



X5070 END MILLS

PLAIN SHANK

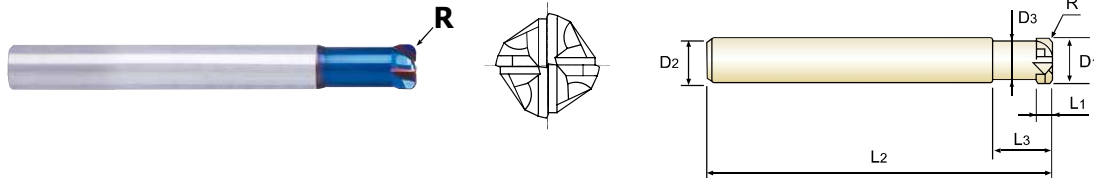
G8B59 SERIES

CARBIDE, 4 FLUTE STUB LENGTH CORNER RADIUS HIGH FEED

- VOLLHARTMETALL, 4 SCHNEIDEN EXTER KURZ ECKENRADIUS HOCHVORSCHUB
- Fraise carbure, 4 dents, torique, grande avance, extra-courte
- 4 TAGLIANTI, TORICA

- ▶ Excellent wear resistance at heavy feed rates on high hardened material.
- ▶ Designed with reduced clearance angles and short flutes for strength.
- ▶ High hardness & heat resistance coating for long life in dry applications.

- ▶ Hervorragende Verschleißigenschaften bei hohen Schnittwerten in gehärteten Materialien
- ▶ Mit reduzierten Freiwinkeln und kurzen Spannuten für hohe Festigkeiten konstruiert.
- ▶ Große Härte u. hitzebeständige Beschichtung für lange Lebensdauer bei Trockenbearbeitung



Unit : mm

EDP No.	Corner Radius	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
	R (±0.005)	D1	D2	L1	L3	L2	D3
G8B5902005	R0.5	2.0	6	1	6	50	1.8
G8B5903005	R0.5	3.0	6	1.2	8	50	2.8
G8B5904005	R0.5	4.0	6	1.5	10	50	3.8
G8B5906005	R0.5	6.0	6	2.5	12	60	5.4
G8B5906010	R1.0	6.0	6	2.5	12	60	5.4
G8B5908010	R1.0	8.0	8	3.5	16	60	7.2
G8B5908020	R2.0	8.0	8	3.5	16	60	7.2
G8B5910010	R1.0	10.0	10	4	20	70	9
G8B5910020	R2.0	10.0	10	4	20	70	9
G8B5912020	R2.0	12.0	12	5	25	80	11
G8B5912030	R3.0	12.0	12	5	25	80	11

Mill Dia. Tolerance (mm)	Corner Radius Tolerance (mm)	Shank Dia. Tolerance
0 ~ -0.02	± 0.005	h5

Due to the characteristics of the blue decoration layer, it might be erased during short term use and the color layer might not be uniformed. However, it doesn't affect the performance of the tool.

Comparison of the endteeth shape



High Feed End Mill

Normal End Mill

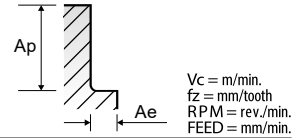


◎ : Excellent ○ : Good

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																					
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																					
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommend																◎	◎	○	◎		

G8B59, G8B54 SERIES

4 FLUTE CORNER RADIUS - SIDE CUTTING



HIGH SPEED

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)																																										
						2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0																																		
P	5	Non-alloy steel	0.3D	0.1R	Vc	180	205	215	235	255	250	250	250	250	fz	0.129	0.182	0.257	0.3	0.343	0.463	0.578	0.701	0.925	RPM	28648	21751	17109	14961	13528	9947	7958	6631	4974	FEED	14782	15835	17588	17953	18561	18422	18398	18595	18402				
					8-9	Low alloy steel	0.3D	0.1R	Vc	180	205	215	235	255	250	250	250	250	fz	0.129	0.182	0.257	0.3	0.343	0.463	0.578	0.701	0.925	RPM	28648	21751	17109	14961	13528	9947	7958	6631	4974	FEED	14782	15835	17588	17953	18561	18422	18398	18595	18402
									11.1	High alloyed steel, and tool steel	0.3D	0.1R	Vc	180	205	215	235	255	250	250	250	250	fz	0.129	0.182	0.257	0.3	0.343	0.463	0.578	0.701	0.925	RPM	28648	21751	17109	14961	13528	9947	7958	6631	4974	FEED	14782	15835	17588	17953	18561
	11.2	High alloyed steel, and tool steel	0.3D	0.1R									Vc	140	160	165	175	200	200	200	200	195	fz	0.111	0.147	0.231	0.284	0.329	0.438	0.547	0.66	0.897	RPM	22282	16977	13130	11141	10610	7958	6366	5305	3879	FEED	9893	9982	12132	12656	13963
					H	Hardened steel	0.3D	0.1R					Vc	140	160	165	175	200	200	200	200	195	fz	0.111	0.147	0.231	0.284	0.329	0.438	0.547	0.66	0.897	RPM	22282	16977	13130	11141	10610	7958	6366	5305	3879	FEED	9893	9982	12132	12656	13963
									0.3D	0.1R	Vc	95	200	140	155	170	170	170	170	165	fz	0.131	0.16	0.209	0.25	0.306	0.404	0.509	0.611	0.833	RPM	15120	21221	11141	9868	9019	6764	5411	4509	3283	FEED	7923	13581	9314	9868	11039	10931	11017
	0.3D	0.05R	Vc	70							90	100	110	120	120	120	120	120	fz	0.101	0.121	0.172	0.214	0.25	0.349	0.447	0.547	0.729	RPM	11141	9549	7958	7003	6366	4775	3820	3183	2387	FEED	4501	4622	5475	5994	6366	6665	6830	6965	6961
			0.3D	0.05R			Vc	55			65	70	75	85	85	85	85	85	fz	0.07	0.091	0.129	0.158	0.2	0.301	0.352	0.4	0.5	RPM	8754	6897	5570	4775	4509	3382	2706	2255	1691	FEED	2451	2510	2874	3018	3608	4072	3810	3608	3382
							0.3D	0.1R	Vc	140	160	165	175	200	200	200	200	195	fz	0.111	0.147	0.231	0.284	0.329	0.438	0.547	0.66	0.897	RPM	22282	16977	13130	11141	10610	7958	6366	5305	3879	FEED	9893	9982	12132	12656	13963	13942	13929	14006	13919
	0.3D	0.1R							Vc	95	200	140	155	170	170	170	170	165	fz	0.131	0.16	0.209	0.25	0.306	0.404	0.509	0.611	0.833	RPM	15120	21221	11141	9868	9019	6764	5411	4509	3283	FEED	7923	13581	9314	9868	11039	10931	11017	11021	10938

NORMAL SPEED

ISO	VDI 3323	Material Description	Ae	Ap	Parameter	Diameter (Ø)																																										
						2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	16.0																																		
P	5	Non-alloy steel	0.5D	0.2R	Vc	85	90	100	100	110	110	110	110	110	fz	0.12	0.17	0.22	0.281	0.33	0.44	0.546	0.659	0.869	RPM	13528	9549	7958	6366	5836	4377	3501	2918	2188	FEED	6494	6494	7003	7156	7703	7703	7647	7691	7607				
					8-9	Low alloy steel	0.5D	0.2R	Vc	85	90	100	100	110	110	110	110	110	fz	0.12	0.17	0.22	0.281	0.33	0.44	0.546	0.659	0.869	RPM	13528	9549	7958	6366	5836	4377	3501	2918	2188	FEED	6494	6494	7003	7156	7703	7703	7647	7691	7607
									11.1	High alloyed steel, and tool steel	0.5D	0.2R	Vc	85	90	100	100	110	110	110	110	110	fz	0.12	0.17	0.22	0.281	0.33	0.44	0.546	0.659	0.869	RPM	13528	9549	7958	6366	5836	4377	3501	2918	2188	FEED	6494	6494	7003	7156	7703
	11.2	High alloyed steel, and tool steel	0.5D	0.2R									Vc	60	65	70	75	75	75	75	75	80	fz	0.099	0.15	0.2	0.25	0.299	0.402	0.5	0.598	0.79	RPM	9549	6897	5570	4775	3979	2984	2387	1989	1592	FEED	3782	4138	4456	4775	4759
					H	Hardened steel	0.5D	0.2R					Vc	60	65	70	75	75	75	75	75	80	fz	0.099	0.15	0.2	0.25	0.299	0.402	0.5	0.598	0.79	RPM	9549	6897	5570	4775	3979	2984	2387	1989	1592	FEED	3782	4138	4456	4775	4759
									0.5D	0.2R	Vc	35	45	50	55	55	55	55	55	55	fz	0.1	0.151	0.2	0.235	0.302	0.398	0.5	0.603	0.795	RPM	5570	4775	3979	3501	2918	2188	1751	1459	1094	FEED	2228	2884	3183	3291	3525	3484	3501
	0.5D	0.1R	Vc	20							25	30	35	35	35	35	35	35	fz	0.078	0.101	0.132	0.182	0.25	0.33	0.42	0.5	0.661	RPM	3183	2653	2387	2228	1857	1393	1114	928	696	FEED	993	1072	1261	1622	1857	1838	1872	1857	1841
			0.5D	0.1R			Vc	15			20	20	25	25	25	25	25	25	fz	0.063	0.08	0.1	0.117	0.147	0.2	0.25	0.299	0.398	RPM	2387	2122	1592	1592	1326	995	796	663	497	FEED	602	679	637	745	780	796	796	793	792
							0.5D	0.2R	Vc	60	65	70	75	75	75	75	75	80	fz	0.099	0.15	0.2	0.25	0.299	0.402	0.5	0.598	0.79	RPM	9549	6897	5570	4775	3979	2984	2387	1989	1592	FEED	3782	4138	4456	4775	4759	4799	4775	4759	5029
	0.5D	0.2R							Vc	35	45	50	55	55	55	55	55	55	fz	0.1	0.151	0.2	0.235	0.302	0.398	0.5	0.603	0.795	RPM	5570	4775	3979	3501	2918	2188	1751	1459	1094	FEED	2228	2884	3183	3291	3525	3484	3501	3519	3480