



SOLID CARBIDE END MILLS

General Purpose / Standard 30° Helix



Performance Matters

GENERAL PURPOSE CARBIDE END MILLS

2 AND 4 FLUTE STANDARD LENGTH

120 & 140 SQUARE END SERIES

2 Flute	DIA	Shank	LOC	OAL	4 Flute
120-0312	1/32	1/8	3/32	1-1/2	140-0312
120-0469	3/64	1/8	1/8	1-1/2	140-0469
120-0625	1/16	1/8	3/16	1-1/2	140-0625
120-0781	5/64	1/8	1/4	1-1/2	140-0781
120-0938	3/32	1/8	3/8	1-1/2	140-0938
120-1094	7/64	1/8	3/8	1-1/2	140-1094
120-1250	1/8	1/8	1/2	1-1/2	140-1250
120-1406	9/64	3/16	1/2	2	140-1406
120-1562	5/32	3/16	1/2	2	140-1562
120-1719	11/64	3/16	5/8	2	140-1719
120-1875	3/16	3/16	5/8	2	140-1875
120-2031	13/64	1/4	5/8	2-1/2	140-2031
120-2188	7/32	1/4	5/8	2-1/2	140-2188
120-2344	15/64	1/4	3/4	2-1/2	140-2344
120-2500	1/4	1/4	3/4	2-1/2	140-2500
120-2656	17/64	5/16	3/4	2-1/2	140-2656
120-2812	9/32	5/16	3/4	2-1/2	140-2812
120-2969	19/64	5/16	13/16	2-1/2	140-2969
120-3125	5/16	5/16	13/16	2-1/2	140-3125
120-3281	21/64	3/8	7/8	2-1/2	140-3281
120-3438	11/32	3/8	7/8	2-1/2	140-3438
120-3594	23/64	3/8	7/8	2-1/2	140-3594
120-3750	3/8	3/8	1	2-1/2	140-3750
120-3906	25/64	7/16	1	2-3/4	140-3906
120-4062	13/32	7/16	1	2-3/4	140-4062
120-4219	27/64	7/16	1	2-3/4	140-4219
120-4375	7/16	7/16	1	2-3/4	140-4375
120-4531	29/64	1/2	1	3	140-4531
120-4688	15/32	1/2	1	3	140-4688
120-4844	31/64	1/2	1	3	140-4844
120-5000	1/2	1/2	1	3	140-5000
120-5625	9/16	9/16	1-1/4	3-1/2	140-5625
120-6250	5/8	5/8	1-1/4	3-1/2	140-6250
120-6875	11/16	3/4	1-1/2	4	140-6875
120-7500	3/4	3/4	1-1/2	4	140-7500
120-8750	7/8	7/8	1-1/2	4	140-8750
120-1000	1	1	1-1/2	4	140-1000

122 & 142 BALL END SERIES

2 Flute	DIA	Shank	LOC	OAL	4 Flute
122-0312	1/32	1/8	3/32	1-1/2	142-0312
122-0469	3/64	1/8	1/8	1-1/2	142-0469
122-0625	1/16	1/8	3/16	1-1/2	142-0625
122-0781	5/64	1/8	1/4	1-1/2	142-0781
122-0938	3/32	1/8	3/8	1-1/2	142-0938
122-1094	7/64	1/8	3/8	1-1/2	142-1094
122-1250	1/8	1/8	1/2	1-1/2	142-1250
122-1406	9/64	3/16	1/2	2	142-1406
122-1562	5/32	3/16	1/2	2	142-1562
122-1719	11/64	3/16	5/8	2	142-1719
122-1875	3/16	3/16	5/8	2	142-1875
122-2031	13/64	1/4	5/8	2-1/2	142-2031
122-2188	7/32	1/4	5/8	2-1/2	142-2188
122-2344	15/64	1/4	3/4	2-1/2	142-2344
122-2500	1/4	1/4	3/4	2-1/2	142-2500
122-2656	17/64	5/16	3/4	2-1/2	142-2656
122-2812	9/32	5/16	3/4	2-1/2	142-2812
122-2969	19/64	5/16	13/16	2-1/2	142-2969
122-3125	5/16	5/16	13/16	2-1/2	142-3125
122-3281	21/64	3/8	7/8	2-1/2	142-3281
122-3438	11/32	3/8	7/8	2-1/2	142-3438
122-3594	23/64	3/8	7/8	2-1/2	142-3594
122-3750	3/8	3/8	1	2-1/2	142-3750
122-3906	25/64	7/16	1	2-3/4	142-3906
122-4062	13/32	7/16	1	2-3/4	142-4062
122-4219	27/64	7/16	1	2-3/4	142-4219
122-4375	7/16	7/16	1	2-3/4	142-4375
122-4531	29/64	1/2	1	3	142-4531
122-4688	15/32	1/2	1	3	142-4688
122-4844	31/64	1/2	1	3	142-4844
122-5000	1/2	1/2	1	3	142-5000
122-5625	9/16	9/16	1-1/4	3-1/2	142-5625
122-6250	5/8	5/8	1-1/4	3-1/2	142-6250
122-6875	11/16	3/4	1-1/2	4	142-6875
122-7500	3/4	3/4	1-1/2	4	142-7500
122-8750	7/8	7/8	1-1/2	4	142-8750
122-1000	1	1	1-1/2	4	142-1000

2 AND 4 FLUTE STUB LENGTH

220 & 240 SQUARE END SERIES

2 Flute	DIA	Shank	LOC	OAL	4 Flute
220-0312	1/32	1/8	1/16	1-1/2	240-0312
220-0469	3/64	1/8	3/32	1-1/2	240-0469
220-0625	1/16	1/8	1/8	1-1/2	240-0625
220-0938	3/32	1/8	3/16	1-1/2	240-0938
220-1250	1/8	1/8	1/4	1-1/2	240-1250
220-1562	5/32	3/16	5/16	2	240-1562
220-1875	3/16	3/16	3/8	2	240-1875
220-2188	7/32	1/4	1/2	2	240-2188
220-2500	1/4	1/4	1/2	2	240-2500
220-3125	5/16	5/16	1/2	2	240-3125
220-3750	3/8	3/8	5/8	2	240-3750
220-4375	7/16	7/16	5/8	2-1/2	240-4375
220-5000	1/2	1/2	5/8	2-1/2	240-5000
220-6250	5/8	5/8	3/4	3	240-6250
220-7500	3/4	3/4	1	3	240-7500

222 & 242 BALL END SERIES

2 Flute	DIA	Shank	LOC	OAL	4 Flute
222-0312	1/32	1/8	1/16	1-1/2	242-0312
222-0469	3/64	1/8	3/32	1-1/2	242-0469
222-0625	1/16	1/8	1/8	1-1/2	242-0625
222-0938	3/32	1/8	3/16	1-1/2	242-0938
222-1250	1/8	1/8	1/4	1-1/2	242-1250
222-1562	5/32	3/16	5/16	2	242-1562
222-1875	3/16	3/16	3/8	2	242-1875
222-2188	7/32	1/4	1/2	2	242-2188
222-2500	1/4	1/4	1/2	2	242-2500
222-3125	5/16	5/16	1/2	2	242-3125
222-3750	3/8	3/8	5/8	2	242-3750
222-4375	7/16	7/16	5/8	2-1/2	242-4375
222-5000	1/2	1/2	5/8	2-1/2	242-5000
222-6250	5/8	5/8	3/4	3	242-6250
222-7500	3/4	3/4	1	3	242-7500

2 AND 4 FLUTE LONG LENGTH

720 & 740 SQUARE END SERIES

2 Flute	DIA	Shank	LOC	OAL	4 Flute
720-1250	1/8	1/8	3/4	2-1/4	740-1250
720-1875	3/16	3/16	3/4	2-1/2	740-1875
720-2500	1/4	1/4	1-1/8	3	740-2500
720-3125	5/16	5/16	1-3/8	3	740-3125
720-3750	3/8	3/8	1-1/2	3	740-3750
720-4375	7/16	7/16	2	4	740-4375
720-5000	1/2	1/2	2	4	740-5000
720-6250	5/8	5/8	2-1/4	5	740-6250
720-7500	3/4	3/4	2-1/4	5	740-7500
720-1000	1	1	2-1/4	5	740-1000

722 & 742 BALL END SERIES

2 Flute	DIA	Shank	LOC	OAL	4 Flute
722-1250	1/8	1/8	3/4	2-1/4	742-1250
722-1875	3/16	3/16	3/4	2-1/2	742-1875
722-2500	1/4	1/4	1-1/8	3	742-2500
722-3125	5/16	5/16	1-3/8	3	742-3125
722-3750	3/8	3/8	1-1/2	3	742-3750
722-4375	7/16	7/16	2	4	742-4375
722-5000	1/2	1/2	2	4	742-5000
722-6250	5/8	5/8	2-1/4	5	742-6250
722-7500	3/4	3/4	2-1/4	5	742-7500
722-1000	1	1	2-1/4	5	742-1000

2 AND 4 FLUTE EXTRA LONG LENGTH

820 & 840 SQUARE END SERIES

2 Flute	DIA	Shank	LOC	OAL	4 Flute
820-1250	1/8	1/8	1	3	840-1250
820-1875	3/16	3/16	1-1/8	3	840-1875
820-2500	1/4	1/4	1-1/2	4	840-2500
820-3125	5/16	5/16	1-3/4	4	840-3125
820-3750	3/8	3/8	2	4	840-3750
820-4375	7/16	7/16	3	6	840-4375
820-5000	1/2	1/2	3	6	840-5000
820-6250	5/8	5/8	3	6	840-6250
820-7500	3/4	3/4	3	6	840-7500
QUOTE	3/4	3/4	4	7	840-7501
820-1000	1	1	3	6	840-1000
QUOTE	1	1	4	7	840-1001
QUOTE	1	1	5	8	840-1002
QUOTE	1	1	6	9	840-1003

822 & 842 BALL END SERIES

2 Flute	DIA	Shank	LOC	OAL	4 Flute
822-1250	1/8	1/8	1	3	842-1250
822-1875	3/16	3/16	1-1/8	3	842-1875
822-2500	1/4	1/4	1-1/2	4	842-2500
822-3125	5/16	5/16	1-3/4	4	842-3125
822-3750	3/8	3/8	2	4	842-3750
822-4375	7/16	7/16	3	6	842-4375
822-5000	1/2	1/2	3	6	842-5000
822-6250	5/8	5/8	3	6	842-6250
822-7500	3/4	3/4	3	6	842-7500
822-1000	1	1	3	6	842-1000

MATERIAL	SPEED (SFM)	END MILL DIAMETER / FEED PER TOOTH (INCHES)		
		Up to 1/4"	Up to 1/2"	Up to 1"
ALUMINUM/ALUMINUM ALLOYS	600 - 1300	.0002-.002	.002-.004	.004-.008
BRASS/SOFT BRONZE	400 - 700	.0005-.002	.002-.003	.003-.005
BRONZE/HIGH TENSILE	250 - 400	.001-.002	.002-.003	.004-.006
COPPER/COPPER ALLOYS	350 - 900	.005-.002	0.002	.002-.006
IRON-CAST (SOFT)	200 - 500	.0005-.002	.002-.003	.003-.008
IRON-CAST (HARD)	100 - 450	.0003-.001	.0008-.002	.003-.005
IRON-DUCTILE	80 - 400	.0002-.001	.001-.002	.002-.006
IRON-MALLEABLE	250 - 600	.001-.002	.001-.003	.003-.008
MAGNESIUM/MAG. ALLOYS	800 - 1400	.0005-.002	.002-.004	.004-.010
MONEL/HIGH NICKEL STEEL	150 - 300	.0002-.001	.001-.002	.002-.004
NICKEL BASE H-TEMP ALLOYS	20 - 100	.0003-.0008	.0008-.001	.001-.002
PLASTICS	600 - 1200	.0006-.003	.003-.006	.006-.015
PLASTICS-GLASS FILLED	300 - 800	.0005-.003	.003-.004	.004-.012
REFRACTORY ALLOYS	80 - 400	.0002-.001	0.001	.001-.002
STEEL-LOW CARBON	250 - 550	.0002-.001	.001-.003	.003-.007
STEEL-MEDIUM CARBON	100 - 250	.0004-.0015	.0015-.002	.002-.005
STEEL: Up to Rc 35	150 - 250	.0005-.001	.001-.002	.002-.003
STEEL: Rc 35 - Rc 50	80 - 150	.0003-.0007	.0007-.001	.002-.003
STEEL: Rc 50 - Rc 60	25 - 120	.0002-.0005	.0005-.001	.001-.003
STEEL-MOLD	200 - 350	.0002-.001	.001-.002	.002-.006
STEEL-TOOL	100 - 300	.0002-.001	.001-.002	.002-.006
STAINLESS STEEL-SOFT	250 - 400	.0002-.001	.001-.002	.002-.006
STAINLESS STEEL-HARD	50 - 250	.0002-.001	.001-.002	.001-.005
TITANIUM-SOFT	120 - 350	.0002-.001	.001-.002	.002-.006
TITANIUM-HARD	30 - 150	.0002-.0005	.0005-.001	.001-.004

ALTiN COATED TOOLS: ADD "ALTiN" AFTER THE PART NUMBER TO ORDER
OTHER COATINGS AVAILABLE UPON REQUEST (TiN, TiCN, ZrN)