

ULTRATOOL Corner Rounding End Mills

Series 233

Solid Carbide Radius Mills
Double-Ended • 3 Straight Flutes • RH Cutting



Radius Mill Specifications:
Radius ±.0005
Pilot Diameter ±.0005

Features 5° top & bottom
flare-out to avoid
workpiece contact.



Radius Dec	Radius Frac/Metric	Pilot Diam	Shank Diam	OAL	EDP#	UnCoated Price	Coated Price
.010	-	.100	1/8	2"	23316	\$24.90	\$27.50
.0156	1/64	.090	1/8	2"	23317	\$24.90	\$27.50
.020	-	.080	1/8	2"	23318	\$24.90	\$27.50
.025	-	.070	1/8	2"	23319	\$24.90	\$27.50
.0312	1/32	.060	1/8	2"	23320	\$24.90	\$27.50
.035	-	.140	1/4	2-1/2	23321	\$34.80	\$40.90
.0394	1.0mm	.140	1/4	2-1/2	23322	\$34.80	\$40.90
.0469	3/64	.140	1/4	2-1/2	23323	\$34.80	\$40.90
.050	-	.140	1/4	2-1/2	23324	\$34.80	\$40.90
.055	-	.090	1/4	2-1/2	23325	\$34.80	\$40.90
.0591	1.5mm	.090	1/4	2-1/2	23326	\$34.80	\$40.90
.0625	1/16	.090	1/4	2-1/2	23327	\$34.80	\$40.90
.070	-	.090	1/4	2-1/2	23328	\$34.80	\$40.90
.075	-	.090	1/4	2-1/2	23329	\$34.80	\$40.90
.0781	5/64	.115	3/8	2-1/2	23330	\$57.70	\$65.60
.0787	2.0mm	.115	3/8	2-1/2	23331	\$57.70	\$65.60
.0938	3/32	.115	3/8	2-1/2	23332	\$57.70	\$65.60
.0984	2.5mm	.115	3/8	2-1/2	23333	\$57.70	\$65.60
.1094	7/64	.115	3/8	2-1/2	23334	\$57.70	\$65.60
.1181	3.0mm	.115	3/8	2-1/2	23335	\$57.70	\$65.60
.125	1/8	.115	3/8	2-1/2	23336	\$57.70	\$65.60
.1406	9/64	.120	1/2	3"	23337	\$90.30	\$100.90
.1562	5/32	.120	1/2	3"	23338	\$90.30	\$100.90
.1575	4.0mm	.120	1/2	3"	23339	\$90.30	\$100.90
.1718	11/64	.120	1/2	3"	23340	\$90.30	\$100.90
.1875	3/16	.120	1/2	3"	23341	\$90.30	\$100.90
.1969	5.0mm	.120	5/8	3-1/2	23342	\$103.50	\$119.90
.2031	13/64	.120	5/8	3-1/2	23343	\$103.50	\$119.90
.2188	7/32	.120	5/8	3-1/2	23344	\$103.50	\$119.90
.2344	15/64	.120	5/8	3-1/2	23345	\$103.50	\$119.90
.2362	6.0mm	.120	5/8	3-1/2	23346	\$103.50	\$119.90
.250	1/4	.120	5/8	3-1/2	23347	\$103.50	\$119.90
.2812	9/32	.120	3/4	4"	23348	\$137.80	\$157.20
.2969	19/64	.120	3/4	4"	23349	\$137.80	\$157.20
.3125	5/16	.120	3/4	4"	23350	\$137.80	\$157.20

Series 235

Carbide Radius Mills
Single End • 4 Straight Flutes • RH Cutting



Features 5°
top and bottom
flare-out to avoid
workpiece contact.



Radius Decimal	Radius Fract	Pilot Diam	Body Diam	Shank Diam	OAL	EDP#	UnCoated Price	Coated Price
.0312	1/32	1/8	3/16	3/16	2"	23500	\$28.20	\$30.30
.0625	1/16	1/8	1/4	1/4	2-1/2	23501	\$33.70	\$37.70
.0938	3/32	3/16	3/8	3/8	2-1/2	23502	\$53.50	\$58.80
.125	1/8	1/4	1/2	1/2	3"	23503	\$76.50	\$83.60
.1562*	5/32	7/16	3/4	3/8	3"	23514	\$87.60	\$98.60
.1875*	3/16	3/8	3/4	3/8	3"	23504	\$87.60	\$98.60
.250*	1/4	1/2	1"	1/2	3"	23505	\$107.00	\$121.10
.3125*	5/16	3/8	1"	1/2	3"	23515	\$107.00	\$121.10
.375*	3/8	1/2	1-1/4	3/4	3"	23506	\$185.90	\$207.10

*Two-piece brazed construction; solid-carbide head w/steel shank.

Counterbores by ULTRATOOL

new!

Series 232S

Solid Carbide Counterbores
Square Flat Bottom • 4 Slow Helix RHS Flutes • Center Cutting



These true counterbores have a cylindrical, non-cutting OD margin, center cutting flat bottom, and incredible OD tolerance of +.0000 / -.0003 (before coating). Use the 232S to spot face irregular surfaces, counter bore, mill a flat bottom, or straighten a misaligned hole. Available in all standard SmoothCoat's.



Diam	LOC	OAL	Shank	EDP#	Price	Coated
1/8	1/2	1-1/2	1/8	32950	\$7.70	\$9.30
3/16	5/8	2"	3/16	32951	\$11.00	\$13.00
1/4	3/4	2-1/2	1/4	32952	\$13.00	\$16.00
5/16	13/16	2-1/2	5/16	32953	\$19.90	\$24.50
3/8	1"	2-1/2	3/8	32954	\$23.70	\$28.60
7/16	1"	2-3/4	7/16	32955	\$33.70	\$40.10
1/2	1"	3"	1/2	32956	\$39.20	\$45.70
5/8	1-1/2	3-1/2	5/8	32957	\$74.70	\$84.80
3/4	1-1/2	4"	3/4	32958	\$104.40	\$116.40
1"	1-1/2	4"	1"	32959	\$171.70	\$188.90

SmoothFlute

SmoothFlute® is the latest technology to be integrated within our product line. It's so unique and important that we've not only obtained patent protection in the USA but additionally in all the major industrial countries of the World.

As incorporated into the Series 323, 323ML, 365, 365ML, and 395ML end mills, SmoothFlute allows for outstanding feed rates with incredibly quiet harmonics. The resultant stable and smooth cutting action leads to superb edge integrity for longer lasting tool life and enhanced work piece finishes.

Should you need a diameter, LOC, radius, or other characteristic not offered in our standard product line, SmoothFlute is also available for special tools on our tungstentoolworks.com website.



Japanese Patent issued for SmoothFlute® technology.