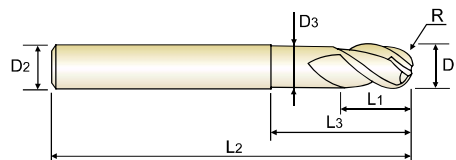
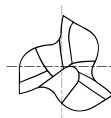


### CARBIDE, 3 FLUTE 40° HELIX BALL NOSE with NECK

● VOLLHARTMETALL, 3 SCHNEIDEN 40° RECHTSSPIRALE STIRNRADIUS mit ABGESETZTEM SCHAFTTETL  
 (●) Fraise carbure, 3 dents, hémisphérique, hélice 40°, détalonnée  
 (●) 3 TAGLIANTI, ELICA 40°, SEMISFERICA, SCARICATA

- ▶ Excellent cutting qualities on aluminum and copper
- ▶ Increased tool life and higher cutting accuracy
- ▶ Mirror surface - Excellent surface finish

- ▶ Ausgezeichnete Schneideigenschaften in Aluminium, Kupfer
- ▶ Verbesserte Standzeiten und höhere Fräsgenauigkeit.
- ▶ Spiegel-Oberfläche - Hervorragendes Oberflächenfinishing.



CARBIDE 3 40° ±0.02 PLAIN P.494

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R(±0.02)	D1	D2	L1	L3	L2	D3
E5908020	R1.0	2.0	6	3	5	60	1.9
E5908025	R1.25	2.5	6	4	6	60	2.4
E5908030	R1.5	3.0	6	4.5	6.5	60	2.8
E5908035	R1.75	3.5	6	5	7	65	3.2
E5908040	R2.0	4.0	6	6	8	65	3.7
E5908050	R2.5	5.0	6	7.5	10	65	4.6
E5908060	R3.0	6.0	6	9	12	75	5.6
E5908080	R4.0	8.0	8	12	25	75	7.4
E5908100	R5.0	10.0	10	15	30	80	9.4
E5908120	R6.0	12.0	12	18	36	90	11.4
E5908160	R8.0	16.0	16	24	40	100	15.4

▶ TiN, TiCN and TiAlN Coatings are available on your request.

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

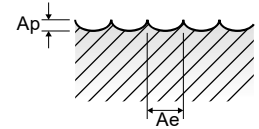
◎ : Excellent ○ : Good

ISO Material Description	P										M				K								
	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	42	21				
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230			
Recommend																							
ISO Material Description	N										S						H						
	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	60	100	75	90	130	110	90	100			15	30	25	38	34	55	60	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	◎	◎	◎	◎	◎	◎	◎	◎															

**E5910** SERIES 2 FLUTE BALL

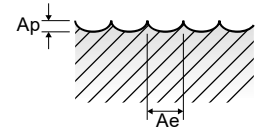
Vc = m/min.  
fz = mm/tooth  
RPM = rev./min.  
FEED = mm/min.

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Mill Diameter (Ø)					
						6.0	8.0	10.0	12.0	16.0	20.0
N	21~22	Aluminum-wrought alloy	0.2D	0.5D	Vc	270	280	350	420	440	350
					fz	0.049	0.071	0.084	0.107	0.123	0.157
					RPM	14324	11141	11141	11141	8754	5570
	23~24	Aluminum-cast, alloyed	0.2D	0.5D	Vc	176	182	228	273	286	228
					fz	0.049	0.071	0.084	0.107	0.123	0.157
					RPM	9311	7242	7242	7242	5690	3621
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.2D	0.5D	Vc	85	85	105	125	135	105
					fz	0.04	0.06	0.069	0.089	0.101	0.131
					RPM	4509	3382	3342	3316	2686	1671
FEED	361	406	461	590	543	438					



**E5908** SERIES 3 FLUTE BALL

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Mill Diameter (Ø)										
						2.0	2.5	3.0	3.5	4.0	5.0	6.0	8.0	10.0	12.0	16.0
N	21~22	Aluminum-wrought alloy	0.2D	0.5D	Vc	135	140	135	160	180	225	270	280	350	420	440
					fz	0.018	0.022	0.026	0.028	0.035	0.038	0.049	0.071	0.084	0.107	0.123
					RPM	21486	17825	14324	14551	14324	14324	14324	11141	11141	11141	8754
	23~24	Aluminum-cast, alloyed	0.2D	0.5D	Vc	88	91	88	104	117	146	176	182	228	273	286
					fz	0.018	0.022	0.026	0.028	0.035	0.038	0.049	0.071	0.084	0.107	0.123
					RPM	13966	11586	9311	9458	9311	9311	9311	7242	7242	7242	5690
	26-28	Copper and Copper Alloys (Bronze / Brass)	0.2D	0.5D	Vc	40	40	40	50	55	70	85	85	105	125	135
					fz	0.015	0.018	0.022	0.022	0.028	0.031	0.04	0.06	0.069	0.089	0.101
					RPM	6366	5093	4244	4547	4377	4456	4509	3382	3342	3316	2686
FEED	286	275	280	300	368	414	541	609	692	885	814					



**E5930** SERIES

2 FLUTE CORNER RADIUS - SLOTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Mill Diameter (Ø)									
						2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
N	21~22	Aluminum-wrought alloy	1.0D	0.5D	Vc	65	100	130	165	195	200	250	300	320	250
					fz	0.022	0.035	0.046	0.05	0.058	0.09	0.11	0.135	0.156	0.2
					RPM	10345	10610	10345	10504	10345	7958	7958	7958	6366	3979
	23~24	Aluminum-cast, alloyed	1.0D	0.5D	Vc	42	65	85	107	127	130	163	195	208	163
					fz	0.022	0.035	0.046	0.05	0.058	0.09	0.11	0.135	0.156	0.2
					RPM	6724	6897	6724	6828	6724	5173	5173	5173	4138	2586
FEED	296	483	619	683	780	931	1138	1397	1291	1035					

2 FLUTE CORNER RADIUS - SIDE CUTTING

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Mill Diameter (Ø)									
						2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0	20.0
N	21~22	Aluminum-wrought alloy	0.2~0.10-0.25D 0.12~0.20-0.5D	1.0D	Vc	65	100	130	165	195	200	250	300	320	250
					fz	0.039	0.046	0.054	0.065	0.077	0.115	0.135	0.170	0.194	0.250
					RPM	10345	10610	10345	10504	10345	7958	7958	7958	6366	3979
	23~24	Aluminum-cast, alloyed	0.2~0.10-0.25D 0.12~0.20-0.5D	1.0D	Vc	42	65	85	107	127	130	163	195	208	163
					fz	0.039	0.046	0.054	0.065	0.077	0.115	0.135	0.170	0.194	0.250
					RPM	6724	6897	6724	6828	6724	5173	5173	5173	4138	2586
FEED	524	634	726	888	1036	1190	1397	1759	1606	1293					

