



PRÄZISION

Span - um Span - Spitze



GESAMT
KATALOG

ERWEITERUNG 2018



ISO-CODES

P	Stahl, hochlegierter Stahl
M	Rostfreier Stahl
K	Grauguss, Sphäroguss und Temperguss
N	Aluminium und andere Nichteisenmetalle
S	Sonder-, Super- und Titanlegierungen
H	Gehärteter Stahl und Hartguss

Auf den Produktseiten finden Sie zu jedem Werkzeug Empfehlungen zur Eignung für die Anwendungsgruppen:

- optimal geeignet
- bedingt geeignet



PIKTOGRAMME

SCHNEIDSTOFF	VHM				HM				M42	HSS-E	HSS-Co	HSS-E-PM	
	Vollhartmetall				Hartmetall								
BESCHICHTUNG	TiAlN nano	Al-TiN	TiAl-ZrN	AlTi-ZrN	TiCN	TiAl-SiN	TiN	TiCN	Al-TiN+	Bronze-VAP			
TOLERANZ	e8	h5	h8	h10	m7	ISO2/6H	2BX	4HX	6GX	6HX			
BOHRTIEFE	~3xD	5xD	~5xD	8xD									
FORM	B	C	D										
SCHNEIDRICHTUNG	 rechts												
SCHAFTFORM	Cyl	-HA	HA	HB	T 3.1								
SPITZENWINKEL	120°	130°	135°	140°									
SPIRALWINKEL	35°/38°	36°/38°/37°	38°	40°/42°	39°/40°/41°	45°	48°						
NORM	DIN 338	DIN 1897	DIN 371	DIN 376	DIN 371/376	DIN 2189	DIN 6527K	DIN 6527L	DIN 6537K	DIN 6537L			
	~DIN 371/374	~DIN 371/376	~DIN 374	~DIN 376	WN								
	Werksnorm												
TYP	SuperV- IK-U	SuperV- U	SuperV- UX	SuperT- NXL	V16	V18	NX	N2	NX-3	N-5	S	Z	ZS
	Produktiv H	Intensiv H	Produktiv N	Durativ	TM SP	NH	N	NL	H				

Dieser Katalog ergänzt den Gesamtkatalog „Präzisionswerkzeuge“.
Die gültige Preisliste sowie Arbeitsrichtwerte zu den einzelnen Werkzeugen können jederzeit bei uns angefordert werden.

Nachdruck, auch auszugsweise, nicht gestattet.
Eventuelle Druckfehler oder zwischenzeitlich eingetretene Änderungen jeder Art berechtigen nicht zu Ansprüchen. Alle mit DIN gekennzeichneten Produkte können abweichend der Maße im Katalog geliefert werden, solange diese der angezeigten DIN-Norm entsprechen.

P	M	K	N	S	H	Typ	Schaftform	Schneidstoff	Oberfläche	Norm	d1/mm	Katalog-Nr.	Progr. Seite
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SuperV-Bohrer ohne Innenkühlung



●	○	●	○	○	○	SuperV-U	HB	VHM	TiAlN-nano	DIN 6537L	3,000 - 20,000	51687	9
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SuperV-Bohrer mit Innenkühlung



●	○	●	○	○	○	SuperV-IK-U	HB	VHM	TiAlN-nano	DIN 6537L	3,000 - 20,000	51681	11
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●	○	○	○	○	○	SuperV-UX	HA	VHM	TiAlN-nano	DIN 6537L	3,000 - 20,000	51785	13
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●	○	○	○	○	○	SuperV-UX	HA	VHM	TiAlN-nano	Werksnorm	3,000 - 20,000	51790	15
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Spiralbohrer mit verst. Zylinderschaft



○	○	○	○	○	●	H	HA	VHM	AlTiN	DIN 6537K	2,600 - 14,100	51146	17
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Einlippenbohrer SuperT-NXL



●	○	●	●	○	○	SuperT-NXL		HM bestückt	TiN	Werksnorm	5,000 - 25,000	65030	18
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●	○	●	●	○	○	SuperT-NXL		HM bestückt	TiN	Werksnorm	5,000 - 22,000	65031	19
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●	○	●	●	○	○	SuperT-NXL		HM bestückt	TiN	Werksnorm	4,000 - 22,000	65032	20
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●	○	●	●	○	○	SuperT-NXL		HM bestückt	TiN	Werksnorm	5,000 - 22,000	65033	21
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V16-Spiralbohrer



●	●	●	●	○	○	V16	zyl.	M42	Bronze-VAP	DIN 338	1,000 - 13,000	71018	22
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P	M	K	N	S	H	Typ	Schaftform	Schneidstoff	Oberfläche	Norm	d1/mm	Katalog-Nr.	Progr. Seite
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V16-Spiralbohrer-Sätze



●	●	●	●	●	○	V16	zyl.	M42	Bronze-VAP	DIN 338		71019	24
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Spiralbohrer extra kurz



○	●	○	○	●		V18	zyl.	HSS-Co	AlTiZrN	DIN 1897	1,000 - 12,000	61131	25
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Spiralbohrer kurz



○	●	○	○	●		V18	zyl.	HSS-Co	AlTiZrN	DIN 338	1,000 - 13,000	61232	26
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P	M	K	N	S	H	Typ	Schaftform	Schneidstoff	Oberfläche	Norm	d1/mm	Katalog-Nr.	Progr. Seite
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V16-Pocket-Satz (Spiralbohrer, Gewindebohrer und Senker)



•	○	○	○	○			zyl.			Werksnorm		71020	27
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Gewindebohrer für Metrische ISO-Gewinde

	•	○	○	○		H	zyl.	HSS-E	TiCN	DIN 376	M16 - M39	53646	32
	•	○	○	○		H	zyl.	HSS-E	TiCN	~DIN 376	M16 - M39	53647	33
	•	○	○	○		Intensiv H	zyl.	HSS-E	TiCN	DIN 371/DIN 376	M2 - M16	53661	30
	•	○	○	○		Produktiv N	zyl.	HSS-E	TiN	DIN 371	M3 - M20	63033	28
	•	○	○	○	○	H	zyl.	HSS-E-PM	TiCN	DIN 371	M3 - M16	53676	31
	•	○	○	○		Produktiv H	zyl.	HSS-E-PM	TiCN	DIN 371/DIN 376	M3 - M16	53640	29

Gewindeformer für Metrische ISO-Gewinde

	•	•	○	○	•	Durativ	zyl.	HSS-E-PM	TiCN	~DIN 371/~DIN 376	M1 - M20	53630	34
	•	•	○	○	•	Durativ	zyl.	HSS-E-PM	TiCN	~DIN 371/~DIN 376	M2 - M20	53631	35

Gewindeformer für Metrische ISO-Feingewinde

	•	•	○	○	•	Durativ	zyl.	HSS-E-PM	TiCN	~DIN 374	M8 x 1 - M20 x 1,5	53632	36
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P	M	K	N	S	H	Typ	Schaftform	Schneidstoff	Oberfläche	Norm	d1/mm	Katalog-Nr.	Progr. Seite
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Gewindeformer für UNC-Gewinde



•	•	•	○	•		Durativ	zyl.	HSS-E-PM	TiCN	~DIN 371/ ~DIN 376	4 - 40 - 3/4 - 10	53633	37
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Gewindeformer für UNF-Gewinde



•	•	•	○	•		Durativ	zyl.	HSS-E-PM	TiCN	~DIN 371/ ~DIN 374	4 - 48 - 3/4 - 16	53634	38
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Gewindeformer für Whitworth-Rohrgewinde



•	•	•	○	•		Durativ	zyl.	HSS-E-PM	TiCN	DIN 2189	G1/8 - G1/2	53635	39
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Kühlkanal-Gewindeformer für Metr. ISO-Gewinde



•	•	•	○	•		Durativ	zyl.	HSS-E-PM	TiCN	~DIN 371/ ~DIN 376	M5 - M20	53610	40
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Kühlkanal-Gewindeformer für Metr. ISO-Feingewinde



•	•	•	○	•		Durativ	zyl.	HSS-E-PM	TiCN	~DIN 374	M8 x 1 - M20 x 1,5	53612	41
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Mikro-Gewindefräser für Metrische ISO-Gewinde



•	•	•	•	•		TM SP	HA	VHM	TiCN	Werksnorm	M1,6 - M16	53840	42
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•	•	•	○	•		TM SP	HA	VHM	TiAlN	Werksnorm	M2 - M12	53850	43
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P	M	K	N	S	H	Typ	Schaftform	Schneidstoff	Oberfläche	Norm	d1/mm	Katalog-Nr.	Progr. Seite
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SuperF-UT-Fräser N2



•	○	•	•	○	○	SuperF-UT N2	HB	VHM	TiAlZrN	DIN 6527L	3,000 - 25,000	64552	44
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SuperF-UT-Fräser NL



•	•	•	•	•	•	SuperF-UT NL	HB	VHM	TiAlN	Werksnorm	6,000 - 25,000	54553	45
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SuperF-UT-Fräser N-5



•	•	•	•	•	•	SuperF-UT N-5	HA	VHM	TiAlN	Werksnorm	4,000 - 20,000	54583	46
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•	•	•	•	•	•	SuperF-UT N-5	HB	VHM	TiAlN	Werksnorm	4,000 - 20,000	54584	47
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SuperF-UT-Fräser NX



•	•	•	•	•	•	SuperF-UT NX	HA	VHM	TiAlSiN	DIN 6527K	3,000 - 20,000	54588	48
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•	•	•	•	•	•	SuperF-UT NX	HB	VHM	TiAlSiN	DIN 6527K	3,000 - 20,000	54589	49
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SuperF-UT-Fräser NX-3



•	•	•	•	•	•	SuperF-UT NX-3	HA	VHM	TiAlSiN	Werksnorm	3,000 - 20,000	54586	50
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•	•	•	•	•	•	SuperF-UT NX-3	HB	VHM	TiAlSiN	Werksnorm	3,000 - 20,000	54587	51
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SuperF-UT-Fräser Z



•	•	•	•	•	•	SuperF-UT Z	HB	VHM	AlTiN+	Werksnorm	3,000 - 20,000	54577	52
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SuperF-UT-Fräser ZS



•	•	•	•	•	•	SuperF-UT ZS	HA	VHM	AlTiN+	Werksnorm	3,000 - 20,000	54582	53
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P	M	K	N	S	H	Typ	Schaftform	Schneidstoff	Oberfläche	Norm	d1/mm	Katalog-Nr.	Progr. Seite
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SuperF-UT-Fräser ZS



•	•	•	•	•		SuperF-UT ZS	HB	VHM	AlTiN+	Werksnorm	3,000 - 20,000	54578	54
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SuperF-UT-Fräser S



○	○	○	○	○		SuperF-UT S	HA	VHM	TiAlN	DIN 6527L	3,000 - 20,000	54556	55
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SuperF-UT-Fräser Z, Sätze



•	•	•	•	•		SuperF-UT Z	HB	VHM	AlTiN+	Werksnorm		78882	56
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Entgratfräser 90°



•	•	•	•	•		SuperAF-90	HB	VHM	TiAlZrN	Werksnorm	6,000 - 20,000	53399	57
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SuperV-Bohrer

SuperV-Bohrer ohne Innenkühlung

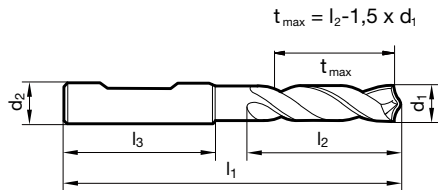


Katalog-Nr. 51687



P	M	K	N	S	H
●		●	○	○	○

- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
3,000	6,000	66,000	28,000	36,000	6,600	8,000	91,000	53,000	36,000
3,100	6,000	66,000	28,000	36,000	6,700	8,000	91,000	53,000	36,000
3,170	6,000	66,000	28,000	36,000	6,750	8,000	91,000	53,000	36,000
3,200	6,000	66,000	28,000	36,000	6,800	8,000	91,000	53,000	36,000
3,250	6,000	66,000	28,000	36,000	6,900	8,000	91,000	53,000	36,000
3,300	6,000	66,000	28,000	36,000	7,000	8,000	91,000	53,000	36,000
3,400	6,000	66,000	28,000	36,000	7,100	8,000	91,000	53,000	36,000
3,500	6,000	66,000	28,000	36,000	7,140	8,000	91,000	53,000	36,000
3,570	6,000	66,000	28,000	36,000	7,200	8,000	91,000	53,000	36,000
3,600	6,000	66,000	28,000	36,000	7,300	8,000	91,000	53,000	36,000
3,700	6,000	66,000	28,000	36,000	7,400	8,000	91,000	53,000	36,000
3,800	6,000	74,000	36,000	36,000	7,500	8,000	91,000	53,000	36,000
3,900	6,000	74,000	36,000	36,000	7,540	8,000	91,000	53,000	36,000
3,970	6,000	74,000	36,000	36,000	7,600	8,000	91,000	53,000	36,000
4,000	6,000	74,000	36,000	36,000	7,700	8,000	91,000	53,000	36,000
4,100	6,000	74,000	36,000	36,000	7,800	8,000	91,000	53,000	36,000
4,200	6,000	74,000	36,000	36,000	7,900	8,000	91,000	53,000	36,000
4,300	6,000	74,000	36,000	36,000	7,940	8,000	91,000	53,000	36,000
4,370	6,000	74,000	36,000	36,000	8,000	8,000	91,000	53,000	36,000
4,400	6,000	74,000	36,000	36,000	8,100	10,000	103,000	61,000	40,000
4,500	6,000	74,000	36,000	36,000	8,200	10,000	103,000	61,000	40,000
4,600	6,000	74,000	36,000	36,000	8,300	10,000	103,000	61,000	40,000
4,650	6,000	74,000	36,000	36,000	8,330	10,000	103,000	61,000	40,000
4,700	6,000	74,000	36,000	36,000	8,400	10,000	103,000	61,000	40,000
4,760	6,000	82,000	44,000	36,000	8,500	10,000	103,000	61,000	40,000
4,800	6,000	82,000	44,000	36,000	8,600	10,000	103,000	61,000	40,000
4,900	6,000	82,000	44,000	36,000	8,700	10,000	103,000	61,000	40,000
5,000	6,000	82,000	44,000	36,000	8,730	10,000	103,000	61,000	40,000
5,100	6,000	82,000	44,000	36,000	8,800	10,000	103,000	61,000	40,000
5,160	6,000	82,000	44,000	36,000	8,900	10,000	103,000	61,000	40,000
5,200	6,000	82,000	44,000	36,000	9,000	10,000	103,000	61,000	40,000
5,300	6,000	82,000	44,000	36,000	9,100	10,000	103,000	61,000	40,000
5,400	6,000	82,000	44,000	36,000	9,130	10,000	103,000	61,000	40,000
5,500	6,000	82,000	44,000	36,000	9,200	10,000	103,000	61,000	40,000
5,550	6,000	82,000	44,000	36,000	9,250	10,000	103,000	61,000	40,000
5,560	6,000	82,000	44,000	36,000	9,300	10,000	103,000	61,000	40,000
5,600	6,000	82,000	44,000	36,000	9,400	10,000	103,000	61,000	40,000
5,700	6,000	82,000	44,000	36,000	9,500	10,000	103,000	61,000	40,000
5,800	6,000	82,000	44,000	36,000	9,520	10,000	103,000	61,000	40,000
5,900	6,000	82,000	44,000	36,000	9,600	10,000	103,000	61,000	40,000
5,950	6,000	82,000	44,000	36,000	9,700	10,000	103,000	61,000	40,000
6,000	6,000	82,000	44,000	36,000	9,800	10,000	103,000	61,000	40,000
6,100	8,000	91,000	53,000	36,000	9,900	10,000	103,000	61,000	40,000
6,200	8,000	91,000	53,000	36,000	9,920	10,000	103,000	61,000	40,000
6,300	8,000	91,000	53,000	36,000	10,000	10,000	103,000	61,000	40,000
6,350	8,000	91,000	53,000	36,000	10,100	12,000	118,000	71,000	45,000
6,400	8,000	91,000	53,000	36,000	10,200	12,000	118,000	71,000	45,000
6,500	8,000	91,000	53,000	36,000	10,300	12,000	118,000	71,000	45,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
10,320	12,000	118,000	71,000	45,000	13,500	14,000	124,000	77,000	45,000
10,400	12,000	118,000	71,000	45,000	13,700	14,000	124,000	77,000	45,000
10,500	12,000	118,000	71,000	45,000	14,000	14,000	124,000	77,000	45,000
10,600	12,000	118,000	71,000	45,000	14,200	16,000	133,000	83,000	48,000
10,700	12,000	118,000	71,000	45,000	14,290	16,000	133,000	83,000	48,000
10,800	12,000	118,000	71,000	45,000	14,500	16,000	133,000	83,000	48,000
10,900	12,000	118,000	71,000	45,000	14,700	16,000	133,000	83,000	48,000
11,000	12,000	118,000	71,000	45,000	15,000	16,000	133,000	83,000	48,000
11,100	12,000	118,000	71,000	45,000	15,200	16,000	133,000	83,000	48,000
11,110	12,000	118,000	71,000	45,000	15,500	16,000	133,000	83,000	48,000
11,200	12,000	118,000	71,000	45,000	15,700	16,000	133,000	83,000	48,000
11,300	12,000	118,000	71,000	45,000	16,000	16,000	133,000	83,000	48,000
11,400	12,000	118,000	71,000	45,000	16,500	18,000	143,000	93,000	48,000
11,500	12,000	118,000	71,000	45,000	17,000	18,000	143,000	93,000	48,000
11,600	12,000	118,000	71,000	45,000	17,500	18,000	143,000	93,000	48,000
11,700	12,000	118,000	71,000	45,000	18,000	18,000	143,000	93,000	48,000
11,800	12,000	118,000	71,000	45,000	18,500	20,000	153,000	101,000	50,000
11,900	12,000	118,000	71,000	45,000	19,000	20,000	153,000	101,000	50,000
11,910	12,000	118,000	71,000	45,000	19,500	20,000	153,000	101,000	50,000
12,000	12,000	118,000	71,000	45,000	20,000	20,000	153,000	101,000	50,000
12,200	14,000	124,000	77,000	45,000					
12,500	14,000	124,000	77,000	45,000					
12,700	14,000	124,000	77,000	45,000					
13,000	14,000	124,000	77,000	45,000					

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

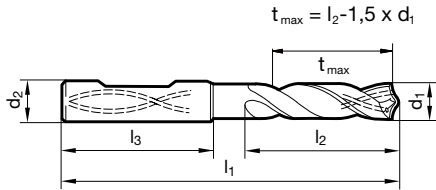


Katalog-Nr. 51681



P	M	K	N	S	H
●	○	●	○	○	○

- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
3,000	6,000	66,000	28,000	36,000
3,100	6,000	66,000	28,000	36,000
3,170	6,000	66,000	28,000	36,000
3,200	6,000	66,000	28,000	36,000
3,250	6,000	66,000	28,000	36,000
3,300	6,000	66,000	28,000	36,000
3,400	6,000	66,000	28,000	36,000
3,500	6,000	66,000	28,000	36,000
3,570	6,000	66,000	28,000	36,000
3,600	6,000	66,000	28,000	36,000
3,700	6,000	66,000	28,000	36,000
3,800	6,000	74,000	36,000	36,000
3,900	6,000	74,000	36,000	36,000
3,970	6,000	74,000	36,000	36,000
4,000	6,000	74,000	36,000	36,000
4,100	6,000	74,000	36,000	36,000
4,200	6,000	74,000	36,000	36,000
4,300	6,000	74,000	36,000	36,000
4,370	6,000	74,000	36,000	36,000
4,400	6,000	74,000	36,000	36,000
4,500	6,000	74,000	36,000	36,000
4,600	6,000	74,000	36,000	36,000
4,650	6,000	74,000	36,000	36,000
4,700	6,000	74,000	36,000	36,000
4,760	6,000	82,000	44,000	36,000
4,800	6,000	82,000	44,000	36,000
4,900	6,000	82,000	44,000	36,000
5,000	6,000	82,000	44,000	36,000
5,100	6,000	82,000	44,000	36,000
5,160	6,000	82,000	44,000	36,000
5,200	6,000	82,000	44,000	36,000
5,300	6,000	82,000	44,000	36,000
5,400	6,000	82,000	44,000	36,000
5,500	6,000	82,000	44,000	36,000
5,560	6,000	82,000	44,000	36,000
5,600	6,000	82,000	44,000	36,000
5,700	6,000	82,000	44,000	36,000
5,800	6,000	82,000	44,000	36,000
5,900	6,000	82,000	44,000	36,000
5,950	6,000	82,000	44,000	36,000
6,000	6,000	82,000	44,000	36,000
6,100	8,000	91,000	53,000	36,000
6,200	8,000	91,000	53,000	36,000
6,300	8,000	91,000	53,000	36,000
6,350	8,000	91,000	53,000	36,000
6,400	8,000	91,000	53,000	36,000
6,500	8,000	91,000	53,000	36,000
6,600	8,000	91,000	53,000	36,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
6,700	8,000	91,000	53,000	36,000
6,750	8,000	91,000	53,000	36,000
6,800	8,000	91,000	53,000	36,000
6,900	8,000	91,000	53,000	36,000
7,000	8,000	91,000	53,000	36,000
7,100	8,000	91,000	53,000	36,000
7,140	8,000	91,000	53,000	36,000
7,200	8,000	91,000	53,000	36,000
7,300	8,000	91,000	53,000	36,000
7,400	8,000	91,000	53,000	36,000
7,500	8,000	91,000	53,000	36,000
7,540	8,000	91,000	53,000	36,000
7,600	8,000	91,000	53,000	36,000
7,700	8,000	91,000	53,000	36,000
7,800	8,000	91,000	53,000	36,000
7,900	8,000	91,000	53,000	36,000
7,940	8,000	91,000	53,000	36,000
8,000	8,000	91,000	53,000	36,000
8,100	10,000	103,000	61,000	40,000
8,200	10,000	103,000	61,000	40,000
8,300	10,000	103,000	61,000	40,000
8,330	10,000	103,000	61,000	40,000
8,400	10,000	103,000	61,000	40,000
8,500	10,000	103,000	61,000	40,000
8,600	10,000	103,000	61,000	40,000
8,700	10,000	103,000	61,000	40,000
8,730	10,000	103,000	61,000	40,000
8,800	10,000	103,000	61,000	40,000
8,900	10,000	103,000	61,000	40,000
9,000	10,000	103,000	61,000	40,000
9,100	10,000	103,000	61,000	40,000
9,130	10,000	103,000	61,000	40,000
9,200	10,000	103,000	61,000	40,000
9,250	10,000	103,000	61,000	40,000
9,300	10,000	103,000	61,000	40,000
9,400	10,000	103,000	61,000	40,000
9,500	10,000	103,000	61,000	40,000
9,520	10,000	103,000	61,000	40,000
9,600	10,000	103,000	61,000	40,000
9,700	10,000	103,000	61,000	40,000
9,800	10,000	103,000	61,000	40,000
9,900	10,000	103,000	61,000	40,000
9,920	10,000	103,000	61,000	40,000
10,000	10,000	103,000	61,000	40,000
10,100	12,000	118,000	71,000	45,000
10,200	12,000	118,000	71,000	45,000
10,300	12,000	118,000	71,000	45,000
10,320	12,000	118,000	71,000	45,000

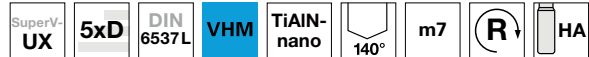
d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
10,400	12,000	118,000	71,000	45,000	13,700	14,000	124,000	77,000	45,000
10,500	12,000	118,000	71,000	45,000	14,000	14,000	124,000	77,000	45,000
10,600	12,000	118,000	71,000	45,000	14,200	16,000	133,000	83,000	48,000
10,700	12,000	118,000	71,000	45,000	14,290	16,000	133,000	83,000	48,000
10,800	12,000	118,000	71,000	45,000	14,500	16,000	133,000	83,000	48,000
10,900	12,000	118,000	71,000	45,000	14,700	16,000	133,000	83,000	48,000
11,000	12,000	118,000	71,000	45,000	15,000	16,000	133,000	83,000	48,000
11,100	12,000	118,000	71,000	45,000	15,200	16,000	133,000	83,000	48,000
11,110	12,000	118,000	71,000	45,000	15,500	16,000	133,000	83,000	48,000
11,200	12,000	118,000	71,000	45,000	15,700	16,000	133,000	83,000	48,000
11,300	12,000	118,000	71,000	45,000	16,000	16,000	133,000	83,000	48,000
11,400	12,000	118,000	71,000	45,000	16,500	18,000	143,000	93,000	48,000
11,500	12,000	118,000	71,000	45,000	17,000	18,000	143,000	93,000	48,000
11,600	12,000	118,000	71,000	45,000	17,500	18,000	143,000	93,000	48,000
11,700	12,000	118,000	71,000	45,000	18,000	18,000	143,000	93,000	48,000
11,800	12,000	118,000	71,000	45,000	18,500	20,000	153,000	101,000	50,000
11,900	12,000	118,000	71,000	45,000	19,000	20,000	153,000	101,000	50,000
11,910	12,000	118,000	71,000	45,000	19,050	20,000	153,000	101,000	50,000
12,000	12,000	118,000	71,000	45,000	19,500	20,000	153,000	101,000	50,000
12,200	14,000	124,000	77,000	45,000	20,000	20,000	153,000	101,000	50,000
12,500	14,000	124,000	77,000	45,000					
12,700	14,000	124,000	77,000	45,000					
13,000	14,000	124,000	77,000	45,000					
13,500	14,000	124,000	77,000	45,000					

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

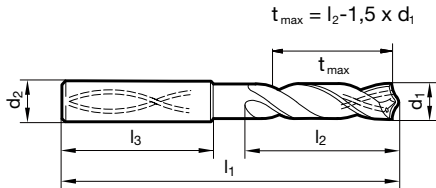


Katalog-Nr. 51785



P	M	K	N	S	H
●	○	○	○	○	○

- Ausspitzung $\geq \varnothing 3,000$
- spezielle Mikrogeometrie
- Flächenanschliff
- Hauptschneidenform gerade
- Kopfbeschichtung
- polierte Spanntuten
- hohe konstante Standzeiten
- hohe Schnittparameter möglich



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
3,000	6,000	66,000	28,000	36,000
3,100	6,000	66,000	28,000	36,000
3,170	6,000	66,000	28,000	36,000
3,200	6,000	66,000	28,000	36,000
3,250	6,000	66,000	28,000	36,000
3,300	6,000	66,000	28,000	36,000
3,400	6,000	66,000	28,000	36,000
3,500	6,000	66,000	28,000	36,000
3,570	6,000	66,000	28,000	36,000
3,600	6,000	66,000	28,000	36,000
3,700	6,000	66,000	28,000	36,000
3,800	6,000	74,000	36,000	36,000
3,900	6,000	74,000	36,000	36,000
3,970	6,000	74,000	36,000	36,000
4,000	6,000	74,000	36,000	36,000
4,040	6,000	74,000	36,000	36,000
4,100	6,000	74,000	36,000	36,000
4,200	6,000	74,000	36,000	36,000
4,300	6,000	74,000	36,000	36,000
4,370	6,000	74,000	36,000	36,000
4,400	6,000	74,000	36,000	36,000
4,500	6,000	74,000	36,000	36,000
4,600	6,000	74,000	36,000	36,000
4,650	6,000	74,000	36,000	36,000
4,700	6,000	74,000	36,000	36,000
4,760	6,000	82,000	44,000	36,000
4,800	6,000	82,000	44,000	36,000
4,900	6,000	82,000	44,000	36,000
5,000	6,000	82,000	44,000	36,000
5,100	6,000	82,000	44,000	36,000
5,110	6,000	82,000	44,000	36,000
5,160	6,000	82,000	44,000	36,000
5,200	6,000	82,000	44,000	36,000
5,300	6,000	82,000	44,000	36,000
5,400	6,000	82,000	44,000	36,000
5,410	6,000	82,000	44,000	36,000
5,500	6,000	82,000	44,000	36,000
5,550	6,000	82,000	44,000	36,000
5,560	6,000	82,000	44,000	36,000
5,600	6,000	82,000	44,000	36,000
5,650	6,000	82,000	44,000	36,000
5,700	6,000	82,000	44,000	36,000
5,800	6,000	82,000	44,000	36,000
5,900	6,000	82,000	44,000	36,000
5,950	6,000	82,000	44,000	36,000
6,000	6,000	82,000	44,000	36,000
6,100	8,000	91,000	53,000	36,000
6,200	8,000	91,000	53,000	36,000

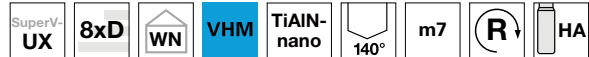
d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
6,300	8,000	91,000	53,000	36,000
6,350	8,000	91,000	53,000	36,000
6,400	8,000	91,000	53,000	36,000
6,500	8,000	91,000	53,000	36,000
6,530	8,000	91,000	53,000	36,000
6,600	8,000	91,000	53,000	36,000
6,700	8,000	91,000	53,000	36,000
6,750	8,000	91,000	53,000	36,000
6,800	8,000	91,000	53,000	36,000
6,900	8,000	91,000	53,000	36,000
7,000	8,000	91,000	53,000	36,000
7,100	8,000	91,000	53,000	36,000
7,140	8,000	91,000	53,000	36,000
7,200	8,000	91,000	53,000	36,000
7,300	8,000	91,000	53,000	36,000
7,400	8,000	91,000	53,000	36,000
7,500	8,000	91,000	53,000	36,000
7,540	8,000	91,000	53,000	36,000
7,550	8,000	91,000	53,000	36,000
7,600	8,000	91,000	53,000	36,000
7,650	8,000	91,000	53,000	36,000
7,700	8,000	91,000	53,000	36,000
7,800	8,000	91,000	53,000	36,000
7,900	8,000	91,000	53,000	36,000
7,940	8,000	91,000	53,000	36,000
8,000	8,000	91,000	53,000	36,000
8,100	10,000	103,000	61,000	40,000
8,200	10,000	103,000	61,000	40,000
8,300	10,000	103,000	61,000	40,000
8,330	10,000	103,000	61,000	40,000
8,400	10,000	103,000	61,000	40,000
8,500	10,000	103,000	61,000	40,000
8,600	10,000	103,000	61,000	40,000
8,700	10,000	103,000	61,000	40,000
8,730	10,000	103,000	61,000	40,000
8,800	10,000	103,000	61,000	40,000
8,900	10,000	103,000	61,000	40,000
9,000	10,000	103,000	61,000	40,000
9,100	10,000	103,000	61,000	40,000
9,130	10,000	103,000	61,000	40,000
9,200	10,000	103,000	61,000	40,000
9,250	10,000	103,000	61,000	40,000
9,300	10,000	103,000	61,000	40,000
9,340	10,000	103,000	61,000	40,000
9,400	10,000	103,000	61,000	40,000
9,500	10,000	103,000	61,000	40,000
9,520	10,000	103,000	61,000	40,000
9,550	10,000	103,000	61,000	40,000

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

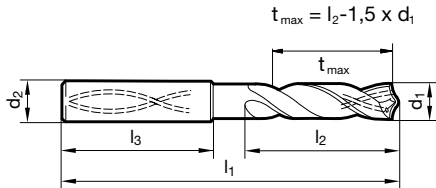


Katalog-Nr. 51790



P	M	K	N	S	H
●	○	○	○	○	○

- Ausspitzung $\geq \varnothing 3,000$
- spezielle Mikrogeometrie
- Flächenanschliff
- Hauptschneidenform gerade
- Kopfbeschichtung
- polierte Spanntuten
- hohe konstante Standzeiten
- hohe Schnittparameter möglich



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
3,000	6,000	70,000	30,000	36,000
3,170	6,000	70,000	30,000	36,000
3,200	6,000	70,000	30,000	36,000
3,250	6,000	70,000	30,000	36,000
3,300	6,000	70,000	30,000	36,000
3,400	6,000	75,000	35,500	36,000
3,500	6,000	75,000	35,500	36,000
3,570	6,000	75,000	35,500	36,000
3,600	6,000	75,000	35,500	36,000
3,700	6,000	75,000	35,500	36,000
3,800	6,000	75,000	37,500	36,000
3,900	6,000	75,000	37,500	36,000
3,970	6,000	75,000	37,500	36,000
4,000	6,000	75,000	37,500	36,000
4,040	6,000	75,000	37,500	36,000
4,100	6,000	75,000	37,500	36,000
4,200	6,000	75,000	37,500	36,000
4,300	6,000	85,000	45,000	36,000
4,370	6,000	85,000	45,000	36,000
4,400	6,000	85,000	45,000	36,000
4,500	6,000	85,000	45,000	36,000
4,600	6,000	85,000	45,000	36,000
4,650	6,000	85,000	45,000	36,000
4,700	6,000	85,000	45,000	36,000
4,760	6,000	90,000	50,000	36,000
4,800	6,000	90,000	50,000	36,000
4,900	6,000	90,000	50,000	36,000
5,000	6,000	90,000	50,000	36,000
5,100	6,000	90,000	50,000	36,000
5,110	6,000	90,000	50,000	36,000
5,160	6,000	90,000	50,000	36,000
5,200	6,000	90,000	50,000	36,000
5,300	6,000	90,000	50,000	36,000
5,400	6,000	97,000	57,000	36,000
5,410	6,000	97,000	57,000	36,000
5,500	6,000	97,000	57,000	36,000
5,550	6,000	97,000	57,000	36,000
5,560	6,000	97,000	57,000	36,000
5,600	6,000	97,000	57,000	36,000
5,700	6,000	97,000	57,000	36,000
5,800	6,000	97,000	57,000	36,000
5,900	6,000	97,000	57,000	36,000
5,950	6,000	97,000	57,000	36,000
6,000	6,000	97,000	57,000	36,000
6,100	8,000	106,000	66,000	36,000
6,200	8,000	106,000	66,000	36,000
6,300	8,000	106,000	66,000	36,000
6,350	8,000	106,000	66,000	36,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
6,400	8,000	106,000	66,000	36,000
6,500	8,000	106,000	66,000	36,000
6,530	8,000	106,000	66,000	36,000
6,600	8,000	106,000	66,000	36,000
6,700	8,000	106,000	66,000	36,000
6,750	8,000	106,000	66,000	36,000
6,800	8,000	106,000	66,000	36,000
6,900	8,000	116,000	76,000	36,000
7,000	8,000	116,000	76,000	36,000
7,100	8,000	116,000	76,000	36,000
7,140	8,000	116,000	76,000	36,000
7,200	8,000	116,000	76,000	36,000
7,300	8,000	116,000	76,000	36,000
7,400	8,000	116,000	76,000	36,000
7,500	8,000	116,000	76,000	36,000
7,540	8,000	116,000	76,000	36,000
7,600	8,000	116,000	76,000	36,000
7,700	8,000	116,000	76,000	36,000
7,800	8,000	116,000	76,000	36,000
7,900	8,000	116,000	76,000	36,000
7,940	8,000	116,000	76,000	36,000
8,000	8,000	116,000	76,000	36,000
8,100	10,000	131,000	87,000	40,000
8,200	10,000	131,000	87,000	40,000
8,300	10,000	131,000	87,000	40,000
8,330	10,000	131,000	87,000	40,000
8,400	10,000	131,000	87,000	40,000
8,500	10,000	131,000	87,000	40,000
8,600	10,000	131,000	87,000	40,000
8,700	10,000	131,000	87,000	40,000
8,730	10,000	131,000	87,000	40,000
8,800	10,000	131,000	87,000	40,000
8,900	10,000	131,000	87,000	40,000
9,000	10,000	131,000	87,000	40,000
9,100	10,000	139,000	95,000	40,000
9,130	10,000	139,000	95,000	40,000
9,200	10,000	139,000	95,000	40,000
9,250	10,000	139,000	95,000	40,000
9,300	10,000	139,000	95,000	40,000
9,340	10,000	139,000	95,000	40,000
9,400	10,000	139,000	95,000	40,000
9,500	10,000	139,000	95,000	40,000
9,520	10,000	139,000	95,000	40,000
9,600	10,000	139,000	95,000	40,000
9,700	10,000	139,000	95,000	40,000
9,800	10,000	139,000	95,000	40,000
9,900	10,000	139,000	95,000	40,000
9,920	10,000	139,000	95,000	40,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
10,000	10,000	139,000	95,000	40,000	13,890	14,000	182,000	133,000	45,000
10,100	12,000	155,000	106,000	45,000	14,000	14,000	182,000	133,000	45,000
10,200	12,000	155,000	106,000	45,000	14,100	16,000	204,000	152,000	48,000
10,300	12,000	155,000	106,000	45,000	14,200	16,000	204,000	152,000	48,000
10,320	12,000	155,000	106,000	45,000	14,290	16,000	204,000	152,000	48,000
10,400	12,000	155,000	106,000	45,000	14,500	16,000	204,000	152,000	48,000
10,500	12,000	155,000	106,000	45,000	14,700	16,000	204,000	152,000	48,000
10,600	12,000	155,000	106,000	45,000	15,000	16,000	204,000	152,000	48,000
10,700	12,000	155,000	106,000	45,000	15,100	16,000	204,000	152,000	48,000
10,720	12,000	155,000	106,000	45,000	15,480	16,000	204,000	152,000	48,000
10,800	12,000	155,000	106,000	45,000	15,500	16,000	204,000	152,000	48,000
10,900	12,000	155,000	106,000	45,000	15,700	16,000	204,000	152,000	48,000
11,000	12,000	155,000	106,000	45,000	15,870	16,000	204,000	152,000	48,000
11,100	12,000	163,000	114,000	45,000	16,000	16,000	204,000	152,000	48,000
11,110	12,000	163,000	114,000	45,000	16,500	18,000	223,000	171,000	48,000
11,200	12,000	163,000	114,000	45,000	16,900	18,000	223,000	171,000	48,000
11,300	12,000	163,000	114,000	45,000	17,000	18,000	223,000	171,000	48,000
11,400	12,000	163,000	114,000	45,000	17,500	18,000	223,000	171,000	48,000
11,500	12,000	163,000	114,000	45,000	17,700	18,000	223,000	171,000	48,000
11,510	12,000	163,000	114,000	45,000	18,000	18,000	223,000	171,000	48,000
11,600	12,000	163,000	114,000	45,000	18,500	20,000	244,000	190,000	50,000
11,700	12,000	163,000	114,000	45,000	18,900	20,000	244,000	190,000	50,000
11,800	12,000	163,000	114,000	45,000	19,000	20,000	244,000	190,000	50,000
11,900	12,000	163,000	114,000	45,000	19,050	20,000	244,000	190,000	50,000
11,910	12,000	163,000	114,000	45,000	19,500	20,000	244,000	190,000	50,000
12,000	12,000	163,000	114,000	45,000	20,000	20,000	244,000	190,000	50,000
12,100	14,000	182,000	133,000	45,000					
12,200	14,000	182,000	133,000	45,000					
12,300	14,000	182,000	133,000	45,000					
12,500	14,000	182,000	133,000	45,000					
12,700	14,000	182,000	133,000	45,000					
13,000	14,000	182,000	133,000	45,000					
13,100	14,000	182,000	133,000	45,000					
13,490	14,000	182,000	133,000	45,000					
13,500	14,000	182,000	133,000	45,000					
13,700	14,000	182,000	133,000	45,000					

Spiralbohrer mit Zylinderschaft

Spiralbohrer mit verst. Zylinderschaft

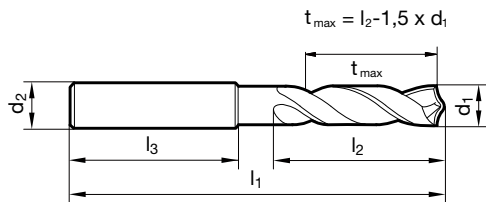


Katalog-Nr. 51146



P	M	K	N	S	H
○		○			●

- Hauptschneidenform gerade (durch Korrektur)
- Flächenanschliff



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
2,600	6,000	62,000	20,000	36,000
3,000	6,000	62,000	20,000	36,000
3,400	6,000	62,000	20,000	36,000
4,000	6,000	66,000	24,000	36,000
4,300	6,000	66,000	24,000	36,000
5,000	6,000	66,000	28,000	36,000
5,100	6,000	66,000	28,000	36,000
5,600	6,000	66,000	28,000	36,000
6,000	6,000	66,000	28,000	36,000
6,900	8,000	79,000	34,000	36,000
7,100	8,000	79,000	41,000	36,000
8,000	8,000	79,000	41,000	36,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
8,600	10,000	89,000	47,000	40,000
9,100	10,000	89,000	47,000	40,000
10,000	10,000	89,000	47,000	40,000
10,400	12,000	102,000	55,000	45,000
10,600	12,000	102,000	55,000	45,000
11,100	12,000	102,000	55,000	45,000
12,000	12,000	102,000	55,000	45,000
14,100	16,000	115,000	65,000	48,000

Einlippenbohrer

Einlippenbohrer SuperT-NXL

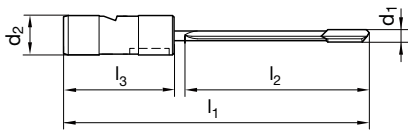


Katalog-Nr. 65030



P	M	K	N	S	H
●	○	●	●	○	○

- fixe Gesamtlänge 800 mm
- Umfangsform G
- universell einsetzbar
- nur auf Tiefbohrmaschinen verwendbar



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	Code-Nr.
5,000	25,000	800,000	700,000	70,000	5,000
6,000	25,000	800,000	700,000	70,000	6,000
7,000	25,000	800,000	700,000	70,000	7,000
8,000	25,000	800,000	700,000	70,000	8,000
9,000	25,000	800,000	700,000	70,000	9,000
10,000	25,000	800,000	700,000	70,000	10,000
11,500	25,000	800,000	700,000	70,000	11,500
12,000	25,000	800,000	700,000	70,000	12,000
15,000	25,000	800,000	700,000	70,000	15,000
16,000	25,000	800,000	700,000	70,000	16,000
18,000	25,000	800,000	700,000	70,000	18,000
19,000	25,000	800,000	700,000	70,000	19,000
20,000	25,000	800,000	700,000	70,000	20,000
21,000	25,000	800,000	700,000	70,000	21,000
22,000	25,000	800,000	700,000	70,000	22,000
25,000	25,000	800,000	700,000	70,000	25,000

Einlippenbohrer

Einlippenbohrer SuperT-NXL

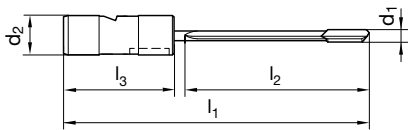


Katalog-Nr. 65031



P	M	K	N	S	H
●	○	●	●	○	○

- fixe Gesamtlänge 1200 mm
- Umfangsform G
- universell einsetzbar
- nur auf Tiefbohrmaschinen verwendbar



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	Code-Nr.
5,000	25,000	1200,000	1100,000	70,000	5,000
6,000	25,000	1200,000	1100,000	70,000	6,000
7,000	25,000	1200,000	1100,000	70,000	7,000
8,000	25,000	1200,000	1100,000	70,000	8,000
9,000	25,000	1200,000	1100,000	70,000	9,000
10,000	25,000	1200,000	1100,000	70,000	10,000
11,500	25,000	1200,000	1100,000	70,000	11,500
12,000	25,000	1200,000	1100,000	70,000	12,000
15,000	25,000	1200,000	1100,000	70,000	15,000
16,000	25,000	1200,000	1100,000	70,000	16,000
18,000	25,000	1200,000	1100,000	70,000	18,000
19,000	25,000	1200,000	1100,000	70,000	19,000
20,000	25,000	1200,000	1100,000	70,000	20,000
22,000	25,000	1200,000	1100,000	70,000	22,000

Einlippenbohrer

Einlippenbohrer SuperT-NXL

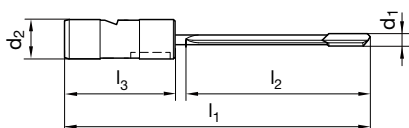


Katalog-Nr. 65032



P	M	K	N	S	H
●	○	●	●	○	○

- fixe Gesamtlänge 1600 mm
- Umfangsform G
- universell einsetzbar
- nur auf Tiefbohrmaschinen verwendbar



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	Code-Nr.
4,000	25,000	1600,000	1500,000	70,000	4,000
5,000	25,000	1600,000	1500,000	70,000	5,000
5,500	25,000	1600,000	1500,000	70,000	5,500
6,000	25,000	1600,000	1500,000	70,000	6,000
6,500	25,000	1600,000	1500,000	70,000	6,500
7,000	25,000	1600,000	1500,000	70,000	7,000
7,500	25,000	1600,000	1500,000	70,000	7,500
8,000	25,000	1600,000	1500,000	70,000	8,000
9,000	25,000	1600,000	1500,000	70,000	9,000
9,500	25,000	1600,000	1500,000	70,000	9,500
10,000	25,000	1600,000	1500,000	70,000	10,000
11,000	25,000	1600,000	1500,000	70,000	11,000
11,500	25,000	1600,000	1500,000	70,000	11,500
12,000	25,000	1600,000	1500,000	70,000	12,000
13,000	25,000	1600,000	1500,000	70,000	13,000
14,000	25,000	1600,000	1500,000	70,000	14,000
15,000	25,000	1600,000	1500,000	70,000	15,000
16,000	25,000	1600,000	1500,000	70,000	16,000
17,000	25,000	1600,000	1500,000	70,000	17,000
18,000	25,000	1600,000	1500,000	70,000	18,000
19,000	25,000	1600,000	1500,000	70,000	19,000
20,000	25,000	1600,000	1500,000	70,000	20,000
22,000	25,000	1600,000	1500,000	70,000	22,000

Einlippenbohrer

Einlippenbohrer SuperT-NXL

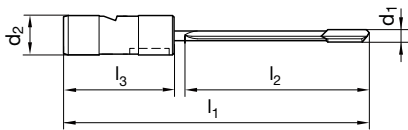


Katalog-Nr. 65033



P	M	K	N	S	H
●	○	●	●	○	○

- fixe Gesamtlänge 2000 mm
- Umfangsform G
- universell einsetzbar
- nur auf Tiefbohrmaschinen verwendbar



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	Code-Nr.
5,000	25,000	2000,000	1900,000	70,000	5,000
6,000	25,000	2000,000	1900,000	70,000	6,000
7,000	25,000	2000,000	1900,000	70,000	7,000
8,000	25,000	2000,000	1900,000	70,000	8,000
9,000	25,000	2000,000	1900,000	70,000	9,000
10,000	25,000	2000,000	1900,000	70,000	10,000
11,500	25,000	2000,000	1900,000	70,000	11,500
12,000	25,000	2000,000	1900,000	70,000	12,000
15,000	25,000	2000,000	1900,000	70,000	15,000
16,000	25,000	2000,000	1900,000	70,000	16,000
18,000	25,000	2000,000	1900,000	70,000	18,000
19,000	25,000	2000,000	1900,000	70,000	19,000
20,000	25,000	2000,000	1900,000	70,000	20,000
22,000	25,000	2000,000	1900,000	70,000	22,000

Spiralbohrer mit Zylinderschaft

V16-Spiralbohrer

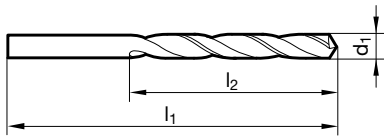


Katalog-Nr. 71018



P	M	K	N	S	H
●	●	●	●	●	○

- Ausspitzung $\geq \varnothing 1,000$
- optimierter Kreuzanschliff
- 8%-kobaltlegierter HSCO-Schnellarbeitsstahl für längere Werkzeuglebensdauer, höhere Warmhärte und Wärmefestigkeit
- für stationären und mobilen Einsatz



d1 mm	inch	l1 mm	l2 mm	d1 mm	inch	l1 mm	l2 mm
1,000		34,000	12,000	4,900		86,000	52,000
1,100		36,000	14,000	5,000		86,000	52,000
1,200		38,000	16,000	5,100		86,000	52,000
1,300		38,000	16,000	5,160	13/64	86,000	52,000
1,400		40,000	18,000	5,200		86,000	52,000
1,500		40,000	18,000	5,300		86,000	52,000
1,590	1/16	43,000	20,000	5,400		93,000	57,000
1,600		43,000	20,000	5,500		93,000	57,000
1,700		43,000	20,000	5,560	7/32	93,000	57,000
1,800		46,000	22,000	5,600		93,000	57,000
1,900		46,000	22,000	5,700		93,000	57,000
1,980	5/64	49,000	24,000	5,800		93,000	57,000
2,000		49,000	24,000	5,900		93,000	57,000
2,100		49,000	24,000	5,950	15/64	93,000	57,000
2,200		53,000	27,000	6,000		93,000	57,000
2,300		53,000	27,000	6,100		101,000	63,000
2,380	3/32	57,000	30,000	6,200		101,000	63,000
2,400		57,000	30,000	6,300		101,000	63,000
2,500		57,000	30,000	6,350	1/4	101,000	63,000
2,600		57,000	30,000	6,400		101,000	63,000
2,700		61,000	33,000	6,500		101,000	63,000
2,780	7/64	61,000	33,000	6,600		101,000	63,000
2,800		61,000	33,000	6,700		101,000	63,000
2,900		61,000	33,000	6,800		109,000	69,000
3,000		61,000	33,000	6,900		109,000	69,000
3,100		65,000	36,000	7,000		109,000	69,000
3,170	1/8	65,000	36,000	7,100		109,000	69,000
3,200		65,000	36,000	7,140	9/32	109,000	69,000
3,250		65,000	36,000	7,200		109,000	69,000
3,300		65,000	36,000	7,300		109,000	69,000
3,400		70,000	39,000	7,400		109,000	69,000
3,500		70,000	39,000	7,500		109,000	69,000
3,570	9/64	70,000	39,000	7,540	19/64	117,000	75,000
3,600		70,000	39,000	7,600		117,000	75,000
3,700		70,000	39,000	7,700		117,000	75,000
3,800		75,000	43,000	7,800		117,000	75,000
3,900		75,000	43,000	7,900		117,000	75,000
3,970	5/32	75,000	43,000	7,940	5/16	117,000	75,000
4,000		75,000	43,000	8,000		117,000	75,000
4,100		75,000	43,000	8,100		117,000	75,000
4,200		75,000	43,000	8,200		117,000	75,000
4,300		80,000	47,000	8,300		117,000	75,000
4,400		80,000	47,000	8,330	21/64	117,000	75,000
4,500		80,000	47,000	8,400		117,000	75,000
4,600		80,000	47,000	8,500		117,000	75,000
4,700		80,000	47,000	8,600		125,000	81,000
4,760	3/16	86,000	52,000	8,700		125,000	81,000
4,800		86,000	52,000	8,730	11/32	125,000	81,000

d1 mm	inch	l1 mm	l2 mm	d1 mm	inch	l1 mm	l2 mm
8,800		125,000	81,000	10,320	13/32	133,000	87,000
8,900		125,000	81,000	10,500		133,000	87,000
9,000		125,000	81,000	10,720	27/64	142,000	94,000
9,100		125,000	81,000	10,800		142,000	94,000
9,130	23/64	125,000	81,000	11,000		142,000	94,000
9,200		125,000	81,000	11,110	7/16	142,000	94,000
9,300		125,000	81,000	11,500		142,000	94,000
9,500		125,000	81,000	11,510	29/64	142,000	94,000
9,520	3/8	133,000	87,000	11,910	15/32	151,000	101,000
9,600		133,000	87,000	12,000		151,000	101,000
9,700		133,000	87,000	12,200		151,000	101,000
9,800		133,000	87,000	12,300	31/64	151,000	101,000
9,900		133,000	87,000	12,500		151,000	101,000
9,920	25/64	133,000	87,000	12,700	1/2	151,000	101,000
10,000		133,000	87,000	12,800		151,000	101,000
10,100		133,000	87,000	13,000		151,000	101,000
10,200		133,000	87,000				
10,300		133,000	87,000				

Spiralbohrer mit Zylinderschaft

V16-Spiralbohrer-Sätze



V16	~5xD	DIN 338	M42	Bronze-VAP	135°	h8	R	Cyl
P	M	K	N	S	H			
•	•	•	•	•	○			

- optimierter Kreuzanschliff
- 8%-kobaltlegierter HSCO-Schnellarbeitsstahl
- für stationären und mobilen Einsatz
- Für Monteure und Handwerker stehen Sätze mit den gebräuchlichsten Bohrerabmessungen zur Verfügung, die mit Kassetten geliefert werden können. Auf Wunsch sind andere Satz-Zusammenstellungen möglich.

Katalog-Nr. 71019

Code-Nr.	d1 mm	steigend um mm	Stück/Satz
0,013	1,0-10,0	0,5	19
0,014	1,0-13,0	0,5	25

Spiralbohrer mit Zylinderschaft

Spiralbohrer extra kurz

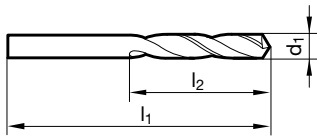


Katalog-Nr. 61131



P	M	K	N	S	H
○	●	○	○	●	

- Ausspitzung $\geq \varnothing 1,000$
- Kegelmantelanschiff
- weite Spannuten
- besonders hohe Verschleißfestigkeit
- besonders hohe Stabilität



d1 mm	inch	l1 mm	l2 mm	d1 mm	inch	l1 mm	l2 mm
1,000		26,000	6,000	5,700		66,000	28,000
1,100		28,000	7,000	5,800		66,000	28,000
1,200		30,000	8,000	5,900		66,000	28,000
1,300		30,000	8,000	6,000		66,000	28,000
1,400		32,000	9,000	6,100		70,000	31,000
1,600		34,000	10,000	6,200		70,000	31,000
1,700		34,000	10,000	6,300		70,000	31,000
1,800		36,000	11,000	6,400		70,000	31,000
1,900		36,000	11,000	6,500		70,000	31,000
2,000		38,000	12,000	6,600		70,000	31,000
2,100		38,000	12,000	6,700		70,000	31,000
2,200		40,000	13,000	6,800		74,000	34,000
2,300		40,000	13,000	6,900		74,000	34,000
2,400		43,000	14,000	7,000		74,000	34,000
2,500		43,000	14,000	7,100		74,000	34,000
2,700		46,000	16,000	7,200		74,000	34,000
2,800		46,000	16,000	7,300		74,000	34,000
2,900		46,000	16,000	7,400		74,000	34,000
3,000		46,000	16,000	7,500		74,000	34,000
3,100		49,000	18,000	7,600		79,000	37,000
3,200		49,000	18,000	7,700		79,000	37,000
3,400		52,000	20,000	7,800		79,000	37,000
3,500		52,000	20,000	7,900		79,000	37,000
3,600		52,000	20,000	8,000		79,000	37,000
3,700		52,000	20,000	8,100		79,000	37,000
3,800		55,000	22,000	8,200		79,000	37,000
3,900		55,000	22,000	8,300		79,000	37,000
4,100		55,000	22,000	8,400		79,000	37,000
4,200		55,000	22,000	8,500		79,000	37,000
4,300		58,000	24,000	8,800		84,000	40,000
4,400		58,000	24,000	9,000		84,000	40,000
4,500		58,000	24,000	9,300		84,000	40,000
4,600		58,000	24,000	9,500		84,000	40,000
4,700		58,000	24,000	9,800		89,000	43,000
4,800		62,000	26,000	10,000		89,000	43,000
4,900		62,000	26,000	10,200		89,000	43,000
5,000		62,000	26,000	10,500		89,000	43,000
5,100		62,000	26,000	11,000		95,000	47,000
5,300		62,000	26,000	11,500		95,000	47,000
5,400		66,000	28,000	12,000		102,000	51,000
5,500		66,000	28,000				
5,600		66,000	28,000				

Spiralbohrer mit Zylinderschaft

Spiralbohrer kurz

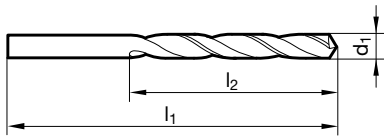


Katalog-Nr. 61232



P	M	K	N	S	H
○	●	○	○	●	

- Ausspitzung $\geq \varnothing 1,000$
- Kegelmantelanschliff
- weite Spannuten
- besonders hohe Stabilität
- besonders hohe Verschleißfestigkeit



d1 mm	inch	l1 mm	l2 mm	d1 mm	inch	l1 mm	l2 mm
1,000		34,000	12,000	5,500		93,000	57,000
1,100		36,000	14,000	5,700		93,000	57,000
1,200		38,000	16,000	5,800		93,000	57,000
1,300		38,000	16,000	5,900		93,000	57,000
1,400		40,000	18,000	6,000		93,000	57,000
1,500		40,000	18,000	6,100		101,000	63,000
1,600		43,000	20,000	6,200		101,000	63,000
1,700		43,000	20,000	6,300		101,000	63,000
1,800		46,000	22,000	6,400		101,000	63,000
1,900		46,000	22,000	6,500		101,000	63,000
2,000		49,000	24,000	6,700		101,000	63,000
2,100		49,000	24,000	6,800		109,000	69,000
2,200		53,000	27,000	6,900		109,000	69,000
2,300		53,000	27,000	7,000		109,000	69,000
2,400		57,000	30,000	7,100		109,000	69,000
2,500		57,000	30,000	7,200		109,000	69,000
2,700		61,000	33,000	7,300		109,000	69,000
2,800		61,000	33,000	7,400		109,000	69,000
2,900		61,000	33,000	7,500		109,000	69,000
3,000		61,000	33,000	7,600		117,000	75,000
3,100		65,000	36,000	7,700		117,000	75,000
3,200		65,000	36,000	7,800		117,000	75,000
3,300		65,000	36,000	7,900		117,000	75,000
3,400		70,000	39,000	8,000		117,000	75,000
3,500		70,000	39,000	8,100		117,000	75,000
3,600		70,000	39,000	8,200		117,000	75,000
3,700		70,000	39,000	8,300		117,000	75,000
3,800		75,000	43,000	8,400		117,000	75,000
4,000		75,000	43,000	8,500		117,000	75,000
4,100		75,000	43,000	8,800		125,000	81,000
4,200		75,000	43,000	9,000		125,000	81,000
4,300		80,000	47,000	9,300		125,000	81,000
4,400		80,000	47,000	9,500		125,000	81,000
4,500		80,000	47,000	9,800		133,000	87,000
4,600		80,000	47,000	10,000		133,000	87,000
4,700		80,000	47,000	10,200		133,000	87,000
4,800		86,000	52,000	10,500		133,000	87,000
4,900		86,000	52,000	11,000		142,000	94,000
5,000		86,000	52,000	11,500		142,000	94,000
5,100		86,000	52,000	12,000		151,000	101,000
5,200		86,000	52,000	12,500		151,000	101,000
5,300		86,000	52,000	13,000		151,000	101,000

Maschinen-Gewindebohrer**V16-Pocket-Satz (Spiralbohrer, Gewindebohrer und Senker)**

- bestehend aus Gewindebohrer Katalog-Nr. 73046 (M3 / M4 / M5 / M6 / M8 / M10), Spiralbohrer Katalog-Nr. 71018 (Ø 2,5 / 3,3 / 4,2 / 5,0 / 6,8 / 8,5) und Kegelsenker 90° Katalog-Nr. 72346 (Ø 6,3 / 12,4)

Katalog-Nr. 71020

Code-Nr.	Stück/Satz
1,000	14

Maschinen-Gewindebohrer

Gewindebohrer für Metrische ISO-Gewinde

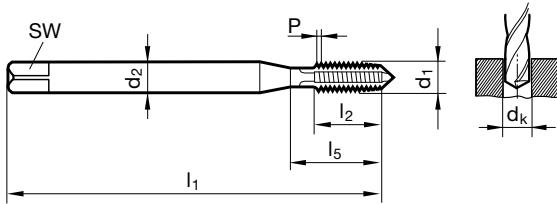


Katalog-Nr. 63033

Produktiv N	DIN 371	B	HSS-E	TiN	R	ISO2/6H
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P	M	K	N	S	H
●	○	○	○		

- für Durchgangsgewinde
- mit Schälanschnitt
- Spanförderung in Vorschubrichtung
- universell einsetzbar
- Stahlwerkstoffe bis 1100 N/mm²



d1	P mm	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000

Maschinen-Gewindebohrer

Gewindebohrer für Metrische ISO-Gewinde

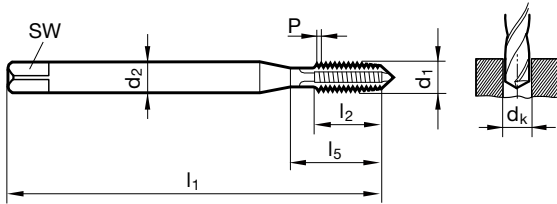


Katalog-Nr. 53640

Produktiv H	DIN 371/376	B	HSS-E- PM	TiCN	R	ISO2/6H
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P	M	K	N	S	H
●		○			

- für Durchgangsgewinde
- mit Schälanschnitt
- Spanförderung in Vorschubrichtung
- hochfeste Werkstoffe
- Stähle 1100 bis 1600 N/mm²



d1	P mm	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
M3	0,500	3,500	2,700	2,50	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,20	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,00	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	20,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	12,00	110,000	26,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000

Maschinen-Gewindebohrer

Gewindebohrer für Metrische ISO-Gewinde

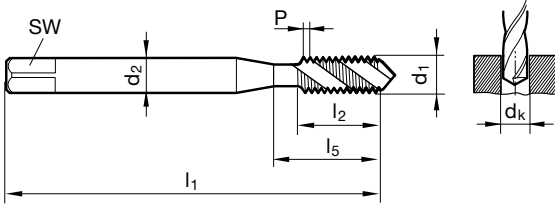


Katalog-Nr. 53661



P	M	K	N	S	H
●		○			

- für Grundgewinde
- Nuten mit ca. 40° Rechtsdrall
- Spanförderung in Schafrichtung
- hochfeste Werkstoffe
- Stähle 1100 bis 1600 N/mm²



d1	P mm	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
M2	0,400	2,800	2,100	1,60	45,000	4,500	13,500
M3	0,500	3,500	2,700	2,50	56,000	6,000	18,000
M4	0,700	4,500	3,400	3,30	63,000	7,500	21,000
M5	0,800	6,000	4,900	4,20	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,00	80,000	11,000	30,000
M8	1,250	8,000	6,200	6,80	90,000	14,000	35,000
M10	1,500	10,000	8,000	8,50	100,000	16,000	39,000
M12	1,750	9,000	7,000	10,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	12,00	110,000	20,000	53,000
M16	2,000	12,000	9,000	14,00	110,000	20,000	54,000

Maschinen-Gewindebohrer

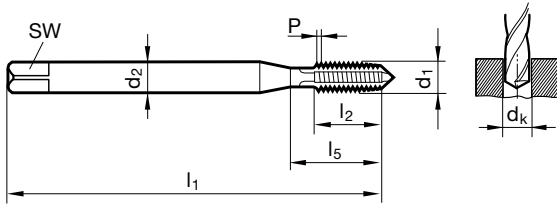
Gewindebohrer für Metrische ISO-Gewinde



Katalog-Nr. 53676



- für Durchgangs- und Grundgewinde
- für Materialien zwischen 45 - 55 HRC



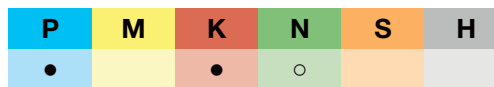
d1	P mm	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
M3	0,500	3,500	2,700	2,60	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,40	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,30	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,10	80,000	16,000	30,000
M8	1,250	8,000	6,200	6,90	90,000	17,000	35,000
M10	1,500	10,000	8,000	8,60	100,000	20,000	39,000
M12	1,750	12,000	9,000	10,40	110,000	24,000	49,000
M14	2,000	14,000	11,000	12,10	110,000	26,000	53,000
M16	2,000	16,000	12,000	14,10	110,000	26,000	54,000

Maschinen-Gewindebohrer

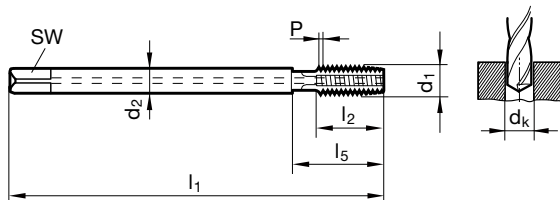
Gewindebohrer für Metrische ISO-Gewinde



Katalog-Nr. 53646



- für große Gewinde
- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für Gusswerkstoffe
- für Aluminium und AlSi Legierungen bis 6% Si-Gehalt
- mit axialem Kühlkanal



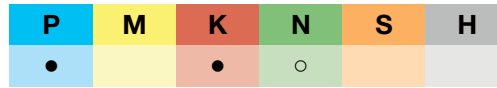
d1	P mm	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
M16	2,000	12,000	9,000	14,00	110,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	140,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	160,000	36,000	73,000
M27	3,000	20,000	16,000	24,00	160,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	180,000	40,000	85,000
M33	3,500	25,000	20,000	29,50	180,000	40,000	91,000
M36	4,000	28,000	22,000	32,00	200,000	50,000	102,000
M39	4,000	32,000	24,000	35,00	200,000	50,000	107,000

Maschinen-Gewindebohrer

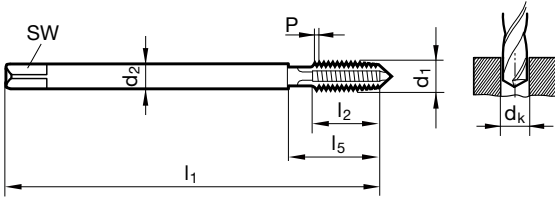
Gewindebohrer für Metrische ISO-Gewinde



Katalog-Nr. 53647



- für große Gewinde
- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für Gusswerkstoffe
- für Aluminium und AlSi Legierungen bis 6% Si-Gehalt
- mit axialem Kühlkanal
- für große Gewindetiefen



d1	P mm	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
M16	2,000	12,000	9,000	14,00	160,000	26,000	54,000
M20	2,500	16,000	12,000	17,50	180,000	32,000	62,000
M24	3,000	18,000	14,500	21,00	200,000	36,000	73,000
M27	3,000	20,000	16,000	24,00	225,000	36,000	73,000
M30	3,500	22,000	18,000	26,50	250,000	40,000	85,000
M33	3,500	25,000	20,000	29,50	275,000	40,000	91,000
M36	4,000	28,000	22,000	32,00	300,000	50,000	102,000
M39	4,000	32,000	24,000	35,00	325,000	50,000	107,000

Gewindeformer mit Schmiernuten

Gewindeformer für Metrische ISO-Gewinde

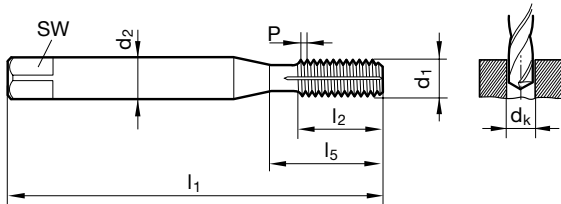


Katalog-Nr. 53630

Durativ	~DIN 371/376	C	HSS-E- PM	TiCN		4HX/6HX
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P	M	K	N	S	H
●	●	●	○	●	

- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für rost-/säurebeständige Stähle
- für formbare Gusswerkstoffe
- für formbare Nichteisenmetalle
- für Sonderlegierungen



d1	P mm	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
M1	0,250	2,500	2,100	0,90	40,000	4,000	
M1,2	0,250	2,500	2,100	1,10	40,000	4,800	
M1,4	0,300	2,500	2,100	1,25	40,000	5,600	
M1,6	0,350	2,500	2,100	1,45	40,000	6,400	
M1,7	0,350	2,500	2,100	1,55	40,000	6,800	
M1,8	0,350	2,500	2,100	1,65	40,000	7,300	
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Gewindeformer mit Schmiernuten

Gewindeformer für Metrische ISO-Gewinde

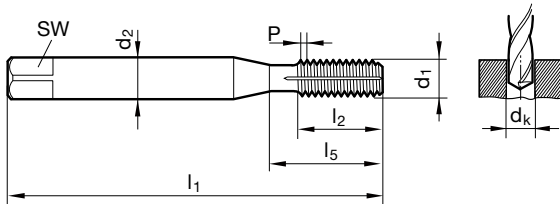


Katalog-Nr. 53631

Durativ	~DIN 371/376	C	HSS-E- PM	TiCN	R	6GX
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P	M	K	N	S	H
•	•	•	○	•	

- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für rost-/säurebeständige Stähle
- für formbare Gusswerkstoffe
- für formbare Nichteisenmetalle
- für Sonderlegierungen



d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M2	0,400	2,800	2,100	1,85	45,000	8,000	13,500
M2,5	0,450	2,800	2,100	2,30	50,000	9,000	14,500
M3	0,500	3,500	2,700	2,80	56,000	10,000	18,000
M4	0,700	4,500	3,400	3,70	63,000	12,000	21,000
M5	0,800	6,000	4,900	4,65	70,000	14,000	25,000
M6	1,000	6,000	4,900	5,55	80,000	16,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	17,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	20,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	24,000	49,000
M14	2,000	11,000	9,000	13,10	110,000	26,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	26,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	32,000	62,000

Gewindeformer mit Schmiernuten

Gewindeformer für Metrische ISO-Feingewinde

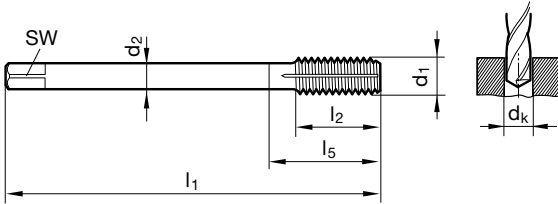


Katalog-Nr. 53632

Durativ	~DIN 374	C	HSS-E- PM	TiCN	R	6HX
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P	M	K	N	S	H
•	•	•	○	•	

- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für rost-/säurebeständige Stähle
- für formbare Gusswerkstoffe
- für formbare Nichteisenmetalle
- für Sonderlegierungen



Code-Nr.	d1	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
8,005	M8 x 1	6,000	4,900	7,55	90,000	16,000	
10,005	M10 x 1	7,000	5,500	9,55	90,000	16,000	
10,006	M10 x 1,25	7,000	5,500	9,40	100,000	20,000	
12,006	M12 x 1,25	9,000	7,000	11,40	100,000	20,000	40,000
12,007	M12 x 1,5	9,000	7,000	11,30	100,000	20,000	40,000
14,006	M14 x 1,25	11,000	9,000	13,40	100,000	20,000	40,000
14,007	M14 x 1,5	11,000	9,000	13,30	100,000	20,000	40,000
16,007	M16 x 1,5	12,000	9,000	15,30	100,000	22,000	44,000
20,007	M20 x 1,5	16,000	12,000	19,30	125,000	25,000	44,000

Gewindeformer mit Schmiernuten

Gewindeformer für UNC-Gewinde

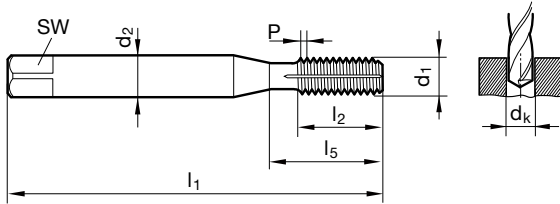


Katalog-Nr. 53633

Durativ	~DIN 371/376	C	HSS-E- PM	TiCN	R	2BX
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P	M	K	N	S	H
•	•	•	○	•	

- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für rost-/säurebeständige Stähle
- für formbare Gusswerkstoffe
- für formbare Nichteisenmetalle
- für Sonderlegierungen



Code-Nr.	d1	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
2,845	4 - 40	3,500	2,700	2,55	56,000	11,000	18,000
3,505	6 - 32	4,000	3,000	3,15	56,000	12,000	20,000
4,166	8 - 32	4,500	3,400	3,80	63,000	12,000	21,000
4,826	10 - 24	6,000	4,900	4,35	70,000	14,000	25,000
5,486	12 - 24	6,000	4,900	5,00	80,000	16,000	30,000
6,350	1/4 - 20	7,000	5,500	5,75	80,000	16,000	30,000
7,938	5/16 - 18	8,000	6,200	7,30	90,000	18,000	35,000
9,525	3/8 - 16	10,000	8,000	8,80	90,000	20,000	35,000
11,113	7/16 - 14	8,000	6,200	10,30	100,000	22,000	42,000
12,700	1/2 - 13	9,000	7,000	11,80	100,000	25,000	40,000
14,288	9/16 - 12	11,000	9,000	13,30	100,000	28,000	40,000
15,875	5/8 - 11	12,000	9,000	14,80	100,000	30,000	44,000
19,050	3/4 - 10	14,000	11,000	17,90	110,000	33,000	44,000

Gewindeformer mit Schmiernuten

Gewindeformer für UNF-Gewinde

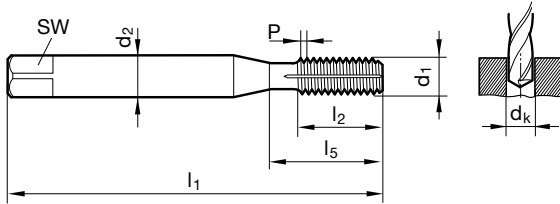


Katalog-Nr. 53634

Durativ	~DIN 371/374	C	HSS-E- PM	TiCN		2BX
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P	M	K	N	S	H
•	•	•	○	•	

- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für rost-/säurebeständige Stähle
- für formbare Gusswerkstoffe
- für formbare Nichteisenmetalle
- für Sonderlegierungen



Code-Nr.	d1	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
2,845	4 - 48	3,500	2,700	2,60	56,000	10,000	18,000
3,505	6 - 40	4,000	3,000	3,20	56,000	11,000	20,000
4,166	8 - 36	4,500	3,400	3,85	63,000	12,000	21,000
4,826	10 - 32	6,000	4,900	4,45	70,000	14,000	25,000
5,486	12 - 28	6,000	4,900	5,10	80,000	16,000	30,000
6,350	1/4 - 28	7,000	5,500	5,95	80,000	16,000	30,000
7,938	5/16 - 24	8,000	6,200	7,45	90,000	18,000	35,000
9,525	3/8 - 24	10,000	8,000	9,05	100,000	18,000	39,000
11,113	7/16 - 20	8,000	6,200	10,55	100,000	22,000	42,000
12,700	1/2 - 20	9,000	7,000	12,10	100,000	20,000	40,000
14,288	9/16 - 18	11,000	9,000	13,65	100,000	22,000	40,000
15,875	5/8 - 18	12,000	9,000	15,25	100,000	22,000	44,000
19,050	3/4 - 16	14,000	11,000	18,35	110,000	25,000	44,000

Gewindeformer mit Schmiernuten

Gewindeformer für Whitworth-Rohrgewinde

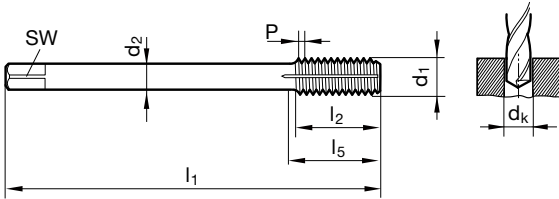


Katalog-Nr. 53635



P	M	K	N	S	H
●	●	●	○	●	●

- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für rost-/säurebeständige Stähle
- für formbare Gusswerkstoffe
- für formbare Nichteisenmetalle
- für Sonderlegierungen



Code-Nr.	d1	P inch	d2 mm	SW mm	dk mm	l1 mm	l2 mm	l5 mm
9,728	G1/8	28,000	7,000	5,500	9,30	90,000	18,000	35,000
13,157	G1/4	19,000	11,000	9,000	12,50	100,000	20,000	40,000
16,662	G3/8	19,000	12,000	9,000	16,00	100,000	22,000	44,000
20,955	G1/2	14,000	16,000	12,000	20,00	125,000	25,000	44,000

Gewindeformer mit Schmiernuten

Kühlkanal-Gewindeformer für Metr. ISO-Gewinde

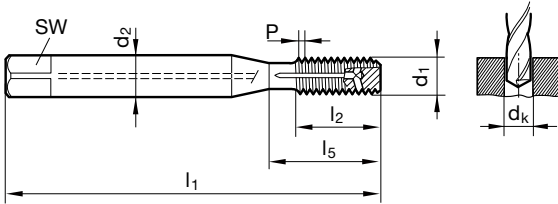


Katalog-Nr. 53610

Durativ	~DIN 371/376	C	HSS-E- PM	TiCN		6HX
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P	M	K	N	S	H
•	•	•	○	•	

- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für rost-/säurebeständige Stähle
- für formbare Gusswerkstoffe
- für formbare Nichteisenmetalle
- für Sonderlegierungen
- radialer Kühlmittelaustritt



d1	P	d2	SW	dk	l1	l2	l5
	mm	mm	mm	mm	mm	mm	mm
M5	0,800	6,000	4,900	4,65	70,000	8,500	25,000
M6	1,000	6,000	4,900	5,55	80,000	11,000	30,000
M8	1,250	8,000	6,200	7,40	90,000	14,000	35,000
M10	1,500	10,000	8,000	9,30	100,000	16,000	39,000
M12	1,750	9,000	7,000	11,20	110,000	18,500	49,000
M14	2,000	11,000	9,000	13,10	110,000	20,000	53,000
M16	2,000	12,000	9,000	15,10	110,000	20,000	54,000
M20	2,500	16,000	12,000	18,90	140,000	25,000	62,000

Gewindeformer mit Schmiernuten

Kühlkanal-Gewindeformer für Metr. ISO-Feingewinde

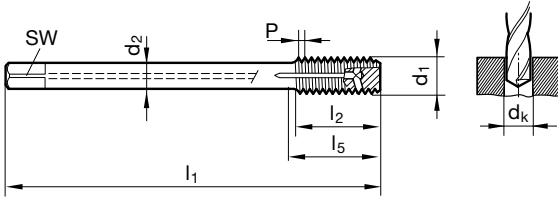


Katalog-Nr. 53612

Durativ	~DIN 374	C	HSS-E- PM	TiCN	R	6HX
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P	M	K	N	S	H
•	•	•	○	•	

- für Durchgangs- und Grundgewinde
- für Stahlwerkstoffe bis 1200 N/mm²
- für rost-/säurebeständige Stähle
- für formbare Gusswerkstoffe
- für formbare Nichteisenmetalle
- für Sonderlegierungen
- radialer Kühlmittelaustritt



Code-Nr.	d1	d2	SW	dk	l1	l2	l5
		mm	mm	mm	mm	mm	mm
8,005	M8 x 1	6,000	4,900	7,55	90,000	11,000	
10,005	M10 x 1	7,000	5,500	9,55	90,000	11,000	
10,006	M10 x 1,25	7,000	5,500	9,40	100,000	14,000	
12,006	M12 x 1,25	9,000	7,000	11,40	100,000	16,000	40,000
12,007	M12 x 1,5	9,000	7,000	11,30	100,000	16,000	40,000
14,006	M14 x 1,25	11,000	9,000	13,40	100,000	15,000	40,000
14,007	M14 x 1,5	11,000	9,000	13,30	100,000	15,000	40,000
16,007	M16 x 1,5	12,000	9,000	15,30	100,000	15,000	44,000
20,007	M20 x 1,5	16,000	12,000	19,30	125,000	16,000	44,000

Gewindefräser

Mikro-Gewindefräser für Metrische ISO-Gewinde

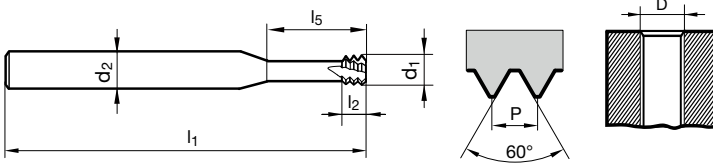


Katalog-Nr. 53840



P	M	K	N	S	H
•	•	•	•	•	

• universelle Verwendung



Code-Nr.	D	P mm	d1 mm	d2 mm	l1 mm	l2 mm	l5 mm	Z
1,600	M1,6	0,350	1,200	3,000	39,000	1,100	4,800	3
1,800	M1,8	0,350	1,400	3,000	39,000	1,100	5,400	3
2,000	M2	0,400	1,550	3,000	39,000	1,200	6,000	4
2,500	M2,5	0,450	1,950	3,000	39,000	1,400	7,500	4
3,000	M3	0,500	2,400	6,000	58,000	1,500	9,500	4
3,500	M3,5	0,600	2,800	6,000	58,000	1,800	11,000	4
4,000	M4	0,700	3,200	6,000	58,000	2,100	12,500	4
5,000	M5	0,800	4,000	6,000	58,000	2,400	16,000	4
6,000	M6	1,000	4,800	6,000	58,000	3,000	20,000	4
8,000	M8	1,250	5,950	6,000	58,000	3,800	24,000	4
10,000	M10	1,500	7,800	8,000	73,000	4,500	33,000	4
12,000	M12	1,750	9,000	10,000	84,000	5,300	38,000	4
16,000	M16	2,000	11,800	12,000	84,000	6,000	35,000	5

Gewindefräser

Mikro-Gewindefräser für Metrische ISO-Gewinde

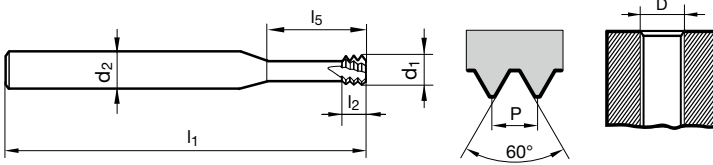


Katalog-Nr. 53850



P	M	K	N	S	H
				○	●

• für die Hartbearbeitung 45-65 HRC



Code-Nr.	D	P mm	d1 mm	d2 mm	l1 mm	l2 mm	l5 mm	Z
2,000	M2	0,400	1,550	3,000	39,000	1,200	6,000	4
2,500	M2,5	0,450	1,950	3,000	39,000	1,400	7,500	4
3,000	M3	0,500	2,350	6,000	58,000	1,500	9,500	4
4,000	M4	0,700	3,100	6,000	58,000	2,100	12,500	4
5,000	M5	0,800	3,800	6,000	58,000	2,400	16,000	4
6,000	M6	1,000	4,800	6,000	58,000	3,000	20,000	4
8,000	M8	1,250	5,950	6,000	58,000	3,800	24,000	4
10,000	M10	1,500	7,800	8,000	64,000	4,500	23,000	4
12,000	M12	1,750	9,000	10,000	73,000	5,300	26,000	5

SuperF-UT-Fräser

SuperF-UT-Fräser N2

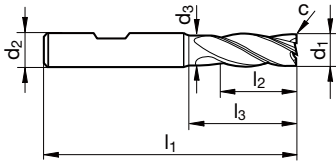


Katalog-Nr. 64552



P	M	K	N	S	H
●	○	●	●	○	○

- sehr großes Materialspektrum = universeller Einsatzbereich
- extrem hohe Standzeiten durch hochharte TiAlZrN-Beschichtung
- bis 1600 N/mm²
- Mikroeckenschutz
- Halsfreischliff
- Zentrumschnitt
- ruhiger, vibrationsfreier Lauf durch ungleiche Drallsteigung
- auch als Satz 322 039 455 erhältlich



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
3,000	6,000	2,700	57,000	8,000	15,000	0,100	4	3,000
4,000	6,000	3,700	57,000	11,000	18,000	0,100	4	4,000
5,000	6,000	4,700	57,000	13,000	18,000	0,100	4	5,000
6,000	6,000	5,500	57,000	13,000	20,000	0,150	4	6,000
8,000	8,000	7,500	63,000	19,000	26,000	0,150	4	8,000
10,000	10,000	9,200	72,000	22,000	30,000	0,200	4	10,000
12,000	12,000	11,200	83,000	26,000	36,000	0,200	4	12,000
16,000	16,000	15,000	92,000	32,000	42,000	0,350	4	16,000
20,000	20,000	19,000	104,000	38,000	52,000	0,450	4	20,000
25,000	25,000	23,500	121,000	45,000	63,000	0,600	4	25,000

SuperF-UT-Fräser

SuperF-UT-Fräser NL

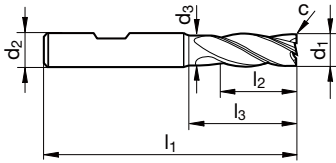


Katalog-Nr. 54553



P	M	K	N	S	H
•		•			

- universell einsetzbar
- bis 1600 N/mm²
- Mikroeckenschutz
- Halsfreischliff
- Zentrumschnitt
- HSC Schichten bis 4xD Schneidenlänge
- ungleiche Teilung



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
6,000	6,000	5,500	65,000	24,000	28,000	0,120	4	6,000
8,000	8,000	7,500	75,000	32,000	38,000	0,160	4	8,000
10,000	10,000	9,200	100,000	40,000	58,000	0,200	4	10,000
12,000	12,000	11,200	100,000	48,000	53,000	0,240	4	12,000
16,000	16,000	15,000	125,000	64,000	75,000	0,320	4	16,000
20,000	20,000	19,000	150,000	80,000	98,000	0,400	4	20,000
25,000	25,000	23,500	175,000	100,000	117,000	0,500	4	25,000

SuperF-UT-Fräser

SuperF-UT-Fräser N-5

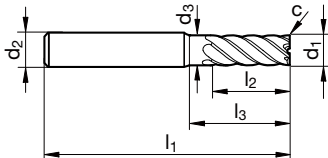


Katalog-Nr. 54583



P	M	K	N	S	H
•	•	•	•	•	

- größtmögliche Vorteile bei Schlicht- und Semischrupp-Operationen speziell unter HPC Bedingungen
- ungleiche Teilung
- bis 1600 N/mm²
- Mikroeckenschutz
- Halsfreischliff
- Zentrumschnitt



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
4,000	6,000	3,800	57,000	11,000	18,000	0,050	5	4,000
5,000	6,000	4,800	57,000	13,000	18,000	0,050	5	5,000
6,000	6,000	5,700	57,000	13,000	20,000	0,050	5	6,000
8,000	8,000	7,700	63,000	19,000	26,000	0,100	5	8,000
10,000	10,000	9,500	72,000	22,000	30,000	0,100	5	10,000
12,000	12,000	11,500	83,000	26,000	36,000	0,100	5	12,000
16,000	16,000	15,500	92,000	32,000	42,000	0,150	5	16,000
20,000	20,000	19,500	104,000	38,000	52,000	0,150	5	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser N-5

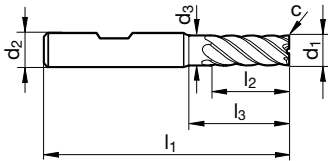


Katalog-Nr. 54584



P	M	K	N	S	H
•	•	•	•	•	

- größtmögliche Vorteile bei Schlicht- und Semischrupp-Operationen speziell unter HPC Bedingungen
- ungleiche Teilung
- bis 1600 N/mm²
- Mikroeckenschutz
- Halsfreischliff
- Zentrumschnitt



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
4,000	6,000	3,800	57,000	11,000	18,000	0,050	5	4,000
5,000	6,000	4,800	57,000	13,000	18,000	0,050	5	5,000
6,000	6,000	5,700	57,000	13,000	20,000	0,050	5	6,000
8,000	8,000	7,700	63,000	19,000	26,000	0,100	5	8,000
10,000	10,000	9,500	72,000	22,000	30,000	0,100	5	10,000
12,000	12,000	11,500	83,000	26,000	36,000	0,100	5	12,000
16,000	16,000	15,500	92,000	32,000	42,000	0,150	5	16,000
20,000	20,000	19,500	104,000	38,000	52,000	0,150	5	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser NX

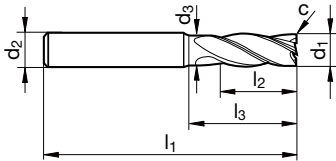


Katalog-Nr. 54588



P	M	K	N	S	H
•	•	•	•	•	

- kurze stabile Ausführung
- angepasste Stirn- und Nutengeometrie für höchste Schnittwerte und sehr gute Spanabfuhr
- extrem steile Tauchwinkel bis 45° möglich
- hohe Standzeiten durch hochharte Beschichtung
- hohe Prozesssicherheit bei gleichzeitiger Reduzierung der Bearbeitungszeiten
- Werkstoffe bis 1400 N/mm²
- Mikroeckenschutz
- Halsfreischliff
- Zentrumschnitt
- ruhiger, vibrationsfreier Lauf durch ungleiche Drallsteigung



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
3,000	6,000	2,700	50,000	5,000	12,000	0,030	4	3,000
3,700	6,000	3,400	54,000	8,000	12,000	0,040	4	3,700
4,000	6,000	3,700	54,000	8,000	15,000	0,040	4	4,000
4,700	6,000	4,400	54,000	9,000	15,000	0,050	4	4,700
5,000	6,000	4,700	54,000	9,000	15,000	0,050	4	5,000
5,700	6,000	5,400	54,000	10,000	17,000	0,060	4	5,700
6,000	6,000	5,500	54,000	10,000	17,000	0,060	4	6,000
7,000	8,000	6,500	58,000	11,000	21,000	0,070	4	7,000
7,700	8,000	7,200	58,000	12,000	21,000	0,080	4	7,700
8,000	8,000	7,500	58,000	12,000	21,000	0,080	4	8,000
9,000	10,000	8,500	66,000	13,000	25,000	0,090	4	9,000
9,700	10,000	9,200	66,000	14,000	25,000	0,100	4	9,700
10,000	10,000	9,200	66,000	14,000	24,000	0,100	4	10,000
11,700	12,000	10,900	73,000	16,000	25,500	0,120	4	11,700
12,000	12,000	11,200	73,000	16,000	26,000	0,120	4	12,000
15,600	16,000	14,800	82,000	22,000	31,400	0,160	4	15,600
16,000	16,000	15,000	82,000	22,000	32,000	0,160	4	16,000
19,000	20,000	18,000	92,000	26,000	39,000	0,190	4	19,000
20,000	20,000	19,000	92,000	26,000	40,000	0,200	4	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser NX

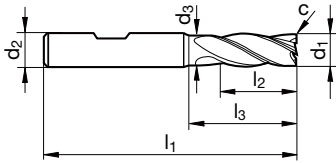


Katalog-Nr. 54589



P	M	K	N	S	H
•	•	•	•	•	

- kurze stabile Ausführung
- angepasste Stirn- und Nutengeometrie für höchste Schnittwerte und sehr gute Spanabfuhr
- extrem steile Tauchwinkel bis 45° möglich
- hohe Standzeiten durch hochharte Beschichtung
- hohe Prozesssicherheit bei gleichzeitiger Reduzierung der Bearbeitungszeiten
- Werkstoffe bis 1400 N/mm²
- Mikroeckenschutz
- Halsfreischliff
- Zentrumschnitt
- ruhiger, vibrationsfreier Lauf durch ungleiche Drallsteigung



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
3,000	6,000	2,700	50,000	5,000	12,000	0,030	4	3,000
3,700	6,000	3,400	54,000	8,000	12,000	0,040	4	3,700
4,000	6,000	3,700	54,000	8,000	15,000	0,040	4	4,000
4,700	6,000	4,400	54,000	9,000	15,000	0,050	4	4,700
5,000	6,000	4,700	54,000	9,000	15,000	0,050	4	5,000
5,700	6,000	5,400	54,000	10,000	17,000	0,060	4	5,700
6,000	6,000	5,500	54,000	10,000	17,000	0,060	4	6,000
7,000	8,000	6,500	58,000	11,000	21,000	0,070	4	7,000
7,700	8,000	7,200	58,000	12,000	21,000	0,080	4	7,700
8,000	8,000	7,500	58,000	12,000	21,000	0,080	4	8,000
9,000	10,000	8,500	66,000	13,000	25,000	0,090	4	9,000
9,700	10,000	9,200	66,000	14,000	25,000	0,100	4	9,700
10,000	10,000	9,200	66,000	14,000	24,000	0,100	4	10,000
11,700	12,000	10,900	73,000	16,000	25,500	0,120	4	11,700
12,000	12,000	11,200	73,000	16,000	26,000	0,120	4	12,000
15,600	16,000	14,800	82,000	22,000	31,400	0,160	4	15,600
16,000	16,000	15,000	82,000	22,000	32,000	0,160	4	16,000
19,000	20,000	18,000	92,000	26,000	39,000	0,190	4	19,000
20,000	20,000	19,000	92,000	26,000	40,000	0,200	4	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser NX-3

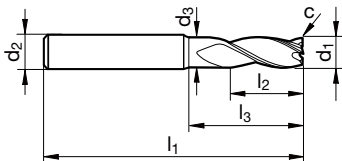


Katalog-Nr. 54586



P	M	K	N	S	H
•	•	•	•	•	

- angepasste Stirn- und Nutengeometrie für höchste Schnittwerte und sehr gute Spanabfuhr
- extrem steile Tauchwinkel bis 45° möglich
- hohe Standzeiten durch hochharte Beschichtung
- 3-Schneider mit vergrößerten Spanräumen
- zur Herstellung von Passfedernuten
- Werkstoffe bis 1400 N/mm²
- Mikroeckenschutz
- Halsfreischliff
- Zentrumschnitt
- ruhiger, vibrationsfreier Lauf durch ungleiche Drallsteigung



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
3,000	6,000	2,700	57,000	8,000	15,000	0,050	3	3,000
3,500	6,000	3,200	57,000	10,000	15,000	0,050	3	3,500
3,700	6,000	3,400	57,000	11,000	15,000	0,060	3	3,700
4,000	6,000	3,700	57,000	11,000	18,000	0,060	3	4,000
4,500	6,000	4,200	57,000	11,000	18,000	0,070	3	4,500
4,700	6,000	4,400	57,000	13,000	18,000	0,070	3	4,700
5,000	6,000	4,700	57,000	13,000	18,000	0,080	3	5,000
5,500	6,000	5,200	57,000	13,000	20,000	0,080	3	5,500
5,700	6,000	5,400	57,000	13,000	20,000	0,090	3	5,700
6,000	6,000	5,500	57,000	13,000	20,000	0,090	3	6,000
6,500	8,000	6,000	63,000	16,000	26,000	0,100	3	6,500
7,000	8,000	6,500	63,000	16,000	26,000	0,110	3	7,000
7,500	8,000	7,000	63,000	19,000	26,000	0,110	3	7,500
8,000	8,000	7,500	63,000	19,000	26,000	0,120	3	8,000
8,500	10,000	8,000	72,000	19,000	31,000	0,130	3	8,500
9,000	10,000	8,500	72,000	19,000	31,000	0,140	3	9,000
9,500	10,000	9,000	72,000	22,000	31,000	0,140	3	9,500
10,000	10,000	9,200	72,000	22,000	30,000	0,150	3	10,000
12,000	12,000	11,200	83,000	26,000	36,000	0,180	3	12,000
16,000	16,000	15,000	92,000	32,000	42,000	0,190	3	16,000
20,000	20,000	19,000	104,000	38,000	52,000	0,240	3	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser NX-3

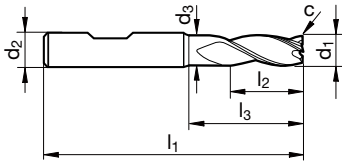


Katalog-Nr. 54587



P	M	K	N	S	H
•	•	•	•	•	

- angepasste Stirn- und Nutengeometrie für höchste Schnittwerte und sehr gute Spanabfuhr
- extrem steile Tauchwinkel bis 45° möglich
- hohe Standzeiten durch hochharte Beschichtung
- 3-Schneider mit vergrößerten Spanräumen
- zur Herstellung von Passfedernuten
- Werkstoffe bis 1400 N/mm²
- Mikroeckenschutz
- Halsfreischliff
- Zentrumschnitt
- ruhiger, vibrationsfreier Lauf durch ungleiche Drallsteigung



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
3,000	6,000	2,700	57,000	8,000	15,000	0,050	3	3,000
3,500	6,000	3,200	57,000	10,000	15,000	0,050	3	3,500
3,700	6,000	3,400	57,000	11,000	15,000	0,060	3	3,700
4,000	6,000	3,700	57,000	11,000	18,000	0,060	3	4,000
4,500	6,000	4,200	57,000	11,000	18,000	0,070	3	4,500
4,700	6,000	4,400	57,000	13,000	18,000	0,070	3	4,700
5,000	6,000	4,700	57,000	13,000	18,000	0,080	3	5,000
5,500	6,000	5,200	57,000	13,000	20,000	0,080	3	5,500
5,700	6,000	5,400	57,000	13,000	20,000	0,090	3	5,700
6,000	6,000	5,500	57,000	13,000	20,000	0,090	3	6,000
6,500	8,000	6,000	63,000	16,000	26,000	0,100	3	6,500
7,000	8,000	6,500	63,000	16,000	26,000	0,110	3	7,000
7,500	8,000	7,000	63,000	19,000	26,000	0,110	3	7,500
8,000	8,000	7,500	63,000	19,000	26,000	0,120	3	8,000
8,500	10,000	8,000	72,000	19,000	31,000	0,130	3	8,500
9,000	10,000	8,500	72,000	19,000	31,000	0,140	3	9,000
9,500	10,000	9,000	72,000	22,000	31,000	0,140	3	9,500
10,000	10,000	9,200	72,000	22,000	30,000	0,150	3	10,000
12,000	12,000	11,200	83,000	26,000	36,000	0,180	3	12,000
16,000	16,000	15,000	92,000	32,000	42,000	0,190	3	16,000
20,000	20,000	19,000	104,000	38,000	52,000	0,240	3	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser Z

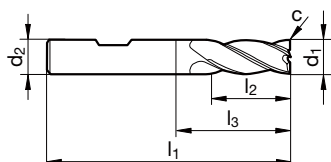


Katalog-Nr. 54577



P	M	K	N	S	H
•	•			•	

- besonders stabil durch Kernsprung
- universell einsetzbar
- Werkstoffe bis 1400 N/mm²
- Mikroeckenschutz
- Zentrumschnitt
- ungleiche Teilung
- HPC-Bearbeitung in zähen, niedrig- und hochlegierten Stählen und in schwer bearbeitbaren Sonderwerkstoffen
- auch als Satz 78882 1,00 und 78882 2,00 erhältlich



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
3,000	6,000	57,000	8,000	15,000	0,045	4	3,000
4,000	6,000	57,000	11,000	18,000	0,060	4	4,000
5,000	6,000	57,000	13,000	18,000	0,075	4	5,000
6,000	6,000	57,000	15,000	20,000	0,090	4	6,000
8,000	8,000	63,000	20,000	26,000	0,120	4	8,000
10,000	10,000	72,000	24,000	30,000	0,150	4	10,000
12,000	12,000	83,000	28,000	36,000	0,180	4	12,000
16,000	16,000	92,000	36,000	42,000	0,240	4	16,000
20,000	20,000	104,000	45,000	52,000	0,300	4	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser ZS

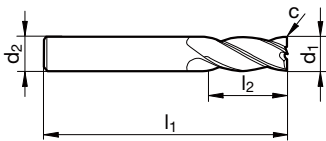


Katalog-Nr. 54582



P	M	K	N	S	H
•	•			•	

- besonders stabil durch Kernsprung
- mit Spanteiler
- universell einsetzbar
- Werkstoffe bis 1400 N/mm²
- Mikroeckenschutz
- Zentrumschnitt
- ungleiche Teilung
- HPC-Bearbeitung in zähen, niedrig- und hochlegierten Stählen und in schwer bearbeitbaren Sonderwerkstoffen



d1 mm	d2 mm	l1 mm	l2 mm	c mm x 45°	Z	Code-Nr.
3,000	6,000	57,000	12,000	0,045	4	3,000
4,000	6,000	65,000	16,000	0,060	4	4,000
5,000	6,000	65,000	20,000	0,075	4	5,000
6,000	6,000	65,000	24,000	0,090	4	6,000
8,000	8,000	75,000	32,000	0,120	4	8,000
10,000	10,000	90,000	40,000	0,150	4	10,000
12,000	12,000	100,000	46,000	0,180	4	12,000
16,000	16,000	108,000	55,000	0,240	4	16,000
20,000	20,000	126,000	65,000	0,300	4	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser ZS

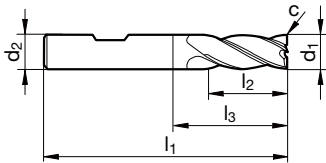


Katalog-Nr. 54578



P	M	K	N	S	H
•	•			•	

- besonders stabil durch Kernsprung
- mit Spanteiler
- universell einsetzbar
- Werkstoffe bis 1400 N/mm²
- Mikroeckenschutz
- Zentrumschnitt
- ungleiche Teilung
- HPC-Bearbeitung in zähen, niedrig- und hochlegierten Stählen und in schwer bearbeitbaren Sonderwerkstoffen



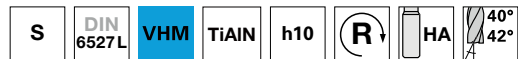
d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	c mm x 45°	Z	Code-Nr.
3,000	6,000	57,000	12,000	15,000	0,045	4	3,000
4,000	6,000	65,000	16,000	18,000	0,060	4	4,000
5,000	6,000	65,000	20,000	18,000	0,075	4	5,000
6,000	6,000	65,000	24,000	28,000	0,090	4	6,000
8,000	8,000	75,000	32,000	38,000	0,120	4	8,000
10,000	10,000	90,000	40,000	48,000	0,150	4	10,000
12,000	12,000	100,000	46,000	53,000	0,180	4	12,000
16,000	16,000	108,000	55,000	58,000	0,240	4	16,000
20,000	20,000	126,000	65,000	74,000	0,300	4	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser S

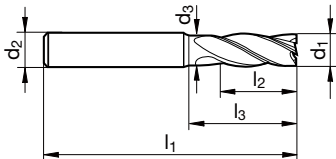


Katalog-Nr. 54556



P	M	K	N	S	H
○	○	○	○	○	

- zum Feinstschlichten und Schlichten
- bis 1600 N/mm²
- ohne Eckenschutzfase
- Halsfreischliff
- Zentrumschnitt
- ruhiger, vibrationsfreier Lauf durch ungleiche Drallsteigung
- HB Spannfläche auf Anfrage möglich



d1 mm	d2 mm	d3 mm	l1 mm	l2 mm	l3 mm	Z	Code-Nr.
3,000	6,000	2,700	57,000	8,000	15,000	4	3,000
4,000	6,000	3,700	57,000	11,000	18,000	4	4,000
5,000	6,000	4,700	57,000	13,000	18,000	4	5,000
6,000	6,000	5,500	57,000	13,000	20,000	4	6,000
8,000	8,000	7,500	63,000	19,000	26,000	4	8,000
10,000	10,000	9,200	72,000	22,000	30,000	4	10,000
12,000	12,000	11,200	83,000	26,000	36,000	4	12,000
16,000	16,000	15,000	92,000	32,000	42,000	4	16,000
20,000	20,000	19,000	104,000	38,000	52,000	4	20,000

SuperF-UT-Fräser

SuperF-UT-Fräser Z, Sätze



Z	WN	VHM	AlTiN+	h10	R	HB
P	M	K	N	S	H	
•	•			•		

- besonders stabil durch Kernsprung
- universell einsetzbar
- Werkstoffe bis 1400 N/mm²
- Mikroeckenschutz
- Zentrumschnitt
- ungleiche Teilung
- HPC-Bearbeitung in zähen, niedrig- und hochlegierten Stählen und in schwer bearbeitbaren Sonderwerkstoffen
- bestehend aus Katalog-Nr. 54577

Katalog-Nr. 78882

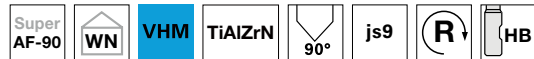
Code-Nr.	d1 mm	Stück/Satz
1,000	6,0-16,0	5
2,000	6,0-12,0	4

Entgrat- und Faswerkzeuge

Entgratfräser 90°

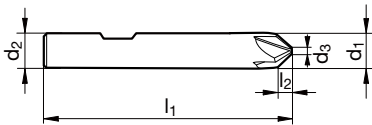


Katalog-Nr. 53399



P	M	K	N	S	H
•	•	•	•	•	•

- Entgrat- und Anfasfräser, z.B. zur Bearbeitung von Werkstückkanten mit Faswinkel 90°
- höchste Vorschübe und bessere Oberfläche durch z = 6
- auch als Satz 322 044 176 erhältlich



d1 js9 mm	d2 h6 mm	d3 mm	l1 mm	l2 mm	Z	Code-Nr.
6,000	6,000	1,500	57,000	2,300	6	6,000
8,000	8,000	2,000	63,000	3,000	6	8,000
10,000	10,000	3,000	72,000	3,500	6	10,000
12,000	12,000	3,000	83,000	4,500	6	12,000
16,000	16,000	4,000	92,000	6,000	6	16,000
20,000	20,000	6,000	92,000	6,900	6	20,000

seit 130 Jahren Präzision

1887



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