



# Roughing End Mills

YOUR #1 SOURCE FOR AMERICAN-MADE PREMIUM CUTTING TOOLS

4 FLUTE - STUB LENGTH - FINE PITCH - 30° HELIX



**SERIES 293**  
ALTIN COATED

DIA	SHANK	LOC	OAL	ITEM#	LIST PRICE
1/4	1/4	3/8	2	TC29316	59.21
5/16	5/16	1/2	2	TC29320	83.14
3/8	3/8	9/16	2	TC29324	96.98
1/2	1/2	5/8	2-1/2	TC29332	121.20
5/8	5/8	3/4	3	TC29340	261.85
3/4	3/4	1	3	TC29348	314.26



*ALTIN coating extends tool life and improves performance*

Our fine pitch rougher is designed to remove maximum material with minimum vibration or chatter, while milling faster than conventional finishing end mills. Excellent for:

**HARDENED STEELS • TITANIUM • INCONEL • SPACE AGE MATERIALS**

For coating information see page 6. For technical information, please see page 239.

TOLERANCES	DIAMETER	SHANK
1/4" - 1/2"	+ .000, -.002	-.0001, -.0004 ISO H6
5/8" - 3/4"	+ .000, -.003	-.0001, -.0004 ISO H6

END MILLS

DRILL MILLS

CHAMFER MILLS

DRILLS

REAMERS

BURS

# Roughing End Mills

YOUR #1 SOURCE FOR AMERICAN-MADE PREMIUM CUTTING TOOLS



**TAKE 55% OFF  
OF LIST PRICE!**

4 FLUTE - REGULAR LENGTH - FINE PITCH - 30° HELIX



**SERIES 295**  
ALTiN COATED

DIA	SHANK	LOC	OAL	ITEM#	LIST PRICE
1/4	1/4	3/4	2-1/2	TC29516	66.41
5/16	5/16	13/16	2-1/2	TC29520	92.38
3/8	3/8	7/8	2-1/2	TC29524	107.75
1/2	1/2	1-1/4	3	TC29532	135.96
5/8	5/8	1-5/8	3-1/2	TC29540	290.93
3/4	3/4	1-5/8	4	TC29548	352.50
1	1	2	4	TC29564	648.35

4 FLUTE - LONG LENGTH - FINE PITCH - 30° HELIX



**SERIES 296**  
ALTiN COATED

DIA	SHANK	LOC	OAL	ITEM#	LIST PRICE
1/4	1/4	1-1/2	4	TC29616	95.10
5/16	5/16	1-1/2	4	TC29620	121.94
3/8	3/8	1-3/4	4	TC29624	152.44
1/2	1/2	2	4	TC29632	176.18
5/8	5/8	2-1/2	5	TC29640	414.49
3/4	3/4	2-1/2	5	TC29648	497.84
1	1	2-1/2	5	TC29664	849.49

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**HARDENED STEELS • TITANIUM • INCONEL • SPACE AGE MATERIALS**

For coating information see page 6. For technical information, please see page 239.

TOLERANCES	DIAMETER	SHANK
1/4" - 1/2"	+0.00, -0.002	-0.001, -.0004 ISO H6
5/8" - 3/4"	+0.00, -0.003	-0.001, -.0004 ISO H6

END MILLS

DRILL MILLS

CHAMFER MILLS

DRILLS

REAMERS

BURS



# Roughing End Mills

YOUR #1 SOURCE FOR AMERICAN-MADE PREMIUM CUTTING TOOLS

**TAKE 55% OFF  
OF LIST PRICE!**

4 FLUTE - REGULAR LENGTH - FINE PITCH - BALL NOSE - 30° HELIX



**SERIES 299**  
ALTIN COATED

DIA	SHANK	LOC	OAL	ITEM #	LIST PRICE
1/4	1/4	3/4	2-1/2	TC29916	83.20
5/16	5/16	7/8	2-1/2	TC29920	106.98
3/8	3/8	1	2-1/2	TC29924	136.69
1/2	1/2	1-1/4	3	TC29932	187.80
5/8	5/8	1-5/8	3-1/2	TC29940	328.06
3/4	3/4	1-5/8	4	TC29948	457.62
1	1	2	4	TC29964	742.89



*"Order today, we'll ship today" Same day shipping until 6pm EST*

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For coating information see page 6. For technical information, please see page 239.

TOLERANCES	DIAMETER	SHANK	RADIUS
1/4" - 1/2"	+0.00, -.002	-.0001, -.0004 ISO H6	+.001, -.001
5/8" - 3/4"	+0.00, -.003	-.0001, -.0004 ISO H6	+.001, -.001

END MILLS

DRILL MILLS

CHAMFER MILLS

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