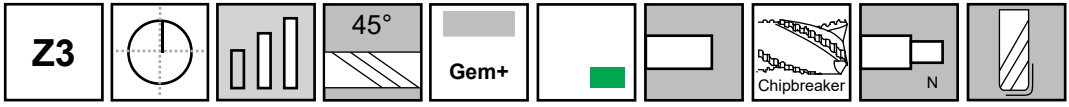
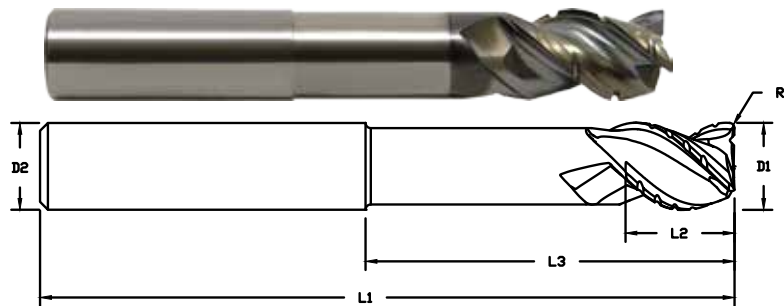


NEW

**TuffCut® XR-AL
Series 334**



- Enhanced flute design for improved chip control and reduced cutting forces
- Chipbreaker design provides better part finish than a traditional knuckle rougher and aids in chip management
- Variable helix strengthens the tool corner reducing the chance of a chipped corner
- Manufactured from premium grade ultrafine carbide material for extended tool life



**XR-AL:
Xtreme Roughing
for ALuminum**

Gem+ Coating		Diameter		Shank	OAL	Flute Length	Neck Length	Corner Radius
Tool No.	EDP	D1	Decimal	D2	L1	L2	L3	R
33425000R.020GP	33400	1/4	.2500	1/4	2	1/2		.020
33425010R.020GP	33404	1/4	.2500	1/4	2-1/2	3/4		.020
33437500R.020GP	33408	3/8	.3750	3/8	2	5/8		.020
33437510R.020GP	33412	3/8	.3750	3/8	2-1/2	1		.020
33450000R.030GP	33416	1/2	.5000	1/2	3	5/8		.030
33450010R.030GP	33419	1/2	.5000	1/2	3	1		.030
33450020R.030GP	33423	1/2	.5000	1/2	3	1-1/4		.030
3345000N4R.030GP	33428	1/2	.5000	1/2	4	5/8	2-1/8	.030
33475000R.030GP	33432	3/4	.7500	3/4	4	1		.030
33475000N4R.030GP	33436	3/4	.7500	3/4	5	1	3	.030
33410010R.030GP	33439	1	1.0000	1	4	1-1/2		.030

Inch	
D1	Tolerance
.2500 - 1.0000	+0/- .0005

Inch	
D2	Tolerance (h6)
.2500 - .3937	+0/- .00035
.3938 - .7087	+0/- .00043
.7088 - 1.0000	+0/- .00051

Gem+ Coating (GP):

Recommended for aluminum and aluminum alloys, non-ferrous metals and composites. Gem+ provides excellent wear resistance and maintains sharp cutting edges.



ISO 9001:2008 Certified



For More Information Contact:
M.A. Ford Mfg. Co., Inc.
 7737 Northwest Blvd.
 Davenport IA 52806
 800-553-8024/563-391-6220
 sales@maford.com
 www.maford.com



TuffCut® XR-AL

334 Series Recommended Cutting Data - Profile Milling Inch

Workpiece Material Group	ISO	Coolant • Preferred 	Profile Milling (ap)		
			1 x D	1.5 x D	2 x D
Max.			vc - SFM		
Non-Ferrous - Aluminum	N	•	2000-2500	1750-2000	1250-1750
Non-Ferrous - Aluminum Cast	N	•	1600-2000	1400-1600	1000-1400
Non-Ferrous - Brass Yellow/Red	N	•	750-1250	500-1000	400-800
Non-Ferrous - Bronze, Aluminum Bronze	N	•	500-1000	400-800	300-600
Non-Ferrous - Copper	N	•	1500-2000	1250-1500	800-1200

Diameter	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1	1
Max. ae	30%	50%	30%	50%	30%	50%	30%	50%	30%	50%
fz=in/tooth	.008	.006	.012	.009	.016	.012	.020	.015	.024	.018

334 Series Recommended Cutting Data - Slotting Inch

Workpiece Material Group	ISO	Coolant • Preferred 	Slotting (ap)	
			.5 x D	1 x D
Max.			vc - SFM	
Non-Ferrous - Aluminum	N	•	1750-2000	1250-1750
Non-Ferrous - Aluminum Cast	N	•	1400-1600	1000-1400
Non-Ferrous - Brass Yellow/Red	N	•	500-1000	400-800
Non-Ferrous - Bronze, Aluminum Bronze	N	•	400-800	300-600
Non-Ferrous - Copper	N	•	1250-1500	800-1000

Diameter	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4	1	1
Max. ap	50%	100%	50%	100%	50%	100%	50%	100%	50%	100%
fz=in/tooth	.008	.005	.012	.008	.020	.010	.025	.015	.030	.020



Made in USA
 ISO 9001:2008 Certified

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.