

# Vrtáky s kuželovou stopkou

Tapper shank drills

Spiralbohrer mit morsekegel

Сверла с коническим хвостовиком



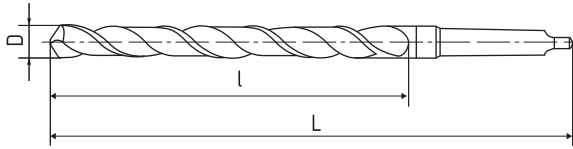
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**VK10010 • VK10015**

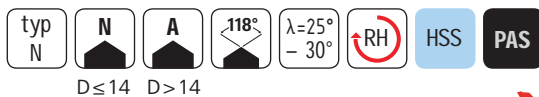
DIN 345

Použití / Usage / Applikation / Употребление

- 1 2 3 4 5 6 7 8 9 10 11 12 13



- 1 2 3 4 5 6 7 8 9 10 11 12 13



VK10010



VK10015

ØD	L	I	CODE	CODE
2	108	24	VK10010.0200	
2,2	108	27	VK10010.0220	
2,5	111	30	VK10010.0250	
2,8	114	33	VK10010.0280	
3	114	33	VK10010.0300	
3,2	117	36	VK10010.0320	
3,5	120	39	VK10010.0350	
3,8	124	43	VK10010.0380	
4	124	43	VK10010.0400	
4,2	124	43	VK10010.0420	
4,5	128	47	VK10010.0450	
4,8	133	52	VK10010.0480	
5	133	52	VK10010.0500	VK10015.0500
5,1	133	52	VK10010.0510	
5,2	133	52	VK10010.0520	
5,25	133	52	VK10010.0525	
5,3	133	52	VK10010.0530	
5,4	138	57	VK10010.0540	
5,5	138	57	VK10010.0550	VK10015.0550
5,6	138	57	VK10010.0560	
5,7	138	57	VK10010.0570	
5,75	138	57	VK10010.0575	
5,8	138	57	VK10010.0580	
5,9	138	57	VK10010.0590	
6	138	57	VK10010.0600	VK10015.0600
6,1	144	63	VK10010.0610	
6,2	144	63	VK10010.0620	
6,25	144	63	VK10010.0625	
6,3	144	63	VK10010.0630	
6,4	144	63	VK10010.0640	
6,5	144	63	VK10010.0650	VK10015.0650
6,6	144	63	VK10010.0660	
6,7	144	63	VK10010.0670	
6,75	150	69	VK10010.0675	

ØD	L	I	CODE	CODE
6,8	150	69	VK10010.0680	
6,9	150	69	VK10010.0690	
7	150	69	VK10010.0700	VK10015.0700
7,1	150	69	VK10010.0710	
7,2	150	69	VK10010.0720	
7,25	150	69	VK10010.0725	
7,3	150	69	VK10010.0730	
7,4	150	69	VK10010.0740	
7,5	150	69	VK10010.0750	VK10015.0750
7,6	156	75	VK10010.0760	
7,7	156	75	VK10010.0770	
7,75	156	75	VK10010.0775	
7,8	156	75	VK10010.0780	
7,9	156	75	VK10010.0790	
8	156	75	VK10010.0800	VK10015.0800
8,1	156	75	VK10010.0810	
8,2	156	75	VK10010.0820	
8,25	156	75	VK10010.0825	
8,3	156	75	VK10010.0830	
8,4	156	75	VK10010.0840	
8,5	156	75	VK10010.0850	VK10015.0850
8,6	162	81	VK10010.0860	
8,7	162	81	VK10010.0870	
8,75	162	81	VK10010.0875	
8,8	162	81	VK10010.0880	
8,9	162	81	VK10010.0890	
9	162	81	VK10010.0900	VK10015.0900
9,1	162	81	VK10010.0910	
9,2	162	81	VK10010.0920	
9,25	162	81	VK10010.0925	
9,3	162	81	VK10010.0930	
9,4	162	81	VK10010.0940	
9,5	162	81	VK10010.0950	VK10015.0950
9,6	168	87	VK10010.0960	

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ØD	L	I	CODE	CODE
9,7	168	87	VK10010.0970	
9,75	168	87	VK10010.0975	
9,8	168	87	VK10010.0980	
9,9	168	87	VK10010.0990	
10	168	87	VK10010.1000	VK10015.1000
10,1	168	87	VK10010.1010	
10,2	168	87	VK10010.1020	
10,25	168	87	VK10010.1025	
10,3	168	87	VK10010.1030	
10,4	168	87	VK10010.1040	
10,5	168	87	VK10010.1050	VK10015.1050
10,6	168	87	VK10010.1060	
10,7	175	94	VK10010.1070	
10,75	175	94	VK10010.1075	
10,8	175	94	VK10010.1080	
10,9	175	94	VK10010.1090	
11	175	94	VK10010.1100	VK10015.1100
11,1	175	94	VK10010.1110	
11,2	175	94	VK10010.1120	
11,25	175	94	VK10010.1125	
11,3	175	94	VK10010.1130	
11,4	175	94	VK10010.1140	
11,5	175	94	VK10010.1150	VK10015.1150
11,6	175	94	VK10010.1160	
11,7	175	94	VK10010.1170	
11,75	175	94	VK10010.1175	
11,8	175	94	VK10010.1180	
11,9	182	101	VK10010.1190	
12	182	101	VK10010.1200	VK10015.1200
12,1	182	101	VK10010.1210	
12,2	182	101	VK10010.1220	
12,25	182	101	VK10010.1225	
12,3	182	101	VK10010.1230	
12,4	182	101	VK10010.1240	
12,5	182	101	VK10010.1250	VK10015.1250
12,6	182	101	VK10010.1260	
12,7	182	101	VK10010.1270	
12,75	182	101	VK10010.1275	
12,8	182	101	VK10010.1280	
12,9	182	101	VK10010.1290	
13	182	101	VK10010.1300	VK10015.1300
13,1	182	101	VK10010.1310	
13,2	182	101	VK10010.1320	
13,25	189	108	VK10010.1325	
13,3	189	108	VK10010.1330	
13,4	189	108	VK10010.1340	
13,5	189	108	VK10010.1350	VK10015.1350
13,6	189	108	VK10010.1360	
13,7	189	108	VK10010.1370	
13,75	189	108	VK10010.1375	
13,8	189	108	VK10010.1380	

ØD	L	I	CODE	CODE
13,9	189	108	VK10010.1390	
14	189	108	VK10010.1400	VK10015.1400
14,25	212	114	VK10010.1425	
14,5	212	114	VK10010.1450	VK10015.1450
14,75	212	114	VK10010.1475	
15	212	114	VK10010.1500	VK10015.1500
15,25	218	120	VK10010.1525	
15,5	218	120	VK10010.1550	VK10015.1550
15,75	218	120	VK10010.1575	
16	218	120	VK10010.1600	VK10015.1600
16,25	223	125	VK10010.1625	
16,5	223	125	VK10010.1650	VK10015.1650
16,75	223	125	VK10010.1675	
17	223	125	VK10010.1700	VK10015.1700
17,25	228	130	VK10010.1725	
17,5	228	130	VK10010.1750	VK10015.1750
17,75	228	130	VK10010.1775	
18	228	130	VK10010.1800	VK10015.1800
18,25	233	135	VK10010.1825	
18,5	233	135	VK10010.1850	VK10015.1850
18,75	233	135	VK10010.1875	
19	233	135	VK10010.1900	VK10015.1900
19,25	238	140	VK10010.1925	
19,5	238	140	VK10010.1950	VK10015.1950
19,75	238	140	VK10010.1975	
20	238	140	VK10010.2000	VK10015.2000
20,25	243	145	VK10010.2025	
20,5	243	145	VK10010.2050	VK10015.2050
20,75	243	145	VK10010.2075	
21	243	145	VK10010.2100	VK10015.2100
21,25	248	150	VK10010.2125	
21,5	248	150	VK10010.2150	VK10015.2150
21,75	248	150	VK10010.2175	
22	248	150	VK10010.2200	VK10015.2200
22,25	248	150	VK10010.2225	
22,5	253	155	VK10010.2250	VK10015.2250
22,75	253	155	VK10010.2275	
23	253	155	VK10010.2300	VK10015.2300
23,25	276	155	VK10010.2325	
23,5	276	155	VK10010.2350	VK10015.2350
23,75	281	160	VK10010.2375	
24	281	160	VK10010.2400	VK10015.2400
24,25	281	160	VK10010.2425	
24,5	281	160	VK10010.2450	VK10015.2450
24,75	281	160	VK10010.2475	
25	281	160	VK10010.2500	VK10015.2500
25,25	286	165	VK10010.2525	
25,5	286	165	VK10010.2550	VK10015.2550
25,75	286	165	VK10010.2575	
26	286	165	VK10010.2600	VK10015.2600
26,25	286	165	VK10010.2625	

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ØD	L	I	CODE	CODE
26,5	286	165	VK10010.2650	VK10015.2650
26,75	291	170	VK10010.2675	
27	291	170	VK10010.2700	VK10015.2700
27,25	291	170	VK10010.2725	
27,5	291	170	VK10010.2750	VK10015.2750
27,75	291	170	VK10010.2775	
28	291	170	VK10010.2800	VK10015.2800
28,25	296	175	VK10010.2825	
28,5	296	175	VK10010.2850	VK10015.2850
28,75	296	175	VK10010.2875	
29	296	175	VK10010.2900	VK10015.2900
29,25	296	175	VK10010.2925	
29,5	296	175	VK10010.2950	VK10015.2950
29,75	296	175	VK10010.2975	
30	296	175	VK10010.3000	VK10015.3000
30,25	301	180	VK10010.3025	
30,5	301	180	VK10010.3050	VK10015.3050
30,75	301	180	VK10010.3075	
31	301	180	VK10010.3100	VK10015.3100
31,25	301	180	VK10010.3125	
31,5	301	180	VK10010.3150	VK10015.3150
31,75	306	185	VK10010.3175	
32	334	185	VK10010.3200	VK10015.3200
32,5	334	185	VK10010.3250	VK10015.3250
33	334	185	VK10010.3300	VK10015.3300
33,5	334	185	VK10010.3350	VK10015.3350
34	339	190	VK10010.3400	VK10015.3400
34,5	339	190	VK10010.3450	VK10015.3450
35	339	190	VK10010.3500	VK10015.3500
35,5	339	190	VK10010.3550	VK10015.3550
36	344	195	VK10010.3600	VK10015.3600
36,5	344	195	VK10010.3650	VK10015.3650
37	344	195	VK10010.3700	VK10015.3700
37,5	344	195	VK10010.3750	VK10015.3750
38	349	200	VK10010.3800	VK10015.3800
38,5	349	200	VK10010.3850	VK10015.3850
39	349	200	VK10010.3900	VK10015.3900
39,5	349	200	VK10010.3950	VK10015.3950
40	349	200	VK10010.4000	VK10015.4000
40,5	354	205	VK10010.4050	VK10015.4050
41	354	205	VK10010.4100	VK10015.4100
41,5	354	205	VK10010.4150	VK10015.4150
42	354	205	VK10010.4200	VK10015.4200
42,5	354	205	VK10010.4250	VK10015.4250
43	359	210	VK10010.4300	VK10015.4300
43,5	359	210	VK10010.4350	VK10015.4350
44	359	210	VK10010.4400	VK10015.4400
44,5	359	210	VK10010.4450	VK10015.4450
45	359	210	VK10010.4500	VK10015.4500
45,5	364	215	VK10010.4550	VK10015.4550
46	364	215	VK10010.4600	VK10015.4600

ØD	L	I	CODE	CODE
46,5	364	215	VK10010.4650	VK10015.4650
47	364	215	VK10010.4700	VK10015.4700
47,5	364	215	VK10010.4750	VK10015.4750
48	369	220	VK10010.4800	VK10015.4800
48,5	369	220	VK10010.4850	VK10015.4850
49	369	220	VK10010.4900	VK10015.4900
49,5	369	220	VK10010.4950	VK10015.4950
50	369	220	VK10010.5000	VK10015.5000
50,5	374	225	VK10010.5050	
51	412	225	VK10010.5100	
52	412	225	VK10010.5200	
53	412	225	VK10010.5300	
54	417	230	VK10010.5400	
55	417	230	VK10010.5500	
56	417	230	VK10010.5600	
57	422	235	VK10010.5700	
58	422	235	VK10010.5800	
59	422	235	VK10010.5900	
60	422	235	VK10010.6000	
61	427	240	VK10010.6100	
62	427	240	VK10010.6200	
63	427	240	VK10010.6300	
64	432	245	VK10010.6400	
65	432	245	VK10010.6500	
66	432	245	VK10010.6600	
67	432	245	VK10010.6700	
68	437	250	VK10010.6800	
69	437	250	VK10010.6900	
70	437	250	VK10010.7000	
71	437	250	VK10010.7100	
72	442	255	VK10010.7200	
73	442	255	VK10010.7300	
74	442	255	VK10010.7400	
75	442	255	VK10010.7500	
76	447	260	VK10010.7600	
77	514	260	VK10010.7700	
78	514	260	VK10010.7800	
79	514	260	VK10010.7900	
80	514	260	VK10010.8000	
81	519	265	VK10010.8100	
82	519	265	VK10010.8200	
83	519	265	VK10010.8300	
84	519	265	VK10010.8400	
85	519	265	VK10010.8500	
86	524	270	VK10010.8600	
87	524	270	VK10010.8700	
88	524	270	VK10010.8800	
89	524	270	VK10010.8900	
90	524	270	VK10010.9000	

doporučené řezné rychlosti • recommended cutting speed • empfohlene schnittgeschwindigkeit • рекомендуемая скорость резания

Skupina Group Gruppe Группа	Materiál Material Material Материал	Pevnost Strength Festigkeit Твердость	Příklad Example Beispiel Пример	v (m/min)			
				HSS	HSSE HSS Co5	HSS Co8	HSSE-PM +AlTiN
1	Automatové a konstrukční oceli Free-cutting steels, general constr. steels Automatenstähle, allgemeine Baustähle Автоматные и конструкционные стали	≤ 600 MPa	DIN 1.0037 DIN 1.0050 11 109 11 500	30	37,5	45	76
2	Konstrukční a lité oceli General construction steels, steel castings Allgemeine Baustähle, Stahlguss Конструкционные и литые стали	≤ 850 MPa	DIN 1.0503 DIN 1.0070 12 050 422650	26	32,5	39	66
3	Nástrojové oceli nízkolegované Tool steels low alloyed Niedriglegierte Werkzeugstähle Инструментальная сталь низколегированная	≤ 1100 MPa	DIN 1.2711 19 662 422865		18	24	41
4	Zuštětované oceli Heat treatable steels Vergütungsstähle Улучшенные стали	≤ 900 MPa	DIN 1.5710 DIN 1.8159 16 240	20	25	30	51
5	Nástrojové oceli vysocolegované Tool steels high alloyed Hochlegierte Werkzeugstähle Инструментальная сталь высоколегированная	≤ 1100 MPa	DIN 1.3243 19 436		18	24	41
6	Nástrojové a zuštětované oceli Tool and treated steels Werkzeug- und Vergütungsstähle Инструментальная и улучшенная сталь	> 1100 MPa	DIN 1.2343 15 241 15 260 19 552		16	20	34
7	Litina Cast iron Temperguss Чугун	≤ 240 HB	GG – 15 GG – 20 422415 422420	25	30	35	59
8	Litina Cast iron Gusseisen Чугун	> 240 HB	GG – 30 422430	17	22	25	44
9	Nerezavějící oceli Corrosion- and acid-proof steels Rost- und säurebeständige Нержавеющие стали	≤ 850 MPa	DIN 1.4013 17 041		10	15	25
10	Slitiny Cr–Ni Chrome–nickel alloys Chrom–Nickellegierungen Хромникелевые сплавы	≤ 850 MPa	DIN 1.4301 DIN 2.4360 Nimonic Hasteloy B 17 242		8	12	21
11	Slitiny Cu–Zn, Cu–Sn Copper–zinc alloys, copper–tin alloys Kupfer–Zink–Legierungen Медноцинковые и меднооловянные сплавы	≤ 800 MPa	DIN 2.0402 DIN 2.1080 423035 423018	50–90	60–100	80–120	120–200
12	Hliník, Al–Si slitiny Aluminium, Aluminium cast alloys Si Aluminium, Aluminium–Gu leg. Si Алюминий, алюминий–кремниевые сплавы	≤ 500 MPa	DIN 3.3211 424254 424203	140–240	160–250	160–300	240–450
13	Titan, Slitiny titanu Titanium, Titanium alloys Titan, Titanlegierungen Титан, Сплавы титана	≤ 1200 MPa	DIN 3.7124 DIN 3.7165 DIN 3.7185		9	12	20

Při použití povlaků je možno řeznou rychlost zvýšit:

In case of using coatings it is possible to increase the cutting speed:

Beim Einsatz der Beschichtungen ist es möglich, die Schneidgeschwindigkeit zu erhöhen:

При использовании покрытий можно увеличить скорость резания:

 TiN v x 1,3  
 TiCN v x 1,4  
 TiAlN, AlTiN v x 1,5