



VOLLHARTMETALL

BOHRWERKZEUGE 3-15xD



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 bzw. die Angaben von max. Zugfestigkeit und Härte:

- optimal geeignet
- bedingt geeignet
- nicht geeignet



PIKTOGRAMME

SCHNEIDSTOFF	VHM				HM							
	Vollhartmetall				Hartmetall							
BESCHICHTUNG	blank	vernickelt	TiN	TiAlN nano	AlTiN nano	Al-TiN	TiAlN	TiCN	Al-TiN+			
Ø-TOLERANZ	h5	h6	h7	h8	m7							
BOHRRTIEFE	1,5xD	3xD	4xD	5xD	7xD	8xD	10xD	12xD	15xD			
	20xD	25xD	30xD	40xD	50xD	75xD	80xD	~3xD	~5xD			
SCHNEIDRICHTUNG	 rechts											
SCHAFTFORM	Cyl	HA	HE	MK								
SPITZENWINKEL	90°	118°	120°	130°	135°	140°	142°	145°				
NORM	DIN 6539	DIN 6537K	DIN 6537L	DIN 8037	DIN 8041	WN						
TYP	Werksnorm											
	SuperV-F	SuperV-U	SuperV- IK-U	SuperV-VA	SuperV-95-GG	SuperV- IK-F	SuperV-95-GN	SuperV-T	SuperV-83-GAL	N	TBE-VHM	
	SuperV-NX	SuperV- IK-NX	SuperV-M	SuperV-AP mini	SuperV-AP mini U	SuperV-AP mini VA	SuperV-AP mini AL	SuperV-AP mini NC	SuperV-APmaxi	SuperT-AL	SuperT-N	SuperT-NX

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

	○	●	○	○	●	●	SuperV-F	zyl.	3xD	VHM	TiN	DIN 6539	3,000 - 12,000	61888	63
	●	○	○	○	○	○	SuperV-U	HA	3xD	VHM	TiAlN-nano	DIN 6537K	3,000 - 20,000	51873	64
	●	○	○	○	○	○	SuperV-U	HE	3xD	VHM	TiAlN-nano	DIN 6537K	3,000 - 20,000	51871	66
	●	○	○	○	○	○	SuperV-U	HA	5xD	VHM	TiAlN-nano	DIN 6537L	3,000 - 20,000	51787	68
	●	○	○	○	○	○	SuperV-U	HE	5xD	VHM	TiAlN-nano	DIN 6537L	3,000 - 20,000	51887	70

SuperV-Bohrer mit Innenkühlung

	●	○	○	○	○	○	SuperV-IK-U	HA	3xD	VHM	TiAlN-nano	DIN 6537K	3,000 - 20,000	51776	72
	●	○	○	○	○	○	SuperV-IK-U	HE	3xD	VHM	TiAlN-nano	DIN 6537K	3,000 - 20,000	51876	74
	○	○	○	○	○	○	SuperV-VA	HA	3xD	VHM	AlTiN nano	DIN 6537K	3,000 - 20,000	51770	76
	○	○	○	○	○	○	SuperV-VA	HE	3xD	VHM	AlTiN nano	DIN 6537K	3,000 - 20,000	51771	78
	○	○	○	○	○	○	SuperV95-GG	HA	4xD	VHM	blank	Werksnorm	3,000 - 21,500	71995	80
	○	●	○	○	●	●	SuperV-IK-F	HE	5xD	VHM	TiN	DIN 6537L	4,000 - 25,000	61880	82
	●	○	○	○	○	○	SuperV-IK-U	HA	5xD	VHM	TiAlN-nano	DIN 6537L	3,000 - 20,000	51781	83
	●	○	○	○	○	○	SuperV-IK-U	HE	5xD	VHM	TiAlN-nano	DIN 6537L	3,000 - 20,000	51881	85
	○	○	○	○	○	○	SuperV-VA	HA	5xD	VHM	AlTiN nano	DIN 6537L	3,000 - 20,000	51772	87
	○	○	○	○	○	○	SuperV-VA	HE	5xD	VHM	AlTiN nano	DIN 6537L	3,000 - 20,000	51773	89

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

	•	○	•	○	○	○	SuperV-IK-U	HA	7xD	VHM	TiAlN-nano Werksnorm	3,000 - 20,000	51789	91
	•	○	•	○	○	○	SuperV-IK-U	HE	7xD	VHM	TiAlN-nano Werksnorm	3,000 - 20,000	51889	92
			•	○	○		SuperV95-GG	HA	7xD	VHM	blank Werksnorm	3,000 - 20,000	71994	93
			•	○	○		SuperV95-GG	HA	10xD	VHM	blank Werksnorm	3,000 - 20,000	71996	94
	•	○	•	○	○		SuperV-IK-U	HA	12xD	VHM	TiAlN-nano Werksnorm	3,000 - 20,000	51893	95
			•	○	○		SuperV95-GN	HA	15xD	VHM	blank Werksnorm	5,000 - 14,000	71997	96
	•	•	•	○	○		SuperV-T	HA	15xD	VHM	AlTiN Werksnorm	3,000 - 14,000	51764	97
	•	•	•	○	○		SuperV-T	HA	20xD	VHM	AlTiN Werksnorm	3,000 - 14,000	51765	98
	•	•	•	○	○		SuperV-T	HA	25xD	VHM	AlTiN Werksnorm	3,000 - 12,000	51766	99
	•	•	•	○	○		SuperV-T	HA	30xD	VHM	AlTiN Werksnorm	3,000 - 10,000	51767	100
	•	•	•	○	○		SuperV-T	HA	40xD	VHM	AlTiN Werksnorm	3,000 - 8,000	51768	101

SuperV-Bohrer, 3-schneidig

			•	•	○		SuperV83-GAL	HA	5xD	VHM	blank DIN 6537L	3,000 - 20,000	71862	102
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SuperV-NX VHM-Hochleistungs-Kleinstbohrer ohne Innenkühlung

	•	○	•	○	○		SuperV-NX	zyl.	4xD	VHM	AlTiN+ Werksnorm	0,500 - 3,000	71998	103
	•	○	•	○	○		SuperV-NX	HA	7xD	VHM	AlTiN+ Werksnorm	0,500 - 3,000	71999	104

Arbeitsrichtwerte für SuperV-Bohrer

Vorschubreihen											
Code-Buchstabe	A	B	C	D	E	F	G	H	I		
Werkzeug-Ø mm	0,50	0,004	0,006	0,007	0,008	0,010	0,012	0,014	0,016	0,019	Vorschub f (mm/U)
	1,00	0,006	0,008	0,012	0,014	0,016	0,018	0,020	0,023	0,025	
	2,00	0,020	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125	
	2,50	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160	
	3,15	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,160	
	4,00	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,200	
	5,00	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250	
	6,30	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315	
	8,00	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,315	
	10,00	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,400	
	12,50	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500	
	16,00	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630	
	20,00	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,630	
	25,00	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	0,800	
	31,50	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000	
	40,00	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000	1,250	
	50,00	0,250	0,310	0,400	0,500	0,630	0,800	1,000	1,250	1,250	
	63,00	0,315	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600	
	80,00	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600	2,000	

Werkzeuge mit fett gedruckten Vorschubreihen-Codebuchstaben sind für die entsprechende Werkstoffgruppe vorrangig einzusetzen.

K, P, K/P

Die universelle Einsetzbarkeit unserer neuen K-Hartmetalle hat u.a. auch zur Folge, dass wir die HM-Anwendungsgruppen nur noch mit K bzw. K/P definieren.

Kühlmitteleinsatz:

- Schneidöl, hochaktiviert
- Bohrölemulsion
- ohne Schmiermittel
- nur Luftkühlung

Werkstoffgruppe	Werkstoffbeispiele, neue Bezeichnung (in Klammern alte Bezeichnung) Fettgedruckte Zahlen = Werkstoff-Nr. nach DIN EN	Zugfestigkeit MPa (N/mm ²)	Härte	Kühl- mittel
Allgemeine Baustähle	1.0035 S185(St33), 1.0486 P275N(StE285), 1.0345 P235GH(H1), 1.0425 P265GH(H2) 1.0050 E295 (St50-2), 1.0070 E360 (St70-2), 1.8937 P500NH (WStE500)	≤500 >500-850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Automatenstähle	1.0718 11SMnPb30 (9SMnPb28), 1.0736 11SMn37 (9SMn36) 1.0727 46S20 (45S20), 1.0728 (60S20), 1.0757 46SPb20 (45SPb20)	≤850 850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Unlegierte Vergütungsstähle	1.0402 C22, 1.1178 C30E (Ck30) 1.0503 C45, 1.1191 C45E (Ck45) 1.0601 C60, 1.1221 C60E (Ck60)	≤ 700 700-850 850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Legierte Vergütungsstähle	1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Unlegierte Einsatzstähle	1.0301 (C10), 1.1121 C10E (Ck10)	≤750		<input checked="" type="checkbox"/>
Legierte Einsatzstähle	1.7043 38Cr4 1.5752 15NiCr13 (15NiCr13), 1.7131 16MnCr5, 1.7264 20CrMo5	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Nitrierstähle	1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	>850-≤1000 ≥1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Werkzeugstähle	1.1750 C75W, 1.2067 102Cr6, 1.2307 29CrMoV9 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2767 X45NiCrMo4	≤850 >850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Schnellarbeitsstähle	1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3	≥650-1000		<input checked="" type="checkbox"/>
Federstähle	1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4 (51CrV4)		≤330 HB	<input checked="" type="checkbox"/>
Gehärtete Stähle	-		≤40-48 HRC >48-60 HRC	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Rostfreie Stähle, geschwefelt austenitisch martensitisch	1.4005 X12CrS13, 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X8CrNiS18-9 1.4301 X5CrNi18-10 (V2A), 1.4541 X6CrNiTi18-10, 1.4571 X6CrNiMoTi 17-12-2 (V4A) 1.4057 X20CrNi 17 2 (X17CrNi16-2), 1.4122 X39CrMo17-1, 1.4521 X2CrMoTi18-2	≤850 ≤850 ≤850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Gusseisen	0.6010 EN-GJL-100(GG10), 0.6020 EN-GJL-200(GG20) 0.6025 EN-GJL-250(GG25), 0.6035 EN-GJL-350(GG35)	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Kugelgraphit- und Temperguss	0.7050 EN-GJS-500-7(GGG50), 0.8035 EN-GJMW-350-4(GTW35) 0.7070 EN-GJS-700-2(GGG70), 0.8170 EN-GJMB-700-2(GTS70)		≤240 HB <300 HB	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Hartguss	-		≤350 HB	<input checked="" type="checkbox"/>
Neue Gusswerkstoffe GGV	EN-GJV250 (GGV25), EN-GJV350 (GGV35) EN-GJV400 (GGV40), EN-GJV500 (GGV50), SiMo6			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Neue Gusswerkstoffe ADI	EN-GJS-800-8 (ADI800), EN-GJS-1000-5 (ADI1000) EN-GJS-1200-2 (ADI1200), EN-GJS-1400-1 (ADI1400)	800-1000 1200-1400		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Sonderlegierungen	Nimonic, Inconel, Monel, Hastelloy	≤1200		<input checked="" type="checkbox"/>
Titan und Titan-Legierungen	3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7165 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤850 >850-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Aluminium und Al-Legierungen	3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1	≤400		<input checked="" type="checkbox"/>
Al-Knetlegierungen	3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	≤450		<input checked="" type="checkbox"/>
Al-Gusslegierungen ≤ 10 % Si	3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9	≤600		<input checked="" type="checkbox"/>
> 10 % Si	3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		<input checked="" type="checkbox"/>
Magnesium-Legierungen	3.5200 MgMn2, 3.5812.05 G-MgAl8Zn1, 3.5612.05 G-MgAl6Zn1	≤450		<input type="checkbox"/>
Kupfer, niedriglegiert	2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb	≤400		<input checked="" type="checkbox"/>
Messing, kurzspanend	2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2	≤600		<input checked="" type="checkbox"/>
langspanend	2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5	≤600		<input checked="" type="checkbox"/>
Bronzen, kurzspanend	2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0790 CuNi18Zn19Pb	≤600 >600-850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Bronzen, langspanend	2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10 2.0980 CuAl11Ni, 2.1247 CuBe2	≤850 >850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Kunststoffe, duroplastisch	Epoxidharz, Resopal, Pertinax, Moltopren		-	<input type="checkbox"/>
thermoplastisch	Plexiglas, Hostalen, Novodur, Makralon		-	<input checked="" type="checkbox"/>
Kunststoffe, aramidfaserverstärkt	Kevlar		-	<input type="checkbox"/>
glas-/kohlefaserverstärkt	GFK/CFK		-	<input type="checkbox"/>

≤3×D Bohrtiefe

≤4×D

Katalog-Nr.	61888	51873	51871	51770	51771	51776	51876	71995
Schneidstoff	VHM	VHM	VHM	VHM	VHM	VHM	VHM	VHM
HM-Anwendgsgr.	K/P	K/P	K/P	K/P	K/P	K/P	K/P	K
Oberfläche	TiN	TiAlN nano	TiAlN nano	AlTiN nano	AlTiN nano	TiAlN nano	TiAlN nano	blank
DIN/Form	6539	6537K	6537K	6537K	6537K	6537K	6537K	WN
Typ	F	U	U	VA	VA	U	U	GG
Innenkühlung				axial	axial	axial	axial	axial
Katalogseite	63	64	66	76	78	72	74	80



V _c m/min	VR-Code	V _c m/min	Vorschubreihen-Code		V _c m/min	Vorschubreihen-Code		V _c m/min	Vorschubreihen-Code		V _c m/min	VR-Code
100	F	130	G	G				145	G	G		
85	E	110	F	F				120	F	F		
110	G	145	H	H				170	H	H		
85	F	110	G	G				145	H	H		
90	F	120	G	G				130	H	H		
85	F	110	G	G				125	G	G		
80	F	105	G	G				120	G	G		
80	F	105	G	G				120	G	G		
75	E	100	F	F				105	G	G		
100	G	130	H	H				145	H	H		
90	F	120	G	G				120	G	G		
65	D	85	E	E				85	E	E		
75	E	100	F	F				110	G	G		
70	D	90	E	E				105	E	E		
50	E	65	F	F				80	F	F		
40	D	55	E	E				65	E	E		
40	C							60	D	D		
45	B	45	C	C				60	C	C		
35	B	40	A	A				55	C	C		
20	A	20	A	A				35	B	B		
40	C	40	B	B	80	E	E	60	E	E		
35	C	15	A	A	60	B-C	B-C	55	B	B		
35	B	35	B	B	80	E	E	45	E	E		
160	G	210	H	H				210	I	I	120	G
120	G	155	H	H				160	I	I	100	G
120	G	155	G	G				140	I	I	90	G
95	G	125	G	G				130	H	H	80	G
25	B	35	C	C				40	C	C	40	B
20	C	25	D	D	30	D	D	30	D	D		
30	B	15	A	A	45	D	D	45	D	D		
25	B	15	A	A	40	C	C	40	C	C		
200	H	260	I	I				310	I	I	410	I
200	H	260	I	I				310	I	I	410	I
170	H	220	H	H				260	I	I	380	I
140	G	180	H	H				220	I	I	330	I
200	G	260	H	H				280	H	H		
80	F	105	G	G				125	G	G		
210	G	270	H	H				325	H	H	280	I
140	F	180	G	G				220	G	G		
80	E	105	F	F				125	G	G	110	F
65	E	85	F	F				105	F	F	80	E
60	D	80	E	E				90	F	F		
45	D	60	E	E				80	F	F		

Arbeitsrichtwerte für SuperV-Bohrer

Vorschubreihen											
Code-Buchstabe	A	B	C	D	E	F	G	H	I		
Werkzeug-Ø mm	0,50	0,004	0,006	0,007	0,008	0,010	0,012	0,014	0,016	0,019	Vorschub f (mm/U)
	1,00	0,006	0,008	0,012	0,014	0,016	0,018	0,020	0,023	0,025	
	2,00	0,020	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125	
	2,50	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160	
	3,15	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,160	
	4,00	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,200	
	5,00	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250	
	6,30	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315	
	8,00	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,315	
	10,00	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,400	
	12,50	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500	
	16,00	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630	
	20,00	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,630	
	25,00	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	0,800	
	31,50	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000	
	40,00	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000	1,250	
	50,00	0,250	0,310	0,400	0,500	0,630	0,800	1,000	1,250	1,250	
	63,00	0,315	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600	
80,00	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600	2,000		

Werkzeuge mit fett gedruckten Vorschubreihen-Codebuchstaben sind für die entsprechende Werkstoffgruppe vorrangig einzusetzen.

K, P, K/P

Die universelle Einsetzbarkeit unserer neuen K-Hartmetalle hat u.a. auch zur Folge, dass wir die HM-Anwendungsgruppen nur noch mit K bzw. K/P definieren.

Kühlmitteleinsatz:

- Schneidöl, hochaktiviert
- Bohrölemulsion
- ohne Schmiermittel
- nur Luftkühlung

Werkstoffgruppe	Werkstoffbeispiele, neue Bezeichnung (in Klammern alte Bezeichnung) Fettgedruckte Zahlen = Werkstoff-Nr. nach DIN EN	Zugfestigkeit MPa (N/mm ²)	Härte	Kühl- mittel
Allgemeine Baustähle	1.0035 S185(St33), 1.0486 P275N(StE285), 1.0345 P235GH(H1), 1.0425 P265GH(H2) 1.0050 E295 (St50-2), 1.0070 E360 (St70-2), 1.8937 P500NH (WStE500)	≤500 >500-850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Automatenstähle	1.0718 11SMnPb30 (9SMnPb28), 1.0736 11SMn37 (9SMn36) 1.0727 46S20 (45S20), 1.0728 (60S20), 1.0757 46SPb20 (45SPb20)	≤850 850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Unlegierte Vergütungsstähle	1.0402 C22, 1.1178 C30E (Ck30) 1.0503 C45, 1.1191 C45E (Ck45) 1.0601 C60, 1.1221 C60E (Ck60)	≤ 700 700-850 850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Legierte Vergütungsstähle	1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Unlegierte Einsatzstähle	1.0301 (C10), 1.1121 C10E (Ck10)	≤750		<input checked="" type="checkbox"/>
Legierte Einsatzstähle	1.7043 38Cr4 1.5752 15NiCr13 (15NiCr13), 1.7131 16MnCr5, 1.7264 20CrMo5	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Nitrierstähle	1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	>850-≤1000 ≥1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Werkzeugstähle	1.1750 C75W, 1.2067 102Cr6, 1.2307 29CrMoV9 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2767 X45NiCrMo4	≤850 >850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Schnellarbeitsstähle	1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3	≥650-1000		<input checked="" type="checkbox"/>
Federstähle	1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4 (51CrV4)		≤330 HB	<input checked="" type="checkbox"/>
Gehärtete Stähle	-		≤40-48 HRC >48-60 HRC	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Rostfreie Stähle, geschwefelt austenitisch martensitisch	1.4005 X12CrS13, 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X8CrNiS18-9 1.4301 X5CrNi18-10 (V2A), 1.4541 X6CrNiTi18-10, 1.4571 X6CrNiMoTi 17-12-2 (V4A) 1.4057 X20CrNi 17 2 (X17CrNi16-2), 1.4122 X39CrMo17-1, 1.4521 X2CrMoTi18-2	≤850 ≤850 ≤850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Gusseisen	0.6010 EN-GJL-100(GG10), 0.6020 EN-GJL-200(GG20) 0.6025 EN-GJL-250(GG25), 0.6035 EN-GJL-350(GG35)	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Kugelgraphit- und Temperguss	0.7050 EN-GJS-500-7(GGG50), 0.8035 EN-GJMW-350-4(GTW35) 0.7070 EN-GJS-700-2(GGG70), 0.8170 EN-GJMB-700-2(GTS70)		≤240 HB <300 HB	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Hartguss	-		≤350 HB	<input checked="" type="checkbox"/>
Neue Gusswerkstoffe GGV	EN-GJV250 (GGV25), EN-GJV350 (GGV35) EN-GJV400 (GGV40), EN-GJV500 (GGV50), SiMo6			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Neue Gusswerkstoffe ADI	EN-GJS-800-8 (ADI800), EN-GJS-1000-5 (ADI1000) EN-GJS-1200-2 (ADI1200), EN-GJS-1400-1 (ADI1400)	800-1000 1200-1400		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Sonderlegierungen	Nimonic, Inconel, Monel, Hastelloy	≤1200		<input checked="" type="checkbox"/>
Titan und Titan-Legierungen	3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7165 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤850 >850-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Aluminium und Al-Legierungen	3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1	≤400		<input checked="" type="checkbox"/>
Al-Knetlegierungen	3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	≤450		<input checked="" type="checkbox"/>
Al-Gusslegierungen ≤ 10 % Si	3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9	≤600		<input checked="" type="checkbox"/>
> 10 % Si	3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		<input checked="" type="checkbox"/>
Magnesium-Legierungen	3.5200 MgMn2, 3.5812.05 G-MgAl8Zn1, 3.5612.05 G-MgAl6Zn1	≤450		<input type="checkbox"/>
Kupfer, niedriglegiert	2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb	≤400		<input checked="" type="checkbox"/>
Messing, kurzspanend	2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2	≤600		<input checked="" type="checkbox"/>
langspanend	2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5	≤600		<input checked="" type="checkbox"/>
Bronzen, kurzspanend	2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0790 CuNi18Zn19Pb	≤600 >600-850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Bronzen, langspanend	2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10 2.0980 CuAl11Ni, 2.1247 CuBe2	≤850 >850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Kunststoffe, duroplastisch	Epoxidharz, Resopal, Pertinax, Moltopren		-	<input type="checkbox"/>
thermoplastisch	Plexiglas, Hostalen, Novodur, Makralon		-	<input checked="" type="checkbox"/>
Kunststoffe, aramidfaserverstärkt	Kevlar		-	<input type="checkbox"/>
glas-/kohlefaserverstärkt	GFK/CFK		-	<input type="checkbox"/>

≤5×D Bohrtiefe

Katalog-Nr.	51887	51787
Schneidstoff	VHM	VHM
HM-Anwendgsgr.	K/P	K/P
Oberfläche	TiAlN nano	TiAlN nano
DIN/Form	6537L	6537L
Typ	U	U
Innenkühlung		
Katalogseite	70	68

51781	51881
VHM	VHM
K/P	K/P
TiAlN nano	TiAlN nano
6537L	6537L
U	U
axial	axial
83	85

71862
VHM
K
blank
6537L
GAL
102

51772	51773
VHM	VHM
K/P	K/P
AlTiN nano	AlTiN nano
6537L	6537L
VA	VA
axial	axial
87	89

61880
VHM
K/P
TiN
6537L
F
axial
82



V _c m/min	Vorschubreihen-Code	
130	G	G
110	F	F
145	H	H
110	G	G
120	G	G
110	G	G
105	G	G
105	G	G
100	F	F
130	H	H
120	G	G
85	E	E
100	F	F
90	E	E
65	F	F
55	E	E
45	C	C
35	A	A
20	A	A
40	B	B
15	A	A
35	B	B
210	H	H
155	H	H
145	G	G
125	G	G
35	C	C
25	D	D
15	A	A
15	A	C
260	I	I
260	I	I
235	I	I
170	H	H
260	H	H
105	G	G
270	H	H
180	G	G
105	F	F
85	F	F
80	E	E
60	E	E

V _c m/min	Vorschubreihen-Code	
145	G	G
120	F	F
170	H	H
145	H	H
130	H	H
125	G	G
120	G	G
120	G	G
105	G	G
105	G	G
145	H	H
120	G	G
85	E	E
105	G	G
100	E	E
70	F	F
55	E	E
60	E	E
60	C	C
55	C	C
35	B	B
60	E	E
55	B	B
50	E	E
195	I	I
160	I	I
140	I	I
130	H	H
40	C	C
35	D	D
45	D	D
40	C	C
310	I	I
310	I	I
260	I	I
220	I	I
280	H	H
125	G	G
325	H	H
220	G	G
125	G	G
105	F	F
90	F	F
80	F	F

V _c m/min	VR-Code
100	F
80	F
80	F
70	F
180	G
160	G
150	G
120	F
180	F
180	F

V _c m/min	Vorschubreihen-Code	
80	E	E
60	B-C	B-C
80	E	E
30	D	D
45	D	D
40	C	C

V _c m/min	VR-Code
110	F
90	E
130	G
110	G
100	G
95	F
90	F
90	F
80	F
110	G
90	F
65	D
85	F
80	E
60	E
50	D
45	D
45	B
40	B
25	A
45	D
40	B
35	D
160	H
120	H
100	H
95	G
30	B
25	C
35	C
30	B
240	H
240	H
200	H
170	H
230	G
95	F
250	G
170	F
95	F
80	E
70	E
60	E

Arbeitsrichtwerte für SuperV-Bohrer

Vorschubreihen										
Code-Buchstabe	A	B	C	D	E	F	G	H	I	
Werkzeug-Ø mm	0,50	0,004	0,006	0,007	0,008	0,010	0,012	0,014	0,016	0,019
	1,00	0,006	0,008	0,012	0,014	0,016	0,018	0,020	0,023	0,025
	2,00	0,020	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125
	2,50	0,025	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160
	3,15	0,032	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,160
	4,00	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,200
	5,00	0,040	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250
	6,30	0,050	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315
	8,00	0,063	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,315
	10,00	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,400
	12,50	0,080	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500
	16,00	0,100	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630
	20,00	0,125	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,630
	25,00	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	0,800
	31,50	0,160	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000
	40,00	0,200	0,250	0,315	0,400	0,500	0,630	0,800	1,000	1,250
	50,00	0,250	0,310	0,400	0,500	0,630	0,800	1,000	1,250	1,250
	63,00	0,315	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600
	80,00	0,400	0,500	0,630	0,800	1,000	1,250	1,600	1,600	2,000

Werkzeuge mit fett gedruckten Vorschubreihen-Codebuchstaben sind für die entsprechende Werkstoffgruppe vorrangig einzusetzen.

K, P, K/P

Die universelle Einsetzbarkeit unserer neuen K-Hartmetalle hat u.a. auch zur Folge, dass wir die HM-Anwendungsgruppen nur noch mit K bzw. K/P definieren.

Kühlmitteleinsatz:

- Schneidöl, hochaktiviert
- Bohrölemulsion
- ohne Schmiermittel
- nur Luftkühlung

Werkstoffgruppe	Werkstoffbeispiele, neue Bezeichnung (in Klammern alte Bezeichnung) Fettgedruckte Zahlen = Werkstoff-Nr. nach DIN EN	Zugfestigkeit MPa (N/mm ²)	Härte	Kühl- mittel
Allgemeine Baustähle	1.0035 S185(St33), 1.0486 P275N(StE285), 1.0345 P235GH(H1), 1.0425 P265GH(H2) 1.0050 E295 (St50-2), 1.0070 E360 (St70-2), 1.8937 P500NH (WStE500)	≤500 >500-850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Automatenstähle	1.0718 11SMnPb30 (9SMnPb28), 1.0736 11SMn37 (9SMn36) 1.0727 46S20 (45S20), 1.0728 (60S20), 1.0757 46SPb20 (45SPb20)	≤850 850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Unlegierte Vergütungsstähle	1.0402 C22, 1.1178 C30E (Ck30) 1.0503 C45, 1.1191 C45E (Ck45) 1.0601 C60, 1.1221 C60E (Ck60)	≤ 700 700-850 850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Legierte Vergütungsstähle	1.5131 50MnSi4, 1.7003 38Cr2, 1.7030 28Cr4 1.5710 36NiCr6, 1.7035 41Cr4, 1.7225 42CrMo4	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Unlegierte Einsatzstähle	1.0301 (C10), 1.1121 C10E (Ck10)	≤750		<input checked="" type="checkbox"/>
Legierte Einsatzstähle	1.7043 38Cr4 1.5752 15NiCr13 (15NiCr13), 1.7131 16MnCr5, 1.7264 20CrMo5	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Nitrierstähle	1.8504 34CrAl6 1.8519 31CrMoV9, 1.8550 34CrAlNi7	≥850-≤1000 >1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Werkzeugstähle	1.1750 C75W, 1.2067 102Cr6, 1.2307 29CrMoV9 1.2080 X210Cr12, 1.2083 X42Cr13, 1.2419 105WCr6, 1.2767 X45NiCrMo4	≤850 >850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Schnellarbeitsstähle	1.3243 S 6-5-2-5, 1.3343 S 6-5-2, 1.3344 S 6-5-3	≥650-1000		<input checked="" type="checkbox"/>
Federstähle	1.5026 55Si7, 1.7176 55Cr3, 1.8159 51CrV4 (51CrV4)		≤330 HB	<input checked="" type="checkbox"/>
Gehärtete Stähle	-		≤40-48 HRC >48-60 HRC	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Rostfreie Stähle, geschwefelt austenitisch martensitisch	1.4005 X12CrS13, 1.4104 X14CrMoS17, 1.4105 X6CrMoS17, 1.4305 X8CrNiS18-9 1.4301 X5CrNi18-10 (V2A), 1.4541 X6CrNiTi18-10, 1.4571 X6CrNiMoTi 17-12-2 (V4A) 1.4057 X20CrNi 17 2 (X17CrNi16-2), 1.4122 X39CrMo17-1, 1.4521 X2CrMoTi18-2	≤850 ≤850 ≤850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Gusseisen	0.6010 EN-GJL-100(GG10), 0.6020 EN-GJL-200(GG20) 0.6025 EN-GJL-250(GG25), 0.6035 EN-GJL-350(GG35)	850-≤1000 1000-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Kugelgraphit- und Temperguss	0.7050 EN-GJS-500-7(GGG50), 0.8035 EN-GJMw-350-4(GTW35) 0.7070 EN-GJS-700-2(GGG70), 0.8170 EN-GJMB-700-2(GTS70)		≤240 HB <300 HB	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Hartguss	-		≤350 HB	<input checked="" type="checkbox"/>
Neue Gusswerkstoffe GGV	EN-GJV250 (GGV25), EN-GJV350 (GGV35) EN-GJV400 (GGV40), EN-GJV500 (GGV50), SiMo6			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Neue Gusswerkstoffe ADI	EN-GJS-800-8 (ADI800), EN-GJS-1000-5 (ADI1000) EN-GJS-1200-2 (ADI1200), EN-GJS-1400-1 (ADI1400)	800-1000 1200-1400		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Sonderlegierungen	Nimonic, Inconel, Monel, Hastelloy	≤1200		<input checked="" type="checkbox"/>
Titan und Titan-Legierungen	3.7024 Ti99,5, 3.7114 TiAl5Sn2,5, 3.7124 TiCu2 3.7154 TiAl6Zr5, 3.7165 TiAl6V4, 3.7184 TiAl4Mo4Sn2,5, - TiAl8Mo1V1	≤850 >850-1200		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Aluminium und Al-Legierungen	3.0255 Al99,5, 3.2315 AlMgSi1, 3.3515 AlMg1	≤400		<input checked="" type="checkbox"/>
Al-Knetlegierungen	3.0615 AlMgSiPb, 3.1325 AlCuMg1, 3.3245 AlMg3Si, 3.4365 AlZnMgCu1,5	≤450		<input checked="" type="checkbox"/>
Al-Gusslegierungen ≤ 10 % Si	3.2131 G-AlSi5Cu1, 3.2153 G-AlSi7Cu3, 3.2573 G-AlSi9	≤600		<input checked="" type="checkbox"/>
> 10 % Si	3.2581 G-AlSi12, 3.2583 G-AlSi12Cu, - G-AlSi12CuNiMg	≤600		<input checked="" type="checkbox"/>
Magnesium-Legierungen	3.5200 MgMn2, 3.5812.05 G-MgAl8Zn1, 3.5612.05 G-MgAl6Zn1	≤450		<input type="checkbox"/>
Kupfer, niedriglegiert	2.0070 SE-Cu, 2.1020 CuSn6, 2.1096 G-CuSn5ZnPb	≤400		<input checked="" type="checkbox"/>
Messing, kurzspanend	2.0380 CuZn39Pb2, 2.0401 CuZn39Pb3, 2.0410 CuZn43Pb2	≤600		<input checked="" type="checkbox"/>
langspanend	2.0250 CuZn20, 2.0280 CuZn33, 2.0332 CuZn37Pb0,5	≤600		<input checked="" type="checkbox"/>
Bronzen, kurzspanend	2.1090 CuSn7ZnPb, 2.1170 CuPb5Sn5, 2.1176 CuPb10Sn 2.0790 CuNi18Zn19Pb	≤600 >600-850		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Bronzen, langspanend	2.0916 CuAl5, 2.0960 CuAl9Mn, 2.1050 CuSn10 2.0980 CuAl11Ni, 2.1247 CuBe2	≤850 >850-1000		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Kunststoffe, duroplastisch	Epoxidharz, Resopal, Pertinax, Moltopren		-	<input type="checkbox"/>
thermoplastisch	Plexiglas, Hostalen, Novodur, Makralon		-	<input checked="" type="checkbox"/>
Kunststoffe, aramidfaserverstärkt	Kevlar		-	<input type="checkbox"/>
glas-/kohlefaserverstärkt	GFK/CFK		-	<input type="checkbox"/>

≤7×D Bohrtiefe

≤10×D

≤12×D

≤15×D

Katalog-Nr.	51789	51889
Schneidstoff	VHM	VHM
HM-Anwendgsgr.	K/P	K/P
Oberfläche	TiAlN nano	
DIN/Form	WN	WN
Typ	U	U
Innenkühlung	axial	axial
Katalogseite	91	92

Katalog-Nr.	71994
Schneidstoff	VHM
HM-Anwendgsgr.	K
Oberfläche	blank
DIN/Form	WN
Typ	GG
Innenkühlung	axial
Katalogseite	93

Katalog-Nr.	71996
Schneidstoff	VHM
HM-Anwendgsgr.	K
Oberfläche	blank
DIN/Form	WN
Typ	GG
Innenkühlung	axial
Katalogseite	94

Katalog-Nr.	51893
Schneidstoff	VHM
HM-Anwendgsgr.	K/P
Oberfläche	TiAlN nano
DIN/Form	WN
Typ	U
Innenkühlung	axial
Katalogseite	95

Katalog-Nr.	71997
Schneidstoff	VHM
HM-Anwendgsgr.	K
Oberfläche	blank
DIN/Form	WN
Typ	GN
Innenkühlung	axial
Katalogseite	96



V _c m/min	Vorschubreihen- Code		V _c m/min	VR- Code	V _c m/min	VR- Code	V _c m/min	VR- Code	V _c m/min	VR- Code
145	F	F					110	F		
120	E	E					110	E		
170	G	G					110	G		
145	G	G					100	G		
130	G	G					110	G		
125	F	F					110	F		
120	F	F					100	F		
120	F	F					110	F		
105	F	F					105	F		
145	G	G					110	G		
120	F	F					110	F		
85	D	D					85	D		
110	F	F					100	F		
105	D	D					80	D		
80	E	E					80	E		
65	D	D					65	D		
60	D	D					50	D		
60	B	B					50	B		
55	B	B								
							60	D		
							55	B		
							45	D		
195	H	H	120	F	120	F	120	H	120	E
160	H	H	100	F	100	F	120	H	100	E
140	H	H	90	F	90	F	100	H	90	E
130	G	G	80	F	80	F	90	G	80	E
40	B	B	40	B	40	A			40	A
35	C	C								
310	H	H	410	H	410	H	150	H	410	F
310	H	H	410	H	410	H	150	H	410	F
260	H	H	380	H	380	H	150	H	380	G
220	H	H	330	H	330	H	120	H	330	G
280	G	G					150	G		
125	F	F					80	F		
325	G	G	280	G	280	G	120	G	280	F
220	F	F					120	F		
125	F	F	110	F	110	F	40	F	110	E
105	E	E	80	E	80	E			80	D
90	E	E								
80	E	E					40	E		

SuperV-Bohrer

SuperV-Bohrer ohne Innenkühlung



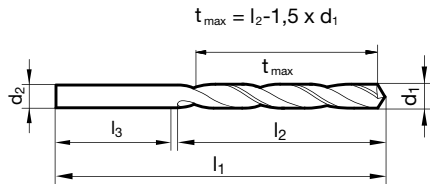
Katalog-Nr. 61888



P	M	K	N	S	H
○	●	○	○	●	●

Arbeitsrichtwerte
Seite 26

- Ausspitzung $\geq \varnothing 3,000$
- Kegelmantelschliff
- Hauptschneidenform konkav
- optimierte Schneidengeometrie
- scharfes Schnittverhalten



d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
3,000	3,000	46,000	16,000	30,000
3,100	3,100	49,000	18,000	31,000
3,200	3,200	49,000	18,000	31,000
3,400	3,400	52,000	20,000	32,000
3,500	3,500	52,000	20,000	32,000
3,600	3,600	52,000	20,000	32,000
4,000	4,000	55,000	22,000	33,000
4,200	4,200	55,000	22,000	33,000
4,300	4,300	58,000	24,000	34,000
4,500	4,500	58,000	24,000	34,000
4,700	4,700	58,000	24,000	34,000
5,000	5,000	62,000	26,000	36,000
5,100	5,100	62,000	26,000	36,000
5,200	5,200	62,000	26,000	36,000
5,500	5,500	66,000	28,000	38,000
5,700	5,700	66,000	28,000	38,000
5,800	5,800	66,000	28,000	38,000
6,000	6,000	66,000	28,000	38,000
6,100	6,100	70,000	31,000	39,000
6,200	6,200	70,000	31,000	39,000
6,400	6,400	70,000	31,000	39,000
6,500	6,500	70,000	31,000	39,000
6,600	6,600	70,000	31,000	39,000
6,700	6,700	70,000	31,000	39,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
6,800	6,800	74,000	34,000	40,000
7,000	7,000	74,000	34,000	40,000
7,200	7,200	74,000	34,000	40,000
7,300	7,300	74,000	34,000	40,000
7,500	7,500	74,000	34,000	40,000
7,700	7,700	79,000	37,000	42,000
7,800	7,800	79,000	37,000	42,000
8,000	8,000	79,000	37,000	42,000
8,400	8,400	79,000	37,000	42,000
8,500	8,500	79,000	37,000	42,000
8,700	8,700	84,000	40,000	44,000
8,900	8,900	84,000	40,000	44,000
9,000	9,000	84,000	40,000	44,000
9,100	9,100	84,000	40,000	44,000
9,200	9,200	84,000	40,000	44,000
9,300	9,300	84,000	40,000	44,000
9,400	9,400	84,000	40,000	44,000
9,500	9,500	84,000	40,000	44,000
9,700	9,700	89,000	43,000	46,000
10,000	10,000	89,000	43,000	46,000
10,100	10,100	89,000	43,000	46,000
10,200	10,200	89,000	43,000	46,000
12,000	12,000	102,000	51,000	51,000

SuperV-Bohrer

SuperV-Bohrer ohne Innenkühlung



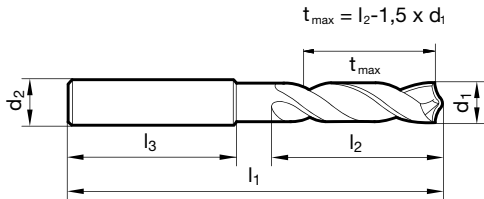
Katalog-Nr. 51873



P	M	K	N	S	H
●		●	○	○	○

Arbeitsrichtwerte
Seite 26

- Ausspitzung $\geq \text{Ø } 3,000$
- 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	62,000	20,000	36,000	7,600	8,000	79,000	41,000	36,000
3,100	6,000	62,000	20,000	36,000	7,700	8,000	79,000	41,000	36,000
3,200	6,000	62,000	20,000	36,000	7,800	8,000	79,000	41,000	36,000
3,300	6,000	62,000	20,000	36,000	7,900	8,000	79,000	41,000	36,000
3,400	6,000	62,000	20,000	36,000	8,000	8,000	79,000	41,000	36,000
3,500	6,000	62,000	20,000	36,000	8,100	10,000	89,000	47,000	40,000
3,600	6,000	62,000	20,000	36,000	8,200	10,000	89,000	47,000	40,000
3,700	6,000	62,000	20,000	36,000	8,300	10,000	89,000	47,000	40,000
3,800	6,000	66,000	24,000	36,000	8,400	10,000	89,000	47,000	40,000
3,900	6,000	66,000	24,000	36,000	8,500	10,000	89,000	47,000	40,000
4,000	6,000	66,000	24,000	36,000	8,600	10,000	89,000	47,000	40,000
4,100	6,000	66,000	24,000	36,000	8,700	10,000	89,000	47,000	40,000
4,200	6,000	66,000	24,000	36,000	8,800	10,000	89,000	47,000	40,000
4,300	6,000	66,000	24,000	36,000	8,900	10,000	89,000	47,000	40,000
4,400	6,000	66,000	24,000	36,000	9,000	10,000	89,000	47,000	40,000
4,500	6,000	66,000	24,000	36,000	9,100	10,000	89,000	47,000	40,000
4,600	6,000	66,000	24,000	36,000	9,200	10,000	89,000	47,000	40,000
4,650	6,000	66,000	24,000	36,000	9,250	10,000	89,000	47,000	40,000
4,700	6,000	66,000	24,000	36,000	9,300	10,000	89,000	47,000	40,000
4,800	6,000	66,000	28,000	36,000	9,400	10,000	89,000	47,000	40,000
4,900	6,000	66,000	28,000	36,000	9,500	10,000	89,000	47,000	40,000
5,000	6,000	66,000	28,000	36,000	9,600	10,000	89,000	47,000	40,000
5,100	6,000	66,000	28,000	36,000	9,700	10,000	89,000	47,000	40,000
5,200	6,000	66,000	28,000	36,000	9,800	10,000	89,000	47,000	40,000
5,300	6,000	66,000	28,000	36,000	9,900	10,000	89,000	47,000	40,000
5,400	6,000	66,000	28,000	36,000	10,000	10,000	89,000	47,000	40,000
5,500	6,000	66,000	28,000	36,000	10,100	12,000	102,000	55,000	45,000
5,550	6,000	66,000	28,000	36,000	10,200	12,000	102,000	55,000	45,000
5,600	6,000	66,000	28,000	36,000	10,300	12,000	102,000	55,000	45,000
5,700	6,000	66,000	28,000	36,000	10,400	12,000	102,000	55,000	45,000
5,800	6,000	66,000	28,000	36,000	10,500	12,000	102,000	55,000	45,000
5,900	6,000	66,000	28,000	36,000	10,600	12,000	102,000	55,000	45,000
6,000	6,000	66,000	28,000	36,000	10,700	12,000	102,000	55,000	45,000
6,100	8,000	79,000	34,000	36,000	10,800	12,000	102,000	55,000	45,000
6,200	8,000	79,000	34,000	36,000	10,900	12,000	102,000	55,000	45,000
6,300	8,000	79,000	34,000	36,000	11,000	12,000	102,000	55,000	45,000
6,400	8,000	79,000	34,000	36,000	11,100	12,000	102,000	55,000	45,000
6,500	8,000	79,000	34,000	36,000	11,200	12,000	102,000	55,000	45,000
6,600	8,000	79,000	34,000	36,000	11,300	12,000	102,000	55,000	45,000
6,700	8,000	79,000	34,000	36,000	11,400	12,000	102,000	55,000	45,000
6,800	8,000	79,000	34,000	36,000	11,500	12,000	102,000	55,000	45,000
6,900	8,000	79,000	34,000	36,000	11,600	12,000	102,000	55,000	45,000
7,000	8,000	79,000	34,000	36,000	11,700	12,000	102,000	55,000	45,000
7,100	8,000	79,000	41,000	36,000	11,800	12,000	102,000	55,000	45,000
7,200	8,000	79,000	41,000	36,000	11,900	12,000	102,000	55,000	45,000
7,300	8,000	79,000	41,000	36,000	12,000	12,000	102,000	55,000	45,000
7,400	8,000	79,000	41,000	36,000	12,200	14,000	107,000	60,000	45,000
7,500	8,000	79,000	41,000	36,000	12,500	14,000	107,000	60,000	45,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
12,700	14,000	107,000	60,000	45,000	16,000	16,000	115,000	65,000	48,000
13,000	14,000	107,000	60,000	45,000	16,500	18,000	123,000	73,000	48,000
13,500	14,000	107,000	60,000	45,000	17,000	18,000	123,000	73,000	48,000
13,700	14,000	107,000	60,000	45,000	17,500	18,000	123,000	73,000	48,000
14,000	14,000	107,000	60,000	45,000	18,000	18,000	123,000	73,000	48,000
14,200	16,000	115,000	65,000	48,000	18,500	20,000	131,000	79,000	50,000
14,500	16,000	115,000	65,000	48,000	19,000	20,000	131,000	79,000	50,000
14,700	16,000	115,000	65,000	48,000	19,500	20,000	131,000	79,000	50,000
15,000	16,000	115,000	65,000	48,000	20,000	20,000	131,000	79,000	50,000
15,200	16,000	115,000	65,000	48,000					
15,500	16,000	115,000	65,000	48,000					
15,700	16,000	115,000	65,000	48,000					

SuperV-Bohrer

SuperV-Bohrer ohne Innenkühlung



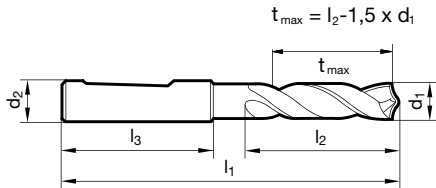
Katalog-Nr. 51871



P	M	K	N	S	H
●		●	○	○	○

Arbeitsrichtwerte
Seite 26

- Ausspitzung $\geq \text{Ø } 3,000$
- 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	62,000	20,000	36,000	6,750	8,000	79,000	34,000	36,000
3,100	6,000	62,000	20,000	36,000	6,800	8,000	79,000	34,000	36,000
3,170	6,000	62,000	20,000	36,000	6,900	8,000	79,000	34,000	36,000
3,200	6,000	62,000	20,000	36,000	7,000	8,000	79,000	34,000	36,000
3,300	6,000	62,000	20,000	36,000	7,100	8,000	79,000	41,000	36,000
3,400	6,000	62,000	20,000	36,000	7,140	8,000	79,000	41,000	36,000
3,500	6,000	62,000	20,000	36,000	7,200	8,000	79,000	41,000	36,000
3,570	6,000	62,000	20,000	36,000	7,300	8,000	79,000	41,000	36,000
3,600	6,000	62,000	20,000	36,000	7,400	8,000	79,000	41,000	36,000
3,700	6,000	62,000	20,000	36,000	7,500	8,000	79,000	41,000	36,000
3,800	6,000	66,000	24,000	36,000	7,540	8,000	79,000	41,000	36,000
3,900	6,000	66,000	24,000	36,000	7,600	8,000	79,000	41,000	36,000
3,970	6,000	66,000	24,000	36,000	7,700	8,000	79,000	41,000	36,000
4,000	6,000	66,000	24,000	36,000	7,800	8,000	79,000	41,000	36,000
4,100	6,000	66,000	24,000	36,000	7,900	8,000	79,000	41,000	36,000
4,200	6,000	66,000	24,000	36,000	7,940	8,000	79,000	41,000	36,000
4,300	6,000	66,000	24,000	36,000	8,000	8,000	79,000	41,000	36,000
4,370	6,000	66,000	24,000	36,000	8,100	10,000	89,000	47,000	40,000
4,400	6,000	66,000	24,000	36,000	8,200	10,000	89,000	47,000	40,000
4,500	6,000	66,000	24,000	36,000	8,300	10,000	89,000	47,000	40,000
4,600	6,000	66,000	24,000	36,000	8,330	10,000	89,000	47,000	40,000
4,700	6,000	66,000	24,000	36,000	8,400	10,000	89,000	47,000	40,000
4,760	6,000	66,000	28,000	36,000	8,500	10,000	89,000	47,000	40,000
4,800	6,000	66,000	28,000	36,000	8,600	10,000	89,000	47,000	40,000
4,900	6,000	66,000	28,000	36,000	8,700	10,000	89,000	47,000	40,000
5,000	6,000	66,000	28,000	36,000	8,730	10,000	89,000	47,000	40,000
5,100	6,000	66,000	28,000	36,000	8,800	10,000	89,000	47,000	40,000
5,160	6,000	66,000	28,000	36,000	8,900	10,000	89,000	47,000	40,000
5,200	6,000	66,000	28,000	36,000	9,000	10,000	89,000	47,000	40,000
5,300	6,000	66,000	28,000	36,000	9,100	10,000	89,000	47,000	40,000
5,400	6,000	66,000	28,000	36,000	9,130	10,000	89,000	47,000	40,000
5,500	6,000	66,000	28,000	36,000	9,200	10,000	89,000	47,000	40,000
5,550	6,000	66,000	28,000	36,000	9,250	10,000	89,000	47,000	40,000
5,560	6,000	66,000	28,000	36,000	9,300	10,000	89,000	47,000	40,000
5,600	6,000	66,000	28,000	36,000	9,400	10,000	89,000	47,000	40,000
5,700	6,000	66,000	28,000	36,000	9,500	10,000	89,000	47,000	40,000
5,800	6,000	66,000	28,000	36,000	9,520	10,000	89,000	47,000	40,000
5,900	6,000	66,000	28,000	36,000	9,600	10,000	89,000	47,000	40,000
5,950	6,000	66,000	28,000	36,000	9,700	10,000	89,000	47,000	40,000
6,000	6,000	66,000	28,000	36,000	9,800	10,000	89,000	47,000	40,000
6,100	8,000	79,000	34,000	36,000	9,900	10,000	89,000	47,000	40,000
6,200	8,000	79,000	34,000	36,000	9,920	10,000	89,000	47,000	40,000
6,300	8,000	79,000	34,000	36,000	10,000	10,000	89,000	47,000	40,000
6,350	8,000	79,000	34,000	36,000	10,100	12,000	102,000	55,000	45,000
6,400	8,000	79,000	34,000	36,000	10,200	12,000	102,000	55,000	45,000
6,500	8,000	79,000	34,000	36,000	10,300	12,000	102,000	55,000	45,000
6,600	8,000	79,000	34,000	36,000	10,400	12,000	102,000	55,000	45,000
6,700	8,000	79,000	34,000	36,000	10,500	12,000	102,000	55,000	45,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
10,600	12,000	102,000	55,000	45,000	14,200	16,000	115,000	65,000	48,000
10,700	12,000	102,000	55,000	45,000	14,300	16,000	115,000	65,000	48,000
10,800	12,000	102,000	55,000	45,000	14,400	16,000	115,000	65,000	48,000
10,900	12,000	102,000	55,000	45,000	14,500	16,000	115,000	65,000	48,000
11,000	12,000	102,000	55,000	45,000	14,700	16,000	115,000	65,000	48,000
11,100	12,000	102,000	55,000	45,000	15,000	16,000	115,000	65,000	48,000
11,200	12,000	102,000	55,000	45,000	15,200	16,000	115,000	65,000	48,000
11,300	12,000	102,000	55,000	45,000	15,500	16,000	115,000	65,000	48,000
11,400	12,000	102,000	55,000	45,000	15,600	16,000	115,000	65,000	48,000
11,500	12,000	102,000	55,000	45,000	15,700	16,000	115,000	65,000	48,000
11,600	12,000	102,000	55,000	45,000	15,800	16,000	115,000	65,000	48,000
11,700	12,000	102,000	55,000	45,000	16,000	16,000	115,000	65,000	48,000
11,800	12,000	102,000	55,000	45,000	16,100	18,000	123,000	73,000	48,000
11,900	12,000	102,000	55,000	45,000	16,200	18,000	123,000	73,000	48,000
12,000	12,000	102,000	55,000	45,000	16,300	18,000	123,000	73,000	48,000
12,100	14,000	107,000	60,000	45,000	16,500	18,000	123,000	73,000	48,000
12,200	14,000	107,000	60,000	45,000	17,000	18,000	123,000	73,000	48,000
12,300	14,000	107,000	60,000	45,000	17,500	18,000	123,000	73,000	48,000
12,400	14,000	107,000	60,000	45,000	18,000	18,000	123,000	73,000	48,000
12,500	14,000	107,000	60,000	45,000	18,300	20,000	131,000	79,000	50,000
12,600	14,000	107,000	60,000	45,000	18,500	20,000	131,000	79,000	50,000
12,700	14,000	107,000	60,000	45,000	19,000	20,000	131,000	79,000	50,000
13,000	14,000	107,000	60,000	45,000	19,500	20,000	131,000	79,000	50,000
13,200	14,000	107,000	60,000	45,000	20,000	20,000	131,000	79,000	50,000
13,300	14,000	107,000	60,000	45,000					
13,500	14,000	107,000	60,000	45,000					
13,700	14,000	107,000	60,000	45,000					
13,800	14,000	107,000	60,000	45,000					
14,000	14,000	107,000	60,000	45,000					
14,100	16,000	115,000	65,000	48,000					

SuperV-Bohrer

SuperV-Bohrer ohne Innenkühlung



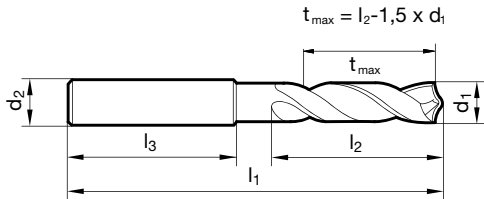
Katalog-Nr. 51787



P	M	K	N	S	H
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Arbeitsrichtwerte
Seite 28

- Ausspitzung $\geq \text{Ø } 3,000$
- 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	7,600	8,000	91,000	53,000	36,000
3,100	6,000	66,000	28,000	36,000	7,700	8,000	91,000	53,000	36,000
3,200	6,000	66,000	28,000	36,000	7,800	8,000	91,000	53,000	36,000
3,300	6,000	66,000	28,000	36,000	7,900	8,000	91,000	53,000	36,000
3,400	6,000	66,000	28,000	36,000	8,000	8,000	91,000	53,000	36,000
3,500	6,000	66,000	28,000	36,000	8,100	10,000	103,000	61,000	40,000
3,600	6,000	66,000	28,000	36,000	8,200	10,000	103,000	61,000	40,000
3,700	6,000	66,000	28,000	36,000	8,300	10,000	103,000	61,000	40,000
3,800	6,000	74,000	36,000	36,000	8,330	10,000	103,000	61,000	40,000
3,900	6,000	74,000	36,000	36,000	8,400	10,000	103,000	61,000	40,000
4,000	6,000	74,000	36,000	36,000	8,500	10,000	103,000	61,000	40,000
4,100	6,000	74,000	36,000	36,000	8,600	10,000	103,000	61,000	40,000
4,200	6,000	74,000	36,000	36,000	8,700	10,000	103,000	61,000	40,000
4,300	6,000	74,000	36,000	36,000	8,800	10,000	103,000	61,000	40,000
4,400	6,000	74,000	36,000	36,000	8,900	10,000	103,000	61,000	40,000
4,500	6,000	74,000	36,000	36,000	9,000	10,000	103,000	61,000	40,000
4,600	6,000	74,000	36,000	36,000	9,100	10,000	103,000	61,000	40,000
4,700	6,000	74,000	36,000	36,000	9,200	10,000	103,000	61,000	40,000
4,760	6,000	82,000	44,000	36,000	9,300	10,000	103,000	61,000	40,000
4,800	6,000	82,000	44,000	36,000	9,400	10,000	103,000	61,000	40,000
4,900	6,000	82,000	44,000	36,000	9,500	10,000	103,000	61,000	40,000
5,000	6,000	82,000	44,000	36,000	9,600	10,000	103,000	61,000	40,000
5,100	6,000	82,000	44,000	36,000	9,700	10,000	103,000	61,000	40,000
5,200	6,000	82,000	44,000	36,000	9,800	10,000	103,000	61,000	40,000
5,300	6,000	82,000	44,000	36,000	9,900	10,000	103,000	61,000	40,000
5,400	6,000	82,000	44,000	36,000	10,000	10,000	103,000	61,000	40,000
5,500	6,000	82,000	44,000	36,000	10,100	12,000	118,000	71,000	45,000
5,600	6,000	82,000	44,000	36,000	10,200	12,000	118,000	71,000	45,000
5,700	6,000	82,000	44,000	36,000	10,300	12,000	118,000	71,000	45,000
5,800	6,000	82,000	44,000	36,000	10,400	12,000	118,000	71,000	45,000
5,900	6,000	82,000	44,000	36,000	10,500	12,000	118,000	71,000	45,000
6,000	6,000	82,000	44,000	36,000	10,600	12,000	118,000	71,000	45,000
6,100	8,000	91,000	53,000	36,000	10,700	12,000	118,000	71,000	45,000
6,200	8,000	91,000	53,000	36,000	10,800	12,000	118,000	71,000	45,000
6,300	8,000	91,000	53,000	36,000	10,900	12,000	118,000	71,000	45,000
6,350	8,000	91,000	53,000	36,000	11,000	12,000	118,000	71,000	45,000
6,400	8,000	91,000	53,000	36,000	11,100	12,000	118,000	71,000	45,000
6,500	8,000	91,000	53,000	36,000	11,200	12,000	118,000	71,000	45,000
6,600	8,000	91,000	53,000	36,000	11,300	12,000	118,000	71,000	45,000
6,700	8,000	91,000	53,000	36,000	11,400	12,000	118,000	71,000	45,000
6,800	8,000	91,000	53,000	36,000	11,500	12,000	118,000	71,000	45,000
6,900	8,000	91,000	53,000	36,000	11,600	12,000	118,000	71,000	45,000
7,000	8,000	91,000	53,000	36,000	11,700	12,000	118,000	71,000	45,000
7,100	8,000	91,000	53,000	36,000	11,800	12,000	118,000	71,000	45,000
7,200	8,000	91,000	53,000	36,000	11,900	12,000	118,000	71,000	45,000
7,300	8,000	91,000	53,000	36,000	12,000	12,000	118,000	71,000	45,000
7,400	8,000	91,000	53,000	36,000	12,200	14,000	124,000	77,000	45,000
7,500	8,000	91,000	53,000	36,000	12,500	14,000	124,000	77,000	45,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
12,700	14,000	124,000	77,000	45,000	16,000	16,000	133,000	83,000	48,000
13,000	14,000	124,000	77,000	45,000	16,500	18,000	143,000	93,000	48,000
13,500	14,000	124,000	77,000	45,000	17,000	18,000	143,000	93,000	48,000
13,700	14,000	124,000	77,000	45,000	17,500	18,000	143,000	93,000	48,000
14,000	14,000	124,000	77,000	45,000	18,000	18,000	143,000	93,000	48,000
14,200	16,000	133,000	83,000	48,000	18,500	20,000	153,000	101,000	50,000
14,500	16,000	133,000	83,000	48,000	19,000	20,000	153,000	101,000	50,000
14,700	16,000	133,000	83,000	48,000	19,500	20,000	153,000	101,000	50,000
15,000	16,000	133,000	83,000	48,000	20,000	20,000	153,000	101,000	50,000
15,200	16,000	133,000	83,000	48,000					
15,500	16,000	133,000	83,000	48,000					
15,700	16,000	133,000	83,000	48,000					

SuperV-Bohrer

SuperV-Bohrer ohne Innenkühlung



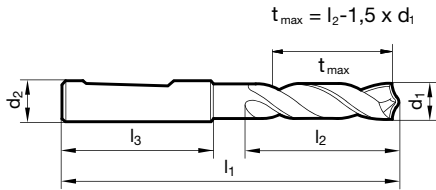
Katalog-Nr. 51887



P	M	K	N	S	H
●		●	○	○	○

Arbeitsrichtwerte
Seite 28

- Ausspitzung $\geq \text{Ø } 3,000$
- 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	6,800	8,000	91,000	53,000	36,000
3,100	6,000	66,000	28,000	36,000	6,900	8,000	91,000	53,000	36,000
3,170	6,000	66,000	28,000	36,000	7,000	8,000	91,000	53,000	36,000
3,200	6,000	66,000	28,000	36,000	7,100	8,000	91,000	53,000	36,000
3,300	6,000	66,000	28,000	36,000	7,140	8,000	91,000	53,000	36,000
3,400	6,000	66,000	28,000	36,000	7,200	8,000	91,000	53,000	36,000
3,500	6,000	66,000	28,000	36,000	7,300	8,000	91,000	53,000	36,000
3,570	6,000	66,000	28,000	36,000	7,400	8,000	91,000	53,000	36,000
3,600	6,000	66,000	28,000	36,000	7,500	8,000	91,000	53,000	36,000
3,700	6,000	66,000	28,000	36,000	7,540	8,000	91,000	53,000	36,000
3,800	6,000	74,000	36,000	36,000	7,600	8,000	91,000	53,000	36,000
3,900	6,000	74,000	36,000	36,000	7,700	8,000	91,000	53,000	36,000
3,970	6,000	74,000	36,000	36,000	7,800	8,000	91,000	53,000	36,000
4,000	6,000	74,000	36,000	36,000	7,900	8,000	91,000	53,000	36,000
4,100	6,000	74,000	36,000	36,000	7,940	8,000	91,000	53,000	36,000
4,200	6,000	74,000	36,000	36,000	8,000	8,000	91,000	53,000	36,000
4,300	6,000	74,000	36,000	36,000	8,100	10,000	103,000	61,000	40,000
4,370	6,000	74,000	36,000	36,000	8,200	10,000	103,000	61,000	40,000
4,400	6,000	74,000	36,000	36,000	8,300	10,000	103,000	61,000	40,000
4,500	6,000	74,000	36,000	36,000	8,330	10,000	103,000	61,000	40,000
4,600	6,000	74,000	36,000	36,000	8,400	10,000	103,000	61,000	40,000
4,700	6,000	74,000	36,000	36,000	8,500	10,000	103,000	61,000	40,000
4,760	6,000	82,000	44,000	36,000	8,600	10,000	103,000	61,000	40,000
4,800	6,000	82,000	44,000	36,000	8,700	10,000	103,000	61,000	40,000
4,900	6,000	82,000	44,000	36,000	8,730	10,000	103,000	61,000	40,000
5,000	6,000	82,000	44,000	36,000	8,800	10,000	103,000	61,000	40,000
5,100	6,000	82,000	44,000	36,000	8,900	10,000	103,000	61,000	40,000
5,160	6,000	82,000	44,000	36,000	9,000	10,000	103,000	61,000	40,000
5,200	6,000	82,000	44,000	36,000	9,100	10,000	103,000	61,000	40,000
5,300	6,000	82,000	44,000	36,000	9,130	10,000	103,000	61,000	40,000
5,400	6,000	82,000	44,000	36,000	9,200	10,000	103,000	61,000	40,000
5,500	6,000	82,000	44,000	36,000	9,300	10,000	103,000	61,000	40,000
5,560	6,000	82,000	44,000	36,000	9,400	10,000	103,000	61,000	40,000
5,600	6,000	82,000	44,000	36,000	9,500	10,000	103,000	61,000	40,000
5,700	6,000	82,000	44,000	36,000	9,520	10,000	103,000	61,000	40,000
5,800	6,000	82,000	44,000	36,000	9,600	10,000	103,000	61,000	40,000
5,900	6,000	82,000	44,000	36,000	9,700	10,000	103,000	61,000	40,000
5,950	6,000	82,000	44,000	36,000	9,800	10,000	103,000	61,000	40,000
6,000	6,000	82,000	44,000	36,000	9,900	10,000	103,000	61,000	40,000
6,100	8,000	91,000	53,000	36,000	9,920	10,000	103,000	61,000	40,000
6,200	8,000	91,000	53,000	36,000	10,000	10,000	103,000	61,000	40,000
6,300	8,000	91,000	53,000	36,000	10,100	12,000	118,000	71,000	45,000
6,350	8,000	91,000	53,000	36,000	10,200	12,000	118,000	71,000	45,000
6,400	8,000	91,000	53,000	36,000	10,300	12,000	118,000	71,000	45,000
6,500	8,000	91,000	53,000	36,000	10,400	12,000	118,000	71,000	45,000
6,600	8,000	91,000	53,000	36,000	10,500	12,000	118,000	71,000	45,000
6,700	8,000	91,000	53,000	36,000	10,600	12,000	118,000	71,000	45,000
6,750	8,000	91,000	53,000	36,000	10,700	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
10,800	12,000	118,000	71,000	45,000	14,700	16,000	133,000	83,000	48,000
10,900	12,000	118,000	71,000	45,000	15,000	16,000	133,000	83,000	48,000
11,000	12,000	118,000	71,000	45,000	15,200	16,000	133,000	83,000	48,000
11,100	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
12,000	12,000	118,000	71,000	45,000	19,500	20,000	153,000	101,000	50,000
12,100	14,000	124,000	77,000	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					
13,500	14,000	124,000	77,000	45,000					
13,700	14,000	124,000	77,000	45,000					
14,000	14,000	124,000	77,000	45,000					
14,100	16,000	133,000	83,000	48,000					
14,200	16,000	133,000	83,000	48,000					
14,500	16,000	133,000	83,000	48,000					

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

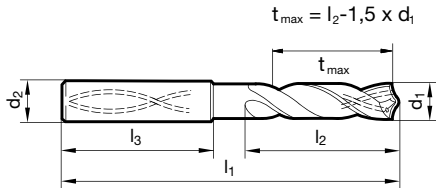


Katalog-Nr. 51776



P	M	K	N	S	H	Arbeitsrichtwerte Seite 26
●	○	●	○	○	○	

- Ausspitzung $\geq \text{Ø } 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie



d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	62,000	20,000	36,000	7,500		8,000	79,000	41,000	36,000
3,100		6,000	62,000	20,000	36,000	7,600		8,000	79,000	41,000	36,000
3,200		6,000	62,000	20,000	36,000	7,700		8,000	79,000	41,000	36,000
3,300		6,000	62,000	20,000	36,000	7,800		8,000	79,000	41,000	36,000
3,400		6,000	62,000	20,000	36,000	7,900		8,000	79,000	41,000	36,000
3,500		6,000	62,000	20,000	36,000	8,000		8,000	79,000	41,000	36,000
3,600		6,000	62,000	20,000	36,000	8,100		10,000	89,000	47,000	40,000
3,700		6,000	62,000	20,000	36,000	8,200		10,000	89,000	47,000	40,000
3,800		6,000	66,000	24,000	36,000	8,300		10,000	89,000	47,000	40,000
3,900		6,000	66,000	24,000	36,000	8,400		10,000	89,000	47,000	40,000
4,000		6,000	66,000	24,000	36,000	8,500		10,000	89,000	47,000	40,000
4,100		6,000	66,000	24,000	36,000	8,600		10,000	89,000	47,000	40,000
4,200		6,000	66,000	24,000	36,000	8,700		10,000	89,000	47,000	40,000
4,300		6,000	66,000	24,000	36,000	8,800		10,000	89,000	47,000	40,000
4,400		6,000	66,000	24,000	36,000	8,900		10,000	89,000	47,000	40,000
4,500		6,000	66,000	24,000	36,000	9,000		10,000	89,000	47,000	40,000
4,600		6,000	66,000	24,000	36,000	9,100		10,000	89,000	47,000	40,000
4,650		6,000	66,000	24,000	36,000	9,200		10,000	89,000	47,000	40,000
4,700		6,000	66,000	24,000	36,000	9,250		10,000	89,000	47,000	40,000
4,800		6,000	66,000	28,000	36,000	9,300		10,000	89,000	47,000	40,000
4,900		6,000	66,000	28,000	36,000	9,400		10,000	89,000	47,000	40,000
5,000		6,000	66,000	28,000	36,000	9,500		10,000	89,000	47,000	40,000
5,100		6,000	66,000	28,000	36,000	9,600		10,000	89,000	47,000	40,000
5,200		6,000	66,000	28,000	36,000	9,700		10,000	89,000	47,000	40,000
5,300		6,000	66,000	28,000	36,000	9,800		10,000	89,000	47,000	40,000
5,400		6,000	66,000	28,000	36,000	9,900		10,000	89,000	47,000	40,000
5,500		6,000	66,000	28,000	36,000	10,000		10,000	89,000	47,000	40,000
5,550		6,000	66,000	28,000	36,000	10,100		12,000	102,000	55,000	45,000
5,600		6,000	66,000	28,000	36,000	10,200		12,000	102,000	55,000	45,000
5,700		6,000	66,000	28,000	36,000	10,300		12,000	102,000	55,000	45,000
5,800		6,000	66,000	28,000	36,000	10,400		12,000	102,000	55,000	45,000
5,900		6,000	66,000	28,000	36,000	10,500		12,000	102,000	55,000	45,000
6,000		6,000	66,000	28,000	36,000	10,600		12,000	102,000	55,000	45,000
6,100		8,000	79,000	34,000	36,000	10,700		12,000	102,000	55,000	45,000
6,200		8,000	79,000	34,000	36,000	10,800		12,000	102,000	55,000	45,000
6,300		8,000	79,000	34,000	36,000	10,900		12,000	102,000	55,000	45,000
6,350	1/4	8,000	79,000	34,000	36,000	11,000		12,000	102,000	55,000	45,000
6,400		8,000	79,000	34,000	36,000	11,100		12,000	102,000	55,000	45,000
6,500		8,000	79,000	34,000	36,000	11,200		12,000	102,000	55,000	45,000
6,600		8,000	79,000	34,000	36,000	11,300		12,000	102,000	55,000	45,000
6,700		8,000	79,000	34,000	36,000	11,400		12,000	102,000	55,000	45,000
6,800		8,000	79,000	34,000	36,000	11,500		12,000	102,000	55,000	45,000
6,900		8,000	79,000	34,000	36,000	11,600		12,000	102,000	55,000	45,000
7,000		8,000	79,000	34,000	36,000	11,700		12,000	102,000	55,000	45,000
7,100		8,000	79,000	41,000	36,000	11,800		12,000	102,000	55,000	45,000
7,200		8,000	79,000	41,000	36,000	11,900		12,000	102,000	55,000	45,000
7,300		8,000	79,000	41,000	36,000	12,000		12,000	102,000	55,000	45,000
7,400		8,000	79,000	41,000	36,000	12,200		14,000	107,000	60,000	45,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
12,500		14,000	107,000	60,000	45,000	18,000		18,000	123,000	73,000	48,000
12,700	1/2	14,000	107,000	60,000	45,000	18,500		20,000	131,000	79,000	50,000
13,000		14,000	107,000	60,000	45,000	18,700		20,000	131,000	79,000	50,000
13,500		14,000	107,000	60,000	45,000	19,000		20,000	131,000	79,000	50,000
13,700		14,000	107,000	60,000	45,000	19,500		20,000	131,000	79,000	50,000
14,000		14,000	107,000	60,000	45,000	19,700		20,000	131,000	79,000	50,000
14,200		16,000	115,000	65,000	48,000	20,000		20,000	131,000	79,000	50,000
14,500		16,000	115,000	65,000	48,000						
14,700		16,000	115,000	65,000	48,000						
15,000		16,000	115,000	65,000	48,000						
15,200		16,000	115,000	65,000	48,000						
15,500		16,000	115,000	65,000	48,000						
15,700		16,000	115,000	65,000	48,000						
16,000		16,000	115,000	65,000	48,000						
16,500		18,000	123,000	73,000	48,000						
16,700		18,000	123,000	73,000	48,000						
17,000		18,000	123,000	73,000	48,000						
17,500		18,000	123,000	73,000	48,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung



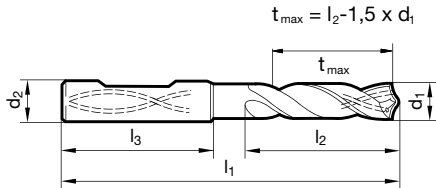
Katalog-Nr. 51876



P	M	K	N	S	H
●	○	●	○	○	○

Arbeitsrichtwerte
Seite 26

- Ausspitzung $\geq \text{Ø } 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie



d1		d2	l1	l2	l3	d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm	mm	inch	mm	mm	mm	mm
3,000		6,000	62,000	20,000	36,000	7,100		8,000	79,000	41,000	36,000
3,100		6,000	62,000	20,000	36,000	7,140	9/32	8,000	79,000	41,000	36,000
3,200		6,000	62,000	20,000	36,000	7,200		8,000	79,000	41,000	36,000
3,300		6,000	62,000	20,000	36,000	7,300		8,000	79,000	41,000	36,000
3,400		6,000	62,000	20,000	36,000	7,400		8,000	79,000	41,000	36,000
3,500		6,000	62,000	20,000	36,000	7,500		8,000	79,000	41,000	36,000
3,600		6,000	62,000	20,000	36,000	7,540	19/64	8,000	79,000	41,000	36,000
3,700		6,000	62,000	20,000	36,000	7,600		8,000	79,000	41,000	36,000
3,800		6,000	66,000	24,000	36,000	7,700		8,000	79,000	41,000	36,000
3,900		6,000	66,000	24,000	36,000	7,800		8,000	79,000	41,000	36,000
4,000		6,000	66,000	24,000	36,000	7,900		8,000	79,000	41,000	36,000
4,100		6,000	66,000	24,000	36,000	7,940	5/16	8,000	79,000	41,000	36,000
4,200		6,000	66,000	24,000	36,000	8,000		8,000	79,000	41,000	36,000
4,300		6,000	66,000	24,000	36,000	8,100		10,000	89,000	47,000	40,000
4,370	11/64	6,000	66,000	24,000	36,000	8,200		10,000	89,000	47,000	40,000
4,400		6,000	66,000	24,000	36,000	8,300		10,000	89,000	47,000	40,000
4,500		6,000	66,000	24,000	36,000	8,330	21/64	10,000	89,000	47,000	40,000
4,600		6,000	66,000	24,000	36,000	8,400		10,000	89,000	47,000	40,000
4,700		6,000	66,000	24,000	36,000	8,500		10,000	89,000	47,000	40,000
4,760	3/16	6,000	66,000	28,000	36,000	8,600		10,000	89,000	47,000	40,000
4,800		6,000	66,000	28,000	36,000	8,700		10,000	89,000	47,000	40,000
4,900		6,000	66,000	28,000	36,000	8,730	11/32	10,000	89,000	47,000	40,000
5,000		6,000	66,000	28,000	36,000	8,800		10,000	89,000	47,000	40,000
5,100		6,000	66,000	28,000	36,000	8,900		10,000	89,000	47,000	40,000
5,160	13/64	6,000	66,000	28,000	36,000	9,000		10,000	89,000	47,000	40,000
5,200		6,000	66,000	28,000	36,000	9,100		10,000	89,000	47,000	40,000
5,300		6,000	66,000	28,000	36,000	9,130	23/64	10,000	89,000	47,000	40,000
5,400		6,000	66,000	28,000	36,000	9,200		10,000	89,000	47,000	40,000
5,500		6,000	66,000	28,000	36,000	9,300		10,000	89,000	47,000	40,000
5,560	7/32	6,000	66,000	28,000	36,000	9,400		10,000	89,000	47,000	40,000
5,600		6,000	66,000	28,000	36,000	9,500		10,000	89,000	47,000	40,000
5,700		6,000	66,000	28,000	36,000	9,520	3/8	10,000	89,000	47,000	40,000
5,800		6,000	66,000	28,000	36,000	9,600		10,000	89,000	47,000	40,000
5,900		6,000	66,000	28,000	36,000	9,700		10,000	89,000	47,000	40,000
5,950	15/64	6,000	66,000	28,000	36,000	9,800		10,000	89,000	47,000	40,000
6,000		6,000	66,000	28,000	36,000	9,900		10,000	89,000	47,000	40,000
6,100		8,000	79,000	34,000	36,000	9,920	25/64	10,000	89,000	47,000	40,000
6,200		8,000	79,000	34,000	36,000	10,000		10,000	89,000	47,000	40,000
6,300		8,000	79,000	34,000	36,000	10,100		12,000	102,000	55,000	45,000
6,350	1/4	8,000	79,000	34,000	36,000	10,200		12,000	102,000	55,000	45,000
6,400		8,000	79,000	34,000	36,000	10,300		12,000	102,000	55,000	45,000
6,500		8,000	79,000	34,000	36,000	10,320	13/32	12,000	102,000	55,000	45,000
6,600		8,000	79,000	34,000	36,000	10,400		12,000	102,000	55,000	45,000
6,700		8,000	79,000	34,000	36,000	10,500		12,000	102,000	55,000	45,000
6,750	17/64	8,000	79,000	34,000	36,000	10,600		12,000	102,000	55,000	45,000
6,800		8,000	79,000	34,000	36,000	10,700		12,000	102,000	55,000	45,000
6,900		8,000	79,000	34,000	36,000	10,800		12,000	102,000	55,000	45,000
7,000		8,000	79,000	34,000	36,000	10,900		12,000	102,000	55,000	45,000

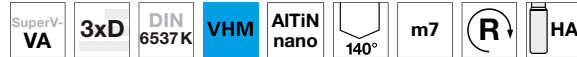
d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
11,000		12,000	102,000	55,000	45,000	14,100		16,000	115,000	65,000	48,000
11,100		12,000	102,000	55,000	45,000	14,200		16,000	115,000	65,000	48,000
11,110	7/16	12,000	102,000	55,000	45,000	14,290	9/16	16,000	115,000	65,000	48,000
11,200		12,000	102,000	55,000	45,000	14,300		16,000	115,000	65,000	48,000
11,300		12,000	102,000	55,000	45,000	14,500		16,000	115,000	65,000	48,000
11,400		12,000	102,000	55,000	45,000	14,700		16,000	115,000	65,000	48,000
11,500		12,000	102,000	55,000	45,000	14,900		16,000	115,000	65,000	48,000
11,600		12,000	102,000	55,000	45,000	15,000		16,000	115,000	65,000	48,000
11,700		12,000	102,000	55,000	45,000	15,200		16,000	115,000	65,000	48,000
11,800		12,000	102,000	55,000	45,000	15,500		16,000	115,000	65,000	48,000
11,900		12,000	102,000	55,000	45,000	15,600		16,000	115,000	65,000	48,000
11,910	15/32	12,000	102,000	55,000	45,000	15,700		16,000	115,000	65,000	48,000
12,000		12,000	102,000	55,000	45,000	16,000		16,000	115,000	65,000	48,000
12,100		14,000	107,000	60,000	45,000	16,100		18,000	123,000	73,000	48,000
12,200		14,000	107,000	60,000	45,000	16,200		18,000	123,000	73,000	48,000
12,300	31/64	14,000	107,000	60,000	45,000	16,500		18,000	123,000	73,000	48,000
12,400		14,000	107,000	60,000	45,000	17,000		18,000	123,000	73,000	48,000
12,500		14,000	107,000	60,000	45,000	17,500		18,000	123,000	73,000	48,000
12,700	1/2	14,000	107,000	60,000	45,000	17,700		18,000	123,000	73,000	48,000
13,000		14,000	107,000	60,000	45,000	18,000		18,000	123,000	73,000	48,000
13,200		14,000	107,000	60,000	45,000	18,500		20,000	131,000	79,000	50,000
13,500		14,000	107,000	60,000	45,000	19,000		20,000	131,000	79,000	50,000
13,700		14,000	107,000	60,000	45,000	19,500		20,000	131,000	79,000	50,000
14,000		14,000	107,000	60,000	45,000	20,000		20,000	131,000	79,000	50,000

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

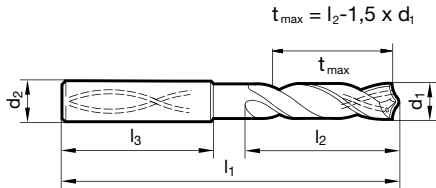


Katalog-Nr. 51770



P	M	K	N	S	H	Arbeitsrichtwerte Seite 26
	●			○		

- Ausspitzung $\geq \varnothing 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie
- besonders geeignet für rostfreie Stähle



d1		d2	l1	l2	l3	d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm	mm	inch	mm	mm	mm	mm
3,000		6,000	62,000	20,000	36,000	6,600		8,000	79,000	34,000	36,000
3,100		6,000	62,000	20,000	36,000	6,700		8,000	79,000	34,000	36,000
3,170	1/8	6,000	62,000	20,000	36,000	6,750	17/64	8,000	79,000	34,000	36,000
3,200		6,000	62,000	20,000	36,000	6,800		8,000	79,000	34,000	36,000
3,250		6,000	62,000	20,000	36,000	6,900		8,000	79,000	34,000	36,000
3,300		6,000	62,000	20,000	36,000	7,000		8,000	79,000	34,000	36,000
3,400		6,000	62,000	20,000	36,000	7,100		8,000	79,000	41,000	36,000
3,500		6,000	62,000	20,000	36,000	7,140	9/32	8,000	79,000	41,000	36,000
3,570	9/64	6,000	62,000	20,000	36,000	7,200		8,000	79,000	41,000	36,000
3,600		6,000	62,000	20,000	36,000	7,300		8,000	79,000	41,000	36,000
3,700		6,000	62,000	20,000	36,000	7,400		8,000	79,000	41,000	36,000
3,800		6,000	66,000	24,000	36,000	7,500		8,000	79,000	41,000	36,000
3,900		6,000	66,000	24,000	36,000	7,540	19/64	8,000	79,000	41,000	36,000
3,970	5/32	6,000	66,000	24,000	36,000	7,600		8,000	79,000	41,000	36,000
4,000		6,000	66,000	24,000	36,000	7,700		8,000	79,000	41,000	36,000
4,100		6,000	66,000	24,000	36,000	7,800		8,000	79,000	41,000	36,000
4,200		6,000	66,000	24,000	36,000	7,900		8,000	79,000	41,000	36,000
4,300		6,000	66,000	24,000	36,000	7,940	5/16	8,000	79,000	41,000	36,000
4,370	11/64	6,000	66,000	24,000	36,000	8,000		8,000	79,000	41,000	36,000
4,400		6,000	66,000	24,000	36,000	8,100		10,000	89,000	47,000	40,000
4,500		6,000	66,000	24,000	36,000	8,200		10,000	89,000	47,000	40,000
4,600		6,000	66,000	24,000	36,000	8,300		10,000	89,000	47,000	40,000
4,650		6,000	66,000	24,000	36,000	8,330	21/64	10,000	89,000	47,000	40,000
4,700		6,000	66,000	24,000	36,000	8,400		10,000	89,000	47,000	40,000
4,760	3/16	6,000	66,000	28,000	36,000	8,500		10,000	89,000	47,000	40,000
4,800		6,000	66,000	28,000	36,000	8,600		10,000	89,000	47,000	40,000
4,900		6,000	66,000	28,000	36,000	8,700		10,000	89,000	47,000	40,000
5,000		6,000	66,000	28,000	36,000	8,730	11/32	10,000	89,000	47,000	40,000
5,100		6,000	66,000	28,000	36,000	8,800		10,000	89,000	47,000	40,000
5,160	13/64	6,000	66,000	28,000	36,000	8,900		10,000	89,000	47,000	40,000
5,200		6,000	66,000	28,000	36,000	9,000		10,000	89,000	47,000	40,000
5,300		6,000	66,000	28,000	36,000	9,100		10,000	89,000	47,000	40,000
5,400		6,000	66,000	28,000	36,000	9,130	23/64	10,000	89,000	47,000	40,000
5,500		6,000	66,000	28,000	36,000	9,200		10,000	89,000	47,000	40,000
5,550		6,000	66,000	28,000	36,000	9,250		10,000	89,000	47,000	40,000
5,560	7/32	6,000	66,000	28,000	36,000	9,300		10,000	89,000	47,000	40,000
5,600		6,000	66,000	28,000	36,000	9,400		10,000	89,000	47,000	40,000
5,700		6,000	66,000	28,000	36,000	9,500		10,000	89,000	47,000	40,000
5,800		6,000	66,000	28,000	36,000	9,520	3/8	10,000	89,000	47,000	40,000
5,900		6,000	66,000	28,000	36,000	9,600		10,000	89,000	47,000	40,000
5,950	15/64	6,000	66,000	28,000	36,000	9,700		10,000	89,000	47,000	40,000
6,000		6,000	66,000	28,000	36,000	9,800		10,000	89,000	47,000	40,000
6,100		8,000	79,000	34,000	36,000	9,900		10,000	89,000	47,000	40,000
6,200		8,000	79,000	34,000	36,000	9,920	25/64	10,000	89,000	47,000	40,000
6,300		8,000	79,000	34,000	36,000	10,000		10,000	89,000	47,000	40,000
6,350	1/4	8,000	79,000	34,000	36,000	10,100		12,000	102,000	55,000	45,000
6,400		8,000	79,000	34,000	36,000	10,200		12,000	102,000	55,000	45,000
6,500		8,000	79,000	34,000	36,000	10,300		12,000	102,000	55,000	45,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
10,320	13/32	12,000	102,000	55,000	45,000	14,290	9/16	16,000	115,000	65,000	48,000
10,400		12,000	102,000	55,000	45,000	14,300		16,000	115,000	65,000	48,000
10,500		12,000	102,000	55,000	45,000	14,500		16,000	115,000	65,000	48,000
10,600		12,000	102,000	55,000	45,000	14,700		16,000	115,000	65,000	48,000
10,700		12,000	102,000	55,000	45,000	15,000		16,000	115,000	65,000	48,000
10,800		12,000	102,000	55,000	45,000	15,200		16,000	115,000	65,000	48,000
10,900		12,000	102,000	55,000	45,000	15,300		16,000	115,000	65,000	48,000
11,000		12,000	102,000	55,000	45,000	15,500		16,000	115,000	65,000	48,000
11,100		12,000	102,000	55,000	45,000	15,700		16,000	115,000	65,000	48,000
11,110	7/16	12,000	102,000	55,000	45,000	16,000		16,000	115,000	65,000	48,000
11,200		12,000	102,000	55,000	45,000	16,300		18,000	123,000	73,000	48,000
11,300		12,000	102,000	55,000	45,000	16,500		18,000	123,000	73,000	48,000
11,400		12,000	102,000	55,000	45,000	16,900		18,000	123,000	73,000	48,000
11,500		12,000	102,000	55,000	45,000	17,000		18,000	123,000	73,000	48,000
11,600		12,000	102,000	55,000	45,000	17,300		18,000	123,000	73,000	48,000
11,700		12,000	102,000	55,000	45,000	17,500		18,000	123,000	73,000	48,000
11,800		12,000	102,000	55,000	45,000	18,000		18,000	123,000	73,000	48,000
11,900		12,000	102,000	55,000	45,000	18,500		20,000	131,000	79,000	50,000
11,910	15/32	12,000	102,000	55,000	45,000	18,900		20,000	131,000	79,000	50,000
12,000		12,000	102,000	55,000	45,000	19,000		20,000	131,000	79,000	50,000
12,200		14,000	107,000	60,000	45,000	19,300		20,000	131,000	79,000	50,000
12,500		14,000	107,000	60,000	45,000	19,500		20,000	131,000	79,000	50,000
12,700	1/2	14,000	107,000	60,000	45,000	20,000		20,000	131,000	79,000	50,000
12,800		14,000	107,000	60,000	45,000						
13,000		14,000	107,000	60,000	45,000						
13,300		14,000	107,000	60,000	45,000						
13,500		14,000	107,000	60,000	45,000						
13,700		14,000	107,000	60,000	45,000						
14,000		14,000	107,000	60,000	45,000						
14,200		16,000	115,000	65,000	48,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

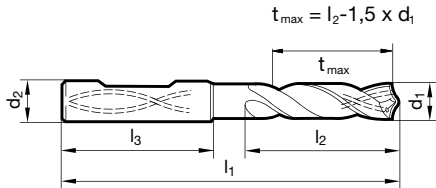


Katalog-Nr. 51771



P	M	K	N	S	H	Arbeitsrichtwerte Seite 26
	●			○		

- Ausspitzung $\geq \varnothing 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie
- besonders geeignet für rostfreie Stähle



d1		d2	l1	l2	l3	d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm	mm	inch	mm	mm	mm	mm
3,000		6,000	62,000	20,000	36,000	6,600		8,000	79,000	34,000	36,000
3,100		6,000	62,000	20,000	36,000	6,700		8,000	79,000	34,000	36,000
3,170	1/8	6,000	62,000	20,000	36,000	6,750	17/64	8,000	79,000	34,000	36,000
3,200		6,000	62,000	20,000	36,000	6,800		8,000	79,000	34,000	36,000
3,250		6,000	62,000	20,000	36,000	6,900		8,000	79,000	34,000	36,000
3,300		6,000	62,000	20,000	36,000	7,000		8,000	79,000	34,000	36,000
3,400		6,000	62,000	20,000	36,000	7,100		8,000	79,000	41,000	36,000
3,500		6,000	62,000	20,000	36,000	7,140	9/32	8,000	79,000	41,000	36,000
3,570	9/64	6,000	62,000	20,000	36,000	7,200		8,000	79,000	41,000	36,000
3,600		6,000	62,000	20,000	36,000	7,300		8,000	79,000	41,000	36,000
3,700		6,000	62,000	20,000	36,000	7,400		8,000	79,000	41,000	36,000
3,800		6,000	66,000	24,000	36,000	7,500		8,000	79,000	41,000	36,000
3,900		6,000	66,000	24,000	36,000	7,540	19/64	8,000	79,000	41,000	36,000
3,970	5/32	6,000	66,000	24,000	36,000	7,600		8,000	79,000	41,000	36,000
4,000		6,000	66,000	24,000	36,000	7,700		8,000	79,000	41,000	36,000
4,100		6,000	66,000	24,000	36,000	7,800		8,000	79,000	41,000	36,000
4,200		6,000	66,000	24,000	36,000	7,900		8,000	79,000	41,000	36,000
4,300		6,000	66,000	24,000	36,000	7,940	5/16	8,000	79,000	41,000	36,000
4,370	11/64	6,000	66,000	24,000	36,000	8,000		8,000	79,000	41,000	36,000
4,400		6,000	66,000	24,000	36,000	8,100		10,000	89,000	47,000	40,000
4,500		6,000	66,000	24,000	36,000	8,200		10,000	89,000	47,000	40,000
4,600		6,000	66,000	24,000	36,000	8,300		10,000	89,000	47,000	40,000
4,650		6,000	66,000	24,000	36,000	8,330	21/64	10,000	89,000	47,000	40,000
4,700		6,000	66,000	24,000	36,000	8,400		10,000	89,000	47,000	40,000
4,760	3/16	6,000	66,000	28,000	36,000	8,500		10,000	89,000	47,000	40,000
4,800		6,000	66,000	28,000	36,000	8,600		10,000	89,000	47,000	40,000
4,900		6,000	66,000	28,000	36,000	8,700		10,000	89,000	47,000	40,000
5,000		6,000	66,000	28,000	36,000	8,730	11/32	10,000	89,000	47,000	40,000
5,100		6,000	66,000	28,000	36,000	8,800		10,000	89,000	47,000	40,000
5,160	13/64	6,000	66,000	28,000	36,000	8,900		10,000	89,000	47,000	40,000
5,200		6,000	66,000	28,000	36,000	9,000		10,000	89,000	47,000	40,000
5,300		6,000	66,000	28,000	36,000	9,100		10,000	89,000	47,000	40,000
5,400		6,000	66,000	28,000	36,000	9,130	23/64	10,000	89,000	47,000	40,000
5,500		6,000	66,000	28,000	36,000	9,200		10,000	89,000	47,000	40,000
5,550		6,000	66,000	28,000	36,000	9,250		10,000	89,000	47,000	40,000
5,560	7/32	6,000	66,000	28,000	36,000	9,300		10,000	89,000	47,000	40,000
5,600		6,000	66,000	28,000	36,000	9,400		10,000	89,000	47,000	40,000
5,700		6,000	66,000	28,000	36,000	9,500		10,000	89,000	47,000	40,000
5,800		6,000	66,000	28,000	36,000	9,520	3/8	10,000	89,000	47,000	40,000
5,900		6,000	66,000	28,000	36,000	9,600		10,000	89,000	47,000	40,000
5,950	15/64	6,000	66,000	28,000	36,000	9,700		10,000	89,000	47,000	40,000
6,000		6,000	66,000	28,000	36,000	9,800		10,000	89,000	47,000	40,000
6,100		8,000	79,000	34,000	36,000	9,900		10,000	89,000	47,000	40,000
6,200		8,000	79,000	34,000	36,000	9,920	25/64	10,000	89,000	47,000	40,000
6,300		8,000	79,000	34,000	36,000	10,000		10,000	89,000	47,000	40,000
6,350	1/4	8,000	79,000	34,000	36,000	10,100		12,000	102,000	55,000	45,000
6,400		8,000	79,000	34,000	36,000	10,200		12,000	102,000	55,000	45,000
6,500		8,000	79,000	34,000	36,000	10,300		12,000	102,000	55,000	45,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
10,320	13/32	12,000	102,000	55,000	45,000	14,290	9/16	16,000	115,000	65,000	48,000
10,400		12,000	102,000	55,000	45,000	14,300		16,000	115,000	65,000	48,000
10,500		12,000	102,000	55,000	45,000	14,500		16,000	115,000	65,000	48,000
10,600		12,000	102,000	55,000	45,000	14,700		16,000	115,000	65,000	48,000
10,700		12,000	102,000	55,000	45,000	15,000		16,000	115,000	65,000	48,000
10,800		12,000	102,000	55,000	45,000	15,200		16,000	115,000	65,000	48,000
10,900		12,000	102,000	55,000	45,000	15,300		16,000	115,000	65,000	48,000
11,000		12,000	102,000	55,000	45,000	15,500		16,000	115,000	65,000	48,000
11,100		12,000	102,000	55,000	45,000	15,700		16,000	115,000	65,000	48,000
11,110	7/16	12,000	102,000	55,000	45,000	16,000		16,000	115,000	65,000	48,000
11,200		12,000	102,000	55,000	45,000	16,300		18,000	123,000	73,000	48,000
11,300		12,000	102,000	55,000	45,000	16,500		18,000	123,000	73,000	48,000
11,400		12,000	102,000	55,000	45,000	16,900		18,000	123,000	73,000	48,000
11,500		12,000	102,000	55,000	45,000	17,000		18,000	123,000	73,000	48,000
11,600		12,000	102,000	55,000	45,000	17,300		18,000	123,000	73,000	48,000
11,700		12,000	102,000	55,000	45,000	17,500		18,000	123,000	73,000	48,000
11,800		12,000	102,000	55,000	45,000	18,000		18,000	123,000	73,000	48,000
11,900		12,000	102,000	55,000	45,000	18,500		20,000	131,000	79,000	50,000
11,910	15/32	12,000	102,000	55,000	45,000	18,900		20,000	131,000	79,000	50,000
12,000		12,000	102,000	55,000	45,000	19,000		20,000	131,000	79,000	50,000
12,200		14,000	107,000	60,000	45,000	19,300		20,000	131,000	79,000	50,000
12,500		14,000	107,000	60,000	45,000	19,500		20,000	131,000	79,000	50,000
12,700	1/2	14,000	107,000	60,000	45,000	20,000		20,000	131,000	79,000	50,000
12,800		14,000	107,000	60,000	45,000						
13,000		14,000	107,000	60,000	45,000						
13,300		14,000	107,000	60,000	45,000						
13,500		14,000	107,000	60,000	45,000						
13,700		14,000	107,000	60,000	45,000						
14,000		14,000	107,000	60,000	45,000						
14,200		16,000	115,000	65,000	48,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

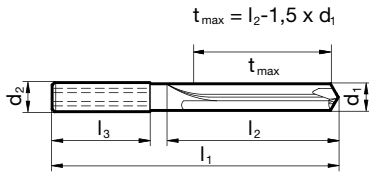


Katalog-Nr. 71995



P	M	K	N	S	H	Arbeitsrichtwerte Seite 26
		●	○			

- Ausspitzung $\geq \varnothing 3,000$
- Kegelmantelschliff
- enge Durchmessertoleranzen
- sehr gute Bohrschuldenoberflächen
- Kühlmitteldruck beachten (s. Diagramm „Kühlmittlempfehlungen“)



d1	inch	d2	l1	l2	l3	d1	inch	d2	l1	l2	l3
mm		mm	mm	mm	mm	mm		mm	mm	mm	mm
3,000		6,000	66,000	24,000	36,000	7,200		8,000	91,000	53,000	36,000
3,100		6,000	66,000	24,000	36,000	7,300		8,000	91,000	53,000	36,000
3,200		6,000	66,000	24,000	36,000	7,400		8,000	91,000	53,000	36,000
3,300		6,000	66,000	24,000	36,000	7,500		8,000	91,000	53,000	36,000
3,400		6,000	66,000	24,000	36,000	7,540	19/64	8,000	91,000	53,000	36,000
3,500		6,000	66,000	24,000	36,000	7,600		8,000	91,000	53,000	36,000
3,600		6,000	66,000	24,000	36,000	7,700		8,000	91,000	53,000	36,000
3,700		6,000	66,000	24,000	36,000	7,800		8,000	91,000	53,000	36,000
3,800		6,000	74,000	30,000	36,000	7,900		8,000	91,000	53,000	36,000
3,900		6,000	74,000	30,000	36,000	7,940	5/16	8,000	91,000	53,000	36,000
4,000		6,000	74,000	30,000	36,000	8,000		8,000	91,000	53,000	36,000
4,100		6,000	74,000	30,000	36,000	8,100		10,000	103,000	61,000	40,000
4,200		6,000	74,000	30,000	36,000	8,200		10,000	103,000	61,000	40,000
4,300		6,000	74,000	30,000	36,000	8,300		10,000	103,000	61,000	40,000
4,400		6,000	74,000	30,000	36,000	8,330	21/64	10,000	103,000	61,000	40,000
4,500		6,000	74,000	30,000	36,000	8,400		10,000	103,000	61,000	40,000
4,600		6,000	74,000	30,000	36,000	8,500		10,000	103,000	61,000	40,000
4,700		6,000	74,000	30,000	36,000	8,600		10,000	103,000	61,000	40,000
4,800		6,000	74,000	36,000	36,000	8,700		10,000	103,000	61,000	40,000
4,900		6,000	74,000	36,000	36,000	8,730	11/32	10,000	103,000	61,000	40,000
5,000		6,000	74,000	36,000	36,000	8,800		10,000	103,000	61,000	40,000
5,100		6,000	74,000	36,000	36,000	8,900		10,000	103,000	61,000	40,000
5,160	13/64	6,000	74,000	36,000	36,000	9,000		10,000	103,000	61,000	40,000
5,200		6,000	74,000	36,000	36,000	9,100		10,000	103,000	61,000	40,000
5,300		6,000	74,000	36,000	36,000	9,130	23/64	10,000	103,000	61,000	40,000
5,400		6,000	74,000	36,000	36,000	9,200		10,000	103,000	61,000	40,000
5,500		6,000	74,000	36,000	36,000	9,300		10,000	103,000	61,000	40,000
5,560	7/32	6,000	74,000	36,000	36,000	9,400		10,000	103,000	61,000	40,000
5,600		6,000	74,000	36,000	36,000	9,500		10,000	103,000	61,000	40,000
5,700		6,000	74,000	36,000	36,000	9,520	3/8	10,000	103,000	61,000	40,000
5,800		6,000	74,000	36,000	36,000	9,600		10,000	103,000	61,000	40,000
5,900		6,000	74,000	36,000	36,000	9,700		10,000	103,000	61,000	40,000
5,950	15/64	6,000	74,000	36,000	36,000	9,800		10,000	103,000	61,000	40,000
6,000		6,000	74,000	36,000	36,000	9,900		10,000	103,000	61,000	40,000
6,100		8,000	91,000	53,000	36,000	9,920	25/64	10,000	103,000	61,000	40,000
6,200		8,000	91,000	53,000	36,000	10,000		10,000	103,000	61,000	40,000
6,300		8,000	91,000	53,000	36,000	10,200		12,000	118,000	71,000	45,000
6,350	1/4	8,000	91,000	53,000	36,000	10,500		12,000	118,000	71,000	45,000
6,400		8,000	91,000	53,000	36,000	10,720	27/64	12,000	118,000	71,000	45,000
6,500		8,000	91,000	53,000	36,000	11,000		12,000	118,000	71,000	45,000
6,600		8,000	91,000	53,000	36,000	11,110	7/16	12,000	118,000	71,000	45,000
6,700		8,000	91,000	53,000	36,000	11,200		12,000	118,000	71,000	45,000
6,750	17/64	8,000	91,000	53,000	36,000	11,500		12,000	118,000	71,000	45,000
6,800		8,000	91,000	53,000	36,000	11,510	29/64	12,000	118,000	71,000	45,000
6,900		8,000	91,000	53,000	36,000	11,910	15/32	12,000	118,000	71,000	45,000
7,000		8,000	91,000	53,000	36,000	12,000		12,000	118,000	71,000	45,000
7,100		8,000	91,000	53,000	36,000	12,300	31/64	14,000	124,000	74,000	45,000
7,140	9/32	8,000	91,000	53,000	36,000	12,500		14,000	124,000	74,000	45,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
12,700	1/2	14,000	124,000	74,000	45,000	18,500		20,000	153,000	101,000	50,000
13,000		14,000	124,000	74,000	45,000	19,000		20,000	153,000	101,000	50,000
13,500		14,000	124,000	74,000	45,000	19,500		20,000	153,000	101,000	50,000
14,000		14,000	124,000	74,000	45,000	20,000		20,000	153,000	101,000	50,000
14,500		16,000	133,000	83,000	48,000	21,500		25,000	168,000	110,000	56,000
15,000		16,000	133,000	83,000	48,000						
15,500		16,000	133,000	83,000	48,000						
16,000		16,000	133,000	83,000	48,000						
16,500		18,000	143,000	93,000	48,000						
17,000		18,000	143,000	93,000	48,000						
17,500		18,000	143,000	93,000	48,000						
18,000		18,000	143,000	93,000	48,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung



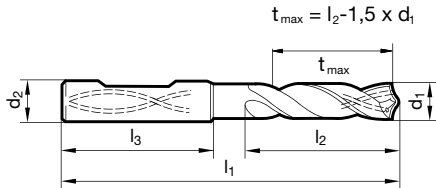
Katalog-Nr. 61880



P	M	K	N	S	H
○	●	○	○	●	●

Arbeitsrichtwerte
Seite 28

- Ausspitzung $\geq \varnothing 4,000$
- Kegelmantelschliff
- Hauptschneidenform konkav
- optimierte Schneidengeometrie
- scharfes Schnittverhalten



d1	inch	d2	l1	l2	l3	d1	inch	d2	l1	l2	l3
mm		mm	mm	mm	mm	mm		mm	mm	mm	mm
4,000		6,000	74,000	36,000	36,000	11,000		12,000	118,000	71,000	45,000
4,100		6,000	74,000	36,000	36,000	11,400		12,000	118,000	71,000	45,000
4,200		6,000	74,000	36,000	36,000	11,500		12,000	118,000	71,000	45,000
4,300		6,000	74,000	36,000	36,000	11,600		12,000	118,000	71,000	45,000
4,500		6,000	74,000	36,000	36,000	11,700		12,000	118,000	71,000	45,000
4,800		6,000	82,000	44,000	36,000	11,800		12,000	118,000	71,000	45,000
4,900		6,000	82,000	44,000	36,000	12,000		12,000	118,000	71,000	45,000
5,000		6,000	82,000	44,000	36,000	12,100		14,000	124,000	77,000	45,000
5,100		6,000	82,000	44,000	36,000	12,200		14,000	124,000	77,000	45,000
5,200		6,000	82,000	44,000	36,000	12,500		14,000	124,000	77,000	45,000
5,400		6,000	82,000	44,000	36,000	12,800		14,000	124,000	77,000	45,000
5,500		6,000	82,000	44,000	36,000	12,900		14,000	124,000	77,000	45,000
5,700		6,000	82,000	44,000	36,000	13,000		14,000	124,000	77,000	45,000
5,800		6,000	82,000	44,000	36,000	13,200		14,000	124,000	77,000	45,000
5,900		6,000	82,000	44,000	36,000	13,500		14,000	124,000	77,000	45,000
6,000		6,000	82,000	44,000	36,000	13,800		14,000	124,000	77,000	45,000
6,100		8,000	91,000	53,000	36,000	14,000		14,000	124,000	77,000	45,000
6,200		8,000	91,000	53,000	36,000	14,100		16,000	133,000	83,000	48,000
6,500		8,000	91,000	53,000	36,000	14,200		16,000	133,000	83,000	48,000
6,600		8,000	91,000	53,000	36,000	14,500		16,000	133,000	83,000	48,000
6,750	17/64	8,000	91,000	53,000	36,000	15,000		16,000	133,000	83,000	48,000
6,800		8,000	91,000	53,000	36,000	15,500		16,000	133,000	83,000	48,000
6,900		8,000	91,000	53,000	36,000	15,800		16,000	133,000	83,000	48,000
7,000		8,000	91,000	53,000	36,000	16,000		16,000	133,000	83,000	48,000
7,140	9/32	8,000	91,000	53,000	36,000	16,500		18,000	143,000	93,000	48,000
7,200		8,000	91,000	53,000	36,000	17,000		18,000	143,000	93,000	48,000
7,500		8,000	91,000	53,000	36,000	17,500		18,000	143,000	93,000	48,000
7,600		8,000	91,000	53,000	36,000	18,000		18,000	143,000	93,000	48,000
7,700		8,000	91,000	53,000	36,000	18,500		20,000	153,000	101,000	50,000
7,800		8,000	91,000	53,000	36,000	19,000		20,000	153,000	101,000	50,000
7,900		8,000	91,000	53,000	36,000	20,000		20,000	153,000	101,000	50,000
8,000		8,000	91,000	53,000	36,000	21,000		25,000	165,000	105,000	56,000
8,100		10,000	103,000	61,000	40,000	22,000		25,000	165,000	105,000	56,000
8,200		10,000	103,000	61,000	40,000	23,500		25,000	180,000	117,000	56,000
8,300		10,000	103,000	61,000	40,000	24,000		25,000	180,000	117,000	56,000
8,500		10,000	103,000	61,000	40,000	24,500		25,000	180,000	117,000	56,000
8,600		10,000	103,000	61,000	40,000	25,000		25,000	180,000	117,000	56,000
8,700		10,000	103,000	61,000	40,000						
8,800		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						
9,300		10,000	103,000	61,000	40,000						
9,500		10,000	103,000	61,000	40,000						
9,700		10,000	103,000	61,000	40,000						
10,000		10,000	103,000	61,000	40,000						
10,200		12,000	118,000	71,000	45,000						
10,500		12,000	118,000	71,000	45,000						
10,800		12,000	118,000	71,000	45,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

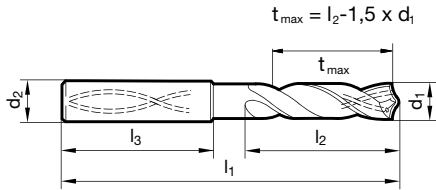


Katalog-Nr. 51781



P	M	K	N	S	H	Arbeitsrichtwerte Seite 28
●	○	●	○	○	○	

- Ausspitzung $\geq \text{Ø } 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie



d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	66,000	28,000	36,000	6,900		8,000	91,000	53,000	36,000
3,100		6,000	66,000	28,000	36,000	7,000		8,000	91,000	53,000	36,000
3,200		6,000	66,000	28,000	36,000	7,100		8,000	91,000	53,000	36,000
3,300		6,000	66,000	28,000	36,000	7,140	9/32	8,000	91,000	53,000	36,000
3,400		6,000	66,000	28,000	36,000	7,200		8,000	91,000	53,000	36,000
3,500		6,000	66,000	28,000	36,000	7,300		8,000	91,000	53,000	36,000
3,600		6,000	66,000	28,000	36,000	7,400		8,000	91,000	53,000	36,000
3,700		6,000	66,000	28,000	36,000	7,500		8,000	91,000	53,000	36,000
3,800		6,000	74,000	36,000	36,000	7,540	19/64	8,000	91,000	53,000	36,000
3,900		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	5/16	8,000	91,000	53,000	36,000
4,370	11/64	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	21/64	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	3/16	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	11/32	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	13/64	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	23/64	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	7/32	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	3/8	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	15/64	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	25/64	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	1/4	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
6,600		8,000	91,000	53,000	36,000	10,320	13/32	12,000	118,000	71,000	45,000
6,700		8,000	91,000	53,000	36,000	10,400		12,000	118,000	71,000	45,000
6,750	17/64	8,000	91,000	53,000	36,000	10,500		12,000	118,000	71,000	45,000
6,800		8,000	91,000	53,000	36,000	10,600		12,000	118,000	71,000	45,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
10,700		12,000	118,000	71,000	45,000	14,000		14,000	124,000	77,000	45,000
10,720	27/64	12,000	118,000	71,000	45,000	14,100		16,000	133,000	83,000	48,000
10,800		12,000	118,000	71,000	45,000	14,200		16,000	133,000	83,000	48,000
10,900		12,000	118,000	71,000	45,000	14,290	9/16	16,000	133,000	83,000	48,000
11,000		12,000	118,000	71,000	45,000	14,500		16,000	133,000	83,000	48,000
11,100		12,000	118,000	71,000	45,000	14,700		16,000	133,000	83,000	48,000
11,110	7/16	12,000	118,000	71,000	45,000	15,000		16,000	133,000	83,000	48,000
11,200		12,000	118,000	71,000	45,000	15,200		16,000	133,000	83,000	48,000
11,300		12,000	118,000	71,000	45,000	15,500		16,000	133,000	83,000	48,000
11,400		12,000	118,000	71,000	45,000	15,600		16,000	133,000	83,000	48,000
11,500		12,000	118,000	71,000	45,000	15,700		16,000	133,000	83,000	48,000
11,600		12,000	118,000	71,000	45,000	15,800		16,000	133,000	83,000	48,000
11,700		12,000	118,000	71,000	45,000	16,000		16,000	133,000	83,000	48,000
11,800		12,000	118,000	71,000	45,000	16,500		18,000	143,000	93,000	48,000
11,900		12,000	118,000	71,000	45,000	16,700		18,000	143,000	93,000	48,000
11,910	15/32	12,000	118,000	71,000	45,000	17,000		18,000	143,000	93,000	48,000
12,000		12,000	118,000	71,000	45,000	17,500		18,000	143,000	93,000	48,000
12,100		14,000	124,000	77,000	45,000	17,700		18,000	143,000	93,000	48,000
12,200		14,000	124,000	77,000	45,000	18,000		18,000	143,000	93,000	48,000
12,300	31/64	14,000	124,000	77,000	45,000	18,500		20,000	153,000	101,000	50,000
12,400		14,000	124,000	77,000	45,000	18,700		20,000	153,000	101,000	50,000
12,500		14,000	124,000	77,000	45,000	19,000		20,000	153,000	101,000	50,000
12,700	1/2	14,000	124,000	77,000	45,000	19,500		20,000	153,000	101,000	50,000
13,000		14,000	124,000	77,000	45,000	19,700		20,000	153,000	101,000	50,000
13,200		14,000	124,000	77,000	45,000	20,000		20,000	153,000	101,000	50,000
13,500		14,000	124,000	77,000	45,000						
13,600		14,000	124,000	77,000	45,000						
13,700		14,000	124,000	77,000	45,000						
13,800		14,000	124,000	77,000	45,000						
13,900		14,000	124,000	77,000	45,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung



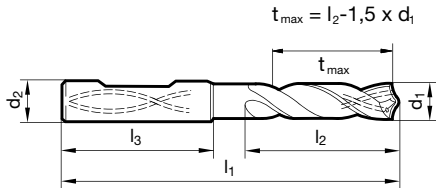
Katalog-Nr. 51881



P	M	K	N	S	H
●	○	●	○	○	○

Arbeitsrichtwerte
Seite 28

- Ausspitzung $\geq \text{Ø } 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie



d1		d2	l1	l2	l3	d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm	mm	inch	mm	mm	mm	mm
3,000		6,000	66,000	28,000	36,000	7,100		8,000	91,000	53,000	36,000
3,100		6,000	66,000	28,000	36,000	7,140	9/32	8,000	91,000	53,000	36,000
3,200		6,000	66,000	28,000	36,000	7,200		8,000	91,000	53,000	36,000
3,300		6,000	66,000	28,000	36,000	7,300		8,000	91,000	53,000	36,000
3,400		6,000	66,000	28,000	36,000	7,400		8,000	91,000	53,000	36,000
3,500		6,000	66,000	28,000	36,000	7,500		8,000	91,000	53,000	36,000
3,600		6,000	66,000	28,000	36,000	7,540	19/64	8,000	91,000	53,000	36,000
3,700		6,000	66,000	28,000	36,000	7,600		8,000	91,000	53,000	36,000
3,800		6,000	74,000	36,000	36,000	7,700		8,000	91,000	53,000	36,000
3,900		6,000	74,000	36,000	36,000	7,800		8,000	91,000	53,000	36,000
4,000		6,000	74,000	36,000	36,000	7,900		8,000	91,000	53,000	36,000
4,100		6,000	74,000	36,000	36,000	7,940	5/16	8,000	91,000	53,000	36,000
4,200		6,000	74,000	36,000	36,000	8,000		8,000	91,000	53,000	36,000
4,300		6,000	74,000	36,000	36,000	8,100		10,000	103,000	61,000	40,000
4,370	11/64	6,000	74,000	36,000	36,000	8,200		10,000	103,000	61,000	40,000
4,400		6,000	74,000	36,000	36,000	8,300		10,000	103,000	61,000	40,000
4,500		6,000	74,000	36,000	36,000	8,330	21/64	10,000	103,000	61,000	40,000
4,600		6,000	74,000	36,000	36,000	8,400		10,000	103,000	61,000	40,000
4,700		6,000	74,000	36,000	36,000	8,500		10,000	103,000	61,000	40,000
4,760	3/16	6,000	82,000	44,000	36,000	8,600		10,000	103,000	61,000	40,000
4,800		6,000	82,000	44,000	36,000	8,700		10,000	103,000	61,000	40,000
4,900		6,000	82,000	44,000	36,000	8,730	11/32	10,000	103,000	61,000	40,000
5,000		6,000	82,000	44,000	36,000	8,800		10,000	103,000	61,000	40,000
5,100		6,000	82,000	44,000	36,000	8,900		10,000	103,000	61,000	40,000
5,160	13/64	6,000	82,000	44,000	36,000	9,000		10,000	103,000	61,000	40,000
5,200		6,000	82,000	44,000	36,000	9,100		10,000	103,000	61,000	40,000
5,300		6,000	82,000	44,000	36,000	9,130	23/64	10,000	103,000	61,000	40,000
5,400		6,000	82,000	44,000	36,000	9,200		10,000	103,000	61,000	40,000
5,500		6,000	82,000	44,000	36,000	9,300		10,000	103,000	61,000	40,000
5,560	7/32	6,000	82,000	44,000	36,000	9,400		10,000	103,000	61,000	40,000
5,600		6,000	82,000	44,000	36,000	9,500		10,000	103,000	61,000	40,000
5,700		6,000	82,000	44,000	36,000	9,520	3/8	10,000	103,000	61,000	40,000
5,800		6,000	82,000	44,000	36,000	9,600		10,000	103,000	61,000	40,000
5,900		6,000	82,000	44,000	36,000	9,700		10,000	103,000	61,000	40,000
5,950	15/64	6,000	82,000	44,000	36,000	9,800		10,000	103,000	61,000	40,000
6,000		6,000	82,000	44,000	36,000	9,900		10,000	103,000	61,000	40,000
6,100		8,000	91,000	53,000	36,000	9,920	25/64	10,000	103,000	61,000	40,000
6,200		8,000	91,000	53,000	36,000	10,000		10,000	103,000	61,000	40,000
6,300		8,000	91,000	53,000	36,000	10,100		12,000	118,000	71,000	45,000
6,350	1/4	8,000	91,000	53,000	36,000	10,200		12,000	118,000	71,000	45,000
6,400		8,000	91,000	53,000	36,000	10,300		12,000	118,000	71,000	45,000
6,500		8,000	91,000	53,000	36,000	10,320	13/32	12,000	118,000	71,000	45,000
6,600		8,000	91,000	53,000	36,000	10,400		12,000	118,000	71,000	45,000
6,700		8,000	91,000	53,000	36,000	10,500		12,000	118,000	71,000	45,000
6,750	17/64	8,000	91,000	53,000	36,000	10,600		12,000	118,000	71,000	45,000
6,800		8,000	91,000	53,000	36,000	10,700		12,000	118,000	71,000	45,000
6,900		8,000	91,000	53,000	36,000	10,800		12,000	118,000	71,000	45,000
7,000		8,000	91,000	53,000	36,000	10,900		12,000	118,000	71,000	45,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
11,000		12,000	118,000	71,000	45,000	14,000		14,000	124,000	77,000	45,000
11,100		12,000	118,000	71,000	45,000	14,100		16,000	133,000	83,000	48,000
11,110	7/16	12,000	118,000	71,000	45,000	14,200		16,000	133,000	83,000	48,000
11,200		12,000	118,000	71,000	45,000	14,290	9/16	16,000	133,000	83,000	48,000
11,300		12,000	118,000	71,000	45,000	14,500		16,000	133,000	83,000	48,000
11,400		12,000	118,000	71,000	45,000	14,700		16,000	133,000	83,000	48,000
11,500		12,000	118,000	71,000	45,000	15,000		16,000	133,000	83,000	48,000
11,600		12,000	118,000	71,000	45,000	15,200		16,000	133,000	83,000	48,000
11,700		12,000	118,000	71,000	45,000	15,500		16,000	133,000	83,000	48,000
11,800		12,000	118,000	71,000	45,000	15,700		16,000	133,000	83,000	48,000
11,900		12,000	118,000	71,000	45,000	15,800		16,000	133,000	83,000	48,000
11,910	15/32	12,000	118,000	71,000	45,000	16,000		16,000	133,000	83,000	48,000
12,000		12,000	118,000	71,000	45,000	16,500		18,000	143,000	93,000	48,000
12,100		14,000	124,000	77,000	45,000	17,000		18,000	143,000	93,000	48,000
12,200		14,000	124,000	77,000	45,000	17,300		18,000	143,000	93,000	48,000
12,300	31/64	14,000	124,000	77,000	45,000	17,500		18,000	143,000	93,000	48,000
12,400		14,000	124,000	77,000	45,000	18,000		18,000	143,000	93,000	48,000
12,500		14,000	124,000	77,000	45,000	18,200		20,000	153,000	101,000	50,000
12,700	1/2	14,000	124,000	77,000	45,000	18,500		20,000	153,000	101,000	50,000
13,000		14,000	124,000	77,000	45,000	18,600		20,000	153,000	101,000	50,000
13,500		14,000	124,000	77,000	45,000	19,000		20,000	153,000	101,000	50,000
13,700		14,000	124,000	77,000	45,000	19,500		20,000	153,000	101,000	50,000
13,800		14,000	124,000	77,000	45,000	20,000		20,000	153,000	101,000	50,000
13,900		14,000	124,000	77,000	45,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

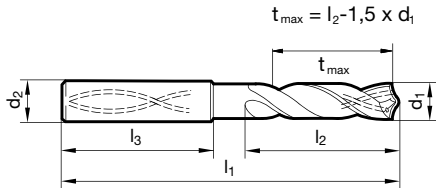


Katalog-Nr. 51772



P	M	K	N	S	H	Arbeitsrichtwerte Seite 28
	●			○		

- Ausspitzung $\geq \varnothing 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie
- besonders geeignet für rostfreie Stähle



d1		d2	l1	l2	l3	d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm	mm	inch	mm	mm	mm	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	1/8	6,000	66,000	28,000	36,000	6,750	17/64	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	9/32	8,000	91,000	53,000	36,000
3,570	9/64	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	19/64	8,000	91,000	53,000	36,000
3,970	5/32	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	5/16	8,000	91,000	53,000	36,000
4,370	11/64	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	21/64	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	3/16	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	11/32	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	13/64	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	23/64	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	7/32	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	3/8	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	15/64	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	25/64	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	1/4	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	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
10,320	13/32	12,000	118,000	71,000	45,000	14,290	9/16	16,000	133,000	83,000	48,000
10,400		12,000	118,000	71,000	45,000	14,300		16,000	133,000	83,000	48,000
10,500		12,000	118,000	71,000	45,000	14,500		16,000	133,000	83,000	48,000
10,600		12,000	118,000	71,000	45,000	14,700		16,000	133,000	83,000	48,000
10,700		12,000	118,000	71,000	45,000	15,000		16,000	133,000	83,000	48,000
10,800		12,000	118,000	71,000	45,000	15,200		16,000	133,000	83,000	48,000
10,900		12,000	118,000	71,000	45,000	15,300		16,000	133,000	83,000	48,000
11,000		12,000	118,000	71,000	45,000	15,500		16,000	133,000	83,000	48,000
11,100		12,000	118,000	71,000	45,000	15,700		16,000	133,000	83,000	48,000
11,110	7/16	12,000	118,000	71,000	45,000	16,000		16,000	133,000	83,000	48,000
11,200		12,000	118,000	71,000	45,000	16,300		18,000	143,000	93,000	48,000
11,300		12,000	118,000	71,000	45,000	16,500		18,000	143,000	93,000	48,000
11,400		12,000	118,000	71,000	45,000	16,900		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	17,300		18,000	143,000	93,000	48,000
11,700		12,000	118,000	71,000	45,000	17,500		18,000	143,000	93,000	48,000
11,800		12,000	118,000	71,000	45,000	18,000		18,000	143,000	93,000	48,000
11,900		12,000	118,000	71,000	45,000	18,500		20,000	153,000	101,000	50,000
11,910	15/32	12,000	118,000	71,000	45,000	18,900		20,000	153,000	101,000	50,000
12,000		12,000	118,000	71,000	45,000	19,000		20,000	153,000	101,000	50,000
12,200		14,000	124,000	77,000	45,000	19,050	3/4	20,000	153,000	101,000	50,000
12,500		14,000	124,000	77,000	45,000	19,300		20,000	153,000	101,000	50,000
12,700	1/2	14,000	124,000	77,000	45,000	19,500		20,000	153,000	101,000	50,000
12,800		14,000	124,000	77,000	45,000	20,000		20,000	153,000	101,000	50,000
13,000		14,000	124,000	77,000	45,000						
13,300		14,000	124,000	77,000	45,000						
13,500		14,000	124,000	77,000	45,000						
13,700		14,000	124,000	77,000	45,000						
14,000		14,000	124,000	77,000	45,000						
14,200		16,000	133,000	83,000	48,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

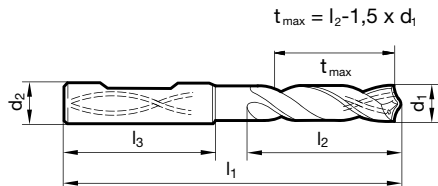


Katalog-Nr. 51773



P	M	K	N	S	H	Arbeitsrichtwerte Seite 28
	●			○		

- Ausspitzung $\geq \varnothing 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie
- besonders geeignet für rostfreie Stähle



d1		d2	l1	l2	l3	d1		d2	l1	l2	l3
mm	inch	mm	mm	mm	mm	mm	inch	mm	mm	mm	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	1/8	6,000	66,000	28,000	36,000	6,750	17/64	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	9/32	8,000	91,000	53,000	36,000
3,570	9/64	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	19/64	8,000	91,000	53,000	36,000
3,970	5/32	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	5/16	8,000	91,000	53,000	36,000
4,370	11/64	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	21/64	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	3/16	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	11/32	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	13/64	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	23/64	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	7/32	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	3/8	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	15/64	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	25/64	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	1/4	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	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
10,320	13/32	12,000	118,000	71,000	45,000	14,290	9/16	16,000	133,000	83,000	48,000
10,400		12,000	118,000	71,000	45,000	14,300		16,000	133,000	83,000	48,000
10,500		12,000	118,000	71,000	45,000	14,500		16,000	133,000	83,000	48,000
10,600		12,000	118,000	71,000	45,000	14,700		16,000	133,000	83,000	48,000
10,700		12,000	118,000	71,000	45,000	15,000		16,000	133,000	83,000	48,000
10,800		12,000	118,000	71,000	45,000	15,200		16,000	133,000	83,000	48,000
10,900		12,000	118,000	71,000	45,000	15,300		16,000	133,000	83,000	48,000
11,000		12,000	118,000	71,000	45,000	15,500		16,000	133,000	83,000	48,000
11,100		12,000	118,000	71,000	45,000	15,700		16,000	133,000	83,000	48,000
11,110	7/16	12,000	118,000	71,000	45,000	16,000		16,000	133,000	83,000	48,000
11,200		12,000	118,000	71,000	45,000	16,300		18,000	143,000	93,000	48,000
11,300		12,000	118,000	71,000	45,000	16,500		18,000	143,000	93,000	48,000
11,400		12,000	118,000	71,000	45,000	16,900		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	17,300		18,000	143,000	93,000	48,000
11,700		12,000	118,000	71,000	45,000	17,500		18,000	143,000	93,000	48,000
11,800		12,000	118,000	71,000	45,000	18,000		18,000	143,000	93,000	48,000
11,900		12,000	118,000	71,000	45,000	18,500		20,000	153,000	101,000	50,000
11,910	15/32	12,000	118,000	71,000	45,000	18,900		20,000	153,000	101,000	50,000
12,000		12,000	118,000	71,000	45,000	19,000		20,000	153,000	101,000	50,000
12,200		14,000	124,000	77,000	45,000	19,050	3/4	20,000	153,000	101,000	50,000
12,500		14,000	124,000	77,000	45,000	19,300		20,000	153,000	101,000	50,000
12,700	1/2	14,000	124,000	77,000	45,000	19,500		20,000	153,000	101,000	50,000
12,800		14,000	124,000	77,000	45,000	20,000		20,000	153,000	101,000	50,000
13,000		14,000	124,000	77,000	45,000						
13,300		14,000	124,000	77,000	45,000						
13,500		14,000	124,000	77,000	45,000						
13,700		14,000	124,000	77,000	45,000						
14,000		14,000	124,000	77,000	45,000						
14,200		16,000	133,000	83,000	48,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung



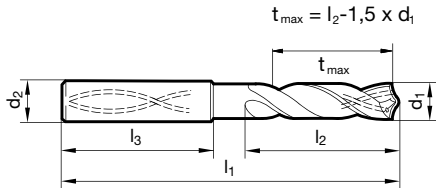
Katalog-Nr. 51789



P	M	K	N	S	H
●	○	●	○	○	○

Arbeitsrichtwerte
Seite 30

- Ausspitzung $\geq \varnothing 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie
- vier Führungsfasen



d1	inch	d2	l1	l2	l3	d1	inch	d2	l1	l2	l3
mm		mm	mm	mm	mm	mm		mm	mm	mm	mm
3,000		6,000	70,000	30,000	36,000	8,000		8,000	116,000	76,000	36,000
3,100		6,000	70,000	30,000	36,000	8,100		10,000	131,000	87,000	40,000
3,170	1/8	6,000	70,000	30,000	36,000	8,200		10,000	131,000	87,000	40,000
3,200		6,000	70,000	30,000	36,000	8,400		10,000	131,000	87,000	40,000
3,250		6,000	70,000	30,000	36,000	8,500		10,000	131,000	87,000	40,000
3,300		6,000	70,000	30,000	36,000	8,600		10,000	131,000	87,000	40,000
3,400		6,000	75,000	35,500	36,000	8,700		10,000	131,000	87,000	40,000
3,500		6,000	75,000	35,500	36,000	8,800		10,000	131,000	87,000	40,000
3,570	9/64	6,000	75,000	35,500	36,000	9,000		10,000	131,000	87,000	40,000
3,600		6,000	75,000	35,500	36,000	9,100		10,000	139,000	95,000	40,000
3,700		6,000	75,000	35,500	36,000	9,200		10,000	139,000	95,000	40,000
3,800		6,000	75,000	37,500	36,000	9,300		10,000	139,000	95,000	40,000
3,900		6,000	75,000	37,500	36,000	9,400		10,000	139,000	95,000	40,000
3,970	5/32	6,000	75,000	37,500	36,000	9,500		10,000	139,000	95,000	40,000
4,000		6,000	75,000	37,500	36,000	9,700		10,000	139,000	95,000	40,000
4,100		6,000	75,000	37,500	36,000	9,800		10,000	139,000	95,000	40,000
4,200		6,000	75,000	37,500	36,000	9,900		10,000	139,000	95,000	40,000
4,300		6,000	85,000	45,000	36,000	10,000		10,000	139,000	95,000	40,000
4,400		6,000	85,000	45,000	36,000	10,200		12,000	155,000	106,000	45,000
4,500		6,000	85,000	45,000	36,000	10,500		12,000	155,000	106,000	45,000
4,600		6,000	85,000	45,000	36,000	10,800		12,000	155,000	106,000	45,000
4,700		6,000	85,000	45,000	36,000	11,000		12,000	155,000	106,000	45,000
4,800		6,000	90,000	50,000	36,000	11,200		12,000	163,000	114,000	45,000
4,900		6,000	90,000	50,000	36,000	11,500		12,000	163,000	114,000	45,000
5,000		6,000	90,000	50,000	36,000	11,800		12,000	163,000	114,000	45,000
5,100		6,000	90,000	50,000	36,000	12,000		12,000	163,000	114,000	45,000
5,200		6,000	90,000	50,000	36,000	12,200		14,000	182,000	133,000	45,000
5,300		6,000	90,000	50,000	36,000	12,500		14,000	182,000	133,000	45,000
5,400		6,000	97,000	57,000	36,000	12,700	1/2	14,000	182,000	133,000	45,000
5,500		6,000	97,000	57,000	36,000	13,000		14,000	182,000	133,000	45,000
5,700		6,000	97,000	57,000	36,000	13,500		14,000	182,000	133,000	45,000
5,800		6,000	97,000	57,000	36,000	14,000		14,000	182,000	133,000	45,000
5,900		6,000	97,000	57,000	36,000	14,200		16,000	204,000	152,000	48,000
6,000		6,000	97,000	57,000	36,000	14,500		16,000	204,000	152,000	48,000
6,200		8,000	106,000	66,000	36,000	15,000		16,000	204,000	152,000	48,000
6,300		8,000	106,000	66,000	36,000	15,500		16,000	204,000	152,000	48,000
6,500		8,000	106,000	66,000	36,000	16,000		16,000	204,000	152,000	48,000
6,600		8,000	106,000	66,000	36,000	16,500		18,000	223,000	171,000	48,000
6,700		8,000	106,000	66,000	36,000	17,000		18,000	223,000	171,000	48,000
6,800		8,000	106,000	66,000	36,000	17,500		18,000	223,000	171,000	48,000
6,900		8,000	116,000	76,000	36,000	18,000		18,000	223,000	171,000	48,000
7,000		8,000	116,000	76,000	36,000	18,500		20,000	244,000	190,000	50,000
7,100		8,000	116,000	76,000	36,000	19,000		20,000	244,000	190,000	50,000
7,200		8,000	116,000	76,000	36,000	19,500		20,000	244,000	190,000	50,000
7,500		8,000	116,000	76,000	36,000	20,000		20,000	244,000	190,000	50,000
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						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

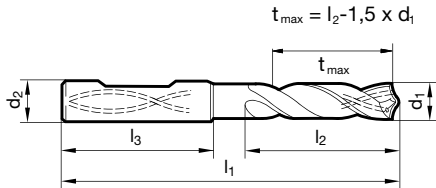


Katalog-Nr. 51889



P	M	K	N	S	H	Arbeitsrichtwerte Seite 30
●	○	●	○	○	○	

- Ausspitzung $\geq \varnothing 3,000$
- Flächenanschliff
- Hauptschneidenform gerade
- optimierte Schneidengeometrie
- vier Führungsfasen



d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm	d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	70,000	30,000	36,000	8,000		8,000	116,000	76,000	36,000
3,100		6,000	70,000	30,000	36,000	8,100		10,000	131,000	87,000	40,000
3,170	1/8	6,000	70,000	30,000	36,000	8,200		10,000	131,000	87,000	40,000
3,200		6,000	70,000	30,000	36,000	8,400		10,000	131,000	87,000	40,000
3,250		6,000	70,000	30,000	36,000	8,500		10,000	131,000	87,000	40,000
3,300		6,000	70,000	30,000	36,000	8,600		10,000	131,000	87,000	40,000
3,400		6,000	75,000	35,500	36,000	8,700		10,000	131,000	87,000	40,000
3,500		6,000	75,000	35,500	36,000	8,800		10,000	131,000	87,000	40,000
3,570	9/64	6,000	75,000	35,500	36,000	9,000		10,000	131,000	87,000	40,000
3,600		6,000	75,000	35,500	36,000	9,100		10,000	139,000	95,000	40,000
3,700		6,000	75,000	35,500	36,000	9,200		10,000	139,000	95,000	40,000
3,800		6,000	75,000	37,500	36,000	9,300		10,000	139,000	95,000	40,000
3,900		6,000	75,000	37,500	36,000	9,400		10,000	139,000	95,000	40,000
3,970	5/32	6,000	75,000	37,500	36,000	9,500		10,000	139,000	95,000	40,000
4,000		6,000	75,000	37,500	36,000	9,700		10,000	139,000	95,000	40,000
4,100		6,000	75,000	37,500	36,000	9,800		10,000	139,000	95,000	40,000
4,200		6,000	75,000	37,500	36,000	9,900		10,000	139,000	95,000	40,000
4,300		6,000	85,000	45,000	36,000	10,000		10,000	139,000	95,000	40,000
4,400		6,000	85,000	45,000	36,000	10,200		12,000	155,000	106,000	45,000
4,500		6,000	85,000	45,000	36,000	10,300		12,000	155,000	106,000	45,000
4,600		6,000	85,000	45,000	36,000	10,500		12,000	155,000	106,000	45,000
4,700		6,000	85,000	45,000	36,000	10,800		12,000	155,000	106,000	45,000
4,800		6,000	90,000	50,000	36,000	11,000		12,000	155,000	106,000	45,000
4,900		6,000	90,000	50,000	36,000	11,200		12,000	163,000	114,000	45,000
5,000		6,000	90,000	50,000	36,000	11,500		12,000	163,000	114,000	45,000
5,100		6,000	90,000	50,000	36,000	11,800		12,000	163,000	114,000	45,000
5,200		6,000	90,000	50,000	36,000	12,000		12,000	163,000	114,000	45,000
5,300		6,000	90,000	50,000	36,000	12,100		14,000	182,000	133,000	45,000
5,400		6,000	97,000	57,000	36,000	12,200		14,000	182,000	133,000	45,000
5,500		6,000	97,000	57,000	36,000	12,500		14,000	182,000	133,000	45,000
5,700		6,000	97,000	57,000	36,000	12,700	1/2	14,000	182,000	133,000	45,000
5,800		6,000	97,000	57,000	36,000	13,000		14,000	182,000	133,000	45,000
5,900		6,000	97,000	57,000	36,000	13,500		14,000	182,000	133,000	45,000
6,000		6,000	97,000	57,000	36,000	14,000		14,000	182,000	133,000	45,000
6,200		8,000	106,000	66,000	36,000	14,100		16,000	204,000	152,000	48,000
6,300		8,000	106,000	66,000	36,000	14,200		16,000	204,000	152,000	48,000
6,500		8,000	106,000	66,000	36,000	14,500		16,000	204,000	152,000	48,000
6,600		8,000	106,000	66,000	36,000	15,000		16,000	204,000	152,000	48,000
6,700		8,000	106,000	66,000	36,000	15,500		16,000	204,000	152,000	48,000
6,800		8,000	106,000	66,000	36,000	16,000		16,000	204,000	152,000	48,000
6,900		8,000	116,000	76,000	36,000	16,500		18,000	223,000	171,000	48,000
7,000		8,000	116,000	76,000	36,000	17,000		18,000	223,000	171,000	48,000
7,100		8,000	116,000	76,000	36,000	17,500		18,000	223,000	171,000	48,000
7,200		8,000	116,000	76,000	36,000	18,000		18,000	223,000	171,000	48,000
7,500		8,000	116,000	76,000	36,000	18,500		20,000	244,000	190,000	50,000
7,600		8,000	116,000	76,000	36,000	19,000		20,000	244,000	190,000	50,000
7,700		8,000	116,000	76,000	36,000	19,500		20,000	244,000	190,000	50,000
7,800		8,000	116,000	76,000	36,000	20,000		20,000	244,000	190,000	50,000

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung



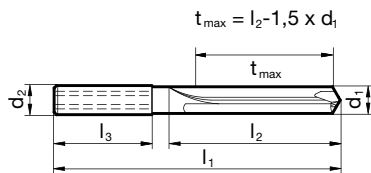
Katalog-Nr. 71994



P	M	K	N	S	H
		•	○		

Arbeitsrichtwerte
Seite 30

- Ausspitzung $\geq \varnothing 3,000$
- Kegelmantelschliff
- enge Durchmessertoleranzen
- sehr gute Bohrungsflächen
- Kühlmitteldruck beachten (s. Diagramm „Kühlmittlempfehlungen“)



d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	74,000	32,000	36,000
3,100		6,000	74,000	32,000	36,000
3,200		6,000	74,000	32,000	36,000
3,300		6,000	74,000	32,000	36,000
3,400		6,000	74,000	34,000	36,000
3,500		6,000	74,000	34,000	36,000
3,600		6,000	74,000	34,000	36,000
3,700		6,000	74,000	34,000	36,000
3,800		6,000	97,000	45,000	36,000
3,900		6,000	97,000	45,000	36,000
4,000		6,000	97,000	45,000	36,000
4,100		6,000	97,000	45,000	36,000
4,200		6,000	97,000	45,000	36,000
4,300		6,000	97,000	45,000	36,000
4,400		6,000	97,000	45,000	36,000
4,500		6,000	97,000	45,000	36,000
4,700		6,000	97,000	45,000	36,000
4,800		6,000	97,000	57,000	36,000
4,900		6,000	97,000	57,000	36,000
5,000		6,000	97,000	57,000	36,000
5,500		6,000	97,000	57,000	36,000
6,000		6,000	97,000	57,000	36,000
6,500		8,000	116,000	76,000	36,000
6,800		8,000	116,000	76,000	36,000
7,000		8,000	116,000	76,000	36,000
7,500		8,000	116,000	76,000	36,000
7,800		8,000	116,000	76,000	36,000
8,000		8,000	116,000	76,000	36,000
8,500		10,000	139,000	95,000	40,000
9,000		10,000	139,000	95,000	40,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
9,500		10,000	139,000	95,000	40,000
10,000		10,000	139,000	95,000	40,000
10,200		12,000	163,000	114,000	45,000
10,500		12,000	163,000	114,000	45,000
11,000		12,000	163,000	114,000	45,000
11,500		12,000	163,000	114,000	45,000
12,000		12,000	163,000	114,000	45,000
12,300	31/64	14,000	182,000	133,000	45,000
12,500		14,000	182,000	133,000	45,000
12,700	1/2	14,000	182,000	133,000	45,000
13,000		14,000	182,000	133,000	45,000
13,500		14,000	182,000	133,000	45,000
14,000		14,000	182,000	133,000	45,000
14,500		16,000	204,000	152,000	48,000
15,000		16,000	204,000	152,000	48,000
15,500		16,000	204,000	152,000	48,000
16,000		16,000	204,000	152,000	48,000
16,500		18,000	223,000	171,000	48,000
17,000		18,000	223,000	171,000	48,000
17,500		18,000	223,000	171,000	48,000
18,000		18,000	223,000	171,000	48,000
18,500		20,000	244,000	190,000	50,000
19,000		20,000	244,000	190,000	50,000
19,500		20,000	244,000	190,000	50,000
20,000		20,000	244,000	190,000	50,000

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung



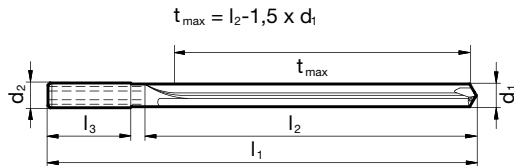
Katalog-Nr. 71996



P	M	K	N	S	H
		●	○		

Arbeitsrichtwerte
Seite 30

- Ausspitzung $\geq \varnothing 3,000$
- Kegelmantelanschliff
- enge Durchmessertoleranzen
- sehr gute Bohrungsoberflächen
- Kühlmitteldruck beachten (s. Diagramm „Kühlmittlempfehlungen“)



d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
3,000		6,000	91,000	42,000	36,000
3,300		6,000	91,000	42,000	36,000
3,500		6,000	91,000	48,000	36,000
3,800		6,000	121,000	77,000	36,000
4,000		6,000	121,000	77,000	36,000
4,200		6,000	121,000	77,000	36,000
4,500		6,000	121,000	77,000	36,000
4,700		6,000	121,000	77,000	36,000
4,800		6,000	121,000	82,000	36,000
5,000		6,000	121,000	82,000	36,000
5,500		6,000	121,000	82,000	36,000
6,000		6,000	121,000	82,000	36,000
6,350	1/4	8,000	146,000	106,000	36,000
6,500		8,000	146,000	106,000	36,000
6,800		8,000	146,000	106,000	36,000
7,000		8,000	146,000	106,000	36,000
7,500		8,000	146,000	106,000	36,000
7,800		8,000	146,000	106,000	36,000
8,000		8,000	146,000	106,000	36,000
8,500		10,000	175,000	130,000	40,000
9,000		10,000	175,000	130,000	40,000
9,500		10,000	175,000	130,000	40,000
10,000		10,000	175,000	130,000	40,000
10,200		12,000	209,000	159,000	45,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
10,500		12,000	209,000	159,000	45,000
11,000		12,000	209,000	159,000	45,000
11,500		12,000	209,000	159,000	45,000
12,000		12,000	209,000	159,000	45,000
12,500		14,000	233,000	183,000	45,000
12,700	1/2	14,000	233,000	183,000	45,000
13,000		14,000	233,000	183,000	45,000
13,500		14,000	233,000	183,000	45,000
14,000		14,000	233,000	183,000	45,000
14,500		16,000	260,000	207,000	48,000
15,000		16,000	260,000	207,000	48,000
15,500		16,000	260,000	207,000	48,000
16,000		16,000	260,000	207,000	48,000
16,500		18,000	284,000	231,000	48,000
17,000		18,000	284,000	231,000	48,000
17,500		18,000	284,000	231,000	48,000
18,000		18,000	284,000	231,000	48,000
18,500		20,000	308,000	255,000	50,000
19,000		20,000	308,000	255,000	50,000
19,500		20,000	308,000	255,000	50,000
20,000		20,000	308,000	255,000	50,000

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung



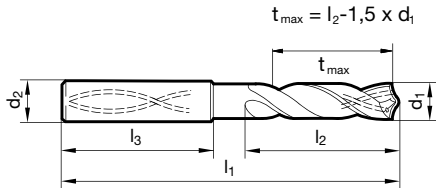
Katalog-Nr. 51893



P	M	K	N	S	H
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Arbeitsrichtwerte
Seite 30

- Ausspitzung $\geq \varnothing 3,000$
- Flächenanschliff
- Kopfbeschichtung
- Hauptschneidenform gerade
- optimierte Schneidengeometrie
- vier Führungsfasen
- Kühlmitteldruck beachten (s. Diagramm „Kühlmitteltempehlungen“)



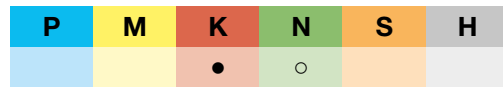
d1	inch	d2	l1	l2	l3	d1	inch	d2	l1	l2	l3
mm		mm	mm	mm	mm	mm		mm	mm	mm	mm
3,000		6,000	90,000	50,000	36,000	7,800		8,000	146,000	108,000	36,000
3,100		6,000	90,000	50,000	36,000	7,900		8,000	146,000	108,000	36,000
3,200		6,000	90,000	50,000	36,000	8,000		8,000	146,000	108,000	36,000
3,300		6,000	90,000	50,000	36,000	8,100		10,000	162,000	120,000	40,000
3,400		6,000	90,000	50,000	36,000	8,200		10,000	162,000	120,000	40,000
3,500		6,000	90,000	50,000	36,000	8,300		10,000	162,000	120,000	40,000
3,600		6,000	90,000	50,000	36,000	8,400		10,000	162,000	120,000	40,000
3,700		6,000	90,000	50,000	36,000	8,500		10,000	162,000	120,000	40,000
3,800		6,000	102,000	64,000	36,000	8,600		10,000	162,000	120,000	40,000
3,900		6,000	102,000	64,000	36,000	8,700		10,000	162,000	120,000	40,000
4,000		6,000	102,000	64,000	36,000	8,800		10,000	162,000	120,000	40,000
4,100		6,000	102,000	64,000	36,000	8,900		10,000	162,000	120,000	40,000
4,200		6,000	102,000	64,000	36,000	9,000		10,000	162,000	120,000	40,000
4,300		6,000	102,000	64,000	36,000	9,100		10,000	162,000	120,000	40,000
4,400		6,000	102,000	64,000	36,000	9,200		10,000	162,000	120,000	40,000
4,500		6,000	102,000	64,000	36,000	9,300		10,000	162,000	120,000	40,000
4,600		6,000	102,000	64,000	36,000	9,400		10,000	162,000	120,000	40,000
4,700		6,000	102,000	64,000	36,000	9,500		10,000	162,000	120,000	40,000
4,800		6,000	116,000	78,000	36,000	9,600		10,000	162,000	120,000	40,000
4,900		6,000	116,000	78,000	36,000	9,700		10,000	162,000	120,000	40,000
5,000		6,000	116,000	78,000	36,000	9,800		10,000	162,000	120,000	40,000
5,100		6,000	116,000	78,000	36,000	9,900		10,000	162,000	120,000	40,000
5,200		6,000	116,000	78,000	36,000	10,000		10,000	162,000	120,000	40,000
5,300		6,000	116,000	78,000	36,000	10,200		12,000	204,000	156,000	45,000
5,400		6,000	116,000	78,000	36,000	10,500		12,000	204,000	156,000	45,000
5,500		6,000	116,000	78,000	36,000	11,000		12,000	204,000	156,000	45,000
5,600		6,000	116,000	78,000	36,000	11,500		12,000	204,000	156,000	45,000
5,700		6,000	116,000	78,000	36,000	12,000		12,000	204,000	156,000	45,000
5,800		6,000	116,000	78,000	36,000	12,500		14,000	230,000	182,000	45,000
5,900		6,000	116,000	78,000	36,000	12,700	1/2	14,000	230,000	182,000	45,000
6,000		6,000	116,000	78,000	36,000	13,000		14,000	230,000	182,000	45,000
6,100		8,000	146,000	108,000	36,000	13,500		14,000	230,000	182,000	45,000
6,200		8,000	146,000	108,000	36,000	14,000		14,000	230,000	182,000	45,000
6,300		8,000	146,000	108,000	36,000	14,500		16,000	260,000	208,000	48,000
6,400		8,000	146,000	108,000	36,000	15,000		16,000	260,000	208,000	48,000
6,500		8,000	146,000	108,000	36,000	15,500		16,000	260,000	208,000	48,000
6,600		8,000	146,000	108,000	36,000	16,000		16,000	260,000	208,000	48,000
6,700		8,000	146,000	108,000	36,000	16,500		18,000	285,000	234,000	48,000
6,800		8,000	146,000	108,000	36,000	17,000		18,000	285,000	234,000	48,000
6,900		8,000	146,000	108,000	36,000	17,500		18,000	285,000	234,000	48,000
7,000		8,000	146,000	108,000	36,000	18,000		18,000	285,000	234,000	48,000
7,100		8,000	146,000	108,000	36,000	18,500		20,000	310,000	258,000	50,000
7,200		8,000	146,000	108,000	36,000	19,000		20,000	310,000	258,000	50,000
7,300		8,000	146,000	108,000	36,000	19,500		20,000	310,000	258,000	50,000
7,400		8,000	146,000	108,000	36,000	20,000		20,000	310,000	258,000	50,000
7,500		8,000	146,000	108,000	36,000						
7,600		8,000	146,000	108,000	36,000						
7,700		8,000	146,000	108,000	36,000						

SuperV-Bohrer

SuperV-Bohrer mit Innenkühlung

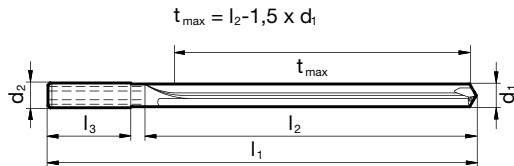


Katalog-Nr. 71997



Arbeitsrichtwerte
Seite 30

- Ausspitzung $\geq \varnothing 5,000$
- Kegelmantelschliff
- negative Steigung
- für sehr maßhaltige Bohrungen
- sehr gute Bohrungsflächen
- Kühlmitteldruck beachten (s. Diagramm „Kühlmittlempfehlungen“)



d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
5,000		6,000	145,000	105,000	36,000
6,000		6,000	145,000	105,000	36,000
8,000		8,000	180,000	137,000	36,000
9,000		10,000	217,000	170,000	40,000
10,000		10,000	217,000	170,000	40,000
11,000		12,000	258,000	205,000	45,000

d1 mm	inch	d2 mm	l1 mm	l2 mm	l3 mm
12,000		12,000	258,000	205,000	45,000
14,000		14,000	290,000	236,000	45,000

SuperV-Bohrer

SuperV-Bohrer, 3-schneidig



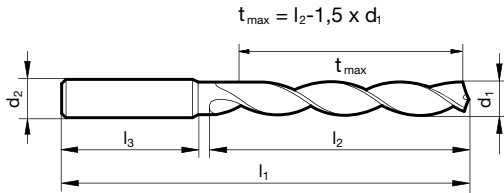
Katalog-Nr. 71862



P	M	K	N	S	H
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Arbeitsrichtwerte
Seite 28

- Ausspitzung $\geq \varnothing 3,000$
- Spiropointanschliff
- weite Spannuten
- optimales Zentrieren
- für unterbrochenen Schnitt geeignet



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
3,200	6,000	66,000	28,000	36,000
3,300	6,000	66,000	28,000	36,000
3,500	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
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
4,500	6,000	74,000	36,000	36,000
4,800	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
5,200	6,000	82,000	44,000	36,000
5,300	6,000	82,000	44,000	36,000
5,500	6,000	82,000	44,000	36,000
5,800	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
6,400	8,000	91,000	53,000	36,000
6,500	8,000	91,000	53,000	36,000
6,700	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
7,400	8,000	91,000	53,000	36,000
7,500	8,000	91,000	53,000	36,000
7,800	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
8,400	10,000	103,000	61,000	40,000
8,500	10,000	103,000	61,000	40,000

d1 mm	d2 mm	l1 mm	l2 mm	l3 mm
8,600	10,000	103,000	61,000	40,000
8,700	10,000	103,000	61,000	40,000
8,800	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
9,500	10,000	103,000	61,000	40,000
9,800	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
10,500	12,000	118,000	71,000	45,000
11,000	12,000	118,000	71,000	45,000
11,200	12,000	118,000	71,000	45,000
11,500	12,000	118,000	71,000	45,000
11,800	12,000	118,000	71,000	45,000
12,000	12,000	118,000	71,000	45,000
12,100	14,000	124,000	77,000	45,000
12,500	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
14,000	14,000	124,000	77,000	45,000
14,100	16,000	133,000	83,000	48,000
14,500	16,000	133,000	83,000	48,000
15,000	16,000	133,000	83,000	48,000
15,500	16,000	133,000	83,000	48,000
16,000	16,000	133,000	83,000	48,000
16,500	18,000	143,000	93,000	48,000
17,000	18,000	143,000	93,000	48,000
17,500	18,000	143,000	93,000	48,000
18,000	18,000	143,000	93,000	48,000
18,500	20,000	153,000	101,000	50,000
19,000	20,000	153,000	101,000	50,000
19,500	20,000	153,000	101,000	50,000
20,000	20,000	153,000	101,000	50,000