

Bohren Drilling | Fräsen Milling | Sägen Sawing

HPTEC

MCT Line

**VHM-Präzisionswerkzeuge für die
High-Tech-Zerspanung** Solid carbide
precision tools for high-tech machining

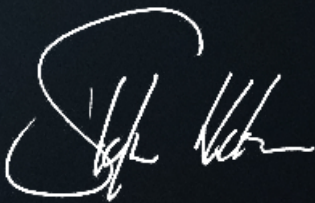
MORE THAN JUST TOOLS



Mehr als nur Werkzeuge More than just tools

Seit 1977 sind wir stolz darauf, hochpräzise Werkzeuge für die spannende Industrie herzustellen. Unser Produktionsstandort im Süden Deutschlands steht für Qualität und Zuverlässigkeit – Made in Germany. Mit einem Team von rund 80 engagierten Mitarbeitern beliefern wir Kunden weltweit. Mit unseren Werkzeugen ab Ø 0,05 mm erhalten Sie mehr als nur ein Werkzeug – Sie erhalten eine maßgeschneiderte, innovative Lösung.

We have been proud to manufacture high-precision tools for the machining industry since 1977. Our production site in the south of Germany stands for quality and reliability - Made in Germany. With a team of around 80 dedicated employees, we supply customers worldwide. With our tools from Ø 0.05 mm, you get more than just a tool - you get a customized, innovative solution.



Stefan Netzer
Geschäftsführung Management

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ÜBERSICHT BESCHICHTUNGEN

OVERVIEW COATINGS

Bezeichnung Name	Anwendung Usage	Eigenschaften Features	Dicke Thickness	Max. Bear.temp. Max. proc. temp.	Vorteile Advantages
A MultiCut	(Un)legierte, Schnellarbeits-Stähle, Nichtrostender Stahl (Un)alloyed, high-speed steels, stainless steel	Anthrazit, HiPIMS, AlTiN-basiert Anthracite, HiPIMS, AlTiN-based	1,5µm - 4,5µm	1.100°C	Universell, höhere Einsatztemperaturen Universal, higher operating temperatures
D CarboCut	Graphit, Keramik-Grünlinge, CFK, GFK Graphite, ceramic green compacts, CFRP, GFRP	Grau Grey	3µm - 14µm	650° C	Multilayer-Schicht, mindert Abrasionsverschleiß, Prozesssicherheit, beste Werkstückoberfläche Multilayer coating, reduces abrasive wear, process reliability, best workpiece surface
E NanoCut		Metall-silber Metal-silver	1µm-7µm	700° C	nanogradiente Struktur, Vermeidung von Aufbauschnitten nanogradient structure, avoidance of built-up edges
H HeavyCut	(Rostfreier) Stahl, Guss, schwer zerspanbare Werkstoffe, Titan, Inconel (Stainless) steel, cast iron, difficult-to-machine materials, titanium, Inconel	Anthrazit / blau Anthracite / blue	3µm - 4,5µm	1.000° C	Einsatz bei hohen Schnittdaten & Trockenbearbeitung möglich, Glatte & dropletfreie Oberfläche Can be used for high cutting data & dry machining, smooth & droplet-free surface
I Carbon Rainbow	Buntmetalle Non-ferrous metals	Schwarzgrau, PVD-Schicht mit 85% sp ³ -Anteil, wasserstofffrei Black-grey, PVD coating with 85% sp ³ content, hydrogen-free	1,5µm	500° C	Geringere Aufschweißneigung, höhere Standzeit, kein Kleben & Kaltaufschweißen, Optimierung Fließverhalten, weniger Nachbearbeitung durch saubere Schnitte Less tendency to weld on, significantly longer service life, no sticking & cold welding, optimization of flow behaviour, less reworking due to clean cuts
L DLC-P	PMMA, Wachs, PEEK PMMA, wax, PEEK	Grau, PVD-Beschichtung Gray, PVD coating	1µm	500° C	Thermische Stabilität bis 500°C: Möglichkeit der Trockenbearbeitung und Minimalmengenschmierung, hocheffizient Thermal stability up to 500°C: Possibility of dry machining and minimum quantity lubrication, highly efficient
Q HPTec Tinox	rostfreie Stähle / Titan bis 70 HRC, Kobalt-Chrom Stainless steels / titanium up to 70 HRC, cobalt-chrome	Rotgold Red gold	1,5µm	1.100° C	Für Mikrowerkzeuge in schwierigsten Materialien geeignet, Dropless, Sehr hohe Zähigkeit Suitable for micro-tools in the most difficult materials, dropless, very high toughness
T TiAlN		Violett-schwarz Violet-black	1µm-4µm	800° C	Universell, geeignet für Trockenbearbeitung Universal, suitable for dry machining
V CroNaTec	Titan, Kobalt-Chrom Titanium, cobalt-chrome	Blau-grau, PVD-Beschichtung Blue-grey, PVD coating	1,5µm	1.100° C	Hohe Warmhärte High heat hardness

TECHNISCHE SYMBOLE

TECHNICAL SYMBOLS



Fischschwanzanschliff rechts / links
Fishtail grinding right / left



M-Anchliff rechts / links
M-grinding right / left



Flacher Stirnanschliff rechts / links
Flat face grinding right / left



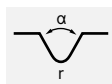
Kugelkopfanschliff rechts / links
Ball nose grinding right / left



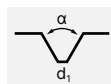
Torischer Anchliff rechts / links
Toric grinding right / left



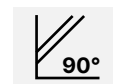
3/4 gerade genutet
3/4 straight grooved



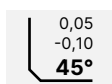
Spitze Radius
Tip radius



Spitze gerade
Tip straight



Ecke 90°
Corner 90°



Ecke 45°
Corner 45°



Eckenradius
Corner radius



Bearbeitungsrichtung axial
Machining direction axial



Bearbeitungsrichtung axial, diagonal
Machining direction axial, diagonal



Bearbeitungsrichtung axial, radial
Machining direction axial, radial



Bearbeitungsrichtung diagonal
Machining direction diagonal



Bearbeitungsrichtung diagonal, radial
Machining direction diagonal, radial



Bearbeitungsrichtung radial
Machining direction radial



Bearbeitungsrichtung axial, diagonal, radial
Machining direction axial, diagonal, radial



Kühlung empfohlen
Cooling recommended



Kühlung nicht empfohlen
Cooling not recommended



Innenkühlung
Internal cooling



Schaft DIN 6535 Form HB
Shank DIN 6535 shape HB



Schaft DIN 6535 Form HA
Shank DIN 6535 shape HA

ÜBERSICHT BOHREN

OVERVIEW DRILLING

Ø [mm]	VHM (unbeschichtet) VHM (uncoated)	Beschichtung Stahl Coating steel	Beschichtung NE-Metalle Coating non-ferrous metals	Stahl Steel	Rostfreier Stahl Stainless steel	Gusseisen Cast iron	NE-Metall Non-ferrous metal	Sonderlegierungen Special alloy	Stahl 45-65 HRC Steel 45-65 HRC	Nichtmetall. Werkstoffe Non-metallic materials	Seite Page
				P	M	K	N	S	H	X	

NC-Anbohrer Z2 Centre drill Z2

NZM / NTM 240 90° 	0,5 - 6,0	✓			●	●	—	●	○	—	●	8
NZM / NTM 240 120° 	0,5 - 6,0	✓			●	●	—	●	○	—	●	9
NZM / NTM 240 142° 	1,0 - 6,0	✓			●	●	—	●	○	—	●	10

Spiralbohrer Z2 Drill Z2

DZM 240 2xD 	0,1 - 2,4	✓			●	●	—	●	○	—	●	11
DZM 240 6xD 	0,1 - 3,0	✓			●	●	—	●	○	—	●	13
DZM 240 12xD 	0,2 - 2,0	✓			●	●	—	●	○	—	●	21
CQR 200 3xD IK 	1,0 - 10,0		✓		●	●	—	○	●	—	○	23
CQR 200 5xD IK 	1,0 - 10,0		✓		●	●	—	○	●	—	○	25
CHM 200 10xD IK 	3,0 - 10,0		✓		●	●	—	○	○	—	○	27
CHM 200 15xD IK 	3,0 - 10,0		✓		●	●	—	○	○	—	○	30
CHM 200 20xD IK 	3,0 - 10,0		✓		●	●	—	○	○	—	○	32
CHM 200 30xD IK 	3,0 - 10,0		✓		●	●	—	○	○	—	○	34
DDC 200 	0,2 - 2,4			✓	—	—	—	●	—	—	●	35
DDK 201 	1,3 - 3,1			✓	—	—	—	●	—	—	●	36
DDK 221 	3,2 - 6,4			✓	—	—	—	●	—	—	●	37

Ø [mm]	VHM (unbeschichtet) VHM (uncoated)	Beschichtung Stahl Coating steel	Beschichtung NE-Metalle Coating non-ferrous metals	Stahl Steel	Rostfreier Stahl Stainless steel	Gusseisen Cast iron	NE-Metall Non-ferrous metal	Sonderlegierungen Special alloy	Stahl 45-65 HRC Steel 45-65 HRC	Nichtmetall. Werkstoffe Non-metallic materials	Seite Page
				P	M	K	N	S	H	X	

Spiralbohrer Z2 Drill Z2

DHN 240 	1,0 - 4,0		✓		●	●	—	●	○	●	○	38
DLB 201 	0,3 - 3,0			✓	—	—	—	●	—	—	●	39
DLB 221 	3,5 - 6,0			✓	—	—	—	●	—	—	●	40
DZL 201 	0,3 - 3,0	✓			●	●	—	●	○	—	●	41
DZL 221 	3,5 - 6,0	✓			●	●	—	●	○	—	●	42
UDK 201 	0,5 - 1,2			✓	—	—	—	●	—	—	●	43
UDK 240 	0,3 - 0,45			✓	—	—	—	●	—	—	●	44
DZR / DTR 240 	0,5 - 3,00			✓	●	●	—	●	○	—	○	45

Spiralbohrer Z3 Drill Z3

DZT 340 5xD 	0,2 - 2,99	✓			●	●	—	●	○	—	○	47
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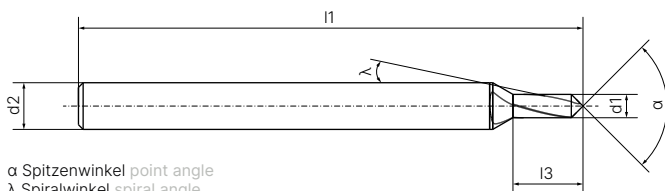
Kegelsenker Z3 - Z5 Champfering tool Z3 - Z5

VZM / VTM 340 90° 	0,5 - 3,0	✓	✓		●	●	—	●	○	—	○	50
VZM / VTM 440 90° 	0,3 - 1,2	✓	✓		●	●	—	●	○	—	○	51
VZF541/VDF540 90-140° 	6,0	✓		✓	●	●	—	●	○	—	●	52

● optimal optimum ○ geeignet suitable — nicht empfehlenswert not recommendable

NZM / NTM 240

NC-Anbohrer Z2 90°
Centre drill Z2 90°



P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z2	α 90°	λ 25°				
						

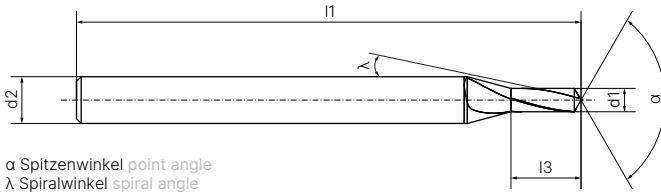
d ₁ (DC)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	NZM 240 (VHM)	NTM 240 (TiAlN)
0,50	1,5	2,00	39	515100	
0,60	1,5	2,00	39	515101	
0,70	1,5	2,00	39	515102	
0,80	1,5	2,00	39	515103	
0,90	1,5	2,00	39	515104	
1,00	3,0	2,00	39	515105	
1,10	3,0	2,00	39	515106	
1,20	3,0	2,00	39	515107	
1,30	3,0	2,00	39	515108	
1,40	3,0	2,00	39	515109	
1,50	4,0	2,00	39	515110	
1,60	4,0	2,00	39	515111	
1,70	4,0	2,00	39	515112	
1,80	4,0	2,00	39	515113	
1,90	4,0	2,00	39	515114	
2,00	8,0	2,00	39	515115	515150
2,50	8,0	2,50	39	515116	515151
3,00	10,0	3,00	39	515117	515152
4,00	12,0	4,00	50	515118	515153
5,00	15,0	5,00	50	515119	515154
6,00	16,0	6,00	57	515120	515155

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NZM / NTM 240

NC-Anbohrer Z2 120°

Centre drill Z2 120°



α Spitzenwinkel point angle
 λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z2	α 120°	λ 25°				
						

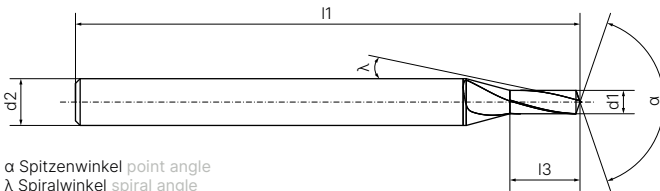
d ₁ (DC)	I ₃ (LCF)	d ₂ (DCONMS)	I ₁ (OAL)	NZM 240 (VHM)	NTM 240 (TiAlN)
0,50	1,5	2,00	39	510712	
0,60	1,5	2,00	39	510713	
0,70	1,5	2,00	39	510739	
0,80	1,5	2,00	39	510715	
0,90	1,5	2,00	39	510716	
1,00	3,0	2,00	39	510717	
1,10	3,0	2,00	39	510718	
1,20	3,0	2,00	39	510719	
1,30	3,0	2,00	39	510720	
1,40	3,0	2,00	39	510721	
1,50	4,0	2,00	39	510722	
1,60	4,0	2,00	39	510723	
1,70	4,0	2,00	39	510724	
1,80	4,0	2,00	39	510725	
1,90	4,0	2,00	39	510726	
2,00	8,0	2,00	39	510727	510733
2,50	8,0	2,50	39	510728	510734
3,00	10,0	3,00	39	510729	510735
4,00	12,0	4,00	50	510730	510736
5,00	15,0	5,00	50	510731	510737
6,00	16,0	6,00	57	510732	510738

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NZM / NTM 240

NC-Anbohrer Z2 142°

Centre drill Z2 142°



P	M	K	N	S	H	X
●	●	—	●	○	—	○

Z_2	α 142°	λ 25°	
			

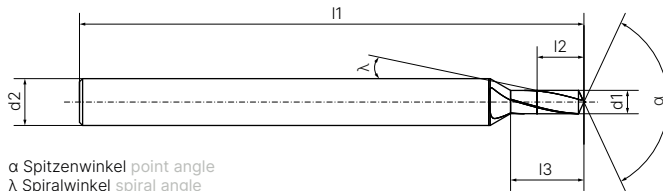
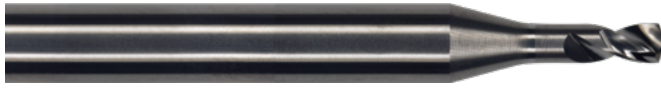
d ₁ (DC)	I ₃ (LCF)	d ₂ (DCONMS)	I ₁ (OAL)	NZM 240 (VHM)	NTM 240 (TiAlN)
1,00	3,0	3,00	39	510700	
1,50	4,0	3,00	39	510701	
2,00	8,0	3,00	39	510702	510707
3,00	10,0	3,00	39	510703	510708
4,00	12,0	4,00	50	510704	510709
5,00	15,0	6,00	50	510705	510710
6,00	16,0	6,00	57	510706	510711

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DZM 240

Spiralbohrer Z2 2xD

Drill Z2 2xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

Z2	α 130°	λ 30°	2xD

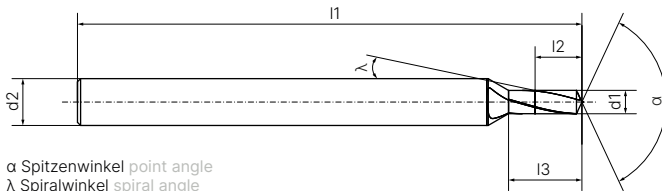
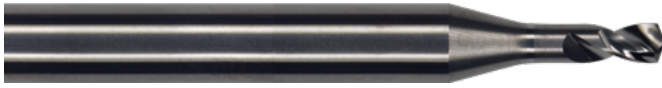
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
0,10	0,35	0,55	3,00	38	515239
0,15	0,40	0,60	3,00	38	515240
0,20	0,55	0,75	3,00	38	515241
0,25	0,70	0,90	3,00	38	515242
0,30	0,90	1,20	3,00	38	515243
0,35	0,90	1,35	3,00	38	515244
0,40	0,80	1,60	3,00	38	515245
0,45	0,90	1,60	3,00	38	515246
0,50	1,00	1,70	3,00	38	515247
0,55	1,10	1,80	3,00	38	515248
0,60	1,20	1,90	3,00	38	515249
0,65	1,30	2,00	3,00	38	515050
0,70	1,40	2,10	3,00	38	515051
0,75	1,50	2,20	3,00	38	515052
0,80	1,60	2,30	3,00	38	515053
0,85	1,70	2,40	3,00	38	515054
0,90	1,80	2,50	3,00	38	515055
0,95	1,90	2,60	3,00	38	515056
1,00	2,00	2,70	3,00	38	515057
1,05	2,10	3,50	3,00	38	515058
1,10	2,20	3,60	3,00	38	515059
1,15	2,30	3,70	3,00	38	515060
1,20	2,40	3,80	3,00	38	515225
1,25	2,50	4,20	3,00	38	515226
1,30	2,60	4,30	3,00	38	515227
1,35	2,70	4,40	3,00	38	515061
1,40	2,80	4,50	3,00	38	515228
1,45	2,90	4,60	3,00	38	515062

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DZM 240

Spiralbohrer Z2 2xD

Drill Z2 2xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

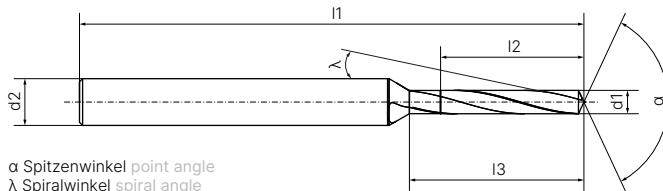
Z2	α 130°	λ 30°	2xD

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
1,50	3,00	4,70	3,00	38	515229
1,55	3,10	5,10	3,00	38	515063
1,60	3,20	5,20	3,00	38	515230
1,65	3,30	5,30	3,00	38	515064
1,70	3,40	5,40	3,00	38	515231
1,75	3,50	5,50	3,00	38	515065
1,80	3,60	5,60	3,00	38	515232
1,85	3,70	5,70	3,00	38	515066
1,88	3,76	5,80	3,00	38	515067
1,89	3,78	5,80	3,00	38	515068
1,90	3,80	5,80	3,00	38	515233
1,95	3,90	5,90	3,00	38	515069
2,00	4,00	6,00	3,00	38	515234
2,10	4,20	6,30	3,00	38	515235
2,20	4,40	6,60	3,00	38	515236
2,30	4,60	6,90	3,00	38	515237
2,40	4,80	7,20	3,00	38	515238

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DZM 240

Spiralbohrer Z2 6xD
Drill Z2 6xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●
Z2						
	α 130°					
		λ 35°				
			6xD			

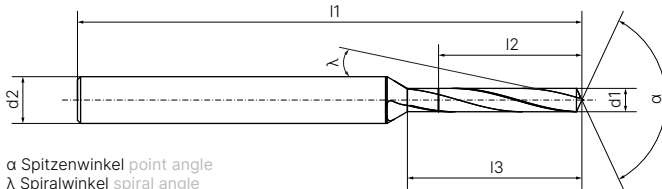
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
0,10	0,5	0,7	3,00	38	515700
0,11	0,5	0,7	3,00	38	515701
0,12	0,5	0,7	3,00	38	515702
0,13	0,8	1,0	3,00	38	515703
0,14	0,8	1,0	3,00	38	515704
0,15	0,8	1,0	3,00	38	515705
0,16	1,1	1,4	3,00	38	515706
0,17	1,1	1,4	3,00	38	515707
0,18	1,1	1,4	3,00	38	515708
0,19	1,1	1,4	3,00	38	515709
0,20	1,5	1,8	3,00	38	515710
0,21	1,5	1,8	3,00	38	515711
0,22	1,5	1,8	3,00	38	515712
0,23	1,5	1,8	3,00	38	515713
0,24	1,5	1,8	3,00	38	515714
0,25	1,9	2,2	3,00	38	515715
0,26	1,9	2,2	3,00	38	515716
0,27	1,9	2,2	3,00	38	515717
0,28	1,9	2,2	3,00	38	515718
0,29	1,9	2,2	3,00	38	515719
0,30	1,8	2,4	3,00	38	515720
0,31	1,8	2,4	3,00	38	515721
0,32	1,8	2,4	3,00	38	515722
0,33	1,8	2,4	3,00	38	515723
0,34	1,8	2,4	3,00	38	515724
0,35	2,2	2,8	3,00	38	515725
0,36	2,2	2,8	3,00	38	515726
0,37	2,2	2,8	3,00	38	515727

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DZM 240

Spiralbohrer Z2 6xD

Drill Z2 6xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

Z2	α 130°	λ 35°	6xD

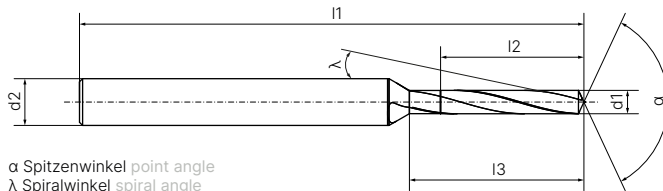
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
0,38	2,2	2,8	3,00	38	515728
0,39	2,7	3,6	3,00	38	515729
0,40	2,7	3,6	3,00	38	515730
0,41	2,7	3,6	3,00	38	515250
0,42	2,7	3,6	3,00	38	515731
0,43	2,7	3,6	3,00	38	515732
0,44	2,7	3,6	3,00	38	515251
0,45	2,7	3,6	3,00	38	515733
0,46	2,7	3,6	3,00	38	515734
0,47	2,7	3,6	3,00	38	515735
0,48	2,7	3,6	3,00	38	515736
0,49	3,2	4,0	3,00	38	515737
0,50	3,2	4,0	3,00	38	515252
0,51	3,2	4,0	3,00	38	515738
0,52	3,2	4,0	3,00	38	515739
0,53	3,2	4,0	3,00	38	515253
0,54	3,6	4,5	3,00	38	515740
0,55	3,6	4,5	3,00	38	515254
0,56	3,6	4,5	3,00	38	515741
0,57	3,6	4,5	3,00	38	515742
0,58	3,6	4,5	3,00	38	515255
0,59	3,6	4,5	3,00	38	515743
0,60	3,6	4,5	3,00	38	515256
0,61	3,9	5,0	3,00	38	515744
0,62	3,9	5,0	3,00	38	515257
0,63	3,9	5,0	3,00	38	515745
0,64	3,9	5,0	3,00	38	515746
0,65	3,9	5,0	3,00	38	515258

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZM 240

Spiralbohrer Z2 6xD

Drill Z2 6xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

Z2	α 130°	λ 35°	6xD

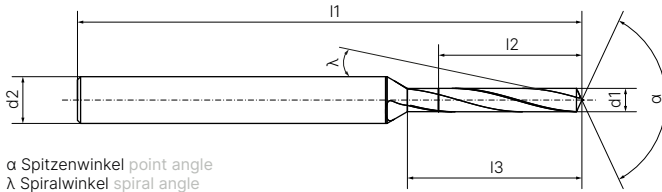
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
0,66	3,9	5,0	3,00	38	515259
0,67	3,9	5,0	3,00	38	515747
0,68	4,5	5,6	3,00	38	515748
0,69	4,5	5,6	3,00	38	515749
0,70	4,5	5,6	3,00	38	515260
0,71	4,5	5,6	3,00	38	515750
0,72	4,5	5,6	3,00	38	515751
0,73	4,5	5,6	3,00	38	515752
0,74	4,5	5,6	3,00	38	515262
0,75	4,5	5,6	3,00	38	515263
0,76	5,0	6,3	3,00	38	515753
0,77	5,0	6,3	3,00	38	515754
0,78	5,0	6,3	3,00	38	515755
0,79	5,0	6,3	3,00	38	515756
0,80	5,0	6,3	3,00	38	515264
0,81	5,0	6,3	3,00	38	515757
0,82	5,0	6,3	3,00	38	515265
0,83	5,0	6,3	3,00	38	515758
0,84	5,0	6,3	3,00	38	515759
0,85	5,0	6,3	3,00	38	515266
0,86	5,7	7,1	3,00	38	515760
0,87	5,7	7,1	3,00	38	515761
0,88	5,7	7,1	3,00	38	515267
0,89	5,7	7,1	3,00	38	515762
0,90	5,7	7,1	3,00	38	515268
0,91	5,7	7,1	3,00	38	515763
0,92	5,7	7,1	3,00	38	515764
0,93	5,7	7,1	3,00	38	515765

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZM 240

Spiralbohrer Z2 6xD

Drill Z2 6xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

Z2	α 130°	λ 35°	6xD

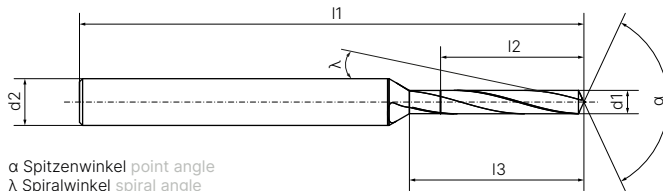
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
0,94	5,7	7,1	3,00	38	515766
0,95	5,7	7,1	3,00	38	515269
0,96	6,5	8,0	3,00	38	515767
0,97	6,5	8,0	3,00	38	515768
0,98	6,5	8,0	3,00	38	515769
0,99	6,5	8,0	3,00	38	515770
1,00	6,5	8,0	3,00	38	515270
1,01	6,5	8,0	3,00	38	515771
1,02	6,5	8,0	3,00	38	515271
1,03	6,5	8,0	3,00	38	515772
1,04	6,5	8,0	3,00	38	515773
1,05	6,5	8,0	3,00	38	515774
1,06	7,3	9,0	3,00	38	515775
1,07	7,3	9,0	3,00	38	515776
1,08	7,3	9,0	3,00	38	515272
1,09	7,3	9,0	3,00	38	515777
1,10	7,3	9,0	3,00	38	515273
1,11	7,3	9,0	3,00	38	515778
1,12	7,3	9,0	3,00	38	515779
1,13	7,3	9,0	3,00	38	515780
1,14	7,3	9,0	3,00	38	515781
1,15	7,3	9,0	3,00	38	515782
1,16	8,2	10,0	3,00	38	515783
1,17	8,2	10,0	3,00	38	515784
1,18	8,2	10,0	3,00	38	515274
1,19	8,2	10,0	3,00	38	515785
1,20	8,2	10,0	3,00	38	515275
1,21	8,2	10,0	3,00	38	515786

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZM 240

Spiralbohrer Z2 6xD

Drill Z2 6xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

Z2	α 130°	λ 35°	6xD

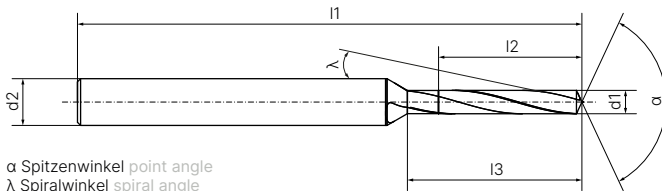
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
1,22	8,2	10,0	3,00	38	515787
1,23	8,2	10,0	3,00	38	515788
1,24	8,2	10,0	3,00	38	515789
1,25	8,2	10,0	3,00	38	515276
1,26	8,2	10,0	3,00	38	515790
1,27	8,2	10,0	3,00	38	515791
1,28	8,2	10,0	3,00	38	515792
1,29	8,2	10,0	3,00	38	515793
1,30	8,2	10,0	3,00	38	515277
1,31	9,2	11,2	3,00	38	515794
1,32	9,2	11,2	3,00	38	515795
1,33	9,2	11,2	3,00	38	515796
1,34	9,2	11,2	3,00	38	515797
1,35	9,2	11,2	3,00	38	515798
1,36	9,2	11,2	3,00	38	515799
1,37	9,2	11,2	3,00	38	515800
1,38	9,2	11,2	3,00	38	515801
1,39	9,2	11,2	3,00	38	515802
1,40	9,2	11,2	3,00	38	515278
1,41	9,2	11,2	3,00	38	515803
1,42	9,2	11,2	3,00	38	515804
1,43	9,2	11,2	3,00	38	515805
1,44	9,2	11,2	3,00	38	515806
1,45	9,2	11,2	3,00	38	515807
1,46	9,2	11,2	3,00	38	515808
1,47	9,2	11,2	3,00	38	515809
1,48	9,2	11,2	3,00	38	515810
1,49	9,2	11,2	3,00	38	515811

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZM 240

Spiralbohrer Z2 6xD

Drill Z2 6xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

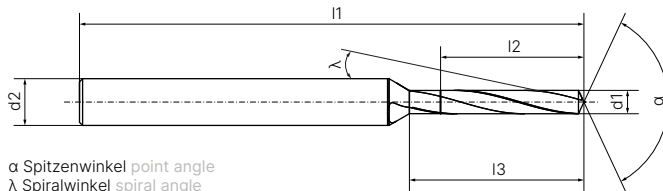
Z2	α 130°	λ 35°	6xD

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
1,50	9,2	11,2	3,00	38	515279
1,51	11,2	13,4	3,00	38	515812
1,52	11,2	13,4	3,00	38	515813
1,53	11,2	13,4	3,00	38	515814
1,54	11,2	13,4	3,00	38	515815
1,55	11,2	13,4	3,00	38	515816
1,56	11,2	13,4	3,00	38	515817
1,57	11,2	13,4	3,00	38	515818
1,58	11,2	13,4	3,00	38	515819
1,59	11,2	13,4	3,00	38	515820
1,60	11,2	13,4	3,00	38	515280
1,61	11,2	13,4	3,00	38	515070
1,62	11,2	13,4	3,00	38	515071
1,63	11,2	13,4	3,00	38	515072
1,64	11,2	13,4	3,00	38	515073
1,65	11,2	13,4	3,00	38	515074
1,66	11,2	13,4	3,00	38	515075
1,67	11,2	13,4	3,00	38	515076
1,68	11,2	13,4	3,00	38	515077
1,69	11,2	13,4	3,00	38	515078
1,70	11,2	13,4	3,00	38	515281
1,71	11,2	13,4	3,00	38	515290
1,72	11,2	13,4	3,00	38	515291
1,73	11,2	13,4	3,00	38	515292
1,74	11,2	13,4	3,00	38	515293
1,75	11,2	13,4	3,00	38	515294
1,76	11,2	13,4	3,00	38	515295
1,77	11,2	13,4	3,00	38	515296

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZM 240

Spiralbohrer Z2 6xD
Drill Z2 6xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●
Z2						

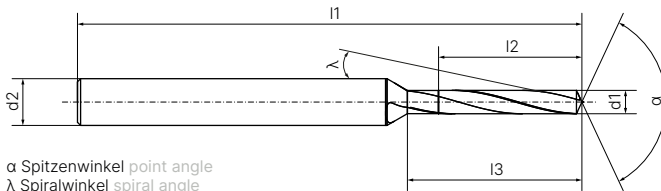
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
1,78	11,2	13,4	3,00	38	515297
1,79	11,2	13,4	3,00	38	515298
1,80	11,2	13,4	3,00	38	515282
1,81	11,2	13,4	3,00	38	515299
1,82	11,2	13,4	3,00	38	515821
1,83	11,2	13,4	3,00	38	515822
1,84	11,2	13,4	3,00	38	515823
1,85	11,2	13,4	3,00	38	515824
1,86	11,2	13,4	3,00	38	515825
1,87	11,2	13,4	3,00	38	515826
1,88	11,2	13,4	3,00	38	515827
1,89	11,2	13,4	3,00	38	515828
1,90	11,2	13,4	3,00	38	515283
1,91	11,2	13,4	3,00	38	515829
1,92	11,2	13,4	3,00	38	515830
1,93	11,2	13,4	3,00	38	515831
1,94	11,2	13,4	3,00	38	515832
1,95	11,2	13,4	3,00	38	515833
1,96	11,2	13,4	3,00	38	515834
1,97	11,2	13,4	3,00	38	515835
1,98	11,2	13,4	3,00	38	515836
1,99	11,2	13,4	3,00	38	515837
2,00	11,2	13,4	3,00	38	515284
2,01	12,5	14,0	3,00	38	515838
2,02	12,5	14,0	3,00	38	515839
2,03	12,5	14,0	3,00	38	515840
2,04	12,5	14,0	3,00	38	515841
2,05	12,5	14,0	3,00	38	515842

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZM 240

Spiralbohrer Z2 6xD

Drill Z2 6xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

Z2	α 130°	λ 35°	6xD

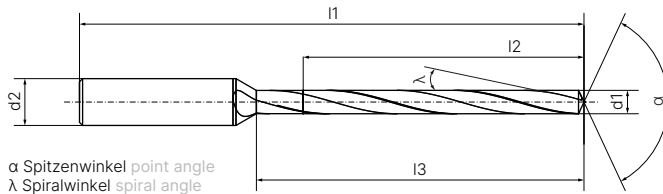
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
2,06	12,5	14,0	3,00	38	515843
2,07	12,5	14,0	3,00	38	515844
2,08	12,5	14,0	3,00	38	515845
2,09	12,5	14,0	3,00	38	515846
2,10	12,5	14,0	3,00	38	515285
2,15	12,5	14,0	3,00	38	515847
2,20	12,5	14,0	3,00	38	515286
2,25	12,5	14,0	3,00	38	515848
2,30	12,5	14,0	3,00	38	515287
2,35	12,5	14,0	3,00	38	515849
2,40	12,5	14,0	3,00	38	515288
2,45	12,5	14,0	3,00	38	515079
2,50	14,0	17,0	3,00	38	515080
2,55	14,0	17,0	3,00	38	515081
2,60	14,0	17,0	3,00	38	515082
2,65	14,0	17,0	3,00	38	515083
2,70	14,0	17,0	3,00	38	515084
2,75	14,0	17,0	3,00	38	515085
2,80	14,0	17,0	3,00	38	515086
2,85	14,0	17,0	3,00	38	515087
2,90	14,0	17,0	3,00	38	515088
3,00	14,0	17,0	3,00	38	515089

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZM 240

Spiralbohrer Z2 12xD

Drill Z2 12xD



P	M	K	N	S	H	X
●	●	—	●	○	—	●

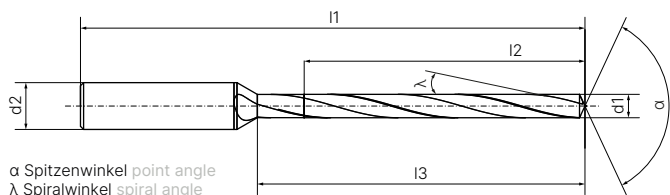
Z2	α 130°	λ 25°	12xD

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
0,20	2,4	3,5	3,00	38	515850
0,30	3,6	4,5	3,00	38	515851
0,35	4,2	5,0	3,00	38	515852
0,40	4,8	6,0	3,00	38	515853
0,45	5,4	6,5	3,00	38	515854
0,50	6,0	7,0	3,00	38	515855
0,55	6,6	7,5	3,00	38	515856
0,60	7,2	9,0	3,00	38	515857
0,65	7,8	9,5	3,00	38	515858
0,70	8,4	10,0	3,00	38	515859
0,75	9,0	10,5	3,00	38	515860
0,80	9,6	11,5	3,00	38	515861
0,85	10,2	12,0	3,00	38	515862
0,90	10,8	12,5	3,00	38	515863
0,95	11,4	13,0	3,00	38	515864
1,00	12,0	14,5	3,00	38	515865
1,05	12,6	15,0	3,00	38	515866
1,10	13,2	15,5	3,00	38	515867
1,15	13,8	16,0	3,00	38	515868
1,20	14,4	17,0	3,00	38	515869
1,25	15,0	17,5	3,00	38	515870
1,30	15,6	18,0	3,00	50	515871
1,35	16,2	18,5	3,00	50	515872
1,40	16,8	19,5	3,00	50	515873
1,45	17,4	20,0	3,00	50	515874
1,50	18,0	21,0	3,00	50	515875
1,55	18,6	21,5	3,00	50	515876
1,60	19,2	22,0	3,00	50	515877

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZM 240

Spiralbohrer Z2 12xD
Drill Z2 12xD



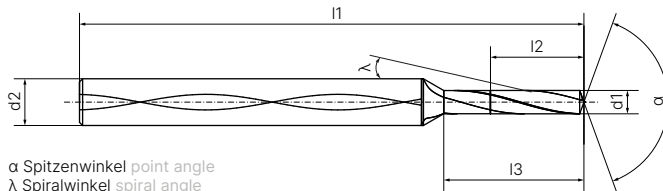
P	M	K	N	S	H	X
●	●	—	●	○	—	●
Z2						
	α 130°					
		λ 25°				
			12xD			

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZM 240 (VHM)
1,65	19,8	22,5	3,00	50	515878
1,70	20,4	23,5	3,00	50	515879
1,75	21,0	24,0	3,00	50	515880
1,80	21,6	25,0	3,00	50	515881
1,85	22,2	25,5	3,00	50	515882
1,90	22,8	26,0	3,00	50	515883
1,95	23,4	26,5	3,00	50	515884
2,00	24,0	27,0	3,00	50	515885

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

CQR 200

Spiralbohrer Z2 3xD IK
Drill Z2 3xD IK



P	M	K	N	S	H	X
●	●	—	○	●	—	○

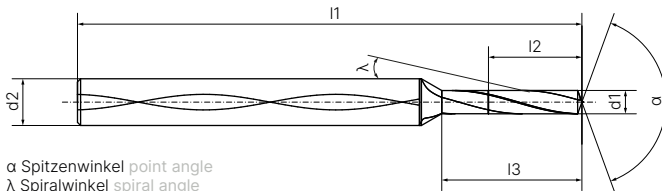
Z2	α 140°	λ 30°	3xD
			DIN 6535 Form HA

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CQR 200 (HP Tec Tinox)
1,00	4,0	6,0	3,00	45	515900
1,10	4,0	6,5	3,00	45	515901
1,20	5,0	7,0	3,00	45	515902
1,30	5,0	8,0	3,00	45	515903
1,40	5,0	8,5	3,00	45	515904
1,50	6,0	9,0	3,00	50	515905
1,60	6,0	9,5	4,00	50	515906
1,70	6,0	10,0	4,00	50	515907
1,80	7,0	11,0	4,00	50	515908
1,90	7,0	11,5	4,00	50	515909
2,00	8,0	12,0	4,00	50	515910
2,10	8,0	12,5	4,00	55	515911
2,20	9,0	13,0	4,00	55	515912
2,30	9,0	14,0	4,00	55	515913
2,40	10,0	14,5	4,00	55	515914
2,50	10,0	15,0	4,00	55	515915
2,60	10,0	15,5	4,00	55	515916
2,70	11,0	16,0	4,00	55	515917
2,80	11,0	17,0	4,00	55	515918
2,90	12,0	17,5	4,00	55	515919
3,00	14,0	20,0	6,00	62	515920
3,30	14,0	20,0	6,00	62	515921
3,50	14,0	20,0	6,00	62	515922
3,70	14,0	20,0	6,00	62	515923
4,00	17,0	24,0	6,00	66	515924
4,20	17,0	24,0	6,00	66	515925
4,30	17,0	24,0	6,00	66	515926
4,50	17,0	24,0	6,00	66	515927

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

CQR 200

Spiralbohrer Z2 3xD IK
Drill Z2 3xD IK



P	M	K	N	S	H	X
●	●	—	●	○	—	○

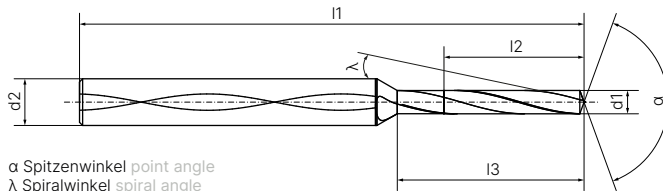
Z2	α 140°	λ 30°	3xD
			DIN 6535 Form HA

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CQR 200 (HPTec Tinox)
4,65	17,0	24,0	6,00	66	515928
4,80	20,0	28,0	6,00	66	515929
5,00	20,0	28,0	6,00	66	515930
5,50	20,0	28,0	6,00	66	515931
5,70	20,0	28,0	6,00	66	515932
5,90	20,0	28,0	6,00	66	515933
6,00	20,0	28,0	6,00	66	515934
6,50	24,0	34,0	8,00	79	515935
6,80	24,0	34,0	8,00	79	515936
7,00	24,0	34,0	8,00	79	515937
7,40	29,0	41,0	8,00	79	515938
7,50	29,0	41,0	8,00	79	515939
8,00	29,0	41,0	8,00	79	515940
8,50	35,0	47,0	10,00	89	515941
8,80	35,0	47,0	10,00	89	515942
9,00	35,0	47,0	10,00	89	515943
9,30	35,0	47,0	10,00	89	515944
9,50	35,0	47,0	10,00	89	515945
10,00	35,0	47,0	10,00	89	515946

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

CQR 200

Spiralbohrer Z2 5xD IK
Drill Z2 5xD IK



P	M	K	N	S	H	X
●	●	—	○	●	—	○

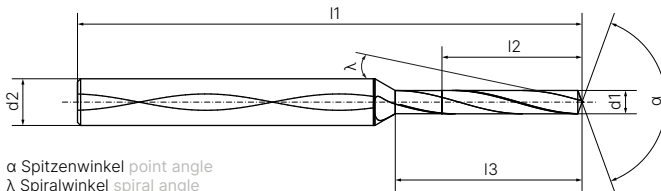
Z2	α 140°	λ 30°	5xD
			DIN 6535 Form HA

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CQR 200 (HP Tec Tinox)
1,00	6,0	8,0	3,00	45	515950
1,10	7,0	9,0	3,00	45	515951
1,20	7,0	9,5	3,00	45	515952
1,30	8,0	10,5	3,00	45	515953
1,40	8,0	11,0	3,00	45	515954
1,50	9,0	12,0	3,00	50	515955
1,60	10,0	13,0	4,00	50	515956
1,70	10,0	13,5	4,00	50	515957
1,80	11,0	14,5	4,00	50	515958
1,90	11,0	15,0	4,00	50	515959
2,00	12,0	16,0	4,00	50	515960
2,10	13,0	17,0	4,00	55	515961
2,20	13,0	17,5	4,00	55	515962
2,30	14,0	18,5	4,00	55	515963
2,40	14,0	19,0	4,00	55	515964
2,50	15,0	20,0	4,00	55	515965
2,60	16,0	21,0	4,00	55	515966
2,70	16,0	21,5	4,00	55	515967
2,80	17,0	22,5	4,00	55	515968
2,90	17,0	23,0	4,00	55	515969
3,00	23,0	28,0	6,00	66	515970
3,10	23,0	28,0	6,00	66	515971
3,30	23,0	28,0	6,00	66	515972
3,40	23,0	28,0	6,00	66	515973
3,50	23,0	28,0	6,00	66	515974
3,70	23,0	28,0	6,00	66	515975
3,80	29,0	36,0	6,00	74	515976
4,00	29,0	36,0	6,00	74	515977

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

CQR 200

Spiralbohrer Z2 5xD IK
Drill Z2 5xD IK



P	M	K	N	S	H	X
●	●	—	○	●	—	○

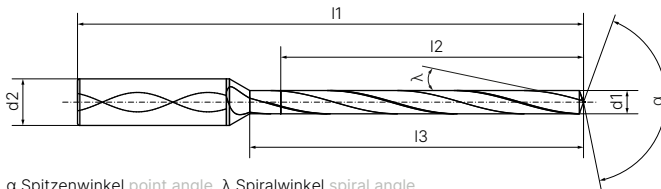
Z2	α 140°	λ 30°	5xD
			DIN 6535 Form HA

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CQR 200 (HPTec Tinox)
4,20	29,0	36,0	6,00	74	515978
4,50	29,0	36,0	6,00	74	515979
4,65	29,0	36,0	6,00	74	515980
5,00	35,0	44,0	6,00	82	515981
5,10	35,0	44,0	6,00	82	515982
5,20	35,0	44,0	6,00	82	515983
5,50	35,0	44,0	6,00	82	515984
5,80	35,0	44,0	6,00	82	515985
6,00	35,0	44,0	6,00	82	515986
6,50	43,0	53,0	8,00	91	515987
6,70	43,0	53,0	8,00	91	515988
6,80	43,0	53,0	8,00	91	515989
7,00	43,0	53,0	8,00	91	515990
7,40	43,0	53,0	8,00	91	515991
7,50	43,0	53,0	8,00	91	515992
8,00	43,0	53,0	8,00	91	515993
8,30	61,0	49,0	10,00	103	515994
8,50	61,0	49,0	10,00	103	515995
9,00	61,0	49,0	10,00	103	515996
9,30	61,0	49,0	10,00	103	515997
9,50	61,0	49,0	10,00	103	515998
10,00	61,0	49,0	10,00	103	515999

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

CHM 200

Spiralbohrer Z2 10xD IK
Drill Z2 10xD IK



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	○	○	—	○

Z2	α 140°	λ 30°	10xD
			DIN 6535 Form HA

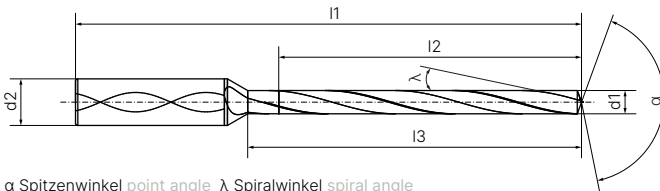
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CHM 200 (HeavyCut)
3,00	39,0	43,0	6,00	80	510750
3,10	39,0	43,0	6,00	80	510751
3,20	39,0	43,0	6,00	80	510752
3,30	39,0	43,0	6,00	80	510753
3,40	39,0	43,0	6,00	80	510754
3,50	39,0	43,0	6,00	80	510755
3,60	39,0	43,0	6,00	80	510756
3,70	39,0	43,0	6,00	80	510757
3,80	39,0	43,0	6,00	80	510758
3,90	39,0	43,0	6,00	80	510759
4,00	50,0	55,0	6,00	92	510760
4,10	50,0	55,0	6,00	92	510761
4,20	50,0	55,0	6,00	92	510762
4,30	50,0	55,0	6,00	92	510763
4,40	50,0	55,0	6,00	92	510764
4,50	50,0	55,0	6,00	92	510765
4,60	50,0	55,0	6,00	92	510766
4,70	50,0	55,0	6,00	92	510767
4,80	50,0	55,0	6,00	92	510768
4,90	50,0	55,0	6,00	92	510769
5,00	61,0	68,0	6,00	104	510770
5,10	61,0	68,0	6,00	104	510771
5,20	61,0	68,0	6,00	104	510772
5,30	61,0	68,0	6,00	104	510773
5,40	61,0	68,0	6,00	104	510774
5,50	61,0	68,0	6,00	104	510775
5,60	61,0	68,0	6,00	104	510776
5,70	61,0	68,0	6,00	104	510777

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CHM 200

Spiralbohrer Z2 10xD IK

Drill Z2 10xD IK



P	M	K	N	S	H	X
●	●	—	○	○	—	○

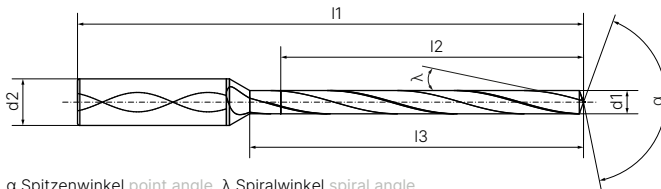
Z2	α 140°	λ 30°	10xD
			DIN 6535 Form HA

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CHM 200 (HeavyCut)
5,80	61,0	68,0	6,00	104	510778
5,90	61,0	68,0	6,00	104	510779
6,00	61,0	68,0	6,00	104	510780
6,10	71,0	80,0	8,00	117	510781
6,20	71,0	80,0	8,00	117	510782
6,30	71,0	80,0	8,00	117	510783
6,40	71,0	80,0	8,00	117	510784
6,50	71,0	80,0	8,00	117	510785
6,60	71,0	80,0	8,00	117	510786
6,70	71,0	80,0	8,00	117	510787
6,80	71,0	80,0	8,00	117	510788
6,90	71,0	80,0	8,00	117	510789
7,00	71,0	80,0	8,00	117	510790
7,10	84,0	94,0	8,00	130	510791
7,20	84,0	94,0	8,00	130	510792
7,30	84,0	94,0	8,00	130	510793
7,40	84,0	94,0	8,00	130	510794
7,50	84,0	94,0	8,00	130	510795
7,60	84,0	94,0	8,00	130	510796
7,70	84,0	94,0	8,00	130	510797
7,80	84,0	94,0	8,00	130	510798
7,90	84,0	94,0	8,00	130	510799
8,00	84,0	94,0	8,00	130	510821
8,10	94,0	105,0	10,00	148	510801
8,20	94,0	105,0	10,00	148	510802
8,30	94,0	105,0	10,00	148	510803
8,40	94,0	105,0	10,00	148	510804
8,50	94,0	105,0	10,00	148	510805

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

CHM 200

Spiralbohrer Z2 10xD IK
Drill Z2 10xD IK



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	○	○	—	○

Z2	α 140°	λ 30°	10xD
			DIN 6535 Form HA

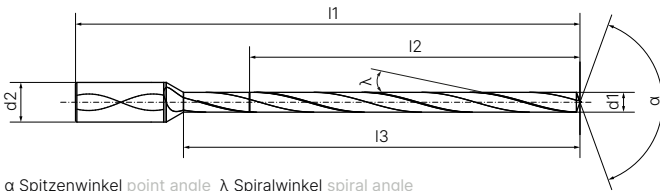
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CHM 200 (HeavyCut)
8,60	94,0	105,0	10,00	148	510806
8,70	94,0	105,0	10,00	148	510807
8,80	94,0	105,0	10,00	148	510808
8,90	94,0	105,0	10,00	148	510809
9,00	94,0	105,0	10,00	148	510822
9,10	103,0	115,0	10,00	158	510811
9,20	103,0	115,0	10,00	158	510812
9,30	103,0	115,0	10,00	158	510813
9,40	103,0	115,0	10,00	158	510814
9,50	103,0	115,0	10,00	158	510815
9,60	103,0	115,0	10,00	158	510816
9,70	103,0	115,0	10,00	158	510817
9,80	103,0	115,0	10,00	158	510818
9,90	103,0	115,0	10,00	158	510819
10,00	103,0	115,0	10,00	158	510823

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

CHM 200

Spiralbohrer Z2 15xD IK

Drill Z2 15xD IK



P	M	K	N	S	H	X
●	●	—	○	○	—	○

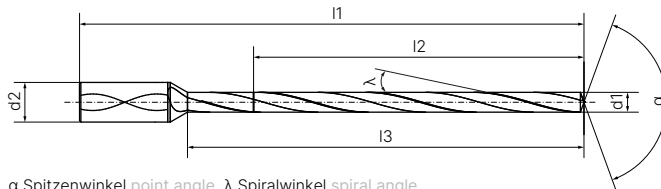
Z2	α 140°	λ 30°	15xD
			DIN 6535 Form HA

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CHM 200 (HeavyCut)
3,00	50,0	60,0	6,0	100	510850
3,10	55,0	65,0	6,0	105	510851
3,30	55,0	65,0	6,0	105	510852
3,40	55,0	65,0	6,0	105	510853
3,50	55,0	65,0	6,0	105	510854
3,70	68,0	72,0	6,0	112	510855
3,80	68,0	72,0	6,0	112	510856
4,00	64,0	72,0	6,0	112	510857
4,50	72,0	80,0	6,0	120	510858
4,60	80,0	88,0	6,0	128	510859
4,80	80,0	88,0	6,0	128	510860
4,90	80,0	88,0	6,0	128	510861
5,00	82,0	88,0	6,0	128	510862
5,10	90,0	96,0	6,0	136	510863
5,20	90,0	96,0	6,0	136	510864
5,50	90,0	96,0	6,0	136	510865
5,80	98,0	104,0	6,0	144	510866
6,00	98,0	104,0	6,0	144	510867
6,10	103,0	112,0	8,0	152	510868
6,20	103,0	112,0	8,0	152	510869
6,40	103,0	112,0	8,0	152	510870
6,50	103,0	112,0	8,0	152	510871
6,70	111,0	120,0	8,0	160	510872
7,00	111,0	120,0	8,0	160	510873
7,50	118,0	130,0	8,0	170	510874
7,80	128,0	140,0	8,0	180	510875
8,00	128,0	140,0	8,0	180	510876
8,50	138,0	150,0	10,0	194	510877

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CHM 200

Spiralbohrer Z2 15xD IK
Drill Z2 15xD IK



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	○	○	—	○
Z2						
	α 140°			λ 30°	15xD	
						DIN 6535 Form HA

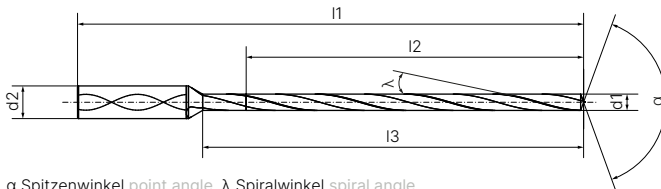
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CHM 200 (HeavyCut)
8,60	148,0	160,0	10,0	204	510878
8,80	148,0	160,0	10,0	204	510879
9,00	148,0	160,0	10,0	204	510880
9,50	160,0	172,0	10,0	216	510881
9,80	170,0	182,0	10,0	226	510882
10,00	170,0	182,0	10,0	226	510883

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CHM 200

Spiralbohrer Z2 20xD IK

Drill Z2 20xD IK



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	○	○	—	○

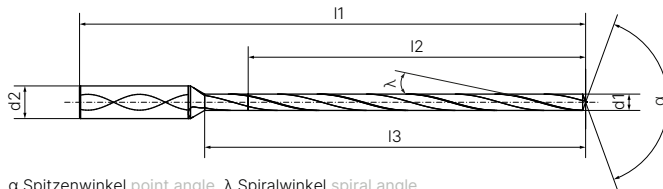
Z2	α 140°	λ 30°	20xD
			DIN 6535 Form HA

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CHM 200 (HeavyCut)
3,00	62,0	70,0	6,00	110,0	510900
3,10	72,0	83,0	6,00	123,0	510901
3,20	72,0	83,0	6,00	123,0	510902
3,30	72,0	83,0	6,00	123,0	510903
3,40	72,0	83,0	6,00	123,0	510904
3,50	72,0	83,0	6,00	123,0	510905
3,60	84,0	96,0	6,00	136,0	510906
3,70	84,0	96,0	6,00	136,0	510907
3,80	84,0	96,0	6,00	136,0	510908
3,90	84,0	96,0	6,00	136,0	510909
4,00	84,0	96,0	6,00	136,0	510910
4,10	96,0	108,0	6,00	148,0	510911
4,20	96,0	108,0	6,00	148,0	510912
4,50	96,0	108,0	6,00	148,0	510913
4,80	106,0	118,0	6,00	158,0	510914
5,00	106,0	118,0	6,00	158,0	510915
5,20	116,0	128,0	6,00	168,0	510916
5,30	116,0	128,0	6,00	168,0	510917
5,40	116,0	128,0	6,00	168,0	510918
5,50	116,0	128,0	6,00	168,0	510919
5,80	126,0	140,0	6,00	180,0	510920
6,00	126,0	140,0	6,00	180,0	510921
6,30	132,0	150,0	8,00	192,0	510922
6,50	132,0	150,0	8,00	192,0	510923
6,80	144,0	162,0	8,00	202,0	510924
7,00	144,0	162,0	8,00	202,0	510925
7,50	155,0	173,0	8,00	213,0	510926
8,00	165,0	183,0	8,00	223,0	510927

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CHM 200

Spiralbohrer Z2 20xD IK
Drill Z2 20xD IK



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	○	○	—	○
Z2						
	α 140°			λ 30°	20xD	
					DIN 6535 Form HA	

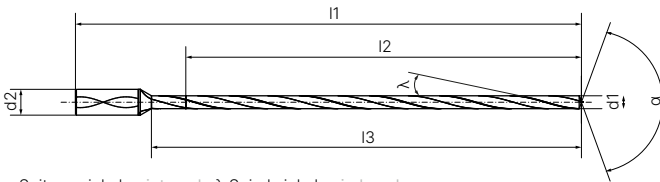
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CHM 200 (HeavyCut)
8,50	176,0	195,0	10,00	239,0	510928
9,00	186,0	205,0	10,00	249,0	510929
9,50	196,0	218,0	10,00	262,0	510930
10,00	206,0	228,0	10,00	272,0	510931

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

CHM 200

Spiralbohrer Z2 30xD IK

Drill Z2 30xD IK



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	○	○	—	○

Z2	α 140°	λ 30°	30xD
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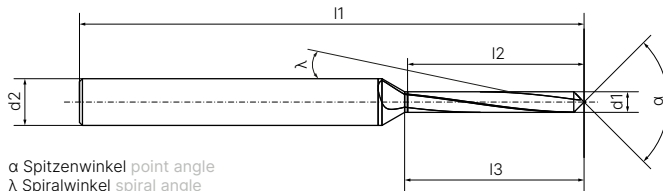
			DIN 6535 Form HA
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	CHM 200 (HeavyCut)
3,00	92,0	100,0	6,00	140,0	513250
3,20	108,0	120,0	6,00	160,0	513251
3,40	108,0	120,0	6,00	160,0	513252
3,50	108,0	120,0	6,00	160,0	513253
3,80	124,0	136,0	6,00	176,0	513254
3,90	124,0	136,0	6,00	176,0	513255
4,00	124,0	136,0	6,00	176,0	513256
4,50	140,0	152,0	6,00	192,0	513257
4,80	156,0	168,0	6,00	208,0	513258
4,90	156,0	168,0	6,00	208,0	513259
5,00	156,0	168,0	6,00	208,0	513260
5,20	170,0	188,0	6,00	228,0	513261
5,50	170,0	188,0	6,00	228,0	513262
5,80	182,0	200,0	6,00	240,0	513263
6,00	182,0	200,0	6,00	240,0	513264
6,30	202,0	220,0	8,00	260,0	513265
6,50	202,0	220,0	8,00	260,0	513266
6,80	214,0	232,0	8,00	272,0	513267
7,00	214,0	232,0	8,00	272,0	513268
8,00	246,0	265,0	8,00	305,0	513269
8,50	265,0	285,0	10,00	330,0	513270
9,00	275,0	295,0	10,00	340,0	513271
9,50	292,0	315,0	10,00	360,0	513272
10,00	305,0	328,0	10,00	372,0	513273

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DDC 200

Spiralbohrer Z2 Drill Z2

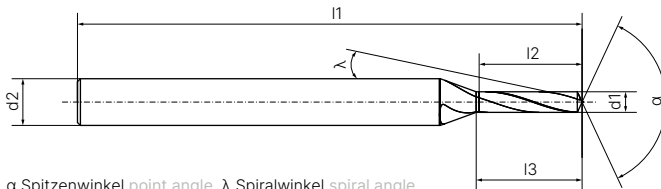


P	M	K	N	S	H	X
—	—	—	●	—	—	●
Z2						

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DDC 200 (CarboCut)
0,20	1,5	1,7	3,175	38	510350
0,20	3,0	3,2	3,175	38	510351
0,30	5,5	5,7	3,175	38	510352
0,40	5,5	5,7	3,175	38	510354
0,50	7,0	7,2	3,175	38	510355
0,60	7,0	7,2	3,175	38	510356
0,70	7,0	7,2	3,175	38	510357
0,80	7,0	7,2	3,175	38	510358
0,90	7,0	7,2	3,175	38	510359
1,00	7,0	7,2	3,175	38	510360
1,10	12,0	12,2	3,175	38	510361
1,10	7,0	7,2	3,175	38	510362
1,20	7,0	7,2	3,175	38	510363
1,30	7,0	7,2	3,175	38	510364
1,40	7,0	7,2	3,175	38	510365
1,40	12,0	12,2	3,175	38	510366
1,50	7,0	7,2	3,175	38	510367
2,40	7,0	7,2	3,175	38	510368

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request



α Spitzwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z2	α 130°	λ 25°	

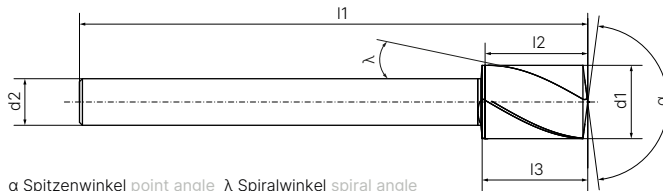
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DDK 201 (CarboCut)
1,30	7,0	7,2	3,175	38	510320
1,40	7,0	7,2	3,175	38	510321
1,50	7,0	7,2	3,175	38	510322
1,60	7,0	7,2	3,175	38	510323
1,70	7,0	7,2	3,175	38	510324
1,80	7,0	7,2	3,175	38	510325
1,90	7,0	7,2	3,175	38	510326
2,00	9,0	9,2	3,175	38	510327
2,10	9,0	9,2	3,175	38	510328
2,20	9,0	9,2	3,175	38	510329
2,30	9,0	9,2	3,175	38	510330
2,40	9,0	9,2	3,175	38	510331
2,50	9,0	9,2	3,175	38	510332
2,60	9,0	9,2	3,175	38	510333
2,70	9,0	9,2	3,175	38	510334
2,80	9,0	9,2	3,175	38	510335
2,90	9,0	9,2	3,175	38	510336
3,00	9,0	9,2	3,175	38	510337
3,10	9,0	9,2	3,175	38	510338

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

DDK 221

Spiralbohrer Z2 Drill Z2



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

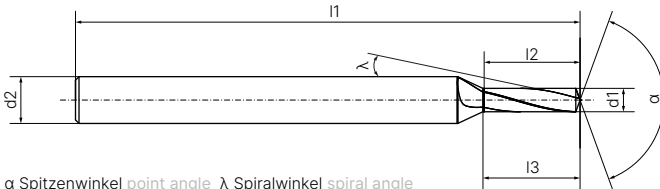
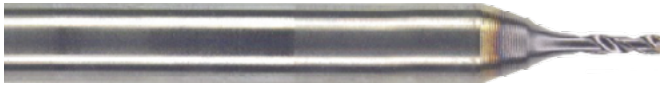
Z2	α 165°	λ 25°	

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DDK 221 (CarboCut)
3,20	12,0	12,5	3,175	38	510340
3,50	12,0	12,5	3,175	38	510341
4,00	12,0	12,5	3,175	38	510342
4,50	12,0	12,5	3,175	38	510343
5,00	12,0	12,5	3,175	38	510344
5,50	12,0	12,5	3,175	38	510345
6,00	12,0	12,5	3,175	38	510346
6,40	12,0	12,5	3,175	38	510347

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

Spiralbohrer Z2
Drill Z2



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	●	○

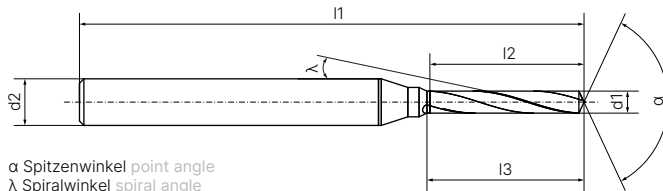
Z_2	α 140°	λ 25°	
			

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DHN 240 (HeavyCut)
1,00	3,8	3,9	4,00	47	530000
1,00	4,7	4,8	4,00	47	530001
1,05	4,9	5,0	4,00	47	530014
1,10	4,1	4,2	4,00	47	530002
1,20	4,5	4,6	4,00	47	530003
1,30	4,9	5,0	4,00	47	530004
1,35	6,3	6,4	4,00	47	530015
1,40	5,3	5,4	4,00	47	530005
1,50	5,6	5,7	4,00	47	530006
1,60	6,0	6,1	4,00	47	530007
1,65	6,2	6,3	4,00	47	530013
1,70	6,4	6,5	4,00	47	530008
1,80	6,8	6,9	4,00	47	530009
1,90	7,1	7,2	4,00	47	530010
1,90	8,9	9,0	4,00	47	530017
1,95	7,3	7,4	4,00	47	530012
1,95	9,2	9,3	4,00	47	530016
2,00	8,2	8,3	4,00	47	530011
3,00	10,2	10,3	4,00	47	530018
4,00	12,2	12,2	4,00	47	530019

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DLB 201

Spiralbohrer Z2 Drill Z2



P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z2	α 130°	λ 25°	

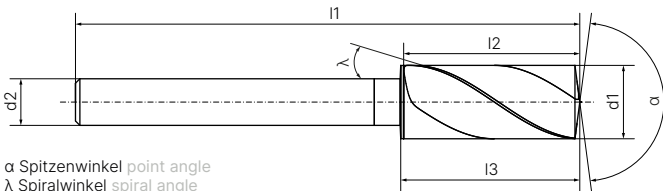
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DLB 201 (DLC-P)
0,30	5,5	5,7	3,175	38	513051
0,35	5,5	5,7	3,175	38	513052
0,40	5,5	5,7	3,175	38	513053
0,45	7,0	7,2	3,175	38	513054
0,50	7,0	7,2	3,175	38	513055
0,50	8,5	8,7	3,175	38	513056
0,60	7,0	7,2	3,175	38	513057
0,60	8,5	8,7	3,175	38	513058
0,70	10,5	10,7	3,175	38	513059
0,80	10,5	10,7	3,175	38	513060
0,90	10,5	10,7	3,175	38	513061
1,00	10,5	10,7	3,175	38	513062
1,10	10,5	10,7	3,175	38	513063
1,20	10,5	10,7	3,175	38	513064
1,30	10,5	10,7	3,175	38	513065
1,40	10,5	10,7	3,175	38	513066
1,50	10,5	10,7	3,175	38	513067
1,60	10,5	10,7	3,175	38	513068
1,70	10,5	10,7	3,175	38	513069
1,80	10,5	10,7	3,175	38	513070
1,90	10,5	10,7	3,175	38	513071
2,00	10,5	10,7	3,175	38	513072
2,50	10,5	10,7	3,175	38	513073
3,00	10,5	10,7	3,175	38	513074
3,00	20,0	20,7	3,175	38	513075

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

DLB 221

Spiralbohrer Z2
Drill Z2



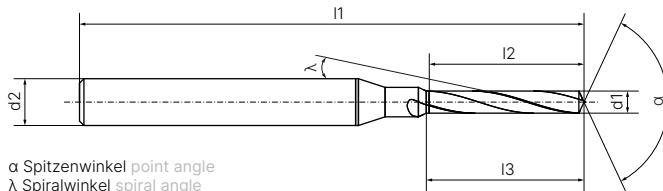
P	M	K	N	S	H	X
—	—	—	●	—	—	●
Z2		α 165°		λ 25°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DLB 221 (DLC-P)
3,50	12,0	12,2	3,175	38	513150
4,00	12,0	12,2	3,175	38	513151
4,50	12,0	12,2	3,175	38	513152
5,00	12,0	12,2	3,175	38	513153
5,50	12,0	12,2	3,175	38	513154
6,00	12,0	12,2	3,175	38	513155

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request
Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

DZL 201

Spiralbohrer Z2 Drill Z2



P	M	K	N	S	H	X
●	●	—	●	○	—	●

Z2	α 130°	λ 25°	

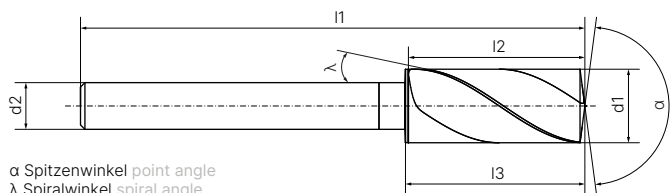
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZL 201 (VHM)
0,30	5,5	5,7	3,175	38	519200
0,35	5,5	5,7	3,175	38	519205
0,40	5,5	5,7	3,175	38	519210
0,45	7,0	7,2	3,175	38	519215
0,50	7,0	7,2	3,175	38	519220
0,50	8,5	8,7	3,175	38	519225
0,60	7,0	7,2	3,175	38	519235
0,60	8,5	8,7	3,175	38	519230
0,70	10,5	10,7	3,175	38	519300
0,80	10,5	10,7	3,175	38	519305
0,90	10,5	10,7	3,175	38	519310
1,00	7,0	8,6	3,175	38	519377
1,00	10,5	10,7	3,175	38	519315
1,10	10,5	10,7	3,175	38	519320
1,20	10,5	10,7	3,175	38	519325
1,30	10,5	10,7	3,175	38	519330
1,40	10,5	10,7	3,175	38	519335
1,50	10,5	10,7	3,175	38	519340
1,60	10,5	10,7	3,175	38	519345
1,70	10,5	10,7	3,175	38	519350
1,80	10,5	10,7	3,175	38	519355
1,90	10,5	10,7	3,175	38	519360
2,00	10,5	10,7	3,175	38	519365
2,50	10,5	10,7	3,175	38	519370
3,00	10,5	10,7	3,175	38	519375
3,00	20,0	20,7	3,175	38	519371

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

DZL 221

Spiralbohrer Z2
Drill Z2



P	M	K	N	S	H	X
●	●	—	●	○	—	●
Z2						

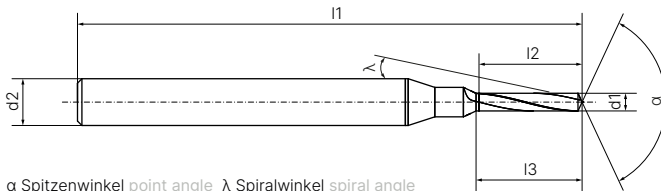
d_1 (DC)	l_2 (APMX)	l_3 (LCF)	d_2 (DCONMS)	l_1 (OAL)	DZL 221 (VHM)
3,50	12,0	12,2	3,175	38	519400
4,00	12,0	12,2	3,175	38	519405
4,50	12,0	12,2	3,175	38	519410
5,00	12,0	12,2	3,175	38	519415
5,50	12,0	12,2	3,175	38	519420
6,00	12,0	12,2	3,175	38	519425

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

UDK 201

Spiralbohrer Z2 Drill Z2



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z2	α 130°	λ 38°	

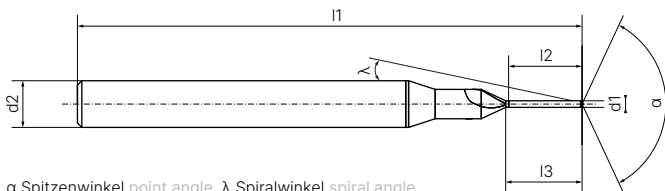
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (CONMS)	l ₁ (OAL)	UDK 201 (CarboCut)
0,50	7,0	7,2	3,175	38	510310
0,60	5,0	5,2	3,175	38	510311
0,60	7,0	7,2	3,175	38	510312
0,70	7,0	7,2	3,175	38	510313
0,80	5,0	5,2	3,175	38	510314
0,80	7,0	7,2	3,175	38	510315
0,90	7,0	7,2	3,175	38	510316
1,00	7,0	7,2	3,175	38	510317
1,10	7,0	7,2	3,175	38	510318
1,20	7,0	7,2	3,175	38	510319

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

UDK 240

Spiralbohrer Z2
Drill Z2



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z2	α 130°	λ 40°	
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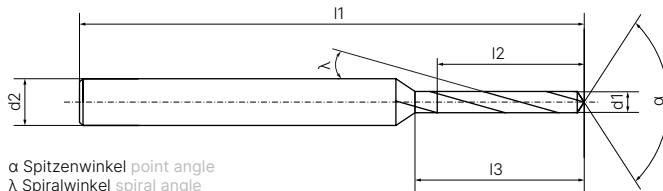
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	UDK 240 (CarboCut)
0,30	3,5	3,7	3,175	38	510370
0,30	5,0	5,2	3,175	38	510371
0,35	4,0	4,2	3,175	38	510372
0,35	5,0	5,2	3,175	38	510373
0,40	5,0	5,2	3,175	38	510374
0,45	4,0	4,2	3,175	38	510375
0,45	5,0	5,2	3,175	38	510376

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

Spiralbohrer Z2
Drill Z2



P	M	K	N	S	H	X
●	●	—	●	○	—	○

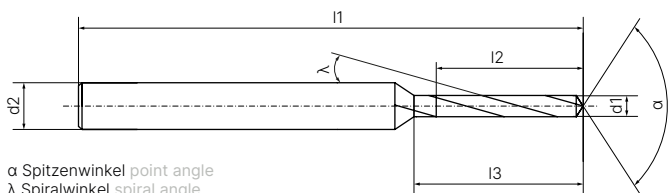
Z2	α 120°	λ 30°	
			

d ₁ (DC)	I ₂ (APMX)	I ₃ (LCF)	d ₂ (DCONMS)	I ₁ (OAL)	DZR 240 (VHM)	DTR 240 (TiAlN)
0,50	5,0	5,5	3,00	45	512850	512901
0,55	5,5	6,0	3,00	45	512851	512902
0,60	6,0	6,5	3,00	45	512852	512903
0,65	6,5	7,0	3,00	45	512853	512904
0,70	7,0	7,5	3,00	45	512854	512905
0,75	7,5	8,0	3,00	45	512855	512906
0,80	8,0	8,5	3,00	45	512856	512907
0,85	8,5	9,0	3,00	45	512857	512908
0,90	9,0	9,5	3,00	45	512858	512909
0,95	9,5	10,0	3,00	45	512859	512910
1,00	10,0	10,5	3,00	45	512860	512911
1,05	10,5	11,0	3,00	45	512861	512912
1,10	11,0	11,5	3,00	45	512862	512913
1,15	11,5	12,0	3,00	45	512863	512914
1,20	12,0	12,5	3,00	45	512864	512915
1,25	12,5	13,0	3,00	45	512865	512916
1,30	13,0	13,5	3,00	45	512866	512917
1,35	13,5	14,0	3,00	45	512867	512918
1,40	14,0	14,5	3,00	45	512868	512919
1,45	14,5	15,0	3,00	45	512869	512920
1,50	15,0	15,5	3,00	45	512870	512921
1,55	15,5	16,0	3,00	45	512871	512922
1,60	16,0	16,5	3,00	45	512872	512923
1,65	16,5	17,0	3,00	45	512873	512924
1,70	17,0	17,5	3,00	45	512874	512925
1,75	17,5	18,0	3,00	45	512875	512926
1,80	18,0	18,5	3,00	45	512876	512927
1,85	18,5	19,0	3,00	45	512877	512928

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZR / DTR 240

Spiralbohrer Z2
Drill Z2



P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z2						

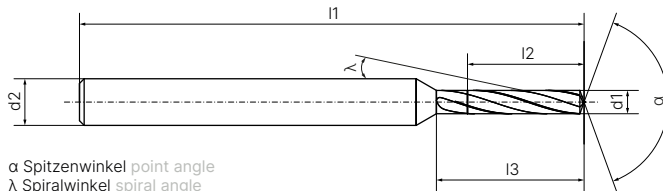
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZR 240 (VHM)	DTR 240 (TiAlN)
1,90	19,0	19,5	3,00	45	512878	512929
1,95	19,5	20,0	3,00	45	512879	512930
2,00	20	20,5	3,00	45	512880	512931
2,05	20	20,5	3,00	45	512881	512932
2,10	20	20,5	3,00	45	512882	512933
2,15	20	20,5	3,00	45	512883	512934
2,20	20	20,5	3,00	45	512884	512935
2,25	20	20,5	3,00	45	512885	512936
2,30	20	20,5	3,00	45	512886	512937
2,35	20	20,5	3,00	45	512887	512938
2,40	20	20,5	3,00	45	512888	512939
2,45	20	20,5	3,00	45	512889	512940
2,50	20	20,5	3,00	45	512890	512941
2,55	20	20,5	3,00	45	512891	512942
2,60	20	20,5	3,00	45	512892	512943
2,65	20	20,5	3,00	45	512893	512944
2,70	20	20,5	3,00	45	512894	512945
2,75	20	20,5	3,00	45	512895	512946
2,80	20	20,5	3,00	45	512896	512947
2,85	20	20,5	3,00	45	512897	512948
2,90	20	20,5	3,00	45	512898	512949
2,95	20	20,5	3,00	45	512899	512950
3,00	20	20,5	3,00	45	512900	512951

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

DZT 340

Spiralbohrer Z3 5xD

Drill Z3 5xD



P	M	K	N	S	H	X
●	●	—	●	○	—	○

Z3	α 140°	λ 35°	5xD

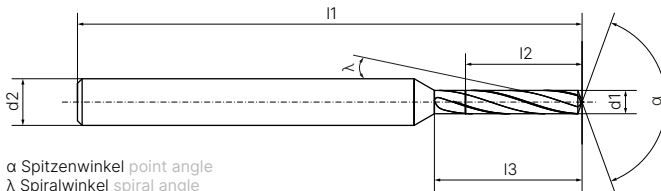
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZT 340 (VHM)
0,20	1,00	1,5	3,00	38	516251
0,25	1,25	1,7	3,00	38	516252
0,30	1,50	2,0	3,00	38	516253
0,35	1,75	2,2	3,00	38	516254
0,40	2,00	2,5	3,00	38	516255
0,45	2,25	2,7	3,00	38	516256
0,50	2,50	3,0	3,00	38	515300
0,55	2,75	3,2	3,00	38	515301
0,60	3,00	3,5	3,00	38	515302
0,65	3,25	3,7	3,00	38	515303
0,70	3,50	4,0	3,00	38	515304
0,75	3,75	4,2	3,00	38	515305
0,80	4,00	4,5	3,00	38	515306
0,85	4,25	4,7	3,00	38	515307
0,90	4,50	5,0	3,00	38	515308
0,95	4,75	5,2	3,00	38	515309
1,00	5,00	6,5	3,00	38	515310
1,05	5,25	6,5	3,00	38	515311
1,10	5,50	7,5	3,00	38	515312
1,15	5,75	7,5	3,00	38	515313
1,20	6,00	8,5	3,00	38	515314
1,25	6,25	8,5	3,00	38	515315
1,30	6,50	8,5	3,00	38	515316
1,35	6,75	9,5	3,00	38	515317
1,40	7,00	9,5	3,00	38	515318
1,45	7,25	9,5	3,00	38	515319
1,50	7,50	9,5	3,00	38	515320
1,55	7,75	10,5	3,00	38	515321

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DZT 340

Spiralbohrer Z3 5xD

Drill Z3 5xD



P	M	K	N	S	H	X
●	●	—	●	○	—	○

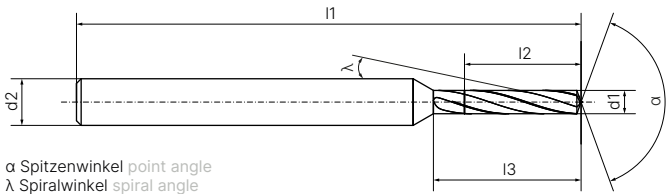
Z3	α 140°	λ 35°	5xD

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	DZT 340 (VHM)
1,60	8,00	10,5	3,00	38	515322
1,65	8,25	10,5	3,00	38	515323
1,70	8,50	10,5	3,00	38	515324
1,75	8,75	11,5	3,00	38	515325
1,80	9,00	11,5	3,00	38	515326
1,85	9,25	11,5	3,00	38	515327
1,90	9,50	11,5	3,00	38	515328
1,95	9,75	12,5	3,00	38	515329
2,00	10,00	12,5	3,00	38	515330
2,05	10,25	12,5	3,00	38	515331
2,10	10,50	12,5	3,00	38	515332
2,15	10,75	13,5	3,00	38	515333
2,20	11,00	13,5	3,00	38	515334
2,25	11,25	13,5	3,00	38	515335
2,30	11,50	13,5	3,00	38	515336
2,35	11,75	13,5	3,00	38	515337
2,40	12,00	14,5	3,00	38	515338
2,45	12,25	14,5	3,00	38	515339
2,50	12,50	14,5	3,00	38	515340
2,55	12,75	14,5	3,00	38	515341
2,60	13,00	14,5	3,00	38	515342
2,65	13,25	14,5	3,00	38	515343
2,70	13,50	16,5	3,00	38	515344
2,75	13,75	16,5	3,00	38	515345
2,80	14,00	16,5	3,00	38	515346
2,85	14,25	16,5	3,00	38	515347
2,90	14,50	16,5	3,00	38	515348
2,95	14,75	16,5	3,00	38	515349

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DZT 340

Spiralbohrer Z3 5xD
Drill Z3 5xD



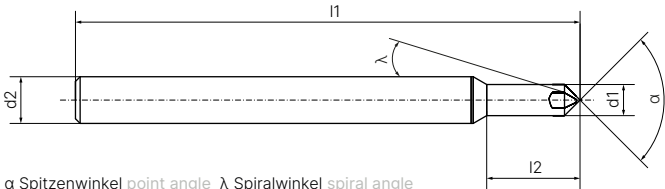
P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z3			α 140°	λ 35°	5xD	

d_1 (DC)	l_2 (APMX)	l_3 (LCF)	d_2 (DCONMS)	l_1 (OAL)	DZT 340 (VHM)
2,99	14,95	16,5	3,00	38	516250

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VZM / VTM 340

Kegelsenker Z3 90°
Champfering tool Z3 90°



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

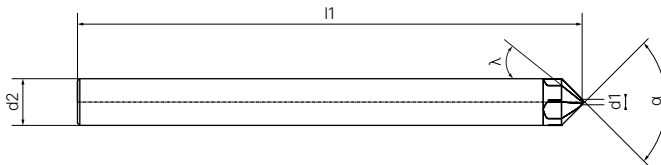
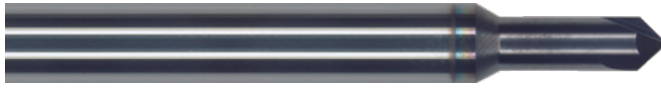
P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z3	α 90°	λ 0°				
						

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	VZM 340 (VHM)	VTM 340 (TiAlN)
0,50	3,0	3,00	39	514700	514754
0,60	3,0	3,00	39	514701	514755
0,70	3,0	3,00	39	514702	514756
0,80	3,0	3,00	39	514703	514757
0,90	3,0	3,00	39	514704	514758
1,00	3,0	3,00	39	514705	514759
1,50	4,5	3,00	39	514706	514760
2,00	6,0	3,00	39	514707	514751
2,50	7,5	3,00	39	514708	514752
3,00	-	3,00	39	514709	514753

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VZM / VTM 440

Kegelsenker Z4 90°
Chamfering tool Z4 90°



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

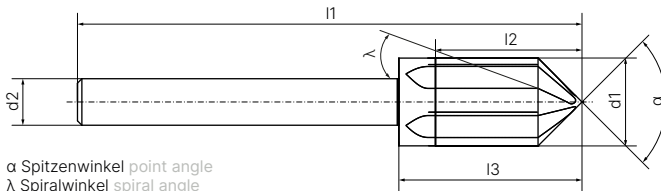
P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z4						
	α 90°			λ 0°		

d_1 (DC)	d_2 (DCONMS)	l_1 (OAL)	VZM 440 (VHM)	VTM 440 (TiAlN)
0,3	3,0	39	511060	511063
0,7	6,0	50	511061	511064
1,2	8,0	59	511062	511065

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VZF 541 / VDF 540

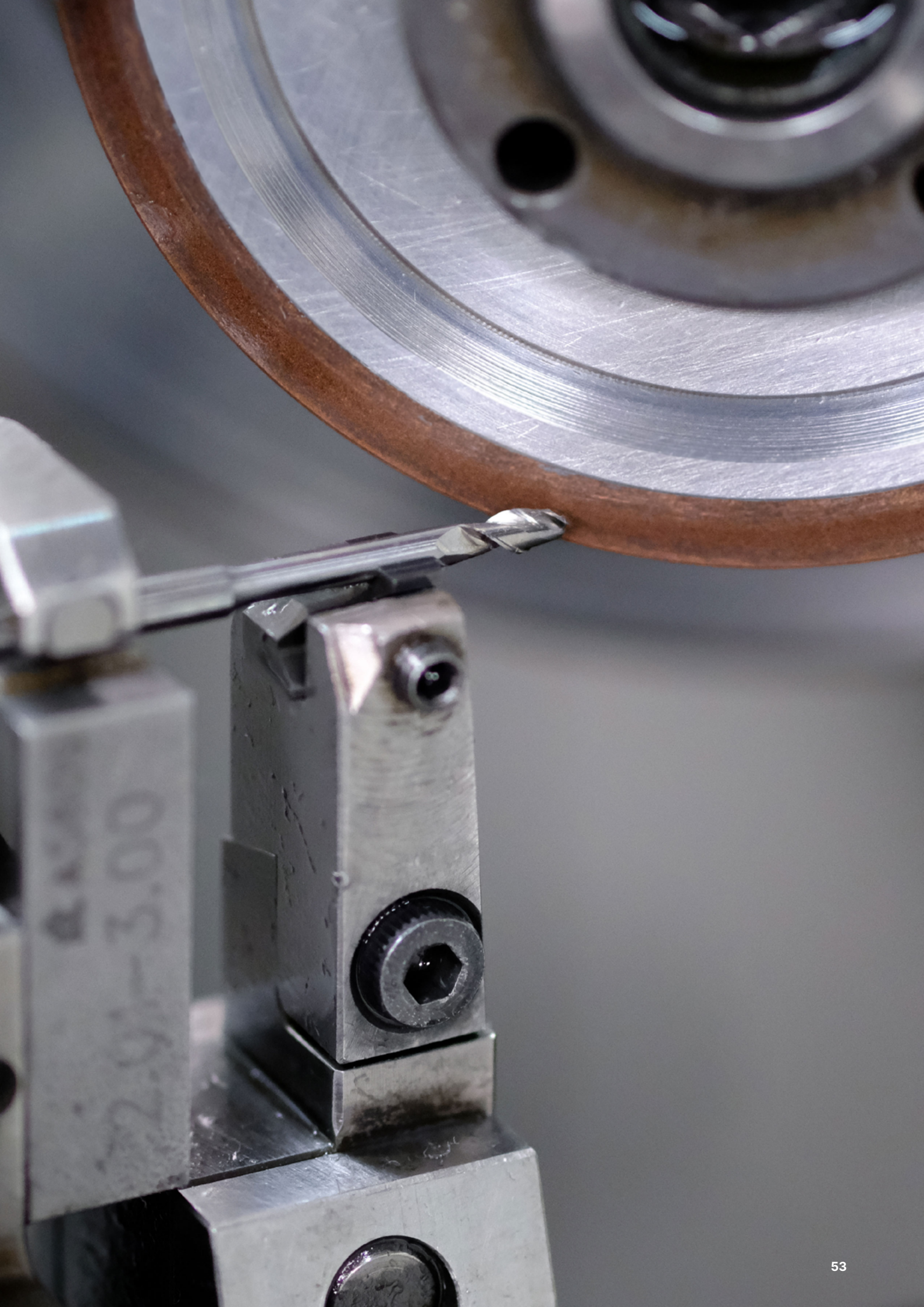
Kegelsenker Z5 90/120/140°
Chamfering tool Z5 90/120/140°



P	M	K	N	S	H	X
●	●	—	●	○	—	●
Z5	α 90-140°		λ 0°			

α (SIG)	d_1 (DC)	l_2 (APMX)	l_3 (LCF)	d_2 (DCONMS)	l_1 (OAL)	VZF 541 (VHM)	VDF 540 (CarboCut)
90°	6,00	6,5	12,3	6,00	50,0		519123
120°	6,00	6,5	12,3	6,00	50,0		519124
140°	6,00	6,5	12,3	6,00	50,0		519125
90°	6,00	10,0	12,5	3,175	38,0	519100	519120
120°	6,00	10,0	12,5	3,175	38,0	519105	519121
140°	6,00	10,0	12,5	3,175	38,0	519110	519122

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ÜBERSICHT FRÄSEN

OVERVIEW MILLING

Ø [mm]	VHM (unbeschichtet) VHM (uncoated)	Beschichtung Stahl Coating steel	Beschichtung NE-Metalle Coating non-ferrous metals	Stahl Steel	Rostfreier Stahl Stainless steel	Gusseisen Cast iron	NE-Metall Non-ferrous metal	Sonderlegierungen Special alloy	Stahl 45-65 HRC Steel 45-65 HRC	Nichtmetall. Werkstoffe Non-metallic materials	Seite Page
				P	M	K	N	S	H	X	

Gravierfräser Z1 Engraving cutter Z1

VZM / VTM 140 30-60° 	0,05 - 0,15	✓	✓		●	●	—	●	○	—	○	59
VZM / VTM 150 30-60° 	0,05 - 0,15	✓	✓		●	●	—	●	○	—	○	60

Schaftfräser Z1 End mill Z1

RZM 140 3xD 	0,3 - 3,0	✓			○	○	—	●	—	—	—	61
RLK 100 	2,0 - 10,0			✓	—	—	—	●	—	—	●	62
RPK 100 	1,0 - 12,0	✓			—	—	—	●	—	—	●	63
RZK 100 	1,5 - 3,0	✓			—	—	—	●	—	—	●	65
RZL 101 	0,4 - 3,0	✓			○	○	—	●	—	—	●	66
RDK 100 	1,6 - 2,4			✓	—	—	—	●	—	—	●	67

Schaftfräser Z2 End mill Z2

RZM / RTM 240 2xD 	0,1 - 2,0	✓	✓		●	●	—	●	○	—	○	68
RZM / RTM 240 3xD 	0,3 - 2,9	✓	✓		●	●	—	●	○	—	○	69
RZM / RTM 240 5xD 	0,3 - 2,5	✓	✓		●	●	—	●	○	—	○	70
RAR 200 	0,3 - 5,0		✓		●	●	—	—	○	●	—	71
RZF / RDF 240 	2,0 - 8,0	✓		✓	—	○	—	●	○	—	●	75

Ø [mm]	VHM (unbeschichtet) VHM (uncoated)	Beschichtung Stahl Coating steel	Beschichtung NE-Metalle Coating non-ferrous metals	Stahl Steel	Rostfreier Stahl Stainless steel	Gusseisen Cast iron	NE-Metall Non-ferrous metal	Sonderlegierungen Special alloy	Stahl 45-65 HRC Steel 45-65 HRC	Nichtmetall. Werkstoffe Non-metallic materials	Seite Page
				P	M	K	N	S	H	X	

Schaftfräser Z2 End mill Z2

RDK 240 	2,0			✓	—	—	—	●	—	—	●	76
RDF 241 	1,0 - 3,0			✓	—	—	—	●	—	—	●	77
RZL 231 	0,5 - 3,0	✓			●	●	—	●	○	—	●	78

Schaftfräser Z3 End mill Z3

RZM / RTM 340 2xD 	0,3 - 2,9	✓	✓		●	●	—	●	○	—	○	79
RZM / RTM 340 3xD 	0,3 - 2,9	✓	✓		●	●	—	●	○	—	○	80
RZT / RTT 340 2,5xD 	0,3 - 2,9	✓	✓		●	○	—	●	○	—	—	81
RTT 340 	2,0 - 6,0		✓		●	○	—	●	○	—	—	82
RZL 331 	0,5 - 2,4	✓			●	●	—	●	○	—	●	83
RQR 350 	3,0 - 10,0		✓		●	●	—	—	●	—	—	84

Schaftfräser Z4 End mill Z4

RZM / RTM 440 2xD 	0,3 - 2,9	✓	✓		●	●	—	●	○	—	○	85
RZM / RTM 440 3xD 	0,5 - 2,5	✓	✓		●	●	—	●	○	—	○	86
RTT 440 2xD 	0,5 - 6,0		✓		●	○	—	●	○	—	—	87
RTT 440 	2,0 - 6,0		✓		●	○	—	●	○	—	—	89
RHE 400 	3,0 - 20,0		✓		●	●	●	—	—	○	—	90

● optimal optimum ○ geeignet suitable — nicht empfehlenswert not recommendable

ÜBERSICHT FRÄSEN

OVERVIEW MILLING

Ø [mm]	VHM (unbeschichtet) VHM (uncoated)	Beschichtung Stahl Coating steel	Beschichtung NE-Metalle Coating non-ferrous metals	Stahl Steel	Rostfreier Stahl Stainless steel	Gusseisen Cast iron	NE-Metall Non-ferrous metal	Sonderlegierungen Special alloy	Stahl 45-65 HRC Steel 45-65 HRC	Nichtmetall. Werkstoffe Non-metallic materials	Seite Page
				P	M	K	N	S	H	X	

Schaftfräser Z4 End mill Z4

RQH 400 	4,0 - 20,0		✓		○	—	—	—	—	●	—	91
RAR 400 	3,0 - 16,0		✓		●	●	●	—	—	○	—	92

Schaftfräser Z5 End mill Z5

RDF 500 	3,0 - 6,0			✓	—	—	—	—	—	—	●	93
RZL 531 	0,5 - 1,4	✓			—	—	—	—	—	—	●	94

Schaftfräser Z6 End mill Z6

RZL 630 	3,0 - 4,0	✓			—	—	—	○	—	—	●	95
RZF 630 	1,5 - 3,0	✓			—	—	—	—	—	—	●	96
RDF 640 	0,8 - 1,2			✓	—	—	—	○	—	—	●	97
RZF / RIF 640 	1,0 - 3,0	✓		✓	—	—	—	○	—	—	●	98
LZF / LIF 640 	1,0 - 3,0	✓		✓	—	—	—	○	—	—	●	99
GZF / GIF 640 	1,0 - 3,0	✓		✓	—	—	—	—	—	—	●	100
RZL 631 	1,5 - 3,175	✓			—	—	—	—	—	—	●	101
RQH 600 	6,0 - 20,0		✓		○	—	—	—	—	●	—	102

Schaftfräser Z7 End mill Z7

RDF 700 	3,0 - 6,0			✓	—	—	—	—	—	—	●	103
RZF / RDF 740 	3,0 - 30,0	✓		✓	—	—	—	—	—	—	●	104

Ø [mm]	VHM (unbeschichtet) VHM (uncoated)	Beschichtung Stahl Coating steel	Beschichtung NE-Metalle Coating non-ferrous metals	Stahl Steel	Rostfreier Stahl Stainless steel	Gusseisen Cast iron	NE-Metall Non-ferrous metal	Sonderlegierungen Special alloy	Stahl 45-65 HRC Steel 45-65 HRC	Nichtmetall. Werkstoffe Non-metallic materials	Seite Page
				P	M	K	N	S	H	X	

Schaftfräser Z7 End mill Z7

LZF / LDF 740



3,0 - 10,0

✓

✓

—

—

—

—

—

—

—

●

105

Kugelpopfräser Z2 Ball nose end mill Z2

RZM / RTM 210 1,5xD



0,3 - 2,5

✓

✓

●

●

—

●

○

—

○

106

RZM / RTM 210 3xD



0,2 - 2,9

✓

✓

●

●

—

●

○

—

○

107

RAR 210



0,5 - 5,0

✓

●

●

—

—

○

●

—

108

REB 210



0,3 - 2,0

✓

●

●

—

—

○

—

○

110

RZK 210



0,4 - 2,5

✓

—

—

—

○

—

—

●

111

RDK 210



0,3 - 3,0

✓

—

—

—

●

—

—

●

113

RQH 210



1,0 - 20,0

✓

○

—

—

—

—

●

—

114

Kugelpopfräser Z4 Ball nose end mill Z4

RQR 410



6,0 - 20,0

✓

—

○

—

—

●

—

—

115

RQH 410



3,0 - 20,0

✓

○

—

—

—

—

●

—

116

Torischer Fräser Z2 Torical end mill Z2

RAR 250



0,5 - 5,0

✓

●

●

—

—

○

●

—

117

RDK 250



2,0 - 3,0

✓

—

—

—

●

—

—

○

122

REB 250



0,3 - 3,0

✓

—

—

—

●

—

—

●

123

● optimal optimum ○ geeignet suitable — nicht empfehlenswert not recommendable

ÜBERSICHT FRÄSEN

OVERVIEW MILLING

Ø [mm]	VHM (unbeschichtet) VHM (uncoated)	Beschichtung Stahl Coating steel	Beschichtung NE-Metalle Coating non-ferrous metals	Stahl Steel	Rostfreier Stahl Stainless steel	Gusseisen Cast iron	NE-Metall Non-ferrous metal	Sonderlegierungen Special alloy	Stahl 45-65 HRC Steel 45-65 HRC	Nichtmetall. Werkstoffe Non-metallic materials	Seite Page
				P	M	K	N	S	H	X	

Torischer Fräser Z2 Torical end mill Z2

RZK 250 	6,0 - 10,0	✓		—	—	—	●	—	—	●	124
RVT 250 	1,0 - 5,0		✓	—	●	—	—	●	—	—	125

Torischer Fräser Z3 Torical end mill Z3

RVT 350 	3,0 - 5,0		✓	—	●	—	—	●	—	—	126
RDK 350 	2,0 - 6,0			✓	—	—	●	—	—	●	127

Torischer Fräser Z4 Torical end mill Z4

RHE 450 	3,0 - 12,0		✓	●	●	●	—	—	○	—	128
RQR 450 	6,0 - 20,0		✓	—	●	—	—	●	—	—	129
RQH 450 	3,0 - 16,0		✓	○	—	—	—	—	●	—	131

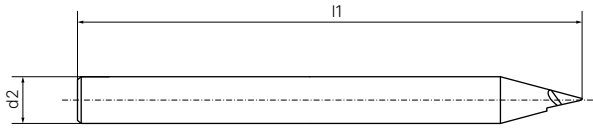
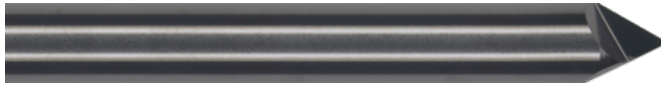
Kreissegmentfräser Z4/Z6 Circle segment end mill Z4/Z6

RQR 460 / 660 	3,0 - 16,0		✓	●	●	○	—	●	○	—	133
---	------------	--	---	---	---	---	---	---	---	---	-----

● optimal optimum ○ geeignet suitable — nicht empfehlenswert not recommendable

VZM / VTM 140

Gravierfräser Z1 30/50/60°
Engraving cutter Z1 30/50/60°



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

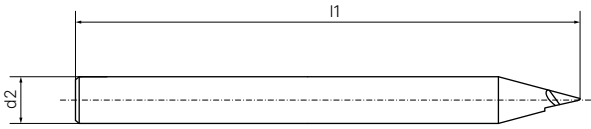
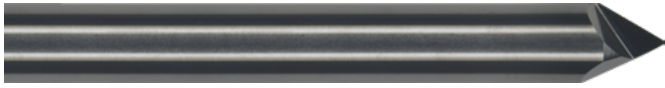
P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z1	α 30-60°		λ 0°			

α (SIG)	d_1 (DC)	d_2 (DCONMS)	l_1 (OAL)	VZM 140 (VHM)	VTM 140 (TiAlN)
30	0,05	3,0	33,0	514900	514950
30	0,08	3,0	33,0	514901	514951
30	0,10	3,0	33,0	514902	514952
30	0,15	3,0	33,0	514903	514953
50	0,05	3,0	33,0	514904	514954
50	0,08	3,0	33,0	514905	514955
50	0,10	3,0	33,0	514906	514956
50	0,15	3,0	33,0	514907	514957
60	0,05	3,0	33,0	514908	514958
60	0,08	3,0	33,0	514909	514959
60	0,10	3,0	33,0	514910	514960
60	0,15	3,0	33,0	514911	514961

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VZM / VTM 150

Gravierfräser Z1 30/50/60°
Engraving cutter Z1 30/50/60°



α Spitzenwinkel point angle λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z1	α 30 - 60°		λ 0°			

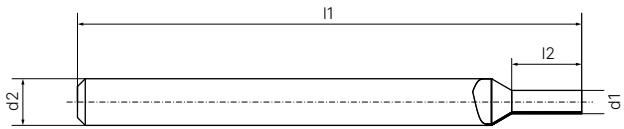
α (SIG)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	VZM 150 (VHM)	VTM 150 (TiAlN)
30	0,05	3,0	33,0	514800	514850
30	0,08	3,0	33,0	514801	514851
30	0,10	3,0	33,0	514802	514852
30	0,15	3,0	33,0	514803	514853
50	0,05	3,0	33,0	514804	514854
50	0,08	3,0	33,0	514805	514855
50	0,10	3,0	33,0	514806	514856
50	0,15	3,0	33,0	514807	514857
60	0,05	3,0	33,0	514808	514858
60	0,08	3,0	33,0	514809	514859
60	0,10	3,0	33,0	514810	514860
60	0,15	3,0	33,0	514811	514861

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RZM 140

Schaftfräser Z1 3xD

End mill Z1 3xD



λ Spiralwinkel spiral angle

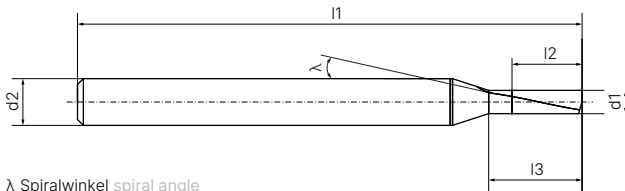
P	M	K	N	S	H	X
○	○	—	●	—	—	—
Z1				λ 0°		3xD

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 140 (VHM)
0,30	0,9	3,00	39	514100
0,40	1,2	3,00	39	514101
0,50	1,5	3,00	39	514102
0,60	1,8	3,00	39	514103
0,70	2,1	3,00	39	514104
0,80	2,4	3,00	39	514105
0,90	2,7	3,00	39	514106
1,00	3,0	3,00	39	514107
1,10	3,3	3,00	39	514108
1,20	3,6	3,00	39	514109
1,30	3,9	3,00	39	514110
1,40	4,2	3,00	39	514111
1,50	4,5	3,00	39	514112
2,00	6,0	3,00	39	514113
2,50	7,5	3,00	39	514114
3,00	9,0	4,00	40	514115

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RLK 100

Schaftfräser Z1 End mill Z1



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z1		λ 23°	
		0,05 -0,10 45°	

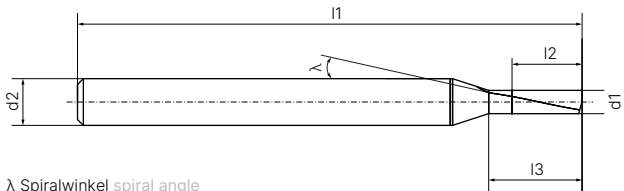
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RLK 100 (DLC-P)
2,00	8,0	-	3,00	40	516200
2,00	6,0	8,0	4,00	45	516221
2,00	6,0	12,0	4,00	45	516220
3,00	8,0	12,0	4,00	45	516219
3,00	8,0	18,0	4,00	45	516218
4,00	10,0	16,0	4,00	45	516217
4,00	10,0	24,0	4,00	45	516216
2,00	4,5	7,3	6,00	50	516201
2,00	6,0	8,0	6,00	45	516226
2,00	6,0	12,0	6,00	45	516227
3,00	8,0	12,0	6,00	45	516225
3,00	8,0	18,0	6,00	45	516224
3,00	8,4	21,0	6,00	50	516202
3,00	12,4	16,0	6,00	50	516203
4,00	10,0	16,0	6,00	45	516223
4,00	10,0	24,0	6,00	55	516222
4,00	10,4	21,2	6,00	50	516204
4,00	12,4	16,0	6,00	50	516205
5,00	13,0	20,0	6,00	55	516215
5,00	13,0	30,0	6,00	65	516214
6,00	14,4	24,0	6,00	50	516206
6,00	15,0	-	6,00	50	516207
6,00	16,0	24,0	6,00	55	516213
6,00	16,0	36,0	6,00	75	516212
8,00	22,0	32,0	6,00	75	516211
8,00	22,0	48,0	6,00	90	516210
10,00	27,0	40,0	10,00	80	516209
10,00	27,0	60,0	10,00	100	516208

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RPK 100

Schaftfräser Z1

End mill Z1



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

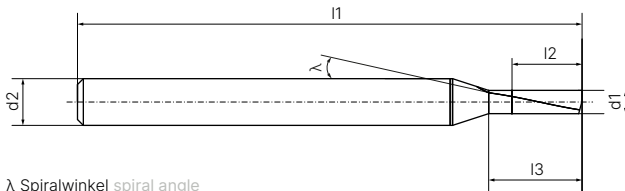
Z1		λ 23°	
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		0,05 -0,10 45°	
--	--	----------------------	--

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RPK 100 (VHM)
1,00	4,0	7,0	3,00	40	516108
2,00	8,0	10,8	3,00	40	516100
3,00	12,0	-	3,00	45	516110
2,00	6,0	8,0	4,00	45	516127
2,00	6,0	12,0	4,00	45	516126
3,00	8,0	12,0	4,00	45	516125
3,00	8,0	18,0	4,00	45	516124
4,00	10,0	16,0	4,00	45	516123
4,00	10,0	24,0	4,00	45	516122
4,00	12,0	-	4,00	45	516111
2,00	4,5	7,3	6,00	50	516101
2,00	6,0	8,0	6,00	45	516132
2,00	6,0	12,0	6,00	45	516133
3,00	8,0	12,0	6,00	45	516131
3,00	8,0	18,0	6,00	45	516130
3,00	8,4	21,0	6,00	50	516102
3,00	12,4	16,0	6,00	50	516103
4,00	10,0	16,0	6,00	45	516129
4,00	10,4	21,2	6,00	50	516104
4,00	12,4	16,6	6,00	50	516105
4,00	10,0	24,0	6,00	55	516128
5,00	13,0	20,0	6,00	55	516121
5,00	13,0	30,0	6,00	65	516120
6,00	14,4	24,0	6,00	50	516106
6,00	15,0	-	6,00	50	516107
6,00	16,0	24,0	6,00	55	516119
6,00	16,0	36,0	6,00	75	516118
8,00	22,0	32,0	6,00	75	516117

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Schaftfräser Z1
End mill Z1



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z1		λ 23°	
----	--	------------------	--

Technical drawing symbols for chamfers and fillets. The first symbol shows a square corner with diagonal hatching. The second symbol shows a square corner with diagonal hatching and three arrows pointing outwards. The third symbol shows a square corner with a 45-degree chamfer, labeled with dimensions 0,05 and -0,10, and the angle 45°.

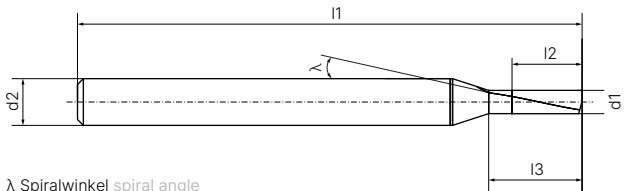
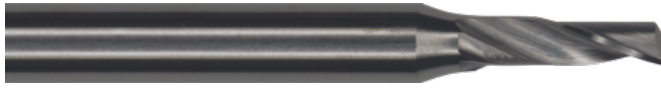
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RPK 100 (VHM)
8,00	22,0	48,0	6,00	90	516116
10,00	27,0	40,0	10,00	80	516115
10,00	27,0	60,0	10,00	100	516114
12,00	32,0	70,0	12,00	115	516134

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RZK 100

Schaftfräser Z1

End mill Z1



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z1 λ
23°

Technical drawing symbols for chamfers and fillets. The first symbol shows a rectangular profile with a 45-degree chamfer on the top-right corner, indicated by a diagonal line and a 45° angle. The second symbol shows a rectangular profile with a fillet on the top-right corner, indicated by a curved line and a 45° angle. The third symbol shows a rectangular profile with a fillet on the top-right corner, indicated by a curved line and a 45° angle. The fourth symbol shows a rectangular profile with a fillet on the top-right corner, indicated by a curved line and a 45° angle.

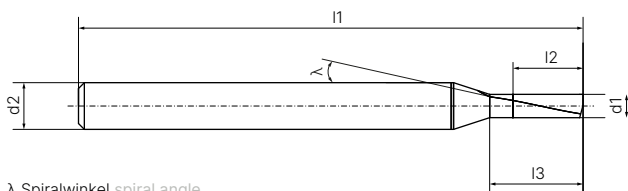
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZK 100 (VHM)
1,50	5,0	7,0	3,175	38	513604
1,50	5,0	7,8	6,00	50	513605
1,60	4,5	6,5	3,175	38	513606
2,00	4,5	7,3	3,00	40	513601
2,00	4,5	7,3	3,175	38	513600
2,00	4,5	7,3	6,00	50	513602
3,00	4,5	7,9	3,175	38	513603
3,00	8,0	-	3,175	38	513607
3,00	10,0	12,5	3,175	45	513608

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

RZL 101

Schaftfräser Z1
End mill Z1



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
○	○	—	●	—	—	●
Z1						

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZL 101 (VHM)
0,40	1,5	2,0	3,175	38	516000
0,50	3,0	3,5	3,175	38	516005
0,50	3,0	6,0	3,175	38	516066
0,50	3,0	8,0	3,175	38	516067
0,50	3,0	10,0	3,175	38	516068
0,60	3,0	3,5	3,175	38	516010
0,70	3,0	3,5	3,175	38	516015
0,80	3,0	3,5	3,175	38	516020
0,80	3,0	8,0	3,175	38	516021
0,80	3,0	10,0	3,175	38	516022
0,80	3,0	15,0	3,175	38	516023
0,90	3,0	3,5	3,175	38	516025
1,00	3,0	3,5	3,175	38	516030
1,00	3,0	8,0	3,175	38	516031
1,00	3,0	12,0	3,175	38	516032
1,00	3,0	15,0	3,175	38	516033
1,20	4,0	4,5	3,175	38	516035
1,40	4,0	4,5	3,175	38	516040
1,50	4,0	4,5	3,175	38	516045
1,50	4,0	10,0	3,175	38	516046
1,50	4,0	15,0	3,175	38	516047
1,60	5,0	5,5	3,175	38	516050
2,00	8,0	8,5	3,175	38	516055
2,40	8,0	8,5	3,175	38	516060
3,00	9,0	9,5	3,175	38	516065

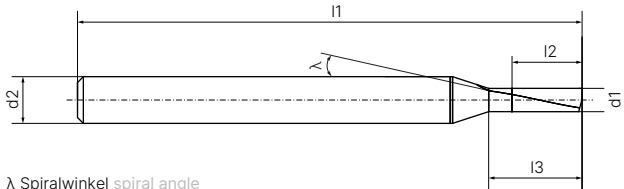
Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

RDK 100

Schaftfräser Z1

End mill Z1



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z1		λ 31°	
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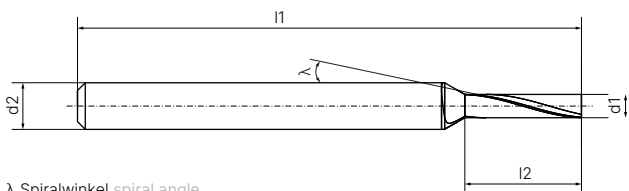
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RDK 100 (CarboCut)
1,60	4,0	7,5	3,175	38	520850
2,00	6,0	11,0	3,175	38	520852
2,40	6,0	11,0	3,175	38	520851

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Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

RZM / RTM 240

Schaftfräser Z2 2xD
End mill Z2 2xD



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z2				λ 30°		2xD

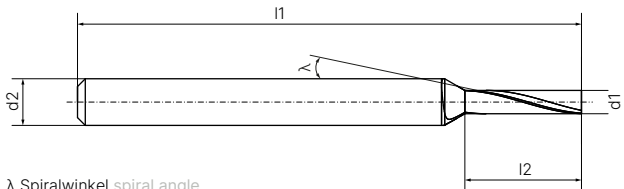
d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 240 (VHM)	RTM 240 (TiAlN)
0,10	0,2	3,00	39	514062	
0,15	0,3	3,00	39	514063	
0,20	0,4	3,00	39	514193	
0,25	0,5	3,00	39	514194	
0,30	0,6	3,00	39	514150	
0,40	0,8	3,00	39	514151	
0,50	1,0	3,00	39	514152	
0,60	1,2	3,00	39	514153	
0,70	1,4	3,00	39	514154	
0,80	1,6	3,00	39	514155	
0,90	1,8	3,00	39	514156	
1,00	2,0	3,00	39	514157	514200
1,10	2,2	3,00	39	514158	514201
1,20	2,4	3,00	39	514159	514202
1,30	2,6	3,00	39	514160	514203
1,40	2,8	3,00	39	514161	514204
1,50	3,0	3,00	39	514162	514205
1,60	3,2	3,00	39	514195	
1,70	3,4	3,00	39	514196	
1,80	3,6	3,00	39	514197	
1,90	3,8	3,00	39	514198	
2,00	4,0	3,00	39	514163	514206

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RZM / RTM 240

Schaftfräser Z2 3xD

End mill Z2 3xD



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z2				λ 30°		3xD
				90°		

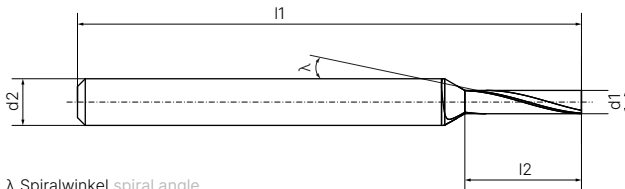
d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 240 (VHM)	RTM 240 (TiAlN)
0,30	1,0	3,0	39	514164	
0,40	1,2	3,0	39	514165	
0,50	1,5	3,0	39	514166	
0,60	2,0	3,0	39	514167	
0,70	2,0	3,0	39	514168	
0,80	2,5	3,0	39	514169	
0,90	2,5	3,0	39	514170	
1,00	3,0	3,0	39	514171	514207
1,10	3,0	3,0	39	514172	514208
1,20	4,0	3,0	39	514173	514209
1,30	4,0	3,0	39	514174	514210
1,40	4,0	3,0	39	514175	514211
1,50	4,5	3,0	39	514176	514212
1,60	4,5	3,0	39	514199	
1,70	5,0	3,0	39	514050	
1,80	6,0	3,0	39	514051	
1,90	6,0	3,0	39	514052	
2,00	6,0	3,0	39	514177	514213
2,10	6,0	3,0	39	514053	
2,20	6,5	3,0	39	514054	
2,30	7,0	3,0	39	514055	
2,40	7,0	3,0	39	514056	
2,50	7,5	3,0	39	514057	
2,60	7,5	3,0	39	514058	
2,70	8,0	3,0	39	514059	
2,80	8,0	3,0	39	514060	
2,90	8,0	3,0	39	514061	

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RZM / RTM 240

Schaftfräser Z2 5xD

End mill Z2 5xD



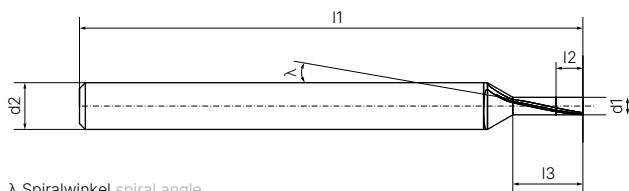
λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z2				λ 30°		5xD

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 240 (VHM)	RTM 240 (TiAlN)
0,30	1,5	3,0	39	514178	
0,40	2,0	3,0	39	514179	
0,50	2,5	3,0	39	514180	
0,60	3,0	3,0	39	514181	
0,70	3,5	3,0	39	514182	
0,80	4,0	3,0	39	514183	
0,90	4,5	3,0	39	514184	
1,00	5,0	3,0	39	514185	514214
1,10	5,5	3,0	39	514186	514215
1,20	6,0	3,0	39	514187	514216
1,50	7,5	3,0	39	514188	514217
2,00	10,0	3,0	39	514189	514218
2,50	12,5	3,0	39	514064	514219

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Schaftfräser Z2
End mill Z2



P	M	K	N	S	H	X
●	●	—	—	○	●	—

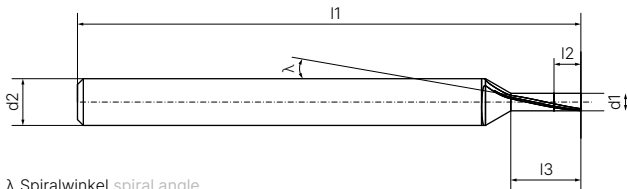
 λ
30°

0,05
-0,10
45°

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RAR 200

Schaftfräser Z2 End mill Z2



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	—	○	—	—

Z2		λ 30°	
----	--	----------	--

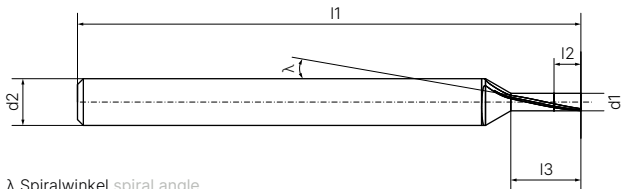
	0,05 -0,10 45°		
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RAR 200 (MultiCut)
1,20	1,8	16,00	4,0	60	521386
1,20	2,5	3,50	4,0	50	521567
1,30	2,5	3,50	4,0	50	521566
1,40	3,0	3,50	4,0	50	521565
1,50	2,3	6,00	4,0	50	521385
1,50	2,3	8,00	4,0	50	521384
1,50	2,3	10,00	4,0	50	521383
1,50	2,3	12,00	4,0	50	521382
1,50	2,3	14,00	4,0	50	521381
1,50	2,3	16,00	4,0	50	521380
1,50	2,3	18,00	4,0	50	521379
1,50	2,3	20,00	4,0	50	521378
1,50	3,0	4,20	4,0	50	521564
1,60	3,5	4,20	4,0	50	521563
1,70	3,5	4,90	4,0	50	521562
1,80	4,0	5,60	4,0	50	521561
1,90	4,0	5,60	4,0	50	521560
2,00	3,0	6,00	4,0	50	521377
2,00	3,0	8,00	4,0	50	521376
2,00	3,0	10,00	4,0	50	521375
2,00	3,0	12,00	4,0	50	521374
2,00	3,0	14,00	4,0	50	521373
2,00	3,0	16,00	4,0	50	521372
2,00	3,0	18,00	4,0	50	521371
2,00	3,0	20,00	4,0	50	521370
2,00	4,0	5,60	4,0	50	521559
2,10	4,0	5,60	4,0	50	521558
2,20	4,5	6,30	4,0	50	521557

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RAR 200

Schaftfräser Z2 End mill Z2



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	—	○	—	—

Z2		λ 30°	
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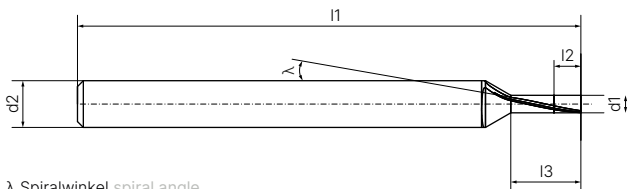
		0,05 -0,10 45°	
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (CONMS)	l ₁ (OAL)	RAR 200 (MultiCut)
2,30	4,5	6,30	4,0	50	521556
2,40	5,0	7,00	4,0	50	521555
2,50	3,7	18,00	4,0	60	521364
2,50	3,7	20,00	4,0	60	521363
2,50	3,7	8,00	4,0	50	521369
2,50	3,7	10,00	4,0	50	521368
2,50	3,7	12,00	4,0	50	521367
2,50	3,7	14,00	4,0	50	521366
2,50	3,7	16,00	4,0	60	521365
2,50	5,0	7,00	4,0	50	521554
2,60	5,0	7,00	4,0	50	521553
2,70	5,5	7,70	4,0	50	521552
2,80	5,5	7,70	4,0	50	521551
2,90	6,0	8,40	4,0	50	521550
3,00	6,0	8,40	4,0	50	521549
3,00	4,5	6,00	6,0	50	521362
3,00	4,5	8,00	6,0	50	521361
3,00	4,5	10,00	6,0	50	521360
3,00	4,5	12,00	6,0	50	521359
3,00	4,5	14,00	6,0	60	521358
3,00	4,5	16,00	6,0	60	521357
3,00	4,5	18,00	6,0	60	521356
3,00	4,5	20,00	6,0	60	521355
4,00	6,0	25,00	6,0	60	521350
4,00	6,0	12,00	6,0	50	521354
4,00	6,0	14,00	6,0	60	521353
4,00	6,0	16,00	6,0	60	521352
4,00	6,0	20,00	6,0	60	521351

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RAR 200

Schaftfräser Z2
End mill Z2



λ Spiralwinkel spiral angle

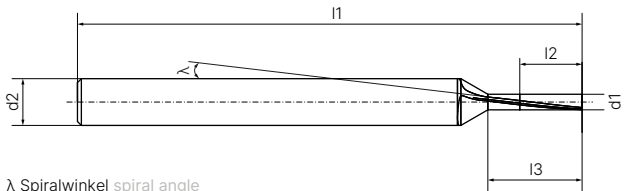
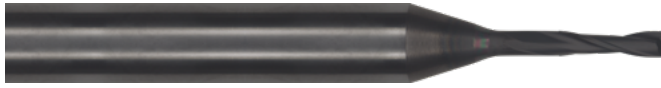
P	M	K	N	S	H	X
●	●	—	—	○	—	—
Z2				λ 30°		
				0,05 -0,10 45°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RAR 200 (MultiCut)
5,00	7,5	12,00	6,0	60	521349
5,00	7,5	14,00	6,0	60	521348
5,00	7,5	16,00	6,0	60	521347
5,00	7,5	20,00	6,0	70	521346
5,00	7,5	25,00	6,0	70	521345

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RZF / RDF 240

Schaftfräser Z2
End mill Z2



λ Spiralwinkel spiral angle

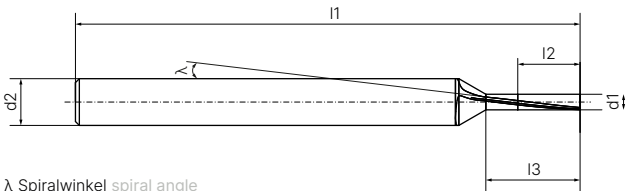
P	M	K	N	S	H	X
—	○	—	●	○	—	●
Z2						

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZF 240 (VHM)	RDF 240 (CarboCut)
2,00	8,0	12,1	6,00	60	520705	520700
4,00	16,0	22,0	6,00	60	520706	520701
5,00	16,0	23,5	6,00	60	520707	520702
6,00	20,0	29,0	6,00	60	520708	520703
8,00	20,0	32,0	8,00	60	520709	520704

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RDK 240

Schaftfräser Z2
End mill Z2



λ Spiralwinkel spiral angle

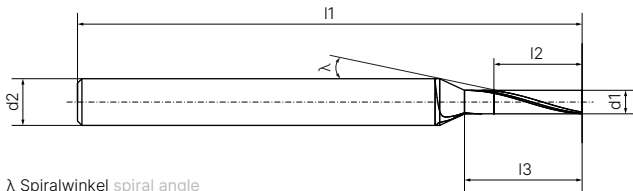
P	M	K	N	S	H	X
—	—	—	●	—	—	—
Z2				λ 40°		
				90°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RDK 240 (CarboCut)
2	8	12,1	3	38	519966
2	8	12,1	6	60	519967

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RDF 241

Schaftfräser Z2
End mill Z2



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	●

Z2		λ 31°	
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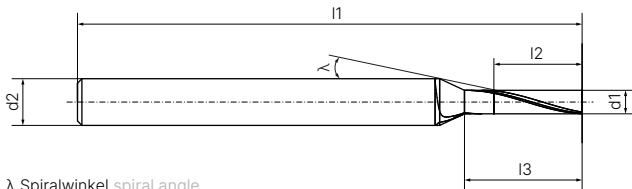
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RDF 241 (CarboCut)
1,00	3,0	5,0	3,175	38	520740
1,60	6,0	8,0	3,175	38	520741
2,00	6,0	9,0	3,175	38	520742
2,40	6,0	9,0	3,175	38	520743
3,00	6,0	8,0	3,175	38	520744

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

RZL 231

Schaftfräser Z2 End mill Z2



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	●

Z2		λ 31°	
----	--	----------	--

--	--	--	--

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZL 231 (VHM)
0,50	3,0	4,5	3,175	38	517000
0,60	3,0	4,5	3,175	38	517005
0,70	3,0	4,5	3,175	38	517010
0,80	5,0	7,0	3,175	38	517015
0,90	5,0	7,0	3,175	38	517020
1,00	5,0	7,0	3,175	38	517025
1,10	5,0	7,0	3,175	38	517030
1,20	5,0	7,0	3,175	38	517035
1,30	5,0	7,0	3,175	38	517040
1,40	5,0	7,0	3,175	38	517045
1,50	6,0	9,0	3,175	38	517050
1,60	6,0	9,0	3,175	38	517055
1,80	6,0	9,0	3,175	38	517060
2,00	8,0	12,0	3,175	38	517065
2,50	8,0	12,0	3,175	38	517070
3,00	10,0	12,0	3,175	38	517075

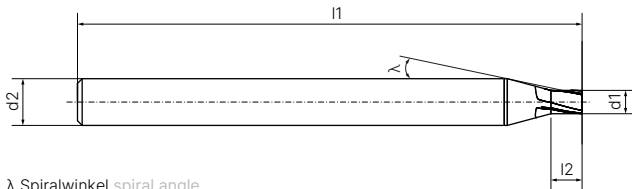
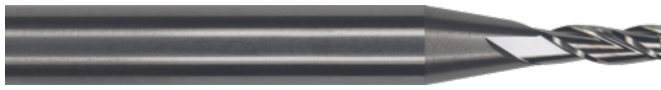
Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

RZM / RTM 340

Schaftfräser Z3 2xD

End mill Z3 2xD



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z3				λ 30°		2xD
				90°		

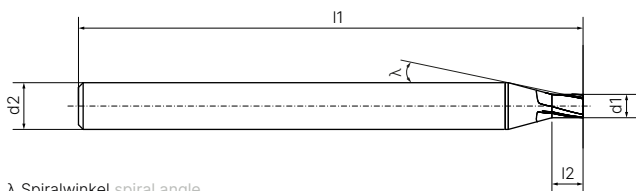
d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 340 (VHM)	RTM 340 (TiAlN)
0,30	0,6	3,00	39	514250	514314
0,40	0,8	3,00	39	514251	514315
0,50	1,0	3,00	39	514252	514316
0,60	1,2	3,00	39	514253	514317
0,70	1,4	3,00	39	514254	514318
0,80	1,6	3,00	39	514255	514319
0,90	1,8	3,00	39	514256	514320
1,00	2,0	3,00	39	514257	514300
1,10	2,2	3,00	39	514258	514301
1,20	2,4	3,00	39	514259	514302
1,30	2,6	3,00	39	514260	514303
1,40	2,8	3,00	39	514261	514304
1,50	3,0	3,00	39	514262	514305
2,00	4,0	3,00	39	514263	514306
2,10	4,2	3,00	39	514291	514331
2,20	4,4	3,00	39	514292	514332
2,30	4,6	3,00	39	514293	514333
2,40	4,8	3,00	39	514294	514334
2,50	5,0	3,00	39	514295	514335
2,60	5,2	3,00	39	514296	514336
2,70	5,4	3,00	39	514297	514337
2,80	5,6	3,00	39	514298	514338
2,90	5,8	3,00	39	514299	514339

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RZM / RTM 340

Schaftfräser Z3 3xD

End mill Z3 3xD



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z3				λ 30°		3xD

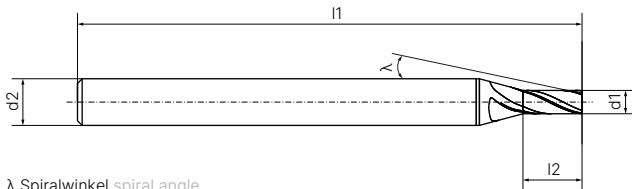
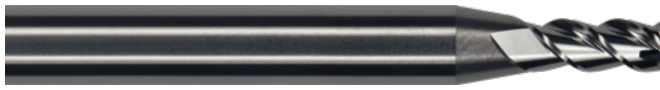
d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 340 (VHM)	RTM 340 (TiAlN)
0,30	0,9	3,00	39	514264	
0,40	1,2	3,00	39	514265	
0,50	1,5	3,00	39	514266	
0,60	2,0	3,00	39	514267	
0,70	2,0	3,00	39	514268	
0,80	2,5	3,00	39	514269	
0,90	2,5	3,00	39	514270	
1,00	3,0	3,00	39	514271	514307
1,10	3,3	3,00	39	514272	514308
1,20	4,0	3,00	39	514273	514309
1,30	4,0	3,00	39	514274	514310
1,40	4,0	3,00	39	514275	514311
1,50	4,5	3,00	39	514276	514312
1,60	4,5	3,00	39	514287	
1,70	5,0	3,00	39	514288	
1,80	6,0	3,00	39	514289	
1,90	6,0	3,00	39	514290	
2,00	6,0	3,00	39	514277	514313
2,10	6,0	3,00	39	514278	514322
2,20	6,5	3,00	39	514279	514323
2,30	7,0	3,00	39	514280	514324
2,40	7,0	3,00	39	514281	514325
2,50	7,5	3,00	39	514282	514326
2,60	7,5	3,00	39	514283	514327
2,70	8,0	3,00	39	514284	514328
2,80	8,0	3,00	39	514285	514329
2,90	8,5	3,00	39	514286	514330

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RZT / RTT 340

Schaftfräser Z3 2,5xD

End mill Z3 2,5xD



λ Spiralwinkel spiral angle

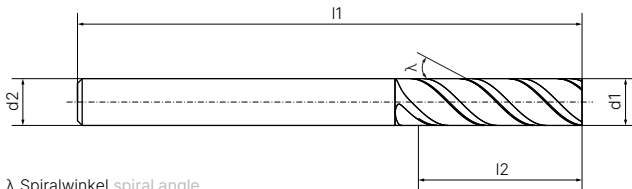
P	M	K	N	S	H	X
●	○	—	●	○	—	—
Z3				λ 45°		2,5xD

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZT 340 (VHM)	RTT 340 (TiAlN)
0,30	0,8	3,00	39	514350	
0,40	1,0	3,00	39	514351	
0,50	1,3	3,00	39	514352	
0,60	1,5	3,00	39	514353	
0,70	1,7	3,00	39	514354	
0,80	2,0	3,00	39	514355	
0,90	2,3	3,00	39	514356	
1,00	2,5	3,00	39	514357	514400
1,10	2,8	3,00	39	514358	514401
1,20	3,0	3,00	39	514359	514402
1,30	3,3	3,00	39	514360	514403
1,40	3,5	3,00	39	514361	514404
1,50	3,8	3,00	39	514362	514405
1,60	4,0	3,00	39	514366	
1,70	4,3	3,00	39	514367	
1,80	4,5	3,00	39	514368	
1,90	4,8	3,00	39	514369	
2,00	5,0	3,00	39	514363	514406
2,10	5,3	3,00	39	514370	
2,20	5,5	3,00	39	514371	
2,30	5,8	3,00	39	514372	
2,40	6,0	3,00	39	514373	
2,50	6,3	3,00	39	514374	
2,60	6,5	3,00	39	514375	
2,70	6,8	3,00	39	514376	
2,80	7,0	3,00	39	514377	
2,90	7,3	3,00	39	514378	

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RTT 340

Schaftfräser Z3
End mill Z3



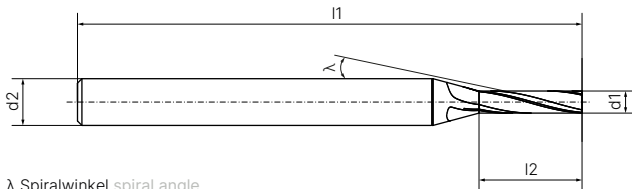
P	M	K	N	S	H	X
●	○	—	●	○	—	—
Z3				λ 45°		

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RTT 340 (TiAlN)
2,00	8,0	2,00	32	514407
2,50	8,0	2,50	32	514408
3,00	12,0	3,00	32	514409
3,50	12,0	3,50	32	514410
4,00	12,0	4,00	40	514411
4,50	14,0	4,50	50	514412
5,00	14,0	5,00	50	514413
6,00	16,0	6,00	50	514414

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RZL 331

Schaftfräser Z3
End mill Z3



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	●
Z3			λ 31°			

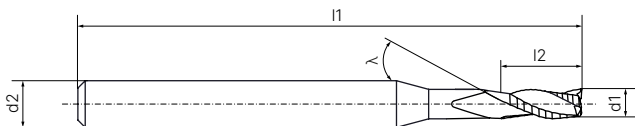
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZL 331 (VHM)
0,50	5,0	6,0	3,175	38	518060
1,00	5,0	7,0	3,175	38	518000
1,10	5,0	7,0	3,175	38	518005
1,20	5,0	7,0	3,175	38	518010
1,30	5,0	7,0	3,175	38	518015
1,40	5,0	7,0	3,175	38	518020
1,50	7,0	9,0	3,175	38	518025
1,60	7,0	9,0	3,175	38	518030
1,70	7,0	9,0	3,175	38	518035
1,80	7,0	9,0	3,175	38	518040
1,90	7,0	9,0	3,175	38	518045
2,00	9,0	12,5	3,175	38	518050
2,40	9,0	12,5	3,175	38	518055

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

RQR 350

Schaftfräser Z3
End mill Z3



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	—	○	—	—

Z3		λ 25°	
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		0,05 -0,10 45°	
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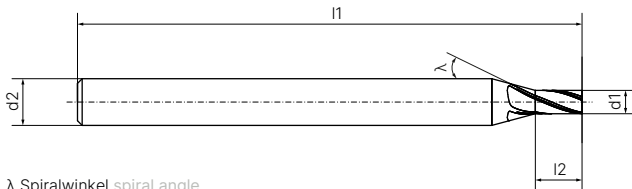
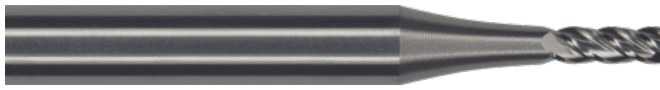
d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RQR 350 (HPTec Tinox)
3,00	8,0	6,00	50	511900
4,00	11,0	6,00	50	511901
5,00	13,0	6,00	50	511902
6,00	13,0	6,00	50	511903
8,00	19,0	8,00	63	511904
10,00	22,0	10,00	72	511905

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RZM / RTM 440

Schaftfräser Z4 2xD

End mill Z4 2xD



λ Spiralwinkel spiral angle

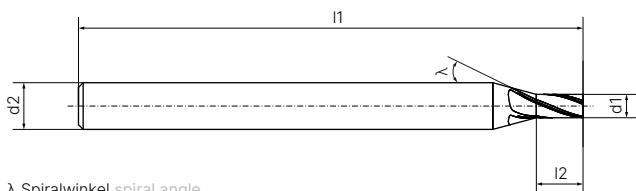
P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z4				λ 40°		2xD
				90°		

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 440 (VHM)	RTM 440 (TiAlN)
0,30	0,6	3,00	39	514463	
0,40	0,8	3,00	39	514464	
0,50	1,0	3,00	39	514465	
0,60	1,2	3,00	39	514466	
0,70	1,4	3,00	39	514467	
0,80	1,6	3,00	39	514468	
0,90	1,8	3,00	39	514469	
1,00	2,0	3,00	39	514470	514508
1,10	2,2	3,00	39	514471	514509
1,20	2,4	3,00	39	514472	514510
1,30	2,6	3,00	39	514473	514511
1,40	2,8	3,00	39	514474	514512
1,50	3,0	3,00	39	514475	514513
1,60	3,2	3,00	39	514476	514514
1,70	3,4	3,00	39	514477	514515
1,80	3,6	3,00	39	514478	514516
1,90	3,8	3,00	39	514479	514517
2,00	4,0	3,00	39	514480	514518
2,10	4,2	3,00	39	514494	
2,20	4,4	3,00	39	514495	
2,30	4,6	3,00	39	514496	
2,40	4,8	3,00	39	514497	
2,50	5,0	3,00	39	514481	514519
2,60	5,2	3,00	39	514498	
2,70	5,4	3,00	39	514499	
2,80	5,6	3,00	39	514488	
2,90	5,8	3,00	39	514489	

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RZM / RTM 440

Schaftfräser Z4 3xD
End mill Z4 3xD



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z4				λ 35° / 38°		3xD
				90°		

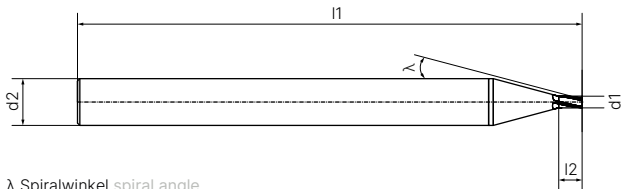
d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 440 (VHM)	RTM 440 (TiAlN)
0,50	1,5	3,00	39	514450	
0,60	1,8	3,00	39	514451	
0,70	2,1	3,00	39	514452	
0,80	2,4	3,00	39	514453	
0,90	2,7	3,00	39	514454	
1,00	3,0	3,00	39	514455	514500
1,10	3,3	3,00	39	514456	514501
1,20	3,6	3,00	39	514457	
1,30	3,9	3,00	39	514458	
1,40	4,2	3,00	39	514459	514504
1,50	4,5	3,00	39	514460	514505
1,60	4,8	3,00	39	514490	
1,70	5,1	3,00	39	514491	
1,80	5,4	3,00	39	514492	
1,90	5,7	3,00	39	514493	
2,00	6,0	3,00	39	514461	514506
2,50	7,5	3,00	39	514462	514507

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RTT 440

Schaftfräser Z4 2xD

End mill Z4 2xD



λ Spiralwinkel spiral angle

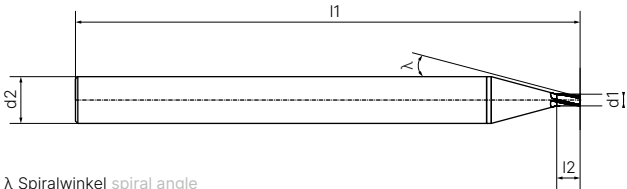
P	M	K	N	S	H	X
●	○	—	●	○	—	—
Z4				λ 45°		2xD
				90°		

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RTT 440 (TiAlN)
0,50	1,0	6,00	40	514669
0,60	1,2	6,00	40	514670
0,70	1,4	6,00	40	514671
0,80	1,6	6,00	40	514672
0,90	1,8	6,00	40	514673
1,00	2,0	6,00	40	514658
1,10	2,2	6,00	40	514674
1,20	2,4	6,00	40	514675
1,30	2,6	6,00	40	514676
1,40	2,8	6,00	40	514677
1,50	3,0	6,00	40	514659
1,60	3,2	6,00	40	514678
1,70	3,4	6,00	40	514679
1,80	3,6	6,00	40	514680
1,90	3,8	6,00	40	514681
2,00	4,0	6,00	40	514660
2,10	4,2	6,00	40	514682
2,20	4,4	6,00	40	514683
2,30	4,6	6,00	40	514684
2,40	4,8	6,00	40	514689
2,50	5,0	6,00	40	514661
2,60	5,2	6,00	40	514685
2,70	5,4	6,00	40	514686
2,80	5,6	6,00	40	514687
2,90	5,8	6,00	40	514688
3,00	6,0	6,00	40	514662
3,50	7,0	6,00	40	514663
4,00	8,0	6,00	40	514664

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RTT 440

Schaftfräser Z4 2xD
End mill Z4 2xD



λ Spiralwinkel spiral angle

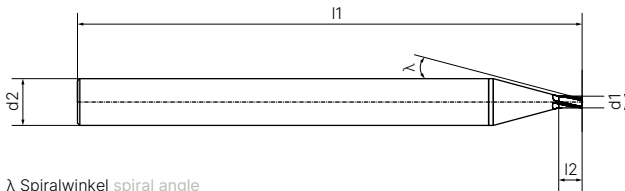
P	M	K	N	S	H	X
●	○	—	●	○	—	—
Z4				λ 45°		2xD

d_1 (DC)	l_2 (APMX)	d_2 (DCONMS)	l_1 (OAL)	RTT 440 (TiAlN)
4,50	9,0	6,00	40	514665
5,00	10,0	6,00	40	514666
6,00	12,0	6,00	40	514668

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RTT 440

Schaftfräser Z4
End mill Z4



λ Spiralwinkel spiral angle

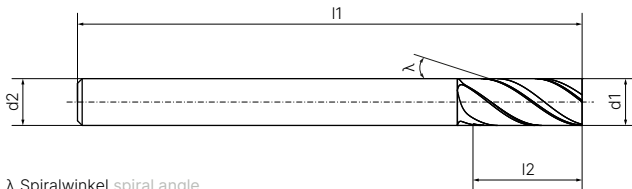
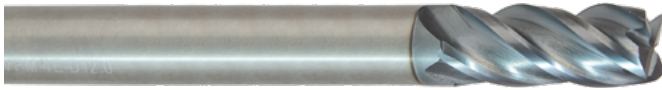
P	M	K	N	S	H	X
●	○	—	●	○	—	—
Z4				λ 45°		
				90°		

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RTT 440 (TiAlN)
2,00	8,0	2,00	32	514650
2,50	8,0	2,50	32	514651
3,00	12,0	3,00	32	514652
3,50	12,0	3,50	32	514653
4,00	12,0	4,00	40	514654
4,50	14,0	4,50	50	514655
5,00	14,0	5,00	50	514656
6,00	16,0	6,00	50	514657

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RHE 400

Schaftfräser Z4 End mill Z4



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	●	—	—	○	—

Z4		λ 36° / 38°	
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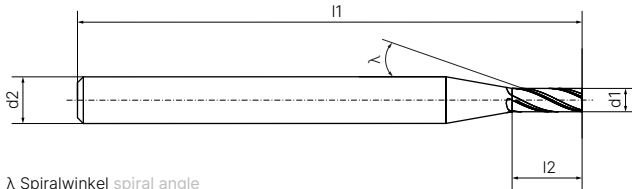
--	--	--	--

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RHE 400 (HeavyCut)
3,00	8,0	6,00	50	511100
4,00	11,0	6,00	50	511101
5,00	13,0	6,00	50	511102
6,00	16,0	6,00	50	511103
7,00	20,0	8,00	60	511104
8,00	20,0	8,00	60	511105
9,00	22,0	10,00	75	511106
10,00	25,0	10,00	75	511107
11,00	26,0	12,00	75	511108
12,00	30,0	12,00	75	511109
14,00	32,0	14,00	75	511110
16,00	45,0	16,00	100	511111
18,00	45,0	18,00	100	511112
20,00	45,0	20,00	100	511113

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RQH 400

Schaftfräser Z4 End mill Z4



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
○	—	—	—	—	●	—

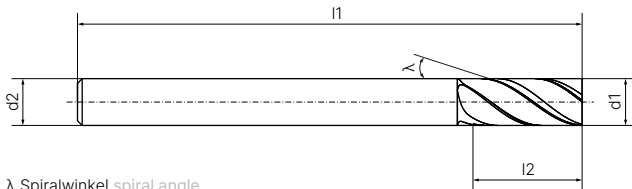
Z4		λ 45°	
			

d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RQH 400 (HPTec Tinox)
1,00	3,0	4,00	50	511150
1,00	3,0	6,00	50	511151
1,50	4,0	4,00	50	511152
1,50	4,0	6,00	50	511153
2,00	6,0	4,00	50	511154
2,00	6,0	6,00	50	511155
2,50	8,0	4,00	50	511156
2,50	8,0	6,00	50	511157
3,00	8,0	4,00	50	511158
3,00	8,0	6,00	50	511159
3,50	10,0	6,00	50	511160
4,00	11,0	4,00	50	511161
4,00	11,0	6,00	50	511162
4,50	11,0	6,00	50	511163
5,00	13,0	6,00	50	511164
5,50	16,0	6,00	50	511165
6,00	16,0	6,00	50	511166
7,00	20,0	8,00	60	511167
8,00	20,0	8,00	60	511168
9,00	22,0	10,00	75	511169
10,00	25,0	10,00	75	511170
11,00	26,0	12,00	75	511171
12,00	30,0	12,00	75	511172
14,00	32,0	14,00	75	511173
16,00	45,0	16,00	100	511174
18,00	45,0	18,00	100	511175
20,00	45,0	20,00	100	511176

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RAR 400

Schaftfräser Z4 End mill Z4



λ Spiralwinkel spiral angle

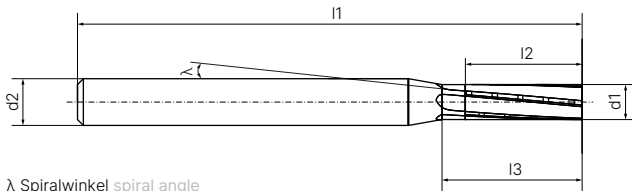
P	M	K	N	S	H	X
●	●	●	—	—	○	—
Z4				λ 38° / 41°	HPC	
				90°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RAR 400 (MultiCut)
3,00	6,0	14	6,00	57	513101
4,00	11,0	19	6,00	57	513102
5,00	13,0	21	6,00	57	513103
6,00	13,0	21	6,00	57	513104
8,00	19,0	27	8,00	63	513105
10,00	22,0	32	10,00	72	513106
12,00	26,0	38	12,00	83	513107
14,00	26,0	38	14,00	83	513108
16,00	32,0	44	16,00	92	513109
18,00	32,0	44	18,00	92	513110
20,00	38,0	54	20,00	104	513111

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RDF 500

Schaftfräser Z5 End mill Z5



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	—	—	—	●

Z5		λ 7°	
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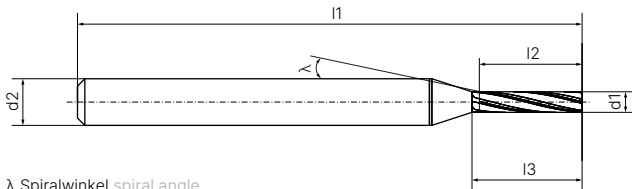
--	--	--	--

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RDF 500 (CarboCut)
3,00	10,0	12,0	4,00	50	513802
3,50	15,0	18,0	4,00	65	513803
4,00	12,0	-	4,00	60	513800
4,00	15,0	-	4,00	60	513805
4,00	16,0	21,0	6,00	60	513809
5,00	20,0	25,0	6,00	60	513804
6,00	20,0	-	6,00	60	513808

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RZL 531

Schaftfräser Z5
End mill Z5



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	—	—	—	●

Z5		λ 30°	
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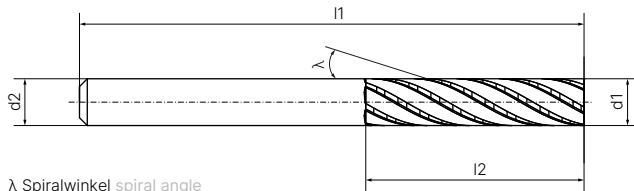
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZL 531 (VHM)
0,50	3,0	3,5	3,175	38	514000
0,60	3,0	3,5	3,175	38	514005
0,70	3,5	5,0	3,175	38	514010
0,80	5,0	7,0	3,175	38	514015
0,90	5,0	7,0	3,175	38	514020
1,00	7,0	7,5	3,175	38	514025
1,10	7,0	9,0	3,175	38	514030
1,20	7,0	9,0	3,175	38	514035
1,30	7,0	9,0	3,175	38	514040
1,40	7,0	7,5	3,175	38	514045

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Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

RZL 630

Schaftfräser Z6
End mill Z6



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	○	—	—	●

Z6		λ 19°	
----	--	----------	--

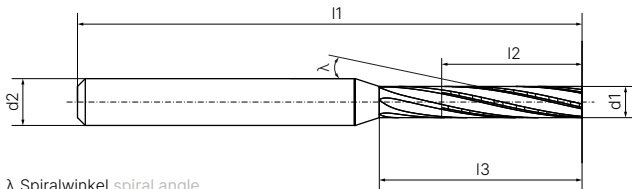
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d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RZL 630 (VHM)
3,00	14,0	3,0	50	510950
3,50	14,0	3,5	50	510952
4,00	14,0	4,0	50	510953

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RZF 630

Schaftfräser Z6
End mill Z6



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	—	—	—	●

Z6		λ 19°	
----	--	----------	--

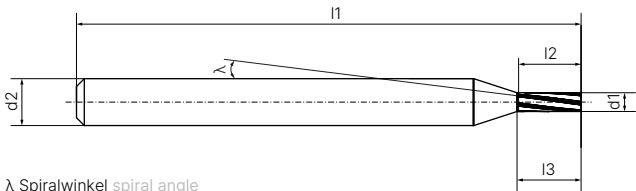
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZF 630 (VHM)
1,50	8,5	9,0	3,00	38	513650
2,00	9,0	13,0	3,00	38	513651
2,50	9,0	9,5	3,00	38	513652
3,00	14,0	-	3,00	50	513653

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RDF 640

Schaftfräser Z6
End mill Z6



λ Spiralwinkel spiral angle

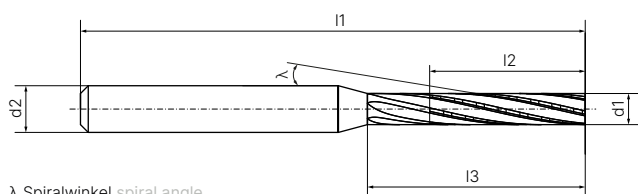
P	M	K	N	S	H	X
—	—	—	○	—	—	●
Z6				λ 25°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RDF 640 (CarboCut)
0,80	3,5	3,6	3,00	38	513740
1,00	4,0	4,1	3,00	38	513741
1,20	4,0	4,1	3,00	38	513742

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RZF / RIF 640

Schaftfräser Z6
End mill Z6



P	M	K	N	S	H	X
—	—	—	○	—	—	●

Z6		λ 19°	
----	--	----------	--

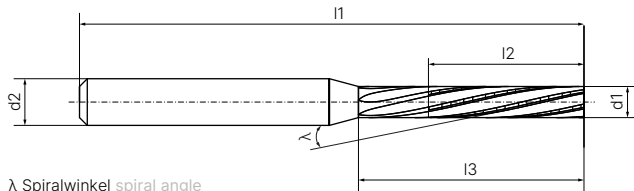
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZF 640 (VHM)	RIF 640 (Carbon Rainbow)
1,00	5,0	8,5	3,00	43	511705	511755
2,00	10,0	14,0	3,00	43	511704	511754
3,00	15,0	—	3,00	51	511703	511753

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LZF / LIF 640

Schaftfräser Z6
End mill Z6



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	○	—	—	●

Z6		λ 19°	
----	--	----------	--

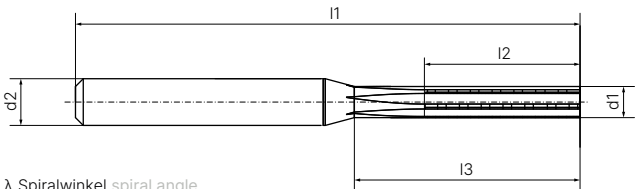
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	LZF 640 (VHM)	LIF 640 (Carbon Rainbow)
1,00	5,00	8,8	3,00	43	511702	511752
2,00	10,00	14,5	3,00	43	511701	511751
3,00	15,00	-	3,00	51	511700	511750

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GZF / GIF 640

Schaftfräser Z6
End mill Z6



λ Spiralwinkel spiral angle

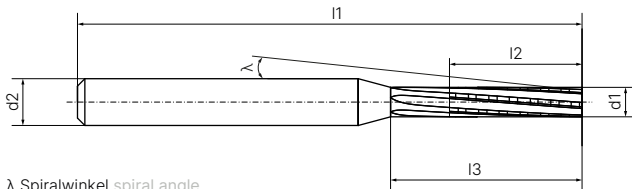
P	M	K	N	S	H	X
—	—	—	—	—	—	●
Z6				λ 0°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	GZF 640 (VHM)	GIF 640 (Carbon Rainbow)
1,00	5,0	9,0	3,00	43	511708	511758
2,00	10,0	15,0	3,00	48	511707	511757
3,00	15,0	-	3,00	53	511706	511756

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RZL 631

Schaftfräser Z6
End mill Z6



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	—	—	—	●

Z6		λ 7°	
----	--	---------	--

--	--	--	--

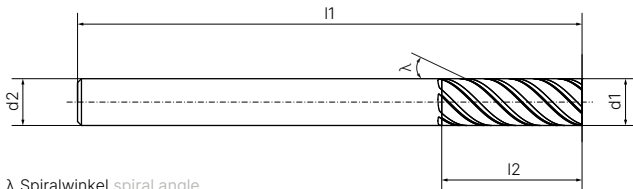
d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZL 631 (VHM)
1,50	8,5	9,0	3,175	38	515000
1,60	8,5	12,0	3,175	38	515005
1,80	8,5	13,0	3,175	38	515010
2,00	9,0	13,0	3,175	38	515015
2,50	9,0	13,0	3,175	38	515020
3,00	9,0	13,0	3,175	38	515025
3,175	9,0	13,0	3,175	38	515030

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Durchmesser 3,00 mm auf Anfrage diameter 3.00 mm on request

RQH 600

Schaftfräser Z6
End mill Z6



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
○	—	—	—	—	●	—

Z6		λ 45°	
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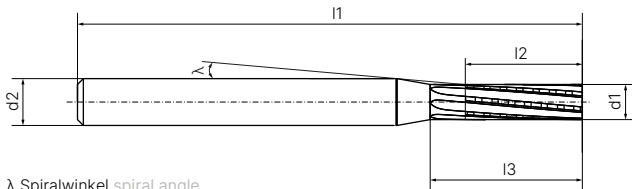
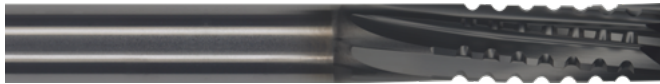
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d ₁ (DC)	l ₂ (APMX)	d ₂ (DCONMS)	l ₁ (OAL)	RQH 600 (HPTec Tinox)
6,00	18,0	6,00	60	511200
6,00	24,0	6,00	75	511201
8,00	20,0	8,00	60	511202
8,00	32,0	8,00	75	511203
10,00	30,0	10,00	75	511204
10,00	40,0	10,00	100	511205
12,00	32,0	12,00	75	511206
12,00	45,0	12,00	100	511207
16,00	40,0	16,00	100	511208
16,00	64,0	16,00	150	511209
20,00	45,0	20,00	100	511210
20,00	75,0	20,00	150	511211

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RDF 700

Schaftfräser Z7 End mill Z7



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	—	—	—	●

Z7		λ 7°	
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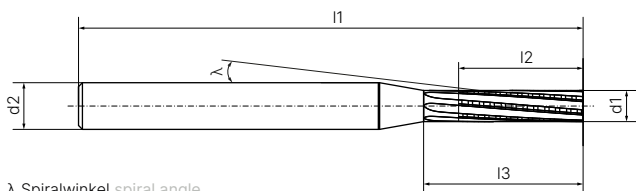
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RDF 700 (CarboCut)
3,00	10,0	13,0	4,00	50	513906
3,50	12,5	15,5	4,00	50	513908
4,00	15,0	-	4,00	50	513909
3,00	10,0	13,0	6,00	60	513907
4,00	15,0	17,5	6,00	60	513910
5,00	20,0	25,0	6,00	60	513911
6,00	16,0	-	6,00	60	513905

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RZF / RDF 740

Schaftfräser Z7
End mill Z7



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	—	—	—	●

Z7		λ 7°	
----	--	---------	--

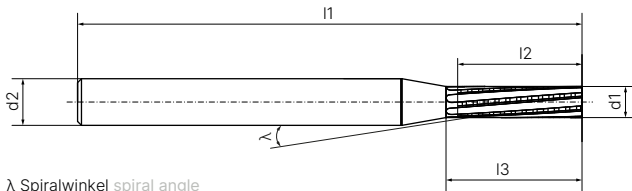


d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RZF 740 (VHM)	RDF 740 (CarboCut)
3,00	9,0	9,1	3,00	38	513852	513945
4,00	16,0	20,5	6,00	60	513853	513948
6,00	16,0	-	6,00	60	513854	513950
8,00	30,0	-	8,00	65	513855	513850
10,00	30,0	-	10,00	65	513856	513851

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LZF / LDF 740

Schaftfräser Z7
End mill Z7



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	—	—	—	●

Z7		λ 7° - 25°	
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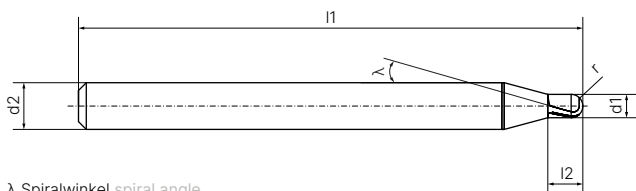


d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	LZF 740 (VHM)	LDF 740 (CarboCut)
3,00	9,0	-	3,00	38	513968	513964
4,00	16,0	17,5	6,00	60	513969	513960
6,00	20,0	-	6,00	60	513970	513965
8,00	30,0	-	8,00	65	513971	513966
10,00	30,0	-	10,00	65	513972	513967

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RZM / RTM 210

Kugelpkopfräser Z2 1,5xD
Ball nose end mill Z2 1,5xD



λ Spiralwinkel spiral angle

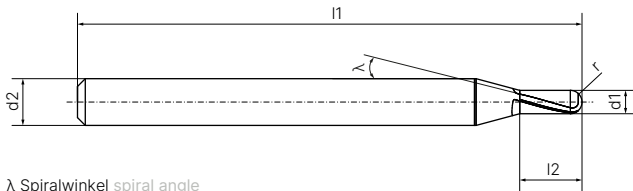
P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z2				λ 30°		1,5xD

d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 210 (VHM)	RTM 210 (TiAlN)
0,30	0,45	0,15	3,00	39	514550	
0,40	0,60	0,20	3,00	39	514551	
0,50	0,75	0,25	3,00	39	514552	
0,60	0,90	0,30	3,00	39	514553	
0,70	1,05	0,35	3,00	39	514554	
0,80	1,20	0,40	3,00	39	514555	
0,90	1,35	0,45	3,00	39	514556	
1,00	1,50	0,50	3,00	39	514557	514600
1,10	1,65	0,55	3,00	39	514558	514601
1,20	1,80	0,60	3,00	39	514559	514602
1,30	1,95	0,65	3,00	39	514560	514603
1,40	2,10	0,70	3,00	39	514561	514604
1,50	2,25	0,75	3,00	39	514562	514605
1,60	2,40	0,80	3,00	39	514588	514623
1,70	2,60	0,85	3,00	39	514589	514624
1,80	2,70	0,90	3,00	39	514590	514625
1,90	2,90	0,95	3,00	39	514591	514626
2,00	3,00	1,00	3,00	39	514563	514606
2,50	3,75	1,25	3,00	39	514564	514607

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RZM / RTM 210

Kugelpkopffräser Z2 3xD
Ball nose end mill Z2 3xD



λ Spiralwinkel spiral angle

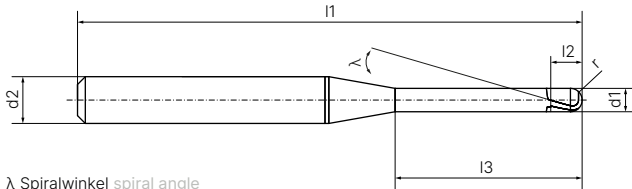
P	M	K	N	S	H	X
●	●	—	●	○	—	○
Z2				λ 30°		3xD

d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RZM 210 (VHM)	RTM 210 (TiAlN)
0,20	0,6	0,10	3,00	39	514583	
0,30	1,0	0,15	3,00	39	514565	
0,40	1,0	0,20	3,00	39	514566	
0,50	1,5	0,25	3,00	39	514567	
0,60	1,5	0,30	3,00	39	514568	
0,70	2,0	0,35	3,00	39	514569	
0,80	2,0	0,40	3,00	39	514570	
0,90	2,5	0,45	3,00	39	514571	
1,00	3,0	0,50	3,00	39	514572	514608
1,20	4,0	0,60	3,00	39	514573	514609
1,30	4,0	0,65	3,00	39	514574	514610
1,40	4,0	0,70	3,00	39	514575	514611
1,50	4,5	0,75	3,00	39	514576	514612
1,60	5,0	0,80	3,00	39	514584	514619
1,80	5,5	0,90	3,00	39	514585	514620
2,00	6,0	1,00	3,00	39	514577	514613
2,10	6,5	1,05	3,00	39	514586	514621
2,20	7,0	1,10	3,00	39	514587	514622
2,50	7,5	1,25	3,00	39	514578	514614
2,60	7,8	1,30	3,00	39	514579	514615
2,70	8,1	1,35	3,00	39	514580	514616
2,80	8,4	1,40	3,00	39	514581	514617
2,90	8,7	1,45	3,00	39	514582	514618

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RAR 210

Kugelpkopfräser Z2 Ball nose end mill Z2



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
●	●	—	—	○	●	—

Z2		λ 30°	
----	--	----------	--

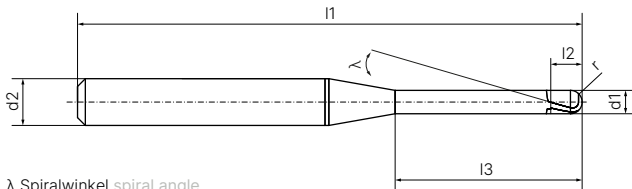


d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RAR 210 (MultiCut)
0,50	0,7	4,0	0,25	4,00	50	521344
0,50	0,7	6,0	0,25	4,00	50	521343
0,60	0,9	4,0	0,30	4,00	50	521342
0,60	0,9	6,0	0,30	4,00	50	521341
0,60	0,9	8,0	0,30	4,00	50	521340
0,80	1,2	4,0	0,40	4,00	50	521339
0,80	1,2	6,0	0,40	4,00	50	521338
0,80	1,2	8,0	0,40	4,00	50	521337
0,80	1,2	10,0	0,40	4,00	50	521336
1,00	1,5	4,0	0,50	4,00	50	521335
1,00	1,5	6,0	0,50	4,00	50	521334
1,00	1,5	8,0	0,50	4,00	50	521333
1,00	1,5	10,0	0,50	4,00	50	521332
1,00	1,5	12,0	0,50	4,00	50	521331
1,00	1,5	15,0	0,50	4,00	50	521330
1,20	1,8	6,0	0,60	4,00	50	521329
1,20	1,8	8,0	0,60	4,00	50	521328
1,20	1,8	12,0	0,60	4,00	50	521327
1,20	1,8	16,0	0,60	4,00	50	521326
1,50	2,3	6,0	0,75	4,00	50	521325
1,50	2,3	8,0	0,75	4,00	50	521324
1,50	2,3	12,0	0,75	4,00	50	521323
1,50	2,3	16,0	0,75	4,00	50	521322
2,00	3,0	6,0	1,00	4,00	50	521321
2,00	3,0	8,0	1,00	4,00	50	521320
2,00	3,0	10,0	1,00	4,00	50	521319
2,00	3,0	12,0	1,00	4,00	50	521318
2,00	3,0	16,0	1,00	4,00	50	521317

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RAR 210

Kugelpkopfräser Z2 Ball nose end mill Z2



λ Spiralwinkel spiral angle

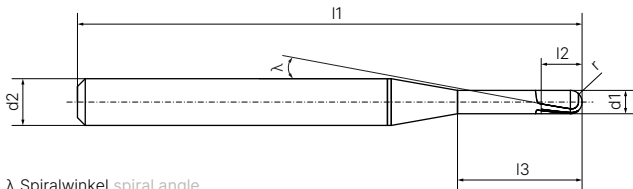
P	M	K	N	S	H	X
●	●	—	—	○	●	—
Z2				λ 30°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RAR 210 (MultiCut)
2,00	3,0	20,0	1,00	4,00	50	521316
2,50	3,7	8,0	1,25	4,00	50	521315
2,50	3,7	10,0	1,25	4,00	50	521314
2,50	3,7	12,0	1,25	4,00	50	521313
2,50	3,7	16,0	1,25	4,00	60	521312
2,50	3,7	20,0	1,25	4,00	60	521311
3,00	4,5	8,0	1,50	6,00	50	521310
3,00	4,5	10,0	1,50	6,00	50	521309
3,00	4,5	12,0	1,50	6,00	50	521308
3,00	4,5	16,0	1,50	6,00	60	521307
3,00	4,5	20,0	1,50	6,00	60	521306
4,00	6,0	10,0	2,00	6,00	60	521305
4,00	6,0	16,0	2,00	6,00	60	521304
4,00	6,0	20,0	2,00	6,00	60	521303
4,00	6,0	25,0	2,00	6,00	60	521302
5,00	7,5	16,0	2,50	6,00	60	521301
5,00	7,5	25,0	2,50	6,00	70	521300

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REB 210

Kugelpkopffräser Z2
Ball nose end mill Z2



λ Spiralwinkel spiral angle

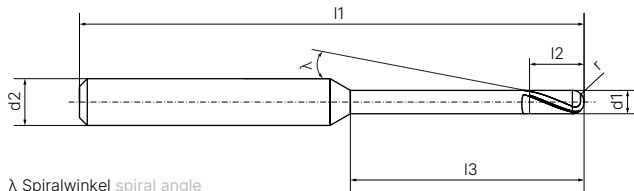
P	M	K	N	S	H	X
●	●	—	—	○	—	○
Z2				λ 20°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	REB 210 (NanoCut)
0,30	0,60	1,0	0,15	6,0	51	512200
0,50	1,00	1,5	0,25	6,0	51	512204
0,50	1,00	4,0	0,25	6,0	51	512205
1,00	2,00	5,0	0,50	6,0	51	512209
1,50	3,00	8,0	0,75	6,0	51	512211
2,00	3,00	10,0	1,00	6,0	51	512212

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RZK 210

Kugelpkopfräser Z2
Ball nose end mill Z2



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	○	—	—	●

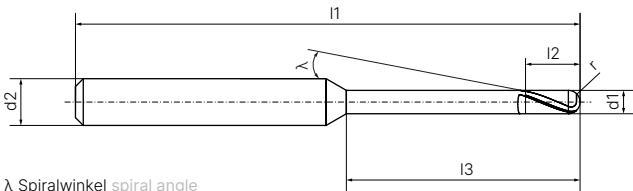
Z2		λ 40°	

d ₁ (DC)	I ₂ (APMX)	I ₃ (LCF)	r (RE)	d ₂ (DCONMS)	I ₁ (OAL)	RZK 210 (VHM)
0,40	2,0	4,0	0,20	3,00	38	520122
0,50	2,0	5,0	0,25	3,00	38	520125
0,60	2,0	6,0	0,30	3,00	38	520124
0,60	3,0	9,0	0,30	3,00	48	520106
0,60	4,0	9,0	0,30	3,00	48	520107
0,70	2,0	7,0	0,35	3,00	38	520119
0,80	2,0	3,0	0,40	3,00	38	520128
0,80	2,0	8,0	0,40	3,00	38	520123
0,90	2,0	9,0	0,45	3,00	38	520118
1,00	4,0	5,0	0,50	3,00	38	520120
1,00	4,0	10,0	0,50	3,00	38	520121
1,00	4,0	13,0	0,50	3,00	43	520109
1,00	4,0	14,0	0,50	3,00	35	520108
1,50	4,0	5,0	0,75	3,00	38	520130
1,50	4,0	10,0	0,75	3,00	43	520111
1,50	4,0	15,0	0,75	3,00	38	520127
1,00	4,0	13,0	0,50	6,00	50	520100
1,00	4,0	14,0	0,50	6,00	50	520101
1,50	4,0	15,0	0,75	6,00	50	520102
2,00	4,0	9,0	1,00	3,00	38	520110
2,00	4,0	20,0	1,00	3,00	35	520112
2,00	4,0	20,0	1,00	3,00	43	520113
2,50	4,5	20,0	1,25	3,00	43	520114
2,50	6,0	20,0	1,25	3,00	43	520115
3,00	5,5	20,0	1,50	3,00	43	520116
3,00	6,0	18,0	1,50	3,00	38	520131
3,00	6,0	22,5	1,50	3,00	48	520117
2,00	4,0	20,0	1,00	6,00	50	520103

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RZK 210

Kugelpkopffräser Z2
Ball nose end mill Z2



λ Spiralwinkel spiral angle

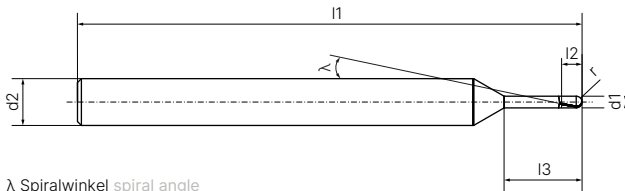
P	M	K	N	S	H	X
—	—	—	○	—	—	●
Z2				λ 40°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RZK 210 (VHM)
2,50	4,5	20,0	1,25	6,00	50	520104
2,50	6,0	20,0	1,25	6,00	50	520105

Weitere Artikel und Beschichtungen auf Anfrage other articles and coatings on request

RDK 210

Kugelpkopfräser Z2 Ball nose end mill Z2



λ Spiralwinkel spiral angle

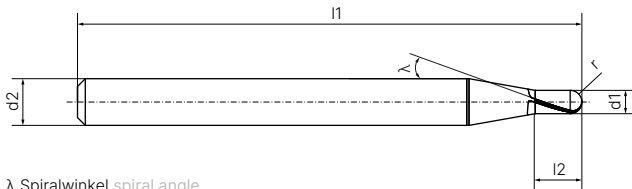
P	M	K	N	S	H	X
—	—	—	●	—	—	●
Z2				λ 40°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	d ₂ (DCONMS)	l ₁ (OAL)	RDK 210 (CarboCut)
0,30	1,5	2,5	6,00	60	511300
0,50	1,5	3,5	6,00	60	511301
0,50	1,5	7,0	6,00	60	511305
1,00	3,0	5,0	6,00	60	511302
1,00	3,0	10,0	6,00	60	511306
1,50	3,0	10,0	6,00	60	511307
2,00	3,0	12,0	3,00	40	511334
3,00	4,0	12,0	6,00	60	511335

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RQH 210

Kugelpkopfräser Z2 Ball nose end mill Z2



λ Spiralwinkel spiral angle

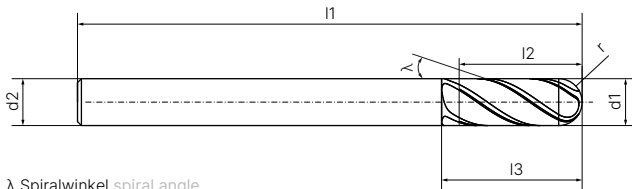
P	M	K	N	S	H	X
○	—	—	—	—	●	—
Z2				λ 35°		

d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RQH 210 (HPTec Tinox)
1,00	2,0	0,50	4,00	50	511450
1,50	3,0	0,75	4,00	50	511451
2,00	4,0	1,00	4,00	50	511452
2,50	5,0	1,25	4,00	50	511453
3,00	6,0	1,50	4,00	50	511454
4,00	8,0	2,00	4,00	50	511455
1,00	2,0	0,50	6,00	50	511456
1,50	3,0	0,75	6,00	50	511457
2,00	4,0	1,00	6,00	50	511458
2,50	5,0	1,25	6,00	50	511459
3,00	6,0	1,50	6,00	50	511460
3,50	8,0	1,75	6,00	50	511461
4,00	8,0	2,00	6,00	50	511462
5,00	10,0	2,50	6,00	50	511463
5,50	12,0	2,75	6,00	50	511464
6,00	12,0	3,00	6,00	50	511465
7,00	14,0	3,50	8,00	60	511466
8,00	16,0	4,00	8,00	60	511467
9,00	18,0	4,50	10,00	75	511468
10,00	20,0	5,00	10,00	75	511469
12,00	24,0	6,00	12,00	75	511470
14,00	28,0	7,00	14,00	75	511471
16,00	32,0	8,00	16,00	100	511472
20,00	40,0	10,00	20,00	100	511473

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RQR 410

Kugelpkopffräser Z4 Ball nose end mill Z4



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	○	—	—	●	—	—

Z4		λ 38°	
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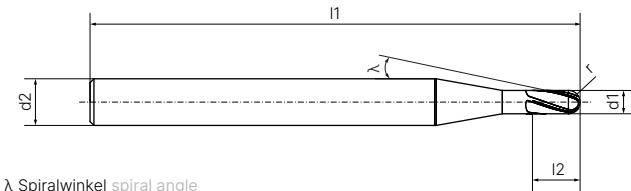


d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RQR 410 (HPTec Tinox)
6,00	9,0	18,0	3,00	6,00	60	511250
6,00	9,0	-	3,00	6,00	50	511251
6,00	16,0	-	3,00	6,00	57	511252
8,00	12,0	24,0	4,00	8,00	75	511253
8,00	12,0	-	4,00	8,00	60	511254
8,00	20,0	-	4,00	8,00	63	511255
10,00	15,0	30,0	5,00	10,00	75	511256
10,00	15,0	-	5,00	10,00	75	511257
10,00	22,0	-	5,00	10,00	72	511258
12,00	18,0	35,0	6,00	12,00	90	511259
12,00	18,0	-	6,00	12,00	75	511260
12,00	25,0	-	6,00	12,00	83	511261
16,00	24,0	40,0	8,00	16,00	90	511262
16,00	24,0	-	8,00	16,00	85	511263
16,00	32,0	-	8,00	16,00	92	511264
20,00	30,0	50,0	10,00	20,00	110	511265
20,00	30,0	-	10,00	20,00	100	511266
20,00	38,0	-	10,00	20,00	104	511267

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RQH 410

Kugelpkopfräser Z4 Ball nose end mill Z4



λ Spiralwinkel spiral angle

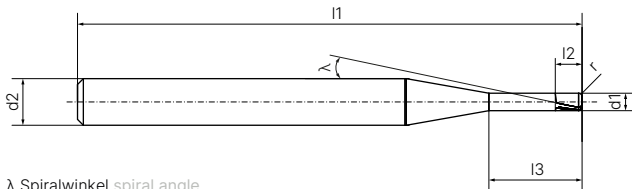
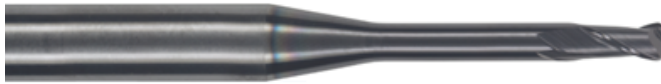
P	M	K	N	S	H	X
○	—	—	—	—	●	—
Z4				λ 35°		

d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RQH 410 (HPTec Tinox)
3,00	6,0	1,50	6,00	50,00	511350
3,00	6,0	1,50	6,00	75,00	511351
4,00	8,0	2,00	6,00	50,00	511352
4,00	8,0	2,00	6,00	75,00	511353
5,00	10,0	2,50	6,00	50,00	511354
5,00	10,0	2,50	6,00	75,00	511355
6,00	12,0	3,00	6,00	50,00	511356
6,00	12,0	3,00	6,00	75,00	511357
8,00	16,0	4,00	8,00	60,00	511358
8,00	16,0	4,00	8,00	100,00	511359
10,00	20,0	5,00	10,00	75,00	511360
10,00	20,0	5,00	10,00	100,00	511361
12,00	24,0	6,00	12,00	75,00	511362
12,00	24,0	6,00	12,00	100,00	511363
14,00	28,0	7,00	14,00	75,00	511364
14,00	28,0	7,00	14,00	100,00	511365
16,00	32,0	8,00	16,00	100,00	511366
16,00	32,0	8,00	16,00	150,00	511367
18,00	36,0	9,00	18,00	100,00	511368
18,00	36,0	9,00	18,00	150,00	511369
20,00	40,0	10,00	20,00	100,00	511370
20,00	40,0	10,00	20,00	150,00	511371

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RAR 250

Torischer Fräser Z2 Torical end mill Z2



λ Spiralwinkel spiral angle

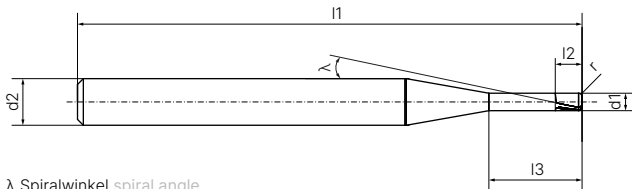
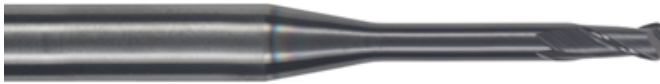
P	M	K	N	S	H	X
●	●	—	—	○	●	—
Z2				λ 30°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RAR 250 (MultiCut)
0,50	0,70	4,0	0,05	4,00	50	521532
0,50	0,70	4,0	0,10	4,00	50	521529
0,50	0,70	6,0	0,05	4,00	50	521531
0,50	0,70	6,0	0,10	4,00	50	521528
0,50	0,70	8,0	0,05	4,00	50	521530
0,50	0,70	8,0	0,10	4,00	50	521527
0,80	1,20	4,0	0,10	4,00	50	521526
0,80	1,20	4,0	0,20	4,00	50	521522
0,80	1,20	6,0	0,10	4,00	50	521525
0,80	1,20	6,0	0,20	4,00	50	521521
0,80	1,20	8,0	0,10	4,00	50	521524
0,80	1,20	8,0	0,20	4,00	50	521520
0,80	1,20	10,0	0,10	4,00	50	521523
0,80	1,20	10,0	0,20	4,00	50	521519
1,00	1,50	4,0	0,30	4,00	50	521502
1,00	1,50	6,0	0,30	4,00	50	521501
1,00	1,50	8,0	0,30	4,00	50	521500
1,00	1,50	10,0	0,30	4,00	50	521499
1,00	1,50	12,0	0,30	4,00	50	521498
1,00	1,50	16,0	0,20	4,00	60	521504
1,00	1,50	20,0	0,20	4,00	60	521503
1,00	1,50	4,0	0,10	4,00	50	521518
1,00	1,50	4,0	0,20	4,00	50	521510
1,00	1,50	6,0	0,10	4,00	50	521517
1,00	1,50	6,0	0,20	4,00	50	521509
1,00	1,50	8,0	0,10	4,00	50	521516
1,00	1,50	8,0	0,20	4,00	50	521508
1,00	1,50	10,0	0,10	4,00	50	521515

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RAR 250

Torischer Fräser Z2 Torical end mill Z2



λ Spiralwinkel spiral angle

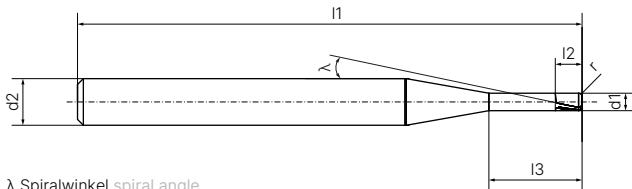
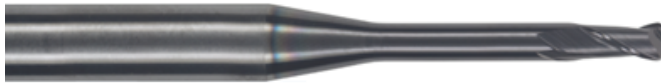
P	M	K	N	S	H	X
●	●	—	—	○	●	—
Z2				λ 30°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (CONMS)	l ₁ (OAL)	RAR 250 (MultiCut)
1,00	1,50	10,0	0,20	4,00	50	521507
1,00	1,50	12,0	0,10	4,00	50	521514
1,00	1,50	12,0	0,20	4,00	50	521506
1,00	1,50	14,0	0,10	4,00	50	521513
1,00	1,50	14,0	0,20	4,00	50	521505
1,00	1,50	16,0	0,10	4,00	60	521512
1,00	1,50	20,0	0,10	4,00	60	521511
1,20	1,80	6,0	0,20	4,00	50	521492
1,20	1,80	8,0	0,20	4,00	50	521491
1,20	1,80	10,0	0,20	4,00	50	521490
1,20	1,80	12,0	0,10	4,00	50	521494
1,20	1,80	12,0	0,20	4,00	50	521489
1,20	1,80	16,0	0,10	4,00	60	521493
1,20	1,80	16,0	0,20	4,00	60	521488
1,20	1,80	6,0	0,10	4,00	50,00	521497
1,20	1,80	8,0	0,10	4,00	50,00	521496
1,20	1,80	10,0	0,10	4,00	50,00	521495
1,50	2,30	6,0	0,20	4,00	50,00	521487
1,50	2,30	6,0	0,30	4,00	50,00	521479
1,50	2,30	8,0	0,20	4,00	50,00	521486
1,50	2,30	8,0	0,30	4,00	50,00	521478
1,50	2,30	10,0	0,20	4,00	50,00	521485
1,50	2,30	10,0	0,30	4,00	50,00	521477
1,50	2,30	12,0	0,20	4,00	50,00	521484
1,50	2,30	12,0	0,30	4,00	50,00	521476
1,50	2,30	14,0	0,20	4,00	50,00	521483
1,50	2,30	14,0	0,30	4,00	50,00	521475
1,50	2,30	16,0	0,20	4,00	50,00	521482

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RAR 250

Torischer Fräser Z2 Torical end mill Z2



λ Spiralwinkel spiral angle

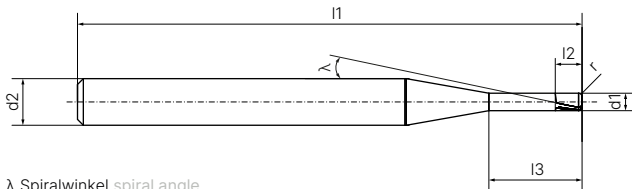
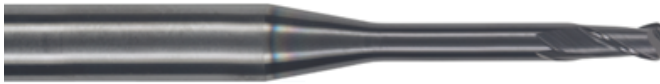
P	M	K	N	S	H	X
●	●	—	—	○	●	—
Z2				λ 30°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RAR 250 (MultiCut)
1,50	2,30	16,0	0,30	4,00	50,00	521474
1,50	2,30	18,0	0,20	4,00	50,00	521481
1,50	2,30	18,0	0,30	4,00	50,00	521473
1,50	2,30	20,0	0,20	4,00	50,00	521480
1,50	2,30	20,0	0,30	4,00	50,00	521472
2,00	3,00	18,0	0,50	4,00	50,00	521457
2,00	3,00	20,0	0,50	4,00	50,00	521456
2,00	3,00	6,0	0,20	4,00	50,00	521471
2,00	3,00	6,0	0,50	4,00	50,00	521463
2,00	3,00	8,0	0,20	4,00	50,00	521470
2,00	3,00	8,0	0,50	4,00	50,00	521462
2,00	3,00	10,0	0,20	4,00	50,00	521469
2,00	3,00	10,0	0,50	4,00	50,00	521461
2,00	3,00	12,0	0,20	4,00	50,00	521468
2,00	3,00	12,0	0,50	4,00	50,00	521460
2,00	3,00	14,0	0,20	4,00	50,00	521467
2,00	3,00	14,0	0,50	4,00	50,00	521459
2,00	3,00	16,0	0,20	4,00	50,00	521466
2,00	3,00	16,0	0,50	4,00	50,00	521458
2,00	3,00	18,0	0,20	4,00	50,00	521465
2,00	3,00	20,0	0,20	4,00	50,00	521464
2,50	3,70	8,0	0,50	4,00	50,00	521448
2,50	3,70	10,0	0,50	4,00	50,00	521447
2,50	3,70	12,0	0,50	4,00	50,00	521446
2,50	3,70	14,0	0,50	4,00	50,00	521445
2,50	3,70	16,0	0,50	4,00	60,00	521444
2,50	3,70	18,0	0,50	4,00	60,00	521443
2,50	3,70	20,0	0,50	4,00	60,00	521442

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RAR 250

Torischer Fräser Z2 Torical end mill Z2



λ Spiralwinkel spiral angle

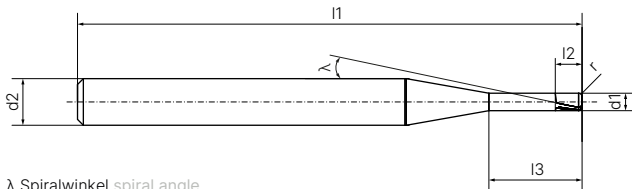
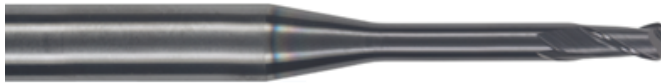
P	M	K	N	S	H	X
●	●	—	—	○	●	—
Z2				λ 30°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (CONMS)	l ₁ (OAL)	RAR 250 (MultiCut)
2,50	3,70	8,0	0,20	4,00	50,00	521455
2,50	3,70	10,0	0,20	4,00	50,00	521454
2,50	3,70	12,0	0,20	4,00	50,00	521453
2,50	3,70	14,0	0,20	4,00	50,00	521452
2,50	3,70	16,0	0,20	4,00	60,00	521451
2,50	3,70	18,0	0,20	4,00	60,00	521450
2,50	3,70	20,0	0,20	4,00	60,00	521449
3,00	4,50	6,0	0,50	6,00	50,00	521433
3,00	4,50	8,0	0,50	6,00	50,00	521432
3,00	4,50	10,0	0,20	6,00	50,00	521439
3,00	4,50	10,0	0,50	6,00	50,00	521431
3,00	4,50	12,0	0,20	6,00	50,00	521438
3,00	4,50	12,0	0,50	6,00	50,00	521430
3,00	4,50	14,0	0,20	6,00	60,00	521437
3,00	4,50	14,0	0,50	6,00	60,00	521429
3,00	4,50	16,0	0,20	6,00	60,00	521436
3,00	4,50	16,0	0,50	6,00	60,00	521428
3,00	4,50	18,0	0,20	6,00	60,00	521435
3,00	4,50	18,0	0,50	6,00	60,00	521427
3,00	4,50	20,0	0,20	6,00	60,00	521434
3,00	4,50	20,0	0,50	6,00	60,00	521426
3,00	4,50	6,0	0,20	6,00	50,00	521441
3,00	4,50	8,0	0,20	6,00	50,00	521440
4,00	6,00	12,0	0,20	6,00	50,00	521425
4,00	6,00	12,0	0,50	6,00	50,00	521420
4,00	6,00	14,0	0,20	6,00	60,00	521424
4,00	6,00	14,0	0,50	6,00	60,00	521419
4,00	6,00	16,0	0,20	6,00	60,00	521423

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RAR 250

Torischer Fräser Z2
Torical end mill Z2



λ Spiralwinkel spiral angle

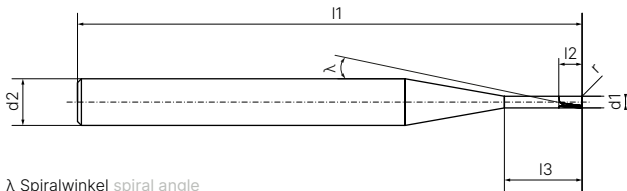
P	M	K	N	S	H	X
●	●	—	—	○	●	—
Z2				λ 30°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RAR 250 (MultiCut)
4,00	6,00	16,0	0,50	6,00	60,00	521418
4,00	6,00	20,0	0,20	6,00	60,00	521422
4,00	6,00	20,0	0,50	6,00	60,00	521417
4,00	6,00	25,0	0,20	6,00	60,00	521421
4,00	6,00	25,0	0,50	6,00	90,00	521416
5,00	7,50	12,0	0,50	6,00	60,00	521415
5,00	7,50	12,0	1,00	6,00	60,00	521410
5,00	7,50	14,0	0,50	6,00	60,00	521414
5,00	7,50	14,0	1,00	6,00	60,00	521409
5,00	7,50	16,0	0,50	6,00	60,00	521413
5,00	7,50	16,0	1,00	6,00	60,00	521408
5,00	7,50	20,0	0,50	6,00	70,00	521412
5,00	7,50	20,0	1,00	6,00	70,00	521407
5,00	7,50	25,0	0,50	6,00	70,00	521411
5,00	7,50	25,0	1,00	6,00	70,00	521406

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RDK 250

Torischer Fräser Z2 Torical end mill Z2



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	—	—	●	—	—	○

Z2		λ 40°	
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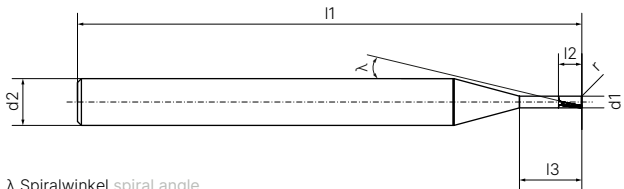


d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RDK 250 (CarboCut)
0,30	1,5	2,5	0,05	6,00	60	511403
0,50	1,5	3,5	0,05	6,00	64	511400
0,50	1,5	7,0	0,05	6,00	64	511405
1,00	3,0	5,0	0,05	6,00	64	511401
1,00	3,0	10,0	0,05	6,00	64	511406
1,50	3,0	10,0	0,05	6,00	64	511407
2,00	3,0	10,0	0,10	3,00	40	511431
3,00	4,0	10,0	0,10	6,00	51	511432

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REB 250

Torischer Fräser Z2 Torical end mill Z2



λ Spiralwinkel spiral angle

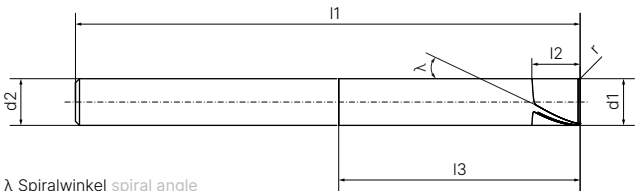
P	M	K	N	S	H	X
—	—	—	●	—	—	●
Z2				λ 40°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	REB 250 (NanoCut)
0,30	0,6	1,0	0,05	6,00	51	512300
0,30	0,6	2,5	0,05	6,00	60	512301
0,50	1,0	1,5	0,05	6,00	51	512304
0,50	1,0	4,0	0,05	6,00	51	512305
1,00	2,0	5,0	0,05	6,00	51	512309
1,50	3,0	8,0	0,05	6,00	51	512311
2,00	3,0	10,0	0,05	6,00	51	512312
2,50	3,0	12,0	0,05	6,00	60	512313
3,00	3,0	12,0	0,05	6,00	60	512314

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RZK 250

Torischer Fräser Z2
Torical end mill Z2



λ Spiralwinkel spiral angle

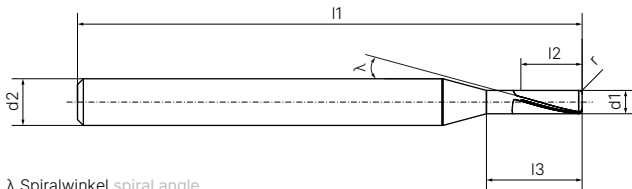
P	M	K	N	S	H	X
—	—	—	●	—	—	●
Z2				λ 30°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RZK 250 (VHM)
6,00	6,0	30,0	0,25	6,00	57	520201
6,00	6,0	30,0	0,25	6,00	80	520202
8,00	8,5	35,0	0,25	8,00	100	520203
10,00	10,5	40,0	0,25	10,00	75	520204
10,00	10,5	40,0	0,25	10,00	100	520205

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RVT 250

Torischer Fräser Z2
Torical end mill Z2



λ Spiralwinkel spiral angle

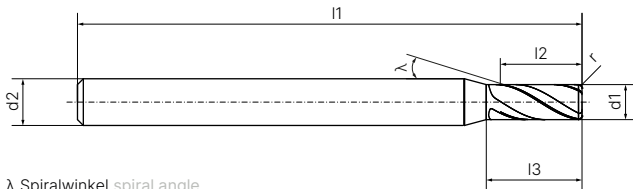
P	M	K	N	S	H	X
—	●	—	—	●	—	—
Z2				λ 40°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RVT 250 (CroNaTec)
1,00	3,0	4,2	0,05	4,00	50	515600
1,00	3,0	4,2	0,30	4,00	50	515601
2,00	6,0	8,1	0,05	4,00	50	515602
2,00	6,0	8,1	0,30	4,00	50	515603
2,50	8,0	10,3	0,05	4,00	50	515604
2,50	8,0	10,3	0,30	4,00	50	515605
3,00	8,0	10,5	0,05	4,00	50	515606
3,00	8,0	10,5	0,30	4,00	50	515607
4,00	11,0	-	0,10	4,00	50	515608
4,00	11,0	-	0,30	4,00	50	515609
4,00	11,0	-	0,50	4,00	50	515610
5,00	13,0	17,2	0,10	6,00	50	515611
5,00	13,0	17,2	0,30	6,00	50	515612
5,00	13,0	17,2	0,50	6,00	50	515613

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RVT 350

Torischer Fräser Z3 Torical end mill Z3



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	●	—	—	●	—	—

Z3		λ 40°	
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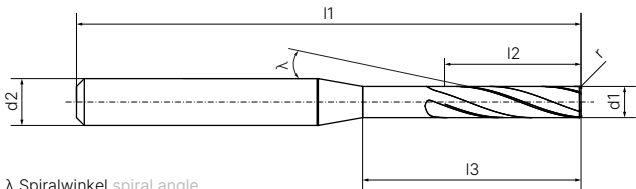
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d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RVT 350 (CroNaTec)
3,00	8,0	10,5	0,1	4,00	50	515650
3,00	8,0	10,5	0,3	4,00	50	515651
3,00	8,0	10,5	0,5	4,00	50	515652
4,00	11,0	-	0,1	4,00	50	515653
4,00	11,0	-	0,3	4,00	50	515654
4,00	11,0	-	0,5	4,00	50	515655
5,00	13,0	13,2	0,1	6,00	50	515656
5,00	13,0	13,2	0,3	6,00	50	515657
5,00	13,0	13,2	0,5	6,00	50	515658

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RDK 350

Torischer Fräser Z3
Torical end mill Z3



λ Spiralwinkel spiral angle

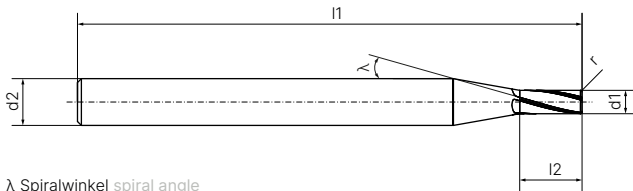
P	M	K	N	S	H	X
—	—	—	●	—	—	●
Z3				λ 40°		

d ₁ (DC)	l ₂ (APMX)	l ₃ (LCF)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RDK 350 (CarboCut)
2,00	10,0	14,0	0,10	3,00	50	511500
3,00	10,0	-	0,20	3,00	50	511501
4,00	15,0	-	0,10	4,00	60	511505
6,00	30,0	-	0,30	6,00	78	511510

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RHE 450

Torischer Fräser Z4 Torical end mill Z4



λ Spiralwinkel spiral angle

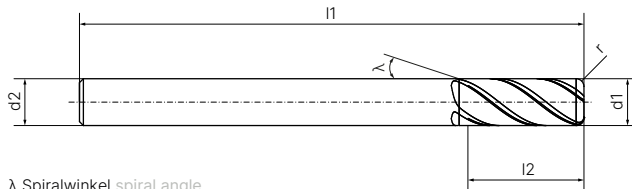
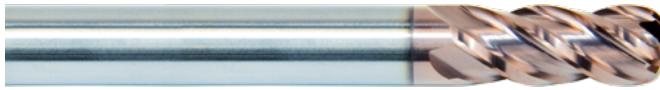
P	M	K	N	S	H	X
●	●	●	—	—	○	—
Z4				λ 36° / 38°		

d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RHE 450 (HeavyCut)
3,00	8,0	0,20	6,00	50	511550
3,00	8,0	0,50	6,00	50	511551
4,00	10,0	0,20	6,00	50	511552
4,00	10,0	0,50	6,00	50	511553
5,00	13,0	0,50	6,00	50	511554
5,00	13,0	1,00	6,00	50	511555
6,00	16,0	0,50	6,00	50	511556
6,00	16,0	1,00	6,00	50	511557
8,00	20,0	0,50	8,00	60	511558
8,00	20,0	1,00	8,00	60	511559
10,00	25,0	0,50	10,00	75	511560
10,00	25,0	1,00	10,00	75	511561
10,00	25,0	2,00	10,00	75	511562
12,00	30,0	1,00	12,00	75	511563
12,00	30,0	2,00	12,00	75	511564

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RQR 450

Torischer Fräser Z4
Torical end mill Z4



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	●	—	—	●	—	—

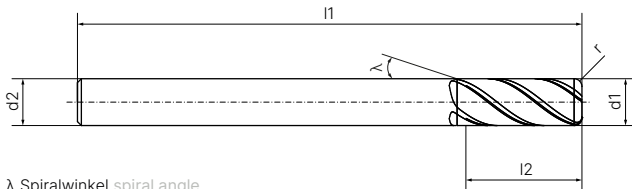
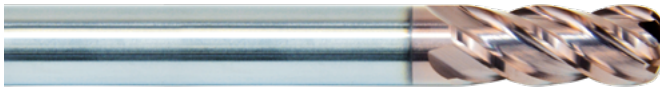
Z4		λ 38°	

d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RQR 450 (HP Tec Tinox)
6,00	16,0	0,30	6,0	50	511650
6,00	16,0	0,50	6,0	50	511651
6,00	16,0	1,00	6,0	50	511652
8,00	20,0	0,30	8,0	60	511653
8,00	20,0	0,50	8,0	60	511654
8,00	20,0	1,00	8,0	60	511655
10,00	25,0	0,50	10,0	75	511656
10,00	25,0	1,00	10,0	75	511657
10,00	25,0	1,50	10,0	75	511658
10,00	25,0	1,60	10,0	75	511659
10,00	25,0	2,00	10,0	75	511660
10,00	25,0	3,00	10,0	75	511661
12,00	30,0	0,50	12,0	75	511662
12,00	30,0	1,00	12,0	75	511663
12,00	30,0	1,50	12,0	75	511664
12,00	30,0	1,60	12,0	75	511665
12,00	30,0	2,00	12,0	75	511666
12,00	30,0	2,50	12,0	75	511667
12,00	30,0	3,00	12,0	75	511668
12,00	30,0	3,20	12,0	75	511669
12,00	30,0	4,00	12,0	75	511670
16,00	35,0	1,00	16,0	90	511671
16,00	35,0	1,25	16,0	90	511672
16,00	35,0	1,50	16,0	90	511673
16,00	35,0	1,60	16,0	90	511674
16,00	35,0	2,00	16,0	90	511675
16,00	35,0	2,50	16,0	90	511676
16,00	35,0	3,00	16,0	90	511677

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RQR 450

Torischer Fräser Z4 Torical end mill Z4



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
—	●	—	—	●	—	—

Z4		λ 38°	
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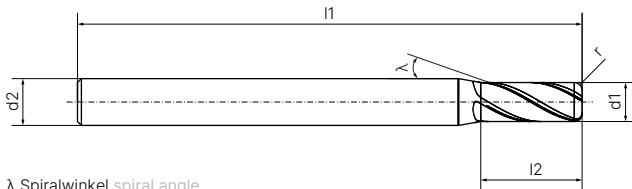
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d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RQR 450 (HPTec Tinox)
16,00	35,0	3,20	16,0	90	511678
16,00	35,0	4,00	16,0	90	511679
16,00	35,0	5,00	16,0	90	511680
20,00	45,0	1,00	20,0	100	511681
20,00	45,0	1,50	20,0	100	511682
20,00	45,0	1,60	20,0	100	511683
20,00	45,0	2,00	20,0	100	511684
20,00	45,0	2,50	20,0	100	511685
20,00	45,0	3,00	20,0	100	511686
20,00	45,0	3,20	20,0	100	511687
20,00	45,0	4,00	20,0	100	511688
20,00	45,0	5,00	20,0	100	511689
20,00	45,0	6,30	20,0	100	511690

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RQH 450

Torischer Fräser Z4
Torical end mill Z4



λ Spiralwinkel spiral angle

P	M	K	N	S	H	X
○	—	—	—	—	●	—

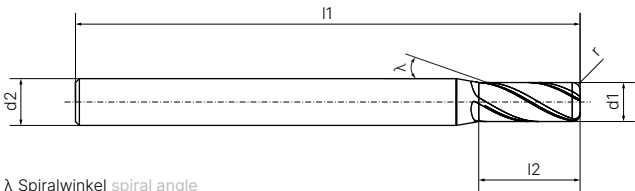
Z4		λ 35°	

d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RQH 450 (HP Tec Tinox)
3,00	8,0	0,20	4,0	50	512250
4,00	10,0	0,30	4,0	50	512251
4,00	10,0	0,50	4,0	50	512252
5,00	13,0	0,50	6,0	50	512253
5,00	13,0	1,00	6,0	50	512254
6,00	16,0	0,50	6,0	50	512255
6,00	16,0	1,00	6,0	50	512256
8,00	20,0	0,50	8,0	60	512257
8,00	20,0	1,00	8,0	60	512258
10,00	25,0	0,50	10,0	75	512259
10,00	25,0	1,00	10,0	75	512260
10,00	25,0	2,00	10,0	75	512261
10,00	25,0	3,00	10,0	75	512262
12,00	30,0	0,50	12,0	75	512263
12,00	30,0	1,00	12,0	75	512264
12,00	30,0	2,00	12,0	75	512265
12,00	30,0	3,00	12,0	75	512266
6,00	6,0	0,50	6,0	75	512267
6,00	6,0	1,00	6,0	75	512268
8,00	8,0	0,50	8,0	100	512269
8,00	8,0	1,00	8,0	100	512270
10,00	10,0	0,50	10,0	100	512271
10,00	10,0	1,00	10,0	100	512272
10,00	10,0	2,00	10,0	100	512273
12,00	12,0	0,50	12,0	100	512274
12,00	12,0	1,00	12,0	100	512275
12,00	12,0	2,00	12,0	100	512276
16,00	16,0	1,00	16,0	150	512277

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RQH 450

Torischer Fräser Z4
Torical end mill Z4



λ Spiralwinkel spiral angle

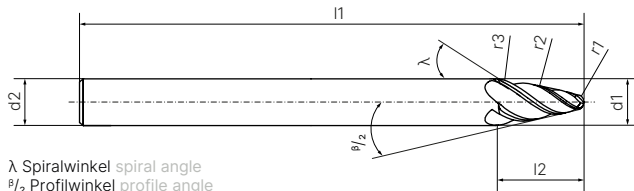
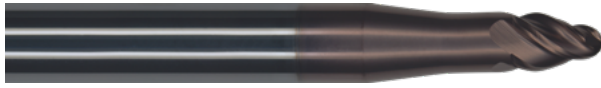
P	M	K	N	S	H	X
○	—	—	—	—	●	—
Z4				λ 35°		

d ₁ (DC)	l ₂ (APMX)	r (RE)	d ₂ (DCONMS)	l ₁ (OAL)	RQH 450 (HPTec Tinox)
16,00	16,0	2,00	16,0	150	512278

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RQR 460 / 660

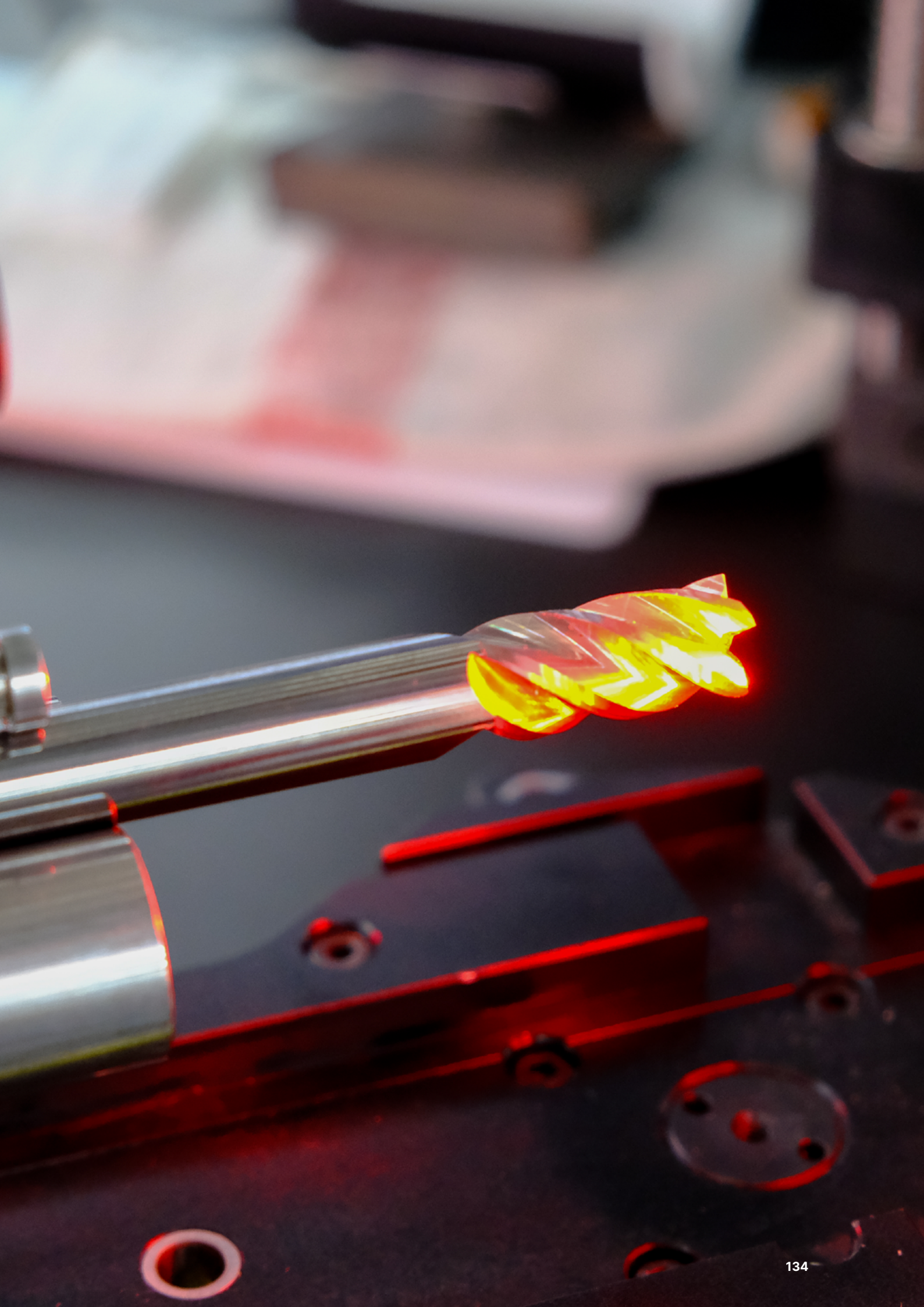
Kreissegmentfräser Z4/Z6
Circle segment end mill Z4/Z6



P	M	K	N	S	H	X
●	●	○	—	●	○	—
Z4/Z6				λ 30/35°		

d ₁ (DC)	r ₁ (RE)	r ₂ (RE)	r ₃ (RE)	l ₂ (APMX)	β/2 (G5)	d ₂ (DCONMS)	l ₁ (OAL)	Z	RQR 460/660 (HPTec Tinox)
3,00	0,50	40,0	1,50	3,0	7,5°	3,00	55	4	512752
3,00	0,50	40,0	1,50	5,0	15,0°	3,00	55	4	512750
4,00	0,75	50,0	2,00	4,0	7,5°	4,00	55	4	512756
4,00	0,75	50,0	2,00	7,0	15,0°	4,00	55	4	512754
6,00	1,00	80,0	3,00	6,0	15,0°	6,00	55	4	512758
6,00	1,00	80,0	3,00	11,0	7,5°	6,00	55	4	512760
12,00	1,50	150,0	6,00	25,0	7,5°	12,00	90	6	512800
16,00	2,00	200,0	8,00	35,0	7,5°	16,00	108	6	512802

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ÜBERSICHT SÄGEN

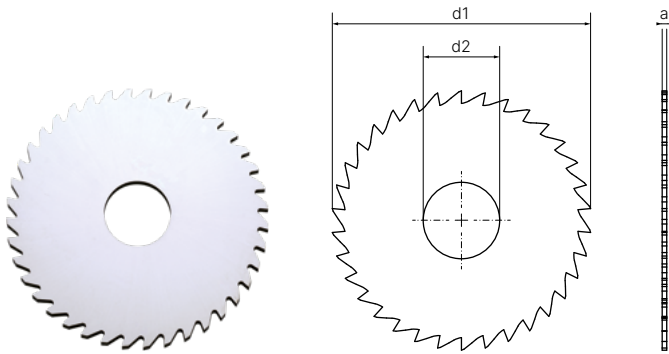
OVERVIEW SAWING

	Ø [mm]	VHM (unbeschichtet) VHM (uncoated)	HP Tec INOX	Stahl Steel P	Rostfreier Stahl Stainless steel M	Gusseisen Cast iron K	NE-Metall Non-ferrous metal N	Sonderlegierungen Special alloy S	Stahl 45-65 HRC Steel 45-65 HRC H	Nichtmetall. Werkstoffe Non-metallic materials X	Seite Page
Grobe Verzahnung Rough toothing											
KZM 040 	15,0 - 100,0	✓		●	—	—	●	—	—	○	136
Feine Verzahnung Fine toothing											
KZM 040 	15,0 - 100,0	✓		●	○	—	●	○	—	—	139
Extrafeine Verzahnung Extra fine toothing											
KZM 040 	15,0 - 80,0	✓		●	○	—	●	○	—	—	142
INOX Feine Verzahnung INOX fine toothing											
KTM 040 	63,0 - 100,0		✓	○	●	—	○	●	—	—	145
Aufnahme Stirnseite Mounting front side											
ZZM 000 	5,0 - 22,0			—	—	—	—	—	—	—	146
Aufnahme Rückseite Mounting back side											
ZZM 000 	5,0 - 16,0			—	—	—	—	—	—	—	147

● optimal optimum ○ geeignet suitable — nicht empfehlenswert not recommendable

KZM 040

Grobe Verzahnung
Rough toothing



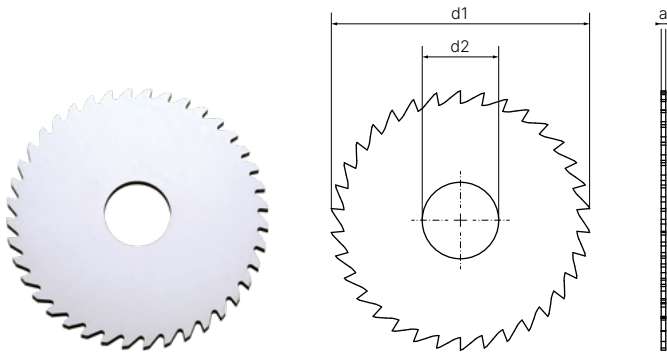
P	M	K	N	S	H	X
●	—	—	●	—	—	○

d_1 js12 (DC)	a +0,01 (OAH)	d_2 H7 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
15,0	0,20	5,0	20	516300
15,0	0,25	5,0	20	516301
15,0	0,30	5,0	20	516302
15,0	0,40	5,0	20	516303
15,0	0,50	5,0	20	516304
15,0	0,60	5,0	20	516305
15,0	0,70	5,0	20	516306
15,0	0,80	5,0	20	516307
15,0	0,90	5,0	20	516308
15,0	1,00	5,0	20	516309
15,0	1,20	5,0	20	516310
15,0	1,50	5,0	20	516311
15,0	2,00	5,0	20	516312
20,0	0,20	5,0	20	516313
20,0	0,25	5,0	20	516314
20,0	0,30	5,0	20	516315
20,0	0,40	5,0	20	516316
20,0	0,50	5,0	20	516317
20,0	0,60	5,0	20	516318
20,0	0,70	5,0	20	516319
20,0	0,80	5,0	20	516320
20,0	0,90	5,0	20	516321
20,0	1,00	5,0	20	516322
20,0	1,20	5,0	20	516323
20,0	1,50	5,0	20	516324
20,0	2,00	5,0	20	516325
30,0	0,20	8,0	30	516326
30,0	0,25	8,0	30	516327

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Grobe Verzahnung
Rough tooththing



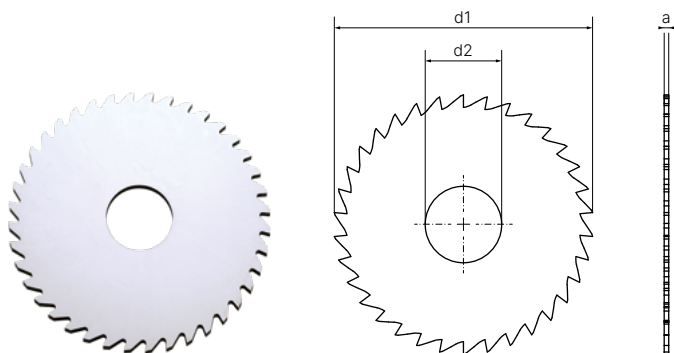
P	M	K	N	S	H	X
●	—	—	●	—	—	○

d_1 js12 (DC)	a +0,01 (OAH)	d_2 H7 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
30,0	0,30	8,0	30	516328
30,0	0,40	8,0	30	516329
30,0	0,50	8,0	30	516330
30,0	0,60	8,0	30	516331
30,0	0,70	8,0	30	516332
30,0	0,80	8,0	24	516333
30,0	0,90	8,0	24	516334
30,0	1,00	8,0	24	516335
30,0	1,20	8,0	24	516336
30,0	1,50	8,0	24	516337
30,0	2,00	8,0	24	516338
40,0	0,20	10,0	40	516339
40,0	0,30	10,0	40	516340
40,0	0,40	10,0	40	516341
40,0	0,50	10,0	40	516342
40,0	0,60	10,0	40	516343
40,0	0,70	10,0	40	516344
40,0	0,80	10,0	32	516345
40,0	0,90	10,0	32	516346
40,0	1,00	10,0	32	516347
40,0	1,50	10,0	32	516348
40,0	2,00	10,0	24	516349
40,0	3,00	10,0	24	516350
50,0	0,40	13,0	48	516351
50,0	0,50	13,0	48	516352
50,0	0,60	13,0	48	516353
50,0	0,70	13,0	40	516354
50,0	0,80	13,0	40	516355

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Grobe Verzahnung
Rough toothing



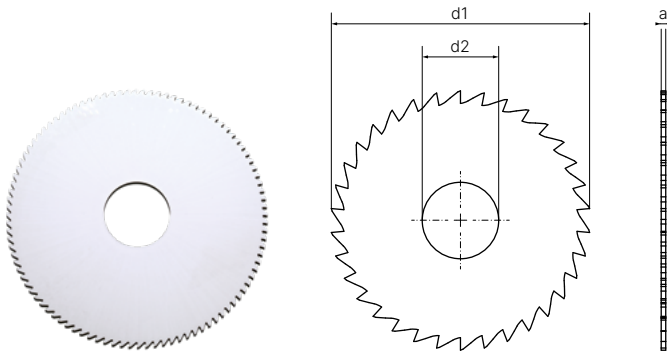
P	M	K	N	S	H	X
●	—	—	●	—	—	○

d_1 js12 (DC)	a +0,01 (OAH)	d_2 H7 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
50,0	0,90	13,0	40	516356
50,0	1,00	13,0	40	516357
50,0	1,50	13,0	32	516358
50,0	2,00	13,0	32	516359
50,0	3,00	13,0	24	516360
63,0	0,40	16,0	64	516361
63,0	0,50	16,0	64	516362
63,0	0,60	16,0	48	516363
63,0	0,70	16,0	48	516364
63,0	0,80	16,0	48	516365
63,0	0,90	16,0	48	516366
63,0	1,00	16,0	48	516367
63,0	1,50	16,0	40	516368
63,0	2,00	16,0	40	516369
63,0	3,00	16,0	32	516370
100,0	0,60	22,0	80	516371
100,0	0,70	22,0	64	516372
100,0	0,80	22,0	64	516373
100,0	0,90	22,0	64	516374
100,0	1,00	22,0	64	516375
100,0	1,50	22,0	48	516376
100,0	2,00	22,0	48	516377
100,0	3,00	22,0	40	516378

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KZM 040

Feine Verzahnung
Fine toothing



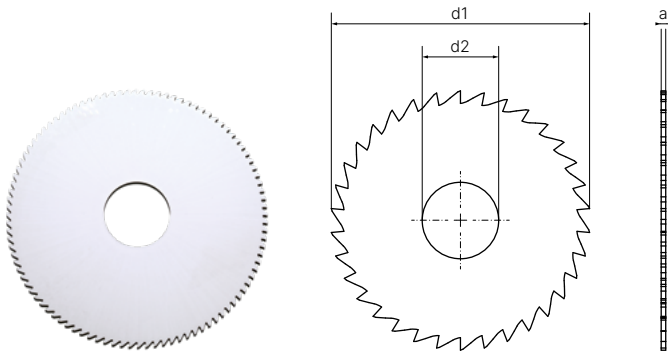
P	M	K	N	S	H	X
●	○	—	●	○	—	—

d_1 js12 (DC)	a $\pm 0,01$ (OAH)	d_2 H6 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
15,0	0,10	5,0	64	516400
15,0	0,20	5,0	64	516401
15,0	0,25	5,0	64	516402
15,0	0,30	5,0	64	516403
15,0	0,40	5,0	64	516404
15,0	0,50	5,0	48	516405
15,0	0,60	5,0	48	516406
15,0	0,70	5,0	48	516407
15,0	0,80	5,0	40	516408
15,0	0,90	5,0	40	516409
15,0	1,00	5,0	40	516410
15,0	1,20	5,0	40	516411
15,0	1,50	5,0	40	516412
15,0	2,00	5,0	40	516413
20,0	0,10	5,0	80	516414
20,0	0,20	5,0	80	516415
20,0	0,25	5,0	64	516416
20,0	0,30	5,0	64	516417
20,0	0,40	5,0	64	516418
20,0	0,50	5,0	48	516419
20,0	0,60	5,0	48	516420
20,0	0,70	5,0	48	516421
20,0	0,80	5,0	40	516422
20,0	0,90	5,0	40	516423
20,0	1,00	5,0	40	516424
20,0	1,20	5,0	40	516425
20,0	1,50	5,0	40	516426
20,0	2,00	5,0	32	516427

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KZM 040

Feine Verzahnung
Fine toothing



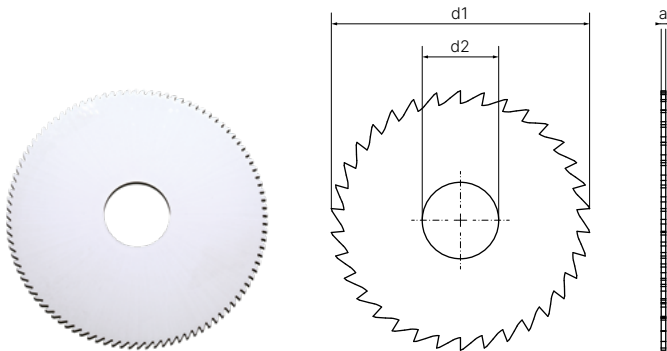
P	M	K	N	S	H	X
●	○	—	●	○	—	—

d_1 js12 (DC)	a $\pm 0,01$ (OAH)	d_2 H6 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
30,0	0,20	8,0	100	516428
30,0	0,25	8,0	100	516429
30,0	0,30	8,0	80	516430
30,0	0,40	8,0	80	516431
30,0	0,50	8,0	80	516432
30,0	0,60	8,0	64	516433
30,0	0,70	8,0	64	516434
30,0	0,80	8,0	64	516435
30,0	0,90	8,0	64	516436
30,0	1,00	8,0	64	516437
30,0	1,20	8,0	48	516438
30,0	1,50	8,0	48	516439
30,0	2,00	8,0	48	516440
40,0	0,20	10,0	128	516441
40,0	0,30	10,0	100	516442
40,0	0,40	10,0	100	516443
40,0	0,50	10,0	80	516444
40,0	0,60	10,0	80	516445
40,0	0,70	10,0	80	516446
40,0	0,80	10,0	80	516447
40,0	0,90	10,0	64	516448
40,0	1,00	10,0	64	516449
40,0	1,50	10,0	64	516450
40,0	2,00	10,0	48	516451
40,0	3,00	10,0	48	516452
50,0	0,40	13,0	100	516453
50,0	0,50	13,0	100	516454
50,0	0,60	13,0	100	516455

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Feine Verzahnung
Fine toothing



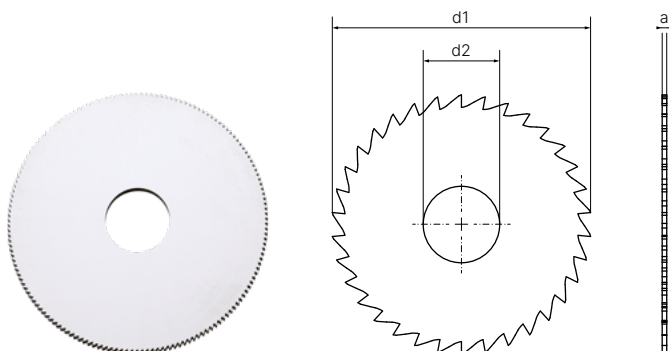
P	M	K	N	S	H	X
●	○	—	●	○	—	—

d_1 js12 (DC)	a $_{+0,01}$ (OAH)	d_2 H6 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
50,0	0,70	13,0	80	516456
50,0	0,80	13,0	80	516457
50,0	0,90	13,0	80	516458
50,0	1,00	13,0	80	516459
50,0	1,50	13,0	64	516460
50,0	2,00	13,0	64	516461
50,0	3,00	13,0	48	516462
63,0	0,40	16,0	128	516463
63,0	0,50	16,0	128	516464
63,0	0,60	16,0	100	516465
63,0	0,70	16,0	100	516466
63,0	0,80	16,0	100	516467
63,0	0,90	16,0	100	516468
63,0	1,00	16,0	100	516469
63,0	1,50	16,0	80	516470
63,0	2,00	16,0	80	516471
63,0	3,00	16,0	64	516472
100,0	0,50	22,0	160	516473
100,0	0,60	22,0	160	516474
100,0	0,70	22,0	128	516475
100,0	0,80	22,0	128	516476
100,0	0,90	22,0	128	516477
100,0	1,00	22,0	128	516478
100,0	1,50	22,0	100	516479
100,0	2,00	22,0	100	516480
100,0	3,00	22,0	80	516481

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KZM 040

Extrafeine Verzahnung
Extra fine toothing



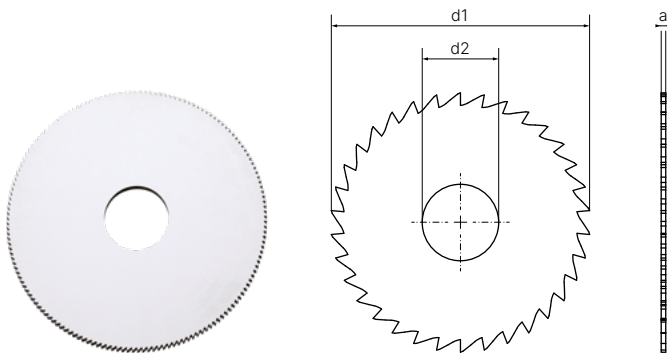
P	M	K	N	S	H	X
●	○	—	●	○	—	—

d_1 js12 (DC)	a $\pm 0,01$ (OAH)	d_2 H6 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
15,0	0,25	5,0	80	516500
15,0	0,30	5,0	80	516501
15,0	0,40	5,0	80	516502
15,0	0,50	5,0	80	516503
15,0	0,60	5,0	80	516504
15,0	0,70	5,0	80	516505
15,0	0,80	5,0	80	516506
15,0	0,90	5,0	80	516507
15,0	1,00	5,0	80	516508
15,0	1,20	5,0	80	516509
15,0	1,50	5,0	80	516510
15,0	2,00	5,0	80	516511
20,0	0,25	5,0	80	516512
20,0	0,30	5,0	80	516513
20,0	0,40	5,0	80	516514
20,0	0,50	5,0	80	516515
20,0	0,60	5,0	80	516516
20,0	0,70	5,0	80	516517
20,0	0,80	5,0	80	516518
20,0	0,90	5,0	80	516519
20,0	1,00	5,0	80	516520
20,0	1,20	5,0	80	516521
20,0	1,50	5,0	80	516522
20,0	2,00	5,0	80	516523
30,0	0,30	8,0	100	516524
30,0	0,40	8,0	100	516525
30,0	0,50	8,0	100	516526
30,0	0,60	8,0	100	516527

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KZM 040

Extrafeine Verzahnung
Extra fine toothing



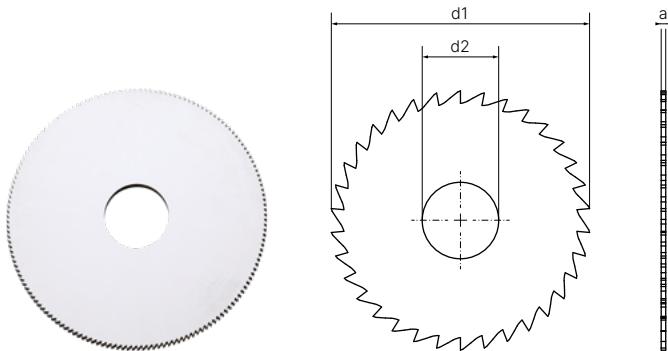
P	M	K	N	S	H	X
●	○	—	●	○	—	—

d_1 js12 (DC)	a $_{+0,01}$ (OAH)	d_2 H6 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
30,0	0,70	8,0	100	516528
30,0	0,80	8,0	100	516529
30,0	0,90	8,0	100	516530
30,0	1,00	8,0	100	516531
30,0	1,20	8,0	100	516532
30,0	1,50	8,0	100	516533
30,0	2,00	8,0	100	516534
40,0	0,20	10,0	160	516535
40,0	0,30	10,0	160	516536
40,0	0,40	10,0	160	516537
40,0	0,50	10,0	160	516538
40,0	0,60	10,0	160	516539
40,0	0,70	10,0	160	516540
40,0	0,80	10,0	160	516541
40,0	0,90	10,0	160	516542
40,0	1,00	10,0	160	516543
40,0	1,50	10,0	160	516544
40,0	2,00	10,0	160	516545
40,0	3,00	10,0	160	516546
50,0	0,40	13,0	120	516547
50,0	0,50	13,0	120	516548
50,0	0,60	13,0	120	516549
50,0	0,70	13,0	120	516550
50,0	0,80	13,0	120	516551
50,0	0,90	13,0	120	516552
50,0	1,00	13,0	120	516553
50,0	1,50	13,0	120	516554
50,0	2,00	13,0	120	516555

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KZM 040

Extrafeine Verzahnung
Extra fine toothing



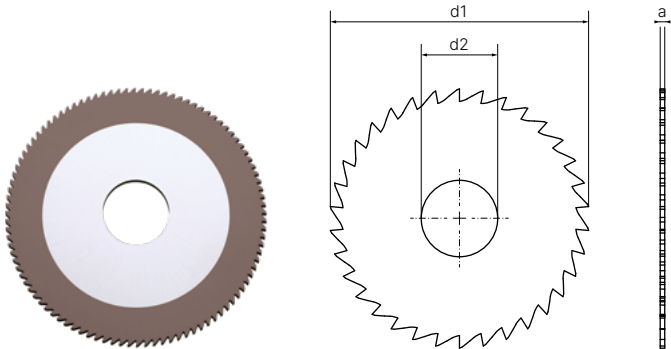
P	M	K	N	S	H	X
●	○	—	●	○	—	—

d_1 js12 (DC)	a $\pm 0,01$ (OAH)	d_2 H6 (DCONMS)	Z (ZEFP)	KZM 040 (VHM)
50,0	3,00	13,0	120	516556
63,0	0,40	16,0	120	516557
63,0	0,50	16,0	120	516558
63,0	0,60	16,0	120	516559
63,0	0,70	16,0	120	516560
63,0	0,80	16,0	120	516561
63,0	0,90	16,0	120	516562
63,0	1,00	16,0	120	516563
63,0	1,50	16,0	120	516564
63,0	2,00	16,0	120	516565
63,0	3,00	16,0	120	516566
80,0	0,50	16,0	128	516567
80,0	0,60	16,0	128	516568
80,0	0,70	16,0	128	516569
80,0	0,80	16,0	128	516570
80,0	0,90	16,0	128	516571
80,0	1,00	16,0	128	516572
80,0	1,50	16,0	128	516573
80,0	2,00	16,0	128	516574
80,0	3,00	16,0	128	516575

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KTM 040

INOX Feine Verzahnung
INOX fine toothing



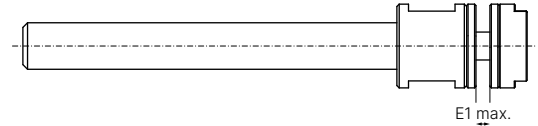
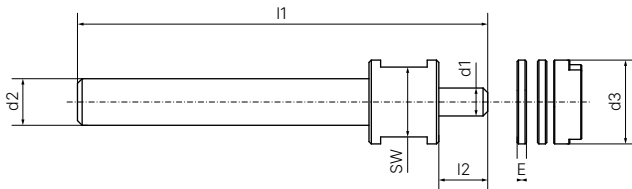
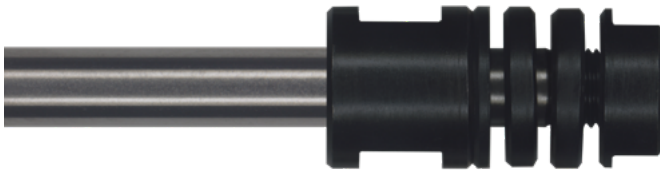
P	M	K	N	S	H	X
○	●	—	○	●	—	—

d_1 js12 (DC)	a +0,01 (OAH)	d_2 h6 (DCONMS)	Z (ZEFP)	KTM 040 (INOX)
63	0,8	16	80	515400
63	1	16	80	515404
80	0,8	22	100	515401
80	1	22	100	515405
100	0,8	22	120	515402
100	1	22	120	515403

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ZZM 000

Aufnahme Stirnseite
Mounting front side

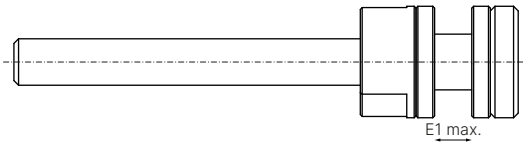
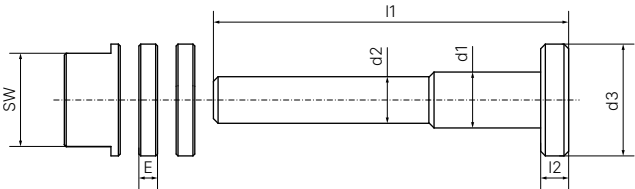
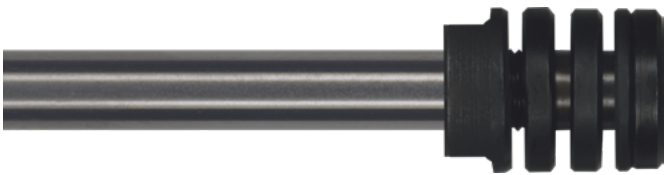


d_1 h6 (DC)	d_2 h6 (DCONMS)	d_3	l_1	l_2	E	E_1 max	SW	ZZM 000
5,00	6,00	10,00	79,0	9,0	2,0	6,0	8	512350
5,00	10,00	10,00	89,0	9,0	2,0	6,0	8	512351
6,00	10,00	12,00	89,5	9,5	2,0	6,0	10	512352
8,00	10,00	15,00	90,0	10,0	2,0	6,0	13	512353
8,00	12,00	15,00	100,0	10,0	2,0	6,0	13	512354
10,00	6,00	18,00	90,5	10,5	2,0	6,0	15	512355
10,00	10,00	18,00	90,5	10,5	2,0	6,0	15	512356
10,00	16,00	18,00	110,5	10,5	2,0	6,0	15	512357
13,00	16,00	22,00	121,0	11,0	2,0	6,0	19	512358
16,00	20,00	26,00	132,0	12,0	2,0	6,0	22	512359
22,00	16,00	32,00	132,0	12,0	2,0	6,0	27	512360

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Aufnahme Rückseite
Mounting back side



d_1 h6	d_2 h6	d_3	l_1	l_2	E	E_1 max	SW	ZZM 000
5,00	4,00	10,00	53,0	3,0	2,0	6,0	8	512361
6,00	5,00	12,00	63,0	3,0	2,0	6,0	10	512362
8,00	6,00	15,00	83,0	3,0	2,0	6,0	13	512363
8,00	7,00	15,00	83,0	3,0	2,0	6,0	13	512364
10,00	6,00	18,00	73,5	3,5	2,0	6,0	15	512365
10,00	8,00	18,00	93,5	3,5	2,0	6,0	15	512366
13,00	10,00	22,00	113,5	3,5	2,0	6,0	19	512367
16,00	12,00	26,00	123,5	3,5	2,0	6,0	22	512368

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