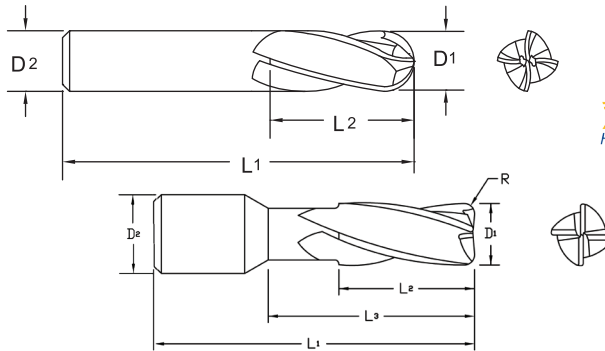


**NEW**

**TuffCut® GP-GX  
GemX Coated**



- 4 Flute, center cutting.
- Stub, standard and long lengths.
- Square end, corner radii and ball nose options.
- Neck relief available.
- GemX coated for longer tool life.
- Excellent for high performance milling of graphite and similar materials.



GemX		End Grind	Diameter D1	Shank D2	OAL L1	Flute Length L2	Neck Length L3	Corner Radius R
Tool No.	EDP							
11112500GX	03640	Square End	1/8	1/8	1-1/2	3/8		
11137500GX	03645	Square End	3/8	3/8	2-1/2	1		
11150000GX	03647	Square End	1/2	1/2	3	1		
111L2500GX	03643	Square End	1/4	1/4	2-1/2	1		
14012500GX	03650	Ball Nose	1/8	1/8	1-1/2	3/8		
140L06250GX	03649	Ball Nose	1/16	1/8	1-1/2	3/8		
140L1562GX	03652	Ball Nose	5/32	3/16	2-1/2	1		
140L1875GX	03654	Ball Nose	3/16	3/16	2-1/2	1		
140L2500GX	03656	Ball Nose	1/4	1/4	2-1/2	1		
16318750GX	03641	Square End	3/16	3/16	2	3/8		
163S062R.010N8GX	03658	Corner Radius	1/16	1/8	2-1/2	3/32	1/2	.010
163S078R.010N5GX	03659	Corner Radius	5/64	1/8	2-1/2	1/8	13/32	.010
163S125R.015N12GX	03660	Corner Radius	1/8	1/8	3	3/16	1-1/2	.015
163S187R.030N8GX	03661	Corner Radius	3/16	3/16	3	7/32	1-1/2	.030
163S2500GX	03642	Square End	1/4	1/4	2-1/2	3/8		
163S250R.030N5GX	03662	Corner Radius	1/4	1/4	4	3/8	1-1/4	.030
163S3750GX	03644	Square End	3/8	3/8	2-1/2	3/8		
163S5000GX	03646	Square End	1/2	1/2	3	3/8		
16515620GX	03651	Ball Nose	5/32	3/16	2	3/8		
16518750GX	03653	Ball Nose	3/16	3/16	2	3/8		
165S2500GX	03655	Ball Nose	1/4	1/4	2-1/2	3/8		

Inch	
D1	Tolerance
1/64	+ .000/- .001
1/32 - 1/4	+ .000/- .002
> 1/4 - 1/2	+ .000/- .003

Inch	
R	Tolerance
> 1/16 - 1/8	+ .002/- .002
> 1/8	+ .003/- .003

M.A. Ford® Coating	M.A. Ford® Tool Number Designation	Microhardness (HV)	Maximum Service Temp.	Friction Coefficient
GemX	GX	10,000	600° C / 1100° F	0.10

**ISO 9001:2015 Certified**

**⚠ WARNING:** This product can expose you to chemicals including nickel, cobalt, and lead, which are known to the State of California to cause cancer, and chemicals including lead which are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

# TuffCut® GP-GX

## Recommended Cutting Data - Inch

TuffCut® GP-GX																	
Workpiece Material Group	ISO	Coolant			Application	Depth of Cut Per Application		vc - SFM	End Mill Diameter (inch)								
		• Preferred ○ Possible x Not Possible				Radial (Ae)	Axial (Ap)		.062	.078	.093	.125	.156	.187	.250	.375	.500
		Max.	Air	MMS					fz - in/tooth by Cutter Diameter								
Aluminum > 10% Si	N	•	X	○	Slotting	-	≤ .25 x D	800	.0003	.0004	.0005	.0006	.0008	.0009	.0013	.0019	.0025
					Profiling	.2 x D	Max.	1200	.0006	.0008	.0009	.0013	.0016	.0019	.0025	.0038	.0050
Graphite	N	○	•	○	Slotting	-	≤ 1.5 x D	1200	.0006	.0008	.0009	.0013	.0016	.0019	.0025	.0038	.0050
					Profiling	.5 x D	Max.	1500	.0010	.0012	.0015	.0020	.0025	.0030	.0040	.0060	.0080
Composites	N	○	•	○	Slotting	-	≤ 1 x D	600	.0003	.0004	.0005	.0006	.0008	.0009	.0013	.0019	.0025
					Profiling	.2 x D	Max.	800	.0005	.0006	.0007	.0010	.0012	.0015	.0020	.0030	.0040

**Note:**

- Cutting data is for tools with a flute length that is ≤ 3xD, and for tools with a neck length that is ≤ 5xD.
- Cutting conditions may need to be reduced for tools that exceed these limits.

**Safety Note**

Always wear the appropriate personal protective equipment such as safety glasses and protective clothing when using solid carbide or HSS cutting tools. Machines should be fully guarded.



**For More Information Contact:**  
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**sales@maford.com**  
**www.maford.com**



Spindle Maximum - Should the calculated spindle speed be more than your actual spindle maximum, use this formula: (Calculated Feed x Spindle Maximum)/Calculated Speed. Above 20,000 RPM, tool balancing required.

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.