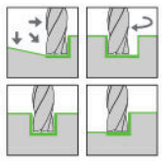
SOLID CARBIDE END MILLS

VOLLHARTMETALLFRÄSER

KARBÜR FREZE PENTA





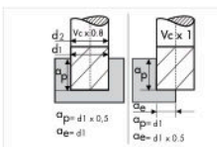


PENTA

<52 HRC



$d_1(e_8)$	L_2	L_1	$d_2(h_6)$	Z	R	Uncoated Code
3	5	57	6	5	0,15	4005410
4	7	57	6	5	0,20	4005420
5	8	57	6	5	0,25	4005430
6	10	57	6	5	0,30	4005440
8	16	63	8	5	0,40	4005450
10	22	72	10	5	0,50	4005460
12	26	83	12	5	0,60	4005470
14	26	83	14	5	0,70	4005480
16	32	92	16	5	0,80	4005490
18	32	92	18	5	0,90	4005500
20	38	104	20	5	1,00	4005510



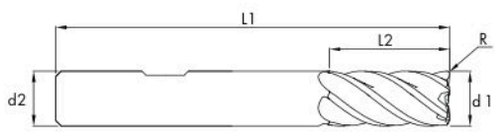
			P (20-30 Hrc)			P (30-40 Hrc)			M			GG			AL			CU			Titan			< 52 HRC		
			1.0050-2 1.0060-2 1.0070-2			1.5864 1.6580 1.7225			1.4405 1.4460 1.4505			0.6035 0.7080 0.8055			3.2151 3.2373 3.2382			2.1247 2.0580 2.0598			3.7035 3.7055 3.7065			1.3255 1.3265 1.3333		
			Vc=120 m/dk.			Vc = 90 m/dk.			Vc = 65 m/dk.			Vc= 130 m/dk.			Vc = 320 m/dk.			Vc = 200 m/dk.			Vc = 50 m/dk.			Vc = 50 m/dk.		
d1	ap	ae	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf
6	3.0	3.0	0.045	4250	190xZ	0,032	4777	150xZ	0,040	3450	140xZ	0,090	6900	620xZ	0,066	16983	1120xZ	0,075	10616	800 xZ	0,008	2654	65 xZ	0.007	2854	55 xZ
8	4,0	4.0	0.06	3185	190xZ	0,042	3582	150xZ	0,054	2587	140xZ	0,120	5175	620xZ	0,088	12737	1120xZ	0,100	7962	800 xZ	0,033	1990	65 xZ	0.028	1990	55 xZ
10	5,0	5.0	0.075	2550	190xZ	0,052	2866	150xZ	0,068	2070	140xZ	0,150	4140	620xZ	0,110	10190	1120xZ	0,126	6370	800 xZ	0,041	1592	65 xZ	0.035	1592	55 xZ
12	6,0	6.0	0.09	2123	190xZ	0,063	2388	150xZ	0,081	1725	140xZ	0,180	3450	620xZ	0,132	8492	1120xZ	0,151	5308	800 xZ	0,049	1327	65 xZ	0.041	1327	55 xZ
14	7.0	7.0	0.104	1820	190xZ	0,073	2047	150xZ	0,095	1478	140xZ	0,210	2957	620xZ	0,154	7278	1120xZ	0,176	4550	800 xZ	0,057	1137	65 xZ	0.048	1137	55 xZ
16	8,0	8.0	0.119	1592	190xZ	0,084	1791	150xZ	0,108	1294	140xZ	0,240	2587	620xZ	0,176	6369	1120xZ	0,201	3981	800 xZ	0,065	995	65 xZ	0.055	995	55 xZ
18	9,0	9.0	0.134	1415	190xZ	0,094	1592	150xZ	0,122	1150	140xZ	0,270	2300	620xZ	0,198	5661	1120xZ	0,226	3539	800 xZ	0,073	885	65 xZ	0.062	885	55 xZ
20	10	10	0.149	1275	190xZ	0.105	1433	150xZ	0,135	1035	140xZ	0,300	2070	620xZ	0,220	5095	1120xZ	0,251	3185	800 xZ	0,082	796	65 xZ	0.069	796	55 xZ

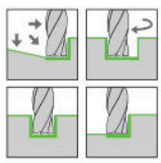
SOLID CARBIDE END MILLS

VOLLHARTMETALLFRÄSER

KARBÜR FREZE PENTA INOX





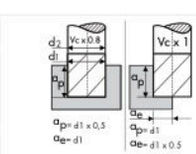


PENTA INOX

<52 HRC

END MILL FRÄSER	MG-10	dl	DIN 6528		DIN 6535 HB		0.5	nACo MULTILAYER
TYPE	QUALITY	DIAMETER	NORM	5 FLUTES	SHAFT TYPE	HELICAL	CORNER RADIUS	COATED

$d_1(e_8)$	L_2	L_1	$d_2(h_6)$	Z	R	Uncoated Code
3	5	57	6	5	0,15	4005410
4	7	57	6	5	0,20	4005420
5	8	57	6	5	0,25	4005430
6	10	57	6	5	0,30	4005440
8	16	63	8	5	0,40	4005450
10	22	72	10	5	0,50	4005460
12	26	83	12	5	0,60	4005470
14	26	83	14	5	0,70	4005480
16	32	92	16	5	0,80	4005490
18	32	92	18	5	0,90	4005500
20	38	104	20	5	1,00	4005510



			P (20-30 Hrc)			P (30-40 Hrc)			M			GG			AL			CU			Titan			< 52 HRC		
			1.0050-2 1.0060-2 1.0070-2			1.5864 1.6580 1.7225			1.4405 1.4460 1.4505			0.6035 0.7080 0.8055			3.2151 3.2373 3.2382			2.1247 2.0580 2.0598			3.7035 3.7055 3.7065			1.3255 1.3265 1.3333		
			Vc=120 m/dk.			Vc = 90 m/dk.			Vc = 65 m/dk.			Vc= 130 m/dk.			Vc = 320 m/dk.			Vc = 200 m/dk.			Vc = 50 m/dk.			Vc = 50 m/dk.		
dl	ap	ae	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf	fz	n	Vf
6	3.0	3.0	0.045	4250	190xZ	0,032	4777	150xZ	0,040	3450	140xZ	0,090	6900	620xZ	0,066	16983	1120xZ	0,075	10616	800 xZ	0,008	2654	65 xZ	0.007	2854	55 xZ
8	4,0	4.0	0.06	3185	190xZ	0,042	3582	150xZ	0,054	2587	140xZ	0,120	5175	620xZ	0,088	12737	1120xZ	0,100	7962	800 xZ	0,033	1990	65 xZ	0.028	1990	55 xZ
10	5,0	5.0	0.075	2550	190xZ	0,052	2866	150xZ	0,068	2070	140xZ	0,150	4140	620xZ	0,110	10190	1120xZ	0,126	6370	800 xZ	0,041	1592	65 xZ	0.035	1592	55 xZ
12	6,0	6.0	0.09	2123	190xZ	0,063	2388	150xZ	0,081	1725	140xZ	0,180	3450	620xZ	0,132	8492	1120xZ	0,151	5308	800 xZ	0,049	1327	65 xZ	0.041	1327	55 xZ
14	7.0	7.0	0.104	1820	190xZ	0,073	2047	150xZ	0,095	1478	140xZ	0,210	2957	620xZ	0,154	7278	1120xZ	0,176	4550	800 xZ	0,057	1137	65 xZ	0.048	1137	55 xZ
16	8,0	8.0	0.119	1592	190xZ	0,084	1791	150xZ	0,108	1294	140xZ	0,240	2587	620xZ	0,176	6369	1120xZ	0,201	3981	800 xZ	0,065	995	65 xZ	0.055	995	55 xZ
18	9,0	9.0	0.134	1415	190xZ	0,094	1592	150xZ	0,122	1150	140xZ	0,270	2300	620xZ	0,198	5661	1120xZ	0,226	3539	800 xZ	0,073	885	65 xZ	0.062	885	55 xZ
20	10	10	0.149	1275	190xZ	0.105	1433	150xZ	0,135	1035	140xZ	0,300	2070	620xZ	0,220	5095	1120xZ	0,251	3185	800 xZ	0,082	796	65 xZ	0.069	796	55 xZ