

HIGH PERFORMANCE 4 FLUTE (INCH)

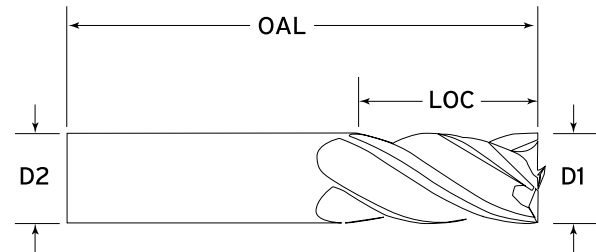


Patented variable flute and index design which reduces chatter and vibration. Radius corners for stronger edges and part radius. Recommended for aggressive machining applications in all materials including, stainless, inconel, titanium, tool steels and hardened materials. Should be run at specific parameters. See "Speeds and Feeds" calculator at www.gorillamill.com or refer to "Speeds and Feeds" chart at the end of this section. Produced with the highest Transverse Rupture Strength (TRS) nano-grain carbide substrate available.

Available in special diameters, lengths and completely resharpenable.

MATERIALS

Gray Cast Iron	4140 Pre-Hard (38 to 42 Rc)	Difficult Stainless Steel, (400 & PH Series)	Inco 718
Ductile Iron	Tool Steels (A2,D2,S7)	Stainless Steel (13-8)	Inco 625
Soft Steels, (A36,1018, 8620,1045)	Die Steels, (H13,P20)	High Temp. Alloys	
Alloy Steels, (4340,4140)	Stainless Steel, (303, 304, 316)	Titanium (6AL4V)	



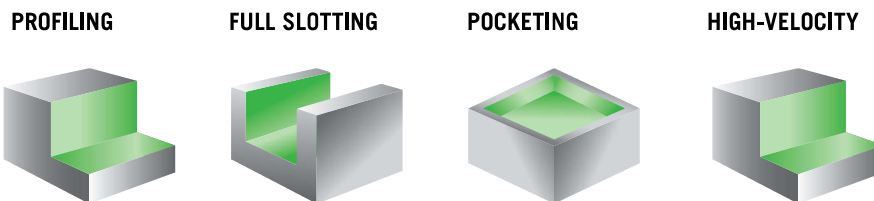
GMX-35 COATED

SPEEDS & FEEDS CHART PAGE 25

D1 Cutting Dia.	D2 Shank Dia.	LOC	OAL	Sq. End WF= Weldon Flat	Corner Radius (Inch) WF=Weldon Flat							Ballnose WF= Weldon Flat
					0.015	0.030	0.060	0.090	0.120	0.190	0.250	
1/8	1/8	1/4	1-1/2	GM18FS4 EDP: 10309	GM18RS4015 EDP: 10319	GM18RS4030 EDP: 10320	—	—	—	—	—	—
	1/8	1/2	1-1/2	GM18F4 EDP: 10305	GM18R4015 EDP: 10311	GM18R4030 EDP: 10312	—	—	—	—	—	GM18B4 EDP: 10304
	1/8	1.0	3.0	GM18FL4 EDP: 10307	GM18RL4015 EDP: 10315	GM18RL4030 EDP: 10316	—	—	—	—	—	—
5/32	3/16	1/2	2.0	GM532F4 EDP: 10535	GM532R4015 EDP: 10536	GM532R4030 EDP: 10537	—	—	—	—	—	GM532B4 EDP: 10534
3/16	3/16	3/8	2.0	GM316FS4 EDP: 10348	GM316RS4015 EDP: 10358	GM316RS4030 EDP: 10359	—	—	—	—	—	—
	3/16	5/8	2.0	GM316F4 EDP: 10344	GM316R4015 EDP: 10350	GM316R4030 EDP: 10351	—	—	—	—	—	GM316B4 EDP: 10343
	3/16	1-1/4	3.0	GM316FL4 EDP: 10346	GM316RL4015 EDP: 10354	GM316RL4030 EDP: 10355	—	—	—	—	—	—

PATENT NO. 7,367,754

Continued on
next page



TOLERANCES
Cut Dia +.000/-0.002
Shank Dia -.0001/-0.0005
LOC +.025/+0.050
OAL +/-0.050

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4 FLUTE

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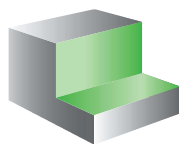
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					0.015	0.030	0.060	0.090	0.120	0.190	0.250	
1/4	1/4	1/2	2.0	GM14FS4 EDP: 10252	GM14RS4015 EDP: 10270	GM14RS4030 EDP: 10271	GM14RS4060 EDP: 10272	—	—	—	—	—
	1/4	3/4	2-1/2	GM14F4 EDP: 10248	GM14R4015 EDP: 10258	GM14R4030 EDP: 10259	GM14R4060 EDP: 10260	—	—	—	—	GM14B4 EDP: 10247
	1/4	1-1/4	3.0	GM14FL4 EDP: 10250	GM14RL4015 EDP: 10264	GM14RL4030 EDP: 10265	GM14RL4060 EDP: 10266	—	—	—	—	—
	1/4	1-1/2	4.0	GM14FXL4 EDP: 10256	GM14RXL4015 EDP: 10282	GM14RXL4030 EDP: 10283	GM14RXL4060 EDP: 10284	—	—	—	—	—
	1/4	3.0	6.0	GM14FSL4 EDP: 10254	GM14RSL4015 EDP: 10276	GM14RSL4030 EDP: 10277	GM14RSL4060 EDP: 10278	—	—	—	—	—
5/16	5/16	1/2	2.0	GM516FS4 EDP: 10506	GM516RS4015 EDP: 10522	GM516RS4030 EDP: 10523	GM516RS4060 EDP: 10524	—	—	—	—	—
	5/16	7/8	2-1/2	GM516F4 EDP: 10502	GM516R4015 EDP: 10510	GM516R4030 EDP: 10511	GM516R4060 EDP: 10512	—	—	—	—	GM516B4 EDP: 10501
	5/16	1-1/4	3.0	GM516FL4 EDP: 10504	GM516RL4015 EDP: 10516	GM516RL4030 EDP: 10517	GM516RL4060 EDP: 10518	—	—	—	—	—
	5/16	1-1/2	4.0	GM516FXL4 EDP: 10508	GM516RXL4015 EDP: 10528	GM516RXL4030 EDP: 10529	GM516RXL4060 EDP: 10530	—	—	—	—	—
3/8	3/8	5/8	2.0	GM38FS4 EDP: 10460	GM38RS4015 EDP: 10480	GM38RS4030 EDP: 10481	GM38RS4060 EDP: 10482	GM38RS4090 EDP: 10483	—	—	—	—
	3/8	7/8	2-1/2	GM38F4 EDP: 10456	GM38R4015 EDP: 10466	GM38R4030 EDP: 10467	GM38R4060 EDP: 10468	GM38R4090 EDP: 10469	—	—	—	GM38B4 EDP: 10455
	3/8	1-1/4	3.0	GM38FL4 EDP: 10458	GM38RL4015 EDP: 10473	GM38RL4030 EDP: 10474	GM38RL4060 EDP: 10475	GM38RL4090 EDP: 10476	—	—	—	—
	3/8	2.0	4.0	GM38FXL4 EDP: 10464	GM38RXL4015 EDP: 10494	GM38RXL4030 EDP: 10495	GM38RXL4060 EDP: 10496	GM38RXL4090 EDP: 10497	—	—	—	—
	3/8	3.0	6.0	GM38FSL4 EDP: 10462	GM38RSL4015 EDP: 10487	GM38RSL4030 EDP: 10488	GM38RSL4060 EDP: 10489	GM38RSL4090 EDP: 10490	—	—	—	—

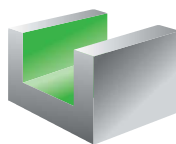
PATENT NO. 7,367,754

TOLERANCES
Cut Dia +.000/- .002
Shank Dia -.0001/- .0005
LOC +.025/+ .050
OAL +/- .050

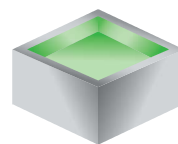
PROFILING



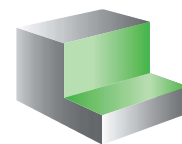
FULL SLOTTING



POCKETING



HIGH-VELOCITY



MATERIALS



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					0.015	0.030	0.060	0.090	0.120	0.190		0.250
7/16	7/16	5/8	2-1/2	GM716FS4 EDP: 10595	GM716RS4015 EDP: 10609	GM716RS4030 EDP: 10611	GM716RS4060 EDP: 10613	GM716RS4090 EDP: 10615	—	—	—	
				GM716FS4WF EDP: 10596	GM716RS4015WF EDP: 10610	GM716RS4030WF EDP: 10612	GM716RS4060WF EDP: 10614	GM716RS4090WF EDP: 10616				
7/16	7/16	1.0	2-1/2	GM716F4 EDP: 10592	GM716R4015 EDP: 10598	GM716R4030 EDP: 10600	GM716R4060 EDP: 10602	GM716R4090 EDP: 10604	—	—	GM716B4 EDP: 10590	
				GM716F4WF EDP: 10593	GM716R4015WF EDP: 10599	GM716R4030WF EDP: 10601	GM716R4060WF EDP: 10603	GM716R4090WF EDP: 10605			GM716B4WF EDP: 10591	
1/2	1/2	5/8	2-1/2	GM12FS4 EDP: 10165	GM12RS4015 EDP: 10212	GM12RS4030 EDP: 10214	GM12RS4060 EDP: 10216	GM12RS4090 EDP: 10218	GM12RS4120 EDP: 10220	—	—	
				GM12FS4WF EDP: 10166	GM12RS4015WF EDP: 10213	GM12RS4030WF EDP: 10215	GM12RS4060WF EDP: 10217	GM12RS4090WF EDP: 10219	GM12RS4120WF EDP: 10221			
	1/2	1.0	3.0	GM12FH4 EDP: 10160	GM12RH4015 EDP: 10187	GM12RH4030 EDP: 10189	GM12RH4060 EDP: 10191	GM12RH4090 EDP: 10193	GM12RH4120 EDP: 10195	—	—	
				GM12FH4WF EDP: 10161	GM12RH4015WF EDP: 10188	GM12RH4030WF EDP: 10190	GM12RH4060WF EDP: 10192	GM12RH4090WF EDP: 10194	GM12RH4120WF EDP: 10196			
	1/2	1-1/4	3.0	GM12F4 EDP: 10157	GM12R4015 EDP: 10172	GM12R4030 EDP: 10174	GM12R4060 EDP: 10176	GM12R4090 EDP: 10178	GM12R4120 EDP: 10180	—	—	GM12B4 EDP: 10155
				GM12F4WF EDP: 10158	GM12R4015WF EDP: 10173	GM12R4030WF EDP: 10175	GM12R4060WF EDP: 10177	GM12R4090WF EDP: 10179	GM12R4120WF EDP: 10181			GM12B4WF EDP: 10156
	1/2	1-1/2	4.0	GM12FL4 EDP: 10163	GM12RL4015 EDP: 10202	GM12RL4030 EDP: 10203	GM12RL4060 EDP: 10204	GM12RL4090 EDP: 10205	GM12RL4120 EDP: 10206	—	—	—
1/2	2.0	4.0	GM12FXL4 EDP: 10170	GM12RXL4015 EDP: 10237	GM12RXL4030 EDP: 10238	GM12RXL4060 EDP: 10239	GM12RXL4090 EDP: 10240	GM12RXL4120 EDP: 10241	—	—	—	
1/2	3.0	6.0	GM12FSL4 EDP: 10168	GM12RSL4015 EDP: 10227	GM12RSL4030 EDP: 10228	GM12RSL4060 EDP: 10229	GM12RSL4090 EDP: 10230	GM12RSL4120 EDP: 10231	—	—	—	
5/8	5/8	3/4	3-1/2	GM58FS4 EDP: 10545	—	GM58RS4030 EDP: 10570	GM58RS4060 EDP: 10572	GM58RS4090 EDP: 10574	GM58RS4120 EDP: 10576	—	—	
				GM58FS4WF EDP: 10546		GM58RS4030WF EDP: 10571	GM58RS4060WF EDP: 10573	GM58RS4090WF EDP: 10575	GM58RS4120WF EDP: 10577			
	5/8	1-1/4	3-1/2	GM58F4 EDP: 10540	—	GM58R4030 EDP: 10550	GM58R4060 EDP: 10552	GM58R4090 EDP: 10554	GM58R4120 EDP: 10556	—	—	
				GM58F4WF EDP: 10541		GM58R4030WF EDP: 10551	GM58R4060WF EDP: 10553	GM58R4090WF EDP: 10555	GM58R4120WF EDP: 10557			GM58B4 EDP: 10538
5/8	2.0	4.0	GM58FL4 EDP: 10543	—	GM58R4030 EDP: 10562	GM58R4060 EDP: 10563	GM58R4090 EDP: 10564	GM58R4120 EDP: 10565	—	—		
5/8	3.0	6.0	GM58FXL4 EDP: 10548	—	GM58RXL4030 EDP: 10582	GM58RXL4060 EDP: 10583	GM58RXL4090 EDP: 10584	GM58RXL4120 EDP: 10585	—	—	—	

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Continued on next page

4 FLUTE

WELDON FLAT



HIGH PERFORMANCE 4 FLUTE (INCH)



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					0.015	0.030	0.060	0.090	0.120	0.190		0.250
3/4	3/4	1.0	4.0	GM34FS4 EDP: 10370	—	GM34RS4030 EDP: 10413	GM34RS4060 EDP: 10415	GM34RS4090 EDP: 10417	GM34RS4120 EDP: 10419	GM34RS4190 EDP: 10421	GM34RS4250 EDP: 10423	—
				GM34FS4WF EDP: 10371		GM34RS4030WF EDP: 10414	GM34RS4060WF EDP: 10416	GM34RS4090WF EDP: 10418	GM34RS4120WF EDP: 10420	GM34RS4190WF EDP: 10422	GM34RS4250WF EDP: 10424	
	3/4	1-1/2	4.0	GM34F4 EDP: 10364	—	GM34R4030 EDP: 10377	GM34R4060 EDP: 10379	GM34R4090 EDP: 10381	GM34R4120 EDP: 10383	GM34R4190 EDP: 10385	GM34R4250 EDP: 10387	GM34B4 EDP: 10362
				GM34F4WF EDP: 10365		GM34R4030WF EDP: 10378	GM34R4060WF EDP: 10380	GM34R4090WF EDP: 10382	GM34R4120WF EDP: 10384	GM34R4190WF EDP: 10386	GM34R4250WF EDP: 10388	GM34B4WF EDP: 10363
	3/4	2.0	4.0	GM34FL4 EDP: 10367	—	GM34RL4030 EDP: 10395	GM34RL4060 EDP: 10396	GM34RL4090 EDP: 10397	GM34RL4120 EDP: 10398	GM34RL4190 EDP: 10399	GM34RL4250 EDP: 10400	—
				GM34FLH4 EDP: 10369		GM34RLH4030 EDP: 10407	GM34RLH4060 EDP: 10408	GM34RLH4090 EDP: 10409	GM34RLH4120 EDP: 10410	GM34RLH4190 EDP: 10411	GM34RLH4250 EDP: 10412	—
3/4	3.0	6.0	GM34FXL4 EDP: 10375	—	GM34RXL4030 EDP: 10443	GM34RXL4060 EDP: 10444	GM34RXL4090 EDP: 10445	GM34RXL4120 EDP: 10446	GM34RXL4190 EDP: 10447	GM34RXL4250 EDP: 10448	—	
			GM34FSL4 EDP: 10373		GM34RSL4030 EDP: 10431	GM34RSL4060 EDP: 10432	GM34RSL4090 EDP: 10433	GM34RSL4120 EDP: 10434	GM34RSL4190 EDP: 10435	GM34RSL4250 EDP: 10436	—	
1.0	1.0	1.0	GM10FS4 EDP: 10050	—	GM10RS4030 EDP: 10093	GM10RS4060 EDP: 10095	GM10RS4090 EDP: 10097	GM10RS4120 EDP: 10099	GM10RS4190 EDP: 10101	GM10RS4250 EDP: 10103	—	
			GM10FS4WF EDP: 10051		GM10RS4030WF EDP: 10094	GM10RS4060WF EDP: 10096	GM10RS4090WF EDP: 10098	GM10RS4120WF EDP: 10100	GM10RS4190WF EDP: 10102	GM10RS4250WF EDP: 10104		
	1.0	1-1/2	4.0	GM10F4 EDP: 10044	—	GM10R4030 EDP: 10057	GM10R4060 EDP: 10059	GM10R4090 EDP: 10061	GM10R4120 EDP: 10063	GM10R4190 EDP: 10065	GM10R4250 EDP: 10067	GM10B4 EDP: 10042
				GM10F4WF EDP: 10045		GM10R4030WF EDP: 10058	GM10R4060WF EDP: 10060	GM10R4090WF EDP: 10062	GM10R4120WF EDP: 10064	GM10R4190WF EDP: 10066	GM10R4250WF EDP: 10068	GM10B4WF EDP: 10043
	1.0	2.0	4.0	GM10FL4 EDP: 10047	—	GM10RL4030 EDP: 10075	GM10RL4060 EDP: 10076	GM10RL4090 EDP: 10077	GM10RL4120 EDP: 10078	GM10RL4190 EDP: 10079	GM10RL4250 EDP: 10080	—
				GM10FLH4 EDP: 10049		GM10RLH4030 EDP: 10087	GM10RLH4060 EDP: 10088	GM10RLH4090 EDP: 10089	GM10RLH4120 EDP: 10090	GM10RLH4190 EDP: 10091	GM10RLH4250 EDP: 10092	—
1.0	3.0	6.0	GM10FXL4 EDP: 10055	—	GM10RXL4030 EDP: 10123	GM10RXL4060 EDP: 10124	GM10RXL4090 EDP: 10125	GM10RXL4120 EDP: 10126	GM10RXL4190 EDP: 10127	GM10RXL4250 EDP: 10128	—	
			GM10FSL4 EDP: 10053		GM10RSL4030 EDP: 10111	GM10RSL4060 EDP: 10112	GM10RSL4090 EDP: 10113	GM10RSL4120 EDP: 10114	GM10RSL4190 EDP: 10115	GM10RSL4250 EDP: 10116	—	

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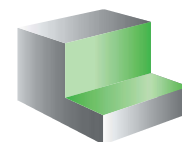
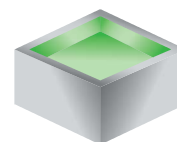
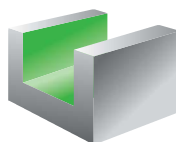
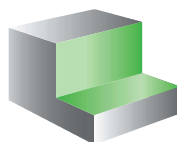
PROFILING

FULL SLOTTING

POCKETING

HIGH-VELOCITY

TOLERANCES
Cut Dia +.000/- .002
Shank Dia -.0001/- .0005
LOC +.025/+ .050
OAL +/- .050



MATERIALS

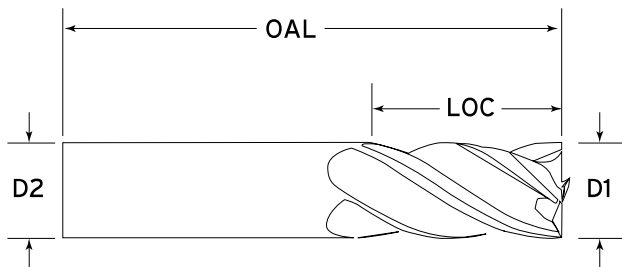


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Ductile Iron	Tool Steels (A2,D2,S7)	Stainless Steel (13-8)	Inco 625
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Alloy Steels, (4340,4140)	Stainless Steel, (303, 304, 316)	Titanium (6AL4V)	

4 FLUTE (INCH) COATED SPEEDS & FEEDS CHART. 1X DIAMETER DEEP, FULL SLOTTING

WORK PIECE MATERIAL	SFM	1/8"		3/16"		1/4"		5/16"		3/8"		7/16"		1/2"		5/8"		3/4"		1"	
		RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM
Gray Cast Iron	600	18,336	58.6	12,224	48.8	9,168	43.9	7,334	43.9	6,112	41.5	5,238	46.1	4,584	45.8	3,667	44.1	3,056	42.7	2,292	36.7
Ductile Iron	500	15,280	24.2	10,186	24.5	7,640	27.4	6,112	29.3	5,093	33.1	4,365	36.8	3,820	35.1	3,056	36.8	2,546	35.3	1,910	32.4
Soft Steels, (A36,1018, 8620,1045)	650	19,864	39.7	13,246	37.1	9,932	39.7	7,945	41.2	6,621	39.7	5,675	40.8	4,966	41.7	3,972	42.9	3,310	42.4	2,483	39.7
Alloy Steels, (4340,4140)	400	12,224	19.5	8,149	19.5	6,112	24.4	4,890	29.3	4,074	29.3	3,492	28.1	3,056	29.3	2,444	27.3	2,037	27.6	1,528	24.4
4140 Pre-Hard (38 to 42 Rc)	300	9,168	10.9	6,112	12.2	4,854	15.5	3,667	14.6	3,056	17.1	2,619	18.8	2,292	18.3	1,833	18.3	1,528	18.3	1,146	16.1
Tool Steels (A2,D2,S7)	300	9,168	14.7	6,112	14.6	4,584	14.7	3,667	17.5	3,056	19.6	2,619	20.8	2,292	20.2	1,833	19.1	1,528	18.2	1,146	16.5
Die Steels, (H13,P20)	325	9,932	15.8	6,621	15.8	4,966	21.8	3,972	23.8	3,310	26.4	2,837	26.1	2,483	24.8	1,986	22.2	1,655	22.5	1,241	19.9
Stainless Steel, (303, 304, 316)	350	10,696	17.1	7,130	17.1	5,348	17.1	4,278	20.4	3,565	22.7	3,056	23.2	2,674	23.5	2,139	22.2	1,782	22.7	1,338	19.8
Difficult Stainless Steel, (400 & PH Series)	300	9,168	14.6	6,112	12.2	4,584	12.8	3,667	16.1	3,056	13.8	2,619	17.8	2,292	18.4	1,833	18.4	1,528	18.4	1,146	16.1
Stainless Steel (13-8)	150	4,584	7.3	3,056	6.1	2,292	6.4	1,833	7.3	1,528	7.9	1,309	9.4	1,146	11.9	916	10.2	764	10.1	573	9.3
High Temp. Alloys	250	7,640	12.2	5,093	10.1	3,820	10.6	3,056	13.4	2,546	14.3	2,182	14.1	1,910	14.5	1,528	13.4	1,273	14.3	955	12.7
Titanium (6AL4V)	200	6,112	9.7	4,074	8.1	3,056	8.1	2,444	11.7	2,037	13.1	1,746	13.2	1,528	14.1	1,222	13.3	1,018	13.1	764	12.3
Inco 718	155	4,736	7.5	3,157	6.3	2,368	6.6	1,894	7.6	1,578	8.2	1,353	9.7	1,184	9.5	947	8.7	790	9.5	592	8.3
Inco 625	135	4,125	6.6	2,750	5.5	2,062	5.8	1,650	6.6	1,375	7.1	1,178	8.5	1,031	8.6	825	8.6	687	9.1	515	8.3

*Recommended Speeds & Feeds



HIGH PERFORMANCE 4 FLUTE (METRIC)



Patented variable flute and index design which reduces chatter and vibration. Radius corners for stronger edges and part radius. Recommended for aggressive machining applications in all materials including, stainless, inconel, titanium, tool steels and hardened materials. Should be run at specific parameters. See "Speeds and Feeds" calculator at www.gorillamill.com or refer to "Speeds and Feeds" chart at the end of this section. Produced with the highest Transverse Rupture Strength (TRS) nano-grain carbide substrate available.

Available in special diameters, lengths and completely resharpenable.

GMX-35 COATED

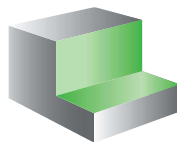
SPEEDS & FEEDS CHART PAGE 28/29

D1 Cutting Dia.	D2 Shank Dia.	LOC	OAL	Sq. End WF= Weldon Flat	Corner Radius (Metric) WF=Weldon Flat						Ballnose
					0.20mm	0.30mm	0.50mm	1.0mm	1.5mm	2.0mm	
3mm	3mm	8mm	38mm	GM0300MMFS4 EDP: 10002	GM0300MMRS4020 EDP: 10005	—	—	—	—	—	—
	3mm	12mm	38mm	GM0300MMF4 EDP: 10001	GM0300MMR4020 EDP: 10003	—	GM0300MMR4050 EDP: 10004	—	—	—	GM0300MMB4 EDP: 10000
4mm	6mm	8mm	50mm	—	—	GM0400MMRS4030 EDP: 10010	—	—	—	—	—
	6mm	12mm	50mm	GM0400MMF4 EDP: 10007	—	GM0400MMR4030 EDP: 10008	GM0400MMR4050 EDP: 10009	—	—	—	GM0400MMB4 EDP: 10006
5mm	6mm	10mm	50mm	—	—	GM0500MMRS4030 EDP: 10015	—	—	—	—	—
	6mm	15mm	65mm	GM0500MMF4 EDP: 10012	—	GM0500MMR4030 EDP: 10013	GM0500MMR4050 EDP: 10014	—	—	—	GM0500MMB4 EDP: 10011
6mm	6mm	12mm	50mm	GM0600MMFS4 EDP: 10018	—	GM0600MMRS4030 EDP: 10021	—	—	—	—	—
	6mm	19mm	65mm	GM0600MMF4 EDP: 10017	—	GM0600MMR4030 EDP: 10019	GM0600MMR4050 EDP: 10020	—	—	—	GM0600MMB4 EDP: 10016
8mm	8mm	12mm	50mm	GM0800MMFS4 EDP: 10024	—	—	GM0800MMRS4050 EDP: 10029	—	—	—	—
	8mm	22mm	65mm	GM0800MMF4 EDP: 10023	—	GM0800MMR4030 EDP: 10025	GM0800MMR4050 EDP: 10026	GM0800MMR4100 EDP: 10027	GM0800MMR4150 EDP: 10028	—	GM0800MMB4 EDP: 10022
10mm	10mm	16mm	50mm	—	—	—	GM1000MMRS4050 EDP: 10040 GM1000MMRS4050WF EDP: 10041	—	—	—	—
	10mm	22mm	70mm	GM1000MMF4 EDP: 10032 GM1000MMF4WF EDP: 10033	—	GM1000MMR4030 EDP: 10034 GM1000MMR4030WF EDP: 10035	GM1000MMR4050 EDP: 10036 GM1000MMR4050WF EDP: 10037	GM1000MMR4100 EDP: 10038 GM1000MMR4100WF EDP: 10039	—	—	GM1000MMB4 EDP: 10030 GM1000MMB4WF EDP: 10031

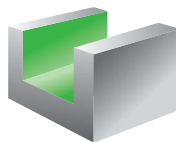
PATENT NO. 7,367,754

TOLERANCES
Cut Dia +.000/- .050mm
Shank Dia -.0025/- .0127mm
LOC +.635/+1.270mm
OAL +/-1.270mm

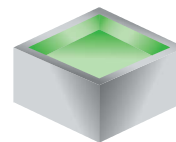
PROFILING



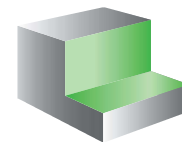
FULL SLOTTING



POCKETING



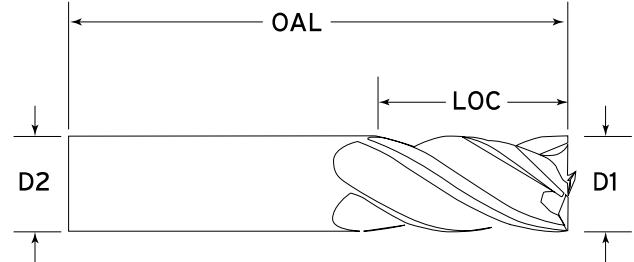
HIGH-VELOCITY



MATERIALS



Gray Cast Iron	4140 Pre-Hard (38 to 42 Rc)	Difficult Stainless Steel, (400 & PH Series)	Inco 718
Ductile Iron	Tool Steels (A2,D2,S7)	Stainless Steel (13-8)	Inco 625
Soft Steels, (A36,1018, 8620,1045)	Die Steels, (H13,P20)	High Temp. Alloys	
Alloy Steels, (4340,4140)	Stainless Steel, (303, 304, 316)	Titanium (6AL4V)	



4 FLUTE

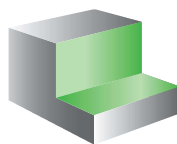
SPEEDS & FEEDS CHART PAGE 28/29

D1 Cutting Dia.	D2 Shank Dia.	LOC	OAL	Sq. End WF= Weldon Flat	Corner Radius (Metric) WF=Weldon Flat						Ballnose
					0.20mm	0.30mm	0.50mm	1.0mm	1.5mm	2.0mm	
12mm	12mm	19mm	63mm	GM1200MMFS4 EDP: 10139 GM1200MMFS4WF EDP: 10140	—	GM1200MMRS4030 EDP: 10151 GM1200MMRS4030WF EDP: 10152	GM1200MMRS4050 EDP: 10153 GM1200MMRS4050WF EDP: 10154	—	—	—	—
	12mm	32mm	75mm	GM1200MMF4 EDP: 10137 GM1200MMF4WF EDP: 10138	—	GM1200MMR4030 EDP: 10141 GM1200MMR4030WF EDP: 10142	GM1200MMR4050 EDP: 10143 GM1200MMR4050WF EDP: 10144	GM1200MMR4100 EDP: 10145 GM1200MMR4100WF EDP: 10146	GM1200MMR4150 EDP: 10147 GM1200MMR4150WF EDP: 10148	GM1200MMR4200 EDP: 10149 GM1200MMR4200WF EDP: 10150	GM1200MMB4 EDP: 10135 GM1200MMB4WF EDP: 10136
16mm	16mm	19mm	75mm	—	—	GM1600MMRS4030 EDP: 10300 GM1600MMRS4030WF EDP: 10301	GM1600MMRS4050 EDP: 10302 GM1600MMRS4050WF EDP: 10303	—	—	—	—
	16mm	32mm	89mm	GM1600MMF4 EDP: 10290 GM1600MMF4WF EDP: 10291	—	GM1600MMR4030 EDP: 10292 GM1600MMR4030WF EDP: 10293	GM1600MMR4050 EDP: 10294 GM1600MMR4050WF EDP: 10295	GM1600MMR4100 EDP: 10296 GM1600MMR4100WF EDP: 10297	—	GM1600MMR4200 EDP: 10298 GM1600MMR4200WF EDP: 10299	GM1600MMB4 EDP: 10288 GM1600MMB4WF EDP: 10289
20mm	20mm	22mm	75mm	—	—	—	—	GM2000MMRS4100 EDP: 10333 GM2000MMRS4100WF EDP: 10334	—	—	—
	20mm	38mm	100mm	GM2000MMF4 EDP: 10325 GM2000MMF4WF EDP: 10326	—	—	GM2000MMR4050 EDP: 10327 GM2000MMR4050WF EDP: 10328	GM2000MMR4100 EDP: 10329 GM2000MMR4100WF EDP: 10330	GM2000MMR4150 EDP: 10331 GM2000MMR4150WF EDP: 10332	—	GM2000MMB4 EDP: 10323 GM2000MMB4WF EDP: 10324
25mm	25mm	38mm	100mm	GM2500MMF4 EDP: 10337 GM2500MMF4WF EDP: 10338	—	—	—	GM2500MMR4100 EDP: 10339 GM2500MMR4100WF EDP: 10340	GM2500MMR4150 EDP: 10341 GM2500MMR4150WF EDP: 10342	—	GM2500MMB4 EDP: 10335 GM2500MMB4WF EDP: 10336

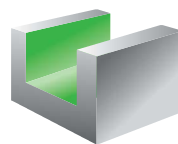
PATENT NO. 7,367,754

TOLERANCES
Cut Dia +.000/-.050mm
Shank Dia -.0025/-.0127mm
LOC +.635/+1.270mm
OAL +/-1.270mm

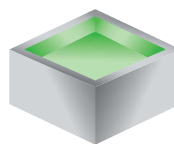
PROFILING



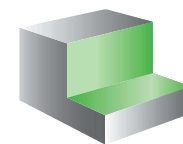
FULL SLOTTING



POCKETING



HIGH-VELOCITY



HIGH PERFORMANCE 4 FLUTE (METRIC)



Patented variable flute and index design which reduces chatter and vibration. Radius corners for stronger edges and part radius. Recommended for aggressive machining applications in all materials including, stainless, inconel, titanium, tool steels and hardened materials. Should be run at specific parameters. See "Speeds and Feeds" calculator at www.gorillamill.com or refer Speeds and Feeds chart at the end of this section. Produced with the highest Transverse Rupture Strength (TRS) nano-grain carbide substrate available.

Available in special diameters, lengths and completely resharpenable.

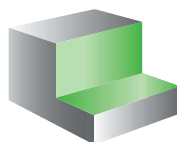
4 FLUTE (METRIC) COATED SPEEDS & FEEDS CHART. 1X DIAMETER DEEP, FULL SLOTTING, METRIC CHIMP LOAD PER TOOTH

WORK PIECE MATERIAL	SFM	3 MM		4 MM		5 MM		6 MM		8 MM		10 MM	
		RPM	MMPT	RPM	MMPT	RPM	MMPT	RPM	MMPT	RPM	MMPT	RPM	MMPT
Gray Cast Iron	600	19,405	.0200	14,554	.0220	11,643	.0250	9,702	.0300	7,277	.0380	5,821	.0440
Ductile Iron	500	16,171	.0100	12,128	.0120	9,702	.0150	8,085	.0220	6,064	.0300	4,851	.0450
Soft Steels, (A36, 1018, 8620, 1045)	650	21,022	.0120	15,767	.0150	12,613	.0170	9,702	.0250	7,883	.0330	6,306	.0390
Alloy Steels, (4340, 4140)	400	12,937	.0100	9,702	.0120	7,762	.0150	6,468	.0250	4,851	.0380	3,881	.0450
4140 Pre-Hard (38 to 42 Rc)	300	9,702	.0070	7,277	.0100	5,821	.0120	4,851	.0200	3,638	.0250	2,910	.0350
Tool Steels (A2, D2, S7)	300	9,702	.0100	7,277	.0120	5,821	.0150	4,851	.0200	3,638	.0300	2,910	.0400
Die Steels, (H13, P20)	325	10,511	.0100	7,883	.0120	6,306	.0150	5,255	.0270	3,941	.0380	3,153	.0500
Stainless Steel, (303, 304, 316)	350	11,319	.0100	8,489	.0120	6,791	.0150	5,659	.0200	4,244	.0300	3,395	.0400
Difficult Stainless Steel, (400 & PH Series)	300	9,702	.0100	7,277	.0120	5,821	.0130	4,851	.0170	3,638	.0280	2,910	.0380
Stainless Steel (13-8)	150	4,851	.0100	3,638	.0120	2,910	.0130	2,425	.0170	1,819	.0250	1,455	.0340
High Temp. Alloys	250	8,085	.0100	6,064	.0110	4,851	.0120	4,042	.0170	3,032	.0270	2,425	.0360
Titanium (6AL4V)	200	6,468	.0100	4,851	.0110	3,881	.0110	3,234	.0170	2,425	.0300	1,940	.0400
Inco 718	155	5,013	.0100	3,759	.0120	3,007	.0130	2,506	.0180	1,880	.0250	1,503	.0330
Inco 625	135	4,366	.0100	3,274	.0110	2,619	.0120	2,183	.0170	1,637	.0250	1,309	.0330

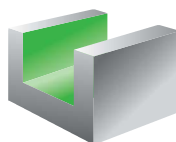
*Recommended Speeds & Feeds

TOLERANCES
Cut Dia +.000/- .050mm
Shank Dia -.0025/- .0127mm
LOC +.635/+1.270mm
OAL +/-1.270mm

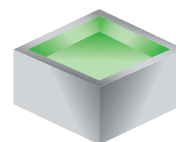
PROFILING



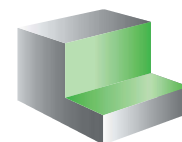
FULL SLOTTING



POCKETING



HIGH-VELOCITY





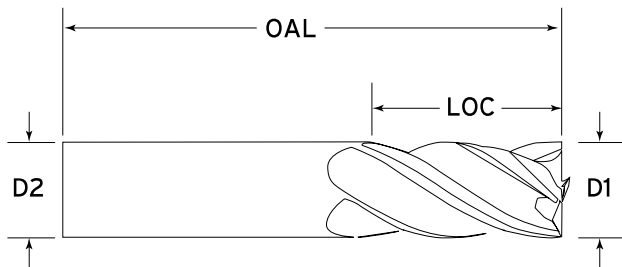
MATERIALS

Gray Cast Iron	4140 Pre-Hard (38 to 42 Rc)	Difficult Stainless Steel, (400 & PH Series)	Inco 718
Ductile Iron	Tool Steels (A2,D2,S7)	Stainless Steel (13-8)	Inco 625
Soft Steels, (A36,1018, 8620,1045)	Die Steels, (H13,P20)	High Temp. Alloys	
Alloy Steels, (4340,4140)	Stainless Steel, (303, 304, 316)	Titanium (6AL4V)	

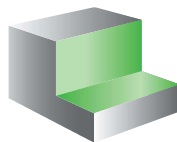
4 FLUTE (METRIC) COATED SPEEDS & FEEDS CHART. 1X DIAMETER DEEP, FULL SLOTTING, METRIC CHIMP LOAD PER TOOTH

WORK PIECE MATERIAL	SFM	12 MM		16 MM		20 MM		25 MM	
		RPM	MMPT	RPM	MMPT	RPM	MMPT	RPM	MMPT
Gray Cast Iron	600	4,851	.0610	3,638	.0760	2,910	.0910	2,328	.1050
Ductile Iron	500	4,042	.0580	3,032	.0740	2,425	.0890	1,940	.1030
Soft Steels, (A36,1018, 8620,1045)	650	5,255	.0530	3,941	.0680	3,153	.0860	2,522	.1010
Alloy Steels, (4340,4140)	400	3,234	.0580	2,425	.0710	1,940	.0860	1,552	.1010
4140 Pre-Hard (38 to 42 Rc)	300	2,425	.0500	1,819	.0630	1,455	.0760	1,164	.0890
Tool Steels (A2,D2,S7)	300	2,425	.0550	1,819	.0660	1,455	.0760	1,164	.0910
Die Steels, (H13,P20)	325	2,627	.0630	1,970	.0710	1,576	.0860	1,261	.1010
Stainless Steel, (303, 304, 316)	350	2,829	.0550	2,122	.0660	1,697	.0810	1,358	.0940
Difficult Stainless Steel, (400 & PH Series)	300	2,425	.0500	1,819	.0630	1,455	.0760	1,164	.0890
Stainless Steel (13-8)	150	1,212	.0550	909	.0690	727	.0810	582	.1010
High Temp. Alloys	250	2,021	.0480	1,516	.0560	1,212	.0710	970	.0840
Titanium (6AL4V)	200	1,617	.0580	1,212	.0680	970	.0810	776	.1010
Inco 718	155	1,253	.0510	939	.0590	752	.0760	601	.0940
Inco 625	135	1,091	.0530	818	.0660	655	.0830	524	.1010

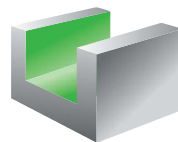
*Recommended Speeds & Feeds



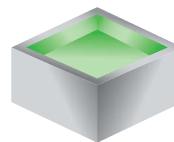
PROFILING



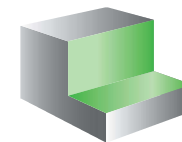
FULL SLOTTING



POCKETING



HIGH-VELOCITY



TOLERANCES
Cut Dia +.000/- .050mm
Shank Dia -.0025/- .0127mm
LOC +.635/+1.270mm
OAL +/-1.270mm

HP

HIGH PERFORMANCE 4 FLUTE NECK RELIEVED (INCH)



Patented variable flute and variable index design which reduces chatter and vibration. For finishing of stainless, inconel, titanium, tool steels, hardened steels and other ferrous materials. Extended neck provides clearance for deep pocketing, slotting or profiling. Center cutting. See "Speeds and Feeds" calculator at www.gorillamill.com or refer to "Speeds and Feeds" chart at the end of this section.

Available in special diameters, lengths and completely resharpenable.

GMX-35 COATED

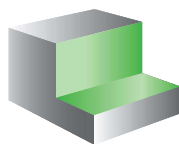
SPEEDS & FEEDS CHART PAGE 32

D1 Cutting Dia.	D2 Shank Dia.	LOC	OAL	LOR	Sq. End	Corner Radius (Inch)						
						0.015	0.030	0.060	0.090	0.120	0.190	0.250
1/4	1/4	3/8	3.0	3/4	GMNR14F40.750 EDP: 10734	GMNR14R40150.750 EDP: 10740	GMNR14R40300.750 EDP: 10743	GMNR14R40600.750 EDP: 10746	—	—	—	—
	1/4	3/8	4.0	1-1/8	GMNR14F41.125 EDP: 10735	GMNR14R40151.125 EDP: 10741	GMNR14R40301.125 EDP: 10744	GMNR14R40601.125 EDP: 10747	—	—	—	—
	1/4	3/8	4.0	2-1/8	GMNR14F42.125 EDP: 10736	GMNR14R40152.125 EDP: 10742	GMNR14R40302.125 EDP: 10745	GMNR14R40602.125 EDP: 10748	—	—	—	—
3/8	3/8	1/2	4.0	1-1/8	GMNR38F41.125 EDP: 10800	GMNR38R40151.125 EDP: 10808	GMNR38R40301.125 EDP: 10812	GMNR38R40601.125 EDP: 10816	GMNR38R40901.125 EDP: 10820	—	—	—
	3/8	1/2	4.0	2-1/8	GMNR38F42.125 EDP: 10801	GMNR38R40152.125 EDP: 10809	GMNR38R40302.125 EDP: 10813	GMNR38R40602.125 EDP: 10817	GMNR38R40902.125 EDP: 10821	—	—	—
	3/8	1/2	6.0	3-1/8	GMNR38F43.125 EDP: 10802	GMNR38R40153.125 EDP: 10810	GMNR38R40303.125 EDP: 10814	GMNR38R40603.125 EDP: 10818	GMNR38R40903.125 EDP: 10822	—	—	—
	3/8	1/2	6.0	4-1/8	GMNR38F44.125 EDP: 10803	GMNR38R40154.125 EDP: 10811	GMNR38R40304.125 EDP: 10815	GMNR38R40604.125 EDP: 10819	GMNR38R40904.125 EDP: 10823	—	—	—
1/2	1/2	5/8	4.0	1-1/2	GMNR12F41.500 EDP: 10686	GMNR12R40151.500 EDP: 10694	GMNR12R40301.500 EDP: 10698	GMNR12R40601.500 EDP: 10702	GMNR12R40901.500 EDP: 10706	GMNR12R41201.500 EDP: 10710	—	—
	1/2	5/8	4.0	2-1/4	GMNR12F42.250 EDP: 10687	GMNR12R40152.250 EDP: 10695	GMNR12R40302.250 EDP: 10699	GMNR12R40602.250 EDP: 10703	GMNR12R40902.250 EDP: 10707	GMNR12R41202.250 EDP: 10711	—	—
	1/2	5/8	6.0	3-3/8	GMNR12F43.375 EDP: 10688	GMNR12R40153.375 EDP: 10696	GMNR12R40303.375 EDP: 10700	GMNR12R40603.375 EDP: 10704	GMNR12R40903.375 EDP: 10708	GMNR12R41203.375 EDP: 10712	—	—
	1/2	5/8	6.0	4-1/8	GMNR12F44.125 EDP: 10689	GMNR12R40154.125 EDP: 10697	GMNR12R40304.125 EDP: 10701	GMNR12R40604.125 EDP: 10705	GMNR12R40904.125 EDP: 10709	GMNR12R41204.125 EDP: 10713	—	—

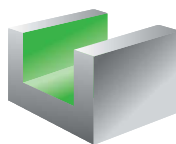
PATENT NO. 7,367,754

TOLERANCES
Cut Dia +.000/- .002
Shank Dia -.0001/- .0005
LOC +.025/+ .050
OAL +/- .050

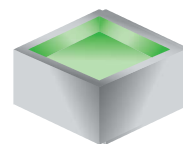
PROFILING



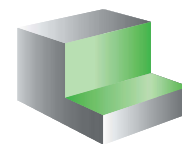
FULL SLOTTING



POCKETING



HIGH-VELOCITY





MATERIALS

Gray Cast Iron	4140 Pre-Hard (38 to 42 Rc)	Difficult Stainless Steel, (400 & PH Series)	Inco 718
Ductile Iron			
Soft Steels, (A36,1018, 8620,1045)	Tool Steels (A2,D2,S7)	Stainless Steel (13-8)	Inco 625
Alloy Steels, (4340,4140)	Die Steels, (H13,P20)	High Temp. Alloys	
	Stainless Steel, (303, 304, 316)	Titanium (6AL4V)	

SPEEDS & FEEDS CHART PAGE 32

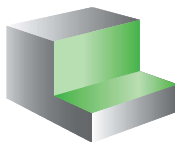
D1 Cutting Dia.	D2 Shank Dia.	LOC	OAL	LOR	Sq. End	Corner Radius (Inch)						
						0.015	0.030	0.060	0.090	0.120	0.190	0.250
5/8	5/8	3/4	4.0	1-5/8	GMNR58F41.625 EDP: 10840	—	GMNR58R40301.625 EDP: 10848	GMNR58R40601.625 EDP: 10852	GMNR58R40901.625 EDP: 10856	GMNR58R41201.625 EDP: 10860	—	—
	5/8	3/4	6.0	2-3/8	GMNR58F42.375 EDP: 10841	—	GMNR58R40302.375 EDP: 10849	GMNR58R40602.375 EDP: 10853	GMNR58R40902.375 EDP: 10857	GMNR58R41202.375 EDP: 10861	—	—
	5/8	3/4	6.0	3-3/8	GMNR58F43.375 EDP: 10842	—	GMNR58R40303.375 EDP: 10850	GMNR58R40603.375 EDP: 10854	GMNR58R40903.375 EDP: 10858	GMNR58R41203.375 EDP: 10862	—	—
	5/8	3/4	6.0	4-1/8	GMNR58F44.125 EDP: 10843	—	GMNR58R40304.125 EDP: 10851	GMNR58R40604.125 EDP: 10855	GMNR58R40904.125 EDP: 10859	GMNR58R41204.125 EDP: 10863	—	—
3/4	3/4	1.0	4-1/2	2-1/4	GMNR34F42.250 EDP: 10758	—	GMNR34R40302.250 EDP: 10764	GMNR34R40602.250 EDP: 10767	GMNR34R40902.250 EDP: 10770	GMNR34R41202.250 EDP: 10773	GMNR34R41902.250 EDP: 10776	GMNR34R42502.250 EDP: 10779
	3/4	1.0	6.0	3-1/4	GMNR34F43.250 EDP: 10759	—	GMNR34R40303.250 EDP: 10765	GMNR34R40603.250 EDP: 10768	GMNR34R40903.250 EDP: 10771	GMNR34R41203.250 EDP: 10774	GMNR34R41903.250 EDP: 10777	GMNR34R42503.250 EDP: 10780
	3/4	1.0	6.0	4-1/8	GMNR34F44.125 EDP: 10760	—	GMNR34R40304.125 EDP: 10766	GMNR34R40604.125 EDP: 10769	GMNR34R40904.125 EDP: 10772	GMNR34R41204.125 EDP: 10775	GMNR34R41904.125 EDP: 10778	GMNR34R42504.125 EDP: 10781
1.0	1.0	1-1/8	4-1/2	2-1/4	GMNR10F42.250 EDP: 10620	—	GMNR10R40302.250 EDP: 10626	GMNR10R40602.250 EDP: 10629	GMNR10R40902.250 EDP: 10632	GMNR10R41202.250 EDP: 10635	GMNR10R41902.250 EDP: 10638	GMNR10R42502.250 EDP: 10641
	1.0	1-1/8	6.0	3-1/4	GMNR10F43.250 EDP: 10621	—	GMNR10R40303.250 EDP: 10627	GMNR10R40603.250 EDP: 10630	GMNR10R40903.250 EDP: 10633	GMNR10R41203.250 EDP: 10636	GMNR10R41903.250 EDP: 10639	GMNR10R42503.250 EDP: 10642
	1.0	1-1/8	6.0	4-1/4	GMNR10F44.250 EDP: 10622	—	GMNR10R40304.250 EDP: 10628	GMNR10R40604.250 EDP: 10631	GMNR10R40904.250 EDP: 10634	GMNR10R41204.250 EDP: 10637	GMNR10R41904.250 EDP: 10640	GMNR10R42504.250 EDP: 10643

PATENT NO. 7,367,754

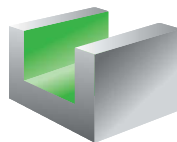
4 FLUTE

TOLERANCES
Cut Dia +.000/- .002
Shank Dia -.0001/- .0005
LOC +.025/+ .050
OAL +/- .050

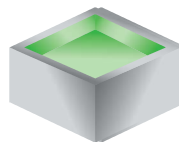
PROFILING



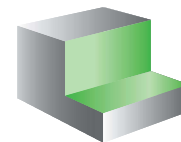
FULL SLOTTING



POCKETING



HIGH-VELOCITY

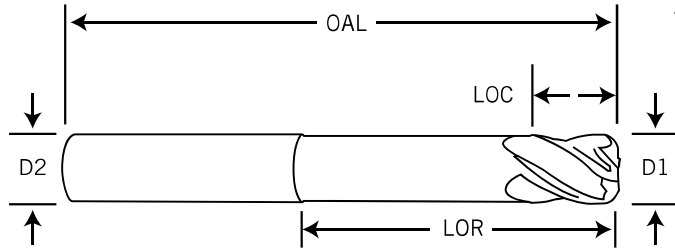


HIGH PERFORMANCE 4 FLUTE NECK RELIEVED (INCH)



Patented variable flute and variable index design which reduces chatter and vibration. For finishing of stainless, inconel, titanium, tool steels, hardened steels and other ferrous materials. Extended neck provides clearance for deep pocketing, slotting or profiling. Center cutting. See "Speeds and Feeds" calculator at www.gorillamill.com or refer to "Speeds and Feeds" chart at the end of this section.

Available in special diameters, lengths and completely resharpenable.



MATERIALS

Gray Cast Iron
Ductile Iron
Soft Steels, (A36,1018, 8620,1045)
Alloy Steels, (4340,4140)

4140 Pre-Hard (38 to 42 Rc)
Tool Steels (A2,D2,S7)
Die Steels, (H13,P20)
Stainless Steel, (303, 304, 316)

Difficult Stainless Steel, (400 & PH Series)
Stainless Steel (13-8)
High Temp. Alloys
Titanium (6AL4V)

Inco 718
Inco 625

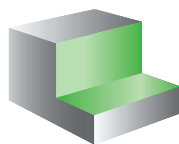
4 FLUTE NECK RELIEVED (INCH) COATED SPEEDS & FEEDS CHART. 1X DIAMETER DEEP, FULL SLOTTING

WORK PIECE MATERIAL	SFM	1/4"		3/8"		1/2"		5/8"		3/4"		1"	
		RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM	RPM	IPM
Gray Cast Iron	450	6,876	32.9	4,584	31.1	3,438	34.4	2,750	33.1	2,292	32.0	1,719	27.5
Ductile Iron	375	5,730	20.6	3,820	24.8	2,865	26.3	2,292	27.6	1,910	26.5	1,433	24.3
Soft Steels, (A36,1018, 8620,1045)	480	7,449	29.8	4,966	29.8	3,725	31.3	2,979	32.2	2,483	31.8	1,862	29.8
Alloy Steels, (4340,4140)	300	4,584	18.3	3,056	22.0	2,292	22.0	1,833	20.5	1,528	20.7	1,146	18.3
4140 Pre-Hard (38 to 42 Rc)	225	3,641	11.6	2,292	12.8	1,719	13.7	1,375	13.7	1,146	13.7	860	12.1
Tool Steels (A2,D2,S7)	225	3,438	11.0	2,292	14.7	1,719	15.2	1,375	14.3	1,146	13.7	860	12.4
Die Steels, (H13,P20)	245	3,725	16.4	2,483	19.8	1,862	18.6	1,490	16.7	1,241	16.9	931	14.9
Stainless Steel, (303, 304, 316)	260	4,011	12.8	2,674	17.0	2,006	17.6	1,604	16.7	1,337	17.0	1,004	14.9
Difficult Stainless Steel, (400 & PH Series)	225	3,438	9.6	2,292	10.4	1,719	13.8	1,375	13.8	1,146	13.8	860	12.1
Stainless Steel (13-8)	115	1,719	4.8	1,146	5.9	860	8.9	687	7.7	573	7.6	430	7.0
High Temp. Alloys	190	2,865	8.0	1,910	10.7	1,433	10.9	1,146	10.1	955	10.7	716	9.5
Titanium (6AL4V)	150	2,292	6.1	1,528	9.8	1,146	10.6	917	10.0	764	9.8	573	9.2
Inco 718	115	1,776	5.0	1,184	6.2	888	7.1	710	6.5	593	7.1	444	6.2
Inco 625	100	1,547	4.4	1,031	5.3	773	6.5	619	6.5	515	6.8	386	6.2

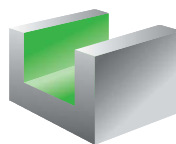
*Recommended Speeds & Feeds

TOLERANCES
Cut Dia +.000/- .002
Shank Dia -.0001/- .0005
LOC +.025/+ .050
OAL +/- .050

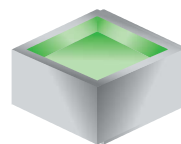
PROFILING



FULL SLOTTING



POCKETING



HIGH-VELOCITY

