed speed stated above are recommended as standard.
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Endmill Carbide

Cutting parameters for MG series end mills

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC						
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)					
1	20000	225	20000	225	20000	180	20000	180	20000	80	20000	135					
2	15000	360	15000	360	15000	325	15000	315	11150	90	13000	200					
3	14000	610	14000	610	13000	570	10600	470	7500	110	8500	370					
4	10800	630	10800	630	10000	575	8000	480	5500	115	6500	380					
5	8200	660	8200	660	7600	600	6400	505	4500	115	5000	400					
6	7000	675	7000	675	6400	620	5300	515	3700	120	4200	405					
8	5200	665	5200	665	4800	610	4000	510	2800	120	3200	415					
10	4200	660	4200	660	3800	600	3200	505	2200	120	2500	390					
12	3500	660	3500	660	3200	600	2650	505	1850	120	2100	390					
14	3000	610	3000	610	2700	570	2300	470	1600	115	1800	370					
16	2600	610	2600	610	2400	570	2000	470	1400	110	1600	370					
18	2300	600	2300	600	2100	560	1800	460	1250	95	1400	365					
20	2050	600	2050	600	1900	560	1600	460	1100	95	1250	365					
Maximum cutting depth																	
	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>∅1 ≤ D < ∅3</td> <td>0.15D</td> </tr> <tr> <td>∅3 ≤ D</td> <td>0.3D</td> </tr> </tbody> </table>						Diameter range	Cutting depth a _p	∅1 ≤ D < ∅3	0.15D	∅3 ≤ D	0.3D					
Diameter range	Cutting depth a _p																
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∅3 ≤ D	0.3D																

ENDMILL

- The above table shows the standard value of side milling. When milling slot, 50% - 70% of rotating speed and 40% - 60% of feed speed stated above are recommended as standard.
- Please select high-precision machine and tool holder.
- Please use air blow or cutting liquid with high mist retardant property.
- Down milling is recommended in the case of side milling.
- When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
- Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Cutting parameters for MG series end mills

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC						
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)					
1	20000	250	20000	250	20000	200	20000	200	20000	90	20000	150					
2	15000	400	15000	400	15000	360	15000	350	11150	100	13000	225					
3	14000	680	14000	680	13000	630	10600	525	7500	120	8500	410					
4	10800	700	10800	700	10000	640	8000	535	5500	125	6500	420					
5	8200	730	8200	730	7600	670	6400	560	4500	125	5000	440					
6	7000	750	7000	750	6400	690	5300	575	3700	135	4200	450					
8	5200	740	5200	740	4800	680	4000	565	2800	135	3200	460					
10	4200	730	4200	730	3800	670	3200	560	2200	135	2500	435					
12	3500	730	3500	730	3200	670	2650	560	1850	135	2100	435					
14	3000	680	3000	680	2700	630	2300	525	1600	125	1800	410					
16	2600	680	2600	680	2400	630	2000	525	1400	120	1600	410					
18	2300	670	2300	670	2100	620	1800	515	1250	105	1400	405					
20	2050	670	2050	670	1900	620	1600	515	1100	105	1250	405					
Maximum cutting depth																	
	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>∅1 ≤ D < ∅3</td> <td>0.15D</td> </tr> <tr> <td>∅3 ≤ D</td> <td>0.3D</td> </tr> </tbody> </table>						Diameter range	Cutting depth a _p	∅1 ≤ D < ∅3	0.15D	∅3 ≤ D	0.3D					
Diameter range	Cutting depth a _p																
∅1 ≤ D < ∅3	0.15D																
∅3 ≤ D	0.3D																

- The above table shows the standard value of side milling. When milling slot, 50% - 70% of rotating speed and 40% - 60% of feed speed stated above are recommended as standard.
- Please select high-precision machine and tool holder.
- Please use air blow or cutting liquid with high mist retardant property.
- Down milling is recommended in the case of side milling.
- When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
- Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Solid Carbide End Mills **MILLING**

Cutting parameters for MG series end mills

MG-6E

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC	
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	7000	890	7000	890	6400	820	5300	680	3700	160	4200	540
8	5200	890	5200	890	4800	820	4000	680	2800	160	3200	550
10	4200	860	4200	860	3800	800	3200	665	2200	160	2500	520
12	3500	860	3500	860	3200	800	2650	665	1850	160	2100	520
14	3000	810	3000	810	2700	750	2300	625	1600	150	1800	490
16	2600	810	2600	810	2400	750	2000	625	1400	150	1600	490
18	2300	800	2300	800	2100	740	1800	615	1250	125	1400	485
20	2050	800	2050	800	1900	740	1600	615	1100	125	1250	485

Maximum cutting depth	<p>The diagram illustrates the maximum cutting depth parameters for the end mill. It shows a cross-section of the tool cutting into a workpiece. The axial cutting depth is labeled as $a_e = 0.05D$, and the radial cutting depth is labeled as $a_p = 1.5D$.</p>	
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ENDMILL

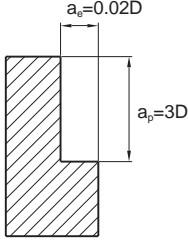
1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Down milling is recommended in the case of side milling.
4. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
5. Make overhang of tool as short as possible in conditions of non-interference.



MILLING Solid Carbide End Mills

Cutting parameters for MG series end mills

MG-6EL

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC	
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	5800	750	5800	750	5300	685	4250	545	2650	115	3600	460
8	4400	750	4400	750	4000	685	3180	545	2000	115	2700	465
10	3500	730	3500	730	3200	665	2550	530	1600	115	2150	440
12	2900	730	2900	730	2650	665	2120	530	1350	115	1800	440
14	2500	685	2500	685	2300	625	1820	500	1150	105	1550	415
16	2200	685	2200	685	2000	625	1590	500	1000	105	1350	415
18	1950	675	1950	675	1800	615	1420	490	900	90	1200	410
20	1750	675	1750	675	1600	615	1270	490	800	90	1050	410
Maximum cutting depth	 <p>The diagram illustrates the maximum cutting depth parameters for the end mill. It shows a cross-section of the tool cutting into a workpiece. The axial cutting depth is labeled as $a_e = 0.02D$, where D is the tool diameter. The radial cutting depth is labeled as $a_p = 3D$.</p>											

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Down milling is recommended in the case of side milling.
4. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
5. Make overhang of tool as short as possible in conditions of non-interference.

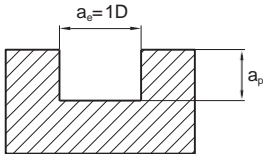
Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for GM series end mills

MG-2ES

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)
0.3	32000	115	32000	115	32000	115	32000	80	32000	40
0.4	32000	125	32000	125	32000	125	32000	90	27500	50
0.5	32000	125	32000	125	29500	125	25000	90	22000	50
0.6	32000	125	32000	125	24500	125	21000	90	18500	50
0.7	32000	125	32000	125	24500	125	21000	90	18500	50
0.8	24500	125	24500	125	18500	125	15500	90	13500	50
0.9	24500	125	24500	125	18500	125	15500	90	13500	50
1.0	21000	140	25000	165	16800	130	14500	90	10000	50
1.5	13000	140	15000	165	11800	130	10000	90	7000	50
2.0	13000	160	15000	185	11800	145	10000	100	7000	60
2.5	8700	200	10000	240	8200	185	6600	100	4700	60
3.0	8700	235	10000	270	8200	220	6600	100	4700	75

Maximum cutting depth		
	Diameter range	Cutting depth a_p
	$D < \varnothing 1$	0.05D
$\varnothing 1 \leq D \leq \varnothing 3$	0.15D	

ENDMILL

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
4. Make overhang of tool as short as possible in conditions of non-interference.

MILLING Solid Carbide End Mills

Cutting parameters for MG series end mills

MG-2B★MG-2BL

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC	
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
R0.5	40000	800	40000	800	38000	700	32000	320	22300	200	25000	275
R1.0	24000	900	24000	900	19000	760	16000	400	11150	230	13000	275
R1.5	15500	950	15500	950	12750	760	10600	450	7400	290	8500	280
R2.0	11500	950	11500	950	9550	760	8000	550	5550	370	6500	370
R2.5	9500	1050	9500	1050	7650	800	6400	550	4450	370	5000	375
R3.0	8000	1050	8000	1050	6400	800	5300	580	3700	390	4200	390
R4.0	6000	1300	6000	1300	4800	950	4000	700	2750	455	3200	440
R5.0	4800	1200	4800	1200	3800	900	3200	650	2200	430	2500	440
R6.0	4000	1100	4000	1100	3200	840	2650	610	1850	430	2100	420
R8.0	3000	1050	3000	1050	2400	800	2000	600	1350	380	1600	375
R10.0	2400	950	2400	950	1900	680	1600	560	1100	370	1250	330
Maximum cutting depth												

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
4. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for MG series end mills

MG-4B★MG-4BL

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC	
	Cutting speed		150m/min		120m/min		100m/min		70m/min		80m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
R1.5	15500	1710	15500	1710	12750	1340	10600	810	7400	520	8500	500
R2.0	11500	1710	11500	1710	9550	1340	8000	990	5550	660	6500	665
R2.5	9500	1890	9500	1890	7650	1440	6400	990	4450	660	5000	675
R3.0	8000	1890	8000	1890	6400	1440	5300	1040	3700	700	4200	700
R4.0	6000	2340	6000	2340	4800	1710	4000	1260	2750	820	3200	790
R5.0	4800	2160	4800	2160	3800	1620	3200	1170	2200	770	2500	790
R6.0	4000	1980	4000	1980	3200	1510	2650	1100	1850	770	2100	755
R8.0	3000	1890	3000	1890	2400	1440	2000	1080	1350	680	1600	675
R10.0	2400	1710	2400	1710	1900	1220	1600	1000	1100	660	1250	595
Maximum cutting depth												

ENDMILL

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
4. Make overhang of tool as short as possible in conditions of non-interference.

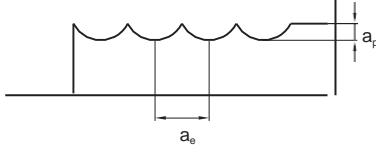
Endmill Carbide

MILLING Solid Carbide End Mills

Cutting parameters for MG series end mills

MG-2BS

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel	
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
R0.15	32000	300	32000	300	32000	270	32000	250	32000	150
R0.2	32000	380	32000	380	32000	320	32000	300	32000	175
R0.25	32000	460	32000	460	32000	410	32000	330	32000	205
R0.3	32000	535	32000	535	32000	500	32000	420	32000	265
R0.35	32000	550	32000	550	32000	520	32000	440	32000	270
R0.4	32000	610	32000	610	32000	560	32000	460	27500	285
R0.45	32000	700	32000	700	32000	600	25000	400	27500	285
R0.5	32000	765	32000	765	32000	640	25000	400	22000	285
R1.0	24000	900	24000	900	19000	760	16000	400	11150	230
R1.5	15500	950	15500	950	12750	760	10600	450	7400	290

Maximum cutting depth			<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> <th>Cutting width a_e</th> </tr> </thead> <tbody> <tr> <td>$D < \varnothing 1$</td> <td>0.05R</td> <td>0.2R</td> </tr> <tr> <td>$\varnothing 1 \leq D \leq \varnothing 3$</td> <td>0.1R</td> <td>0.2R</td> </tr> </tbody> </table>			Diameter range	Cutting depth a_p	Cutting width a_e	$D < \varnothing 1$	0.05R	0.2R	$\varnothing 1 \leq D \leq \varnothing 3$	0.1R	0.2R
	Diameter range	Cutting depth a_p	Cutting width a_e											
	$D < \varnothing 1$	0.05R	0.2R											
$\varnothing 1 \leq D \leq \varnothing 3$	0.1R	0.2R												

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Make overhang of tool as short as possible in conditions of non-interference.
4. Reduce feed speed correspondingly when rotating speed is low.

Endmill Carbide

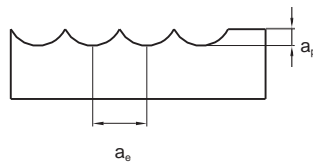
Solid Carbide End Mills MILLING

Cutting parameters for MG series end mills

MG-2BP

Workpiece material		Cast iron, Carbon steel, Alloy steel ~750N/mm ²				Carbon steel, Alloy steel ~30HRC				Pre-hardened steel, quenched and tempered steel ~40HRC				Stainless steel			
Diameter (mm)	Effective length (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)
R0.25	4	27000	400	0.02	0.025	27000	380	0.02	0.025	27000	300	0.02	0.025	27000	200	0.02	0.025
	6	21000	200	0.01	0.015	21000	180	0.01	0.015	21000	160	0.01	0.015	21000	150	0.01	0.015
R0.3	4	27000	400	0.03	0.12	27000	380	0.03	0.12	25000	250	0.03	0.12	24000	200	0.03	0.12
	6	25000	300	0.03	0.12	25000	280	0.03	0.12	20000	150	0.03	0.12	20000	140	0.03	0.12
R0.4	4	27000	600	0.04	0.16	27000	550	0.04	0.16	23000	450	0.04	0.16	21000	300	0.04	0.16
	6	24000	400	0.04	0.12	24000	360	0.04	0.12	21000	250	0.04	0.12	19000	200	0.04	0.12
	8	22000	300	0.04	0.12	22000	270	0.04	0.12	19000	150	0.04	0.12	19000	140	0.04	0.12
	10	22000	270	0.03	0.09	22000	250	0.03	0.09	19000	135	0.03	0.09	19000	120	0.03	0.09
R0.5	4	28000	600	0.05	0.20	28000	550	0.05	0.20	25000	500	0.05	0.20	21000	300	0.05	0.20
	6	21000	400	0.05	0.20	21000	360	0.05	0.20	19000	300	0.05	0.20	16000	200	0.05	0.20
	8	21000	360	0.05	0.15	21000	320	0.05	0.15	19000	270	0.05	0.15	16000	180	0.05	0.15
	10	18000	300	0.03	0.10	18000	270	0.03	0.10	17000	200	0.03	0.10	14000	150	0.03	0.10
	12	18000	270	0.03	0.10	18000	250	0.03	0.10	17000	180	0.03	0.10	14000	135	0.03	0.10
R0.6	6	20000	600	0.06	0.24	20000	540	0.06	0.24	17000	300	0.06	0.24	14000	200	0.06	0.24
	8	20000	540	0.06	0.24	20000	500	0.06	0.24	17000	270	0.06	0.24	14000	170	0.06	0.24
	12	16000	300	0.06	0.18	16000	270	0.06	0.18	14000	200	0.06	0.18	11000	150	0.06	0.18
	16	16000	270	0.03	0.12	16000	230	0.03	0.12	14000	175	0.03	0.12	11000	135	0.03	0.12
R0.75	8	17000	600	0.08	0.30	17000	540	0.08	0.30	15000	300	0.08	0.30	12000	250	0.08	0.30
	12	17000	540	0.06	0.24	17000	500	0.06	0.24	15000	275	0.06	0.24	12000	225	0.06	0.24
	16	13000	300	0.04	0.16	13000	275	0.04	0.16	12000	200	0.04	0.16	9500	150	0.04	0.16
R1.0	6	16500	800	0.10	0.40	16500	750	0.10	0.40	16500	560	0.10	0.40	13500	450	0.10	0.40
	8	16500	800	0.10	0.32	16500	750	0.10	0.32	16500	560	0.10	0.32	13500	450	0.10	0.32
	10	14000	630	0.08	0.30	14000	600	0.08	0.30	13000	450	0.08	0.30	10000	270	0.08	0.30
	12	14000	630	0.06	0.30	14000	600	0.06	0.30	13000	450	0.06	0.30	10000	270	0.06	0.30
	16	14000	550	0.06	0.24	14000	530	0.06	0.24	13000	400	0.06	0.24	10000	270	0.06	0.24
	20	11000	360	0.06	0.16	11000	330	0.06	0.16	10000	225	0.06	0.16	8000	175	0.06	0.16

Maximum cutting depth

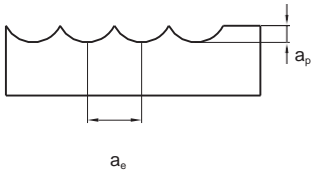


ENDMILL

MILLING Solid Carbide End Mills

Cutting parameters for MG series end mills

MG-2BP

Workpiece material		Cast iron, Carbon steel, Alloy steel ~750N/mm ²				Carbon steel, Alloy steel ~30HRC				Pre-hardened steel, quenched and tempered steel ~40HRC				Stainless steel			
Diameter (mm)	Effective length (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)
R1.25	8	14000	800	0.10	0.32	14000	750	0.10	0.32	14000	560	0.10	0.32	12500	450	0.10	0.32
	12	13000	630	0.06	0.30	13000	600	0.06	0.30	12000	450	0.06	0.30	10000	270	0.06	0.30
	16	13000	550	0.06	0.24	13000	530	0.06	0.24	12000	400	0.06	0.24	10000	270	0.06	0.24
	20	10000	360	0.06	0.16	10000	330	0.06	0.16	8000	225	0.06	0.16	7000	175	0.06	0.16
R1.5	10	12000	800	0.15	0.40	12000	720	0.15	0.40	9500	600	0.15	0.40	7500	400	0.15	0.40
	12	12000	720	0.15	0.40	12000	650	0.15	0.40	9500	540	0.15	0.40	7500	360	0.15	0.40
	16	10000	600	0.15	0.40	10000	540	0.15	0.40	8500	300	0.15	0.40	6500	250	0.15	0.40
	20	10000	600	0.10	0.32	10000	540	0.10	0.32	8500	300	0.10	0.32	6500	250	0.10	0.32
R2.0	10	9000	800	0.20	0.80	9000	720	0.20	0.80	7500	600	0.20	0.80	6000	400	0.20	0.80
	16	9000	800	0.20	0.60	9000	720	0.20	0.60	7500	600	0.20	0.60	6000	400	0.20	0.60
	20	7000	600	0.20	0.40	7000	540	0.20	0.40	6000	400	0.20	0.40	5000	250	0.20	0.40
	25	7000	600	0.15	0.40	7000	540	0.15	0.40	6000	400	0.15	0.40	5000	250	0.15	0.40
R2.5	16	7000	600	0.25	1.00	7000	540	0.25	1.00	6500	500	0.25	1.00	5000	400	0.25	1.00
	25	6000	500	0.25	1.00	6000	450	0.25	1.00	5000	500	0.25	1.00	4000	250	0.25	1.00
Maximum cutting depth																	

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Make overhang of tool as short as possible in conditions of non-interference.
4. Reduce feed speed correspondingly when rotating speed is low.



ENDMILL

Endmill Carbide

Cutting parameters for MG series end mills

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC	
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
1	20000	200	20000	200	20000	160	20000	160	20000	60	20000	120
2	15000	320	15000	320	15000	290	15000	280	11150	84	13000	180
3	14000	545	14000	545	13000	510	10600	420	7500	120	8500	330
4	10800	560	10800	560	10000	520	8000	430	5500	130	6500	335
5	8200	580	8200	580	7600	540	6400	450	4500	130	5000	355
6	7000	600	7000	600	6400	550	5300	460	3700	140	4200	360
8	5200	600	5200	600	4800	550	4000	460	2800	140	3200	365
10	4200	580	4200	580	3800	540	3200	445	2200	140	2500	350
12	3500	580	3500	580	3200	540	2650	445	1850	140	2100	350

Maximum cutting depth							
	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>∅1 ≤ D < ∅3</td> <td>0.15D</td> </tr> <tr> <td>∅3 ≤ D</td> <td>0.3D</td> </tr> </tbody> </table>	Diameter range	Cutting depth a _p	∅1 ≤ D < ∅3	0.15D	∅3 ≤ D	0.3D
Diameter range	Cutting depth a _p						
∅1 ≤ D < ∅3	0.15D						
∅3 ≤ D	0.3D						

ENDMILL

- The above table shows the standard value of side milling. When milling slot, 50% - 70% of rotating speed and 40% - 60% of feed speed stated above are recommended as standard.
- Please select high-precision machine and tool holder.
- Please use air blow or cutting liquid with high mist retardant property.
- Down milling is recommended in the case of side milling.
- When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
- Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Cutting parameters for GM series end mills

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC						
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)					
3	14000	820	14000	820	13000	755	10600	630	7500	145	8500	490					
4	10800	840	10800	840	10000	770	8000	640	5500	145	6500	500					
5	8200	880	8200	880	7600	810	6400	670	4500	145	5000	530					
6	7000	900	7000	900	6400	830	5300	690	3700	160	4200	540					
8	5200	890	5200	890	4800	815	4000	680	2800	160	3200	550					
10	4200	880	4200	880	3800	810	3200	670	2200	160	2500	520					
12	3500	880	3500	880	3200	810	2650	670	1850	160	2100	520					
16	2600	680	2600	680	2400	630	2000	525	1400	120	1600	490					
Maximum cutting depth																	
	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>∅1 ≤ D < ∅3</td> <td>0.15D</td> </tr> <tr> <td>∅3 ≤ D</td> <td>0.3D</td> </tr> </tbody> </table>						Diameter range	Cutting depth a _p	∅1 ≤ D < ∅3	0.15D	∅3 ≤ D	0.3D					
Diameter range	Cutting depth a _p																
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- The above table shows the standard value of side milling. When milling slot, 50%~70% of rotating speed and 40%~60% of feed speed stated above are recommended as standard.
- Please select high-precision machine and tool holder.
- Please use air blow or cutting liquid with high mist retardant property.
- Down milling is recommended in the case of side milling.
- When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
- Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Solid Carbide End Mills **MILLING**

Cutting parameters for MG series end mills

MG-4W—side cutting

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	6350	760	5300	640	4500	360	3450	280	2650	210	
7	5460	760	4550	640	3650	360	3000	280	2250	310	
8	4750	760	4000	640	3400	410	2650	310	2000	240	
9	4250	760	3540	640	2850	410	2300	310	1750	240	
10	3800	760	3200	640	2700	430	2050	330	1600	260	
11	3470	760	2900	640	2400	430	1850	330	1450	260	
12	3200	770	2250	650	1950	470	1500	360	1150	280	
16	2400	770	2000	640	1700	480	1300	360	1000	280	
20	1900	760	1600	610	1350	470	1050	350	800	260	
Maximum cutting depth											

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Down milling is recommended in the case of side milling.
4. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
5. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

MILLING Solid Carbide End Mills

Cutting parameters for MG series end mills

MG-4W—slot cutting

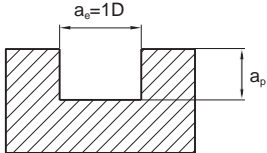
Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		
Cutting speed	80~120 m/min		70~100m/min		60~90m/min		40~70m/min		30~60m/min		
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	
6	5300	640	4500	540	3700	300	2900	230	2400	190	
7	4500	630	3800	540	3200	300	2500	230	2050	190	
8	4000	640	3400	540	2800	340	2200	260	1800	220	
9	3500	630	3000	540	2450	340	1950	260	1600	220	
10	3200	640	2700	540	2250	360	1750	280	1450	230	
11	3000	630	2450	540	2050	360	1600	280	1300	230	
12	2650	640	2250	540	1850	370	1450	290	1200	240	
16	2000	640	1700	540	1400	390	1100	310	900	250	
20	1600	640	1350	510	1100	390	900	300	700	230	
Maximum cutting depth	<p>Maximum $a_p=12\text{mm}$</p>						<p>$a_p=0.5D$</p>				

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
4. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Cutting parameters for SM series end mills

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~40HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
1	20000	200	20000	60	20000	165	20000	120	20000	90	
2	15000	320	11150	85	15000	285	13000	180	11140	130	
3	14000	545	7500	120	10600	420	8500	330	7430	240	
4	10800	560	5500	135	8000	425	6500	335	5570	245	
5	8200	585	4500	135	6400	445	5000	355	4460	260	
6	7000	600	3700	140	5300	465	4200	360	3710	260	
8	5200	595	2800	140	4000	455	3200	365	2785	270	
10	4200	585	2200	140	3200	445	2500	350	2230	250	
12	3500	585	1850	140	2650	445	2100	350	1855	250	
14	3000	545	1600	135	2300	420	1800	330	1590	240	
16	2600	545	1400	120	2000	420	1600	330	1390	240	
18	2300	535	1250	120	1800	415	1400	325	1240	235	
20	2050	535	1100	120	1600	415	1250	325	1115	235	

Maximum cutting depth	a _e =0.1D		a _e =0.05D		a _e =0.03D															
	a _p =1.5D	a _p =1.5D	a _p =1.5D	a _p =1.5D	a _p =1.5D	a _p =1.5D														
	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr><td>Ø1 ≤ D < Ø3</td><td>0.15D</td></tr> <tr><td>Ø3 ≤ D < Ø6</td><td>0.3D</td></tr> <tr><td>Ø6 ≤ D < Ø20</td><td>0.5D</td></tr> </tbody> </table>		Diameter range	Cutting depth a _p	Ø1 ≤ D < Ø3	0.15D	Ø3 ≤ D < Ø6	0.3D	Ø6 ≤ D < Ø20	0.5D	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr><td>Ø1 ≤ D < Ø3</td><td>0.1D</td></tr> <tr><td>Ø3 ≤ D</td><td>0.2D</td></tr> </tbody> </table>		Diameter range	Cutting depth a _p	Ø1 ≤ D < Ø3	0.1D	Ø3 ≤ D	0.2D		
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- Please use air blow or cutting liquid with high mist retardant property.
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- When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
- Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Cutting parameters for SM series end mills

SM-2E

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~40HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)
1	20000	140	20000	45	20000	115	20000	85	20000	65
2	15000	225	11150	60	15000	200	13000	125	11140	90
3	14000	385	7500	85	10600	295	8500	230	7430	170
4	10800	390	5500	95	8000	300	6500	235	5570	170
5	8200	410	4500	95	6400	315	5000	245	4460	180
6	7000	420	3700	95	5300	325	4200	255	3710	180
8	5200	415	2800	95	4000	320	3200	255	2785	190
10	4200	410	2200	95	3200	315	2500	240	2230	175
12	3500	410	1850	95	2650	315	2100	240	1855	175
14	3000	385	1600	95	2300	295	1800	230	1590	170
16	2600	385	1400	85	2000	295	1600	230	1390	170
18	2300	375	1250	85	1800	290	1400	230	1240	165
20	2050	375	1100	85	1600	290	1250	230	1115	165

Maximum cutting depth	Diagram 1: $a_e=0.1D$		Diagram 2: $a_e=0.05D$		Diagram 3: $a_e=0.03D$	
	a_e	a_p	a_e	a_p	a_e	a_p
	$0.1D$	$1.5D$	$0.05D$	$1.5D$	$0.03D$	$1.5D$

Diagram 4: $a_e=1D$	Diagram 5: $a_e=0.05D$	Diagram 6: $a_e=0.03D$																				
<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>$\varnothing 1 \leq D < \varnothing 3$</td> <td>0.15D</td> </tr> <tr> <td>$\varnothing 3 \leq D < \varnothing 6$</td> <td>0.3D</td> </tr> <tr> <td>$\varnothing 6 \leq D < \varnothing 20$</td> <td>0.5D</td> </tr> </tbody> </table>	Diameter range	Cutting depth a_p	$\varnothing 1 \leq D < \varnothing 3$	0.15D	$\varnothing 3 \leq D < \varnothing 6$	0.3D	$\varnothing 6 \leq D < \varnothing 20$	0.5D	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>$\varnothing 1 \leq D < \varnothing 3$</td> <td>0.1D</td> </tr> <tr> <td>$\varnothing 3 \leq D$</td> <td>0.2D</td> </tr> </tbody> </table>	Diameter range	Cutting depth a_p	$\varnothing 1 \leq D < \varnothing 3$	0.1D	$\varnothing 3 \leq D$	0.2D	<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>$\varnothing 1 \leq D < \varnothing 3$</td> <td>0.1D</td> </tr> <tr> <td>$\varnothing 3 \leq D$</td> <td>0.2D</td> </tr> </tbody> </table>	Diameter range	Cutting depth a_p	$\varnothing 1 \leq D < \varnothing 3$	0.1D	$\varnothing 3 \leq D$	0.2D
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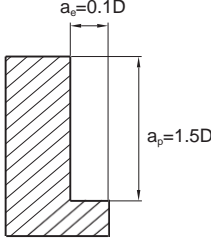
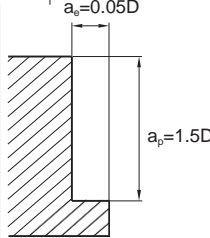
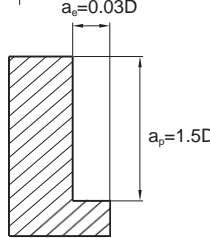
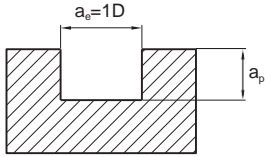
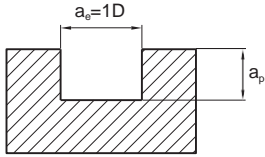
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Endmill Carbide

Cutting parameters for SM series end mills

SM-4E

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~40HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)
1	20000	270	20000	95	20000	215	20000	135	20000	120
2	15000	435	11150	110	15000	380	13000	200	11140	175
3	14000	735	7500	135	10600	565	8500	370	7430	325
4	10800	755	5500	140	8000	575	6500	380	5570	335
5	8200	795	4500	140	6400	605	5000	400	4460	350
6	7000	810	3700	145	5300	620	4200	405	3710	350
8	5200	800	2800	145	4000	615	3200	415	2785	365
10	4200	795	2200	145	3200	605	2500	390	2230	340
12	3500	795	1850	145	2650	605	2100	390	1855	340
14	3000	735	1600	140	2300	565	1800	370	1590	325
16	2600	735	1400	135	2000	565	1600	370	1390	325
18	2300	720	1250	115	1800	555	1400	365	1240	315
20	2050	720	1100	115	1600	555	1250	365	1115	315

Maximum cutting depth						
	Diameter range	Cutting depth a _p	Diameter range	Cutting depth a _p	Diameter range	Cutting depth a _p
	∅1 ≤ D < ∅3	0.15D		∅1 ≤ D < ∅3	0.1D	
	∅3 ≤ D < ∅6	0.3D		∅3 ≤ D	0.2D	
	∅6 ≤ D < ∅20	0.5D				

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- Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for SM series end mills

SM-4E-G★SM-4EL-G

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Carbon steel, Alloy steel ~40HRC		Pre-hardened steel, quenched and tempered steel ~45HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC	
Cutting speed	300m/min		250 m/min		200 m/min		150 m/min		100 m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	15915	1535	13260	1280	10600	1020	7960	765	5300	515
8	11935	1530	9950	1260	7960	1020	5970	765	3980	515
10	9550	1450	7960	1245	6370	1000	4775	750	3180	495
12	7960	1450	6630	1245	5300	1000	3980	750	2650	495
14	6820	1390	5685	1160	4550	930	3410	810	2275	465
16	5970	1390	4975	1160	3980	930	2985	810	1990	465
18	5305	1390	4420	1160	3540	930	2650	810	1770	465
20	4775	1390	3980	1160	3180	930	2390	810	1590	465
Maximum										

ENDMILL

al noise may be generated. Please reduce the rotating



Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for SM series end mills

SM-6E

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~40HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	7000	1070	3700	195	5300	815	4200	650	3710	470	
8	5200	1070	2800	195	4000	815	3200	660	2785	485	
10	4200	1035	2200	195	3200	800	2500	630	2230	450	
12	3500	1035	1850	195	2650	800	2100	630	1855	450	
16	2600	975	1400	180	2000	750	1600	590	1390	435	
20	2050	960	1100	150	1600	740	1250	580	1115	420	
Maximum cutting depth											

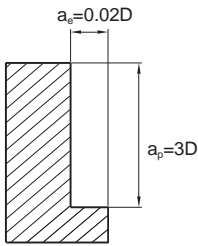
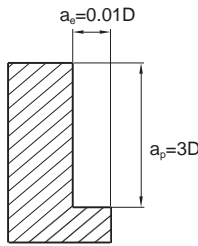
1. Please select high-precision machine and tool holder.
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3. Down milling is recommended in the case of side milling.
4. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
5. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

MILLING Solid Carbide End Mills

Cutting parameters for SM series end mills

SM-6EL

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~40HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	5800	900	2650	140	4250	655	3600	555	3180	490	490
8	4400	900	2000	140	3180	655	2700	560	2390	495	495
10	3500	875	1600	140	2550	635	2150	530	1910	470	470
12	2900	875	1350	140	2120	635	1800	530	1590	470	470
16	2200	825	1000	125	1590	600	1350	500	1195	445	445
20	1750	810	800	110	1270	590	1050	495	955	440	440
Maximum cutting depth											

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Down milling is recommended in the case of side milling.
4. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
5. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for SM series end mills

SM-2B★SM-2BL

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~40HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)
R0.5	40000	960	22300	240	32000	385	25000	330	22280	295
R1.0	24000	1080	11150	275	16000	480	13000	330	11140	295
R1.5	15500	1150	7400	350	10600	545	8500	335	7430	295
R2.0	11500	1150	5550	445	8000	665	6500	450	5570	385
R2.5	9500	1270	4450	445	6400	665	5000	455	4455	405
R3.0	8000	1270	3700	470	5300	700	4200	470	3715	420
R4.0	6000	1575	2750	550	4000	850	3200	535	2785	465
R5.0	4800	1455	2200	520	3200	785	2500	535	2230	465
R6.0	4000	1330	1850	520	2650	740	2100	505	1855	450
R8.0	3000	1270	1350	455	2000	725	1600	455	1395	395
R10.0	2400	1150	1100	445	1600	675	1250	400	1115	360

Maximum cutting depth	
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ENDMILL

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
4. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

MILLING Solid Carbide End Mills

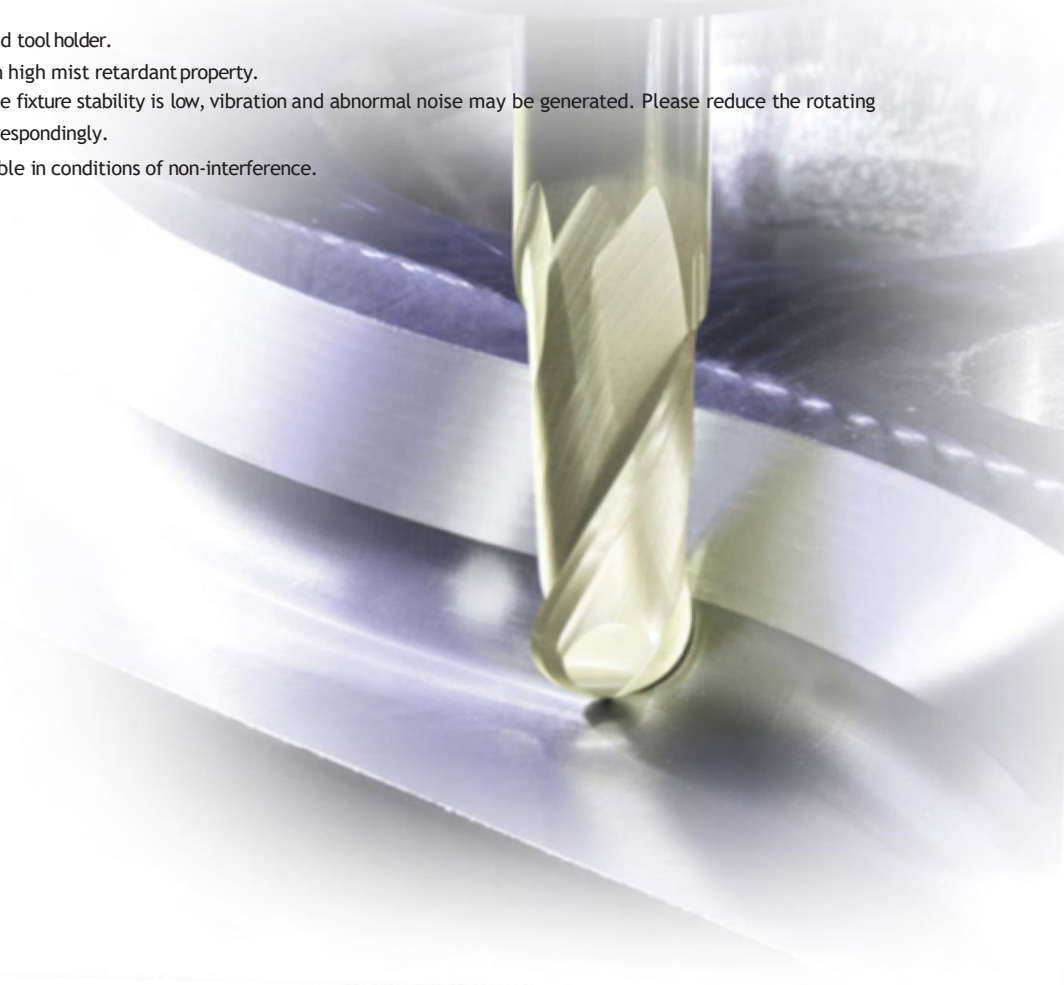
Cutting parameters for SM series end mills

SM-2B★SM-2BL

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Carbon steel, Alloy steel ~400HRC		Pre-hardened steel, quenched and tempered steel ~45HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)
R3.0	15000	4800	11500	2750	9500	2250	7960	1885	6370	1510
R4.0	11500	3650	8950	2100	7150	1700	5970	1420	4775	1135
R5.0	9500	3000	7150	1700	5700	1350	4775	1130	3820	905
R6.0	7950	2500	5950	1400	4750	1100	3980	920	3180	735
R8.0	5950	1900	4450	1050	3550	850	2985	760	2390	610
R10.0	4750	1500	3550	850	2850	680	2390	570	1910	455

Maximum cutting depth	
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1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
4. Make overhang of tool as short as possible in conditions of non-interference.



ENDMILL

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for SM series end mills

SM-4B★SM-4BL

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~40HRC		Pre-hardened steel, quenched and tempered steel ~50HRC		Hardened steel ~55HRC		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
R1.5		15500	2055	7400	625	10600	975	8500	600	7430	525
R2.0		11500	2055	5550	795	8000	1190	6500	800	5570	685
R2.5		9500	2270	4450	795	6400	1190	5000	810	4455	720
R3.0		8000	2270	3700	840	5300	1245	4200	840	3715	745
R4.0		6000	2810	2750	985	4000	1515	3200	950	2785	825
R5.0		4800	2595	2200	925	3200	1405	2500	950	2230	825
R6.0		4000	2375	1850	925	2650	1320	2100	905	1855	800
R8.0		3000	2270	1350	815	2000	1295	1600	810	1395	705
R10.0		2400	2055	1100	795	1600	1200	1250	715	1115	640
Maximum cutting depth											

ENDMILL

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
4. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

MILLING Solid Carbide End Mills

Cutting parameters for SM series end mills

SM-2BC

Workpiece material			Pre-hardened steel, quenched and tempered steel ~40HRC			Pre-hardened steel, quenched and tempered steel ~50HRC			Hardened steel ~55HRC		
Diameter (mm)	Taper half angle (°)	Effective length (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)
R0.25	0.5°	3	30000	300	0.03	30000	270	0.03	30000	240	0.03
		5	30000	250	0.02	30000	225	0.02	30000	200	0.02
	1.0°	3	30000	330	0.03	30000	300	0.03	30000	265	0.03
		5	30000	270	0.02	30000	245	0.02	30000	215	0.02
	1.5°	3	30000	350	0.03	30000	315	0.03	30000	280	0.03
		5	30000	300	0.02	30000	270	0.02	30000	240	0.02
R0.30	0.5°	5	30000	300	0.03	30000	270	0.03	30000	240	0.03
		8	30000	250	0.02	30000	225	0.02	30000	200	0.02
	1.0°	5	30000	350	0.03	30000	315	0.03	30000	280	0.03
		8	30000	300	0.02	30000	270	0.02	30000	240	0.02
		10	30000	270	0.02	30000	245	0.02	30000	215	0.02
		12	30000	250	0.015	30000	225	0.015	30000	200	0.015
	1.5°	15	30000	250	0.01	30000	225	0.01	30000	200	0.01
		8	30000	350	0.03	30000	315	0.03	30000	280	0.03
		15	30000	300	0.01	30000	270	0.01	30000	240	0.01
		8	30000	350	0.03	30000	315	0.03	30000	280	0.03
R0.40	0.5°	8	30000	350	0.05	30000	315	0.05	30000	280	0.05
		12	30000	300	0.04	30000	270	0.04	30000	240	0.04
	1.0°	8	30000	400	0.05	30000	360	0.05	30000	320	0.05
		12	30000	350	0.04	30000	315	0.04	30000	280	0.04
	1.5°	8	30000	450	0.05	30000	405	0.05	30000	360	0.05
		12	30000	400	0.04	30000	360	0.04	30000	320	0.04
R0.50	0.5°	10	22000	450	0.05	22000	405	0.05	22000	360	0.05
		15	22000	400	0.04	22000	360	0.04	22000	320	0.04
		20	22000	370	0.03	22000	335	0.03	22000	295	0.03
		25	22000	350	0.01	22000	315	0.01	22000	280	0.01
		30	22000	320	0.005	22000	290	0.005	22000	255	0.005
	1.0°	10	22000	500	0.05	22000	450	0.05	22000	400	0.05
		15	22000	450	0.04	22000	405	0.04	22000	360	0.04
		20	22000	430	0.02	22000	390	0.02	22000	345	0.02
		25	22000	400	0.015	22000	360	0.015	22000	320	0.015
		30	22000	360	0.01	22000	325	0.01	22000	290	0.01
35	22000	320	0.005	22000	290	0.005	22000	255	0.005		
Maximum cutting depth			<p> $\leq 0.1R (R < 0.5)$ $\leq 0.2R (R \geq 0.5)$ </p>								

ENDMILL

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for SM series end mills

SM-2BC

Workpiece material			Pre-hardened steel, quenched and tempered steel ~40HRC			Pre-hardened steel, quenched and tempered steel ~50HRC			Hardened steel ~55HRC		
Diameter (mm)	Taper half angle (°)	Effective length (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)
R0.50	1.5°	10	22000	530	0.05	22000	475	0.05	22000	425	0.05
		15	22000	500	0.04	22000	450	0.04	22000	400	0.04
		20	22000	460	0.02	22000	415	0.02	22000	370	0.02
	2°	15	22000	600	0.04	22000	540	0.04	22000	480	0.04
		20	22000	500	0.02	22000	450	0.02	22000	400	0.02
		20	22000	550	0.03	22000	495	0.03	22000	440	0.03
	5°	20	22000	600	0.03	22000	540	0.03	22000	480	0.03
R0.60	0.5°	12	22000	500	0.05	22000	450	0.05	22000	400	0.05
		24	22000	400	0.02	22000	360	0.02	22000	320	0.02
	1.0°	12	22000	550	0.05	22000	495	0.05	22000	440	0.05
		24	22000	450	0.02	22000	405	0.02	22000	360	0.02
	1.5°	12	22000	600	0.05	22000	540	0.05	22000	480	0.05
		24	22000	550	0.02	22000	495	0.02	22000	440	0.02
R0.75	0.5°	10	20000	600	0.1	20000	540	0.1	20000	480	0.1
		15	20000	550	0.08	20000	495	0.08	20000	440	0.08
		30	20000	500	0.02	20000	450	0.02	20000	400	0.02
	1.0°	10	20000	650	0.1	20000	585	0.1	20000	520	0.1
		15	20000	600	0.08	20000	540	0.08	20000	480	0.08
		20	20000	550	0.05	20000	495	0.05	20000	440	0.05
	1.5°	30	20000	530	0.02	20000	480	0.02	20000	425	0.02
		10	20000	700	0.1	20000	630	0.1	20000	560	0.1
		15	20000	650	0.08	20000	585	0.08	20000	520	0.08
		30	20000	600	0.02	20000	540	0.02	20000	480	0.02
R1.0	0.5°	20	18000	800	0.05	18000	720	0.05	18000	640	0.05
		30	18000	650	0.03	18000	585	0.03	18000	520	0.03
		40	18000	500	0.02	18000	450	0.02	18000	400	0.02
	1.0°	20	18000	900	0.05	18000	810	0.05	18000	720	0.05
		25	18000	850	0.04	18000	765	0.04	18000	680	0.04
		30	18000	800	0.03	18000	720	0.03	18000	640	0.03
		35	18000	750	0.03	18000	675	0.03	18000	600	0.03
		40	18000	600	0.02	18000	540	0.02	18000	480	0.02
		50	18000	550	0.02	18000	495	0.02	18000	440	0.02

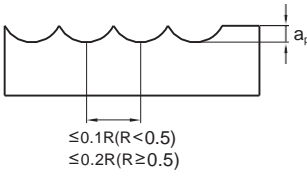
Maximum cutting depth

$\leq 0.1R (R < 0.5)$
 $\leq 0.2R (R \geq 0.5)$

MILLING Solid Carbide End Mills

Cutting parameters for SM series end mills

SM-2BC

Workpiece material			Pre-hardened steel, quenched and tempered steel ~40HRC			Pre-hardened steel, quenched and tempered steel ~50HRC			Hardened steel ~55HRC		
Diameter (mm)	Taper half angle (°)	Effective length (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)
R1.0	1.5°	20	18000	1000	0.05	18000	900	0.05	18000	800	0.05
		30	18000	900	0.03	18000	810	0.03	18000	720	0.03
		40	18000	750	0.03	18000	675	0.03	18000	600	0.03
	2°	30	18000	900	0.04	18000	810	0.04	18000	720	0.04
		40	18000	850	0.03	18000	765	0.03	18000	680	0.03
	3°	30	18000	1000	0.04	18000	900	0.04	18000	800	0.04
40		18000	900	0.03	18000	810	0.03	18000	720	0.03	
R1.5	0.5°	30	16000	1100	0.1	16000	990	0.1	16000	880	0.1
		40	16000	950	0.06	16000	855	0.06	16000	760	0.06
		50	16000	800	0.03	16000	720	0.03	16000	640	0.03
	1.0°	30	16000	1200	0.1	16000	1080	0.1	16000	960	0.1
		40	16000	1000	0.06	16000	900	0.06	16000	800	0.06
		50	16000	850	0.03	16000	765	0.03	16000	680	0.03
R1.5	1.5°	30	16000	1300	0.1	16000	1170	0.1	16000	1040	0.1
		40	16000	1100	0.06	16000	990	0.06	16000	880	0.06
		50	16000	950	0.03	16000	855	0.03	16000	760	0.03
R2.0	0.5°	60	14000	1100	0.1	14000	990	0.1	14000	880	0.1
	1.0°	60	14000	1100	0.1	14000	990	0.1	14000	880	0.1
Maximum cutting depth			 <p style="text-align: center;"> $\leq 0.1R (R < 0.5)$ $\leq 0.2R (R \geq 0.5)$ </p>								

1. Please select high-precision machine and tool holder. When vibration and abnormal noise occur during machining, please reduce axial cutting depth a_p .
2. Please use air blow or cutting liquid with high mist retardant property.
3. Reduce feed speed correspondingly when rotating speed is low.
4. Because machining conditions such as machine and allowance for machining may vary, please adjust the parameters based on actual requirements.

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for HM series end mills

HM-2E

Workpiece material	Pre-hardened steel, Hardened steel 40~50HRC		Hardened steel 50~60HRC		Hardened steel 60~68HRC	
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
1	40000	160	40000	160	32000	130
2	40000	400	24000	240	16000	160
3	32000	510	16000	255	11000	175
4	24000	625	12000	310	8000	210
5	19000	685	9500	340	6400	230
6	16000	770	8000	385	5300	255
8	12000	770	6000	385	4000	255
10	9600	770	4800	385	3200	255
12	8000	800	4000	400	2700	270
14	6800	680	3400	340	2300	230
16	6000	600	3000	300	2000	200
18	5300	530	2700	270	1800	180
20	4800	480	2400	240	1600	160
Maximum cutting depth	<p>Maximum $a_e = 1.0\text{mm}$</p>		<p>Maximum $a_e = 0.5\text{mm}$</p>		<p>Maximum $a_e = 0.3\text{mm}$</p>	

1. Please select high-precision and rigidity machine and tool holder.
2. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
3. Please use air blow or MQL (minimum oil mist cooling).
4. Down milling is recommended in the case of side milling.
5. Make overhang of tool as short as possible in conditions of non-interference.

MILLING Solid Carbide End Mills

Cutting parameters for HM series end mills

HM-4E★HM-4EL

Workpiece material	Pre-hardened steel, Hardened steel 40~50HRC		Hardened steel 50~60HRC		Hardened steel 60~68HRC		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
1		40000	320	40000	320	32000	260
2		40000	800	24000	480	16000	320
3		32000	1020	16000	510	11000	350
4		24000	1250	12000	620	8000	420
5		19000	1360	9500	680	6400	460
6		16000	1540	8000	770	5300	510
8		12000	1540	6000	770	4000	510
10		9600	1540	4800	770	3200	510
12		8000	1600	4000	800	2700	540
14		6800	1340	3400	680	2300	460
16		6000	1200	3000	600	2000	400
18		5300	1060	2700	530	1800	360
20		4800	960	2400	480	1600	320
Maximum cutting depth	<p>$a_e=0.05D$ $a_p=1.5D$ Maximum $a_e=1.0\text{mm}$</p>		<p>$a_e=0.03D$ $a_p=1D$ Maximum $a_e=0.5\text{mm}$</p>		<p>$a_e=0.02D$ $a_p=1D$ Maximum $a_e=0.3\text{mm}$</p>		

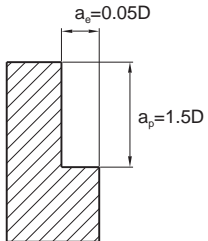
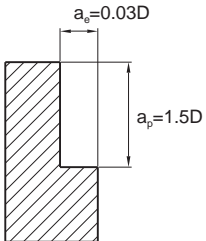
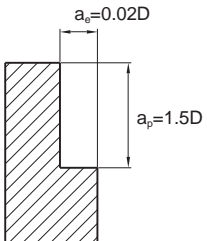
1. Please select high-precision and rigidity machine and tool holder.
2. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
3. Please use air blow or MQL (minimum oil mist cooling).
4. Down milling is recommended in the case of side milling.
5. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Solid Carbide End Mills MILLING

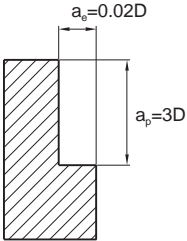
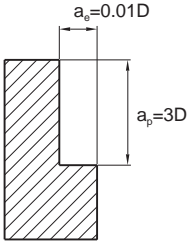
Cutting parameters for HM series end mills

HM-6E

Workpiece material	Pre-hardened steel, Hardened steel 40-50HRC		Hardened steel 50-60HRC		Hardened steel 60-68HRC	
Cutting speed	300m/min		150m/min		100m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	16000	1850	8000	925	5300	610
8	12000	1850	6000	925	4000	610
10	9600	1850	4800	925	3200	610
12	8000	1920	4000	960	2700	650
14	6800	1600	3400	815	2300	550
16	6000	1440	3000	720	2000	480
18	5300	1270	2700	635	1800	430
20	4800	1150	2400	575	1600	385
Maximum cutting depth	 <p>Maximum $a_e = 1.0\text{mm}$</p>		 <p>Maximum $a_e = 0.5\text{mm}$</p>		 <p>Maximum $a_e = 0.3\text{mm}$</p>	

1. Please select high-precision and rigidity machine and tool holder.
2. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
3. Please use air blow or MQL (minimum oil mist cooling).
4. Down milling is recommended in the case of side milling.
5. Make overhang of tool as short as possible in conditions of non-interference.

HM-6EL

Workpiece material	Pre-hardened steel, Hardened steel 40~50HRC		Hardened steel 50~60HRC		Hardened steel 60~68HRC	
Cutting speed	300m/min		150m/min		100m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	16000	1300	8000	650	5300	430
8	12000	1300	6000	650	4000	430
10	9600	1300	4800	650	3200	430
12	8000	1350	4000	670	2700	460
14	6800	1150	3400	570	2300	380
16	6000	1000	3000	500	2000	340
18	5300	890	2700	450	1800	300
20	4800	800	2400	400	1600	270
Maximum cutting depth	 <p>Maximum $a_e = 0.3\text{mm}$</p>					

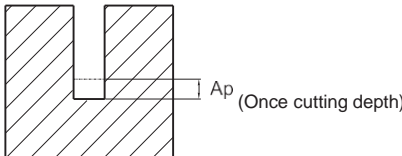
1. Please select high-precision and rigidity machine and tool holder.
2. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
3. Please use air blow or MQL (minimum oil mist cooling).
4. Down milling is recommended in the case of side milling.
5. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for HM series end mills

HM-2EP

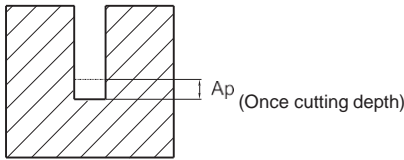
Workpiece material		Pre-hardened steel, Hardened steel 40-50HRC			Hardened steel 50-60HRC		
Diameter r (mm)	Effective length (mm)	Rotating speed (min^{-1})	Feed speed (mm/min)	a_p (mm)	Rotating speed (min^{-1})	Feed speed (mm/min)	a_p (mm)
0.5	4	21000	100	0.009	17000	50	0.009
	6	20000	75	0.006	15000	35	0.007
	8	20000	50	0.002	15000	20	0.003
0.8	4	20000	200	0.022	14000	100	0.011
	6	18000	150	0.014	14000	75	0.009
	8	18000	100	0.01	14000	50	0.006
	10	18000	75	0.007	14000	30	0.004
1.0	4	17000	400	0.035	12000	100	0.016
	6	17000	400	0.03	12000	100	0.014
	8	15000	300	0.02	10000	75	0.01
	10	15000	250	0.015	10000	50	0.008
	12	12000	150	0.01	10000	50	0.006
	14	12000	100	0.007	10000	30	0.004
1.2	6	14000	400	0.03	10000	100	0.017
	8	12000	300	0.03	10000	100	0.014
	10	12000	300	0.02	10000	75	0.01
	12	10000	200	0.01	10000	50	0.00
1.5	6	12000	400	0.06	8000	200	0.028
	8	10000	300	0.04	7000	150	0.021
	10	10000	300	0.03	7000	150	0.017
	12	10000	300	0.025	7000	100	0.01
	14	10000	250	0.02	7000	75	0.005
2.0	6	9000	400	0.13	6000	300	0.07
	8	9000	400	0.11	6000	300	0.06
	10	7000	300	0.10	6000	200	0.05
	12	7000	300	0.06	6000	200	0.03
	14	7000	250	0.04	6000	150	0.015
	16	7000	200	0.02	6000	100	0.008
Maximum cutting depth							

ENDMILL

MILLING Solid Carbide End Mills

Cutting parameters for HM series end mills

HM-2EP

Workpiece material		Pre-hardened steel, Hardened steel 40-50HRC			Hardened steel 50-60HRC		
Diameter r (mm)	Effective length (mm)	Rotating speed (min^{-1})	Feed speed (mm/min)	a_p (mm)	Rotating speed (min^{-1})	Feed speed (mm/min)	a_p (mm)
2.5	8	8000	400	0.16	5000	300	0.08
	10	8000	400	0.14	5000	300	0.07
	12	8000	400	0.09	5000	300	0.05
	14	6000	300	0.07	5000	200	0.03
	16	6000	300	0.05	5000	200	0.025
	18	6000	300	0.04	5000	150	0.02
	20	6000	300	0.02	5000	100	0.01
3.0	6	7000	400	0.18	5000	300	0.10
	8	7000	400	0.15	5000	300	0.08
	10	7000	400	0.12	5000	300	0.06
	12	7000	400	0.10	5000	300	0.05
	14	6000	300	0.08	5000	200	0.04
	16	6000	300	0.06	5000	200	0.03
	18	6000	300	0.05	5000	200	0.025
	20	6000	250	0.04	5000	150	0.01
4.0	12	4500	400	0.16	4000	300	0.08
	16	4500	400	0.14	4000	300	0.06
	20	4500	300	0.10	4000	300	0.04
	25	4500	300	0.08	4000	300	0.03
5.0	16	4000	400	0.19	3000	300	0.09
	25	4000	400	0.15	3000	300	0.06
Maximum cutting depth							

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Make overhang of tool as short as possible in conditions of non-interference.
4. Reduce feed speed correspondingly when rotating speed is low.

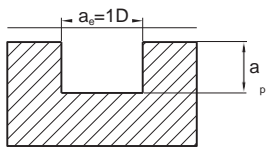
Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for HM series end mills

HM-2ES

Workpiece material	Pre-hardened steel, Hardened steel 40-50HRC		Hardened steel 50-60HRC	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
0.3	23000	30	16500	25
0.4	17500	30	12500	25
0.5	14000	30	10000	25
0.6	11500	30	8450	25
0.7	10000	30	7500	25
0.8	8750	30	6350	25
0.9	8000	30	5500	25
1.0	7000	30	5050	25
1.5	5050	40	3550	25
2.0	3950	40	2750	25
2.5	3500	45	2500	30
3.0	2750	45	2000	30

Maximum cutting depth	Pre-hardened steel, Hardened steel 40-50HRC		Hardened steel 50-60HRC	
	Diameter range	Cutting depth a_p	Diameter range	Cutting depth a_p
	$D < \varnothing 1$	0.02D	$D < \varnothing 1$	0.01D
	$\varnothing 1 \leq D \leq \varnothing 3$	0.05D	$\varnothing 1 \leq D \leq \varnothing 3$	0.02D

ENDMILL

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Make overhang of tool as short as possible in conditions of non-interference.
4. Reduce feed speed correspondingly when rotating speed is low.

Endmill Carbide

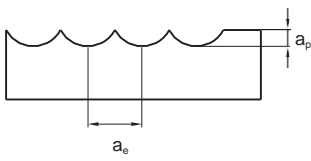
MILLING Solid Carbide End Mills

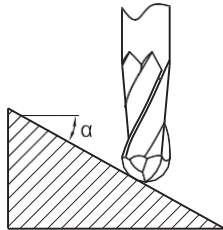
Cutting parameters for HM series end mills

HM-2B★HM-2BL★HM-2BFP

Workpiece material	Pre-hardened steel, Hardened steel 40~50HRC				Hardened steel 50~60HRC				Hardened steel 60~68HRC			
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)
R0.5	40000	1900	0.01	0.05	36000	1500	0.01	0.05	32000	1400	0.01	0.05
R1.0	33000	3100	0.02	0.075	26000	2100	0.02	0.075	24000	2000	0.02	0.075
R1.5	29000	4100	0.03	0.1	23000	2900	0.03	0.1	21000	2600	0.03	0.1
R2.0	22000	3900	0.04	0.15	17000	2500	0.04	0.15	15500	2100	0.04	0.15
R2.5	17500	3500	0.05	0.15	13500	2200	0.05	0.15	13000	2000	0.05	0.15
R3.0	15000	3100	0.06	0.2	11500	1700	0.06	0.2	10500	1500	0.06	0.2
R4.0	11000	2500	0.08	0.25	8600	1600	0.08	0.25	8000	1400	0.08	0.25
R5.0	9000	2000	0.1	0.3	7000	1400	0.1	0.3	6000	1200	0.1	0.3
R6.0	7500	1800	0.1	0.35	5700	1300	0.1	0.35	5300	1200	0.1	0.35
R8.0	5500	1800	0.1	0.4	4300	1300	0.1	0.4	4000	1200	0.1	0.4
R10.0	4500	1800	0.1	0.5	3500	1300	0.1	0.5	3200	1200	0.1	0.5

Maximum cutting depth





1. Please select high-precision and rigidity machine and tool holder.
2. Above table shows the standard for operations with little change of machining load, such as contour machining .When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
3. Please use air blow or MQL (minimum oil mist cooling).
4. When inclination angle α is more than 15° , please reduce rotating speed and feed speed to 50% - 80% of the speeds stated in the table.
5. Make overhang of tool as short as possible in conditions of non-interference.



ENDMILL

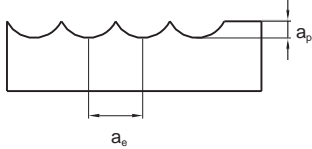
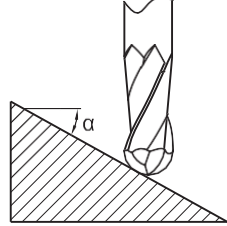
Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for HM series end mills

HM-4B★HM-4BL

Workpiece material	Pre-hardened steel, Hardened steel 40~50HRC				Hardened steel 50~60HRC				Hardened steel 60~68HRC			
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	a _p (mm)	a _e (mm)
R1.5	29000	6560	0.03	0.1	22800	4560	0.03	0.1	21100	4240	0.03	0.1
R2.0	22000	6250	0.04	0.15	17100	4000	0.04	0.15	15800	3520	0.04	0.15
R2.5	17400	5600	0.05	0.15	13600	3520	0.05	0.15	12700	3200	0.05	0.15
R3.0	14500	5000	0.06	0.2	11400	3000	0.06	0.2	10600	2500	0.06	0.2
R4.0	10900	4200	0.08	0.25	8550	2500	0.08	0.25	7950	2250	0.08	0.25
R5.0	8700	3500	0.1	0.3	6850	2200	0.1	0.3	6350	2000	0.1	0.3
R6.0	7250	3000	0.1	0.35	5700	2000	0.1	0.35	5300	1900	0.1	0.35
R8.0	5450	3000	0.1	0.4	4280	2000	0.1	0.4	4000	1900	0.1	0.4
R10.0	4350	3000	0.1	0.5	3425	2000	0.1	0.5	3200	1900	0.1	0.5

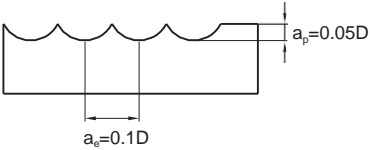
Maximum cutting depth		
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1. Please select high-precision and rigidity machine and tool holder.
2. Above table shows the standard for operations with little change of machining load, such as contour machining. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
3. Please use air blow or MQL (minimum oil mist cooling).
4. When inclination angle α is more than 15° , please reduce rotating speed and feed speed to 50% - 80% of the speeds stated in the table.
5. Make overhang of tool as short as possible in conditions of non-interference.

MILLING Solid Carbide End Mills

Cutting parameters for HM series end mills

HM-2BS

Workpiece material	Pre-hardened steel, Hardened steel 40-50HRC		Hardened steel 50-60HRC	
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
R0.15	25000	135	25000	115
R0.2	25000	140	25000	120
R0.25	25000	150	25000	130
R0.3	25000	175	24000	150
R0.35	25000	190	24000	150
R0.4	24000	210	18000	140
R0.45	21000	210	15000	140
R0.5	19000	210	14000	140
R1.0	9500	210	7200	140
R1.5	6400	210	4800	140
Maximum cutting depth				

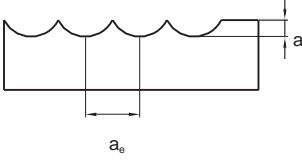
1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Make overhang of tool as short as possible in conditions of non-interference.
4. Reduce feed speed correspondingly when rotating speed is low.

Endmill Carbide

Solid Carbide End Mills **MILLING**

Cutting parameters for HM series end mills

HM-2BP

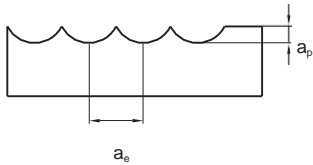
Workpiece material		Pre-hardened steel, Hardened steel 40-50HRC				Hardened steel 50-60HRC			
Diameter r (mm)	Effective length (mm)	Rotating speed (min^{-1})	Feed speed (mm/min)	a_p (mm)	a_e (mm)	Rotating speed (min^{-1})	Feed speed (mm/min)	a_p (mm)	a_e (mm)
R0.25	4	27000	200	0.01	0.01	27000	100	0.01	0.01
	6	20000	150	0.005	0.01	20000	75	0.005	0.005
R0.3	4	24000	200	0.03	0.06	17000	150	0.02	0.04
	6	20000	150	0.02	0.03	17000	150	0.01	0.02
	8	20000	120	0.02	0.03	17000	120	0.01	0.02
R0.4	4	21000	300	0.04	0.08	14500	200	0.03	0.08
	6	19000	200	0.02	0.04	12000	150	0.02	0.04
	8	17000	150	0.02	0.04	12000	100	0.02	0.04
	10	17000	135	0.02	0.03	12000	75	0.01	0.02
R0.5	4	21000	300	0.05	0.10	14500	200	0.05	0.10
	6	16000	200	0.05	0.10	11500	150	0.05	0.10
	8	16000	180	0.03	0.05	11500	135	0.03	0.05
	10	14000	150	0.01	0.03	9800	100	0.01	0.03
	12	14000	135	0.01	0.03	9800	75	0.01	0.03
R0.6	6	14000	200	0.06	0.12	9500	175	0.06	0.12
	8	14000	180	0.06	0.12	9500	150	0.06	0.12
	12	11000	150	0.04	0.06	7500	100	0.03	0.06
	16	11000	135	0.02	0.04	7500	75	0.02	0.03
R0.75	8	12000	250	0.08	0.15	8000	200	0.08	0.15
	12	12000	225	0.06	0.15	8000	175	0.06	0.15
	16	9500	150	0.01	0.05	6500	100	0.01	0.03
R1.0	6	13500	400	0.10	0.20	7500	225	0.10	0.20
	8	13500	400	0.10	0.16	7500	225	0.10	0.16
	10	10000	275	0.08	0.16	5500	175	0.08	0.16
	12	10000	275	0.06	0.16	5500	175	0.06	0.16
	16	10000	250	0.02	0.10	5500	150	0.02	0.10
	20	8000	175	0.02	0.05	5500	125	0.01	0.05
Maximum cutting depth									

ENDMILL

MILLING Solid Carbide End Mills

Cutting parameters for HM series end mills

HM-2BP

Workpiece material		Pre-hardened steel, Hardened steel 40-50HRC				Hardened steel 50-60HRC			
Diameter r (mm)	Effective length (mm)	Rotating speed (min^{-1})	Feed speed (mm/min)	a_p (mm)	a_e (mm)	Rotating speed (min^{-1})	Feed speed (mm/min)	a_p (mm)	a_e (mm)
R1.25	8	12500	400	0.10	0.16	7000	225	0.10	0.16
	12	9000	275	0.06	0.16	5000	175	0.06	0.16
	16	9000	250	0.02	0.10	5000	150	0.02	0.10
	20	5500	175	0.02	0.05	5000	125	0.01	0.05
R1.5	10	7500	400	0.10	0.30	4000	200	0.10	0.30
	12	7500	360	0.10	0.30	4000	180	0.10	0.30
	16	6500	250	0.05	0.20	3000	150	0.05	0.20
	20	6500	250	0.02	0.10	3000	150	0.02	0.05
R2.0	10	6000	400	0.20	0.40	3000	200	0.20	0.40
	16	6000	400	0.10	0.32	3000	200	0.20	0.20
	20	5000	250	0.10	0.20	2500	100	0.10	0.20
	25	5000	250	0.10	0.20	2500	100	0.10	0.10
R2.5	16	5000	400	0.25	0.50	3000	200	0.2	0.2
	25	4000	250	0.25	0.50	3000	100	0.20	0.2
Maximum cutting depth									

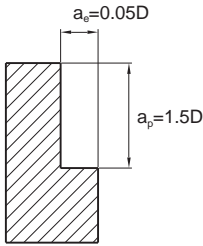
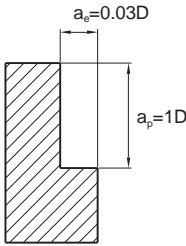
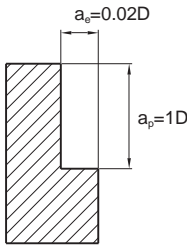
1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Make overhang of tool as short as possible in conditions of non-interference.
4. Reduce feed speed correspondingly when rotating speed is low.

Endmill Carbide

Solid Carbide End Mills MILLING

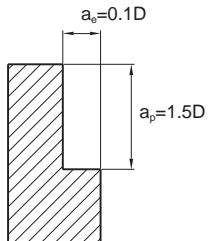
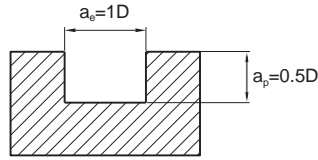
Cutting parameters for HM series end mills

HM-4R★HM-4RP★HM-4RF

Workpiece material	Pre-hardened steel, Hardened steel 40~50HRC		Hardened steel 50~60HRC		Hardened steel 60~68HRC	
Cutting speed	300m/min		150m/min		100m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
3	32000	1225	16000	610	11000	420
4	24000	1500	12000	745	8000	500
5	19000	1630	9500	815	6400	550
6	16000	1850	8000	925	5300	610
8	12000	1850	6000	925	4000	610
10	9600	1850	4800	925	3200	610
12	8000	1920	4000	960	2700	648
16	6000	1440	3000	720	2000	480
Maximum cutting depth	 <p>Maximum $a_e = 1.0\text{mm}$</p>		 <p>Maximum $a_e = 0.5\text{mm}$</p>		 <p>Maximum $a_e = 0.3\text{mm}$</p>	

1. Please select high-precision and rigidity machine and tool holder.
2. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
3. Please use air blow or MQL (minimum oil mist cooling).
4. Down milling is recommended in the case of side milling.
5. Make overhang of tool as short as possible in conditions of non-interference.

AL-2E★AL-2EL

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)
1	40000	650	40000	500
2	40000	950	32000	750
3	26500	1500	21000	1100
4	20000	1600	16000	1250
5	16000	1500	13000	1100
6	13000	1250	10600	1000
8	10000	1400	8000	1100
10	8000	1600	6500	1250
12	6600	1650	5300	1300
14	5700	1700	4600	1350
16	5000	1700	4000	1350
18	4400	1700	3500	1350
20	4000	1700	3200	1350
Maximum cutting depth				

1. The above table shows the reference value of side milling. The feed speed in slot milling is 70% of the reference value stated in the table.
2. Please select high rigidity and precision machine and tool holder. Vibration and abnormal noise may be generated if the machine rigidity and workpiece fixture stability is low. Please reduce the rotating speed and feed speed stated above correspondingly.
3. It is possible to increase the rotating speed and feed speed correspondingly if the cutting depth is low.
4. Please use water-soluble cutting liquid.
5. Down milling is recommended in the case of side milling.
6. Make overhang of tool as short as possible in conditions of non-interference.

ENDMILL

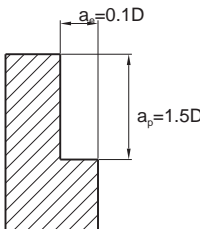
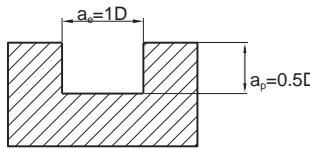
Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for AL series end mills

AL-3E★AL-3EL

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)
1	40000	800	40000	600
2	40000	1200	32000	900
3	26500	1800	21000	1300
4	20000	2000	16000	1500
5	16000	1750	13000	1300
6	13000	1500	10600	1200
8	10000	1650	8000	1300
10	8000	1900	6500	1500
12	6600	1950	5300	1550
14	5700	2000	4600	1600
16	5000	2000	4000	1600
18	4400	2000	3500	1600
20	4000	2000	3200	1600

Maximum cutting depth		
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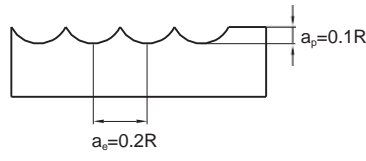
ENDMILL

1. The above table shows the reference value of side milling. The feed speed in slot milling is 70% of the reference value stated in the table.
2. Please select high rigidity and precision machine and tool holder. Vibration and abnormal noise may be generated if the machine rigidity and workpiece fixture stability is low. Please reduce the rotating speed and feed speed stated above correspondingly.
3. It is possible to increase the rotating speed and feed speed correspondingly if the cutting depth is low.
4. Please use water-soluble cutting liquid.
5. Down milling is recommended in the case of side milling.
6. Make overhang of tool as short as possible in conditions of non-interference.



AL-2B

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%	
	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
R1.0	40000	2000	32000	1600
R1.5	26500	1950	21000	1550
R2.0	20000	1950	16000	1550
R2.5	16000	1950	13000	1550
R3.0	13000	2000	10600	1600
R4.0	10000	2450	8000	2000
R5.0	8000	2200	6500	1750
R6.0	6600	2050	5300	1650

Maximum cutting depth	
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1. Please select high rigidity and precision machine and tool holder. Vibration and abnormal noise may be generated if the machine rigidity and workpiece fixture stability is low. Please reduce the rotating speed and feed speed stated above correspondingly.
2. If the cutting depth is low, it is possible to increase the rotating speed and feed speed correspondingly.
3. Please use water-soluble cutting liquid.
4. Make overhang of tool as short as possible in conditions of non-interference.

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for AL series end mills

AL-3W

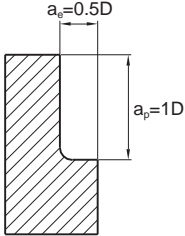
Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%	
Cutting speed	250m/min		200m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	13000	3000	10600	1900
8	10000	3000	8000	1900
10	8000	2900	6500	1850
12	6600	2700	5300	1700
14	5700	2600	4600	1650
16	5000	2550	4000	1600
18	4400	2500	3500	1550
20	4000	2400	3200	1500
Maximum cutting depth				

1. The above table shows the reference value of side milling. The feed speed in slot milling is 70% of the reference value stated in the table, and feed rate 50%.
2. Please select high rigidity and precision machine and tool holder. Vibration and abnormal noise may be generated if the machine rigidity and workpiece fixture stability is low. Please reduce the rotating speed and feed speed stated above correspondingly.
3. It is possible to increase the rotating speed and feed speed correspondingly if the cutting depth is low.
4. Please use water-soluble cutting liquid.
5. Down milling is recommended in the case of side milling.
6. Make overhang of tool as short as possible in conditions of non-interference.

MILLING Solid Carbide End Mills

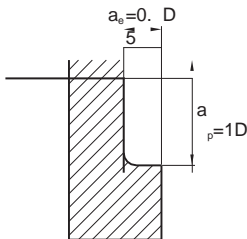
Cutting parameters for AL series end mills

AL-2R-AIR

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%	
Cutting speed	500~800m/min		500~800m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	35000	3500	35000	3500
8	26000	3800	26000	3800
10	21000	4000	21000	4000
12	18000	4300	18000	4300
16	15000	4800	15000	4800
20	12000	5500	12000	5500
Maximum cutting depth				

1. Above cutting parameters are suitable for aluminium high speed machining specific CNC.
2. Please select cutting liquid or strong air cooling system for chip flowing out.
3. The sparkle by machining or heat caused by breakage might result in fire or conflagration. Please pay attention to fire prevention.
4. Dynamic balance detection should be done before machining.

AL-2RL-AIR

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%	
Cutting speed	500~800m/min		500~800m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
6	30000	3000	30000	3000
8	24000	3200	24000	3200
10	20000	3500	20000	3500
12	16000	3800	16000	3800
16	12000	4000	12000	4000
20	10000	4600	10000	4600
Maximum cutting depth				

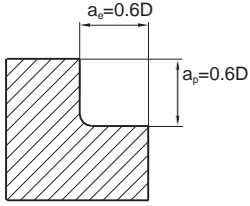
1. Above cutting parameters are suitable for aluminium high speed machining specific CNC.
2. Please select cutting liquid or strong air cooling system for chip flowing out.
3. The sparkle by machining or heat caused by breakage might result in fire or conflagration. Please pay attention to fire prevention.
4. Dynamic balance detection should be done before machining.

Endmill Carbide

Solid Carbide End Mills MILLING

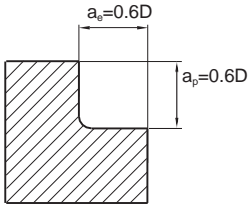
Cutting parameters for AL series end mills

AL-3R-AIR

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%	
Cutting speed	800~1200m/min		800~1200m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
12	25000	6000	25000	6000
16	20000	6400	20000	6400
20	15000	7000	15000	7000
Maximum cutting depth				

1. Above cutting parameters are suitable for aluminium high speed machining specific CNC .
2. Please select cutting liquid or strong air cooling system for chip flowing out.
3. The sparkle by machining or heat caused by breakage might result in fire or conflagration. Please pay attention to fire prevention.
4. Dynamic balance detection should be done before machining.

AL-3RL-AIR

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%	
Cutting speed	800~1200m/min		800~1200m/min	
Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
12	22000	5300	22000	5300
16	18000	5700	18000	5700
20	13000	6000	13000	6000
Maximum cutting depth				

1. Above cutting parameters are suitable for aluminium high speed machining specific CNC .
2. Please select cutting liquid or strong air cooling system for chip flowing out.
3. The sparkle by machining or heat caused by breakage might result in fire or conflagration. Please pay attention to fire prevention.
4. Dynamic balance detection should be done before machining.

ENDMILL

ALG-2E

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
1		40000	650	40000	500
2		40000	950	32000	750
3		26500	1500	21000	1100
4		20000	1600	16000	1250
5		16000	1500	13000	1100
6		13000	1250	10600	1000
8		10000	1400	8000	1100
10		8000	1600	6500	1250
12		6600	1650	5300	1300
14		5700	1700	4600	1350
16		5000	1700	4000	1350
18		4400	1700	3500	1350
20		4000	1700	3200	1350
Maximum cutting depth					

1. The above table shows the standard value of side milling. When milling slot, 70% of feed speed stated above are recommend as standard.
2. Please select high-rigidity and high-precision machine and tool holder. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed above correspondingly.
3. When cutting depth is smaller, rotating speed and feed speed can be increased correspondingly.
4. Please select water-soluble cutting liquid.
5. Down milling is recommended in the case of side milling.
6. Make overhang of tool as short as possible in condition of non-interference.

Endmill Carbide

Solid Carbide End Mills MILLING

Cutting parameters for AL series end mills

ALG-3E

Workpiece material	Aluminum alloy		Silicon aluminum alloy Si≤10%		
	Diameter (mm)	Rotating speed (min ⁻¹)	Feed speed (mm/min)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
1		40000	800	40000	600
2		40000	1200	32000	900
3		26500	1800	21000	1300
4		20000	2000	16000	1500
5		16000	1750	13000	1300
6		13000	1500	10600	1200
8		10000	1650	8000	1300
10		8000	1900	6500	1500
12		6600	1950	5300	1550
14		5700	2000	4600	1600
16		5000	2000	4000	1600
18		4400	2000	3500	1600
20		4000	2000	3200	1600

Maximum cutting depth	
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ENDMILL

1. The above table shows the standard value of side milling. When milling slot, 70% of feed speed stated above are recommend as standard.
2. Please select high-rigidity and high-precision machine and tool holder. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed above correspondingly.
3. When cutting depth is smaller, rotating speed and feed speed can be increased correspondingly.
4. Please select water-soluble cutting liquid.
5. Down milling is recommended in the case of side milling.
6. Make overhang of tool as short as possible in condition of non-interference.

DAMATACO

CUTTING TOOLS

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