CARBIDE, 2 FLUTE EXTRA LONG LENGTH BALL NOSE

VOLLHARTMETALL, 2 SCHNEIDEN EXTRA LANG STIRNRADIUS

Fraise carbure, 2 dents, hémisphérique, extra-longue

2 TAGLIENTI, SEMISFERICA, SERIE EXTRA LUNGA

- Suitable for dry milling applications at high temperatures.
- Excellent high-performance end mills.
- Designed for milling of radius bottom slots, fillets and special contours.

- Für die Trockenbearbeitung.
- Hervorragendes Preis - Leistungsverhältnis.
- Bestimmt für das Fräsen von Nuten mit konvexem Grund, Sonderprofilen und zum Kopieren.

P.597

Unit : mm

EDP No.	Radius of Ball Nose R (±0.02)	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
G9455903	R1.5	3.0	3	20	60
G9455030	R1.5	3.0	3	30	75
G9455904	R2.0	4.0	4	20	60
G9455040	R2.0	4.0	4	30	75
G9455905	R2.5	5.0	5	25	75
G9455050	R2.5	5.0	5	40	100
G9455906	R3.0	6.0	6	30	75
G9455060	R3.0	6.0	6	50	150
G9455908	R4.0	8.0	8	30	75
G9455080	R4.0	8.0	8	50	150
G9455910	R5.0	10.0	10	40	100
G9455100	R5.0	10.0	10	60	150
G9455912	R6.0	12.0	12	45	100
G9455120	R6.0	12.0	12	75	150
G9455914	R7.0	14.0	14	45	100
G9455140	R7.0	14.0	14	75	150
G9455916	R8.0	16.0	16	45	100
G9455160	R8.0	16.0	16	75	150
G9455918	R9.0	18.0	18	45	100
G9455180	R9.0	18.0	18	75	150
G9455920	R10.0	20.0	20	45	100
G9455200	R10.0	20.0	20	75	150

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0 ~ - 0.03	h5

◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommend	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	○	○	○	○	○	○

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend	○	○	○	○	○	○	○	○			○	○	○	○	○	○	○			○	

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDPARAMETER

G9624, G9A70, G9437, G9438, G9454, G9455 SERIES 2 FLUTE BALL NOSE

Vc = m/min.
fz = mm/tooth
RPM = rev./min.
FEED = mm/min.
Ap = mm

ISO	VDI 3323	Material Description	Ae	Parameter	Mill Diameter (Ø) 2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
P	1-4	Non-alloy steel	0.2D	Vc	80	105	110	125	135	155	170	190	200	205	215	225
				fz	0.026	0.025	0.035	0.045	0.06	0.089	0.122	0.15	0.165	0.18	0.188	0.201
				RPM	12732	11141	8754	7958	7162	6167	5411	5040	4547	4078	3802	3581
				FEED	662	557	613	716	859	1098	1320	1512	1501	1468	1430	1440
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	5		0.2D	Vc	55	80	90	95	110	125	135	150	160	160	170	175
				fz	0.023	0.023	0.031	0.04	0.06	0.08	0.1	0.12	0.128	0.141	0.148	0.158
				RPM	8754	8488	7162	6048	5836	4974	4297	3979	3638	3183	3006	2785
				FEED	403	390	444	484	700	796	859	955	931	898	890	880
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	6-7	Low alloy steel	0.2D	Vc	80	105	110	125	135	155	170	190	200	205	215	225
				fz	0.026	0.025	0.035	0.045	0.06	0.089	0.122	0.15	0.165	0.18	0.188	0.201
				RPM	12732	11141	8754	7958	7162	6167	5411	5040	4547	4078	3802	3581
				FEED	662	557	613	716	859	1098	1320	1512	1501	1468	1430	1440
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	8-9		0.2D	Vc	55	80	90	95	110	125	135	150	160	160	170	175
				fz	0.023	0.023	0.031	0.04	0.06	0.08	0.1	0.12	0.128	0.141	0.148	0.158
				RPM	8754	8488	7162	6048	5836	4974	4297	3979	3638	3183	3006	2785
				FEED	403	390	444	484	700	796	859	955	931	898	890	880
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	10	High alloyed steel, and tool steel	0.2D	Vc	80	105	110	125	135	155	170	190	200	205	215	225
				fz	0.026	0.025	0.035	0.045	0.06	0.089	0.122	0.15	0.165	0.18	0.188	0.201
				RPM	12732	11141	8754	7958	7162	6167	5411	5040	4547	4078	3802	3581
				FEED	662	557	613	716	859	1098	1320	1512	1501	1468	1430	1440
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	11.1 - 11.2		0.2D	Vc	55	80	90	95	110	125	135	150	160	160	170	175
				fz	0.023	0.023	0.031	0.04	0.06	0.08	0.1	0.12	0.128	0.141	0.148	0.158
				RPM	8754	8488	7162	6048	5836	4974	4297	3979	3638	3183	3006	2785
				FEED	403	390	444	484	700	796	859	955	931	898	890	880
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
K	15-20	Grey cast iron Nodular cast iron Malleable cast iron	0.7D	Vc	65	65	65	65	65	65	65	65	60	65	60	65
				fz	0.01	0.016	0.028	0.04	0.053	0.092	0.112	0.131	0.164	0.177	0.209	0.2
				RPM	10345	6897	5173	4138	3448	2586	2069	1724	1364	1293	1061	1035
				FEED	207	221	290	331	366	476	463	452	447	458	444	414
				Ap	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
N	21~22	Aluminum-wrought alloy	0.7D	Vc	195	195	195	190	195	200	195	195	190	195	190	185
				fz	0.006	0.01	0.013	0.019	0.023	0.034	0.044	0.061	0.073	0.07	0.079	0.092
				RPM	31035	20690	15518	12096	10345	7958	6207	5173	4320	3879	3360	2944
				FEED	372	414	403	460	476	541	546	631	631	543	531	542
				Ap	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	23~25	Aluminum-cast, alloyed	0.7D	Vc	195	195	195	190	195	200	195	195	190	195	190	185
				fz	0.006	0.01	0.013	0.019	0.023	0.034	0.044	0.061	0.073	0.07	0.079	0.092
				RPM	31035	20690	15518	12096	10345	7958	6207	5173	4320	3879	3360	2944
				FEED	372	414	403	460	476	541	546	631	631	543	531	542
				Ap	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
H	38.1	Hardened steel	0.2D	Vc	25	35	45	50	50	50	55	55	55	60	60	60
				fz	0.016	0.016	0.021	0.024	0.03	0.046	0.054	0.07	0.081	0.091	0.1	0.111
				RPM	3979	3714	3581	3183	2653	1989	1751	1459	1251	1194	1061	955
				FEED	127	119	150	153	159	183	189	204	203	217	212	212
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	40	Chilled Cast Iron	0.2D	Vc	55	80	90	95	110	125	135	150	160	160	170	175
				fz	0.023	0.023	0.031	0.04	0.06	0.08	0.1	0.12	0.128	0.141	0.148	0.158
				RPM	8754	8488	7162	6048	5836	4974	4297	3979	3638	3183	3006	2785
				FEED	403	390	444	484	700	796	859	955	931	898	890	880
				Ap	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3

※ The FEED, in long & extra long types, should be reduced by around 50%