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MAXCARB GP • MAXCARB HP • MAXCARB HP ULTRA • ALUMIMAX

EMPT MaxCarb Series • Version 2025 FRACTIONAL / METRIC

MAXCARB GP • MAXCARB HP • MAXCARB HP ULTRA • ALUMIMAX



MAXCARB

PREMIUM SOLID CARBIDE END MILLS

**PRECISION-ENGINEERED
FOR VERSATILITY,
PERFORMANCE AND
EXTENDED TOOL LIFE.**

- ▶ General Purpose
- ▶ High Performance
- ▶ Extreme Production & HEM
- ▶ Extreme Production for Aluminum



MADE IN CANADA

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MAXCARB GP

VERSATILITY meets PERFORMANCE & DURABILITY.

The **General Purpose Series** embodies our commitment to quality and performance in general-purpose milling designed to excel across a wide range of materials. Precision Grinding with high quality surface finishes for maximum tool life, delivering cost-effective, reliable and economical solutions for everyday general-purpose milling and machining applications.

GP Speeds & Feeds	3-4
Square End 2, 3 & 4 Flute - Fractional	5-7
Square End 2, 3 & 4 Flute - Metric	7-8
Ball Nose End 2, 3 & 4 Flute - Fractional	9-11
Ball Nose End 2, 3 & 4 - Metric	12
Engraving Tools	11
Spot Drills	11
90° Drill/Mills 2 & 4 Flute - Fractional	12
Square Double End 2 & 4 Flute - Fractional	13
Ball Nose Double End 2 & 4 Flute - Fractional	14

MAXCARB HP

HIGH PERFORMANCE. PRECISION. STABILITY.

The **High Performance Series** is engineered for superior performance in demanding applications, featuring variable pitch geometry to significantly reduce chatter and vibration. All HP Series undergo a unique honing process to improve edge integrity and finish quality with specially designed core and heel geometry to enhance rigidity and minimize tool deflection for consistent, accurate results.

HP Speeds & Feeds	15-16
Square & Corner Radius End 4 & 5 Flute - Fractional	17-18
Ball Nose End 4 Flute - Fractional	19
Long Reach Neck Relief Square & Corner Radius - Fractional	20
Long Reach Neck Relief Ball Nose End - Fractional	20

MAXCARB HP ULTRA & HEM

ULTIMATE TOOL LIFE. MAXIMUM PERFORMANCE.

The **High Performance Ultra & HEM Series** combines advanced engineering with ultra-premium materials to deliver maximum tool life, precision and productivity. Built for the most demanding production environments. The HP Ultra Series features variable pitch geometry to dramatically reduce chatter and vibration, manufactured from Ultra Premium Micrograin Carbide ensures exceptional wear resistance and cutting performance. HEM (High Efficiency Milling) Series for Dynamic and Trochoidal Milling - with or without chipbreaker.

HP Ultra Speeds & Feeds	21-22
Square & Corner Radius End 4 & 5 Flute - Fractional	23-24
Ball Nose End 4 Flute - Fractional	25
HEM Speeds & Feeds	26
HEM Square & Corner Radius End 5, 6 & 7 Flute - Fractional	27-28

ALUMIMAX

EXTREME PRODUCTION. HIGH-EFFICIENCY.

The **AlumiMax Series** is purpose-built for high-speed, high-efficiency aluminum machining in both medium/roughing and medium/finishing applications that combine advanced geometries with premium materials and coatings to deliver exceptional chip control, reduced built-up edge, and a superior surface finish - with or without chipbreaker.

AlumiMax Speeds & Feeds	29-30
Square & Corner Radius End - Medium/Roughing - Fractional	31
Square & Corner Radius End - Medium/Finishing - Fractional	32
Ball Nose End 2 & 3 Flute - Fractional	33

GENERAL PURPOSE

VERSATILITY meets PERFORMANCE & DURABILITY.

The **General Purpose Series** embodies our commitment to quality and performance in general-purpose milling designed to excel across a wide range of materials. Precision Grinding with high quality surface finishes for maximum tool life, delivering cost-effective, reliable and economical solutions for everyday general-purpose milling and machining applications.

Choose from a broad selection of geometries, lengths, and configurations to match your specific needs that provide dependable results with for plunging, pocketing, slotting, ramping and profiling applications.

Material: Premium: 10% micrograin carbide for enhanced strength and wear resistance

30° Helix Angle: Ideal for general-purpose milling across a wide range of materials

Honed Cutting Edges: All tools are honed to extend tool life and improve cutting performance

Wide Range of Sizes: Cutting diameters from 1/32" to 1" - Centre Cutting

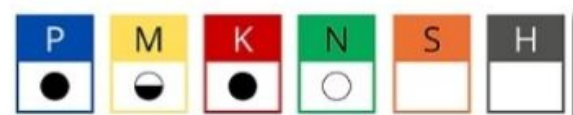
Geometries for Every Application:

- Square End & Ball Nose – 2, 3 & 4 Flute
- Double End Square & Ball Nose – 2 & 4 Flute
- 90° Drill/Mills, Engraving & Spot Tools

Versatile Configurations: Length of Cut from 1/16" to 3" and 2, 3 & 4 Flute options

Coating Options:

- Uncoated – For softer materials; general purpose applications
- TiAlN Coated – Provides high heat resistance and extended tool life in harder materials or high-speed applications



Shank Tolerance: +0.0000" / -0.0004"
Diameter Tolerance: +0.0000" / -0.0020"

Material Classification		Speed (SFM)		Feed Per Tooth By End Mill Diameter (IPT)							
		Uncoated	TiAlN	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
Aluminum Alloys & Aluminum	N	600 - 1200	900 - 1800	.0020	.0025	.0030	.0035	.0040	.0050	.0060	.0080
Copper Alloys & Copper		350 - 850	525 - 1275	.0020	.0025	.0025	.0030	.0030	.0035	.0040	.0060
Bronze & Brass		250 - 400	375 - 600	.0020	.0025	.0025	.0030	.0030	.0035	.0040	.0050
Graphite		500 - 800	500 - 1200	.0030	.0035	.0025	.0030	.0030	.0040	.0050	.0070
Plastics		600 - 1100	600 - 1650	.0030	.0035	.0040	.0050	.0060	.0080	.0100	.0150
Softer Cast Iron	K	250 - 450	375 - 650	.0020	.0022	.0025	.0027	.0030	.0045	.0060	.0080
Harder Cast Iron		100 - 250	100 - 375	.0008	.0010	.0015	.0017	.0020	.0025	.0030	.0040
Ductile Iron		80 - 400	100 - 600	.0010	.0012	.0015	.0017	.0020	.0030	.0040	.0060
Malleable Iron		150 - 500	225 - 650	.0010	.0015	.0020	.0025	.0030	.0040	.0050	.0070
Low Carbon Steels (1020 & Under)	P	200 - 400	300 - 600	.0010	.0015	.0020	.0025	.0030	.0040	.0050	.0070
Medium Carbon Steels (1030-1060)		100 - 250	150 - 375	.0015	.0016	.0017	.0018	.0020	.0030	.0040	.0050
Alloy Steels Hardened to 35 Rc		130 - 230	130 - 345	.0010	.0011	.0012	.0013	.0015	.0017	.0020	.0030
Alloy Steels Hardened to 40-50 Rc		70 - 130	70 - 160	.0007	.0007	.0008	.0009	.0010	.0015	.0020	.0030
Die Steels Hardened to 51-60 Rc		---	---	---	---	---	---	---	---	---	---
Tool Steels		100 - 250	150 - 375	.0010	.0012	.0015	.0017	.0020	.0025	.0030	.0040
Mold Steels		200 - 350	300 - 525	.0010	.0012	.0015	.0017	.0020	.0025	.0030	.0040
Softer Stainless Steels	M	200 - 350	300 - 450	.0010	.0012	.0015	.0012	.0020	.0030	.0040	.0060
Harder Stainless Steels		100 - 200	150 - 300	.0005	.0006	.0015	.0008	.0010	.0020	.0030	.0050
Monel & High Nickel Steel	S	75 - 175	75 - 200	.0010	.0012	.0015	.0017	.0020	.0025	.0030	.0040
Softer Titanium		125 - 300	125 - 375	.0010	.0012	.0015	.0017	.0020	.0030	.0040	.0060
Harder Titanium		50 - 150	50 - 175	.0005	.0006	.0007	.0008	.0010	.0015	.0020	.0020
Nickel Based High Temp Alloys		50 - 100	50 - 125	.0008	.0008	.0009	.0009	.0010	.0012	.0015	.0020

- Higher Feed Per Tooth should be used to start for radial depths of cut less than 25% of the tool diameter.
- The above recommendations are for axial lengths of cut not to exceed 1x the tool diameter for profiling and .5x the diameter for full slotting.
- The above parameters are recommended starting points only. If the tool is working well, without vibrations or significant noise, increase the SFM and/or Feed Per Tooth in 5-10% increments.
- Optimum speeds & feeds will depend upon material, setup, machine conditions & tool deflection. Higher or lower parameters may be required to achieve optimum machining conditions.
- For Light Radial Depths of cut, make certain to increase the feed rate to compensate for Radial Chip Thinning Factor (RCTF). Consult a formula or app to calculate.
- For Plunging or Ramping the feed rate should be reduced by about 50%
- Climb Milling is preferred to Conventional Milling.



D Cutter Ø	d Shank Ø	L1 Length Of Cut	L Overall Length	Uncoated			TiAlN		
				2FL	3FL	4FL	2FL	3FL	4FL
1/32"	1/8"	1/16"	1-1/2"	MAX-991000	MAX-991001	MAX-991002	MAX-991096	MAX-991097	MAX-991098
1/32"	1/8"	3/32"	1-1/2"	MAX-991147	MAX-991148	MAX-991149	MAX-991543	MAX-991544	MAX-991545
3/64"	1/8"	3/32"	1-1/2"	MAX-991003	MAX-991004	MAX-991005	MAX-991099	MAX-991100	MAX-991101
3/64"	1/8"	1/8"	1-1/2"	MAX-991150	MAX-991151	MAX-991152	MAX-991546	MAX-991547	MAX-991548
1/16"	1/8"	1/8"	1-1/2"	MAX-991006	MAX-991007	MAX-991008	MAX-991102	MAX-991103	MAX-991104
1/16"	1/8"	3/16"	1-1/2"	MAX-991153	MAX-991154	MAX-991155	MAX-991549	MAX-991550	MAX-991551
5/64"	1/8"	1/4"	1-1/2"	MAX-991156	MAX-991157	MAX-991158	MAX-991552	MAX-991553	MAX-991554
3/32"	1/8"	3/16"	1-1/2"	MAX-991009	MAX-991010	MAX-991011	MAX-991105	MAX-991106	MAX-991107
3/32"	1/8"	3/8"	1-1/2"	MAX-991159	MAX-991160	MAX-991161	MAX-991555	MAX-991556	MAX-991557
7/64"	1/8"	3/8"	1-1/2"	MAX-991166	MAX-991167	MAX-991168	MAX-991562	MAX-991563	MAX-991564
1/8"	1/8"	1/4"	1-1/2"	MAX-991015	MAX-991016	MAX-991017	MAX-991111	MAX-991112	MAX-991113
1/8"	1/8"	1/2"	1-1/2"	MAX-991169	MAX-991170	MAX-991171	MAX-991565	MAX-991566	MAX-991567
1/8"	1/8"	3/4"	2-1/2"	MAX-991746	-	MAX-991747	MAX-991790	-	MAX-991791
1/8"	1/8"	1"	3"	MAX-991815	-	MAX-991816	MAX-991879	-	MAX-991880
9/64"	3/16"	9/16"	2"	MAX-991173	MAX-991174	MAX-991175	MAX-991569	MAX-991570	MAX-991571
5/32"	3/16"	5/16"	2"	MAX-991018	MAX-991019	MAX-991020	MAX-991114	MAX-991115	MAX-991116
5/32"	3/16"	9/16"	2"	MAX-991176	MAX-991177	MAX-991178	MAX-991572	MAX-991573	MAX-991574
11/64"	3/16"	9/16"	2"	MAX-991179	MAX-991180	MAX-991181	MAX-991575	MAX-991576	MAX-991577
3/16"	3/16"	3/8"	2"	MAX-991021	MAX-991022	MAX-991023	MAX-991117	MAX-991118	MAX-991119
3/16"	3/16"	5/8"	2"	MAX-991182	MAX-991183	MAX-991184	MAX-991578	MAX-991579	MAX-991580
3/16"	3/16"	3/4"	2-1/2"	MAX-991748	-	MAX-991749	MAX-991792	-	MAX-991793
3/16"	3/16"	1-1/8"	3"	MAX-991817	-	MAX-991818	MAX-991881	-	MAX-991882
13/64"	1/4"	5/8"	2-1/2"	MAX-991186	MAX-991187	MAX-991188	MAX-991582	MAX-991583	MAX-991584
7/32"	1/4"	7/16"	2"	MAX-991024	MAX-991025	MAX-991026	MAX-991120	MAX-991121	MAX-991122
7/32"	1/4"	5/8"	2-1/2"	MAX-991189	MAX-991190	MAX-991191	MAX-991585	MAX-991586	MAX-991587
15/64"	1/4"	3/4"	2-1/2"	MAX-991192	MAX-991193	MAX-991194	MAX-991588	MAX-991589	MAX-991590
1/4"	1/4"	1/2"	2"	MAX-991027	MAX-991028	MAX-991029	MAX-991123	MAX-991124	MAX-991125
1/4"	1/4"	3/4"	2-1/2"	MAX-991195	MAX-991196	MAX-991197	MAX-991591	MAX-991592	MAX-991593
1/4"	1/4"	1-1/8"	3"	MAX-991750	-	MAX-991751	MAX-991794	-	MAX-991795
1/4"	1/4"	1-1/2"	4"	MAX-991819	-	MAX-991820	MAX-991883	-	MAX-991884
17/64"	5/16"	7/8"	2-1/2"	MAX-991199	MAX-991200	MAX-991201	MAX-991595	MAX-991596	MAX-991597
9/32"	5/16"	7/8"	2-1/2"	MAX-991202	MAX-991203	MAX-991204	MAX-991598	MAX-991599	MAX-991600
19/64"	5/16"	7/8"	2-1/2"	MAX-991205	MAX-991206	MAX-991207	MAX-991601	MAX-991602	MAX-991603
5/16"	5/16"	1/2"	2"	MAX-991030	MAX-991031	MAX-991032	MAX-991126	MAX-991127	MAX-991128
5/16"	5/16"	7/8"	2-1/2"	MAX-991208	MAX-991209	MAX-991210	MAX-991604	MAX-991605	MAX-991606
5/16"	5/16"	1-1/8"	3"	MAX-991752	-	MAX-991753	MAX-991796	-	MAX-991797
5/16"	5/16"	1-5/8"	4"	MAX-991823	-	MAX-991824	MAX-991887	-	MAX-991888
21/64"	3/8"	7/8"	2-1/2"	MAX-991212	MAX-991213	MAX-991214	MAX-991608	MAX-991609	MAX-991610



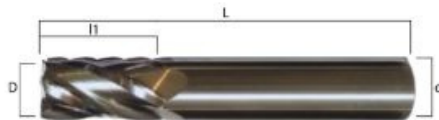
D Cutter Ø	d Shank Ø	L1 Length Of Cut	L Overall Length	Uncoated			TiAlN		
				2FL	3FL	4FL	2FL	3FL	4FL
11/32"	3/8"	7/8"	2-1/2"	MAX-991215	MAX-991216	MAX-991217	MAX-991611	MAX-991612	MAX-991613
23/64"	3/8"	7/8"	2-1/2"	MAX-991218	MAX-991219	MAX-991220	MAX-991614	MAX-991615	MAX-991616
3/8"	3/8"	5/8"	2"	MAX-991033	MAX-991034	MAX-991035	MAX-991129	MAX-991130	MAX-991131
3/8"	3/8"	1"	2-1/2"	MAX-991221	MAX-991222	MAX-991223	MAX-991617	MAX-991618	MAX-991619
3/8"	3/8"	1-1/8"	3"	MAX-991754	-	MAX-991755	MAX-991798	-	MAX-991799
3/8"	3/8"	1-3/4"	4"	MAX-991829	-	MAX-991830	MAX-991893	-	MAX-991894
25/64"	7/16"	1"	2-1/2"	MAX-991225	MAX-991226	MAX-991227	MAX-991621	MAX-991622	MAX-991623
13/32"	7/16"	1"	2-1/2"	MAX-991228	MAX-991229	MAX-991230	MAX-991624	MAX-991625	MAX-991626
27/64"	7/16"	1"	2-1/2"	MAX-991231	MAX-991232	MAX-991233	MAX-991627	MAX-991628	MAX-991629
7/16"	7/16"	5/8"	2-1/2"	MAX-991036	MAX-991037	MAX-991038	MAX-991132	MAX-991133	MAX-991134
7/16"	7/16"	1"	2-1/2"	MAX-991234	MAX-991235	MAX-991236	MAX-991630	MAX-991631	MAX-991632
7/16"	7/16"	2"	4"	MAX-991756	-	MAX-991757	MAX-991800	-	MAX-991801
29/64"	1/2"	1"	3"	MAX-991238	MAX-991239	MAX-991240	MAX-991634	MAX-991635	MAX-991636
15/32"	1/2"	1"	3"	MAX-991241	MAX-991242	MAX-991243	MAX-991637	MAX-991638	MAX-991639
31/64"	1/2"	1"	3"	MAX-991244	MAX-991245	MAX-991246	MAX-991640	MAX-991641	MAX-991642
1/2"	1/2"	5/8"	2-1/2"	MAX-991039	MAX-991040	MAX-991041	MAX-991135	MAX-991136	MAX-991137
1/2"	1/2"	1"	3"	MAX-991247	MAX-991248	MAX-991249	MAX-991643	MAX-991644	MAX-991645
1/2"	1/2"	1-1/4"	3"	-	-	MAX-994001	-	-	MAX-994000
1/2"	1/2"	2"	4"	MAX-991758	-	MAX-991759	MAX-991802	-	MAX-991803
1/2"	1/2"	3"	6"	MAX-991833	-	MAX-991834	MAX-991897	-	MAX-991898
33/64"	9/16"	1-1/4"	3-1/2"	MAX-991251	MAX-991252	MAX-991253	MAX-991647	MAX-991648	MAX-991649
17/32"	9/16"	1-1/4"	3-1/2"	MAX-991254	MAX-991255	MAX-991256	MAX-991650	MAX-991651	MAX-991652
35/64"	9/16"	1-1/4"	3-1/2"	MAX-991257	MAX-991258	MAX-991260	MAX-991653	MAX-991654	MAX-991655
9/16"	9/16"	1-1/4"	3-1/2"	MAX-991261	MAX-991262	MAX-991263	MAX-991656	MAX-991657	MAX-991658
37/64"	5/8"	1-1/4"	3-1/2"	MAX-991265	MAX-991266	MAX-991267	MAX-991660	MAX-991661	MAX-991662
19/32"	5/8"	1-1/4"	3-1/2"	MAX-991268	MAX-991269	MAX-991270	MAX-991663	MAX-991664	MAX-991665
39/64"	5/8"	1-1/4"	3-1/2"	MAX-991271	MAX-991272	MAX-991273	MAX-991666	MAX-991667	MAX-991668
5/8"	5/8"	3/4"	3"	MAX-991042	MAX-991043	MAX-991044	MAX-991138	MAX-991139	MAX-991140
5/8"	5/8"	1-1/4"	3-1/2"	MAX-991274	MAX-991275	MAX-991276	MAX-991669	MAX-991670	MAX-991671
5/8"	5/8"	2-1/4"	5"	MAX-991762	-	MAX-991763	MAX-991806	-	MAX-991807
5/8"	5/8"	3"	6"	MAX-991837	-	MAX-991838	MAX-991901	-	MAX-991902
41/64"	3/4"	1-1/2"	4"	MAX-991278	MAX-991279	MAX-991280	MAX-991673	MAX-991674	MAX-991675
21/32"	3/4"	1-1/2"	4"	MAX-991281	MAX-991282	MAX-991283	MAX-991676	MAX-991677	MAX-991678
43/64"	3/4"	1-1/2"	4"	MAX-991284	MAX-991285	MAX-991286	MAX-991679	MAX-991680	MAX-991681
11/16"	3/4"	1-1/2"	4"	MAX-991287	MAX-991288	MAX-991289	MAX-991682	MAX-991683	MAX-991684
45/64"	3/4"	1-1/2"	4"	MAX-991290	MAX-991291	MAX-991292	MAX-991685	MAX-991686	MAX-991687
23/32"	3/4"	1-1/2"	4"	MAX-991293	MAX-991294	MAX-991295	MAX-991688	MAX-991689	MAX-991690
47/64"	3/4"	1-1/2"	4"	MAX-991296	MAX-991297	MAX-991298	MAX-991691	MAX-991692	MAX-991693

MAXCARB GP

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D Cutter Ø	d Shank Ø	l1 Length Of Cut	L Overall Length	Uncoated			TiAlN		
				2FL	3FL	4FL	2FL	3FL	4FL
3/4"	3/4"	1"	3"	MAX-991045	MAX-991046	MAX-991047	MAX-991141	MAX-991142	MAX-991143
3/4"	3/4"	1-1/2"	4"	MAX-991299	MAX-991300	MAX-991301	MAX-991694	MAX-991695	MAX-991696
3/4"	3/4"	2-1/4"	5"	MAX-991764	-	MAX-991765	MAX-991808	-	MAX-991809
3/4"	3/4"	3"	6"	MAX-991839	-	MAX-991840	MAX-991903	-	MAX-991904
49/64"	7/8"	1-1/2"	4"	MAX-991303	MAX-991304	MAX-991305	MAX-991698	MAX-991699	MAX-991700
25/32"	7/8"	1-1/2"	4"	MAX-991306	MAX-991307	MAX-991308	MAX-991701	MAX-991702	MAX-991703
51/64"	7/8"	1-1/2"	4"	MAX-991309	MAX-991310	MAX-991311	MAX-991704	MAX-991705	MAX-991706
13/16"	7/8"	1-1/2"	4"	MAX-991312	MAX-991313	MAX-991314	MAX-991707	MAX-991708	MAX-991709
53/64"	7/8"	1-1/2"	4"	MAX-991315	MAX-991316	MAX-991317	MAX-991710	MAX-991711	MAX-991712
27/32"	7/8"	1-1/2"	4"	MAX-991318	MAX-991319	MAX-991320	MAX-991713	MAX-991714	MAX-991715
55/64"	7/8"	1-1/2"	4"	MAX-991321	MAX-991322	MAX-991323	MAX-991716	MAX-991717	MAX-991718
7/8"	7/8"	1-1/2"	4"	MAX-991324	MAX-991325	MAX-991326	MAX-991719	MAX-991720	MAX-991721
57/64"	1"	1-1/2"	4"	MAX-991328	MAX-991329	MAX-991330	MAX-991723	MAX-991724	MAX-991725
29/32"	1"	1-1/2"	4"	MAX-991331	MAX-991332	MAX-991333	MAX-991726	MAX-991727	MAX-991728
59/64"	1"	1-1/2"	4"	MAX-991334	MAX-991335	MAX-991336	MAX-991729	MAX-991730	MAX-991731
15/16"	1"	1-1/2"	4"	MAX-991337	MAX-991338	MAX-991339	MAX-991732	MAX-991733	MAX-991734
61/64"	1"	1-1/2"	4"	MAX-991340	MAX-991341	MAX-991342	MAX-991735	MAX-991736	MAX-991737
31/32"	1"	1-1/2"	4"	MAX-991343	MAX-991344	MAX-991345	MAX-991738	MAX-991739	MAX-991740
63/64"	1"	1-1/2"	4"	MAX-991346	MAX-991347	MAX-991348	MAX-991741	MAX-991742	MAX-991743
1"	1"	1"	3"	MAX-991012	MAX-991013	MAX-991014	MAX-991108	MAX-991109	MAX-991110
1"	1"	1-1/2"	4"	MAX-991162	MAX-991163	MAX-991164	MAX-991558	MAX-991559	MAX-991560
1"	1"	2-1/4"	5"	MAX-991744	-	MAX-991745	MAX-991788	-	MAX-991789
1"	1"	3"	6"	MAX-991810	-	MAX-991812	MAX-991875	-	MAX-991876



Square End - Metric

D Cutter Ø	d Shank Ø	l1 Length Of Cut	L Overall Length	Uncoated			TiAlN		
				2FL	3FL	4FL	2FL	3FL	4FL
1	1	3	38	MAX-993244	MAX-993245	MAX-993246	MAX-993310	MAX-993311	MAX-993312
1.5	2	5	38	MAX-993247	MAX-993248	MAX-993249	MAX-993313	MAX-993314	MAX-993315
2	2	6	38	MAX-993250	MAX-993251	MAX-993252	MAX-993316	MAX-993317	MAX-993318

GENERAL PURPOSE
Square End - Metric



D Cutter Ø	d Shank Ø	l1 Length Of Cut	L Overall Length	Uncoated			TiAlN		
				2FL	3FL	4FL	2FL	3FL	4FL
3	3	12	38	MAX-993256	MAX-993257	MAX-993258	MAX-993322	MAX-993323	MAX-993324
3	3	25	75	MAX-993464	-	MAX-993465	MAX-993488	-	MAX-993489
3	3	25	100	MAX-993512	-	MAX-993513	MAX-993528	-	MAX-993529
3.5	4	12	50	MAX-993259	MAX-993260	MAX-993261	MAX-993325	MAX-993326	MAX-993327
4	4	14	50	MAX-993262	MAX-993263	MAX-993261	MAX-993328	MAX-993329	MAX-993330
4	4	25	75	MAX-993466	-	MAX-993467	MAX-993490	-	MAX-993491
4	4	50	100	MAX-993514	-	MAX-993515	MAX-993530	-	MAX-993531
4.5	5	14	50	MAX-993265	MAX-993266	MAX-993267	MAX-993331	MAX-993332	MAX-993333
5	5	16	50	MAX-993268	MAX-993269	MAX-993270	MAX-993334	MAX-993335	MAX-993336
5	5	25	75	MAX-993468	-	MAX-993469	MAX-993492	-	MAX-993493
5	5	30	100	MAX-993516	-	MAX-993517	MAX-993532	-	MAX-993533
6	6	19	63	MAX-993271	MAX-993272	MAX-993273	MAX-993337	MAX-993338	MAX-993339
6	6	25	75	MAX-993470	-	MAX-993471	MAX-993494	-	MAX-993495
6	6	50	100	MAX-993518	-	MAX-993519	MAX-993534	-	MAX-993535
7	7	19	63	MAX-993274	MAX-993275	MAX-993276	MAX-993340	MAX-993341	MAX-993342
8	8	19	63	MAX-993277	MAX-993278	MAX-993279	MAX-993343	MAX-993344	MAX-993345
8	8	30	100	MAX-993472	-	MAX-993473	MAX-993496	-	MAX-993497
8	8	50	150	MAX-993520	-	MAX-993521	MAX-993536	-	MAX-993537
9	9	22	70	MAX-993280	MAX-993281	MAX-993282	MAX-993346	MAX-993347	MAX-993348
10	10	22	70	MAX-993283	MAX-993284	MAX-993285	MAX-993349	MAX-993350	MAX-993351
10	10	38	100	MAX-993474	-	MAX-993475	MAX-993498	-	MAX-993499
10	10	75	150	MAX-993522	-	MAX-993523	MAX-993538	-	MAX-993539
11	11	25	70	MAX-993286	MAX-993287	MAX-993288	MAX-993352	MAX-993353	MAX-993354
12	12	25	75	MAX-993289	MAX-993290	MAX-993291	MAX-993355	MAX-993356	MAX-993357
12	12	50	100	MAX-993476	-	MAX-993477	MAX-993500	-	MAX-993501
12	12	75	150	MAX-993524	-	MAX-993525	MAX-993540	-	MAX-993541
14	14	30	88	MAX-993292	MAX-993293	MAX-993294	MAX-993358	MAX-993359	MAX-993360
14	14	50	125	MAX-993478	-	MAX-993479	MAX-993502	-	MAX-993503
14	14	75	150	MAX-993526	-	MAX-993527	MAX-993542	-	MAX-993543
16	16	32	88	MAX-993295	MAX-993296	MAX-993297	MAX-993361	MAX-993362	MAX-993363
16	16	75	150	MAX-993480	-	MAX-993481	MAX-993504	-	MAX-993505
18	18	36	100	MAX-993298	MAX-993299	MAX-993300	MAX-993364	MAX-993365	MAX-993366
18	18	75	150	MAX-993482	-	MAX-993483	MAX-993506	-	MAX-993507
20	20	38	100	MAX-993301	MAX-993302	MAX-993303	MAX-993367	MAX-993368	MAX-993369
20	20	75	150	MAX-993484	-	MAX-993485	MAX-993508	-	MAX-993509
22	22	38	100	MAX-993304	MAX-993305	MAX-993306	MAX-993370	MAX-993371	MAX-993372
25	25	38	100	MAX-993307	MAX-993308	MAX-993309	MAX-993373	MAX-993374	MAX-993375
25	25	75	150	MAX-993486	-	MAX-993487	MAX-993510	-	MAX-993511



D Cutter Ø	d Shank Ø	L1 Length Of Cut	L Overall Length	Uncoated			TiAlN		
				2FL	3FL	4FL	2FL	3FL	4FL
1/32"	1/8"	1/16"	1-1/2"	MAX-991907	MAX-991908	MAX-991909	MAX-992003	MAX-992004	MAX-993580
1/32"	1/8"	3/32"	1-1/2"	MAX-992053	MAX-992054	MAX-992055	MAX-992436	MAX-992437	MAX-992438
3/64"	1/8"	3/32"	1-1/2"	MAX-991910	MAX-991911	MAX-991912	MAX-992005	MAX-992006	MAX-992007
3/64"	1/8"	1/8"	1-1/2"	MAX-992056	MAX-992057	MAX-992058	MAX-992439	MAX-992440	MAX-992441
1/16"	1/8"	1/8"	1-1/2"	MAX-991913	MAX-991914	MAX-991915	MAX-992008	MAX-992009	MAX-992010
1/16"	1/8"	3/16"	1-1/2"	MAX-992059	MAX-992060	MAX-992061	MAX-992442	MAX-992443	MAX-992444
5/64"	1/8"	1/4"	1-1/2"	MAX-992062	MAX-992063	MAX-992064	MAX-992445	MAX-992446	MAX-992447
3/32"	1/8"	3/16"	1-1/2"	MAX-991916	MAX-991917	MAX-991918	MAX-992011	MAX-992012	MAX-992013
3/32"	1/8"	3/8"	1-1/2"	MAX-992065	MAX-992066	MAX-992067	MAX-992448	MAX-992449	MAX-992450
7/64"	1/8"	3/8"	1-1/2"	MAX-992071	MAX-992072	MAX-992073	MAX-992454	MAX-992455	MAX-992456
1/8"	1/8"	1/4"	1-1/2"	MAX-991922	MAX-991923	MAX-991924	MAX-992017	MAX-992018	MAX-992019
1/8"	1/8"	1/2"	1-1/2"	MAX-992074	MAX-992075	MAX-992076	MAX-992457	MAX-991566	MAX-992459
1/8"	1/8"	3/4"	2-1/2"	MAX-992628	-	MAX-992629	MAX-992672	-	MAX-992673
1/8"	1/8"	1"	3"	MAX-992696	-	MAX-992697	MAX-992760	-	MAX-992761
9/64"	3/16"	9/16"	2"	MAX-992077	MAX-992078	MAX-992079	MAX-992460	MAX-992461	MAX-992462
5/32"	3/16"	5/16"	2"	MAX-991925	MAX-991926	MAX-991927	MAX-992020	MAX-992021	MAX-992022
5/32"	3/16"	9/16"	2"	MAX-992080	MAX-992081	MAX-992082	MAX-992463	MAX-992464	MAX-992465
11/64"	3/16"	9/16"	2"	MAX-992083	MAX-992084	MAX-992085	MAX-992466	MAX-992467	MAX-992468
3/16"	3/16"	3/8"	2"	MAX-991928	MAX-991929	MAX-991930	MAX-992023	MAX-992024	MAX-992025
3/16"	3/16"	5/8"	2"	MAX-992086	MAX-992087	MAX-992088	MAX-992470	MAX-992471	MAX-992472
3/16"	3/16"	3/4"	2-1/2"	MAX-992630	-	MAX-992631	MAX-992674	-	MAX-992675
3/16"	3/16"	1-1/8"	3"	MAX-992698	-	MAX-992699	MAX-992762	-	MAX-992763
13/64"	1/4"	5/8"	2-1/2"	MAX-992089	MAX-992090	MAX-992091	MAX-992473	MAX-992474	MAX-992475
7/32"	1/4"	7/16"	2"	MAX-991931	MAX-991932	MAX-991933	MAX-992026	MAX-992027	MAX-992028
7/32"	1/4"	5/8"	2-1/2"	MAX-992092	MAX-992093	MAX-992094	MAX-992476	MAX-992477	MAX-992478
15/64"	1/4"	3/4"	2-1/2"	MAX-992095	MAX-992096	MAX-992097	MAX-992479	MAX-992480	MAX-992481
1/4"	1/4"	1/2"	2"	MAX-991934	MAX-991935	MAX-991936	MAX-992029	MAX-992030	MAX-992031
1/4"	1/4"	3/4"	2-1/2"	MAX-992098	MAX-992099	MAX-992100	MAX-992482	MAX-992483	MAX-992484
1/4"	1/4"	1-1/8"	3"	MAX-992632	-	MAX-992633	MAX-992676	-	MAX-992677
1/4"	1/4"	1-1/2"	4"	MAX-992700	-	MAX-992701	MAX-992764	-	MAX-992765
17/64"	5/16"	7/8"	2-1/2"	MAX-992101	MAX-992102	MAX-992103	MAX-992485	MAX-992486	MAX-992487
9/32"	5/16"	7/8"	2-1/2"	MAX-992104	MAX-992105	MAX-992106	MAX-992488	MAX-992489	MAX-992490
19/64"	5/16"	7/8"	2-1/2"	MAX-992107	MAX-992108	MAX-992109	MAX-992491	MAX-992492	MAX-992493
5/16"	5/16"	1/2"	2"	MAX-991937	MAX-991938	MAX-991939	MAX-992032	MAX-992033	MAX-992034
5/16"	5/16"	7/8"	2-1/2"	MAX-992110	MAX-992111	MAX-992112	MAX-992494	MAX-992495	MAX-992496
5/16"	5/16"	1-1/8"	3"	MAX-992634	-	MAX-992635	MAX-992678	-	MAX-992679
5/16"	5/16"	1-5/8"	4"	MAX-992704	-	MAX-992705	MAX-992768	-	MAX-992769

GENERAL PURPOSE
 Ball Nose End - Fractional



D Cutter Ø	d Shank Ø	L1 Length Of Cut	L Overall Length	Uncoated			TiAlN		
				2FL	3FL	4FL	2FL	3FL	4FL
21/64"	3/8"	7/8"	2-1/2"	MAX-992113	MAX-992114	MAX-992115	MAX-992497	MAX-992498	MAX-992499
11/32"	3/8"	7/8"	2-1/2"	MAX-992116	MAX-992117	MAX-992118	MAX-992500	MAX-992501	MAX-992502
23/64"	3/8"	7/8"	2-1/2"	MAX-992119	MAX-992120	MAX-992121	MAX-992503	MAX-992504	MAX-992505
3/8"	3/8"	5/8"	2"	MAX-991940	MAX-991941	MAX-991942	MAX-992035	MAX-992036	MAX-992037
3/8"	3/8"	1"	2-1/2"	MAX-992122	MAX-992123	MAX-992124	MAX-992506	MAX-992507	MAX-992508
3/8"	3/8"	1-1/8"	3"	MAX-992636	-	MAX-992637	MAX-992680	-	MAX-992681
3/8"	3/8"	1-3/4"	4"	MAX-992710	-	MAX-992711	MAX-992774	-	MAX-992775
25/64"	7/16"	1"	2-1/2"	MAX-992125	MAX-992126	MAX-992127	MAX-992509	MAX-992510	MAX-992511
13/32"	7/16"	1"	2-1/2"	MAX-992128	MAX-992129	MAX-992130	MAX-992512	MAX-992513	MAX-992514
27/64"	7/16"	1"	2-1/2"	MAX-992131	MAX-992132	MAX-992133	MAX-992515	MAX-992516	MAX-992517
7/16"	7/16"	5/8"	2-1/2"	MAX-991943	MAX-991944	MAX-991945	MAX-992038	MAX-992039	MAX-992040
7/16"	7/16"	1"	2-1/2"	MAX-992134	MAX-992135	MAX-992136	MAX-992518	MAX-992519	MAX-992520
7/16"	7/16"	2"	4"	MAX-992638	-	MAX-992639	MAX-992682	-	MAX-992683
29/64"	1/2"	1"	3"	MAX-992137	MAX-992138	MAX-992139	MAX-992521	MAX-992522	MAX-992523
15/32"	1/2"	1"	3"	MAX-992140	MAX-992141	MAX-992142	MAX-992524	MAX-992525	MAX-992526
31/64"	1/2"	1"	3"	MAX-992143	MAX-992144	MAX-992145	MAX-992527	MAX-992528	MAX-992529
1/2"	1/2"	5/8"	2-1/2"	MAX-991946	MAX-991947	MAX-991948	MAX-992041	MAX-992042	MAX-992043
1/2"	1/2"	1"	3"	MAX-992146	MAX-992147	MAX-992148	MAX-992530	MAX-992531	MAX-992532
1/2"	1/2"	1-1/4"	3"	-	-	-	-	-	-
1/2"	1/2"	2"	4"	MAX-992640	-	MAX-992641	MAX-992684	-	MAX-992685
1/2"	1/2"	3"	6"	MAX-992714	-	MAX-992715	MAX-992778	-	MAX-992779
33/64"	9/16"	1-1/4"	3-1/2"	MAX-992149	MAX-992150	MAX-992151	MAX-992533	MAX-992534	MAX-992535
17/32"	9/16"	1-1/4"	3-1/2"	MAX-992152	MAX-992153	MAX-992154	MAX-992536	MAX-992537	MAX-992538
35/64"	9/16"	1-1/4"	3-1/2"	MAX-992155	MAX-992156	MAX-992157	MAX-992539	MAX-992540	MAX-992541
9/16"	9/16"	1-1/4"	3-1/2"	MAX-992158	MAX-992159	MAX-992160	MAX-992542	MAX-992543	MAX-992544
37/64"	5/8"	1-1/4"	3-1/2"	MAX-992161	MAX-992162	MAX-992163	MAX-992545	MAX-992546	MAX-992547
19/32"	5/8"	1-1/4"	3-1/2"	MAX-992164	MAX-992165	MAX-992166	MAX-992548	MAX-992549	MAX-992550
39/64"	5/8"	1-1/4"	3-1/2"	MAX-992167	MAX-992168	MAX-992169	MAX-992551	MAX-992552	MAX-992553
5/8"	5/8"	3/4"	3"	MAX-991949	MAX-991950	MAX-991951	MAX-992044	MAX-992045	MAX-992046
5/8"	5/8"	1-1/4"	3-1/2"	MAX-992170	MAX-992171	MAX-992172	MAX-992554	MAX-992555	MAX-992556
5/8"	5/8"	2-1/4"	5"	MAX-992644	-	MAX-992645	MAX-992688	-	MAX-992689
5/8"	5/8"	3"	6"	MAX-992718	-	MAX-992719	MAX-992782	-	MAX-992783
41/64"	3/4"	1-1/2"	4"	MAX-992173	MAX-992174	MAX-992175	MAX-992557	MAX-992558	MAX-992559
21/32"	3/4"	1-1/2"	4"	MAX-992176	MAX-992177	MAX-992178	MAX-992560	MAX-992561	MAX-992562
43/64"	3/4"	1-1/2"	4"	MAX-992179	MAX-992180	MAX-992181	MAX-992563	MAX-992564	MAX-992565
11/16"	3/4"	1-1/2"	4"	MAX-992182	MAX-992183	MAX-992184	MAX-992566	MAX-992567	MAX-992568
45/64"	3/4"	1-1/2"	4"	MAX-992185	MAX-992186	MAX-993999	MAX-992569	MAX-992570	MAX-992571



D Cutter Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	Uncoated			TiALN		
				2FL	3FL	4FL	2FL	3FL	4FL
23/32"	3/4"	1-1/2"	4"	MAX-992187	MAX-992188	MAX-992189	MAX-992572	MAX-992573	MAX-992574
47/64"	3/4"	1-1/2"	4"	MAX-992190	MAX-992191	MAX-992192	MAX-992575	MAX-992576	MAX-992577
3/4"	3/4"	1"	3"	MAX-991952	MAX-991953	MAX-991954	MAX-992047	MAX-992048	MAX-992049
3/4"	3/4"	1-1/2"	4"	MAX-992193	MAX-992194	MAX-992195	MAX-992578	MAX-992579	MAX-992580
3/4"	3/4"	2-1/4"	5"	MAX-992646	-	MAX-992647	MAX-992690	-	MAX-992691
3/4"	3/4"	3"	6"	MAX-992720	-	MAX-992721	MAX-992784	-	MAX-992785
49/64"	7/8"	1-1/2"	4"	MAX-992196	MAX-992197	MAX-992198	MAX-992581	MAX-992582	MAX-992583
25/32"	7/8"	1-1/2"	4"	MAX-992199	MAX-992200	MAX-992201	MAX-992584	MAX-992585	MAX-992586
51/64"	7/8"	1-1/2"	4"	MAX-992202	MAX-992203	MAX-992204	MAX-992587	MAX-992588	MAX-992589
13/16"	7/8"	1-1/2"	4"	MAX-992205	MAX-992206	MAX-992207	MAX-992590	MAX-992591	MAX-992592
53/64"	7/8"	1-1/2"	4"	MAX-992208	MAX-992209	MAX-992210	MAX-992593	MAX-992594	MAX-992595
27/32"	7/8"	1-1/2"	4"	MAX-992211	MAX-992212	MAX-992213	MAX-992596	MAX-992597	MAX-992598
55/64"	7/8"	1-1/2"	4"	MAX-992214	MAX-992215	MAX-992216	MAX-992599	MAX-992600	MAX-992601
7/8"	7/8"	1-1/2"	4"	MAX-992217	MAX-992218	MAX-992219	MAX-992602	MAX-992603	MAX-992604
57/64"	1"	1-1/2"	4"	MAX-992220	MAX-992221	MAX-992222	MAX-992605	MAX-992606	MAX-992607
29/32"	1"	1-1/2"	4"	MAX-992223	MAX-992224	MAX-992225	MAX-992608	MAX-992609	MAX-992610
59/64"	1"	1-1/2"	4"	MAX-992226	MAX-992227	MAX-992228	MAX-992611	MAX-992612	MAX-992613
15/16"	1"	1-1/2"	4"	MAX-992229	MAX-992230	MAX-992231	MAX-992614	MAX-992615	MAX-992616
61/64"	1"	1-1/2"	4"	MAX-992232	MAX-992233	MAX-992234	MAX-992617	MAX-992618	MAX-992619
31/32"	1"	1-1/2"	4"	MAX-992235	MAX-992236	MAX-992237	MAX-992620	MAX-992621	MAX-992622
63/64"	1"	1-1/2"	4"	MAX-992238	MAX-992239	MAX-992240	MAX-992623	MAX-992624	MAX-992625
1"	1"	1"	3"	MAX-991919	MAX-991920	MAX-991921	MAX-992014	MAX-992015	MAX-992016
1"	1"	1-1/2"	4"	MAX-992068	MAX-992069	MAX-992070	MAX-992451	MAX-992452	MAX-992453
1"	1"	2-1/4"	5"	MAX-992626	-	MAX-992627	MAX-992670	-	MAX-992671
1"	1"	3"	6"	MAX-992692	-	MAX-992693	MAX-992756	-	MAX-992757

Engraving Tool



D Tip Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	TiALN 1FL
.005"	1/4"	1/2"	2-1/2"	MAX-993998
.010"	1/4"	1/2"	2-1/2"	MAX-993581
.020"	1/4"	1/2"	2-1/2"	MAX-993582

Spot Drill



D Drill Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	TiALN 2FL
1/4"	1/4"	1/2"	3"	MAX-993583
3/8"	3/8"	3/4"	3"	MAX-993584
1/2"	1/2"	1"	4"	MAX-993585
5/8"	5/8"	1"	4"	MAX-993586
3/4"	3/4"	1-1/8"	4"	MAX-993587

GENERAL PURPOSE
Ball Nose End - Metric

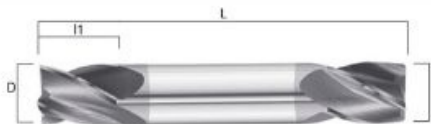


D Cutter Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	Uncoated		TiALN	
				2FL	4FL	2FL	4FL
1	1	3	38	MAX-993376	MAX-993377	MAX-993420	MAX-993421
1.5	2	5	38	MAX-993378	MAX-993379	MAX-993422	MAX-993423
2	2	6	38	MAX-993380	MAX-993381	MAX-993424	MAX-993425
3	3	12	38	MAX-993384	MAX-993385	MAX-993428	MAX-993429
3.5	4	12	50	MAX-993386	MAX-993387	MAX-993430	MAX-993431
4	4	14	50	MAX-993388	MAX-993389	MAX-993432	MAX-993433
4.5	5	14	50	MAX-993390	MAX-993391	MAX-993434	MAX-993435
5	5	16	50	MAX-993392	MAX-993393	MAX-993436	MAX-993437
6	6	19	63	MAX-993394	MAX-993395	MAX-993438	MAX-993439
7	7	19	63	MAX-993396	MAX-993397	MAX-993440	MAX-993441
8	8	19	63	MAX-993398	MAX-993399	MAX-993442	MAX-993443
9	9	22	70	MAX-993400	MAX-993401	MAX-993444	MAX-993445
10	10	22	70	MAX-993402	MAX-993403	MAX-993446	MAX-993447
11	11	25	70	MAX-993404	MAX-993405	MAX-993448	MAX-993449
12	12	25	75	MAX-993406	MAX-993407	MAX-993450	MAX-993451
14	14	30	88	MAX-993408	MAX-993409	MAX-993452	MAX-993453
16	16	32	88	MAX-993410	MAX-993411	MAX-993454	MAX-993455
18	18	36	100	MAX-993412	MAX-993413	MAX-993456	MAX-993457
20	20	38	100	MAX-993414	MAX-993415	MAX-993458	MAX-993459
22	25	38	100	MAX-993416	MAX-993417	MAX-993460	MAX-993461
25	25	38	100	MAX-993418	MAX-993419	MAX-993462	MAX-993463

90° Drill/Mill - Fractional



D Cutter Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	Uncoated		TiALN	
				2FL	4FL	2FL	4FL
1/8"	1/8"	1-1/6"	1-1/2"	MAX-993544	MAX-993545	MAX-993562	MAX-993563
3/16"	3/16"	5/8"	2"	MAX-993546	MAX-993547	MAX-993564	MAX-993565
1/4"	1/4"	3/4"	2-1/2"	MAX-993548	MAX-993549	MAX-993566	MAX-993567
5/16"	5/16"	7/8"	2-1/2"	MAX-993550	MAX-993551	MAX-993568	MAX-993569
3/8"	3/8"	1"	2-1/2"	MAX-993552	MAX-993553	MAX-993570	MAX-993571
7/16"	7/16"	1"	2-1/2"	MAX-993554	MAX-993555	MAX-993572	MAX-993573
1/2"	1/2"	1"	3"	MAX-993556	MAX-993557	MAX-993574	MAX-993575
5/8"	5/8"	1-1/4"	3-1/2"	MAX-993558	MAX-993559	MAX-993576	MAX-993577
3/4"	3/4"	1-1/2"	4"	MAX-993560	MAX-993561	MAX-993578	MAX-993579



D Cutter Ø	d Shank Ø	I1 LOC Length Of Cut	L OAL Overall Length	Uncoated		TiALN	
				2FL	4FL	2FL	4FL
1/32"	1/8"	1/16"	1-1/2"	MAX-992788	MAX-992789	MAX-992860	MAX-992861
3/64"	1/8"	3/32"	1-1/2"	MAX-992790	MAX-992791	MAX-992862	MAX-992863
1/16"	1/8"	1/8"	1-1/2"	MAX-992792	MAX-992793	MAX-992864	MAX-992865
3/32"	1/8"	3/16"	1-1/2"	MAX-992794	MAX-992795	MAX-992866	MAX-992867
7/64"	1/8"	7/32"	1-1/2"	MAX-992796	MAX-992797	MAX-992868	MAX-992869
1/8"	1/8"	1/4"	1-1/2"	MAX-992798	MAX-992799	MAX-992870	MAX-992871
5/32"	3/16"	5/16"	2"	MAX-992800	MAX-992801	MAX-992872	MAX-992873
5/32"	3/16"	7/16"	3"	MAX-993008	MAX-993009	MAX-993036	MAX-993037
3/16"	3/16"	5/16"	2"	MAX-992802	MAX-992803	MAX-992874	MAX-992875
3/16"	3/16"	1/2"	3"	MAX-993010	MAX-993011	MAX-993038	MAX-993039
7/32"	1/4"	3/8"	2-1/2"	MAX-992804	MAX-992805	MAX-992876	MAX-992877
7/32"	1/4"	9/16"	4"	MAX-993012	MAX-993011	MAX-993040	MAX-993041
1/4"	1/4"	1/2"	2-1/2"	MAX-992806	MAX-992807	MAX-992878	MAX-992879
1/4"	1/4"	5/8"	4"	MAX-993014	MAX-993015	MAX-993042	MAX-993043
9/32"	5/16"	1/2"	2-1/2"	MAX-992808	MAX-992809	MAX-992880	MAX-992881
5/16"	5/16"	1/2"	2-1/2"	MAX-992810	MAX-992811	MAX-992882	MAX-992883
5/16"	5/16"	3/4"	4"	MAX-993016	MAX-993017	MAX-993044	MAX-993045
3/8"	3/8"	9/16"	2-1/2"	MAX-992812	MAX-992813	MAX-992884	MAX-992885
3/8"	3/8"	3/4"	4"	MAX-993020	MAX-993021	MAX-993048	MAX-993049
7/16"	1/2"	9/16"	2-3/4"	MAX-992814	MAX-992815	MAX-992886	MAX-992887
7/16"	1/2"	7/8"	4"	MAX-993022	MAX-993023	MAX-993050	MAX-993051
1/2"	1/2"	5/8"	3"	MAX-992816	MAX-992817	MAX-992888	MAX-992889
1/2"	1/2"	1"	4"	MAX-993024	MAX-993025	MAX-993052	MAX-993053
9/16"	5/8"	11/16"	3-1/2"	MAX-992818	MAX-992819	MAX-992890	MAX-992891
5/8"	5/8"	11/16"	3-1/2"	MAX-992820	MAX-992821	MAX-992892	MAX-992893
5/8"	5/8"	1-1/2"	6"	MAX-993028	MAX-993029	MAX-993056	MAX-993057
3/4"	3/4"	7/8"	4"	MAX-992822	MAX-992823	MAX-992894	MAX-992895
3/4"	3/4"	1-1/2"	6"	MAX-993030	MAX-993031	MAX-993058	MAX-993059



D Cutter Ø	d Shank Ø	I1 LOC Length Of Cut	L OAL Overall Length	Uncoated		TiALN	
				2FL	4FL	2FL	4FL
1/32"	1/8"	1/16"	1-1/2"	MAX-992896	MAX-992897	MAX-992968	MAX-992969
3/64"	1/8"	3/32"	1-1/2"	MAX-992898	MAX-992899	MAX-992970	MAX-992971
1/16"	1/8"	1/8"	1-1/2"	MAX-992900	MAX-992901	MAX-992972	MAX-992973
3/32"	1/8"	3/16"	1-1/2"	MAX-992902	MAX-992903	MAX-992974	MAX-992975
7/64"	1/8"	7/32"	1-1/2"	MAX-992904	MAX-992905	MAX-992976	MAX-992977
1/8"	1/8"	1/4"	1-1/2"	MAX-992906	MAX-992907	MAX-992978	MAX-992979
5/32"	3/16"	5/16"	2"	MAX-992908	MAX-992909	MAX-992980	MAX-992981
5/32"	3/16"	7/16"	3"	MAX-993064	MAX-993065	MAX-993092	MAX-993093
3/16"	3/16"	5/16"	2"	MAX-992910	MAX-992911	MAX-992982	MAX-992983
3/16"	3/16"	1/2"	3"	MAX-993066	MAX-993067	MAX-993094	MAX-993095
7/32"	1/4"	3/8"	2-1/2"	MAX-992912	MAX-992913	MAX-992984	MAX-992985
7/32"	1/4"	9/16"	4"	MAX-993068	MAX-993069	MAX-993096	MAX-993097
1/4"	1/4"	1/2"	2-1/2"	MAX-992914	MAX-992915	MAX-992986	MAX-992987
1/4"	1/4"	5/8"	4"	MAX-993070	MAX-993071	MAX-993098	MAX-993099
9/32"	5/16"	1/2"	2-1/2"	MAX-992916	MAX-992917	MAX-992988	MAX-992989
5/16"	5/16"	1/2"	2-1/2"	MAX-992918	MAX-992919	MAX-992990	MAX-992991
5/16"	5/16"	3/4"	4"	MAX-993072	MAX-993073	MAX-993100	MAX-993101
3/8"	3/8"	9/16"	2-1/2"	MAX-992920	MAX-992921	MAX-992992	MAX-992993
3/8"	3/8"	3/4"	4"	MAX-993076	MAX-993077	MAX-993104	MAX-993105
7/16"	1/2"	9/16"	2-3/4"	MAX-992922	MAX-992923	MAX-992994	MAX-992995
7/16"	1/2"	7/8"	4"	MAX-993078	MAX-993079	MAX-993106	MAX-993107
1/2"	1/2"	5/8"	3"	MAX-992924	MAX-992925	MAX-992996	MAX-992997
1/2"	1/2"	1"	4"	MAX-993080	MAX-993081	MAX-993108	MAX-993109
9/16"	5/8"	11/16"	3-1/2"	MAX-992926	MAX-992927	MAX-992998	MAX-992999
5/8"	5/8"	11/16"	3-1/2"	MAX-992928	MAX-992929	MAX-993000	MAX-993001
5/8"	5/8"	1-1/2"	6"	MAX-993084	MAX-993085	MAX-993112	MAX-993113
3/4"	3/4"	7/8"	4"	MAX-992930	MAX-992931	MAX-993002	MAX-993003
3/4"	3/4"	1-1/2"	6"	MAX-993086	MAX-993087	MAX-993114	MAX-993115

HIGH PERFORMANCE

HIGH PERFORMANCE. PRECISION. STABILITY.

The **High Performance Series** is engineered for superior performance in demanding applications, featuring variable pitch geometry to significantly reduce chatter and vibration. All HP Series undergo a unique honing process to improve edge integrity and finish quality with specially designed core and heel geometry to enhance rigidity and minimize tool deflection for consistent, accurate results.

Choose from a broad selection of geometries, lengths, and configurations to match your specific needs that provide dependable results with for plunging, pocketing, slotting, ramping and profiling applications.

Material: Premium: 10% micrograin carbide for enhanced strength and wear resistance
Honed Cutting Edges: All tools are honed to extend tool life and improve cutting performance
Wide Range of Sizes: Cutting diameters from 1/8" to 1" - Centre Cutting

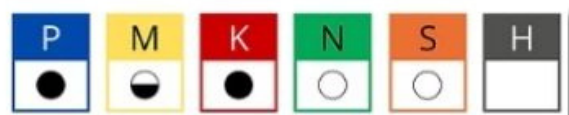
Geometries for Every Application:

- Square & Corner Radius End – 4 & 5 Flute
- Ball Nose – 4 Flute
- Long Reach Neck Relief Square & Corner Radius End – 4 Flute
- Long Reach Neck Relief Ball Nose – 4 Flute

Versatile Configurations: Length of Cut from 7/16" to 3"

Coating Options:

- TiAlN Coated – Provides high heat resistance and extended tool life in harder materials or high-speed applications



Shank Tolerance: +0.0000" / -0.0004"
Diameter Tolerance: +0.0000" / -0.0015"

Material Classification		Speed	Feed Per Tooth By End Mill Diameter (IPT)							
		SFM	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
Aluminum Alloys & Aluminum	N	900 - 1800	.0025	.0030	.0035	.0040	.0045	.0055	.0065	.0085
Copper Alloys & Copper		525 - 1275	.0025	.0030	.0030	.0035	.0035	.0040	.0045	.0065
Bronze & Brass		375 - 600	.0025	.0030	.0030	.0035	.0035	.0040	.0045	.0055
Graphite		---	---	---	---	---	---	---	---	---
Plastics		---	---	---	---	---	---	---	---	---
Softer Cast Iron	K	375 - 650	.0025	.0027	.0030	.0032	.0035	.0040	.0045	.0085
Harder Cast Iron		100 - 375	.0013	.0015	.0020	.0022	.0025	.0030	.0035	.0045
Ductile Iron		100 - 600	.0015	.0017	.0020	.0022	.0025	.0035	.0045	.0065
Malleable Iron		225 - 650	.0015	.0020	.0025	.0030	.0035	.0045	.0055	.0075
Low Carbon Steels (1020 & Under)	P	300 - 600	.0015	.0020	.0025	.0030	.0035	.0045	.0055	.0075
Medium Carbon Steels (1030-1060)		150 - 375	.0020	.0021	.0022	.0023	.0025	.0035	.0045	.0055
Alloy Steels Hardened to 35 Rc		130 - 345	.0015	.0016	.0017	.0018	.0020	.0022	.0025	.0035
Alloy Steels Hardened to 40-50 Rc		70 - 160	.0012	.0012	.0013	.0014	.0015	.0020	.0025	.0035
Die Steels Hardened to 51-60 Rc		---	---	---	---	---	---	---	---	---
Tool Steels		150 - 375	.0015	.0017	.0020	.0022	.0025	.0030	.0035	.0045
Mold Steels		300 - 525	.0015	.0017	.0020	.0022	.0025	.0030	.0035	.0045
Softer Stainless Steels	M	300 - 450	.0015	.0017	.0020	.0017	.0025	.0035	.0045	.0065
Harder Stainless Steels		150 - 300	.0010	.0011	.0012	.0013	.0015	.0025	.0035	.0055
Monel & High Nickel Steel	S	75 - 200	.0015	.0017	.0020	.0021	.0025	.0030	.0035	.0045
Softer Titanium		125 - 375	.0015	.0017	.0020	.0021	.0025	.0035	.0045	.0065
Harder Titanium		50 - 175	.0010	.0011	.0012	.0012	.0014	.0017	.0022	.0023
Nickel Based High Temp Alloys		50 - 125	.0013	.0012	.0011	.0011	.0014	.0015	.0017	.0023

- Higher Feed Per Tooth should be used to start for radial depths of cut less than 25% of the tool diameter.
- The above recommendations are for axial lengths of cut not to exceed 1.25x the tool diameter for profiling and .75x the diameter for full slotting.
- The above parameters are recommended starting points only. If the tool is working well, without vibrations or significant noise, increase the SFM and/or Feed Per Tooth in 5-10% increments.
- Optimum speeds & feeds will depend upon material, setup, machine conditions & tool deflection. Higher or lower parameters may be required to achieve optimum machining conditions.
- For Light Radial Depts of cut, make certain to increase the feed rate to compensate for Radial Chip Thinning Factor (RCTF). Consult a formula or app to calculate.
- For Plunging or Ramping the feed rate should be reduced by about 50%
- Climb Milling is preferred to Conventional Milling.



D Cutter Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	End Face	TiALN 4FL Round Shank	TiALN 4FL Weldon Shank	5FL Round Shank
1/8"	1/8"	1/2"	1-1/2"	SQ	MAX-884000	-	-
1/8"	1/8"	1/2"	1-1/2"	.010"R	MAX-884001	-	-
3/16"	3/16"	3/8"	2"	SQ	MAX-881147	-	-
3/16"	3/16"	3/8"	2"	.015"R	MAX-881148	-	-
3/16"	3/16"	5/8"	2"	SQ	MAX-881004	-	-
3/16"	3/16"	5/8"	2"	.015"R	MAX-881005	-	-
3/16"	3/16"	3/4"	2-1/2"	SQ	MAX-881053	-	-
3/16"	3/16"	3/4"	2-1/2"	.015"R	MAX-881054	-	-
3/16"	3/16"	1-1/8"	3"	SQ	MAX-881132	-	-
3/16"	3/16"	1-1/8"	3"	.015"R	MAX-884003	-	-
1/4"	1/4"	3/8"	2"	SQ	MAX-881149	-	-
1/4"	1/4"	3/8"	2"	.015"R	MAX-881150	-	-
1/4"	1/4"	3/4"	2-1/2"	SQ	MAX-881006	MAX-881030	MAX-884011
1/4"	1/4"	3/4"	2-1/2"	.020"R	MAX-881007	MAX-881031	MAX-884012
1/4"	1/4"	1-1/8"	3"	SQ	MAX-881055	MAX-881078	MAX-884025
1/4"	1/4"	1-1/8"	3"	.020"R	MAX-881056	MAX-881079	MAX-884026
1/4"	1/4"	1-1/2"	4"	SQ	MAX-881133	-	MAX-884039
1/4"	1/4"	1-1/2"	4"	.020"R	MAX-884004	-	MAX-884040
5/16"	5/16"	3/8"	2"	SQ	MAX-881151	-	-
5/16"	5/16"	3/8"	2"	.020"R	MAX-881152	-	-
5/16"	5/16"	13/16"	2-1/2"	SQ	MAX-881008	MAX-881032	MAX-884013
5/16"	5/16"	13/16"	2-1/2"	.020"R	MAX-881009	MAX-881033	MAX-884014
5/16"	5/16"	1-1/8"	3"	SQ	MAX-881057	MAX-881080	MAX-884027
5/16"	5/16"	1-1/8"	3"	.020"R	MAX-881058	MAX-881081	MAX-884028
5/16"	5/16"	1-5/8"	4"	SQ	MAX-881134	-	MAX-884041
5/16"	5/16"	1-5/8"	4"	.020"R	MAX-884005	-	MAX-884042
3/8"	3/8"	1/2"	2"	SQ	MAX-881153	-	-
3/8"	3/8"	1/2"	2"	.020"R	MAX-881154	-	-
3/8"	3/8"	7/8"	4"	SQ	MAX-881010	MAX-881034	MAX-884015
3/8"	3/8"	7/8"	4"	.020"R	MAX-881011	MAX-881035	MAX-884016
3/8"	3/8"	1-1/8"	3"	SQ	MAX-881059	MAX-881082	MAX-884029
3/8"	3/8"	1-1/8"	3"	.020"R	MAX-881060	MAX-881083	MAX-884030
3/8"	3/8"	1-3/4"	4"	SQ	MAX-881135	-	MAX-884043
3/8"	3/8"	1-3/4"	4"	.020"R	MAX-884006	-	MAX-884044
7/16"	7/16"	1"	2-3/4"	SQ	MAX-881013	MAX-881036	-
7/16"	7/16"	2"	4"	SQ	MAX-881061	MAX-881084	-
1/2"	1/2"	5/8"	2-1/2"	SQ	MAX-881155	MAX-881161	-
1/2"	1/2"	5/8"	2-1/2"	.030"R	MAX-881156	MAX-881162	-
1/2"	1/2"	1-1/4"	3"	SQ	MAX-881014	MAX-881037	MAX-884017
1/2"	1/2"	1-1/4"	3"	.015"R	MAX-881015	MAX-881038	-
1/2"	1/2"	1-1/4"	3"	.030"R	MAX-881016	MAX-881039	MAX-884018
1/2"	1/2"	1-1/4"	3"	.060"R	MAX-881017	MAX-881040	-



D Cutter Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	End Face	TiALN 4FL Round Shank	TiALN 4FL Weldon Shank	5FL Round Shank
1/2"	1/2"	2"	2"	SQ	MAX-881062	MAX-881085	MAX-884031
1/2"	1/2"	2"	2"	.015"R	MAX-881063	MAX-881086	-
1/2"	1/2"	2"	2"	.030"R	MAX-881064	MAX-881087	MAX-884032
1/2"	1/2"	2"	2"	.060"R	MAX-881065	MAX-881088	-
1/2"	1/2"	3"	3"	SQ	MAX-881136	-	MAX-884045
1/2"	1/2"	3"	3"	.030"R	MAX-884007	-	MAX-884046
5/8"	5/8"	3/4"	3/4"	SQ	MAX-881157	MAX-881163	-
5/8"	5/8"	3/4"	3/4"	.030"R	MAX-881158	MAX-881164	-
5/8"	5/8"	1-1/4"	1-1/4"	SQ	MAX-881018	MAX-881041	MAX-884019
5/8"	5/8"	1-1/4"	1-1/4"	.030"R	MAX-881019	MAX-881042	MAX-884020
5/8"	5/8"	1-1/4"	1-1/4"	.060"R	MAX-881020	MAX-881043	-
5/8"	5/8"	1-1/4"	1-1/4"	.125"R	MAX-881021	MAX-881044	-
5/8"	5/8"	2-1/4"	2-1/4"	SQ	MAX-881066	MAX-881089	MAX-884033
5/8"	5/8"	2-1/4"	2-1/4"	.030"R	MAX-881067	MAX-881090	MAX-884034
5/8"	5/8"	2-1/4"	2-1/4"	.060"R	MAX-881068	MAX-881091	-
5/8"	5/8"	2-1/4"	2-1/4"	.125"R	MAX-881069	MAX-881092	-
5/8"	5/8"	3"	3"	SQ	MAX-881137	-	MAX-884047
5/8"	5/8"	3"	3"	.030"R	MAX-884008	-	MAX-884048
3/4"	3/4"	1"	1"	SQ	MAX-881159	MAX-881165	-
3/4"	3/4"	1"	1"	.030"R	MAX-881160	MAX-881166	-
3/4"	3/4"	1-1/2"	1-1/2"	SQ	MAX-881022	MAX-881045	MAX-884021
3/4"	3/4"	1-1/2"	1-1/2"	.030"R	MAX-881023	MAX-881046	MAX-884022
3/4"	3/4"	1-1/2"	1-1/2"	.060"R	MAX-881024	MAX-881047	-
3/4"	3/4"	1-1/2"	1-1/2"	.125"R	MAX-881025	MAX-881048	-
3/4"	3/4"	2-1/4"	2-1/4"	SQ	MAX-881070	MAX-881093	MAX-884035
3/4"	3/4"	2-1/4"	2-1/4"	.030"R	MAX-881071	MAX-881094	MAX-884036
3/4"	3/4"	2-1/4"	2-1/4"	.060"R	MAX-881072	MAX-881095	-
3/4"	3/4"	2-1/4"	2-1/4"	.125"R	MAX-881073	MAX-881096	-
3/4"	3/4"	3"	3"	SQ	MAX-881138	-	MAX-884049
3/4"	3/4"	3"	3"	.030"R	MAX-884009	-	MAX-884050
1"	1"	1-1/2"	1-1/2"	SQ	MAX-881000	MAX-881026	MAX-884051
1"	1"	1-1/2"	1-1/2"	.030"R	MAX-881001	MAX-881027	MAX-884010
1"	1"	1-1/2"	1-1/2"	.060"R	MAX-881002	MAX-881028	-
1"	1"	1-1/2"	1-1/2"	.125"R	MAX-881003	MAX-881029	-
1"	1"	2-1/4"	2-1/4"	SQ	MAX-881049	MAX-881074	MAX-884023
1"	1"	2-1/4"	2-1/4"	.030"R	MAX-881050	MAX-881075	MAX-884024
1"	1"	2-1/4"	2-1/4"	.060"R	MAX-881051	MAX-881076	-
1"	1"	2-1/4"	2-1/4"	.125"R	MAX-881052	MAX-881077	-
1"	1"	3"	3"	SQ	MAX-881131	-	MAX-884037
1"	1"	3"	3"	.030"R	MAX-884002	-	MAX-884038

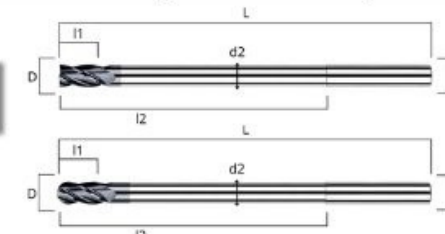
Ball Nose End - Fractional



D Cutter Ø	d Shank Ø	L1 LOC Length Of Cut	L OAL Overall Length	TiALN	
				4FL Round Shank	4FL Weldon Shank
3/16"	3/16"	5/8"	2"	MAX-881098	-
3/16"	3/16"	3/4"	2-1/2"	MAX-881115	-
3/16"	3/16"	1-1/8"	3"	MAX-881140	-
1/4"	1/4"	3/4"	2-1/2"	MAX-881099	MAX-881107
1/4"	1/4"	1-1/8"	3"	MAX-881116	MAX-881124
1/4"	1/4"	1-1/2"	4"	MAX-881141	-
5/16"	5/16"	13/16"	2-1/2"	MAX-881100	MAX-881108
5/16"	5/16"	1-1/8"	3"	MAX-881117	MAX-881125
5/16"	5/16"	1-5/8"	4"	MAX-881142	-
3/8"	3/8"	7/8"	2-1/2"	MAX-881101	MAX-881109
3/8"	3/8"	1-1/8"	3"	MAX-881118	MAX-881126
3/8"	3/8"	1-3/4"	4"	MAX-881143	-
7/16"	7/16"	1"	2-3/4"	MAX-881102	MAX-881110
7/16"	7/16"	2"	4"	MAX-881119	MAX-881127
1/2"	1/2"	1"	3"	MAX-881103	MAX-881111
1/2"	1/2"	2"	4"	MAX-881120	MAX-881128
1/2"	1/2"	3"	6"	MAX-881144	-
5/8"	5/8"	1-1/2"	3-1/2"	MAX-881104	MAX-881112
5/8"	5/8"	2-1/4"	5"	MAX-881121	MAX-881129
5/8"	5/8"	3"	6"	MAX-881145	-
3/4"	3/4"	1-1/2"	4"	MAX-881105	MAX-881113
3/4"	3/4"	2-1/4"	5"	MAX-881122	MAX-881130
3/4"	3/4"	3"	6"	MAX-881146	-
1"	1"	1-1/2"	4"	MAX-881097	MAX-881106
1"	1"	2-1/4"	5"	MAX-881114	MAX-881123
1"	1"	3"	6"	MAX-881139	-

HIGH PERFORMANCE

Long Reach Neck Relief - Fractional
Square, Corner Radius & Ball Nose End



D Cutter Ø	d Shank Ø	d2 Neck Ø	L1 LOC Length Of Cut	L2 LBS Length Below Shank	L OAL Overall Length	End Face	TiALN 4FL Round Shank
5/16"	5/16"	.3025"	7/16"	2-1/2"	4"	SQ	MAX-881177
5/16"	5/16"	.3025"	7/16"	2-1/2"	4"	.015"R	MAX-881178
5/16"	5/16"	.3025"	7/16"	2-1/2"	4"	BN	MAX-881200
3/8"	3/8"	.3650"	1/2"	2-1/2"	4"	SQ	MAX-881179
3/8"	3/8"	.3650"	1/2"	2-1/2"	4"	.015"R	MAX-881180
3/8"	3/8"	.3650"	1/2"	2-1/2"	4"	BN	MAX-881201
1/2"	1/2"	.4800"	5/8"	3"	5"	SQ	MAX-881181
1/2"	1/2"	.4800"	5/8"	3"	5"	.020"R	MAX-881182
1/2"	1/2"	.4800"	5/8"	3"	5"	BN	MAX-881202
1/2"	1/2"	.4800"	5/8"	4"	6"	SQ	MAX-881184
1/2"	1/2"	.4800"	5/8"	4"	6"	.020"R	MAX-881183
1/2"	1/2"	.4800"	5/8"	4"	6"	BN	MAX-881203
5/8"	5/8"	.6050"	3/4"	3"	5"	SQ	MAX-881185
5/8"	5/8"	.6050"	3/4"	3"	5"	.020"R	MAX-881186
5/8"	5/8"	.6050"	3/4"	3"	5"	BN	MAX-881204
5/8"	5/8"	.6050"	3/4"	4"	6"	SQ	MAX-881188
5/8"	5/8"	.6050"	3/4"	4"	6"	.020"R	MAX-881187
5/8"	5/8"	.6050"	3/4"	4"	6"	BN	MAX-881205
3/4"	3/4"	.7300"	1"	3"	5"	SQ	MAX-881189
3/4"	3/4"	.7300"	1"	3"	5"	.020"R	MAX-881190
3/4"	3/4"	.7300"	1"	3"	5"	BN	MAX-881206
3/4"	3/4"	.7300"	1"	4"	6"	SQ	MAX-881193
3/4"	3/4"	.7300"	1"	4"	6"	.020"R	MAX-881191
3/4"	3/4"	.7300"	1"	4"	6"	BN	MAX-881207
3/4"	3/4"	.7300"	1"	5"	7"	SQ	MAX-881194
3/4"	3/4"	.7300"	1"	5"	7"	.020"R	MAX-881192
3/4"	3/4"	.7300"	1"	5"	7"	BN	MAX-881208
1"	1"	.9800"	1-1/4"	3"	5"	SQ	MAX-881167
1"	1"	.9800"	1-1/4"	3"	5"	.020"R	MAX-881168
1"	1"	.9800"	1-1/4"	3"	5"	BN	MAX-881195
1"	1"	.9800"	1-1/4"	4"	6"	SQ	MAX-881171
1"	1"	.9800"	1-1/4"	4"	6"	.020"R	MAX-881169
1"	1"	.9800"	1-1/4"	5"	7"	BN	MAX-881197
1"	1"	.9800"	1-1/4"	5"	7"	SQ	MAX-881172
1"	1"	.9800"	1-1/4"	5"	7"	.020"R	MAX-881170

MAXCARB HP

MAXCARB HP

EXTREME PRODUCTION

ULTIMATE TOOL LIFE. MAXIMUM PERFORMANCE.

The **High Performance Ultra Series** combines advanced engineering with ultra-premium materials to deliver maximum tool life, precision and productivity. Built for the most demanding production environments. The HP Ultra Series features variable pitch geometry to dramatically reduce chatter and vibration, manufactured from Ultra Premium Micrograin Carbide ensures exceptional wear resistance and cutting performance.

Choose from a broad selection of geometries, lengths, and configurations to match your specific needs that provide dependable results with for plunging, pocketing, slotting, ramping and profiling applications.

Material: Premium: Ultra Premium Micrograin Carbide

Honed Cutting Edges: All tools are honed to extend tool life and improve cutting performance

Wide Range of Sizes: Cutting diameters from 1/8" to 1" - Centre Cutting

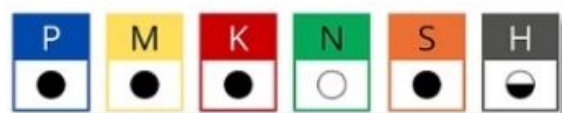
Geometries for Every Application:

- Square & Corner Radius End – 4 & 5 Flute
- Ball Nose – 4 Flute
- HEM (High Efficiency Milling) Square & Corner Radius End – 5, 6 & 7 Flute

Versatile Configurations: Length of Cut from 1/16" to 3" and 4 & 5 Flute options

Coating Options:

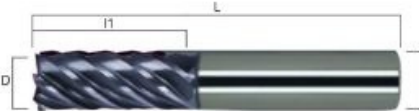
- TiAlN Coated – Provides high heat resistance and extended tool life in harder materials or high-speed applications



Shank Tolerance: +0.0000" / -0.0004"
Diameter Tolerance: +0.0000" / -0.0015"

Material Classification		Speed	Feed Per Tooth By End Mill Diameter (IPT)							
		SFM	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
Aluminum Alloys & Aluminum	N	900 - 1800	.0025	.0030	.0035	.0040	.0045	.0055	.0065	.0085
Copper Alloys & Copper		525 - 1275	.0025	.0030	.0030	.0035	.0035	.0040	.0045	.0065
Bronze & Brass		375 - 600	.0025	.0030	.0030	.0035	.0035	.0040	.0045	.0055
Graphite		---	---	---	---	---	---	---	---	---
Plastics		---	---	---	---	---	---	---	---	---
Softer Cast Iron	K	375 - 650	.0030	.0032	.0035	.0037	.0040	.0045	.0070	.0090
Harder Cast Iron		100 - 375	.0018	.0020	.0025	.0027	.0030	.0035	.0040	.0050
Ductile Iron		100 - 600	.0020	.0022	.0025	.0027	.0030	.0040	.0050	.0070
Malleable Iron		225 - 650	.0020	.0025	.0030	.0037	.0040	.0050	.0060	.0080
Low Carbon Steels (1020 & Under)	P	300 - 600	.0020	.0025	.0030	.0035	.0040	.0050	.0060	.0080
Medium Carbon Steels (1030-1060)		150 - 375	.0025	.0026	.0027	.0028	.0030	.0040	.0050	.0060
Alloy Steels Hardened to 35 Rc		130 - 345	.0020	.0021	.0022	.0023	.0025	.0027	.0030	.0040
Alloy Steels Hardened to 40-50 Rc		70 - 160	.0012	.0012	.0013	.0014	.0015	.0026	.0030	.0035
Die Steels Hardened to 51-60 Rc		---	---	---	---	---	---	---	---	---
Tool Steels		150 - 375	.0020	.0022	.0025	.0027	.0030	.0035	.0040	.0050
Mold Steels		300 - 525	.0020	.0022	.0025	.0027	.0030	.0035	.0040	.0050
Softer Stainless Steels	M	300 - 450	.0020	.0022	.0025	.0022	.0030	.0040	.0050	.0070
Harder Stainless Steels		150 - 300	.0015	.0016	.0017	.0018	.0020	.0030	.0040	.0060
Monel & High Nickel Steel	S	75 - 200	.0015	.0022	.0025	.0027	.0030	.0035	.0040	.0050
Softer Titanium		125 - 375	.0015	.0022	.0025	.0027	.0030	.0040	.0050	.0070
Harder Titanium		50 - 175	.0010	.0016	.0017	.0018	.0020	.0022	.0026	.0030
Nickel Based High Temp Alloys		50 - 125	.0014	.0014	.0015	.0016	.0017	.0018	.0020	.0023

- Higher Feed Per Tooth should be used to start for radial depths of cut less than 25% of the tool diameter.
- The above recommendations are for axial lengths of cut not to exceed 1.5x the tool diameter for profiling and 1x the diameter for full slotting.
- The above parameters are recommended starting points only. If the tool is working well, without vibrations or significant noise, increase the SFM and/or Feed Per Tooth in 5-10% increments.
- Optimum speeds & feeds will depend upon material, setup, machine conditions & tool deflection. Higher or lower parameters may be required to achieve optimum machining conditions.
- For Light Radial Depts of cut, make certain to increase the feed rate to compensate for Radial Chip Thinning Factor (RCTF). Consult a formula or app to calculate.
- For Plunging or Ramping the feed rate should be reduced by about 50%
- Climb Milling is preferred to Conventional Milling.



D Cutter Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	End Face	TiALN	4FL Round Shank	4FL Weldon Shank	5FL Round Shank
1/8"	1/8"	1/2"	1-1/2"	SQ		MAX-771006	-	-
1/8"	1/8"	1/2"	1-1/2"	.010"R		MAX-771007	-	-
3/16"	3/16"	3/8"	2"	SQ		MAX-771175	-	-
3/16"	3/16"	3/8"	2"	.015"R		MAX-771176	-	-
3/16"	3/16"	5/8"	2"	SQ		MAX-771008	-	-
3/16"	3/16"	5/8"	2"	.015"R		MAX-771009	-	-
3/16"	3/16"	3/4"	2-1/2"	SQ		MAX-771079	-	-
3/16"	3/16"	3/4"	2-1/2"	.015"R		MAX-771080	-	-
3/16"	3/16"	1-1/8"	3"	SQ		MAX-771159	-	-
3/16"	3/16"	1-1/8"	3"	.015"R		MAX-774001	-	-
1/4"	1/4"	3/8"	2"	SQ		MAX-771177	-	-
1/4"	1/4"	3/8"	2"	.015"R		MAX-771178	-	-
1/4"	1/4"	3/4"	2-1/2"	SQ		MAX-771010	MAX-771051	MAX-771013
1/4"	1/4"	3/4"	2-1/2"	.020"R		MAX-771012	MAX-771053	MAX-771014
1/4"	1/4"	1-1/8"	3"	SQ		MAX-771081	MAX-771104	MAX-774010
1/4"	1/4"	1-1/8"	3"	.020"R		MAX-771082	MAX-771105	MAX-774011
1/4"	1/4"	1-1/2"	4"	SQ		MAX-771160	-	MAX-774024
1/4"	1/4"	1-1/2"	4"	.020"R		MAX-774002	-	MAX-774025
5/16"	5/16"	3/8"	2"	SQ		MAX-771179	-	-
5/16"	5/16"	3/8"	2"	.020"R		MAX-771180	-	-
5/16"	5/16"	13/16"	2-1/2"	SQ		MAX-771015	MAX-771054	MAX-771017
5/16"	5/16"	13/16"	2-1/2"	.020"R		MAX-771016	MAX-771055	MAX-771018
5/16"	5/16"	1-1/8"	3"	SQ		MAX-771083	MAX-771106	MAX-774012
5/16"	5/16"	1-1/8"	3"	.020"R		MAX-771084	MAX-771107	MAX-774013
5/16"	5/16"	1-5/8"	4"	SQ		MAX-771161	-	MAX-774026
5/16"	5/16"	1-5/8"	4"	.020"R		MAX-774003	-	MAX-774027
3/8"	3/8"	1/2"	2"	SQ		MAX-771181	-	-
3/8"	3/8"	1/2"	2"	.020"R		MAX-771182	-	-
3/8"	3/8"	7/8"	2-1/2"	SQ		MAX-771019	MAX-771056	MAX-771023
3/8"	3/8"	7/8"	2-1/2"	.020"R		MAX-771021	MAX-771058	MAX-771024
3/8"	3/8"	7/8"	2-1/2"	.030"R		MAX-771022	MAX-771059	-
3/8"	3/8"	1-1/8"	3"	SQ		MAX-771085	MAX-771108	MAX-774014
3/8"	3/8"	1-1/8"	3"	.020"R		MAX-771086	MAX-771109	MAX-774015
3/8"	3/8"	1-3/4"	4"	SQ		MAX-771162	-	MAX-774028
3/8"	3/8"	1-3/4"	4"	.020"R		MAX-774004	-	MAX-774029
7/16"	7/16"	1"	2-3/4"	SQ		MAX-771026	MAX-771060	-
7/16"	7/16"	2"	4"	SQ		MAX-771087	MAX-771110	-
1/2"	1/2"	5/8"	2-1/2"	SQ		MAX-771183	MAX-771189	-
1/2"	1/2"	5/8"	2-1/2"	.030"R		MAX-771184	MAX-771190	-
1/2"	1/2"	1-1/4"	3"	SQ		MAX-771027	MAX-771061	MAX-771031
1/2"	1/2"	1-1/4"	3"	.015"R		MAX-771028	MAX-771062	-
1/2"	1/2"	1-1/4"	3"	.030"R		MAX-771029	MAX-771063	MAX-771032
1/2"	1/2"	1-1/4"	3"	.060"R		MAX-771030	MAX-771064	-



D Cutter Ø	d Shank Ø	l1 LOC Length Of Cut	L OAL Overall Length	End Face	TiALN	4FL Round Shank	4FL Weldon Shank	5FL Round Shank
1/2"	1/2"	2"	2"	SQ		MAX-771088	MAX-771111	MAX-774016
1/2"	1/2"	2"	2"	.015"R		MAX-771089	MAX-771112	-
1/2"	1/2"	2"	2"	.030"R		MAX-771090	MAX-771113	MAX-774017
1/2"	1/2"	2"	2"	.060"R		MAX-771091	MAX-771114	-
1/2"	1/2"	3"	3"	SQ		MAX-771163	-	MAX-774030
1/2"	1/2"	3"	3"	.030"R		MAX-774005	-	MAX-774031
5/8"	5/8"	3/4"	3/4"	SQ		MAX-771185	MAX-771191	-
5/8"	5/8"	3/4"	3/4"	.030"R		MAX-771086	MAX-771192	-
5/8"	5/8"	1-1/4"	1-1/4"	SQ		MAX-771033	MAX-771065	MAX-771037
5/8"	5/8"	1-1/4"	1-1/4"	.030"R		MAX-771034	MAX-771066	MAX-771038
5/8"	5/8"	1-1/4"	1-1/4"	.060"R		MAX-771035	MAX-771067	-
5/8"	5/8"	1-1/4"	1-1/4"	.125"R		MAX-771036	MAX-771068	-
5/8"	5/8"	2-1/4"	2-1/4"	SQ		MAX-771092	MAX-771115	MAX-774018
5/8"	5/8"	2-1/4"	2-1/4"	.030"R		MAX-771093	MAX-771116	MAX-774019
5/8"	5/8"	2-1/4"	2-1/4"	.060"R		MAX-771094	MAX-771117	-
5/8"	5/8"	2-1/4"	2-1/4"	.125"R		MAX-771095	MAX-771118	-
5/8"	5/8"	3"	3"	SQ		MAX-771164	-	MAX-774032
5/8"	5/8"	3"	3"	.030"R		MAX-774006	-	MAX-774033
3/4"	3/4"	1"	1"	SQ		MAX-771187	MAX-771193	-
3/4"	3/4"	1"	1"	.030"R		MAX-771188	MAX-771194	-
3/4"	3/4"	1-1/2"	1-1/2"	SQ		MAX-771039	MAX-771069	MAX-771043
3/4"	3/4"	1-1/2"	1-1/2"	.030"R		MAX-771040	MAX-771071	MAX-771044
3/4"	3/4"	1-1/2"	1-1/2"	.060"R		MAX-771041	MAX-771072	-
3/4"	3/4"	1-1/2"	1-1/2"	.125"R		MAX-771042	MAX-771073	-
3/4"	3/4"	2-1/4"	2-1/4"	SQ		MAX-771096	MAX-771119	MAX-774020
3/4"	3/4"	2-1/4"	2-1/4"	.030"R		MAX-771097	MAX-771120	MAX-774021
3/4"	3/4"	2-1/4"	2-1/4"	.060"R		MAX-771098	MAX-771121	-
3/4"	3/4"	2-1/4"	2-1/4"	.125"R		MAX-771099	MAX-771122	-
3/4"	3/4"	3"	3"	SQ		MAX-771165	-	MAX-774034
3/4"	3/4"	3"	3"	.030"R		MAX-774007	-	MAX-774035
1"	1"	1-1/2"	1-1/2"	SQ		MAX-771000	MAX-771045	MAX-771004
1"	1"	1-1/2"	1-1/2"	.030"R		MAX-771001	MAX-771046	MAX-771005
1"	1"	1-1/2"	1-1/2"	.060"R		MAX-771002	MAX-771047	-
1"	1"	1-1/2"	1-1/2"	.125"R		MAX-771003	MAX-771048	-
1"	1"	2-1/4"	2-1/4"	SQ		MAX-771074	MAX-771100	MAX-774008
1"	1"	2-1/4"	2-1/4"	.030"R		MAX-771075	MAX-771101	MAX-774009
1"	1"	2-1/4"	2-1/4"	.060"R		MAX-771076	MAX-771102	-
1"	1"	2-1/4"	2-1/4"	.125"R		MAX-771077	MAX-771103	-
1"	1"	3"	3"	SQ		MAX-771158	-	MAX-774022
1"	1"	3"	3"	.030"R		MAX-774000	-	MAX-774023



MAXCARB HP ULTRA SERIES EXTREME PRODUCTION

Ball Nose End - Fractional



D Cutter Ø	d Shank Ø	L1 LOC Length Of Cut	L OAL Overall Length	End Face	TiALN	
					4FL Round Shank	4FL Weldon Shank
3/16"	3/16"	5/8"	2"	BN	MAX-771125	-
3/16"	3/16"	3/4"	2-1/2"	BN	MAX-771142	-
3/16"	3/16"	1-1/8"	3"	BN	MAX-771168	-
1/4"	1/4"	3/4"	2-1/2"	BN	MAX-771126	MAX-771134
1/4"	1/4"	1-11/8"	3"	BN	MAX-771143	MAX-771151
1/4"	1/4"	1-1/2"	4"	BN	MAX-771169	-
5/16"	5/16"	13/16"	2-1/2"	BN	MAX-771127	MAX-771135
5/16"	5/16"	1-1/8"	3"	BN	MAX-771144	MAX-771152
5/16"	5/16"	1-5/8"	4"	BN	MAX-771170	-
3/8"	3/8"	7/8"	2-1/2"	BN	MAX-771128	MAX-771136
3/8"	3/8"	1-1/8"	3"	BN	MAX-771145	MAX-771153
3/8"	3/8"	1-3/4"	4"	BN	MAX-771171	-
7/16"	7/16"	1"	2-3/4"	BN	MAX-771129	MAX-771137
7/16"	7/16"	2"	4"	BN	MAX-771146	MAX-771154
1/2"	1/2"	1"	3"	BN	MAX-771130	MAX-771138
1/2"	1/2"	2"	4"	BN	MAX-771147	MAX-771155
1/2"	1/2"	3"	6"	BN	MAX-771172	-
5/8"	5/8"	1-1/4"	3-1/2"	BN	MAX-771131	MAX-771139
5/8"	5/8"	2-1/4"	5"	BN	MAX-771148	MAX-771156
5/8"	5/8"	3"	6"	BN	MAX-771173	-
3/4"	3/4"	1-1/2"	4"	BN	MAX-771132	MAX-771140
3/4"	3/4"	2-1/4"	5"	BN	MAX-771149	MAX-771157
3/4"	3/4"	3"	6"	BN	MAX-771174	-
1"	1"	1-1/2"	4"	BN	MAX-771123	MAX-771133
1"	1"	2-1/4"	5"	BN	MAX-771141	MAX-771150
1"	1"	3"	6"	BN	MAX-771166	-

HEM (HIGH EFFICIENCY MILLING)

Shank Tolerance: +0.0000" / -0.0004"
Diameter Tolerance: +0.0000" / -0.0015"

Material Classification	Speed SFM	Feed Per Tooth By End Mill Diameter (IPT)							
		1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
Softer Cast Iron	K	375 - 950	.0030	.0032	.0035	.0037	.0040	.0045	.0070
Harder Cast Iron		150 - 475	.0018	.0020	.0025	.0027	.0030	.0035	.0050
Ductile Iron		200 - 900	.0020	.0022	.0025	.0027	.0030	.0040	.0050
Malleable Iron		275 - 850	.0020	.0025	.0030	.0037	.0040	.0050	.0080
Low Carbon Steels (1020 & Under)	P	350 - 900	.0020	.0025	.0030	.0035	.0040	.0050	.0080
Medium Carbon Steels (1030-1060)		200 - 675	.0025	.0026	.0027	.0028	.0030	.0040	.0060
Alloy Steels Hardened to 35 Rc		190 - 545	.0020	.0021	.0022	.0023	.0025	.0027	.0030
Alloy Steels Hardened to 40-50 Rc		90 - 275	.0012	.0012	.0013	.0014	.0015	.0026	.0030
Die Steels Hardened to 51-60 Rc		---	---	---	---	---	---	---	---
Tool Steels	M	175 - 525	.0020	.0022	.0025	.0027	.0030	.0035	.0050
Mold Steels		300 - 725	.0020	.0022	.0025	.0027	.0030	.0035	.0050
Softer Stainless Steels	S	300 - 520	.0020	.0022	.0025	.0027	.0030	.0040	.0070
Harder Stainless Steels		150 - 475	.0015	.0016	.0017	.0018	.0020	.0030	.0060
Monel & High Nickel Steel	S	75 - 250	.0015	.0022	.0025	.0027	.0030	.0035	.0050
Softer Titanium		125 - 425	.0015	.0022	.0025	.0027	.0030	.0040	.0050
Harder Titanium		50 - 195	.0010	.0016	.0017	.0018	.0020	.0022	.0026
Nickel Based High Temp Alloys		50 - 175	.0014	.0014	.0015	.0016	.0017	.0018	.0020

- High Efficiency Milling (HEM) utilizes high axial depths of cut with low radial depths of cut. Make certain to increase the programmed feed rate to compensate for Radial Chip Thinning Factor (RCTF). Consult a formula or app to calculate.
- The above recommendations are for axial lengths of cut not to exceed 1.5x the tool diameter for profiling and 1x the diameter for full slotting.
- The above parameters are recommended starting points only. If the tool is working well, without vibrations or significant noise, increase the SFM and/or Feed Per Tooth in 5-10% increments.
- Optimum speeds & feeds will depend upon material, setup, machine conditions & tool deflection. Higher or lower parameters may be required to achieve optimum machining conditions.
- For Plunging or Ramping the feed rate should be reduced by about 50%
- Climb Milling is preferred to Conventional Milling.

MAXCARB HP ULTRA

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EXTREME PRODUCTION

HEM (HIGH EFFICIENCY MILLING)

Square & Corner Radius - Fractional



D Cutter Ø	d Shank Ø	I1 Length Of Cut	L Overall Length	End Face	5FL	5FL Chipbreaker	ALL4 6FL	7FL	7FL Chipbreaker
1/4"	1/4"	3/4"	2-1/2"	SQ	MAX-774036	-	MAX-771198	-	-
1/4"	1/4"	3/4"	2-1/2"	.015"R	MAX-774037	-	-	-	-
1/4"	1/4"	3/4"	2-1/2"	.030"R	MAX-774038	-	MAX-771199	-	-
1/4"	1/4"	1-1/8"	3"	SQ	MAX-774039	-	-	-	-
1/4"	1/4"	1-1/8"	3"	.015"R	MAX-774040	-	-	-	-
1/4"	1/4"	1-1/8"	3"	.030"R	MAX-774041	-	-	-	-
5/16"	5/16"	13/16"	2-1/2"	SQ	MAX-774042	-	-	-	-
5/16"	5/16"	13/16"	2-1/2"	.015"R	MAX-774043	-	-	-	-
5/16"	5/16"	13/16"	2-1/2"	.030"R	MAX-774044	-	-	-	-
5/16"	5/16"	1-1/4"	3"	SQ	MAX-774045	-	-	-	-
5/16"	5/16"	1-1/4"	3"	.015"R	MAX-774046	-	-	-	-
5/16"	5/16"	1-1/4"	3"	.030"R	MAX-774047	-	-	-	-
5/16"	5/16"	2-1/8"	4"	SQ	MAX-774048	-	-	-	-
5/16"	5/16"	2-1/8"	4"	.015"R	MAX-774049	-	-	-	-
5/16"	5/16"	2-1/8"	4"	.030"R	MAX-774050	-	-	-	-
3/8"	3/8"	1"	2-1/2"	SQ	MAX-774051	MAX-774066	MAX-771200	MAX-774060	MAX-774075
3/8"	3/8"	1"	2-1/2"	.015"R	MAX-774052	MAX-774067	-	MAX-774061	MAX-774076
3/8"	3/8"	1"	2-1/2"	.030"R	MAX-774053	MAX-774068	MAX-771201	MAX-774062	MAX-774077
3/8"	3/8"	1-1/4"	3"	SQ	MAX-774054	MAX-774069	-	MAX-774063	MAX-774078
3/8"	3/8"	1-1/4"	3"	.015"R	MAX-774055	MAX-774070	-	MAX-774064	MAX-774079
3/8"	3/8"	1-1/4"	3"	.030"R	MAX-774056	MAX-774071	-	MAX-774065	MAX-774080
3/8"	3/8"	2-1/8"	4"	SQ	MAX-774057	MAX-774072	-	-	-
3/8"	3/8"	2-1/8"	4"	.015"R	MAX-774058	MAX-774073	-	-	-
3/8"	3/8"	2-1/8"	4"	.030"R	MAX-774059	MAX-774074	-	-	-
1/2"	1/2"	1-1/4"	3"	SQ	MAX-774081	MAX-774112	MAX-771202	MAX-774096	MAX-774128
1/2"	1/2"	1-1/4"	3"	.015"R	MAX-774082	MAX-774113	-	MAX-774097	MAX-774129
1/2"	1/2"	1-1/4"	3"	.030"R	MAX-773999	MAX-774114	MAX-771203	MAX-774098	MAX-774130
1/2"	1/2"	1-1/4"	3"	.060"R	MAX-774083	MAX-774115	-	MAX-774099	-
1/2"	1/2"	2-1/8"	4"	SQ	MAX-774084	MAX-774116	-	MAX-774100	MAX-774131
1/2"	1/2"	2-1/8"	4"	.015"R	MAX-774085	MAX-774117	-	MAX-774101	MAX-774132
1/2"	1/2"	2-1/8"	4"	.030"R	MAX-774086	MAX-774118	-	MAX-774102	MAX-774133
1/2"	1/2"	2-1/8"	4"	.060"R	MAX-774087	MAX-774119	-	MAX-774103	-
1/2"	1/2"	2-5/8"	5"	SQ	MAX-774088	MAX-774120	-	MAX-774104	MAX-774134
1/2"	1/2"	2-5/8"	5"	.015"R	MAX-774089	MAX-774121	-	MAX-774105	MAX-774135
1/2"	1/2"	2-5/8"	5"	.030"R	MAX-774090	MAX-774122	-	MAX-774106	MAX-774136
1/2"	1/2"	2-5/8"	5"	.060"R	MAX-774091	MAX-774123	-	MAX-774107	-
1/2"	1/2"	3-1/4"	6"	SQ	MAX-774092	MAX-774124	-	MAX-774108	MAX-774137
1/2"	1/2"	3-1/4"	6"	.015"R	MAX-774093	MAX-774125	-	MAX-774109	MAX-774138

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EXTREME PRODUCTION

HEM (HIGH EFFICIENCY MILLING)

Square & Corner Radius - Fractional



D Cutter Ø	d Shank Ø	I1 Length Of Cut	L Overall Length	End Face	5FL	5FL Chipbreaker	ALL4 6FL	7FL	7FL Chipbreaker
1/2"	1/2"	3-1/4"	6"	.030"R	MAX-774094	MAX-774126	-	MAX-774110	MAX-774139
1/2"	1/2"	3-1/4"	6"	.060"R	MAX-774095	MAX-774127	-	MAX-774111	-
5/8"	5/8"	1-1/2"	3-1/2"	SQ	MAX-774140	MAX-774158	MAX-771205	MAX-774149	MAX-774167
5/8"	5/8"	1-1/2"	3-1/2"	.030"R	MAX-774141	MAX-774159	MAX-771206	MAX-774150	MAX-774168
5/8"	5/8"	1-1/2"	3-1/2"	.060"R	MAX-774142	MAX-774160	-	MAX-774151	-
5/8"	5/8"	2-1/2"	5"	SQ	MAX-774143	MAX-774161	-	MAX-774152	MAX-774169
5/8"	5/8"	2-1/2"	5"	.015"R	MAX-774144	MAX-774162	-	MAX-774153	MAX-774170
5/8"	5/8"	2-1/2"	5"	.060"R	MAX-774145	MAX-774163	-	MAX-774154	-
5/8"	5/8"	3-1/4"	6"	SQ	MAX-774146	MAX-774164	-	MAX-774155	MAX-774171
5/8"	5/8"	3-1/4"	6"	.030"R	MAX-774147	MAX-774165	-	MAX-774156	MAX-774172
5/8"	5/8"	3-1/4"	6"	.060"R	MAX-774148	MAX-774166	-	MAX-774157	-
3/4"	5/8"	1-1/2"	4"	SQ	MAX-774173	MAX-774191	MAX-771208	MAX-774182	MAX-774197
3/4"	3/4"	1-1/2"	4"	.030"R	MAX-774174	MAX-774192	MAX-771209	MAX-774183	MAX-774198
3/4"	3/4"	1-1/2"	4"	.060"R	MAX-774175	-	-	MAX-774184	-
3/4"	3/4"	2-1/2"	5"	SQ	MAX-774176	MAX-774193	-	MAX-774185	MAX-774199
3/4"	3/4"	2-1/2"	5"	.030"R	MAX-774177	MAX-774194	-	MAX-774186	MAX-774200
3/4"	3/4"	2-1/2"	5"	.060"R	MAX-774178	-	-	MAX-774187	-
3/4"	3/4"	3-1/4"	6"	SQ	MAX-774179	MAX-774195	-	MAX-774188	MAX-774201
3/4"	3/4"	3-1/4"	6"	.030"R	MAX-774180	MAX-774196	-	MAX-774189	MAX-774202
3/4"	3/4"	3-1/4"	6"	.060"R	MAX-774181	-	-	MAX-774190	-
1"	1"	1-1/2"	4"	SQ	MAX-774203	MAX-774221	MAX-771195	MAX-774212	MAX-774227
1"	1"	1-1/2"	4"	.030"R	MAX-774204	MAX-774222	MAX-771196	MAX-774213	MAX-774228
1"	1"	1-1/2"	4"	.060"R	MAX-774205	-	-	MAX-774214	-
1"	1"	2-5/8"	5"	SQ	MAX-774206	MAX-774223	-	MAX-774215	MAX-774229
1"	1"	2-5/8"	5"	.030"R	MAX-774207	MAX-774224	-	MAX-774216	MAX-774230
1"	1"	2-5/8"	5"	.060"R	MAX-774208	-	-	MAX-774217	-
1"	1"	3-1/4"	6"	SQ	MAX-774209	MAX-774225	-	MAX-774218	MAX-774231
1"	1"	3-1/4"	6"	.030"R	MAX-774210	MAX-774226	-	MAX-774219	MAX-774232
1"	1"	3-1/4"	6"	.060"R	MAX-774211	-	-	MAX-774220	-

MAXCARB HP ULTRA





EXTREME PRODUCTION FOR ALUMINUM

Shank Tolerance: +0.0000" / -0.0004"
Diameter Tolerance: +0.0000" / -0.0004"

EXTREME PRODUCTION. HIGH-EFFICIENCY.

The **AlumiMax Series** is purpose-built for high-speed, high-efficiency aluminum machining in both medium/roughing and medium/finishing applications that combine advanced geometries with premium materials and coatings to deliver exceptional chip control, reduced built-up edge, and a superior surface finish.

A unique combination of variable pitch and variable helix, polished flute surfaces, and chipbreaking geometry allows for aggressive material removal with minimal vibration. Each tool is manufactured and finished with a unique honing and polishing process to enhance cutting edge and extend tool life and maximize consistency.

For plunging, pocketing, slotting, ramping and profiling applications.

Material: Ultra Premium Micrograin Carbide

36° & 45° Helix Angle: Ideal for general-purpose milling across a wide range of materials

Wide Range of Sizes: Cutting diameters from 1/4" to 1" - Centre Cutting

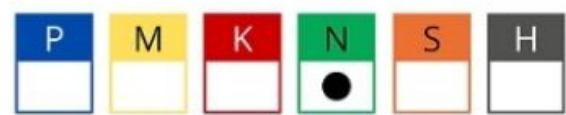
Geometries for Every Application:

- Square & Corner Radius End – 2 & 3 Flute
- Ball Nose – 2 & 3 Flute
- Available with or without chipbreakers for application specific control

Versatile Configurations: Length of Cut from 1/16" to 3"

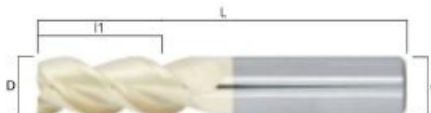
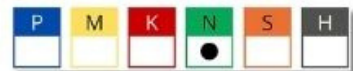
Coating Options:

- Uncoated – Ideal for soft, gummy aluminum
- ZrN Coated – Provides high lubricity and reduced built-up edge
- DLC Coated – Ultra-low friction and maximum wear resistance



Material Classification		Speed	Feed Per Tooth By End Mill Diameter (IPT)							
		SFM	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	1"
Aluminum Alloys & Aluminum	N	900 - 1800	.0030	.0035	.0040	.0045	.0050	.0060	.0070	.0090
Copper Alloys & Copper		525 - 1275	.0030	.0035	.0035	.0040	.0040	.0045	.0050	.0070
Bronze & Brass		375 - 600	.0030	.0035	.0035	.0040	.0040	.0045	.0050	.0060
Graphite		500 - 1200	.0040	.0045	.0045	.0045	.0045	.0050	.0060	.0080
Plastics		600 - 1650	.0040	.0045	.0050	.0060	.0070	.0090	.0110	.0160
Softer Cast Iron	K	---	---	---	---	---	---	---	---	---
Harder Cast Iron		---	---	---	---	---	---	---	---	---
Ductile Iron		---	---	---	---	---	---	---	---	---
Malleable Iron		---	---	---	---	---	---	---	---	---
Low Carbon Steels (1020 & Under)	P	---	---	---	---	---	---	---	---	---
Medium Carbon Steels (1030-1060)		---	---	---	---	---	---	---	---	---
Alloy Steels Hardened to 35 Rc		---	---	---	---	---	---	---	---	---
Alloy Steels Hardened to 40-50 Rc		---	---	---	---	---	---	---	---	---
Die Steels Hardened to 51-60 Rc		---	---	---	---	---	---	---	---	---
Tool Steels		---	---	---	---	---	---	---	---	---
Mold Steels		---	---	---	---	---	---	---	---	---
Softer Stainless Steels	M	---	---	---	---	---	---	---	---	---
Harder Stainless Steels		---	---	---	---	---	---	---	---	---
Monel & High Nickel Steel	S	---	---	---	---	---	---	---	---	---
Softer Titanium		---	---	---	---	---	---	---	---	---
Harder Titanium		---	---	---	---	---	---	---	---	---
Nickel Based High Temp Alloys		---	---	---	---	---	---	---	---	---

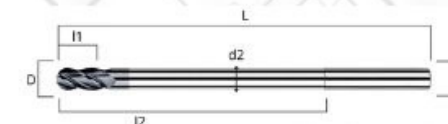
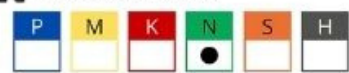
- Higher Feed Per Tooth should be used to start for radial depths of cut less than 25% of the tool diameter.
- The above recommendations are for axial lengths of cut not to exceed 1.5x the tool diameter for profiling and 1x the diameter for full slotting.
- The above parameters are recommended starting points only. If the tool is working well, without vibrations or significant noise, increase the SFM and/or Feed Per Tooth in 5-10% increments.
- Optimum speeds & feeds will depend upon material, setup, machine conditions & tool deflection. Higher or lower parameters may be required to achieve optimum machining conditions.
- For Light Radial Depths of cut, make certain to increase the feed rate to compensate for Radial Chip Thinning Factor (RCTF). Consult a formula or app to calculate.
- For Plunging or Ramping the feed rate should be reduced by about 50%.
- Climb Milling is preferred to Conventional Milling.



D Cutter Ø	d Shank Ø	L1 LOC Length Of Cut	L OAL Overall Length	End Face	Uncoated 3FL	Uncoated Chipbreaker	ZrN 3FL	ZrN Chipbreaker
1/4"	1/4"	3/4"	2-1/2"	SQ	MAX-661344	-	MAX-661395	-
1/4"	1/4"	3/4"	2-1/2"	.015"R	MAX-661345	-	MAX-661396	-
1/4"	1/4"	3/4"	2-1/2"	.030"R	MAX-661347	-	-	-
1/4"	1/4"	3/4"	2-1/2"	.060"R	MAX-661348	-	-	-
5/16"	5/16"	13/16"	2-1/2"	SQ	MAX-661350	-	MAX-661399	-
5/16"	5/16"	13/16"	2-1/2"	.030"R	MAX-661351	-	MAX-661400	-
5/16"	5/16"	13/16"	2-1/2"	.060"R	MAX-661352	-	-	-
3/8"	3/8"	1"	2-1/2"	SQ	MAX-661353	-	MAX-661401	-
3/8"	3/8"	1"	2-1/2"	.030"R	MAX-661354	MAX-661356	MAX-661402	MAX-661403
3/8"	3/8"	1"	2-1/2"	.060"R	MAX-661355	-	-	-
3/8"	3/8"	1-1/8"	3"	SQ	MAX-661357	-	MAX-661404	-
3/8"	3/8"	1-1/8"	3"	.030"R	MAX-661358	MAX-661359	MAX-661405	MAX-661406
1/2"	1/2"	1-1/4"	3"	SQ	MAX-661360	-	MAX-661407	-
1/2"	1/2"	1-1/4"	3"	.030"R	MAX-661361	MAX-661365	MAX-661408	MAX-661409
1/2"	1/2"	1-1/4"	3"	.060"R	MAX-661362	-	-	-
1/2"	1/2"	1-1/4"	3"	.090"R	MAX-661363	-	-	-
1/2"	1/2"	1-1/4"	3"	.120"R	MAX-661364	-	-	-
1/2"	1/2"	2"	4"	SQ	MAX-661366	-	MAX-661410	-
1/2"	1/2"	2"	4"	.030"R	MAX-661367	MAX-661368	MAX-661411	MAX-661412
5/8"	5/8"	1-1/4"	3-1/2"	SQ	MAX-661369	-	MAX-661413	-
5/8"	5/8"	1-1/4"	3-1/2"	.030"R	MAX-661370	MAX-661374	MAX-661414	MAX-661415
5/8"	5/8"	1-1/4"	3-1/2"	.060"R	MAX-661371	-	-	-
5/8"	5/8"	1-1/4"	3-1/2"	.090"R	MAX-661372	-	-	-
5/8"	5/8"	1-1/4"	3-1/2"	.120"R	MAX-661373	-	-	-
5/8"	5/8"	2-1/4"	5"	SQ	MAX-661375	-	MAX-661416	-
5/8"	5/8"	2-1/4"	5"	.030"R	MAX-661376	MAX-661377	MAX-661417	MAX-661418
3/4"	3/4"	1-5/8"	4"	SQ	MAX-661378	-	MAX-661419	-
3/4"	3/4"	1-5/8"	4"	.030"R	MAX-661379	MAX-661383	MAX-661420	MAX-661421
3/4"	3/4"	1-5/8"	4"	.060"R	MAX-661380	-	-	-
3/4"	3/4"	1-5/8"	4"	.090"R	MAX-661381	-	-	-
3/4"	3/4"	1-5/8"	4"	.120"R	MAX-661382	-	-	-
3/4"	3/4"	2-1/4"	5"	SQ	MAX-661384	-	MAX-661422	-
3/4"	3/4"	2-1/4"	5"	.030"R	MAX-661385	MAX-661386	MAX-661423	MAX-661424
1"	1"	1-1/2"	4"	SQ	MAX-661387	-	MAX-661425	-
1"	1"	1-1/2"	4"	.030"R	MAX-661388	MAX-661391	MAX-661426	MAX-661427
1"	1"	1-1/2"	4"	.060"R	MAX-661389	-	-	-
1"	1"	1-1/2"	4"	.120"R	MAX-661390	-	-	-
1"	1"	2-1/4"	5"	SQ	MAX-661392	-	MAX-661428	-
1"	1"	2-1/4"	5"	.030"R	MAX-661393	MAX-661394	MAX-661429	MAX-661430



D Cutter Ø	d Shank Ø	L1 LOC Length Of Cut	L OAL Overall Length	End Face	Uncoated 2FL	Uncoated 3FL	ZrN 2FL	ZrN 3FL	DLC 2FL	DLC 3FL
1/8"	1/8"	1/2"	1-1/2"	SQ	MAX-661118	MAX-661119	-	-	-	-
3/16"	3/16"	5/8"	2"	SQ	MAX-661120	MAX-661122	MAX-661004	MAX-661006	MAX-661234	MAX-661236
3/16"	3/16"	3/4"	2-1/2"	SQ	MAX-661152	MAX-661153	MAX-661036	MAX-661037	-	-
3/16"	3/16"	1-1/8"	3"	SQ	MAX-661200	MAX-661201	MAX-661084	MAX-661085	-	-
1/4"	1/4"	3/4"	2-1/2"	SQ	MAX-661123	MAX-661125	MAX-661007	MAX-661009	MAX-661237	MAX-661239
1/4"	1/4"	3/4"	2-1/2"	.020"R	MAX-661124	MAX-661126	MAX-661008	MAX-661010	MAX-661238	MAX-661240
1/4"	1/4"	1-1/8"	3"	SQ	MAX-661154	MAX-661155	MAX-661038	MAX-661039	-	-
1/4"	1/4"	1-1/2"	4"	SQ	MAX-661202	MAX-661203	MAX-661086	MAX-661087	-	-
5/16"	5/16"	13/16"	2-1/2"	SQ	MAX-661128	MAX-661130	MAX-661012	MAX-661014	MAX-661242	MAX-661244
5/16"	5/16"	13/16"	2-1/2"	.020"R	MAX-661129	MAX-661132	MAX-661013	MAX-661016	MAX-661243	MAX-661246
5/16"	5/16"	1-1/8"	3"	SQ	MAX-661156	MAX-661157	MAX-661040	MAX-661041	-	-
5/16"	5/16"	1-5/8"	4"	SQ	MAX-661204	MAX-661205	MAX-661088	MAX-661089	-	-
3/8"	3/8"	1"	2-1/2"	SQ	MAX-661134	MAX-661136	MAX-661018	MAX-661020	MAX-661248	MAX-661250
3/8"	3/8"	1"	2-1/2"	.020"R	MAX-661135	MAX-661137	MAX-661019	MAX-661021	MAX-661249	MAX-661251
3/8"	3/8"	1-1/8"	3"	SQ	MAX-661158	MAX-661159	MAX-661042	MAX-661043	-	-
3/8"	3/8"	1-3/4"	4"	SQ	MAX-661206	MAX-661207	MAX-661090	MAX-661091	-	-
1/2"	1/2"	1-1/4"	3"	SQ	MAX-661138	MAX-661140	MAX-661022	MAX-661024	MAX-661252	MAX-661254
1/2"	1/2"	1-1/4"	3"	.030"R	MAX-661139	MAX-661141	MAX-661023	MAX-661025	MAX-661253	MAX-661255
1/2"	1/2"	2"	4"	SQ	MAX-661160	MAX-661161	MAX-661044	MAX-661045	-	-
1/2"	1/2"	3"	6"	SQ	MAX-661208	MAX-661209	MAX-661092	MAX-661093	-	-
5/8"	5/8"	1-1/4"	3-1/2"	SQ	MAX-661142	MAX-661144	MAX-661026	MAX-661028	MAX-661256	MAX-661258
5/8"	5/8"	1-1/4"	3-1/2"	.030"R	MAX-661143	MAX-661145	MAX-661027	MAX-661029	MAX-661257	MAX-661259
5/8"	5/8"	2-1/4"	5"	SQ	MAX-661162	MAX-661163	MAX-661046	MAX-661047	-	-
5/8"	5/8"	3"	6"	SQ	MAX-661210	MAX-661211	MAX-661094	MAX-661095	-	-
3/4"	3/4"	1-1/2"	4"	SQ	MAX-661146	MAX-661148	MAX-661030	MAX-661032	MAX-661260	MAX-661262
3/4"	3/4"	1-1/2"	4"	.030"R	MAX-661147	MAX-661149	MAX-661031	MAX-661033	MAX-661261	MAX-661263
3/4"	3/4"	2-1/4"	5"	SQ	MAX-661164	MAX-661165	MAX-661048	MAX-661049	-	-
3/4"	3/4"	3"	6"	SQ	MAX-661212	MAX-661213	MAX-661096	MAX-661097	-	-
1"	1"	1-1/2"	4"	SQ	MAX-661114	MAX-661116	MAX-661000	MAX-661002	MAX-661230	MAX-661232
1"	1"	1-1/2"	4"	.030"R	MAX-661115	MAX-661117	MAX-661001	MAX-661003	MAX-661231	MAX-661233
1"	1"	2-1/4"	5"	SQ	MAX-661150	MAX-661151	MAX-661034	MAX-661035	-	-
1"	1"	3"	6"	SQ	MAX-661198	MAX-661199	MAX-661082	MAX-661083	-	-

Ball Nose - Fractional


D Cutter Ø	d Shank Ø	I1 LOC Length Of Cut	L OAL Overall Length	End Face	Uncoated		ZrN	
					2FL	3FL	2FL	3FL
3/16"	3/16"	5/8"	2"	BN	MAX-661168	MAX-661169	MAX-661052	MAX-661053
3/16"	3/16"	3/4"	2-1/2"	BN	MAX-661184	MAX-661185	MAX-661068	MAX-661069
3/16"	3/16"	1-1/8"	3"	BN	MAX-661216	MAX-661217	MAX-661100	MAX-661101
1/4"	1/4"	3/4"	2-1/2"	BN	MAX-661170	MAX-661171	MAX-661054	MAX-661055
1/4"	1/4"	1-1/8"	3"	BN	MAX-661186	MAX-661187	MAX-661070	MAX-661071
1/4"	1/4"	1-1/2"	4"	BN	MAX-661218	MAX-661219	MAX-661102	MAX-661103
5/16"	5/16"	13/16"	2-1/2"	BN	MAX-661172	MAX-661173	MAX-661056	MAX-661057
5/16"	5/16"	1-1/8"	3"	BN	MAX-661188	MAX-661189	MAX-661072	MAX-661073
5/16"	5/16"	1-5/8"	4"	BN	MAX-661220	MAX-661221	MAX-661104	MAX-661105
3/8"	3/8"	1"	2-1/2"	BN	MAX-661174	MAX-661175	MAX-661058	MAX-661059
3/8"	3/8"	1-1/8"	3"	BN	MAX-661190	MAX-661191	MAX-661074	MAX-661075
3/8"	3/8"	1-3/4"	4"	BN	MAX-661222	MAX-661223	MAX-661106	MAX-661107
1/2"	1/2"	1-1/2"	3-1/2"	BN	MAX-661176	MAX-661177	MAX-661060	MAX-661061
1/2"	1/2"	2-1/4"	5"	BN	MAX-661192	MAX-661193	MAX-661076	MAX-661077
1/2"	1/2"	3"	6"	BN	MAX-661224	MAX-661225	MAX-661108	MAX-661109
5/8"	5/8"	1-1/2"	3"	BN	MAX-661178	MAX-661179	MAX-661062	MAX-661063
5/8"	5/8"	2-1/4"	4"	BN	MAX-661194	MAX-661195	MAX-661078	MAX-661079
5/8"	5/8"	3"	6"	BN	MAX-661226	MAX-661227	MAX-661110	MAX-661111
3/4"	3/4"	1-1/2"	4"	BN	MAX-661180	MAX-661181	MAX-661064	MAX-661065
3/4"	3/4"	2-1/4"	5"	BN	MAX-661196	MAX-661197	MAX-661080	MAX-661081
3/4"	3/4"	3"	6"	BN	MAX-661228	MAX-661229	MAX-661112	MAX-661113
1"	1"	1-1/2"	4"	BN	MAX-661166	MAX-661167	MAX-661050	MAX-661051
1"	1"	2-1/4"	5"	BN	MAX-661182	MAX-661183	MAX-661066	MAX-661067
1"	1"	3"	6"	BN	MAX-661214	MAX-661215	MAX-661098	MAX-661099

CUSTOM TOOLING

End Face:

- ☐ Square
☐ Ball Nose
☐ Corner Radius Size: _____
☐ Chamfer Size: _____

Dimensions:

- ☐ L - Overall Length (OAL): _____
☐ d - Shank Diameter: _____
☐ I1 - Length of Cut (LOC): _____
☐ D - Tool Diameter: _____
☐ Number of Flutes: _____

Shank:

- ☐ Round
☐ Weldon

Series:

- ☐ **MAXCARB GP**
☐ **MAXCARB HP**
☐ **MAXCARB HP ULTRA & HEM**
☐ **ALUMIMAX**

Coating:

- ☐ Uncoated
☐ TiAlN (Titanium Aluminum Nitride)
☐ ZrN (Zirconium Nitride)
☐ DLC (Diamond Like Carbon)

Tapered:

- ☐ No
☐ Yes
 Taper Angle Per Side: _____
 D-Tip Diameter: _____

Neck Relief: *Optional*

- ☐ No
☐ Yes
 d2-Neck Relief Diameter: _____
 I2-Length Below Shank (LBS): _____

Special Minimum Order Quantities

Tool Dia. Range	MOQ
Under 3/16" (4mm)	N/A
3/16" - 1/4" (4mm-6mm)	20
5/16" - 3/8" (7mm-10mm)	15
7/16" - 1/2" (11mm-12mm)	10
9/16" - 3/4" (13mm-20mm)	5
7/8" - 1" (25mm)	3