



American Made... in America's Hometown!





For more than 50 years Richards Micro-Tool has been the Precision Performance company when it comes to engineering and producing miniature cutting tools for industry and the medical field. We set the standards of quality, service and value that others follow.

Cost Effective Solutions

At Richards Micro-Tool our goal is to deliver enhanced value through engineered solutions for your cutting tool applications. We take the time to understand your application so that we can provide a cost effective solution that delivers effective results and long-term value. This includes our in-stock cutting tools and custom applications.

Raising Standards on Every Product

The combination of practical experience and state-of-the-art technology at Richards Micro-Tool provides our customers with performance that not only exceeds industry standards, it exceeds expectations. Our job is to help you create a superior product by partnering with you as a unified metal-working team.

“Above and Beyond” Service

We are continuously improving both our products and our service. We make every effort to turn quotes around in 24 hours or less, responsiveness that is second to none in the industry. We have a well deserved reputation for delivering products on time, and for going the extra mile to assist our customers. Discover for yourself the difference Richards Micro-Tool can make for your company.

Finding the right tool for the job is easier and faster then ever with the new Richards Micro Tool “fast tabs”. Use the symbols on the outside edge of the catalog to quickly find the right tool based on material, end feature, and measurement.

MATERIAL TYPE:

CARBIDE



COBALT/HSS



COATING TYPE:



**AMORPHOUS
DIAMOND**



**CRYSTALLINE
DIAMOND**

END FEATURE:



**SQUARE
END**



**BALL
END**



**CORNER
RADIUS**



SPECIAL



**CIRCUIT
BOARD
DRILLS**



**MICRO
DRILLS**



**HARD
MILL**



**MULTI
FLUTE**



**HIGH
HELIX**

MEASUREMENT:

.XXX

DECIMAL

X/X

FRACTIONAL

mm

METRIC

READING OUR DIMENSIONS:

OAL-OVERALL LENGTH
RL-REACH LENGTH
LOC-LENGTH OF CUT
ND-NECK DIAMETER



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SQUARE END, STANDARD

DECIMAL .005-.050"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +/-0.0005

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part	RMT Part	RMT Part
				2 Flute	3 Flute	4 Flute
.005"	.015"	.125"	1.50"	874-.005	--	--
.006"	.018"	.125"	1.50"	874-.006	--	--
.007"	.021"	.125"	1.50"	874-.007	--	--
.008"	.024"	.125"	1.50"	874-.008	--	--
.009"	.027"	.125"	1.50"	874-.009	--	--
.010"	.030"	.125"	1.50"	874-.010	887-.010	875-.010
.011"	.033"	.125"	1.50"	874-.011	887-.011	875-.011
.012"	.036"	.125"	1.50"	874-.012	887-.012	875-.012
.013"	.039"	.125"	1.50"	874-.013	887-.013	875-.013
.014"	.042"	.125"	1.50"	874-.014	887-.014	875-.014
.015"	.045"	.125"	1.50"	874-.015	887-.015	875-.015
.0156" (1/64")	.0468"	.125"	1.50"	874-1560	887-1560	875-1560
.018"	.054"	.125"	1.50"	874-.018	887-.018	--
.0197" (.5mm)	.0591"	.125"	1.50"	874-0197	887-0197	875-0197
.020"	.060"	.125"	1.50"	874-.020	887-.020	875-.020
.023"	.069"	.125"	1.50"	874-.023	887-.023	--
.024"	.072"	.125"	1.50"	874-.024	887-.024	--
.025"	.075"	.125"	1.50"	874-.025	887-.025	875-.025
.026"	.078"	.125"	1.50"	874-.026	887-.026	875-.026
.029"	.087"	.125"	1.50"	874-.029	887-.029	--
.030"	.09"	.125"	1.50"	874-.030	887-.030	875-.030
.0312" (1/32")	.093"	.125"	1.50"	874-.031	887-.031	875-.031
.033"	.099"	.125"	1.50"	874-.033	887-.033	875-.033
.035"	.105"	.125"	1.50"	874-.035	887-.035	875-.035
.0394" (1.0 mm)	.1182"	.125"	1.50"	874-0394	887-0394	875-0394
.040"	.12"	.125"	1.50"	874-.040	887-.040	875-.040
.045"	.135"	.125"	1.50"	874-.045	887-.045	875-.045
.0468" (3/64")	.141"	.125"	1.50"	874-.047	887-.047	875-.047
.0492" (1.25 mm)	.1476"	.125"	1.50"	874-0492	887-0492	875-0492
.050"	.150"	.125"	1.50"	874-.050	887-.050	875-.050

SQUARE END, STANDARD

DECIMAL .055-.1772"



CARBIDE



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DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part		
				2 Flute	3 Flute	4 Flute
.055"	.165"	.125"	1.50"	874-.055	887-.055	875-.055
.0591" (1.5 mm)	.1773"	.125"	1.50"	874-0591	887-0591	875-0591
.060"	.180"	.125"	1.50"	874-.060	887-.060	875-.060
.0625" (1/16")	.1875"	.125"	1.50"	874-.062	887-.062	875-.062
.0630" (1.6 mm)	.189"	.125"	1.50"	874-0630	887-0630	875-0630
.064"	.192"	.125"	1.50"	874-.064	887-.064	875-.064
.065"	.195"	.125"	1.50"	874-.065	887-.065	875-.065
.070"	.210"	.125"	1.50"	874-.070	887-.070	875-.070
.0709" (1.8 mm)	.2127"	.125"	1.50"	874-0709	887-0709	875-0709
.075"	.225"	.125"	1.50"	874-.075	887-.075	875-.075
.0781" (5/64")	.2343"	.125"	1.50"	874-.078	887-.078	875-.078
.0787" (2.0 mm)	.2361"	.125"	1.50"	874-0787	887-0787	875-0787
.080"	.240"	.125"	1.50"	874-.080	887-.080	875-.080
.085"	.255"	.125"	1.50"	874-.085	887-.085	875-.085
.0866" (2.2 mm)	.2598"	.125"	1.50"	874-0866	887-0866	875-0866
.090"	.270"	.125"	1.50"	874-.090	887-.090	875-.090
.0938" (3/32")	.2814"	.125"	1.50"	874-.093	887-.093	875-.093
.095"	.285"	.125"	1.50"	874-.095	887-.095	875-.095
.0984" (2.5 mm)	.2952"	.125"	1.50"	874-0984	887-0984	875-0984
.100"	.300"	.125"	1.50"	874-.100	887-.100	875-.100
.103"	.309"	.125"	1.50"	874-.103	887-.103	875-.103
.1102" (2.8 mm)	.3306"	.125"	1.50"	874-1102	887-1102	875-1102
.1181" (3.0 mm)	.3543"	.125"	1.50"	874-1181	887-1181	875-1181
.120"	.360"	.125"	1.50"	874-.120	887-.120	875-.120
.1378" (3.5 mm)	.4134"	.1875"	1.50"	874-1378	887-1378	875-1378
.1772" (4.5 mm)	.5316"	.1875"	1.50"	874-1772	887-1772	875-1772

Square End Carbide Micro Endmills

SQUARE END, STANDARD, COATED

DECIMAL .005-.050"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +/-0.0005

TiAIN COATED

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT Part	RMT Part	RMT Part
				2 Flute	3 Flute	4 Flute
.005"	.015"	.125"	1.50"	874-C-.005	--	--
.006"	.018"	.125"	1.50"	874-C-.006	--	--
.007"	.021"	.125"	1.50"	874-C-.007	--	--
.008"	.024"	.125"	1.50"	874-C-.008	--	--
.009"	.027"	.125"	1.50"	874-C-.009	--	--
.010"	.030"	.125"	1.50"	874-C-.010	887-C-.010	875-C-.010
.011"	.033"	.125"	1.50"	874-C-.011	887-C-.011	875-C-.011
.012"	.036"	.125"	1.50"	874-C-.012	887-C-.012	875-C-.012
.013"	.039"	.125"	1.50"	874-C-.013	887-C-.013	875-C-.013
.014"	.042"	.125"	1.50"	874-C-.014	887-C-.014	875-C-.014
.015"	.045"	.125"	1.50"	874-C-.015	887-C-.015	875-C-.015
.0156" (1/64")	.0468"	.125"	1.50"	874-C-1560	887-C-1560	875-C-1560
.018"	.054"	.125"	1.50"	874-C-.018	887-C-.018	--
.0197" (.5 mm)	.0591"	.125"	1.50"	874-C-0197	887-C-0197	875-C-0197
.020"	.060"	.125"	1.50"	874-C-.020	887-C-.020	875-C-.020
.023"	.069"	.125"	1.50"	874-C-.023	887-C-.023	--
.024"	.072"	.125"	1.50"	874-C-.024	887-C-.024	--
.025"	.075"	.125"	1.50"	874-C-.025	887-C-.025	875-C-.025
.029"	.087"	.125"	1.50"	874-C-.029	887-C-.029	--
.030"	.090"	.125"	1.50"	874-C-.030	887-C-.030	875-C-.030
.0312" (1/32")	.093"	.125"	1.50"	874-C-.031	887-C-.031	875-C-.031
.035"	.105"	.125"	1.50"	874-C-.035	887-C-.035	875-C-.035
.0394" (1.0 mm)	.1182"	.125"	1.50"	874-C-0394	887-C-0394	875-C-0394
.040"	.120"	.125"	1.50"	874-C-.040	887-C-.040	875-C-.040
.045"	.135"	.125"	1.50"	874-C-.045	887-C-.045	875-C-.045
.047" (3/64")	.141"	.125"	1.50"	874-C-.047	887-C-.047	875-C-.047
.0492" (1.25 mm)	.1476"	.125"	1.50"	874-C-0492	887-C-0492	875-C-0492
.050"	.150"	.125"	1.50"	874-C-.050	887-C-.050	875-C-.050

CARBIDE



.XX

COATED

SQUARE END, STANDARD, COATED

DECIMAL .055-.1772"



CARBIDE



.XX

COATED

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part		
				2 Flute	3 Flute	4 Flute
.055"	.165"	.125"	1.50"	874-C-.055	887-C-.055	875-C-.055
.0591" (1.5 mm)	.1773"	.125"	1.50"	874-C-0591	887-C-0591	875-C-0591
.060"	.180"	.125"	1.50"	874-C-.060	887-C-.060	875-C-.060
.0625" (1/16")	.1875"	.125"	1.50"	874-C-.062	887-C-.062	875-C-.062
.0630" (1.6 mm)	.189"	.125"	1.50"	874-C-0630	887-C-0630	875-C-0630
.065"	.195"	.125"	1.50"	874-C-.065	887-C-.065	875-C-.065
.070"	.210"	.125"	1.50"	874-C-.070	887-C-.070	875-C-.070
.0709" (1.8 mm)	.2127"	.125"	1.50"	874-C-0709	887-C-0709	875-C-0709
.075"	.225"	.125"	1.50"	874-C-.075	887-C-.075	875-C-.075
.0781" (5/64")	.2343"	.125"	1.50"	874-C-.078	887-C-.078	875-C-.078
.0787" (2.0 mm)	.2361"	.125"	1.50"	874-C-0787	887-C-0787	875-C-0787
.080"	.240"	.125"	1.50"	874-C-.080	887-C-.080	875-C-.080
.085"	.255"	.125"	1.50"	874-C-.085	887-C-.085	875-C-.085
.0866" (2.2 mm)	.2598"	.125"	1.50"	874-C-0866	887-C-0866	875-C-0866
.090"	.270"	.125"	1.50"	874-C-.090	887-C-.090	875-C-.090
.0938" (3/32")	.2814"	.125"	1.50"	874-C-.093	887-C-.093	875-C-.093
.095"	.285"	.125"	1.50"	874-C-.095	887-C-.095	875-C-.095
.0984" (2.5 mm)	.2952"	.125"	1.50"	874-C-0984	887-C-0984	875-C-0984
.100"	.300"	.125"	1.50"	874-C-.100	887-C-.100	875-C-.100
.1102" (2.8 mm)	.3306"	.125"	1.50"	874-C-1102	887-C-1102	875-C-1102
.1181" (3.0 mm)	.3543"	.125"	1.50"	874-C-1181	887-C-1181	875-C-1181
.120"	.360"	.125"	1.50"	874-C-.120	887-C-.120	875-C-.120
.1378" (3.5 mm)	.4134"	.1875"	1.50"	874-C-1378	887-C-1378	875-C-1378
.1772" (4.5 mm)	.5316"	.1875"	1.50"	874-C-1772	887-C-1772	875-C-1772

SQUARE END, STUB

DECIMAL .005-.050"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

DIAMETER TOLERANCE: +/-0.0005

CARBIDE



.XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	
				2 flute	4 flute
.005"	.008"	.125"	1.50"	878-.005	--
.006"	.009"	.125"	1.50"	878-.006	--
.007"	.011"	.125"	1.50"	878-.007	--
.008"	.012"	.125"	1.50"	878-.008	--
.009"	.014"	.125"	1.50"	878-.009	--
.010"	.015"	.125"	1.50"	878-.010	879-.010
.011"	.017"	.125"	1.50"	878-.011	879-.011
.012"	.018"	.125"	1.50"	878-.012	879-.012
.013"	.020"	.125"	1.50"	878-.013	879-.013
.014"	.021"	.125"	1.50"	878-.014	879-.014
.015"	.023"	.125"	1.50"	878-.015	879-.015
.0156" (1/64")	.023"	.125"	1.50"	878-1560	879-1560
.018"	.027"	.125"	1.50"	878-.018	879-.018
.0197" (.5 mm)	.030"	.125"	1.50"	878-0197	879-0197
.020"	.030"	.125"	1.50"	878-.020	879-.020
.023"	.035"	.125"	1.50"	878-.023	879-.023
.025"	.038"	.125"	1.50"	878-.025	879-.025
.029"	.044"	.125"	1.50"	878-.029	879-.029
.030"	.045"	.125"	1.50"	878-.030	879-.030
.031" (1/32")	.047"	.125"	1.50"	878-.031	879-.031
.035"	.053"	.125"	1.50"	878-.035	879-.035
.0394" (1.0 mm)	.059"	.125"	1.50"	878-0394	879-0394
.040"	.060"	.125"	1.50"	878-.040	879-.040
.045"	.068"	.125"	1.50"	878-.045	879-.045
.047" (5/64")	.071"	.125"	1.50"	878-.047	879-.047
.0492" (1.25 mm)	.074"	.125"	1.50"	878-0492	879-0492
.050"	.075"	.125"	1.50"	878-.050	879-.050

SQUARE END, STUB

DECIMAL .055-.1378"



CARBIDE



XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	RMT PART
				2 flute	4 flute
.055"	.083"	.125"	1.50"	878-.055	879-.055
.0591" (1.5 mm)	.089"	.125"	1.50"	878-0591	879-0591
.060"	.090"	.125"	1.50"	878-.060	879-.060
.062"	.093"	.125"	1.50"	878-.062	879-.062
.0630" (1.6 mm)	.095"	.125"	1.50"	878-0630	879-0630
.065"	.098"	.125"	1.50"	878-.065	879-.065
.070"	.105"	.125"	1.50"	878-.070	879-.070
.0709" (1.8 mm)	.106"	.125"	1.50"	878-0709	879-0709
.074"	.111"	.125"	1.50"	878-.074	879-.074
.075"	.113"	.125"	1.50"	878-.075	879-.075
.078" (5/64")	.117"	.125"	1.50"	878-.078	879-.078
.0787" (2.0 mm)	.118"	.125"	1.50"	878-0787	879-0787
.080"	.120"	.125"	1.50"	878-.080	879-.080
.085"	.128"	.125"	1.50"	878-.085	879-.085
.0866" (2.2 mm)	.130"	.125"	1.50"	878-0866	879-0866
.090"	.135"	.125"	1.50"	878-.090	879-.090
.093" (3/32")	.140"	.125"	1.50"	878-.093	879-.093
.095"	.143"	.125"	1.50"	878-.095	879-.095
.0984" (2.5 mm)	.148"	.125"	1.50"	878-0984	879-0984
.100"	.150"	.125"	1.50"	878-.100	879-.100
.1102" (2.8 mm)	.166"	.125"	1.50"	878-1102	879-1102
.1181" (3.0 mm)	.177"	.125"	1.50"	878-1181	879-1181
.120"	.180"	.125"	1.50"	878-.120	879-.120
.1378" (3.5 mm)	.207"	.1875"	1.50"	878-1378	879-1378

Square End Carbide Micro Endmills

SQUARE END, LONG REACH

DECIMAL .005-.100"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +/-0.0005

CARBIDE



.XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH	RMT Part	RMT Part
					2 flute	4 flute
.005"	.015"	.125"	1.50"	.047"	874-.005RL	--
.010"	.030"	.125"	1.50"	.080"	874-RL.010X.080	875-RL.010X.080
.010"	.030"	.125"	1.50"	.0937"	874-.010RL	875-.010RL
.015"	.045"	.125"	1.50"	.125"	874-.015RL	875-.015RL
.020"	.060"	.125"	1.50"	.170"	874-RL.020X.170	875-RL.020X.170
.020"	.060"	.125"	1.50"	.1875"	874-.020RL	875-.020RL
.025"	.075"	.125"	1.50"	.213"	874-RL.025X.213	875-RL.025X.213
.025"	.075"	.125"	1.50"	.250"	874-.025RL	875-.025RL
.030"	.090"	.125"	1.50"	.250"	874-.030RL	875-.030RL
.030"	.090"	.125"	1.50"	.270"	874-RL.030X.270	875-RL.030X.270
.031"	.093"	.125"	1.50"	.279"	874-RL.031X.279	875-RL.031X.279
.035"	.105"	.125"	1.50"	.250"	874-.035RL	875-.035RL
.035"	.105"	.125"	1.50"	.315"	874-RL.035X.315	875-RL.035X.315
.040"	.120"	.125"	1.50"	.250"	874-.040RL	875-.040RL
.040"	.120"	.125"	1.50"	.360"	874-RL.040X.360	875-RL.040X.360
.045"	.135"	.125"	1.50"	.405"	874-RL.045X.405	875-RL.045X.405
.045"	.135"	.125"	1.50"	.500"	874-.045RL	875-.045RL
.047"	.141"	.125"	1.50"	.423"	874-RL.047X.423	875-RL.047X.423
.050"	.150"	.125"	1.50"	.500"	874-.050RL	875-.050RL
.055"	.165"	.125"	1.50"	.500"	874-.055RL	875-.055RL
.060"	.180"	.125"	1.50"	.500"	874-.060RL	875-.060RL
.062"	.186"	.125"	1.50"	.500"	874-RL.062X.500	875-RL.062X.500
.065"	.195"	.125"	1.50"	.500"	874-.065RL	875-.065RL
.070"	.210"	.125"	1.50"	.500"	874-.070RL	875-.070RL
.078"	.234"	.125"	1.50"	.500"	874-RL.078X.500	875-RL.078X.500
.080"	.240"	.125"	1.50"	.500"	874-.080RL	875-.080RL
.090"	.270"	.125"	1.50"	.500"	874-.090RL	875-.090RL
.090"	.270"	.125"	1.50"	.625"	874-RL.090X.625	875-RL.090X.625
.093"	.279"	.125"	1.50"	.625"	874-RL.093X.625	875-RL.093X.625
.095"	.285"	.125"	1.50"	.625"	874-RL.095X.625	875-RL.095X.625
.100"	.300"	.125"	1.50"	.500"	874-.100RL	875-.100RL
.100"	.300"	.125"	1.50"	.625"	874-RL.100X.625	875-RL.100X.625

SQUARE END, LONG FLUTE, LONG REACH

DECIMAL .010-.250"



CARBIDE



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DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 FLUTE					
.010"	5X (.050")	.125"	2.50"	10X (.100")	887X-F5R10-.010
.015" (1/64")	5X (.075")	.125"	2.50"	10X (.150")	887X-F5R10-.015
.020"	5X (.100")	.125"	2.50"	10X (.200")	887X-F5R10-.020
.025"	5X (.125")	.125"	2.50"	10X (.250")	887X-F5R10-.025
.030"	5X (.150")	.125"	2.50"	10X (.300")	887X-F5R10-.030
.031" (1/32")	5X (.155")	.125"	2.50"	10X (.300")	887X-F5R10-.031
.035"	5X (.175")	.125"	2.50"	10X (.350")	887X-F5R10-.035
.040"	5X (.200")	.125"	2.50"	10X (.400")	887X-F5R10-.040
.045"	5X (.225")	.125"	2.50"	10X (.450")	887X-F5R10-.045
.047" (3/64")	5X (.250")	.125"	2.50"	10X (.500")	887X-F5R10-.047
.050"	6X (.300")	.125"	2.50"	12X (.600")	887X-FR-.050 X 600
.055"	7X (.385")	.125"	2.50"	14X (.770")	887X-FR-.055 X 770
.060"	8.3X (.500")	.125"	2.50"	16X (1.00")	887X-FR-.060 X 1.00
.062" (1/16")	8X (.500")	.125"	2.50"	16X (1.00")	887X-FR-.062 X 1.00
.065"	7.7X (.500")	.125"	2.50"	15X (1.00")	887X-FR-.065 X 1.00
.070"	7.1X (.500")	.125"	2.50"	14X (1.00")	887X-FR-.070 X 1.00
.075"	6.7X (.500")	.125"	2.50"	13X (1.00")	887X-FR-.075 X 1.00
.078" (5/64")	6.4X (.500")	.125"	2.50"	12X (1.00")	887X-FR-.078 X 1.00
.080"	9.4X (.750")	.125"	2.50"	15X (1.25")	887X-FR-.080 X 1.25
.085"	8.8X (.750")	.125"	2.50"	14X (1.25")	887X-FR-.085 X 1.25
.090"	8.3X (.750")	.125"	2.50"	14X (1.25")	887X-FR-.090 X 1.25
.093" (3/32")	8.1X (.750")	.125"	2.50"	13X (1.25")	887X-FR-.093 X 1.25
.095"	7.9X (.750")	.125"	2.50"	13X (1.25")	887X-FR-.095 X 1.25
.100"	7.5X (.750")	.125"	2.50"	12X (1.25")	887X-FR-.100 X 1.25
.125" (1/8")	8X (1.00")	.125"	2.50"	12X (1.50")	887X-FR-.125 X 1.50
.187" (3/16")	6X (1.125")	.1875"	3.00"	8X (1.625")	887X-FR-.187 X 1.625
.250" (1/4")	8X (1.50")	.250"	4.00"	8X (2.00")	887X-FR-.250 X 2.0

TECHNICAL INFORMATION

- .001 increments priced upon request
- Long Reach End Mills with solid neck diameters provide rigidity and reduce tool deflection, allowing deep pocket milling at high speed and feed rates while increasing tool life over long length of cut tools. Neck diameters are ground below the cutter diameter to assure proper clearance from the work piece.

Square End Carbide Micro Endmills

SQUARE END, EXTRA LONG FLUTE

DECIMAL .031-.125"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER .005" to .124": +/- .0005

CUTTING DIAMETER .125" to .375": +0.000 / -.002

CARBIDE



.XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				3 flute
.031" (1/32")	12X (.375")	.125"	2.50"	887X-LF12-.031
.047" (3/64")	12X (.570")	.125"	2.50"	887X-LF12-.047
.062" (1/16")	12X (.750")	.125"	2.50"	887X-LF12-.062
.078" (5/64")	12X (.940")	.125"	2.50"	887X-LF12-.078
.093" (3/32")	12X (1.125")	.125"	2.50"	887X-LF12-.093
.125" (1/8")	12X (1.50")	.125"	3.00"	887X-LF12-.125
.156" (5/32")	12X (1.875")	.1875"	4.00"	887X-LF12-.156
.187" (3/16")	12X (2.25")	.1875"	4.00"	887X-LF12-.187
.250" (1/4")	12X (3.00")	.250"	6.00"	887X-LF12-.250
.062" (1/16")	15X (.950")	.125"	2.50"	887X-LF15-.062
.078" (5/64")	15X (1.187")	.125"	2.50"	887X-LF15-.078
.093" (3/32")	15X (1.400")	.125"	3.00"	887X-LF15-.093
.125" (1/8")	15X (1.875")	.125"	3.00"	887X-LF15-.125



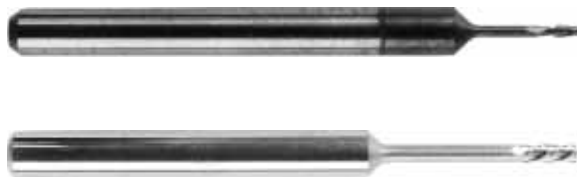
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SQUARE END, LONG SHANK, LONG REACH STUB

DECIMAL .010-.030"



CARBIDE



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DIA	FLUTE LENGTH	SHANK φ	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.010"	.015"	.125"	2.50"	5x (.050")	888X-RL5-.010
.010"	.015"	.125"	2.50"	8x (.080")	888X-RL8-.010
.010"	.015"	.125"	2.50"	12x (.125")	888X-RL12-.010
.010"	.015"	.125"	2.50"	15x (.150")	888X-RL15-.010
.015" (1/64")	.023"	.125"	2.50"	3x (.045")	888X-RL3-.015
.015" (1/64")	.023"	.125"	2.50"	5x (.078")	888X-RL5-.015
.015" (1/64")	.023"	.125"	2.50"	8x (.125")	888X-RL8-.015
.015" (1/64")	.023"	.125"	2.50"	12x (.1875")	888X-RL12-.015
.015" (1/64")	.023"	.125"	2.50"	15x (.225")	888X-RL15-.015
.015" (1/64")	.023"	.125"	2.50"	20x (.300")	888X-RL20-.015
.020"	.030"	.125"	2.50"	5x (.100")	888X-RL5-.020
.020"	.030"	.125"	2.50"	8x (.160")	888X-RL8-.020
.020"	.030"	.125"	2.50"	12x (.250")	888X-RL12-.020
.020"	.030"	.125"	2.50"	15x (.300")	888X-RL15-.020
.020"	.030"	.125"	2.50"	20x (.400")	888X-RL20-.020
.025"	.037"	.125"	2.50"	5x (.125")	888X-RL5-.025
.025"	.037"	.125"	2.50"	8x (.200")	888X-RL8-.025
.025"	.037"	.125"	2.50"	12x (.3125")	888X-RL12-.025
.025"	.037"	.125"	2.50"	15x (.375")	888X-RL15-.025
.025"	.037"	.125"	2.50"	20x (.500")	888X-RL20-.025
.030"	.045"	.125"	2.50"	5x (.150")	888X-RL5-.030
.030"	.045"	.125"	2.50"	8x (.250")	888X-RL8-.030
.030"	.045"	.125"	2.50"	12x (.375")	888X-RL12-.030
.030"	.045"	.125"	2.50"	15x (.450")	888X-RL15-.030

SQUARE END, LONG SHANK, LONG REACH, STUB

DECIMAL .031-.050"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER .005" to .124": +/- .0005

CUTTING DIAMETER .125" to .375": +0.000 / -.002

DIA	FLUTE LENGTH	SHANK ϕ	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.031" (1/32")	.047"	.125"	2.50"	3x (.093")	888X-RL3-.031
.031" (1/32")	.047"	.125"	2.50"	5x (.155")	888X-RL5-.031
.031" (1/32")	.047"	.125"	2.50"	8x (.250")	888X-RL8-.031
.031" (1/32")	.047"	.125"	2.50"	12x (.375")	888X-RL12-.031
.031" (1/32")	.047"	.125"	2.50"	15x (.470")	888X-RL15-.031
.031" (1/32")	.047"	.125"	2.50"	20x (.625")	888X-RL20-.031
.035"	.052"	.125"	2.50"	5x (.187")	888X-RL5-.035
.035"	.052"	.125"	2.50"	8x (.280")	888X-RL8-.035
.035"	.052"	.125"	2.50"	12x (.425")	888X-RL12-.035
.035"	.052"	.125"	2.50"	15x (.525")	888X-RL15-.035
.035"	.052"	.125"	2.50"	20x (.700")	888X-RL20-.035
.040"	.060"	.125"	2.50"	5x (.200")	888X-RL5-.040
.040"	.060"	.125"	2.50"	8x (.325")	888X-RL8-.040
.040"	.060"	.125"	2.50"	12x (.480")	888X-RL12-.040
.040"	.060"	.125"	2.50"	15x (.600")	888X-RL15-.040
.040"	.060"	.125"	2.50"	20x (.800")	888X-RL20-.040
.045"	.067"	.125"	2.50"	5x (.225")	888X-RL5-.045
.045"	.067"	.125"	2.50"	8x (.375")	888X-RL8-.045
.045"	.067"	.125"	2.50"	12x (.550")	888X-RL12-.045
.045"	.067"	.125"	2.50"	15x (.680")	888X-RL15-.045
.045"	.067"	.125"	2.50"	20x (.900")	888X-RL20-.045
.047" (3/64")	.071"	.125"	2.50"	3x (.141")	888X-RL3-.047
.047" (3/64")	.071"	.125"	2.50"	5x (.250")	888X-RL5-.047
.047" (3/64")	.071"	.125"	2.50"	8x (.375")	888X-RL8-.047
.047" (3/64")	.071"	.125"	2.50"	12x (.570")	888X-RL12-.047
.047" (3/64")	.071"	.125"	2.50"	15x (.710")	888X-RL15-.047
.047" (3/64")	.071"	.125"	2.50"	20x (.950")	888X-RL20-.047
.050"	.075"	.125"	2.50"	5x (.250")	888X-RL5-.050
.050"	.075"	.125"	2.50"	8x (.400")	888X-RL8-.050
.050"	.075"	.125"	2.50"	12x (.600")	888X-RL12-.050
.050"	.075"	.125"	2.50"	15x (.750")	888X-RL15-.050

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CARBIDE

SQUARE END, LONG SHANK, LONG REACH, STUB

DECIMAL .055-.078"



CARBIDE



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DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.055"	.083"	.125"	2.50"	5x (.275")	888X-RL5-.055
.055"	.083"	.125"	2.50"	8x (.450")	888X-RL8-.055
.055"	.083"	.125"	2.50"	12x (.660")	888X-RL12-.055
.055"	.083"	.125"	2.50"	15x (.825")	888X-RL15-.055
.060"	.090"	.125"	2.50"	5x (.312")	888X-RL5-.060
.060"	.090"	.125"	2.50"	8x (.500")	888X-RL8-.060
.060"	.090"	.125"	2.50"	12x (.720")	888X-RL12-.060
.060"	.090"	.125"	2.50"	15x (.900")	888X-RL15-.060
.062" (1/16")	.093"	.125"	2.50"	3x (.186")	888X-RL3-.062
.062" (1/16")	.093"	.125"	2.50"	5x (.312")	888X-RL5-.062
.062" (1/16")	.093"	.125"	2.50"	8x (.500")	888X-RL8-.062
.062" (1/16")	.093"	.125"	2.50"	12x (.750")	888X-RL12-.062
.062" (1/16")	.093"	.125"	2.50"	15x (.950")	888X-RL15-.062
.062" (1/16")	.093"	.125"	2.50"	20x (1.250")	888X-RL20-.062
.065"	.098"	.125"	2.50"	5x (.325")	888X-RL5-.065
.065"	.098"	.125"	2.50"	8x (.525")	888X-RL8-.065
.065"	.098"	.125"	2.50"	12x (.800")	888X-RL12-.065
.070"	.105"	.125"	2.50"	5x (.375")	888X-RL5-.070
.070"	.105"	.125"	2.50"	8x (.570")	888X-RL8-.070
.070"	.105"	.125"	2.50"	12x (.850")	888X-RL12-.070
.075"	.113"	.125"	2.50"	5x (.375")	888X-RL5-.075
.075"	.113"	.125"	2.50"	8x (.625")	888X-RL8-.075
.075"	.113"	.125"	2.50"	12x (.900")	888X-RL12-.075
.078" (5/64)"	.117"	.125"	2.50"	3x (.234")	888X-RL3-.078
.078" (5/64)"	.117"	.125"	2.50"	5x (.400")	888X-RL5-.078
.078" (5/64)"	.117"	.125"	2.50"	8x (.625")	888X-RL8-.078
.078" (5/64)"	.117"	.125"	2.50"	12x (.940")	888X-RL12-.078
.078" (5/64)"	.117"	.125"	2.50"	15x (1.187")	888X-RL15-.078
.078" (5/64)"	.117"	.125"	3.00"	20x (1.562")	888X-RL20-.078

Square End Carbide Micro Endmills

SQUARE END, LONG SHANK, LONG REACH, STUB

DECIMAL .080-.093"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER .005" to .124": +/--.0005

CUTTING DIAMETER .125" to .375": +0.000 / -.002

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.080"	.120"	.125"	2.50"	5x (.400")	888X-RL5-.080
.080"	.120"	.125"	2.50"	8x (.650")	888X-RL8-.080
.080"	.120"	.125"	2.50"	12x (.960")	888X-RL12-.080
.085"	.128"	.125"	2.50"	5x (.425")	888X-RL5-.085
.085"	.128"	.125"	2.50"	8x (.700")	888X-RL8-.085
.085"	.128"	.125"	2.50"	12x (1.020")	888X-RL12-.085
.090"	.135"	.125"	2.50"	5x (.450")	888X-RL5-.090
.090"	.135"	.125"	2.50"	8x (.750")	888X-RL8-.090
.090"	.135"	.125"	2.50"	12x (1.080")	888X-RL12-.090
.093" (3/32")	.140"	.125"	2.50"	3x (.270")	888X-RL3-.093
.093" (3/32")	.140"	.125"	2.50"	5x (.500")	888X-RL5-.093
.093" (3/32")	.140"	.125"	2.50"	8x (.750")	888X-RL8-.093
.093" (3/32")	.140"	.125"	2.50"	12x (1.125")	888X-RL12-.093
.093" (3/32")	.140"	.125"	2.50"	15x (1.400")	888X-RL15-.093
.093" (3/32")	.140"	.125"	4.00"	20x (1.875")	888X-RL20-.093



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SQUARE END, LONG SHANK, LONG REACH, STUB

DECIMAL .095-.250"



CARBIDE



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DIA	FLUTE LENGTH	SHANK ϕ	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.095"	.143"	.125"	2.50"	5x (.500")	888X-RL5-.095
.095"	.143"	.125"	2.50"	8x (.750")	888X-RL8-.095
.095"	.143"	.125"	2.50"	12x (1.150")	888X-RL12-.095
.100"	.150"	.125"	2.50"	5x (.500")	888X-RL5-.100
.100"	.150"	.125"	2.50"	8x (.800")	888X-RL8-.100
.100"	.150"	.125"	2.50"	12x (1.200")	888X-RL12-.100
.125" (1/8")	.1875"	.125"	2.50"	5x (.625")	888X-RL5-.125
.125" (1/8")	.1875"	.125"	2.50"	8x (1.000")	888X-RL8-.125
.125" (1/8")	.1875"	.125"	3.00"	12x (1.500")	888X-RL12-.125
.125" (1/8")	.1875"	.125"	3.00"	15x (1.875")	888X-RL15-.125
.125" (1/8")	.1875"	.125"	4.00"	20x (2.500")	888X-RL20-.125
.187" (3/16")	.281"	.1875"	3.00"	5x (1.000")	888X-RL5-.187
.187" (3/16")	.281"	.1875"	3.00"	8x (1.500")	888X-RL8-.187
.187" (3/16")	.281"	.1875"	4.00"	12x (2.250")	888X-RL12-.187
.187" (3/16")	.281"	.1875"	4.00"	15x (2.812")	888X-RL15-.187
.250" (1/4")	.375"	.250"	4.00"	5x (1.250")	888X-RL5-.250
.250" (1/4")	.375"	.250"	4.00"	8x (2.000")	888X-RL8-.250
.250" (1/4")	.375"	.250"	6.00"	12x (3.000")	888X-RL12-.250
.250" (1/4")	.375"	.250"	6.00"	15x (3.750")	888X-RL15-.250

BALL END, STANDARD**DECIMAL .005-.050"**

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +/-0.0005

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part	RMT Part
				2 Flute	4 Flute
.005"	.015"	.125"	1.50"	882-.005	--
.006"	.018"	.125"	1.50"	882-.006	--
.007"	.021"	.125"	1.50"	882-.007	--
.008"	.024"	.125"	1.50"	882-.008	--
.009"	.027"	.125"	1.50"	882-.009	--
.010"	.030"	.125"	1.50"	882-.010	883-.010
.011"	.033"	.125"	1.50"	882-.011	883-.011
.012"	.036"	.125"	1.50"	882-.012	883-.012
.013"	.039"	.125"	1.50"	882-.013	883-.013
.014"	.042"	.125"	1.50"	882-.014	883-.014
.015"	.045"	.125"	1.50"	882-.015	883-.015
.0156" (1/64")	.0468"	.125"	1.50"	882-1560	883-1560
.018"	.054"	.125"	1.50"	882-.018	--
.0197" (.5 mm)	.0591"	.125"	1.50"	882-0197	883-0197
.020"	.060"	.125"	1.50"	882-.020	883-.020
.025"	.075"	.125"	1.50"	882-.025	883-.025
.030"	.090"	.125"	1.50"	882-.030	883-.030
.0312" (1/32")	.093"	.125"	1.50"	882-.031	883-.031
.035"	.105"	.125"	1.50"	882-.035	883-.035
.0394" (1.0 mm)	.1182"	.125"	1.50"	882-0394	883-0394
.040"	.120"	.125"	1.50"	882-.040	883-.040
.045"	.135"	.125"	1.50"	882-.045	883-.045
.0468" (3/64")	.141"	.125"	1.50"	882-.047	883-.047
.0492" (1.25 mm)	.105"	.125"	1.50"	882-0492	883-0492
.050"	.1182"	.125"	1.50"	882-.050	883-.050

BALL END, STANDARD

DECIMAL .053-.1772"



CARBIDE



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DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part	
				2 Flute	4 Flute
.053"	.120"	.125"	1.50"	882-.053	883-.053
.055"	.135"	.125"	1.50"	882-.055	883-.055
.0591" (1.5 mm)	.141"	.125"	1.50"	882-0591	883-0591
.060"	.1476"	.125"	1.50"	882-.060	883-.060
.0625" (1/16")	.150"	.125"	1.50"	882-.062	883-.062
.0630" (1.6 mm)	.159"	.125"	1.50"	882-0630	883-0630
.064"	.165"	.125"	1.50"	882-.064	883-.064
.065"	.1773"	.125"	1.50"	882-.065	883-.065
.070"	.180"	.125"	1.50"	882-.070	883-.070
.0709" (1.8 mm)	.1875"	.125"	1.50"	882-0709	883-0709
.075"	.189"	.125"	1.50"	882-.075	883-.075
.0781" (5/64")	.192"	.125"	1.50"	882-.078	883-.078
.0787" (2.0 mm)	.195"	.125"	1.50"	882-0787	883-0787
.080"	.210"	.125"	1.50"	882-.080	883-.080
.085"	.2127"	.125"	1.50"	882-.085	883-.085
.0866" (2.2 mm)	.225"	.125"	1.50"	882-0866	883-0866
.090"	.2343"	.125"	1.50"	882-.090	883-.090
.0938" (3/32")	.2361"	.125"	1.50"	882-.093	883-.093
.095"	.240"	.125"	1.50"	882-.095	883-.095
.0984" (2.5 mm)	.255"	.125"	1.50"	882-0984	883-0984
.100"	.2598"	.125"	1.50"	882-.100	883-.100
.1102" (2.8 mm)	.270"	.125"	1.50"	882-1102	883-1102
.1181" (3.0 mm)	.2814"	.125"	1.50"	882-1181	883-1181
.120"	.285"	.125"	1.50"	882-.120	883-.120
.1378" (3.5 mm)	.2952"	.1875"	1.50"	882-1378	883-1378
.1772" (4.5 mm)	.300"	.1875"	1.50"	882-1772	883-1772

BALL END, STANDARD, COATED

DECIMAL .005-.050"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +/-0.0005

TiAIN COATED



**.XX
COATED**

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT Part	
				2 Flute	4 Flute
.005"	.015"	.125"	1.50"	882-C-.005	--
.006"	.018"	.125"	1.50"	882-C-.006	--
.007"	.021"	.125"	1.50"	882-C-.007	--
.008"	.024"	.125"	1.50"	882-C-.008	--
.009"	.027"	.125"	1.50"	882-C-.009	--
.010"	.030"	.125"	1.50"	882-C-.010	883-C-.010
.011"	.033"	.125"	1.50"	882-C-.011	883-C-.011
.012"	.036"	.125"	1.50"	882-C-.012	883-C-.012
.013"	.039"	.125"	1.50"	882-C-.013	883-C-.013
.014"	.042"	.125"	1.50"	882-C-.014	883-C-.014
.015"	.045"	.125"	1.50"	882-C-.015	883-C-.015
.0156" (1/64")	.0468"	.125"	1.50"	882-C-1560	883-C-1560
.0197" (.5 mm)	.0591"	.125"	1.50"	882-C-0197	883-C-0197
.020"	.060"	.125"	1.50"	882-C-.020	883-C-.020
.025"	.075"	.125"	1.50"	882-C-.025	883-C-.025
.030"	.090"	.125"	1.50"	882-C-.030	883-C-.030
.031" (1/32")	.093"	.125"	1.50"	882-C-.031	883-C-.031
.035"	.105"	.125"	1.50"	882-C-.035	883-C-.035
.0394" (1.0 mm)	.1182"	.125"	1.50"	882-C-0394	883-C-0394
.040"	.120"	.125"	1.50"	882-C-.040	883-C-.040
.045"	.135"	.125"	1.50"	882-C-.045	883-C-.045
.047" (3/64")	.141"	.125"	1.50"	882-C-.047	883-C-.047
.0492" (1.25 mm)	.105"	.125"	1.50"	882-C-0492	883-C-0492
.050"	.1182"	.125"	1.50"	882-C-.050	883-C-.050

Ball End Carbide Micro Endmills

BALL END, STANDARD, COATED

DECIMAL .055-.1772"



CARBIDE



.XX

COATED

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT Part	
				2 Flute	4 Flute
.055"	.135"	.125"	1.50"	882-C-.055	883-C-.055
.0591" (1.5 mm)	.141"	.125"	1.50"	882-C-0591	883-C-0591
.060"	.1476"	.125"	1.50"	882-C-.060	883-C-.060
.0625" (1/16")	.150"	.125"	1.50"	882-C-.062	883-C-.062
.0630" (1.6 mm)	.159"	.125"	1.50"	882-C-0630	883-C-0630
.065"	.1773"	.125"	1.50"	882-C-.065	883-C-.065
.070"	.180"	.125"	1.50"	882-C-.070	883-C-.070
.0709" (1.8 mm)	.1875"	.125"	1.50"	882-C-0709	883-C-0709
.075"	.189"	.125"	1.50"	882-C-.075	883-C-.075
.0781" (5/64")	.192"	.125"	1.50"	882-C-.078	883-C-.078
.0787" (2.0 mm)	.195"	.125"	1.50"	882-C-0787	883-C-0787
.080"	.210"	.125"	1.50"	882-C-.080	883-C-.080
.085"	.2127"	.125"	1.50"	882-C-.085	883-C-.085
.0866" (2.2 mm)	.225"	.125"	1.50"	882-C-0866	883-C-0866
.090"	.2343"	.125"	1.50"	882-C-.090	883-C-.090
.0938" (3/32")	.2361"	.125"	1.50"	882-C-.093	883-C-.093
.095"	.240"	.125"	1.50"	882-C-.095	883-C-.095
.0984" (2.5 mm)	.255"	.125"	1.50"	882-C-0984	883-C-0984
.100"	.2598"	.125"	1.50"	882-C-.100	883-C-.100
.1102" (2.8 mm)	.270"	.125"	1.50"	882-C-1102	883-C-1102
.1181" (3.0 mm)	.2814"	.125"	1.50"	882-C-1181	883-C-1181
.120"	.285"	.125"	1.50"	882-C-.120	883-C-.120
.1378" (3.5 mm)	.2952"	.1875"	1.50"	882-C-1378	883-C-1378
.1772" (4.5 mm)	.300"	.1875"	1.50"	882-C-1772	883-C-1772

BALL END, STUB

DECIMAL .005-.050"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

DIAMETER TOLERANCE: +/-0.0005



.XX

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 flute	4 flute
.005"	.008"	.125"	1.50"	876-.005	--
.006"	.009"	.125"	1.50"	876-.006	--
.007"	.011"	.125"	1.50"	876-.007	--
.008"	.012"	.125"	1.50"	876-.008	--
.009"	.014"	.125"	1.50"	876-.009	--
.010"	.015"	.125"	1.50"	876-.010	880-.010
.011"	.017"	.125"	1.50"	876-.011	880-.011
.012"	.018"	.125"	1.50"	876-.012	880-.012
.013"	.020"	.125"	1.50"	876-.013	880-.013
.014"	.021"	.125"	1.50"	876-.014	880-.014
.015"	.023"	.125"	1.50"	876-.015	880-.015
.0156" (1/64")	.023"	.125"	1.50"	876-1560	880-1560
.018"	.027"	.125"	1.50"	876-.018	880-.018
.0197" (.5 mm)	.030"	.125"	1.50"	876-0197	880-0197
.020"	.030"	.125"	1.50"	876-.020	880-.020
.025"	.038"	.125"	1.50"	876-.025	880-.025
.030"	.045"	.125"	1.50"	876-.030	880-.030
.031" (1/32")	.047"	.125"	1.50"	876-.031	880-.031
.035"	.053"	.125"	1.50"	876-.035	880-.035
.0394" (1.0 mm)	.059"	.125"	1.50"	876-0394	880-0394
.040"	.060"	.125"	1.50"	876-.040	880-.040
.045"	.068"	.125"	1.50"	876-.045	880-.045
.047" (3/64")	.071"	.125"	1.50"	876-.047	880-.047
.0492" (1.25 mm)	.074"	.125"	1.50"	876-0492	880-0492
.050"	.075"	.125"	1.50"	876-.050	880-.050

BALL END, STUB

DECIMAL .055-.1378"



CARBIDE



.XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	
				2 flute	4 flute
.055"	.083"	.125"	1.50"	876-.055	880-.055
.0591" (1.5 mm)	.089"	.125"	1.50"	876-0591	880-0591
.060"	.090"	.125"	1.50"	876-.060	880-.060
.062" (1/16")	.093"	.125"	1.50"	876-.062	880-.062
.0630" (1.6 mm)	.095"	.125"	1.50"	876-0630	880-0630
.065"	.098"	.125"	1.50"	876-.065	880-.065
.070"	.105"	.125"	1.50"	876-.070	880-.070
.0709" (1.8 mm)	.106"	.125"	1.50"	876-0709	880-0709
.075"	.113"	.125"	1.50"	876-.075	880-.075
.078" (5/64")	.117"	.125"	1.50"	876-.078	880-.078
.0787" (2.0 mm)	.118"	.125"	1.50"	876-0787	880-0787
.080"	.120"	.125"	1.50"	876-.080	880-.080
.085"	.128"	.125"	1.50"	876-.085	880-.085
.0866" (2.2 mm)	.130"	.125"	1.50"	876-0866	880-0866
.090"	.135"	.125"	1.50"	876-.090	880-.090
.093" (3/32")	.140"	.125"	1.50"	876-.093	880-.093
.095"	.143"	.125"	1.50"	876-.095	880-.095
.0984" (2.5 mm)	.148"	.125"	1.50"	876-0984	880-0984
.100"	.150"	.125"	1.50"	876-.100	880-.100
.1102" (2.8 mm)	.166"	.125"	1.50"	876-1102	880-1102
.1181" (3.0 mm)	.177"	.125"	1.50"	876-1181	880-1181
.120"	.180"	.125"	1.50"	876-.120	880-.120
.1378" (3.5 mm)	.207"	.1875"	1.50"	876-1378	880-1378

Ball End Carbide Micro Endmills

BALL END, LONG REACH

DECIMAL .005-.100"



USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +/-0.0005

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH	RMT Part	RMT Part
					2 flute	4 flute
.005"	.015"	.125"	1.50"	.047"	882-.005RL	--
.010"	.030"	.125"	1.50"	.080"	882-RL.010X.080	883-RL.010X.080
.010"	.030"	.125"	1.50"	.0937"	882-.010RL	883-.010RL
.015"	.045"	.125"	1.50"	.125"	882-.015RL	883-.015RL
.020"	.060"	.125"	1.50"	.170"	882-RL.020X.170	883-RL.020X.170
.020"	.060"	.125"	1.50"	.1875"	882-.020RL	883-.020RL
.025"	.075"	.125"	1.50"	.213"	882-RL.025X.213	883-RL.025X.213
.025"	.075"	.125"	1.50"	.250"	882-.025RL	883-.025RL
.030"	.090"	.125"	1.50"	.250"	882-.030RL	883-.030RL
.030"	.090"	.125"	1.50"	.270"	882-RL.030X.270	883-RL.030X.270
.031"	.093"	.125"	1.50"	.279"	882-RL.031X.279	883-RL.031X.279
.035"	.105"	.125"	1.50"	.250"	882-.035RL	883-.035RL
.035"	.105"	.125"	1.50"	.315"	882-RL.035X.315	883-RL.035X.315
.040"	.120"	.125"	1.50"	.250"	882-.040RL	883-.040RL
.040"	.120"	.125"	1.50"	.360"	882-RL.040X.360	883-RL.040X.360
.045"	.135"	.125"	1.50"	.405"	882-RL.045X.405	883-RL.045X.405
.045"	.135"	.125"	1.50"	.500"	882-.045RL	883-.045RL
.047"	.141"	.125"	1.50"	.423"	882-RL.047X.423	883-RL.047X.423
.050"	.150"	.125"	1.50"	.500"	882-.050RL	883-.050RL
.055"	.165"	.125"	1.50"	.500"	882-.055RL	883-.055RL
.060"	.180"	.125"	1.50"	.500"	882-.060RL	883-.060RL
.062"	.186"	.125"	1.50"	.500"	882-RL.062X.500	883-RL.062X.500
.065"	.195"	.125"	1.50"	.500"	882-.065RL	883-.065RL
.070"	.210"	.125"	1.50"	.500"	882-.070RL	883-.070RL
.078"	.234"	.125"	1.50"	.500"	882-RL.078X.500	883-RL.078X.500
.080"	.240"	.125"	1.50"	.500"	882-.080RL	883-.080RL
.090"	.270"	.125"	1.50"	.500"	882-.090RL	883-.090RL
.090"	.270"	.125"	1.50"	.625"	882-RL.090X.625	883-RL.090X.625
.093"	.279"	.125"	1.50"	.625"	882-RL.093X.625	883-RL.093X.625
.095"	.285"	.125"	1.50"	.625"	882-RL.095X.625	883-RL.095X.625
.100"	.300"	.125"	1.50"	.500"	882-.100RL	883-.100RL
.100"	.300"	.125"	1.50"	.625"	882-RL.100X.625	883-RL.100X.625

BALL END, LONG FLUTE, LONG REACH

DECIMAL .010-.250"



USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER .005" to .124": +/--.0005

CUTTING DIAMETER .125" to .375": +0.000 / -.002

CARBIDE



XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 FLUTE					
.010"	5X (.050")	.125"	2.50"	10X (.100")	887XB-F5R10-.010
.015" (1/64")	5X (.075")	.125"	2.50"	10X (.150")	887XB-F5R10-.015
.020"	5X (.100")	.125"	2.50"	10X (.200")	887XB-F5R10-.020
.025"	5X (.125")	.125"	2.50"	10X (.250")	887XB-F5R10-.025
.030"	5X (.150")	.125"	2.50"	10X (.300")	887XB-F5R10-.030
.031" (1/32")	5X (.155")	.125"	2.50"	10X (.300")	887XB-F5R10-.031
.035"	5X (.175")	.125"	2.50"	10X (.350")	887XB-F5R10-.035
.040"	5X (.200")	.125"	2.50"	10X (.400")	887XB-F5R10-.040
.045"	5X (.225")	.125"	2.50"	10X (.450")	887XB-F5R10-.045
.047" (3/64")	5X (.250")	.125"	2.50"	10X (.500")	887XB-F5R10-.047
.050"	6X (.300")	.125"	2.50"	12X (.600")	887XB-FR-.050 X 600
.055"	7X (.385")	.125"	2.50"	14X (.770")	887XB-FR-.055 X 770
.060"	8.3X (.500")	.125"	2.50"	16X (1.00")	887XB-FR-.060 X 1.00
.062" (1/16")	8X (.500")	.125"	2.50"	16X (1.00")	887XB-FR-.062 X 1.00
.065"	7.7X (.500")	.125"	2.50"	15X (1.00")	887XB-FR-.065 X 1.00
.070"	7.1X (.500")	.125"	2.50"	14X (1.00")	887XB-FR-.070 X 1.00
.075"	6.7X (.500")	.125"	2.50"	13X (1.00")	887XB-FR-.075 X 1.00
.078" (5/64")	6.4X (.500")	.125"	2.50"	12X (1.00")	887XB-FR-.078 X 1.00
.080"	9.4X (.750")	.125"	2.50"	15X (1.25")	887XB-FR-.080 X 1.25
.085"	8.8X (.750")	.125"	2.50"	14X (1.25")	887XB-FR-.085 X 1.25
.090"	8.3X (.750")	.125"	2.50"	14X (1.25")	887XB-FR-.090 X 1.25
.093" (3/32")	8.1X (.750")	.125"	2.50"	13X (1.25")	887XB-FR-.093 X 1.25
.095"	7.9X (.750")	.125"	2.50"	13X (1.25")	887XB-FR-.095 X 1.25
.100"	7.5X (.750")	.125"	2.50"	12X (1.25")	887XB-FR-.100 X 1.25
.125" (1/8")	8X (1.00")	.125"	2.50"	12X (1.50")	887XB-FR-.125 X 1.50
.187" (3/16")	6X (1.125")	.1875"	3.00"	8X (1.625")	887XB-FR-.187 X 1.625
.250" (1/4")	8X (1.50")	.250"	4.00"	8X (2.00")	887XB-FR-.250 X 2.00

Ball End Carbide Micro Endmills

BALL END, EXTRA LONG FLUTE

DECIMAL .031-.125"



USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER .005" to .124": +/- .0005

CUTTING DIAMETER .125" to .375": +0.000 / -.002

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
3 flute				
.031"(1/32")	12X (.375")	.125"	2.50"	887XB-LF12-.031
.047"(3/64")	12X (.570")	.125"	2.50"	887XB-LF12-.047
.062" (1/16")	12X (.750")	.125"	2.50"	887XB-LF12-.062
.078" (5/64")	12X (.940")	.125"	2.50"	887XB-LF12-.078
.093"(3/32")	12X (1.125")	.125"	2.50"	887XB-LF12-.093
.125"(1/8")	12X (1.50")	.125"	3.00"	887XB-LF12-.125
3 flute				
.062" (1/16")	15X (.950")	.125"	2.50"	887XB-LF15-.062
.078" (5/64")	15X (1.187")	.125"	2.50"	887XB-LF15-.078
.093"(3/32")	15X (1.400")	.125"	3.00"	887XB-LF15-.093
.125"(1/8")	15X (1.875")	.125"	3.00"	887XB-LF15-.125



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BALL END, LONG SHANK, LONG REACH, STUB

DECIMAL .010-.030"



USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER .005" to .124": +/- .0005

CUTTING DIAMETER .125" to .375": +0.000 / -.002

CARBIDE



XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.010"	.015"	.125"	2.50"	5x (.050")	888XB-RL5-.010
.010"	.015"	.125"	2.50"	8x (.080")	888XB-RL8-.010
.010"	.015"	.125"	2.50"	12x (.125")	888XB-RL12-.010
.010"	.015"	.125"	2.50"	15x (.150")	888XB-RL15-.010
.015" (1/64")	.023"	.125"	2.50"	3x (.045")	888XB-RL3-.015
.015" (1/64")	.023"	.125"	2.50"	5x (.078")	888XB-RL5-.015
.015" (1/64")	.023"	.125"	2.50"	8x (.125")	888XB-RL8-.015
.015" (1/64")	.023"	.125"	2.50"	12x (.1875")	888XB-RL12-.015
.015" (1/64")	.023"	.125"	2.50"	15x (.225")	888XB-RL15-.015
.015" (1/64")	.023"	.125"	2.50"	20x (.300")	888XB-RL20-.015
.020"	.030"	.125"	2.50"	5x (.100")	888XB-RL5-.020
.020"	.030"	.125"	2.50"	8x (.160")	888XB-RL8-.020
.020"	.030"	.125"	2.50"	12x (.250")	888XB-RL12-.020
.020"	.030"	.125"	2.50"	15x (.300")	888XB-RL15-.020
.020"	.030"	.125"	2.50"	20x (.400")	888XB-RL20-.020
.025"	.037"	.125"	2.50"	5x (.125")	888XB-RL5-.025
.025"	.037"	.125"	2.50"	8x (.200")	888XB-RL8-.025
.025"	.037"	.125"	2.50"	12x (.3125")	888XB-RL12-.025
.025"	.037"	.125"	2.50"	15x (.375")	888XB-RL15-.025
.030"	.045"	.125"	2.50"	5x (.150")	888XB-RL5-.030
.030"	.045"	.125"	2.50"	8x (.250")	888XB-RL8-.030
.030"	.045"	.125"	2.50"	12x (.375")	888XB-RL12-.030
.030"	.045"	.125"	2.50"	15x (.450")	888XB-RL15-.030

BALL END, LONG SHANK, LONG REACH, STUB

DECIMAL .031-.050"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER .005" to .124": +/- .0005

CUTTING DIAMETER .125" to .375": +0.000 / -.002

CARBIDE



XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.031" (1/32")	.047"	.125"	2.50"	3x (.093")	888XB-RL3-.031
.031" (1/32")	.047"	.125"	2.50"	5x (.155")	888XB-RL5-.031
.031" (1/32")	.047"	.125"	2.50"	8x (.250")	888XB-RL8-.031
.031" (1/32")	.047"	.125"	2.50"	12x (.375")	888XB-RL12-.031
.031" (1/32")	.047"	.125"	2.50"	15x (.470")	888XB-RL15-.031
.031" (1/32")	.047"	.125"	2.50"	20x (.625")	888XB-RL20-.031
.035"	.052"	.125"	2.50"	5x (.187")	888XB-RL5-.035
.035"	.052"	.125"	2.50"	8x (.280")	888XB-RL8-.035
.035"	.052"	.125"	2.50"	12x (.425")	888XB-RL12-.035
.035"	.052"	.125"	2.50"	15x (.525")	888XB-RL15-.035
.040"	.060"	.125"	2.50"	5x (.200")	888XB-RL5-.040
.040"	.060"	.125"	2.50"	8x (.325")	888XB-RL8-.040
.040"	.060"	.125"	2.50"	12x (.480")	888XB-RL12-.040
.040"	.060"	.125"	2.50"	15x (.600")	888XB-RL15-.040
.040"	.060"	.125"	2.50"	20x (.800")	888XB-RL20-.040
.045"	.067"	.125"	2.50"	5x (.225")	888XB-RL5-.045
.045"	.067"	.125"	2.50"	8x (.375")	888XB-RL8-.045
.045"	.067"	.125"	2.50"	12x (.550")	888XB-RL12-.045
.045"	.067"	.125"	2.50"	15x (.680")	888XB-RL15-.045
.047" (3/64")	.071"	.125"	2.50"	3x (.141")	888XB-RL3-.047
.047" (3/64")	.071"	.125"	2.50"	5x (.250")	888XB-RL5-.047
.047" (3/64")	.071"	.125"	2.50"	8x (.375")	888XB-RL8-.047
.047" (3/64")	.071"	.125"	2.50"	12x (.570")	888XB-RL12-.047
.047" (3/64")	.071"	.125"	2.50"	15x (.710")	888XB-RL15-.047
.047" (3/64")	.071"	.125"	2.50"	20x (.950")	888XB-RL20-.047
.050"	.075"	.125"	2.50"	5x (.250")	888XB-RL5-.050
.050"	.075"	.125"	2.50"	8x (.400")	888XB-RL8-.050
.050"	.075"	.125"	2.50"	12x (.600")	888XB-RL12-.050

BALL END, LONG SHANK, LONG REACH, STUB

DECIMAL .055-.078"



CARBIDE



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DIA	FLUTE LENGTH	SHANK ϕ	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.055"	.083"	.125"	2.50"	5x (.275")	888XB-RL5-.055
.055"	.083"	.125"	2.50"	8x (.450")	888XB-RL8-.055
.055"	.083"	.125"	2.50"	12x (.660")	888XB-RL12-.055
.060"	.090"	.125"	2.50"	5x (.312")	888XB-RL5-.060
.060"	.090"	.125"	2.50"	8x (.500")	888XB-RL8-.060
.060"	.090"	.125"	2.50"	12x (.720")	888XB-RL12-.060
.060"	.090"	.125"	2.50"	15x (.900")	888XB-RL15-.060
.062" (1/16")	.093"	.125"	2.50"	3x (.186")	888XB-RL3-.062
.062" (1/16")	.093"	.125"	2.50"	5x (.312")	888XB-RL5-.062
.062" (1/16")	.093"	.125"	2.50"	8x (.500")	888XB-RL8-.062
.062" (1/16")	.093"	.125"	2.50"	12x (.750")	888XB-RL12-.062
.062" (1/16")	.093"	.125"	2.50"	15x (.950")	888XB-RL15-.062
.062" (1/16")	.093"	.125"	2.50"	20x (1.250")	888XB-RL20-.062
.065"	.098"	.125"	2.50"	5x (.325")	888XB-RL5-.065
.065"	.098"	.125"	2.50"	8x (.525")	888XB-RL8-.065
.070"	.105"	.125"	2.50"	5x (.375")	888XB-RL5-.070
.070"	.105"	.125"	2.50"	8x (.570")	888XB-RL8-.070
.075"	.113"	.125"	2.50"	5x (.375")	888XB-RL5-.075
.075"	.113"	.125"	2.50"	8x (.625")	888XB-RL8-.075
.078" (5/64")	.117"	.125"	2.50"	3x (.234")	888XB-RL3-.078
.078" (5/64")	.117"	.125"	2.50"	5x (.400")	888XB-RL5-.078
.078" (5/64")	.117"	.125"	2.50"	8x (.625")	888XB-RL8-.078
.078" (5/64")	.117"	.125"	2.50"	12x (.940")	888XB-RL12-.078
.078" (5/64")	.117"	.125"	2.50"	15x (1.187")	888XB-RL15-.078
.078" (5/64")	.117"	.125"	3.00"	20x (1.562")	888XB-RL20-.078

BALL END, LONG SHANK, LONG REACH, STUB

DECIMAL .080-.093"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER .005" to .124": +/--.0005

CUTTING DIAMETER .125" to .375": +0.000 / -.002

CARBIDE



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DIA	FLUTE LENGTH	SHANK ϕ	OAL	REACH LENGTH (ACTUAL)		RMT PART
3 Flute						
.080"	.120"	.125"	2.50"	5x	(.400")	888XB-RL5-.080
.080"	.120"	.125"	2.50"	8x	(.650")	888XB-RL8-.080
.085"	.128"	.125"	2.50"	5x	(.425")	888XB-RL5-.085
.085"	.128"	.125"	2.50"	8x	(.700")	888XB-RL8-.085
.090"	.135"	.125"	2.50"	5x	(.450")	888XB-RL5-.090
.090"	.135"	.125"	2.50"	8x	(.750")	888XB-RL8-.090
.093" (3/32")	.140"	.125"	2.50"	3x	(.270")	888XB-RL3-.093
.093" (3/32")	.140"	.125"	2.50"	5x	(.500")	888XB-RL5-.093
.093" (3/32")	.140"	.125"	2.50"	8x	(.750")	888XB-RL8-.093
.093" (3/32")	.140"	.125"	2.50"	12x	(1.125")	888XB-RL12-.093
.093" (3/32")	.140"	.125"	2.50"	15x	(1.400")	888XB-RL15-.093
.093" (3/32")	.140"	.125"	4.00"	20x	(1.875")	888XB-RL20-.093



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BALL END, LONG SHANK, LONG REACH, STUB

DECIMAL .095-.250"



CARBIDE



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DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
.095"	.143"	.125"	2.50"	5x (.500")	888XB-RL5-.095
.095"	.143"	.125"	2.50"	8x (.750")	888XB-RL8-.095
.100"	.150"	.125"	2.50"	5x (.500")	888XB-RL5-.100
.100"	.150"	.125"	2.50"	8x (.800")	888XB-RL8-.100
.125" (1/8")	.1875"	.125"	2.50"	5x (.625")	888XB-RL5-.125
.125" (1/8")	.1875"	.125"	2.50"	8x (1.000")	888XB-RL8-.125
.125" (1/8")	.1875"	.125"	3.00"	12x (1.500")	888XB-RL12-.125
.125" (1/8")	.1875"	.125"	3.00"	15x (1.875")	888XB-RL15-.125
.125" (1/8")	.1875"	.125"	4.00"	20x (2.500")	888XB-RL20-.125
.187" (3/16")	.281"	.1875"	3.00"	5x (1.000")	888XB-RL5-.187
.187" (3/16")	.281"	.1875"	3.00"	8x (1.500")	888XB-RL8-.187
.187" (3/16")	.281"	.1875"	4.00"	12x (2.250")	888XB-RL12-.187
.187" (3/16")	.281"	.1875"	4.00"	15x (2.812")	888XB-RL15-.187
.250" (1/4")	.375"	.250"	4.00"	5x (1.250")	888XB-RL5-.250
.250" (1/4")	.375"	.250"	4.00"	8x (2.000")	888XB-RL8-.250
.250" (1/4")	.375"	.250"	6.00"	12x (3.000")	888XB-RL12-.250
.250" (1/4")	.375"	.250"	6.00"	15x (3.750")	888XB-RL15-.250

CORNER RADIUS, STANDARD, 4 FLUTE

DECIMAL .020-.100"

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +/-0.0005

TiAIN COATED

CARBIDE



.XX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT Part	RMT Part	RMT Part	RMT Part
				.005 CR	.010 CR	.015 CR	.020 CR
.020"	.060"	.125"	1.50"	875-CR5-.020	--	--	--
.025"	.075"	.125"	1.50"	875-CR5-.025	--	--	--
.030"	.090"	.125"	1.50"	875-CR5-.030	875-CR10-.030	--	--
.031"	.093"	.125"	1.50"	875-CR5-.031	875-CR10-.031	--	--
.035"	.105"	.125"	1.50"	875-CR5-.035	875-CR10-.035	--	--
.040"	.120"	.125"	1.50"	875-CR5-.040	875-CR10-.040	--	--
.045"	.135"	.125"	1.50"	875-CR5-.045	875-CR10-.045	875-CR15-.045	--
.047"	.141"	.125"	1.50"	875-CR5-.047	875-CR10-.047	875-CR15-.047	--
.050"	.150"	.125"	1.50"	875-CR5-.050	875-CR10-.050	875-CR15-.050	--
.055"	.165"	.125"	1.50"	875-CR5-.055	875-CR10-.055	875-CR15-.055	--
.060"	.180"	.125"	1.50"	875-CR5-.060	875-CR10-.060	875-CR15-.060	--
.062"	.186"	.125"	1.50"	875-CR5-.062	875-CR10-.062	875-CR15-.062	875-CR20-.062
.065"	.195"	.125"	1.50"	875-CR5-.065	875-CR10-.065	875-CR15-.065	--
.070"	.210"	.125"	1.50"	875-CR5-.070	875-CR10-.070	875-CR15-.070	--
.075"	.225"	.125"	1.50"	875-CR5-.075	875-CR10-.075	875-CR15-.075	--
.078"	.234"	.125"	1.50"	875-CR5-.078	875-CR10-.078	875-CR15-.078	875-CR20-.078
.080"	.240"	.125"	1.50"	875-CR5-.080	875-CR10-.080	875-CR15-.080	--
.085"	.255"	.125"	1.50"	875-CR5-.085	875-CR10-.085	875-CR15-.085	--
.090"	.270"	.125"	1.50"	875-CR5-.090	875-CR10-.090	875-CR15-.090	--
.093"	.279"	.125"	1.50"	875-CR5-.093	875-CR10-.093	875-CR15-.093	875-CR20-.093
.095"	.285"	.125"	1.50"	875-CR5-.095	875-CR10-.095	875-CR15-.095	--
.100"	.300"	.125"	1.50"	875-CR5-.100	875-CR10-.100	875-CR15-.100	--

CORNER RADIUS, STUB, 4 FLUTE

DECIMAL .020-.093"



CARBIDE



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DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	RMT PART	RMT PART
				.005 CR	.010 CR	.015 CR
.020"	.030"	.125"	1.50"	879-CR5-.020	--	--
.025"	.038"	.125"	1.50"	879-CR5-.025	--	--
.031" (1/32")	.047"	.125"	1.50"	879-CR5-.031	--	--
.047" (3/64")	.071"	.125"	1.50"	879-CR5-.047	879-CR10-.047	--
.062" (1/16")	.093"	.125"	1.50"	879-CR5-.062	879-CR10-.062	879-CR15-.062
.078" (5/64")	.117"	.125"	1.50"	879-CR5-.078	879-CR10-.078	879-CR15-.078
.093" (3/32")	.140"	.125"	1.50"	879-CR5-.093	879-CR10-.093	879-CR15-.093

TECHNICAL INFORMATION

- Prevents corner breaking
- Makes radius between wall and floor
- 4 Flute End Mills - Best used for profile and contour milling
- Coating: Available Upon Request

CARBIDE DECIMAL SPECIALS

HARD MILL COATED

USE: GENERAL PURPOSE

HELIX: 18 DEGREES

HAND: RHS / RHC

RAKE ANGLE: NEUTRAL

CENTER CUTTING: YES

DIAMETER TOLERANCE: +/-0.0005

HARD MILL COATED .015-.093"

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT Part
				4 flute
.015"	.023"	.125"	1.50"	879HM-.015
.031"	.047"	.125"	1.50"	879HM-.031
.047"	.071"	.125"	1.50"	879HM-.047
.062"	.093"	.125"	1.50"	879HM-.062
.078"	.117"	.125"	1.50"	879HM-.078
.093"	.140"	.125"	1.50"	879HM-.093



COATED .XXX

CARBIDE

HM

CARBIDE DECIMAL SPECIALS

MULTI FLUTE AND HIGH HELIX

USE : GENERAL PURPOSE
 HELIX : 35 DEGREES
 HAND : RHS / RHC
 RAKE ANGLE: POSITIVE
 CENTER CUTTING: YES
 DIAMETER TOLERANCE: +/-0.0005

CARBIDE

MF

HH

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MULTI FLUTE .031-.100"

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part
				5 flute
.031"	.090"	.125"	1.50"	889MF-.031
.040"	.120"	.125"	1.50"	889MF-.040
.047"	.141"	.125"	1.50"	889MF-.047
.050"	.150"	.125"	1.50"	889MF-.050
.060"	.180"	.125"	1.50"	889MF-.060
.062"	.186"	.125"	1.50"	889MF-.062
.070"	.210"	.125"	1.50"	889MF-.070
.078"	.234"	.125"	1.50"	889MF-.078
.080"	.240"	.125"	1.50"	889MF-.080
.093"	.279"	.125"	1.50"	889MF-.093
.100"	.300"	.125"	1.50"	889MF-.100

45 DEG. HIGH HELIX .015-.093"

DIA	FLUTE LENGTH	SHANK ϕ	OAL	TYPE	RMT PART
					2 Flute
.015"	.023"	.125"	1.50"	SE	874HH-.015
.031"	.047"	.125"	1.50"	SE	874HH-.031
.047"	.071"	.125"	1.50"	SE	874HH-.047
.062"	.093"	.125"	1.50"	SE	874HH-.062
.078"	.117"	.125"	1.50"	SE	874HH-.078
.093"	.140"	.125"	1.50"	SE	874HH-.093

Special Carbide Micro Endmills

SQUARE END, 5X FLUTE 10X REACH

DECIMAL .015-.093"

CVD DIAMOND COATED



DIA	FLUTE LENGTH	SHANK ϕ	OAL	REACH LENGTH	RMT PART
4 Flute					
.015"	5X (.075")	.125"	2.50"	10X (.156")	875X-F5R10CVD-.015
.031"	5X (.155")	.125"	2.50"	10X (.312")	875X-F5R10CVD-.031
.047"	5X (.235")	.125"	2.50"	10X (.480")	875X-F5R10CVD-.047
.062"	5X (.312")	.125"	2.50"	10X (.625")	875X-F5R10CVD-.062
.078"	5X (.390")	.125"	2.50"	10X (.800")	875X-F5R10CVD-.078
.093"	5X (.465")	.125"	2.50"	10X (.950")	875X-F5R10CVD-.093

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

DIAMETER TOLERANCE: +/-0.001



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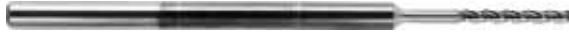


Special Carbide Micro Endmills

BALL END, 5X FLUTE 10X REACH

DECIMAL .015-.093"

CVD DIAMOND COATED



DIA	FLUTE LENGTH	SHANK ϕ	OAL	REACH LENGTH	RMT PART
					4 Flute
.015"	5X (.075")	.125"	2.50"	10X (.156")	875XB-F5R10CVD-.015
.031"	5X (.155")	.125"	2.50"	10X (.312")	875XB-F5R10CVD-.031
.047"	5X (.235")	.125"	2.50"	10X (.480")	875XB-F5R10CVD-.047
.062"	5X (.312")	.125"	2.50"	10X (.625")	875XB-F5R10CVD-.062
.078"	5X (.390")	.125"	2.50"	10X (.800")	875XB-F5R10CVD-.078
.093"	5X (.465")	.125"	2.50"	10X (.950")	875XB-F5R10CVD-.093

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SQUARE END, STANDARD AND STUB

FRACTIONAL



STANDARD LENGTH 1/32-3/8" DIA.

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART		
				2 Flute	3 Flute	4 Flute
1/32"	3/32"	.125"	1.50"	874-0031	13001	875-0031
3/64"	9/64"	.125"	1.50"	874-0046	13002	875-0046
1/16"	3/16"	.125"	1.50"	874-0062	13003	875-0062
5/64"	3/16"	.125"	1.50"	874-0078	13004	875-0078
3/32"	3/8"	.125"	1.50"	874-0093	13005	875-0093
7/64"	7/16"	.125"	1.50"	874-0109	13006	875-0109
1/8"	1/2"	.125"	1.50"	874-0125	13007	875-0125
9/64"	1/2"	.1875"	2.00"	874-0140	13008	875-0140
5/32"	9/16"	.1875"	2.00"	874-0156	13009	875-0156
11/64"	5/8"	.1875"	2.00"	874-0171	13010	875-0171
3/16"	5/8"	.1875"	2.00"	874-0187	13011	875-0187
13/64"	5/8"	.250"	2.50"	874-0203	13012	875-0203
7/32"	5/8"	.250"	2.50"	874-0219	13013	875-0219
15/64"	5/8"	.250"	2.50"	874-0234	13014	875-0234
1/4"	3/4"	.250"	2.50"	874-0250	13015	875-0250
5/16"	13/16"	.3125"	2.50"	874-0312	13019	875-0312
3/8"	1"	.375"	2.50"	874-0375	13023	875-0375

STUB LENGTH 1/32-1/4" DIA.

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	1/16"	.125"	1.50"	878-0031	879-0031
3/64"	1/16"	.125"	1.50"	878-0046	879-0046
1/16"	1/8"	.125"	1.50"	878-0062	879-0062
3/32"	3/16"	.125"	1.50"	878-0093	879-0093
1/8"	1/4"	.125"	1.50"	878-0125	879-0125
5/32"	3/8"	.1875"	2.00"	878-0156	879-0156
3/16"	3/8"	.1875"	2.00"	878-0187	879-0187
1/4"	1/2"	.250"	2.00"	878-0250	879-0250



SQUARE END, STANDARD COATED

AMORPHOUS DIAMOND



CARBIDE



STANDARD LENGTH 1/32-1/2"

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	3/32"	.125"	1.50"	AD12001	AD14001
3/64"	9/64"	.125"	1.50"	AD12002	AD14002
1/16"	3/16"	.125"	1.50"	AD12003	AD14003
5/64"	3/16"	.125"	1.50"	AD12004	AD14004
3/32"	3/8"	.125"	1.50"	AD12005	AD14005
7/64"	7/16"	.125"	1.50"	AD12006	AD14006
1/8"	1/2"	.125"	1.50"	AD12007	AD14007
9/64"	1/2"	.1875"	2.00"	AD12008	AD14008
5/32"	9/16"	.1875"	2.00"	AD12009	AD14009
3/16"	5/8"	.1875"	2.00"	AD12011	AD14011
1/4"	1/4"	.250"	2.50"	AD12015	AD14015
3/8"	3/8"	.375"	2.50"	AD12023	AD14023
1/2"	1/2"	.500"	3.00"	AD12031	AD14031

TECHNICAL INFORMATION

- General purpose.
- 30° helix.
- Cutting diameter tolerance: 1/32" — 1/4" + .000" - .002"; 5/16" — 3/8" + .000" - .003"
- 2 Flute End Mills - Best used for slotting non-ferrous, plastic and composite materials
- 4 Flute End Mills - Best used for profile and contour milling
- Stub Length End Mills allow increased feed rates, lowering cycle times and production cost, facilitating increased throughput and efficiencies

X/X

AD





Square End Carbide Micro Endmills

SQUARE END, LONG FLUTE, LONG REACH STUB

FRACTIONAL 1/32-3/32"

USE : GENERAL PURPOSE
 HELIX : 35 DEGREES
 HAND : RHS / RHC
 RAKE ANGLE: POSITIVE
 CENTER CUTTING: YES
 DIAMETER TOLERANCE: +0.000 / -.001

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT Part
3 Flute					
1/32"	.0625"	.125"	2.50"	8X (.250")	3-0312RS
1/16"	.125"	.125"	2.50"	8X (.500")	3-0625RS
3/32"	.1875"	.125"	2.50"	8X (.750")	3-0938RS

REACH STUB 1/32-3/32"



DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
1/32"	1/16"	.125"	2.50"	8X (.250")	AD3-0312RS
1/16"	1/8"	.125"	2.50"	8X (.500")	AD3-0625RS
3/32"	3/16"	.125"	2.50"	8X (.750")	AD3-0938RS

LONG REACH STUB 1/32-3/32"



DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
3 Flute					
1/32"	1/16"	.125"	2.50"	12X (.375")	AD3-0312XRS
1/32"	1/16"	.125"	2.50"	16X (.500")	AD3-0312XLRs
1/16"	1/8"	.125"	2.50"	12X (.750")	AD3-0625XRS
1/16"	1/8"	.125"	2.50"	16X (1.00")	AD3-0625XLRs
3/32"	3/16"	.125"	2.50"	11X (1.00")	AD3-0938XRS
3/32"	3/16"	.125"	2.50"	13X (1.25")	AD3-0938XLRs

SQUARE END, LONG FLUTE, LONG REACH

AMORPHOUS DIAMOND COATED

USE : GENERAL PURPOSE

HELIX : 35 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER UNDER 1/8": +0.000 / -.001

CUTTING DIAMETER 1/8" AND ABOVE: +0.000 / -.002

CARBIDE



X/X



LONG FLUTE LONG REACH 1/64-1/4"

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART	RMT PART
1/64"	5X (5/64")	.125"	2.50"	10x (.150")	3 Flute AD3-0156XR	4 Flute --
1/64"	5X (5/64")	.125"	2.50"	16x (.250")	AD3-0156XLR	--
1/32"	5X (5/32")	.125"	2.50"	8X (.250")	AD3-0312XR	--
1/32"	5X (5/32")	.125"	2.50"	12X (.375")	AD3-0312XLR	--
3/64"	5X (1/4")	.125"	2.50"	8X (.375")	AD3-0469XR	--
3/64"	5X (1/4")	.125"	2.50"	11X (.500")	AD3-0469XLR	--
1/16"	8X (1/2")	.125"	2.50"	12X (.750")	AD3-0625XR	--
1/16"	8X (1/2")	.125"	2.50"	16X (1.00")	AD3-0625XLR	--
5/64"	6x (1/2")	.125"	2.50"	10X (.750")	AD3-0781XR	--
5/64"	6x (1/2")	.125"	2.50"	13X (1.00")	AD3-0781XLR	--
3/32"	8X (3/4")	.125"	2.50"	11X (1.00")	AD3-0938XR	--
3/32"	8X (3/4")	.125"	2.50"	13X (1.25")	AD3-0938XLR	--
1/8"	8X (1")	.125"	3.00"	10X (1.25")	AD3-1250XR	--
1/8"	8X (1")	.125"	3.00"	12X (1.50")	AD3-1250XLR	--
3/16"	6X (1 1/8")	.1875"	3.00"	8X (1.50")	--	AD4-1875XR
3/16"	6X (1 1/8")	.1875"	3.00"	9X (1.75")	--	AD4-1875XLR
1/4"	6X (1 1/2")	.250"	4.00"	8X (2.00")	--	AD4-2500XR
1/4"	6X (1 1/2")	.250"	4.00"	10X (2.50")	--	AD4-2500XLR

Square End Carbide Micro Endmills

SQUARE END, LONG FLUTE, LONG SHANK

FRACTIONAL 1/64-3/8"



XX



CARBIDE

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part	RMT Part	RMT Part
				2 Flute	3 Flute	4 Flute
1/64"	.078"	.125"	2.50"	--	3-0156	--
1/32"	.156"	.125"	2.50"	--	3-0312	--
3/64"	.250"	.125"	2.50"	--	3-0469	--
1/16"	.500"	.125"	2.50"	--	3-0625	--
5/64"	.500"	.125"	2.50"	--	3-0781	--
3/32"	.750"	.125"	2.50"	--	3-0938	--
1/8"	.750"	.125"	2.25"	16201	--	17201
1/8"	1.000"	.125"	3.00"	16202	3-1250	17202
3/16"	.750"	.1875"	2.50"	16203	--	17203
3/16"	1.125"	.1875"	3.00"	16204	--	17204
1/4"	1.125"	.250"	3.00"	16205	--	17205
1/4"	1.000"	.250"	4.00"	16206	--	17206
1/4"	1.500"	.250"	4.00"	16207	--	17207
1/4"	1.500"	.250"	6.00"	16208	--	17208
5/16"	1.125"	.3125"	3.00"	16209	--	17209
5/16"	1.625"	.3125"	4.00"	16210	--	17210
3/8"	1.125"	.375"	3.00"	16211	--	17211
3/8"	1.000"	.375"	4.00"	16212	--	17212
3/8"	1.750"	.375"	4.00"	16213	--	17213
3/8"	1.500"	.375"	6.00"	16214	--	17214

2 & 4 FLUTES:

HELIX : 30 DEGREES

DIAMETER TOLERANCE: +0.000 / -.002

3 FLUTES:

HELIX : 35 DEGREES

DIAMETER TOLERANCE: +0.000 / -.001

SQUARE END, LONG FLUTE, LONG SHANK

FRACTIONAL 1/64-1/4"

AMORPHOUS DIAMOND COATED



CARBIDE



DIA	FLUTE LENGTH	SHANK Ø	OAL	Part ID	
				3 Flute	4 Flute
1/64"	5X (5/64")	.125"	2.50"	AD3-0156	--
1/32"	5X (5/32")	.125"	2.50"	AD3-0312	--
3/64"	5X (1/4")	.125"	2.50"	AD3-0469	--
1/16"	8X (1/2")	.125"	2.50"	AD3-0625	--
5/64"	6X (1/2")	.125"	2.50"	AD3-0781	--
3/32"	8X (3/4")	.125"	2.50"	AD3-0938	--
1/8"	8X (1")	.125"	3.00"	AD3-1250	--
3/16"	6X (1 1/8")	.1875"	3.00"	--	AD4-1875
1/4"	6X (1 1/2")	.250"	4.00"	--	AD4-2500

USE : GENERAL PURPOSE

HELIX : 35 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER UNDER 1/8": +0.000 / -.001

CUTTING DIAMETER 1/8" AND ABOVE: +0.000 / -.002



WE MANUFACTURE THEM RIGHT HERE IN AMERICA'S HOMETOWN!

X/X



SQUARE END, DOUBLE END, STUB

FRACTIONAL 1/32-3/8"



DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	1/16"	.125"	1.50"	872-0031	873-0031
3/64"	1/16"	.125"	1.50"	872-0046	873-0046
1/16"	1/8"	.125"	1.50"	872-0062	873-0062
5/64"	1/8"	.125"	1.50"	872-0078	873-0078
3/32"	3/16"	.125"	1.50"	872-0093	873-0093
7/64"	1/4"	.125"	1.50"	872-0109	873-0109
1/8"	1/4"	.125"	1.50"	872-0125	873-0125
9/64"	5/16"	.1875"	2.00"	872-0140	873-0140
5/32"	5/16"	.1875"	2.00"	872-0156	873-0156
11/64"	3/8"	.1875"	2.00"	872-0171	873-0171
3/16"	3/8"	.1875"	2.00"	872-0187	873-0187
7/32"	1/2"	.250"	2.50"	872-0219	873-0219
1/4"	1/2"	.250"	2.50"	872-0250	873-0250
5/16"	1/2"	.3125"	2.50"	872-0312	873-0312
3/8"	1/2"	.3125"	2.50"	872-0375	873-0375

TECHNICAL INFORMATION

- General purpose.
- 30° helix.
- Cutting diameter tolerance: 1/32" — 1/4" + .000" - .002"; 5/16" — 3/8" + .000" - .003"
- Coatings available upon request.
- 2 Flute End Mills - Best used for slotting non-ferrous, plastic and composite materials
- 4 Flute End Mills - Best used for profile and contour milling
- Stub Length End Mills allow increased feed rates, lowering cycle times and production cost, facilitating increased throughput and efficiencies

Q MILLS

FRACTIONAL 1/32-1/4"



CARBIDE



X/M

DIA	FLUTE LENGTH	SHANK Ø	OAL	PART ID
				3 Flute
1/32"	3/32"	.250"	2.50"	885-SS0031
3/64"	9/64"	.250"	2.50"	885-SS0046
1/16"	3/16"	.250"	2.50"	885-SS0062
5/64"	3/16"	.250"	2.50"	885-SS0078
3/32"	3/8"	.250"	2.50"	885-SS0093
7/64"	7/16"	.250"	2.50"	885-SS0109
1/8"	1/2"	.250"	2.50"	885-SS0125
5/32"	9/16"	.250"	2.50"	885-SS0156
3/16"	5/8"	.250"	2.50"	885-SS0187
7/32"	5/8"	.250"	2.50"	885-SS0219
1/4"	3/4"	.250"	2.50"	885-SS0250

TECHNICAL INFORMATION

- 35° Helix
- Cutting diameter tolerance: +0"/-.001"
- Coatings available upon request
- .001 increments available upon request
- Designed with a fast helix and 3 flutes. Manufactured from precision performing sub micro-grain carbide, the 1/4" shank provides greater rigidity and is easier to handle.
- CNC ground to exact tolerances, specifications and finish to provide increased rates of stock removal with an improved part finish.
- Machine application: Recommended for ferrous materials.
- Additional features: corner radius, corner chamfer available upon request.

FRACTIONAL

QS MILLS



DIA	FLUTE LENGTH	SHANK ϕ	OAL	PART ID
				3 Flute
1/32"	1/16"	.250"	2.50"	884-SS0031
3/64"	3/32"	.250"	2.50"	884-SS0046
1/16"	1/8"	.250"	2.50"	884-SS0062
5/64"	1/8"	.250"	2.50"	884-SS0078
3/32"	3/16"	.250"	2.50"	884-SS0093
7/64"	3/16"	.250"	2.50"	884-SS0109
1/8"	1/4"	.250"	2.50"	884-SS0125
5/32"	3/8"	.250"	2.50"	884-SS0156
3/16"	3/8"	.250"	2.50"	884-SS0187
7/32"	3/8"	.250"	2.50"	884-SS0219
1/4"	1/2"	.250"	2.50"	884-SS0250

TECHNICAL INFORMATION

- 35° Helix
- Cutting diameter tolerance: +0"/-.001"
- Coatings available upon request
- .001 increments available upon request
- Designed with a fast helix and 3 flutes and manufactured from precision performing sub micro-grain carbide, the 1/4" shank provides greater rigidity and is easier to handle.
- CNC ground to exact tolerances, specifications and finish to provide increased rates of stock removal with an improved part finish.
- Machine application: Recommended for ferrous materials.
- Additional features: corner radius, corner chamfer available upon request.

FRACTIONAL QSR AND QB MILLS

CARBIDE

SQUARE

X/Y



QSR MILLS

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	PART ID
3 Flute					
1/32"	1/16"	.250"	2.50"	5X (.155")	884-SS0031LBS
3/64"	3/32"	.250"	2.50"	5X (.230")	884-SS0046LBS
1/16"	1/8"	.250"	2.50"	5X (.312")	884-SS0062LBS
5/64"	1/8"	.250"	2.50"	5X (.390")	884-SS0078LBS
3/32"	3/16"	.250"	2.50"	5X (.465")	884-SS0093LBS
7/64"	3/16"	.250"	2.50"	5X (.545")	884-SS0109LBS
1/8"	1/4"	.250"	2.50"	5X (.625")	884-SS0125LBS
5/32"	3/8"	.250"	2.50"	5X (.780")	884-SS0156LBS
3/16"	3/8"	.250"	2.50"	5X (.9375")	884-SS0187LBS
7/32"	3/8"	.250"	2.50"	5X (1.093")	884-SS0219LBS
1/4"	1/2"	.250"	2.50"	5X (1.250")	884-SS0250LBS



QB MILLS

DIA	FLUTE LENGTH	SHANK Ø	OAL	PART ID
3 Flute				
1/32"	3/32"	.250"	2.50"	885B-SS0031
1/16"	3/16"	.250"	2.50"	885B-SS0062
3/32"	3/8"	.250"	2.50"	885B-SS0093
1/8"	1/2"	.250"	2.50"	885B-SS0125
3/16"	5/8"	.250"	2.50"	885B-SS0187
1/4"	3/4"	.250"	2.50"	885B-SS0250

FRACTIONAL CARBIDE SPECIALS



USE : GENERAL PURPOSE

HELIX : 45 & 60 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER 2 FLUTES: +0.000 / -.001

CUTTING DIAMETER 3 FLUTES: +0.000 / -.002

S CARBIDE

K/K

SQUARE END, 45 DEG. HELIX

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part	
				2 Flute	3 Flute
1/32"	3/32"	.125"	1.50"	874HH-0031	--
3/64"	9/64"	.125"	1.50"	874HH-0047	--
1/16"	3/16"	.125"	1.50"	874HH-0062	--
5/64"	3/16"	.125"	1.50"	874HH-0078	--
3/32"	3/8"	.125"	1.50"	874HH-0093	--
1/8"	3/8"	.125"	1.50"	874HH-0125	--
3/16"	5/8"	.1875"	2.00"	874HH-0187	--
1/4"	3/4"	.250"	2.50"	874HH-0250	--
1/8"	1/2"	.125"	1.50"		12499
3/16"	5/8"	.1875"	2.00"		12500
1/4"	3/4"	.250"	2.50"	--	12501
5/16"	13/16"	.3125"	2.50"	--	12502
3/8"	7/8"	.375"	2.50"	--	12503

SQUARE END, 60 DEG. HELIX

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				3 Flute	
1/8"	1/2"	.125"	1.50"		12699
3/16"	5/8"	.1875"	2.00"		12700
1/4"	3/4"	.250"	2.50"		12701
5/16"	13/16"	.3125"	2.50"		12702
3/8"	7/8"	.375"	2.50"		12703

FRACTIONAL CARBIDE SPECIALS

TiN COATED



S CARBIDE

X/X

COATED

SQUARE END, 45 DEG. HELIX (TiN)

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				3 Flute
1/8"	1/2"	.125"	1.50"	12599
3/16"	5/8"	.1875"	2.00"	12600
1/4"	3/4"	.250"	2.50"	12601
5/16"	13/16"	.3125"	2.50"	12602
3/8"	7/8"	.375"	2.50"	12603

SQUARE END, 60 DEG. HELIX (TiN)

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				3 Flute
1/8"	1/2"	.125"	1.50"	12799
3/16"	5/8"	.1875"	2.00"	12800
1/4"	3/4"	.250"	2.50"	12801
5/16"	13/16"	.3125"	2.50"	12802
3/8"	7/8"	.375"	2.50"	12803

BALL END, STANDARD AND STUB

FRACTIONAL



STANDARD LENGTH 1/32-3/8" DIA.

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART		
				2 Flute	3 Flute	4 Flute
1/32"	3/32"	.125"	1.50"	882-0031	13001BN	883-0031
3/64"	9/64"	.125"	1.50"	882-0046	13002BN	883-0046
1/16"	3/16"	.125"	1.50"	882-0062	13003BN	883-0062
5/64"	3/16"	.125"	1.50"	882-0078	13004BN	883-0078
3/32"	3/8"	.125"	1.50"	882-0093	13005BN	883-0093
7/64"	7/16"	.125"	1.50"	882-0109	13006BN	883-0109
1/8"	1/2"	.125"	1.50"	882-0125	13007BN	883-0125
9/64"	1/2"	.1875"	2.00"	882-0140	13008BN	883-0140
5/32"	9/16"	.1875"	2.00"	882-0156	13009BN	883-0156
11/64"	5/8"	.1875"	2.00"	882-0171	13010BN	883-0171
3/16"	5/8"	.1875"	2.00"	882-0187	13011BN	883-0187
13/64"	5/8"	.250"	2.50"	882-0203	13012BN	883-0203
7/32"	5/8"	.250"	2.50"	882-0219	13013BN	883-0219
15/64"	5/8"	.250"	2.50"	882-0234	13014BN	883-0234
1/4"	3/4"	.250"	2.50"	882-0250	13015BN	883-0250
5/16"	13/16"	.3125"	2.50"	882-0312	13019BN	883-0312
3/8"	1"	.375"	2.50"	882-0375	13023BN	883-0375

STUB LENGTH 1/32-1/4" DIA.

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	1/16"	.125"	1.50"	876-0031	880-0031
3/64"	1/16"	.125"	1.50"	876-0046	880-0046
1/16"	1/8"	.125"	1.50"	876-0062	880-0062
3/32"	3/16"	.125"	1.50"	876-0093	880-0093
1/8"	1/4"	.125"	1.50"	876-0125	880-0125
5/32"	3/8"	.1875"	2.00"	876-0156	880-0156
3/16"	3/8"	.1875"	2.00"	876-0187	880-0187
1/4"	1/2"	.250"	2.00"	876-0250	880-0250

K/K



CARBIDE

BALL END, STANDARD COATED

AMORPHOUS DIAMOND



AMORPHOUS DIAMOND COATED STANDARD LENGTH 1/32-1/2" DIA.

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	3/32"	.125"	1.50"	AD12001BN	AD14001BN
3/64"	9/64"	.125"	1.50"	AD12002BN	AD14002BN
1/16"	3/16"	.125"	1.50"	AD12003BN	AD14003BN
5/64"	3/16"	.125"	1.50"	AD12004BN	AD14004BN
3/32"	3/8"	.125"	1.50"	AD12005BN	AD14005BN
7/64"	7/16"	.125"	1.50"	AD12006BN	AD14006BN
1/8"	1/2"	.125"	1.50"	AD12007BN	AD14007BN
9/64"	1/2"	.1875"	2.00"	AD12008BN	AD14008BN
5/32"	9/16"	.1875"	2.00"	AD12009BN	AD14009BN
3/16"	5/8"	.1875"	2.00"	AD12011BN	AD14011BN
1/4"	1/4"	.250"	2.50"	AD12015BN	AD14015BN
3/8"	3/8"	.375"	2.50"	AD12023BN	AD14023BN
1/2"	1/2"	.500"	3.00"	AD12031BN	AD14031BN

TECHNICAL INFORMATION

- 35° Helix
- Amorphous Diamond (AD Coating) is a smooth, hard, thin film coating used primarily for machining graphite and non-ferrous materials.
- Applied at low temperatures under 150° centigrade, thin film diamond enhances the surface properties of carbide without distorting the concentricity of the end mill.



A FOCUS ON NEW TECHNOLOGY, QUALITY, INCREASED CAPACITY AND CUSTOMER SATISFACTION ARE THE DRIVING FORCES BEHIND THE **NEW** RICHARDS MICRO TOOL.

BALL END LONG FLUTE LONG REACH

**AMORPHOUS DIAMOND
COATED**



CARBIDE



FRACTIONAL 1/64-1/4"

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART	RMT PART
					3 Flute	4 Flute
1/64"	5X (5/64")	.125"	2.50"	10x (.150")	AD3-0156XRB	--
1/64"	5X (5/64")	.125"	2.50"	16x (.250")	AD3-0156XLRB	--
1/32"	5X (5/32")	.125"	2.50"	8X (.250")	AD3-0312XRB	--
1/32"	5X (5/32")	.125"	2.50"	12X (.375")	AD3-0312XLRB	--
3/64"	5X (1/4")	.125"	2.50"	8X (.375")	AD3-0469XRB	--
3/64"	5X (1/4")	.125"	2.50"	11X (.500")	AD3-0469XLRB	--
1/16"	8X (1/2")	.125"	2.50"	12X (.750")	AD3-0625XRB	--
1/16"	8X (1/2")	.125"	2.50"	16X (1.00")	AD3-0625XLRB	--
5/64"	6x (1/2")	.125"	2.50"	10X (.750")	AD3-0781XRB	--
5/64"	6x (1/2")	.125"	2.50"	13X (1.00")	AD3-0781XLRB	--
3/32"	8X (3/4")	.125"	2.50"	11X (1.00")	AD3-0938XRB	--
3/32"	8X (3/4")	.125"	2.50"	13X (1.25")	AD3-0938XLRB	--
1/8"	8X (1")	.125"	3.00"	10X (1.25")	AD3-1250XRB	--
1/8"	8X (1")	.125"	3.00"	12X (1.50")	AD3-1250XLRB	--
3/16"	6X (1 1/8")	.1875"	3.00"	8X (1.50")	--	AD4-1875XRB
3/16"	6X (1 1/8")	.1875"	3.00"	9X (1.75")	--	AD4-1875XLRB
1/4"	6X (1 1/2")	.250"	4.00"	8X (2.00")	--	AD4-2500XRB
1/4"	6X (1 1/2")	.250"	4.00"	10X (2.50")	--	AD4-2500XLRB

USE : GENERAL PURPOSE

HELIX : 35 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER UNDER 1/8": +0.000 / -.001

CUTTING DIAMETER 1/8" AND ABOVE: +0.000 / -.002

X/X



Ball End Carbide Micro Endmills

BALL END LONG FLUTE LONG SHANK

FRACTIONAL 1/64-3/8"

USE : GENERAL PURPOSE

HELIX : (SEE CHART)

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

2 & 4 FLUTES:

HELIX : 30 DEGREES

DIAMETER TOLERANCE: +0.000 / -.002

3 FLUTES:

HELIX : 35 DEGREES

DIAMETER TOLERANCE: +0.000 / -.001

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT Part		
				2 Flute	3 Flute	4 Flute
1/64"	.078"	.125"	2.50"	--	3-0156B	--
1/32"	.156"	.125"	2.50"	--	3-0312B	--
3/64"	.250"	.125"	2.50"	--	3-0469B	--
1/16"	.500"	.125"	2.50"	--	3-0625B	--
5/64"	.500"	.125"	2.50"	--	3-0781B	--
3/32"	.750"	.125"	2.50"	--	3-0938B	--
1/8"	.750"	.125"	2.25"	16301	--	17301
1/8"	1.000"	.125"	3.00"	16302	3-1250B	17302
3/16"	.750"	.1875"	2.50"	16303	--	17303
3/16"	1.125"	.1875"	3.00"	16304	--	17304
1/4"	1.125"	.250"	3.00"	16305	--	17305
1/4"	1.000"	.250"	4.00"	16306	--	17306
1/4"	1.500"	.250"	4.00"	16307	--	17307
1/4"	1.500"	.250"	6.00"	16308	--	17308
5/16"	1.125"	.3125"	3.00"	16309	--	17309
5/16"	1.625"	.3125"	4.00"	16310	--	17310
3/8"	1.125"	.375"	3.00"	16311	--	17311
3/8"	1.000"	.375"	4.00"	16312	--	17312
3/8"	1.750"	.375"	4.00"	16313	--	17313
3/8"	1.500"	.375"	6.00"	16314	--	17314

XX



CARBIDE



BALL END LONG FLUTE LONG SHANK

FRACTIONAL 1/64-1/4"

AMORPHOUS DIAMOND COATED



CARBIDE



X/X

AD



USE : GENERAL PURPOSE

HELIX : 35 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER UNDER 1/8": +0.000 / -.001

CUTTING DIAMETER 1/8" AND ABOVE: +0.000 / -.002

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	
				3 Flute	4 Flute
1/64"	5X (5/64")	.125"	2.50"	AD3-0156B	--
1/32"	5X (5/32")	.125"	2.50"	AD3-0312B	--
3/64"	5X (1/4")	.125"	2.50"	AD3-0469B	--
1/16"	8X (1/2")	.125"	2.50"	AD3-0625B	--
5/64"	6X (1/2")	.125"	2.50"	AD3-0781B	--
3/32"	8X (3/4")	.125"	2.50"	AD3-0938B	--
1/8"	8X (1")	.125"	3.00"	AD3-1250B	--
3/16"	6X (1 1/8")	.1875"	3.00"	--	AD4-1875B
1/4"	6X (1 1/2")	.250"	4.00"	--	AD4-2500B



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Ball End Carbide Micro Endmills

BALL END LONG SHANK LONG REACH

FRACTIONAL 1/32-3/32"

USE : GENERAL PURPOSE
 HELIX : 35 DEGREES
 HAND : RHS / RHC
 RAKE ANGLE: POSITIVE
 CENTER CUTTING: YES
 DIAMETER TOLERANCE: +0.000 / -.001

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT Part
1/32"	.0625"	.125"	2.50"	8X (.250")	3-0312RSB
1/16"	.125"	.125"	2.50"	8X (.500")	3-0625RSB
3/32"	.1875"	.125"	2.50"	8X (.750")	3-0938RSB



WE MANUFACTURE THEM RIGHT HERE IN AMERICA'S HOMETOWN!



CARBIDE



X/X



FRACTIONAL
LONG SHANK LONG REACH STUB
AMORPHOUS DIAMOND

USE : GENERAL PURPOSE

HELIX : 35 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER UNDER 1/8": +0.000 / -.001

CUTTING DIAMETER 1/8" AND ABOVE: +0.000 / -.002

REACH STUB

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	RMT PART
					3 Flute
1/32"	1/16"	.125"	2.50"	8X (.250")	AD3-0312RSB
1/16"	1/8"	.125"	2.50"	8X (.500")	AD3-0625RSB
3/32"	3/16"	.125"	2.50"	8X (.750")	AD3-0938RSB

LONG REACH STUB

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH (ACTUAL)	Part ID
					3 Flute
1/32"	1/16"	.125"	2.50"	12X (.375")	AD3-0312XRSB
1/32"	1/16"	.125"	2.50"	16X (.500")	AD3-0312XLSB
1/16"	1/8"	.125"	2.50"	12X (.750")	AD3-0625XRSB
1/16"	1/8"	.125"	2.50"	16X (1.00")	AD3-0625XLSB
3/32"	3/16"	.125"	2.50"	11X (1.00")	AD3-0938XRSB
3/32"	3/16"	.125"	2.50"	13X (1.25")	AD3-0938XLSB



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FRACTIONAL

STANDARD LENGTH



TECHNICAL INFORMATION

- Prevents corner breaking
- Makes radius between wall and floor
- 30° helix
- Cutting diameter tolerance: 1/32" — 1/4" + .000" - .002"; 5/16" — 3/8" + .000" - .003"
- Coatings available upon request.
- 2 Flute End Mills - Best used for slotting non-ferrous, plastic and composite materials
- 4 Flute End Mills - Best used for profile and contour milling

DIA	FLUTE LENGTH	SHANK Ø	OAL	CORNER RADIUS	RMT PART	
					2 Flute	4 Flute
1/8"	1/2"	.125"	1.50"	.010" CR	12007CR.010	14007CR.010
3/16"	5/8"	.1875"	2.00"	.010" CR	12011CR.010	14011CR.010
1/8"	1/2"	.125"	1.50"	.015" CR	12007CR.015	14007CR.015
3/16"	5/8"	.1875"	2.00"	.015" CR	12011CR.015	14011CR.015
1/4"	3/4"	.250"	2.50"	.015" CR	12015CR.015	14015CR.015
5/16"	13/16"	.3125"	2.50"	.015" CR	12019CR.015	14019CR.015
3/8"	1"	.375"	2.50"	.015" CR	12023CR.015	14023CR.015
1/8"	1/2"	.125"	1.50"	.020" CR	12007CR.020	14007CR.020
1/4"	3/4"	.250"	2.50"	.020" CR	12015CR.020	14015CR.020
5/16"	13/16"	.3125"	2.50"	.020" CR	12019CR.020	14019CR.020
3/16"	5/8"	.1875"	2.00"	.030" CR	12011CR.030	14011CR.030
1/4"	3/4"	.250"	2.50"	.030" CR	12015CR.030	14015CR.030
5/16"	13/16"	.3125"	2.50"	.030" CR	12019CR.030	14019CR.030
3/8"	1"	.375"	2.50"	.030" CR	12023CR.030	14023CR.030
1/4"	3/4"	.250"	2.50"	.045" CR	12015CR.045	14015CR.045
5/16"	13/16"	.3125"	2.50"	.045" CR	12019CR.045	14019CR.045
3/8"	1"	.375"	2.50"	.045" CR	12023CR.045	14023CR.045
1/4"	3/4"	.250"	2.50"	.060" CR	12015CR.060	14015CR.060
5/16"	13/16"	.3125"	2.50"	.060" CR	12019CR.060	14019CR.060
3/8"	1"	.375"	2.50"	.060" CR	12023CR.060	14023CR.060

FRACTIONAL CARBIDE SPECIALS

HARD MILL COATED



USE : GENERAL PURPOSE

HELIX : 18 DEGREES

HAND : RHS / RHC

RAKE ANGLE: NEUTRAL

CENTER CUTTING: YES

DIAMETER TOLERANCE: +0.000 / -.001

HARD MILL COATED 1/32-1/4" DIA.

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART
				4 Flute
1/32"	1/16"	.125"	1.50"	879HM-0031
3/64"	1/16"	.125"	1.50"	879HM-0047
1/16"	1/8"	.125"	1.50"	879HM-0062
5/64"	1/8"	.125"	1.50"	879HM-0078
3/32"	3/16"	.125"	1.50"	879HM-0093
1/8"	1/4"	.125"	1.50"	879HM-0125
3/16"	3/8"	.1875"	2.00"	879HM-0187
1/4"	1/2"	.250"	2.50"	879HM-0250

FRACTIONAL CARBIDE SPECIALS

MULTI FLUTE



USE : GENERAL PURPOSE
 HELIX : 35 DEGREES
 HAND : RHS / RHC
 RAKE ANGLE: POSITIVE
 CENTER CUTTING: YES
 DIAMETER TOLERANCE: +0.000 / -.001

MF
CARBIDE

X/XX

MULTI FLUTE 1/32-1/4" DIA.

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART
				5 Flute
1/32"	3/32"	.125"	1.50"	889MF-0031
3/64"	9/64"	.125"	1.50"	889MF-0046
1/16"	3/16"	.125"	1.50"	889MF-0062
5/64"	3/16"	.125"	1.50"	889MF-0078
3/32"	3/8"	.125"	1.50"	889MF-0093
1/8"	1/2"	.125"	1.50"	889MF-0125
3/16"	5/8"	.1875"	2.00"	889MF-0187
1/4"	3/4"	.250"	2.50"	889MF-0250



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FRACTIONAL CARBIDE SPECIALS**60 DEG. DRILL POINT DRILL MILL**

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	1/8"	.125"	1.50"	874DM60-0031	875DM60-0031
1/16"	3/16"	.125"	1.50"	874DM60-0062	875DM60-0062
3/32"	3/8"	.125"	1.50"	874DM60-0093	875DM60-0093
1/8"	1/2"	.125"	1.50"	874DM60-0125	875DM60-0125
3/16"	5/8"	.1875"	2.00"	874DM60-0187	875DM60-0187
1/4"	3/4"	.250"	2.50"	874DM60-0250	875DM60-0250

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

CUTTING DIAMETER UP TO 1/8" : +0.000/-0.001

CUTTING DIAMETER 1/8" AND OVER : +0.000/-0.002

END SHAPE : 60° DRILL POINT

CUTTER TYPE : DRILL MILL

COATING : AVAILABLE UPON REQUEST

FRACTIONAL CARBIDE SPECIALS

CARBIDE

S

X/X



90 DEG. DRILL POINT DRILL MILL

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	1/8"	.125"	1.50"	874DM90-0031	875DM90-0031
1/16"	3/16"	.125"	1.50"	874DM90-0062	875DM90-0062
3/32"	3/8"	.125"	1.50"	874DM90-0093	875DM90-0093
1/8"	1/2"	.125"	1.50"	874DM90-0125	875DM90-0125
3/16"	5/8"	.1875"	2.00"	874DM90-0187	875DM90-0187
1/4"	3/4"	.250"	2.50"	874DM90-0250	875DM90-0250

END SHAPE : 90° DRILL POINT

CUTTER TYPE : DRILL MILL

COATING : AVAILABLE UPON REQUEST



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60 DEG. CARBIDE CHAMFER MILLS

USE : GENERAL PURPOSE

HELIX : 0 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

DIAMETER TOLERANCE: +0 /-.0005



S CARBIDE



X/K

90 DEG. CARBIDE CHAMFER MILLS

END SHAPE : 60° / 90° POINT

CUTTER TYPE : CHAMFER MILL

COATING : AVAILABLE UPON REQUEST

CARBIDE**S****X/M****SINGLE END 60 DEG. CHAMFER**

SINGLE END 60° CARBIDE CHAMFER MILLS							
DIA	FLUTE LENGTH	SHANK Ø	OAL	TYPE	END	RMT PART	RMT PART
						2 Flute	4 Flute
1/8"	(.108" REF)	.125"	1.50"	SE	60°	818-260-125	818-460-125
1/4"	(.216" REF)	.250"	2.50"	SE	60°	818-260-250	818-460-250

DOUBLE END 60 DEG. CHAMFER

DOUBLE END 60° CARBIDE CHAMFER MILLS							
DIA	FLUTE LENGTH	SHANK Ø	OAL	TYPE	END	RMT PART	RMT PART
						2 Flute	4 Flute
1/8"	(.108" REF)	.125"	2.00"	DE	60°	819-260-125	819-460-125
3/16"	(.162" REF)	.1875"	2.50"	DE	60°	819-260-187	819-460-125
1/4"	(.216" REF)	.250"	2.50"	DE	60°	819-260-250	819-460-250

SINGLE END 90 DEG. CHAMFER

SINGLE END 90° CARBIDE CHAMFER MILLS							
DIA	FLUTE LENGTH	SHANK Ø	OAL	TYPE	END	RMT PART	RMT PART
						2 Flute	4 Flute
1/8"	(.063" REF)	.125"	1.50"	SE	90°	818-290-125	818-490-125
1/4"	(.125" REF)	.250"	2.50"	SE	90°	818-290-250	818-490-250

DOUBLE END 90 DEG. CHAMFER

DOUBLE END 90° CARBIDE CHAMFER MILLS							
DIA	FLUTE LENGTH	SHANK Ø	OAL	TYPE	END	RMT PART	RMT PART
						2 Flute	4 Flute
1/8"	(.108" REF)	.125"	2.00"	DE	90°	819-290-125	819-490-125
3/16"	(.162" REF)	.1875"	2.50"	DE	90°	819-290-125	819-490-187
1/4"	(.216" REF)	.250"	2.50"	DE	90°	819-290-250	819-490-250

60 DEG. DRILL AND COUNTERSINK

TECHNICAL INFORMATION

- Carbide Drills & Countersinks - 60°
- Straight Flute ideal for machining hardend steels up to 65Rc, cast iron, tough alloys, plastics and other abrasive materials.
- These carbide combined drill and countersinks are manufactured to exacting CNC specifications. Coatings are available upon request.

60 DEG. DRILL AND COUNTERSINK

SOLID CARBIDE DRILL & COUNTERSINK 60° STRAIGHT FLUTE					
SIZE	DRILL DIA	DRILL LENGTH	BODY DIA	OAL	RMT PART
#00 x 60°	.025"	.025"	.125"	1.50"	601-0250
#0 x 60°	.031"	.031"	.125"	1.50"	601-0310
#1 x 60°	.047"	.047"	.125"	1.50"	601-0001
#2 x 60°	.078"	.078"	.1875"	2.00"	601-0002
#3 x 60°	.109"	.109"	.250"	2.00"	601-0003
#4 x 60°	.125"	.125"	.3125"	2.125"	601-0004
#5 x 60°	.1875"	.1875"	.4375"	2.75"	601-0005
#6 x 60°	.219"	.219"	.500"	3.00"	601-0006
#7 x 60°	.250"	.250"	.625"	3.75"	601-0007
#8 x 60°	.3125"	.3125"	.750"	4.00"	601-0008

DIAMETER : WIRE

TYPE :DE

FLUTE LENGTH : STANDARD

END SHAPE : 118° DP

CUTTER TYPE : DRILL & 60° COUNTERSINK

HELIX : 0 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

DIAMETER TOLERANCE: +/-0.0015

82 and 90 DEG. DRILL AND COUNTERSINK**STRAIGHT FLUTE****82 DEG. DRILL AND COUNTERSINK**

SOLID CARBIDE DRILL & COUNTERSINK 82° STRAIGHT FLUTE					
SIZE	DRILL DIA	DRILL LENGTH	BODY DIA	OAL	RMT Part
#00 x 82°	.025"	.025"	.125"	1.50"	681-0250
#0 x 82°	.031"	.031"	.125"	1.50"	681-0310
#1 x 82°	.047"	.047"	.125"	1.50"	681-0001
#2 x 82°	.078"	.078"	.1875"	2.00"	681-0002
#3 x 82°	.109"	.109"	.250"	2.00"	681-0003
#4 x 82°	.125"	.125"	.3125"	2.125"	681-0004
#5 x 82°	.1875"	.1875"	.4375"	2.75"	681-0005
#6 x 82°	.219"	.219"	.500"	3.00"	681-0006
#7 x 82°	.250"	.250"	.625"	3.75"	681-0007
#8 x 82°	.3125"	.3125"	.750"	4.00"	681-0008

90 DEG. DRILL AND COUNTERSINK

SOLID CARBIDE DRILL & COUNTERSINK 90° STRAIGHT FLUTE					
SIZE	DRILL DIA	DRILL LENGTH	BODY DIA	OAL	RMT Part
#00 x 90°	.025"	.025"	.125"	1.50"	691-0250
#0 x 90°	.031"	.031"	.125"	1.50"	691-0310
#1 x 90°	.047"	.047"	.125"	1.50"	691-0001
#2 x 90°	.078"	.078"	.1875"	2.00"	691-0002
#3 x 90°	.109"	.109"	.250"	2.00"	691-0003
#4 x 90°	.125"	.125"	.3125"	2.125"	691-0004
#5 x 90°	.1875"	.1875"	.4375"	2.75"	691-0005
#6 x 90°	.219"	.219"	.500"	3.00"	691-0006
#7 x 90°	.250"	.250"	.625"	3.75"	691-0007
#8 x 90°	.3125"	.3125"	.750"	4.00"	691-0008

90 DEG., NC SPOT DRILL

TECHNICAL INFORMATION

- Solid Carbide NC Spotting Drills - 90° & 120°
- Featuring a unique four-facet point, the NC Spotting Drill offers greater precision in spotting applications. This tool can be used to stabilize a deep hole drilling operation or chamfer a hole for another tool.
- Ground only on CNC equipment utilizing the latest in grinding wheel technology, our solid carbide NC Spotting Drills will outperform HSS and Cobalt.
- Tight tolerances applied to short overall lengths with short flute design translate to greater rigidity and strength for the end user.

90 DEG. NC SPOT DRILL

SOLID CARBIDE 90° NC SPOT DRILL STRAIGHT FLUTE				
DRILL DIA	FLUTE LENGTH	BODY DIA	OAL	RMT PART
.125"	.312"	.125"	1.50"	701-012590
.1875"	.500"	.1875"	2.00"	701-018790
.250"	.625"	.250"	2.50"	701-025090
.3125"	.750"	.3125"	2.50"	701-031290
.375"	.937"	.375"	2.50"	701-037590
.500"	1.25"	.500"	3.00"	701-050090

120 DEG., NC SPOT DRILL

STRAIGHT FLUTE



CARBIDE

S

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120 DEG. NC SPOT DRILL

SOLID CARBIDE 120° NC SPOT DRILL STRAIGHT FLUTE					
DRILL DIA	FLUTE LENGTH	BODY DIA	OAL	RMT PART	
.125"	.312"	.125"	1.50"	701-0125120	
.1875"	.500"	.1875"	2.00"	701-0187120	
.250"	.625"	.250"	2.50"	701-0250120	
.3125"	.750"	.3125"	2.50"	701-0312120	
.375"	.937"	.375"	2.50"	701-0375120	
.500"	1.25"	.500"	3.00"	701-0500120	



CARBIDE METRIC ENDMILLS

SQUARE END STANDARD-----	77
BALL END STANDARD-----	78
STUB REACH SQUARE-----	79
LONG FLUTE LONG REACH SQUARE-----	80
STUB REACH BALL-----	81
LONG FLUTE LONG REACH BALL-----	82
CARBIDE CIRCUIT BOARD DRILLS-----	83-88

SQUARE,END STANDARD

.50 - 12 mm DIA.



CARBIDE

mm

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	RMT PART
				2 Flute	4 Flute
.50 mm	1.5 mm	3 mm	38 mm	41001	43001
1 mm	3 mm	3 mm	38 mm	41002	43002
1.5 mm	4.5 mm	3 mm	38 mm	41003	43003
2 mm	6 mm	3 mm	38 mm	41004	43004
2.5 mm	8 mm	3 mm	38 mm	41005	43005
3 mm	10 mm	3 mm	38 mm	41006	43006
3.5 mm	12 mm	4 mm	50 mm	41007	43007
4 mm	12 mm	4 mm	50 mm	41008	43008
4.5 mm	14 mm	5 mm	50 mm	41009	43009
5 mm	15 mm	5 mm	50 mm	41010	43010
6 mm	18 mm	6 mm	63 mm	41011	43011
7 mm	20 mm	8 mm	63 mm	41012	43012
8 mm	20 mm	8 mm	63 mm	41013	43013
9 mm	22 mm	10 mm	63 mm	41014	43014
10 mm	22 mm	10 mm	63 mm	41015	43015
12 mm	25 mm	12 mm	75 mm	41016	43016

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

DIAMETER TOLERANCE: +0 /-.05 mm

BALL END, STANDARD

.50 - 12 mm DIA.



CARBIDE



mm

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	RMT PART
				2 Flute	4 Flute
.50 mm	1.5 mm	3 mm	38 mm	42001	44001
1 mm	3 mm	3 mm	38 mm	42002	44002
1.5 mm	4.5 mm	3 mm	38 mm	42003	44003
2 mm	6 mm	3 mm	38 mm	42004	44004
2.5 mm	8 mm	3 mm	38 mm	42005	44005
3 mm	10 mm	3 mm	38 mm	42006	44006
3.5 mm	12 mm	4 mm	50 mm	42007	44007
4 mm	12 mm	4 mm	50 mm	42008	44008
4.5 mm	14 mm	5 mm	50 mm	42009	44009
5 mm	15 mm	5 mm	50 mm	42010	44010
6 mm	18 mm	6 mm	63 mm	42011	44011
7 mm	20 mm	8 mm	63 mm	42012	44012
8 mm	20 mm	8 mm	63 mm	42013	44013
9 mm	22 mm	10 mm	63 mm	42014	44014
10 mm	22 mm	10 mm	63 mm	42015	44015
12 mm	25 mm	12 mm	75 mm	42016	44016

USE : GENERAL PURPOSE

HELIX : 30 DEGREES

HAND : RHS / RHC

RAKE ANGLE: POSITIVE

CENTER CUTTING: YES

DIAMETER TOLERANCE: +0 /-.05 mm

Square End Carbide Micro Endmills

METRIC STUB, REACH, SQUARE

AMORPHOUS DIAMOND COATED G MILL

TECHNICAL INFORMATION

- 35° Helix
- Diameter tolerance: $+.000"/-.001"$ (except as noted)
- AD (Amorphous Diamond) coated "G" Mills are specifically designed for machining graphite electrodes.
- "G" Mills have been shown to be a cost effective solution in producing graphite electrodes by lowering tooling costs and improving productivity.
- Designed with a Fast Helix and 3- or 4-flute design, "G" Mills outperform conventional end mills by providing faster particle evacuation while producing extremely smooth finishes in graphite.
- "G" Mills are factory laser inspected to ensure more accurate machining of graphite electrodes.



CARBIDE

SQUARE

mm

AD

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH	RMT PART
					3 Flute
.40 mm	.60 mm	3 mm	75 mm	3.2 mm	61001
.50 mm	.75 mm	3 mm	75 mm	4 mm	61002
.60 mm	.90 mm	3 mm	75 mm	4.8 mm	61003
.80 mm	1.2 mm	3 mm	75 mm	6.4 mm	61004
1 mm	1.5 mm	3 mm	75 mm	8 mm	61005
1.5 mm	2.25 mm	3 mm	75 mm	12 mm	61006
2 mm	3 mm	3 mm	75 mm	16 mm	61007
2.5 mm	3.75 mm	3 mm	75 mm	20 mm	61008
3 mm	4.5 mm	3 mm	75 mm	24 mm	61009
4 mm	6 mm	4 mm	75 mm	32 mm	61010
6 mm	9 mm	6 mm	100 mm	48 mm	61011
8 mm	12 mm	8 mm	100 mm	64 mm	61012
10 mm	15 mm	10 mm	120 mm	80 mm	61013
12 mm	18 mm	12 mm	150 mm	96 mm	61014

METRIC LONG FLUTE, LONG REACH, SQUARE

**AMORPHOUS DIAMOND
COATED G MILL**



CARBIDE



mm



Diam	FLUTE LENGTH	SHANK ϕ	OAL	REACH LENGTH	RMT PART
3 Flute					
.40 mm	5X (2 mm)	3 mm	75 mm	4 mm	51001
.50 mm	5X (2.5 mm)	3 mm	75 mm	5 mm	51002
.60 mm	5X (3 mm)	3 mm	75 mm	6 mm	51003
.80 mm	5X (4 mm)	3 mm	75 mm	8 mm	51004
1 mm	5X (5 mm)	3 mm	75 mm	10 mm	51005
1.2 mm	5X (6 mm)	3 mm	75 mm	12 mm	51006
1.5 mm	5X (7.5 mm)	3 mm	75 mm	15 mm	51007
2 mm	5X (10 mm)	3 mm	75 mm	20 mm	51008
2.5 mm	5X (12.5 mm)	3 mm	75 mm	25 mm	51009
3 mm	5X (15 mm)	3 mm	75 mm	30 mm	51010
4 mm	5X (20 mm)	4 mm	75 mm	40 mm	51011
6 mm	5X (30 mm)	6 mm	100 mm	60 mm	51012
8 mm	5X (40 mm)	8 mm	100 mm	70 mm	51013
10 mm	5X (50 mm)	10 mm	120 mm	80 mm	51014
12 mm	5X (60 mm)	12 mm	150 mm	85 mm	51015



mm



Ball End Carbide Micro Endmills

METRIC STUB, REACH, BALL

AMORPHOUS DIAMOND COATED G MILL

TECHNICAL INFORMATION

- 35° Helix
- Diameter tolerance: +.000"/-.001" (except as noted)
- AD (Amorphous Diamond) coated "G" Mills are specifically designed for machining graphite electrodes.
- "G" Mills have been shown to be a cost effective solution in producing graphite electrodes by lowering tooling costs and improving productivity.
- Designed with a Fast Helix and 3- or 4-flute design, "G" Mills outperform conventional end mills by providing faster particle evacuation while producing extremely smooth finishes in graphite.
- "G" Mills are factory laser inspected to ensure more accurate machining of graphite electrodes.

DIA	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH	RMT PART
					3 Flute
.40 mm	.60 mm	3 mm	75 mm	3.2 mm	62001
.50 mm	.75 mm	3 mm	75 mm	4 mm	62002
.60 mm	.90 mm	3 mm	75 mm	4.8 mm	62003
.80 mm	1.2 mm	3 mm	75 mm	6.4 mm	62004
1 mm	1.5 mm	3 mm	75 mm	8 mm	62005
1.5 mm	2.25 mm	3 mm	75 mm	12 mm	62006
2 mm	3 mm	3 mm	75 mm	16 mm	62007
2.5 mm	3.75 mm	3 mm	75 mm	20 mm	62008
3 mm	4.5 mm	3 mm	75 mm	24 mm	62009
4 mm	6 mm	4 mm	75 mm	32 mm	62010
6 mm	9 mm	6 mm	100 mm	48 mm	62011
8 mm	12 mm	8 mm	100 mm	64 mm	62012
10 mm	15 mm	10 mm	120 mm	80 mm	62013
12 mm	18 mm	12 mm	150 mm	96 mm	62014

METRIC LONG FLUTE, LONG REACH, BALL

AMORPHOUS DIAMOND COATED G MILL



CARBIDE



mm



TECHNICAL INFORMATION

- 35° Helix
- AD (Amorphous Diamond) coated “G” Mills are specifically designed for machining graphite electrodes.
- “G” Mills have been shown to be a cost effective solution in producing graphite electrodes by lowering tooling costs and improving productivity.
- Designed with a Fast Helix and 3- or 4-flute design, “G” Mills outperform conventional end mills by providing faster particle evacuation while producing extremely smooth finishes in graphite.
- “G” Mills are factory laser inspected to ensure more accurate machining of graphite electrodes.

Diam	FLUTE LENGTH	SHANK Ø	OAL	REACH LENGTH	RMT PART
3 Flute					
.40 mm	5X (2 mm)	3 mm	75 mm	4 mm	52001
.50 mm	5X (2.5 mm)	3 mm	75 mm	5 mm	52002
.60 mm	5X (3 mm)	3 mm	75 mm	6 mm	52003
.80 mm	5X (4 mm)	3 mm	75 mm	8 mm	52004
1 mm	5X (5 mm)	3 mm	75 mm	10 mm	52005
1.2 mm	5X (6 mm)	3 mm	75 mm	12 mm	52006
1.5 mm	5X (7.5 mm)	3 mm	75 mm	15 mm	52007
2 mm	5X (10 mm)	3 mm	75 mm	20 mm	52008
2.5 mm	5X (12.5 mm)	3 mm	75 mm	25 mm	52009
3 mm	5X (15 mm)	3 mm	75 mm	30 mm	52010
4 mm	5X (20 mm)	4 mm	75 mm	40 mm	52011
6 mm	5X (30 mm)	6 mm	100 mm	60 mm	52012
8 mm	5X (40 mm)	8 mm	100 mm	70 mm	52013
10 mm	5X (50 mm)	10 mm	120 mm	80 mm	52014
12 mm	5X (60 mm)	12 mm	150 mm	85 mm	52015

CARBIDE CIRCUIT BOARD DRILLS**.004-.020"****TECHNICAL INFORMATION**

- Engineered for small diameter hole drilling
- All drills are on 1/8" shanks, 1.5" overall length
- Diameter tolerance: +0"/-0.0003"
- Coatings and reach lengths priced upon request



CARBIDE



.XXX

DRILL DIA.	WIRE SIZE	METRIC SIZE	POINT ANGLE	SHANK ϕ	OAL	RMT PART
.0040	# 102	.10	118° DP	.125"	1.50"	RS3170040
.0050	# 99	.13	118° DP	.125"	1.50"	RS3170050
.0059	# 97	.15	118° DP	.125"	1.50"	RS3170059
.0063	# 96	.16	118° DP	.125"	1.50"	RS3170063
.0067	# 95	.17	118° DP	.125"	1.50"	RS3170067
.0071	# 94	.18	118° DP	.125"	1.50"	RS3170071
.0075	# 93	.19	118° DP	.125"	1.50"	RS3170075
.0079	# 92	.20	118° DP	.125"	1.50"	RS3170079
.0083	# 91	.21	118° DP	.125"	1.50"	RS3170083
.0087	# 90	.22	118° DP	.125"	1.50"	RS3170087
.0091	# 89	.23	118° DP	.125"	1.50"	RS3170091
.0095	# 88	.24	118° DP	.125"	1.50"	RS3170095
.0098	.25mm	.25	118° DP	.125"	1.50"	RS3170098
.0100	# 87	.25	118° DP	.125"	1.50"	RS3170100
.0105	# 86	.27	118° DP	.125"	1.50"	RS3170105
.0110	# 85	.28	118° DP	.125"	1.50"	RS3170110
.0115	# 84	.29	118° DP	.125"	1.50"	RS3170115
.0118	.30mm	.30	118° DP	.125"	1.50"	RS3170118
.0120	# 83	.30	118° DP	.125"	1.50"	RS3170120
.0125	# 82	.32	118° DP	.125"	1.50"	RS3170125
.0130	# 81	.33	130° DP	.125"	1.50"	RS3170130
.0135	# 80	.34	130° DP	.125"	1.50"	RS3170135
.0138	.35mm	.35	130° DP	.125"	1.50"	RS3170138
.0145	# 79	.37	130° DP	.125"	1.50"	RS3170145
.0156	1/64"	.40	130° DP	.125"	1.50"	RS3170156
.0157	.40mm	.40	130° DP	.125"	1.50"	RS3170157
.0160	# 78	.41	130° DP	.125"	1.50"	RS3170160
.0177	.45mm	.45	130° DP	.125"	1.50"	RS3170177
.0180	# 77	.46	130° DP	.125"	1.50"	RS3170180
.0197	.50mm	.50	130° DP	.125"	1.50"	RS3170197
.0200	# 76	.51	130° DP	.125"	1.50"	RS3170200

* **SOLD IN MULTIPLES OF FIVE**

CARBIDE CIRCUIT BOARD DRILLS

.021-.040"

USE : GENERAL PURPOSE
 HELIX : 20 DEGREES
 HAND : RHS / RHC
 CENTER CUTTING: YES



CARBIDE



.XXX

DRILL DIA	WIRE SIZE	METRIC SIZE	POINT ANGLE	SHANK Ø	OAL	RMT PART
.0210	# 75	.53	130° DP	.125"	1.50"	RS3170210
.0217	.55mm	.55	130° DP	.125"	1.50"	RS3170217
.0225	# 74	.57	130° DP	.125"	1.50"	RS3170225
.0236	.60mm	.60	130° DP	.125"	1.50"	RS3170236
.0240	# 73	.61	130° DP	.125"	1.50"	RS3170240
.0250	# 72	.64	130° DP	.125"	1.50"	RS3170250
.0256	.65mm	.65	130° DP	.125"	1.50"	RS3170256
.0260	# 71	.66	130° DP	.125"	1.50"	RS3170260
.0276	.70mm	.70	130° DP	.125"	1.50"	RS3170276
.0280	# 70	.71	130° DP	.125"	1.50"	RS3170280
.0292	# 69	.74	130° DP	.125"	1.50"	RS3170292
.0295	.75mm	.75	130° DP	.125"	1.50"	RS3170295
.0310	# 68	.79	130° DP	.125"	1.50"	RS3170310
.0312	1/32"	.79	130° DP	.125"	1.50"	RS3170312
.0315	.80mm	.80	130° DP	.125"	1.50"	RS3170315
.0320	# 67	.81	130° DP	.125"	1.50"	RS3170320
.0330	# 66	.84	130° DP	.125"	1.50"	RS3170330
.0335	.85mm	.85	130° DP	.125"	1.50"	RS3170335
.0350	# 65	.89	130° DP	.125"	1.50"	RS3170350
.0354	.90mm	.90	130° DP	.125"	1.50"	RS3170354
.0360	# 64	.91	130° DP	.125"	1.50"	RS3170360
.0370	# 63	.94	130° DP	.125"	1.50"	RS3170370
.0374	.95mm	.95	130° DP	.125"	1.50"	RS3170374
.0380	# 62	.97	130° DP	.125"	1.50"	RS3170380
.0390	# 61	.99	130° DP	.125"	1.50"	RS3170390
.0394	1.0mm	1.00	130° DP	.125"	1.50"	RS3170394
.0400	# 60	1.02	130° DP	.125"	1.50"	RS3170400

*** SOLD IN MULTIPLES OF FIVE**

CARBIDE CIRCUIT BOARD DRILLS**.041-.0709"****TECHNICAL INFORMATION**

- Engineered for small diameter hole drilling
- All drills are on 1/8" shanks, 1.5" overall length
- Diameter tolerance: +0"/-0.0003"
- Coatings and reach lengths priced upon request

**CARBIDE****.XXX**

DRILL DIA	WIRE SIZE	METRIC SIZE	POINT ANGLE	SHANK Ø	OAL	RMT PART
.0410	# 59	1.04	130° DP	.125"	1.50"	RS3170410
.0413	1.05mm	1.05	130° DP	.125"	1.50"	RS3170413
.0420	# 58	1.07	130° DP	.125"	1.50"	RS3170420
.0430	# 57	1.09	130° DP	.125"	1.50"	RS3170430
.0433	1.10mm	1.10	130° DP	.125"	1.50"	RS3170433
.0440	1.12mm	1.12	130° DP	.125"	1.50"	RS3170440
.0453	1.15mm	1.15	130° DP	.125"	1.50"	RS3170453
.0465	# 56	1.18	130° DP	.125"	1.50"	RS3170465
.0469	3/64"	1.19	130° DP	.125"	1.50"	RS3170469
.0472	1.20mm	1.20	130° DP	.125"	1.50"	RS3170472
.0492	1.25mm	1.25	130° DP	.125"	1.50"	RS3170492
.0512	1.30mm	1.30	130° DP	.125"	1.50"	RS3170512
.0520	# 55	1.32	130° DP	.125"	1.50"	RS3170520
.0531	1.35mm	1.35	130° DP	.125"	1.50"	RS3170531
.0550	# 54	1.40	130° DP	.125"	1.50"	RS3170550
.0551	1.40mm	1.40	130° DP	.125"	1.50"	RS3170551
.0571	1.45mm	1.45	130° DP	.125"	1.50"	RS3170571
.0591	1.50mm	1.50	130° DP	.125"	1.50"	RS3170591
.0595	# 53	1.51	130° DP	.125"	1.50"	RS3170595
.0610	1.55mm	1.55	130° DP	.125"	1.50"	RS3170610
.0625	1/16"	1.59	130° DP	.125"	1.50"	RS3170625
.0630	1.60mm	1.60	130° DP	.125"	1.50"	RS3170630
.0635	# 52	1.61	130° DP	.125"	1.50"	RS3170635
.0650	1.65mm	1.65	130° DP	.125"	1.50"	RS3170650
.0669	1.70mm	1.70	130° DP	.125"	1.50"	RS3170669
.0670	# 51	1.70	130° DP	.125"	1.50"	RS3170670
.0689	1.75mm	1.75	130° DP	.125"	1.50"	RS3170689
.0700	# 50	1.78	130° DP	.125"	1.50"	RS3170700
.0709	1.80mm	1.80	130° DP	.125"	1.50"	RS3170709

*** SOLD IN MULTIPLES OF FIVE**

CARBIDE CIRCUIT BOARD DRILLS

.0728-.1004"

USE : GENERAL PURPOSE
 HELIX : 20 DEGREES
 HAND : RHS / RHC
 CENTER CUTTING: YES



CARBIDE



.XXX

DRILL DIA	WIRE SIZE	METRIC SIZE	POINT ANGLE	SHANK Ø	OAL	RMT PART
.0728	1.85mm	1.85	130° DP	.125"	1.50"	RS3170728
.0730	# 49	1.85	130° DP	.125"	1.50"	RS3170730
.0748	1.90mm	1.90	130° DP	.125"	1.50"	RS3170748
.0760	# 48	1.93	130° DP	.125"	1.50"	RS3170760
.0768	1.95mm	1.95	130° DP	.125"	1.50"	RS3170768
.0781	5/64"	1.98	130° DP	.125"	1.50"	RS3170781
.0785	# 47	1.99	130° DP	.125"	1.50"	RS3170785
.0787	2.0mm	2.00	130° DP	.125"	1.50"	RS3170787
.0807	2.05mm	2.05	130° DP	.125"	1.50"	RS3170807
.0810	# 46	2.06	130° DP	.125"	1.50"	RS3170810
.0820	# 45	2.08	130° DP	.125"	1.50"	RS3170820
.0827	2.10mm	2.10	130° DP	.125"	1.50"	RS3170827
.0846	2.15mm	2.15	130° DP	.125"	1.50"	RS3170846
.0860	# 44	2.18	130° DP	.125"	1.50"	RS3170860
.0866	2.20mm	2.20	130° DP	.125"	1.50"	RS3170866
.0886	2.25mm	2.25	130° DP	.125"	1.50"	RS3170886
.0890	# 43	2.26	130° DP	.125"	1.50"	RS3170890
.0906	2.30mm	2.30	130° DP	.125"	1.50"	RS3170906
.0925	2.35mm	2.35	130° DP	.125"	1.50"	RS3170925
.0935	# 42	2.37	130° DP	.125"	1.50"	RS3170935
.0938	3/32"	2.38	130° DP	.125"	1.50"	RS3170938
.0945	2.40mm	2.40	130° DP	.125"	1.50"	RS3170945
.0960	# 41	2.44	130° DP	.125"	1.50"	RS3170960
.0965	2.45mm	2.45	130° DP	.125"	1.50"	RS3170965
.0980	# 40	2.49	130° DP	.125"	1.50"	RS3170980
.0984	2.50mm	2.50	130° DP	.125"	1.50"	RS3170984
.0995	# 39	2.53	130° DP	.125"	1.50"	RS3170995
.1004	2.50mm	2.55	130° DP	.125"	1.50"	RS3171004

*** SOLD IN MULTIPLES OF FIVE**

CARBIDE CIRCUIT BOARD DRILLS**.1015-.125"****TECHNICAL INFORMATION**

- Engineered for small diameter hole drilling
- All drills are on 1/8" shanks, 1.5" overall length
- Diameter tolerance: +0"/-0.0003"
- Coatings and reach lengths priced upon request

USE : GENERAL PURPOSE**HELIX : 20 DEGREES****HAND : RHS / RHC****CENTER CUTTING: YES****CARBIDE****.XXX**

DRILL DIA	WIRE SIZE	METRIC SIZE	POINT ANGLE	SHANK Ø	OAL	RMT PART
.1015	# 38	2.58	130° DP	.125"	1.50"	RS3171015
.1024	2.60mm	2.60	130° DP	.125"	1.50"	RS3171024
.1040	# 37	2.64	130° DP	.125"	1.50"	RS3171040
.1043	2.65mm	2.65	130° DP	.125"	1.50"	RS3171043
.1063	2.70mm	2.70	130° DP	.125"	1.50"	RS3171063
.1065	# 36	2.71	130° DP	.125"	1.50"	RS3171065
.1083	2.75mm	2.75	130° DP	.125"	1.50"	RS3171083
.1094	7/64"	2.78	130° DP	.125"	1.50"	RS3171094
.1100	# 35	2.79	130° DP	.125"	1.50"	RS3171100
.1102	2.80mm	2.80	130° DP	.125"	1.50"	RS3171102
.1110	# 34	2.82	130° DP	.125"	1.50"	RS3171110
.1122	2.85mm	2.85	130° DP	.125"	1.50"	RS3171122
.1130	# 33	2.87	130° DP	.125"	1.50"	RS3171130
.1142	2.90mm	2.90	130° DP	.125"	1.50"	RS3171142
.1160	# 32	2.95	130° DP	.125"	1.50"	RS3171160
.1161	2.95mm	2.95	130° DP	.125"	1.50"	RS3171161
.1181	3.00mm	3.00	130° DP	.125"	1.50"	RS3171181
.1200	# 31	3.05	130° DP	.125"	1.50"	RS3171200
.1201	3.05mm	3.05	130° DP	.125"	1.50"	RS3171201
.1220	3.10mm	3.10	130° DP	.125"	1.50"	RS3171220
.1240	3.15mm	3.15	130° DP	.125"	1.50"	RS3171240
.1250	1/8"	3.18	130° DP	.125"	1.50"	RS3171250

* **SOLD IN MULTIPLES OF FIVE**

Carbide Circuit Board Drills

CARBIDE CIRCUIT BOARD DRILLS



CARBIDE



.XXX



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DOUBLE END STANDARD FRACTIONAL-----96
DOUBLE END STUB FRACTIONAL-----97
DOUBLE END LONG FRACTIONAL-----98

BALL END-----99-106

SINGLE END STANDARD DECIMAL-----99-100
SINGLE END STUB DECIMAL-----101-102
SINGLE END STANDARD FRACTIONAL-----103
DOUBLE END STANDARD FRACTIONAL-----104
DOUBLE END STUB FRACTIONAL-----105
DOUBLE END LONG FRACTIONAL-----106

METRIC MICRODRILLS-----107-116

SINGLE END, SQUARE END, STANDARD**DECIMAL .005-.070"**

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +.000/- .001

COBALT



.XXX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				2 Flute
.005"	.015"	.125"	1.50"	846-.005
.010"	.030"	.125"	1.50"	846-.010
.015"	.045"	.125"	1.50"	846-.015
.0156" (1/64")	.047"	.125"	1.50"	846-1560
.0197" (.5 mm)	.059"	.125"	1.50"	846-0197
.020"	.060"	.125"	1.50"	846-.020
.025"	.075"	.125"	1.50"	846-.025
.030"	.090"	.125"	1.50"	846-.030
.035"	.105"	.1875"	1.50"	846-.035
.0394" (1 mm)	.118"	.1875"	1.50"	846-0394
.040"	.120"	.1875"	1.50"	846-.040
.045"	.135"	.1875"	1.50"	846-.045
.0492" (1.25 mm)	.148"	.1875"	1.50"	846-0492
.050"	.150"	.1875"	1.50"	846-.050
.055"	.165"	.1875"	1.50"	846-.055
.0591" (1.5 mm)	.177"	.1875"	1.50"	846-0591
.060"	.180"	.1875"	1.50"	846-.060
.0630" (1.6 mm)	.189"	.1875"	1.50"	846-0630
.065"	.195"	.1875"	1.50"	846-.065
.070"	.210"	.1875"	1.50"	846-.070

SINGLE END, SQUARE END, STANDARD**DECIMAL .0709-.1378"****COBALT**

SQUARE

.XXX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				2 Flute
.0709" (1.8 mm)	.213"	.1875"	1.50"	846-0709
.075"	.225"	.1875"	1.50"	846-.075
.0787" (2 mm)	.236"	.1875"	1.50"	846-0787
.080"	.240"	.1875"	1.50"	846-.080
.085"	.255"	.1875"	1.50"	846-.085
.0866" (2.2 mm)	.260"	.1875"	1.50"	846-0866
.090"	.270"	.1875"	1.50"	846-.090
.095"	.285"	.1875"	1.50"	846-.095
.0984" (2.5 mm)	.295"	.1875"	1.50"	846-0984
.100"	.300"	.1875"	1.50"	846-.100
.1102" (2.8 mm)	.331"	.1875"	1.50"	846-1102
.1181" (3 mm)	.354"	.1875"	1.50"	846-1181
.120"	.360"	.1875"	1.50"	846-.120
.1378" (3.5 mm)	.414"	.1875"	1.50"	846-1378

SINGLE END, SQUARE END, STUB**DECIMAL .005-.070"**

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +.000/- .001

COBALT

SQUARE

.XXX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				2 Flute
.005"	.008"	.125"	1.50"	856-.005
.010"	.015"	.125"	1.50"	856-.010
.015"	.023"	.125"	1.50"	856-.015
.0156" (1/64")	.023"	.125"	1.50"	856-1560
.0197" (.5 mm)	.030"	.125"	1.50"	856-0197
.020"	.030"	.125"	1.50"	856-.020
.025"	.038"	.125"	1.50"	856-.025
.030"	.045"	.125"	1.50"	856-.030
.035"	.053"	.1875"	1.50"	856-.035
.0394" (1 mm)	.059"	.1875"	1.50"	856-0394
.040"	.060"	.1875"	1.50"	856-.040
.045"	.068"	.1875"	1.50"	856-.045
.0492" (1.25 mm)	.074"	.1875"	1.50"	856-0492
.050"	.075"	.1875"	1.50"	856-.050
.055"	.083"	.1875"	1.50"	856-.055
.0591" (1.5 mm)	.089"	.1875"	1.50"	856-0591
.060"	.090"	.1875"	1.50"	856-.060
.0630" (1.6 mm)	.095"	.1875"	1.50"	856-0630
.065"	.098"	.1875"	1.50"	856-.065
.070"	.105"	.1875"	1.50"	856-.070

SINGLE END, SQUARE END, STUB**DECIMAL .0709-.1378"****COBALT**

SQUARE

.XXX

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART
				2 Flute
.0709" (1.8 mm)	.106"	.1875"	1.50"	856-0709
.075"	.113"	.1875"	1.50"	856-.075
.0787" (2 mm)	.118"	.1875"	1.50"	856-0787
.080"	.120"	.1875"	1.50"	856-.080
.085"	.128"	.1875"	1.50"	856-.085
.0866" (2.2 mm)	.130"	.1875"	1.50"	856-0866
.090"	.135"	.1875"	1.50"	856-.090
.095"	.143"	.1875"	1.50"	856-.095
.0984" (2.5 mm)	.148"	.1875"	1.50"	856-0984
.100"	.150"	.1875"	1.50"	856-.100
.1102" (2.8 mm)	.165"	.1875"	1.50"	856-1102
.1181" (3 mm)	.177"	.1875"	1.50"	856-1181
.120"	.180"	.1875"	1.50"	856-.120
.1378" (3.5 mm)	.207"	.1875"	1.50"	856-1378

SINGLE END, SQUARE END, STANDARD**FRACTIONAL 1/32-3/16"**

COBALT



X/X

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	3/32"	.1875"	1.50"	846-0031	853-0031
3/64"	9/64"	.1875"	1.50"	846-0046	853-0046
1/16"	3/16"	.1875"	1.50"	846-0062	853-0062
5/64"	15/64"	.1875"	1.50"	846-0078	853-0078
3/32"	9/32"	.1875"	1.50"	846-0093	853-0093
7/64"	21/64"	.1875"	1.50"	846-0109	853-0109
1/8"	3/8"	.1875"	1.50"	846-0125	853-0125
9/64"	13/32"	.1875"	1.50"	846-0140	853-0140
5/32"	7/16"	.1875"	1.50"	846-0156	853-0156
11/64"	1/2"	.1875"	1.50"	846-0171	853-0171
* 3/16"	1/2"	.1875"	1.50"	846-0187	853-0187

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE 2 FLUTE : +.000/-.002"

DIAMETER TOLERANCE 4 FLUTE : +.002/-.000"

* DIAMETER TOLERANCE 3/16" : +.000/-.0025"

DOUBLE END, SQUARE END, STANDARD**FRACTIONAL 1/32-3/16"****COBALT**

SQUARE

X/X

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	RMT PART
				2 Flute	4 Flute
1/32"	3/32"	.1875"	2.50"	540-0031	547-0031
3/64"	9/64"	.1875"	2.50"	540-0046	547-0046
1/16"	3/16"	.1875"	2.50"	540-0062	547-0062
5/64"	15/64"	.1875"	2.50"	540-0078	547-0078
3/32"	9/32"	.1875"	2.50"	540-0093	547-0093
7/64"	21/64"	.1875"	2.50"	540-0109	547-0109
1/8"	3/8"	.1875"	2.50"	540-0125	547-0125
9/64"	13/32"	.1875"	2.50"	540-0140	547-0140
5/32"	7/16"	.1875"	2.50"	540-0156	547-0156
11/64"	1/2"	.1875"	2.50"	540-0171	547-0171
* 3/16"	1/2"	.1875"	2.50"	540-0187	547-0187

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE 2 FLUTE : +.000/-.002

DIAMETER TOLERANCE 4 FLUTE : +.002/-.000

* DIAMETER TOLERANCE 3/16" : +.000/-.0025

DOUBLE END, SQUARE END, STUB**FRACTIONAL 1/32-3/16"**

COBALT



X/X

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	3/64"	.1875"	2.00"	542-0031	549-0031
3/64"	1/16"	.1875"	2.00"	542-0046	549-0046
1/16"	3/32"	.1875"	2.00"	542-0062	549-0062
5/64"	1/8"	.1875"	2.00"	542-0078	549-0078
3/32"	9/64"	.1875"	2.00"	542-0093	549-0093
7/64"	5/32"	.1875"	2.00"	542-0109	549-0109
1/8"	3/16"	.1875"	2.00"	542-0125	549-0125
9/64"	7/32"	.1875"	2.00"	542-0140	549-0140
5/32"	15/64"	.1875"	2.00"	542-0156	549-0156
11/64"	1/4"	.1875"	2.00"	542-0171	549-0171
* 3/16"	9/32"	.1875"	2.00"	542-0187	549-0187

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE 2 FLUTE : +.000/-.002

DIAMETER TOLERANCE 4 FLUTE : +.002/-.000

* DIAMETER TOLERANCE 3/16" : +.000/-.0025

DOUBLE END, SQUARE END, LONG

FRACTIONAL 1/32-3/16"



DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 Flute	4 Flute
1/16"	7/32"	.1875"	2.50"	544-0062	551-0062
3/32"	9/32"	.1875"	2.625"	544-0093	551-0093
1/8"	3/4"	.1875"	3.125"	544-0125	551-0125
5/32"	7/8"	.1875"	3.25"	544-0156	551-0156
* 3/16"	1"	.1875"	3.375"	544-0187	551-0187

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE 2 FLUTE : +.000/- .002

DIAMETER TOLERANCE 4 FLUTE : +.002/- .000

* DIAMETER TOLERANCE 3/16" : +.000/- .0025

SINGLE END, BALL END, STANDARD**DECIMAL .005-.070"**

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +.000/- .001

COBALT



.XXX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				2 Flute
.005"	.015"	.125"	1.50"	858-.005
.010"	.030"	.125"	1.50"	858-.010
.015"	.045"	.125"	1.50"	858-.015
.0156" (1/64")	.047"	.125"	1.50"	858-1560
.0197" (.5 mm)	.059"	.125"	1.50"	858-0197
.020"	.060"	.125"	1.50"	858-.020
.025"	.075"	.125"	1.50"	858-.025
.030"	.090"	.125"	1.50"	858-.030
.035"	.105"	.1875"	1.50"	858-.035
.0394" (1 mm)	.118"	.1875"	1.50"	858-0394
.040"	.120"	.1875"	1.50"	858-.040
.045"	.135"	.1875"	1.50"	858-.045
.0492" (1.25 mm)	.148"	.1875"	1.50"	858-0492
.050"	.150"	.1875"	1.50"	858-.050
.055"	.165"	.1875"	1.50"	858-.055
.0591" (1.5 mm)	.177"	.1875"	1.50"	858-0591
.060"	.180"	.1875"	1.50"	858-.060
.0630" (1.6 mm)	.189"	.1875"	1.50"	858-0630
.065"	.195"	.1875"	1.50"	858-.065
.070"	.210"	.1875"	1.50"	858-.070

SINGLE END, BALL END, STANDARD**DECIMAL .0709-.1378"****COBALT****.XXX**

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				2 Flute
.0709" (1.8 mm)	.213"	.1875"	1.50"	858-0709
.075"	.225"	.1875"	1.50"	858-.075
.0787" (2 mm)	.236"	.1875"	1.50"	858-0787
.080"	.240"	.1875"	1.50"	858-.080
.085"	.255"	.1875"	1.50"	858-.085
.0866" (2.2 mm)	.260"	.1875"	1.50"	858-0866
.090"	.270"	.1875"	1.50"	858-.090
.095"	.285"	.1875"	1.50"	858-.095
.0984" (2.5 mm)	.295"	.1875"	1.50"	858-0984
.100"	.300"	.1875"	1.50"	858-.100
.1102" (2.8 mm)	.331"	.1875"	1.50"	858-1102
.1181" (3 mm)	.354"	.1875"	1.50"	858-1181
.120"	.360"	.1875"	1.50"	858-.120
.1378" (3.5 mm)	.414"	.1875"	1.50"	858-1378

SINGLE END, BALL END, STUB**DECIMAL .005-.070"**

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +.000/-.001

COBALT



.XXX

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART
				2 Flute
.005"	.008"	.125"	1.50"	857-.005
.010"	.015"	.125"	1.50"	857-.010
.015"	.023"	.125"	1.50"	857-.015
.0156" (1/64")	.023"	.125"	1.50"	857-1560
.0197" (.5 mm)	.030"	.125"	1.50"	857-0197
.020"	.030"	.125"	1.50"	857-.020
.025"	.038"	.125"	1.50"	857-.025
.030"	.045"	.125"	1.50"	857-.030
.035"	.053"	.1875"	1.50"	857-.035
.0394" (1 mm)	.059"	.1875"	1.50"	857-0394
.040"	.060"	.1875"	1.50"	857-.040
.045"	.068"	.1875"	1.50"	857-.045
.0492" (1.25 mm)	.074"	.1875"	1.50"	857-0492
.050"	.075"	.1875"	1.50"	857-.050
.055"	.083"	.1875"	1.50"	857-.055
.0591" (1.5 mm)	.089"	.1875"	1.50"	857-0591
.060"	.090"	.1875"	1.50"	857-.060
.0630" (1.6 mm)	.095"	.1875"	1.50"	857-0630
.065"	.098"	.1875"	1.50"	857-.065
.070"	.105"	.1875"	1.50"	857-.070

SINGLE, END BALL, END STUB**DECIMAL .0709-.1378"****COBALT****.XXX**

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART
				2 Flute
.0709" (1.8 mm)	.106"	.1875"	1.50"	857-0709
.075"	.113"	.1875"	1.50"	857-.075
.0787" (2 mm)	.118"	.1875"	1.50"	857-0787
.080"	.120"	.1875"	1.50"	857-.080
.085"	.128"	.1875"	1.50"	857-.085
.0866" (2.2 mm)	.130"	.1875"	1.50"	857-0866
.090"	.135"	.1875"	1.50"	857-.090
.095"	.143"	.1875"	1.50"	857-.095
.0984" (2.5 mm)	.148"	.1875"	1.50"	857-0984
.100"	.150"	.1875"	1.50"	857-.100
.1102" (2.8 mm)	.165"	.1875"	1.50"	857-1102
.1181" (3 mm)	.177"	.1875"	1.50"	857-1181
.120"	.180"	.1875"	1.50"	857-.120
.1378" (3.5 mm)	.207"	.1875"	1.50"	857-1378

SINGLE END, BALL END, STANDARD**FRACTIONAL 1/32-3/16"**

COBALT



X/X

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART
				2 Flute
1/32"	3/32"	.1875"	1.50"	858-0031
3/64"	9/64"	.1875"	1.50"	858-0046
1/16"	3/16"	.1875"	1.50"	858-0062
5/64"	15/64"	.1875"	1.50"	858-0078
3/32"	9/32"	.1875"	1.50"	858-0093
7/64"	21/64"	.1875"	1.50"	858-0109
1/8"	3/8"	.1875"	1.50"	858-0125
9/64"	13/32"	.1875"	1.50"	858-0140
5/32"	7/16"	.1875"	1.50"	858-0156
11/64"	1/2"	.1875"	1.50"	858-0171
* 3/16"	1/2"	.1875"	1.50"	858-0187

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +.000/-.002

* DIAMETER TOLERANCE 3/16" : +.000/-.0025

DOUBLE END, BALL END, STANDARD**FRACTIONAL 1/32-3/16"****COBALT****.XX**

DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	3/32"	.1875"	2.50"	541-0031	548-0031
3/64"	9/64"	.1875"	2.50"	541-0046	548-0046
1/16"	3/16"	.1875"	2.50"	541-0062	548-0062
5/64"	15/64"	.1875"	2.50"	541-0078	548-0078
3/32"	9/32"	.1875"	2.50"	541-0093	548-0093
7/64"	21/64"	.1875"	2.50"	541-0109	548-0109
1/8"	3/8"	.1875"	2.50"	541-0125	548-0125
9/64"	13/32"	.1875"	2.50"	541-0140	548-0140
5/32"	7/16"	.1875"	2.50"	541-0156	548-0156
11/64"	1/2"	.1875"	2.50"	541-0171	548-0171
* 3/16"	1/2"	.1875"	2.50"	541-0187	548-0187

USE : GENERAL PURPOSE**HELIX : 35 - 40 DEGREES****HAND : RHS / RHC****RAKE ANGLE : POSITIVE****CENTER CUTTING : YES****DIAMETER TOLERANCE 2 FLUTE : +.000/- .002****DIAMETER TOLERANCE 4 FLUTE : +.002/- .000***** DIAMETER TOLERANCE 3/16" : +.000/- .0025**

DOUBLE END, BALL END, STUB**FRACTIONAL 1/32-3/16"**

COBALT



X/X

DIA	FLUTE LENGTH	SHANK ϕ	OAL	RMT PART	
				2 Flute	4 Flute
1/32"	3/64"	.1875"	2.00"	543-0031	550-0031
3/64"	1/16"	.1875"	2.00"	543-0046	550-0046
1/16"	3/32"	.1875"	2.00"	543-0062	550-0062
5/64"	1/8"	.1875"	2.00"	543-0078	550-0078
3/32"	9/64"	.1875"	2.00"	543-0093	550-0093
7/64"	5/32"	.1875"	2.00"	543-0109	550-0109
1/8"	3/16"	.1875"	2.00"	543-0125	550-0125
9/64"	7/32"	.1875"	2.00"	543-0140	550-0140
5/32"	15/64"	.1875"	2.00"	543-0156	550-0156
11/64"	1/4"	.1875"	2.00"	543-0171	550-0171
* 3/16"	9/32"	.1875"	2.00"	543-0187	550-0187

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE 2 FLUTE : +.000/-.002

DIAMETER TOLERANCE 4 FLUTE : +.002/-.000

* DIAMETER TOLERANCE 3/16" : +.000/-.0025

DOUBLE END, BALL END, LONG

FRACTIONAL 1/32-3/16"



DIA	FLUTE LENGTH	SHANK Ø	OAL	RMT PART	
				2 Flute	4 Flute
1/16"	7/32"	.1875"	2.50"	545-0062	552-0062
3/32"	9/32"	.1875"	2.625"	545-0093	552-0093
1/8"	3/4"	.1875"	3.125"	545-0125	552-0125
5/32"	7/8"	.1875"	3.25"	545-0156	552-0156
* 3/16"	1"	.1875"	3.375"	545-0187	552-0187

USE : GENERAL PURPOSE

HELIX : 35 - 40 DEGREES

HAND : RHS / RHC

RAKE ANGLE : POSITIVE

CENTER CUTTING : YES

DIAMETER TOLERANCE : +.002/- .000

*** DIAMETER TOLERANCE 3/16" : +.000/- .0025**



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DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
.10 mm	.7 mm		.0039	1 mm	25 mm	MD010
.11 mm	.7 mm		.0043	1 mm	25 mm	MD011
.12 mm	.7 mm		.0047	1 mm	25 mm	MD012
.13 mm	1 mm		.0051	1 mm	25 mm	MD013
.14 mm	1 mm		.0055	1 mm	25 mm	MD014
.15 mm	1 mm	# 97	.0059	1 mm	25 mm	MD015
.16 mm	1.4 mm	# 96	.0063	1 mm	25 mm	MD016
.17 mm	1.4 mm	# 95	.0067	1 mm	25 mm	MD017
.18 mm	1.4 mm	# 94	.0071	1 mm	25 mm	MD018
.19 mm	1.4 mm	# 93	.0075	1 mm	25 mm	MD019
.20 mm	1.8 mm	# 92	.0079	1 mm	25 mm	MD020
.21 mm	1.8 mm	# 91	.0083	1 mm	25 mm	MD021
.22 mm	1.8 mm	# 90	.0087	1 mm	25 mm	MD022
.23 mm	1.8 mm	# 89	.0091	1 mm	25 mm	MD023
.24 mm	1.8 mm	# 88	.0094	1 mm	25 mm	MD024
.25 mm	2.2 mm		.0098	1 mm	25 mm	MD025
.26 mm	2.2 mm		.0102	1 mm	25 mm	MD026
.27 mm	2.2 mm	# 86	.0106	1 mm	25 mm	MD027
.28 mm	2.2 mm	# 85	.0110	1 mm	25 mm	MD028
.29 mm	2.2 mm	# 84	.0114	1 mm	25 mm	MD029
.30 mm	2.2 mm		.0118	1 mm	25 mm	MD030
.31 mm	2.8 mm		.0122	1 mm	25 mm	MD031
.32 mm	2.8 mm	# 82	.0126	1 mm	25 mm	MD032
.33 mm	2.8 mm	# 81	.0130	1 mm	25 mm	MD033
.34 mm	2.8 mm	# 80	.0134	1 mm	25 mm	MD034
.35 mm	2.8 mm		.0138	1 mm	25 mm	MD035
.36 mm	2.8 mm		.0142	1 mm	25 mm	MD036
.37 mm	2.8 mm	# 79	.0146	1 mm	25 mm	MD037
.38 mm	2.8 mm		.0150	1 mm	25 mm	MD038
.39 mm	2.8 mm		.0154	1 mm	25 mm	MD039
.40 mm	3.2 mm		.0157	1 mm	25 mm	MD040

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METRIC MICRO DRILLS

.41 - .70 mm



COBALT

MD
mm

DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
.41 mm	3.2 mm	# 78	.0161	1 mm	25 mm	MD041
.42 mm	3.2 mm		.0165	1 mm	25 mm	MD042
.43 mm	3.2 mm		.0169	1 mm	25 mm	MD043
.44 mm	3.2 mm		.0173	1 mm	25 mm	MD044
.45 mm	3.2 mm		.0177	1 mm	25 mm	MD045
.46 mm	3.6 mm	# 77	.0181	1 mm	25 mm	MD046
.47 mm	3.6 mm		.0185	1 mm	25 mm	MD047
.48 mm	3.6 mm		.0189	1 mm	25 mm	MD048
.49 mm	3.6 mm		.0193	1 mm	25 mm	MD049
.50 mm	3.6 mm		.0197	1 mm	25 mm	MD050
.51 mm	4 mm	# 76	.0201	1.5 mm	25 mm	MD051
.52 mm	4 mm		.0205	1.5 mm	25 mm	MD052
.53 mm	4 mm	# 75	.0209	1.5 mm	25 mm	MD053
.54 mm	4 mm		.0213	1.5 mm	25 mm	MD054
.55 mm	4 mm		.0217	1.5 mm	25 mm	MD055
.56 mm	4.5 mm		.0220	1.5 mm	25 mm	MD056
.57 mm	4.5 mm	# 74	.0224	1.5 mm	25 mm	MD057
.58 mm	4.5 mm		.0228	1.5 mm	25 mm	MD058
.59 mm	4.5 mm		.0232	1.5 mm	25 mm	MD059
.60 mm	4.5 mm		.0236	1.5 mm	25 mm	MD060
.61 mm	4.7 mm	# 73	.0240	1.5 mm	25 mm	MD061
.62 mm	4.7 mm		.0244	1.5 mm	25 mm	MD062
.63 mm	4.7 mm	# 72	.0248	1.5 mm	25 mm	MD063
.64 mm	4.7 mm		.0252	1.5 mm	25 mm	MD064
.65 mm	4.7 mm		.0256	1.5 mm	25 mm	MD065
.66 mm	4.7 mm	# 71	.0260	1.5 mm	25 mm	MD066
.67 mm	4.7 mm		.0264	1.5 mm	25 mm	MD067
.68 mm	5.2 mm		.0268	1.5 mm	25 mm	MD068
.69 mm	5.2 mm		.0272	1.5 mm	25 mm	MD069
.70 mm	5.2 mm		.0276	1.5 mm	25 mm	MD070

*** SOLD IN MULTIPLES OF FIVE**

METRIC MICRO DRILLS

.71 - 1.00 mm

TECHNICAL INFORMATION

- Superior quality Twist Drills made of M42 Cobalt
- Guaranteed to meet geometry specifications
- Four facet point - Self-centering, more accurate holes, longer drill life
- Size range = 0.10 mm - 3.00 mm (.004"-.118")
- Packaged and sold in quantities of 5 pieces per size
- Left hand available by special order
- 120 DEG. Drill Point



DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
.71 mm	5.2 mm	# 70	.0280	1.5 mm	25 mm	MD071
.72 mm	5.2 mm		.0283	1.5 mm	25 mm	MD072
.73 mm	5.2 mm		.0287	1.5 mm	25 mm	MD073
.74 mm	5.2 mm	# 69	.0291	1.5 mm	25 mm	MD074
.75 mm	5.2 mm		.0295	1.5 mm	25 mm	MD075
.76 mm	5.5 mm		.0299	1.5 mm	25 mm	MD076
.77 mm	5.5 mm		.0303	1.5 mm	25 mm	MD077
.78 mm	5.5 mm		.0307	1.5 mm	25 mm	MD078
.79 mm	5.5 mm	# 68	.0311	1.5 mm	25 mm	MD079
.80 mm	5.5 mm		.0315	1.5 mm	25 mm	MD080
.81 mm	5.5 mm	# 67	.0319	1.5 mm	25 mm	MD081
.82 mm	5.5 mm		.0323	1.5 mm	25 mm	MD082
.83 mm	5.5 mm		.0327	1.5 mm	25 mm	MD083
.84 mm	5.5 mm	# 66	.0331	1.5 mm	25 mm	MD084
.85 mm	5.5 mm		.0335	1.5 mm	25 mm	MD085
.86 mm	6 mm		.0339	1.5 mm	25 mm	MD086
.87 mm	6 mm		.0343	1.5 mm	25 mm	MD087
.88 mm	6 mm		.0346	1.5 mm	25 mm	MD088
.89 mm	6 mm	# 65	.0350	1.5 mm	25 mm	MD089
.90 mm	6 mm		.0354	1.5 mm	25 mm	MD090
.91 mm	6 mm	# 64	.0358	1.5 mm	25 mm	MD091
.92 mm	6 mm		.0362	1.5 mm	25 mm	MD092
.93 mm	6 mm		.0366	1.5 mm	25 mm	MD093
.94 mm	6 mm	# 63	.0370	1.5 mm	25 mm	MD094
.95 mm	6 mm		.0374	1.5 mm	25 mm	MD095
.96 mm	6.5 mm	# 62	.0378	1.5 mm	25 mm	MD096
.97 mm	6.5 mm		.0382	1.5 mm	25 mm	MD097
.98 mm	6.5 mm		.0386	1.5 mm	25 mm	MD098
.99 mm	6.5 mm	# 61	.0390	1.5 mm	25 mm	MD099
1.00 mm	6.5 mm		.0394	1.5 mm	25 mm	MD100

*** SOLD IN MULTIPLES OF FIVE**

METRIC MICRO DRILLS**1.01 - 1.30mm****COBALT**

MD

mm

DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
1.01 mm	6.5 mm	# 60	.0398	1.5 mm	25 mm	MD101
1.02 mm	6.5 mm		.0402	1.5 mm	25 mm	MD102
1.03 mm	6.5 mm		.0406	1.5 mm	25 mm	MD103
1.04 mm	6.5 mm	# 59	.0409	1.5 mm	25 mm	MD104
1.05 mm	6.5 mm		.0413	1.5 mm	25 mm	MD105
1.06 mm	7 mm		.0417	1.5 mm	25 mm	MD106
1.07 mm	7 mm	# 58	.0421	1.5 mm	25 mm	MD107
1.08 mm	7 mm		.0425	1.5 mm	25 mm	MD108
1.09 mm	7 mm	# 57	.0429	1.5 mm	25 mm	MD109
1.10 mm	7 mm		.0433	1.5 mm	25 mm	MD110
1.11 mm	7 mm		.0437	1.5 mm	25 mm	MD111
1.12 mm	7 mm		.0441	1.5 mm	25 mm	MD112
1.13 mm	7 mm		.0445	1.5 mm	25 mm	MD113
1.14 mm	7 mm		.0449	1.5 mm	25 mm	MD114
1.15 mm	7 mm		.0453	1.5 mm	25 mm	MD115
1.16 mm	7.5 mm		.0457	1.5 mm	25 mm	MD116
1.17 mm	7.5 mm		.0461	1.5 mm	25 mm	MD117
1.18 mm	7.5 mm	# 56	.0465	1.5 mm	25 mm	MD118
1.19 mm	7.5 mm	3/64	.0469	1.5 mm	25 mm	MD119
1.20 mm	7.5 mm		.0472	1.5 mm	25 mm	MD120
1.21 mm	7.5 mm		.0476	1.5 mm	25 mm	MD121
1.22 mm	7.5 mm		.0480	1.5 mm	25 mm	MD122
1.23 mm	7.5 mm		.0484	1.5 mm	25 mm	MD123
1.24 mm	7.5 mm		.0488	1.5 mm	25 mm	MD124
1.25 mm	7.5 mm		.0492	1.5 mm	25 mm	MD125
1.26 mm	7.5 mm		.0496	1.5 mm	25 mm	MD126
1.27 mm	7.5 mm		.0500	1.5 mm	25 mm	MD127
1.28 mm	7.5 mm		.0504	1.5 mm	25 mm	MD128
1.29 mm	7.5 mm		.0508	1.5 mm	25 mm	MD129
1.30 mm	7.5 mm		.0512	1.5 mm	25 mm	MD130

*** SOLD IN MULTIPLES OF FIVE**

METRIC MICRO DRILLS

1.31 - 1.60mm



TECHNICAL INFORMATION

- Superior quality Twist Drills made of M42 Cobalt
- Guaranteed to meet geometry specifications
- Four facet point - Self-centering, more accurate holes, longer drill life
- Size range = 0.10 mm - 3.00 mm (.004"-.118")
- Packaged and sold in quantities of 5 pieces per size
- Left hand available by special order
- 120 DEG. Drill Point

DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
1.31 mm	8.5 mm		.0516	1.5 mm	25 mm	MD131
1.32 mm	8.5 mm	# 55	.0520	1.5 mm	25 mm	MD132
1.33 mm	8.5 mm		.0524	1.5 mm	25 mm	MD133
1.34 mm	8.5 mm		.0528	1.5 mm	25 mm	MD134
1.35 mm	8.5 mm		.0531	1.5 mm	25 mm	MD135
1.36 mm	8.5 mm		.0535	1.5 mm	25 mm	MD136
1.37 mm	8.5 mm		.0539	1.5 mm	25 mm	MD137
1.38 mm	8.5 mm		.0543	1.5 mm	25 mm	MD138
1.39 mm	8.5 mm		.0547	1.5 mm	25 mm	MD139
1.40 mm	8.5 mm	# 54	.0551	1.5 mm	25 mm	MD140
1.41 mm	8.5 mm		.0555	1.5 mm	25 mm	MD141
1.42 mm	8.5 mm		.0559	1.5 mm	25 mm	MD142
1.43 mm	8.5 mm		.0563	1.5 mm	25 mm	MD143
1.44 mm	8.5 mm		.0567	1.5 mm	25 mm	MD144
1.45 mm	8.5 mm		.0571	1.5 mm	25 mm	MD145
1.46 mm	8.5 mm		.0575	1.5 mm	25 mm	MD146
1.47 mm	8.5 mm		.0579	1.5 mm	25 mm	MD147
1.48 mm	8.5 mm		.0583	1.5 mm	25 mm	MD148
1.49 mm	8.5 mm		.0587	1.5 mm	25 mm	MD149
1.50 mm	10 mm		.0591	2 mm	35 mm	MD150
1.51 mm	10 mm	# 53	.0594	2 mm	35 mm	MD151
1.52 mm	10 mm		.0598	2 mm	35 mm	MD152
1.53 mm	10 mm		.0602	2 mm	35 mm	MD153
1.54 mm	10 mm		.0606	2 mm	35 mm	MD154
1.55 mm	10 mm		.0610	2 mm	35 mm	MD155
1.56 mm	10 mm		.0614	2 mm	35 mm	MD156
1.57 mm	10 mm		.0618	2 mm	35 mm	MD157
1.58 mm	10 mm		.0622	2 mm	35 mm	MD158
1.59 mm	10 mm	1/16	.0626	2 mm	35 mm	MD159
1.60 mm	10 mm		.0630	2 mm	35 mm	MD160

*SOLD IN MULTIPLES OF FIVE

METRIC MICRO DRILLS**1.61 - 1.90mm****COBALT****mm**

DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
1.61 mm	10 mm	# 52	.0634	2 mm	35 mm	MD161
1.62 mm	10 mm		.0638	2 mm	35 mm	MD162
1.63 mm	10 mm		.0642	2 mm	35 mm	MD163
1.64 mm	10 mm		.0646	2 mm	35 mm	MD164
1.65 mm	10 mm		.0650	2 mm	35 mm	MD165
1.66 mm	10 mm		.0654	2 mm	35 mm	MD166
1.67 mm	10 mm		.0657	2 mm	35 mm	MD167
1.68 mm	10 mm		.0661	2 mm	35 mm	MD168
1.69 mm	10 mm		.0665	2 mm	35 mm	MD169
1.70 mm	10 mm	# 51	.0669	2 mm	35 mm	MD170
1.71 mm	10 mm		.0673	2 mm	35 mm	MD171
1.72 mm	10 mm		.0677	2 mm	35 mm	MD172
1.73 mm	10 mm		.0681	2 mm	35 mm	MD173
1.74 mm	10 mm		.0685	2 mm	35 mm	MD174
1.75 mm	10 mm		.0689	2 mm	35 mm	MD175
1.76 mm	10 mm		.0693	2 mm	35 mm	MD176
1.77 mm	11 mm		.0697	2 mm	35 mm	MD177
1.78 mm	11 mm	# 50	.0701	2 mm	35 mm	MD178
1.79 mm	11 mm		.0705	2 mm	35 mm	MD179
1.80 mm	11 mm		.0709	2 mm	35 mm	MD180
1.81 mm	11 mm		.0713	2 mm	35 mm	MD181
1.82 mm	11 mm		.0717	2 mm	35 mm	MD182
1.83 mm	11 mm		.0720	2 mm	35 mm	MD183
1.84 mm	11 mm		.0724	2 mm	35 mm	MD184
1.85 mm	11 mm	# 49	.0728	2 mm	35 mm	MD185
1.86 mm	11 mm		.0732	2 mm	35 mm	MD186
1.87 mm	11 mm		.0736	2 mm	35 mm	MD187
1.88 mm	11 mm		.0740	2 mm	35 mm	MD188
1.89 mm	11 mm		.0744	2 mm	35 mm	MD189
1.90 mm	11 mm		.0748	2 mm	35 mm	MD190

*** SOLD IN MULTIPLES OF FIVE**

METRIC MICRO DRILLS

1.91 - 2.20 mm



TECHNICAL INFORMATION

- Superior quality Twist Drills made of M42 Cobalt
- Guaranteed to meet geometry specifications
- Four facet point - Self-centering, more accurate holes, longer drill life
- Size range = 0.10 mm - 3.00 mm (.004"-.118")
- Packaged and sold in quantities of 5 pieces per size
- Left hand available by special order
- 120 DEG. Drill Point

DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
1.91 mm	11 mm		.0752	2 mm	35 mm	MD191
1.92 mm	11 mm		.0756	2 mm	35 mm	MD192
1.93 mm	11 mm	# 48	.0760	2 mm	35 mm	MD193
1.94 mm	11 mm		.0764	2 mm	35 mm	MD194
1.95 mm	11 mm		.0768	2 mm	35 mm	MD195
1.96 mm	11 mm		.0772	2 mm	35 mm	MD196
1.97 mm	11 mm		.0776	2 mm	35 mm	MD197
1.98 mm	11 mm	5/64	.0780	2 mm	35 mm	MD198
1.99 mm	11 mm	# 47	.0783	2 mm	35 mm	MD199
2.00 mm	11 mm		.0787	2 mm	35 mm	MD200
2.01 mm	12 mm		.0791	2.5 mm	35 mm	MD201
2.02 mm	12 mm		.0795	2.5 mm	35 mm	MD202
2.03 mm	12 mm		.0799	2.5 mm	35 mm	MD203
2.04 mm	12 mm		.0803	2.5 mm	35 mm	MD204
2.05 mm	12 mm		.0807	2.5 mm	35 mm	MD205
2.06 mm	12 mm	# 46	.0811	2.5 mm	35 mm	MD206
2.07 mm	12 mm		.0815	2.5 mm	35 mm	MD207
2.08 mm	12 mm	# 45	.0819	2.5 mm	35 mm	MD208
2.09 mm	12 mm		.0823	2.5 mm	35 mm	MD209
2.10 mm	12 mm		.0827	2.5 mm	35 mm	MD210
2.11 mm	12 mm		.0831	2.5 mm	35 mm	MD211
2.12 mm	12 mm		.0835	2.5 mm	35 mm	MD212
2.13 mm	12 mm		.0839	2.5 mm	35 mm	MD213
2.14 mm	12 mm		.0843	2.5 mm	35 mm	MD214
2.15 mm	12 mm		.0846	2.5 mm	35 mm	MD215
2.16 mm	12 mm		.0850	2.5 mm	35 mm	MD216
2.17 mm	12 mm		.0854	2.5 mm	35 mm	MD217
2.18 mm	12 mm	# 44	.0858	2.5 mm	35 mm	MD218
2.19 mm	12 mm		.0862	2.5 mm	35 mm	MD219
2.20 mm	12 mm		.0866	2.5 mm	35 mm	MD220

*SOLD IN MULTIPLES OF FIVE

METRIC MICRO DRILLS**2.21 - 2.50mm****COBALT**

MD

mm

DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
2.21 mm	14 mm		.0870	2.5 mm	35 mm	MD221
2.22 mm	14 mm		.0874	2.5 mm	35 mm	MD222
2.23 mm	14 mm		.0878	2.5 mm	35 mm	MD223
2.24 mm	14 mm		.0882	2.5 mm	35 mm	MD224
2.25 mm	14 mm		.0886	2.5 mm	35 mm	MD225
2.26 mm	14 mm	# 43	.0890	2.5 mm	35 mm	MD226
2.27 mm	14 mm		.0894	2.5 mm	35 mm	MD227
2.28 mm	14 mm		.0898	2.5 mm	35 mm	MD228
2.29 mm	14 mm		.0902	2.5 mm	35 mm	MD229
2.30 mm	14 mm		.0906	2.5 mm	35 mm	MD230
2.31 mm	14 mm		.0909	2.5 mm	35 mm	MD231
2.32 mm	14 mm		.0913	2.5 mm	35 mm	MD232
2.33 mm	14 mm		.0917	2.5 mm	35 mm	MD233
2.34 mm	14 mm		.0921	2.5 mm	35 mm	MD234
2.35 mm	14 mm		.0925	2.5 mm	35 mm	MD235
2.36 mm	14 mm		.0929	2.5 mm	35 mm	MD236
2.37 mm	14 mm		.0933	2.5 mm	35 mm	MD237
2.38 mm	14 mm	3/32	.0937	2.5 mm	35 mm	MD238
2.39 mm	14 mm		.0941	2.5 mm	35 mm	MD239
2.40 mm	14 mm		.0945	2.5 mm	35 mm	MD240
2.41 mm	14 mm		.0949	2.5 mm	35 mm	MD241
2.42 mm	14 mm		.0953	2.5 mm	35 mm	MD242
2.43 mm	14 mm		.0957	2.5 mm	35 mm	MD243
2.44 mm	14 mm	# 41	.0961	2.5 mm	35 mm	MD244
2.45 mm	14 mm		.0965	2.5 mm	35 mm	MD245
2.46 mm	14 mm		.0969	2.5 mm	35 mm	MD246
2.47 mm	14 mm		.0972	2.5 mm	35 mm	MD247
2.48 mm	14 mm		.0976	2.5 mm	35 mm	MD248
2.49 mm	14 mm	# 40	.0980	2.5 mm	35 mm	MD249
2.50 mm	14 mm		.0984	2.5 mm	35 mm	MD250

***SOLD IN MULTIPLES OF FIVE**



METRIC MICRO DRILLS

2.51 - 2.80 mm

TECHNICAL INFORMATION

- Superior quality Twist Drills made of M42 Cobalt
- Guaranteed to meet geometry specifications
- Four facet point - Self-centering, more accurate holes, longer drill life
- Size range = 0.10 mm - 3.00 mm (.004"-.118")
- Packaged and sold in quantities of 5 pieces per size
- Left hand available by special order
- 120 DEG. Drill Point

DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
2.51 mm	16 mm		.0988	3 mm	40 mm	MD251
2.52 mm	16 mm		.0992	3 mm	40 mm	MD252
2.53 mm	16 mm	# 39	.0996	3 mm	40 mm	MD253
2.54 mm	16 mm		.1000	3 mm	40 mm	MD254
2.55 mm	16 mm		.1004	3 mm	40 mm	MD255
2.56 mm	16 mm		.1008	3 mm	40 mm	MD256
2.57 mm	16 mm		.1012	3 mm	40 mm	MD257
2.58 mm	16 mm	# 38	.1016	3 mm	40 mm	MD258
2.59 mm	16 mm		.1020	3 mm	40 mm	MD259
2.60 mm	16 mm		.1024	3 mm	40 mm	MD260
2.61 mm	16 mm		.1028	3 mm	40 mm	MD261
2.62 mm	16 mm		.1031	3 mm	40 mm	MD262
2.63 mm	16 mm		.1035	3 mm	40 mm	MD263
2.64 mm	16 mm	# 37	.1039	3 mm	40 mm	MD264
2.65 mm	16 mm		.1043	3 mm	40 mm	MD265
2.66 mm	16 mm		.1047	3 mm	40 mm	MD266
2.67 mm	16 mm		.1051	3 mm	40 mm	MD267
2.68 mm	16 mm		.1055	3 mm	40 mm	MD268
2.69 mm	16 mm		.1059	3 mm	40 mm	MD269
2.70 mm	16 mm	# 36	.1063	3 mm	40 mm	MD270
2.71 mm	16 mm		.1067	3 mm	40 mm	MD271
2.72 mm	16 mm		.1071	3 mm	40 mm	MD272
2.73 mm	16 mm		.1075	3 mm	40 mm	MD273
2.74 mm	16 mm		.1079	3 mm	40 mm	MD274
2.75 mm	16 mm		.1083	3 mm	40 mm	MD275
2.76 mm	16 mm		.1087	3 mm	40 mm	MD276
2.77 mm	16 mm		.1091	3 mm	40 mm	MD277
2.78 mm	18 mm	7/64	.1094	3 mm	40 mm	MD278
2.79 mm	18 mm	# 35	.1098	3 mm	40 mm	MD279
2.80 mm	18 mm		.1102	3 mm	40 mm	MD280

*** SOLD IN MULTIPLES OF FIVE**

METRIC MICRO DRILLS**2.81 - 3.00mm****COBALT**

MD

mm

DIA	FLUTE LENGTH	WIRE SIZE	DIA (INCH)	SHANK DIA	OAL	RMT PART
2.81 mm	18 mm		.1106	3 mm	40 mm	MD281
2.82 mm	18 mm	# 34	.1110	3 mm	40 mm	MD282
2.83 mm	18 mm		.1114	3 mm	40 mm	MD283
2.84 mm	18 mm		.1118	3 mm	40 mm	MD284
2.85 mm	18 mm		.1122	3 mm	40 mm	MD285
2.86 mm	18 mm		.1126	3 mm	40 mm	MD286
2.87 mm	18 mm	# 33	.1130	3 mm	40 mm	MD287
2.88 mm	18 mm		.1134	3 mm	40 mm	MD288
2.89 mm	18 mm		.1138	3 mm	40 mm	MD289
2.90 mm	18 mm		.1142	3 mm	40 mm	MD290
2.91 mm	18 mm		.1146	3 mm	40 mm	MD291
2.92 mm	18 mm		.1150	3 mm	40 mm	MD292
2.93 mm	18 mm		.1154	3 mm	40 mm	MD293
2.94 mm	18 mm		.1157	3 mm	40 mm	MD294
2.95 mm	18 mm	# 32	.1161	3 mm	40 mm	MD295
2.96 mm	18 mm		.1165	3 mm	40 mm	MD296
2.97 mm	18 mm		.1169	3 mm	40 mm	MD297
2.98 mm	18 mm		.1173	3 mm	40 mm	MD298
2.99 mm	18 mm		.1177	3 mm	40 mm	MD299
3.00 mm	18 mm		.1181	3 mm	40 mm	MD300

***SOLD IN MULTIPLES OF FIVE**

COBALT DRILL AND COUNTERSINK**60 DEGREE**

USE : GENERAL PURPOSE

HELIX : 24°

HAND : RHS / RHC

CHISEL ANGLE: 130°

CENTER CUTTING: YES

DIAMETER TOLERANCE: +/-0.0015

SIZE	DRILL DIA	DRILL LENGTH	BODY DIA	OAL	RMT Part
#00000 x 60°	Ø .010"	.010"	Ø 1/8"	1 1/4"	501-0100
#0000 x 60°	Ø .015"	.015"	Ø 1/8"	1 1/4"	501-0150
#000 x 60°	Ø .020"	.020"	Ø 1/8"	1 1/4"	501-0200
#00 x 60°	Ø .025"	.025"	Ø 1/8"	1 1/4"	501-0250
#0 x 60°	Ø .031"	.031"	Ø 1/8"	1 1/4"	501-0310
#1-0 x 60°	Ø .040"	.040"	Ø 1/8"	1 1/4"	501-0400
#1 x 60°	Ø 3/64" (.047")	3/64"	Ø 1/8"	1 1/4"	501-0001
#2 x 60°	Ø 5/64" (.078")	5/64"	Ø 3/16"	1 7/8"	501-0002
#3 x 60°	Ø 7/64" (.109")	7/64"	Ø 1/4"	2"	501-0003
#4 x 60°	Ø 1/8" (.125")	1/8"	Ø 5/16"	2 1/8"	501-0004
#4½ x 60°	Ø 9/64" (.141")	9/64"	Ø 3/8"	2 1/2"	501-0045
#5 x 60°	Ø 3/16" (.1875")	3/16"	Ø 7/16"	2 3/4"	501-0005
#6 x 60°	Ø 7/32" (.219")	7/32"	Ø 1/2"	3"	501-0006
#7 x 60°	Ø 1/4" (.250")	1/4"	Ø 5/8"	3 1/4"	501-0007
#8 x 60°	Ø 5/16" (.3125")	5/16"	Ø 3/4"	3 1/2"	501-0008

HSS DRILL AND COUNTERSINK**60 DEGREE**

SIZE	DRILL DIA	PILOT DRILL LENGTH	BODY DIA	OAL	RMT Part
#00000 x 60°	∅ .010"	.010"	∅ 1/8"	1 1/4"	801-0100
#0000 x 60°	∅ .015"	.015"	∅ 1/8"	1 1/4"	801-0150
#000 x 60°	∅ .020"	.020"	∅ 1/8"	1 1/4"	801-0200
#00 x 60°	∅ .025"	.025"	∅ 1/8"	1 1/4"	801-0250
#0 x 60°	∅ .031"	.031"	∅ 1/8"	1 1/4"	801-0310
#1-0 x 60°	∅ .040"	.040"	∅ 1/8"	1 1/4"	801-0400
#1 x 60°	∅ 3/64" (.047")	3/64"	∅ 1/8"	1 1/4"	801-0001
#2 x 60°	∅ 5/64" (.078")	5/64"	∅ 3/16"	1 7/8"	801-0002
#3 x 60°	∅ 7/64" (.109")	7/64"	∅ 1/4"	2"	801-0003
#4 x 60°	∅ 1/8" (.125")	1/8"	∅ 5/16"	2 1/8"	801-0004
#4½ x 60°	∅ 9/64" (.141")	9/64"	∅ 3/8"	2 1/2"	801-0045
#5 x 60°	∅ 3/16" (.1875")	3/16"	∅ 7/16"	2 3/4"	801-0005
#6 x 60°	∅ 7/32" (.219")	7/32"	∅ 1/2"	3"	801-0006
#7 x 60°	∅ 1/4" (.250")	1/4"	∅ 5/8"	3 1/4"	801-0007
#8 x 60°	∅ 5/16" (.3125")	5/16"	∅ 3/4"	3 1/2"	801-0008

HSS DRILL & 60° COUNTERSINK - ∅ 3/32" (.0938") SHANK

SIZE	DRILL DIA	PILOT DRILL LENGTH	BODY DIA	OAL	RMT Part
#000 x 60°	∅ .020"	.020"	∅ 3/32"	1 1/4"	801-3200
#00 x 60°	∅ .025"	.025"	∅ 3/32"	1 1/4"	801-3250
#0 x 60°	∅ .031"	.031"	∅ 3/32"	1 1/4"	801-3310

HSS DRILL AND COUNTERSINK**82 DEGREE COUNTERSINK**

USE : GENERAL PURPOSE

HELIX : 24°

HAND : RHS / RHC

CHISEL ANGLE: 130°

CENTER CUTTING: YES

DIAMETER TOLERANCE: +/-0.0015

SIZE	DRILL DIA	PILOT DRILL LENGTH	BODY DIA	OAL	RMT Part
#00000 x 82°	Ø .010"	.010"	Ø 1/8"	1 1/4"	181-0100
#0000 x 82°	Ø .015"	.015"	Ø 1/8"	1 1/4"	181-0150
#000 x 82°	Ø .020"	.020"	Ø 1/8"	1 1/4"	181-0200
#00 x 82°	Ø .025"	.025"	Ø 1/8"	1 1/4"	181-0250
#0 x 82°	Ø .031"	.031"	Ø 1/8"	1 1/4"	181-0310
#1 x 82°	Ø 3/64" (.047")	3/64"	Ø 1/8"	1 1/4"	181-0001
#2 x 82°	Ø 5/64" (.078")	5/64"	Ø 3/16"	1 7/8"	181-0002
#3 x 82°	Ø 7/64" (.109")	7/64"	Ø 1/4"	2"	181-0003
#4 x 82°	Ø 1/8" (.125")	1/8"	Ø 5/16"	2 1/8"	181-0004
#4½ x 82°	Ø 9/64" (.141")	9/64"	Ø 3/8"	2 1/2"	181-0045
#5 x 82°	Ø 3/16" (.1875")	3/16"	Ø 7/16"	2 3/4"	181-0005
#6 x 82°	Ø 7/32" (.219")	7/32"	Ø 1/2"	3"	181-0006
#7 x 82°	Ø 1/4" (.250")	1/4"	Ø 5/8"	3 1/4"	181-0007
#8 x 82°	Ø 5/16" (.3125")	5/16"	Ø 3/4"	3 1/2"	181-0008

HSS DRILL AND COUNTERSINK**90 DEGREE COUNTERSINK**

SIZE	DRILL DIA	PILOT DRILL LENGTH	BODY DIA	OAL	RMT Part
#00000 x 90°	Ø .010"	.010"	Ø 1/8"	1 1/4"	191-0100
#0000 x 90°	Ø .015"	.015"	Ø 1/8"	1 1/4"	191-0150
#000 x 90°	Ø .020"	.020"	Ø 1/8"	1 1/4"	191-0200
#00 x 90°	Ø .025"	.025"	Ø 1/8"	1 1/4"	191-0250
#0 x 90°	Ø .031"	.031"	Ø 1/8"	1 1/4"	191-0310
#1 x 90°	Ø 3/64" (.047")	3/64"	Ø 1/8"	1 1/4"	191-0001
#2 x 90°	Ø 5/64" (.078")	5/64"	Ø 3/16"	1 7/8"	191-0002
#3 x 90°	Ø 7/64" (.109")	7/64"	Ø 1/4"	2"	191-0003
#4 x 90°	Ø 1/8" (.125")	1/8"	Ø 5/16"	2 1/8"	191-0004
#4½ x 90°	Ø 9/64" (.141")	9/64"	Ø 3/8"	2 1/2"	191-0045
#5 x 90°	Ø 3/16" (.1875")	3/16"	Ø 7/16"	2 3/4"	191-0005
#6 x 90°	Ø 7/32" (.219")	7/32"	Ø 1/2"	3"	191-0006
#7 x 90°	Ø 1/4" (.250")	1/4"	Ø 5/8"	3 1/4"	191-0007
#8 x 90°	Ø 5/16" (.3125")	5/16"	Ø 3/4"	3 1/2"	191-0008

HSS DRILL AND COUNTERSINK**HSS DRILL AND RADIAL C'SINK**

USE : GENERAL PURPOSE

HELIX : 24°

HAND : RHS / RHC

CHISEL ANGLE: 130°

CENTER CUTTING: YES

DIAMETER TOLERANCE: +/-0.0015

HSS DRILL AND RADIAL C'SINK

SIZE	DRILL DIA	RADIAL FORM	BODY DIA	OAL	FORM LENGTH	RMT Part
#000 x 60°	Ø .020"	9/64" RAD	Ø 1/8"	1 1/4"	3/32"	804-0200
#00 x 60°	Ø .025"	9/64" RAD	Ø 1/8"	1 1/4"	7/64"	804-0250
#0 x 60°	Ø .031"	9/64" RAD	Ø 1/8"	1 1/4"	1/8"	804-0310
#1 x 60°	Ø 3/64" (.047")	9/64" RAD	Ø 1/8"	1 1/4"	1/8"	804-0001
#2 x 60°	Ø 5/64" (.078")	7/32" RAD	Ø 3/16"	1 7/8"	3/16"	804-0002
#3 x 60°	Ø 7/64" (.109")	13/64" RAD	Ø 1/4"	2"	1/4"	804-0003
#4 x 60°	Ø 1/8" (.125")	1/4" RAD	Ø 5/16"	2 1/8"	9/32"	804-0004
#5 x 60°	Ø 3/16" (.1875")	5/16" RAD	Ø 7/16"	2 3/4"	25/64"	804-0005

HSS DRILL AND 60 DEGREE BELLTYPE C'SINK

SIZE	DRILL DIA	PILOT DRILL LENGTH	BODY DIA	OAL	RMT Part
#11 x 60°	Ø 3/64" (.047")	3/64"	Ø 1/8"	1 1/4"	802-0011
#12 x 60°	Ø 1/16" (.0625")	1/16"	Ø 3/16"	1 7/8"	802-0012
#13 x 60°	Ø 3/32" (.0938")	3/32"	Ø 1/4"	2"	802-0013
#14 x 60°	Ø 7/64" (.109")	7/64"	Ø 5/16"	2 1/8"	802-0014
#15 x 60°	Ø 5/32" (.156")	5/32"	Ø 7/16"	2 3/4"	802-0015
#16 x 60°	Ø 3/16" (.1875")	3/16"	Ø 1/2"	3"	802-0016
#17 x 60°	Ø 7/32" (.219")	7/32"	Ø 5/8"	3 1/4"	802-0017
#18 x 60°	Ø 1/4" (.250")	1/4"	Ø 3/4"	3 1/2"	802-0018

HSS DRILL AND COUNTERSINK

60 DEGREE COUNTERSINK LONG



SIZE	DRILL DIA	PILOT DRILL LENGTH	BODY DIA	OAL	RMT Part
#1 x 60°	Ø 3/64" (.047")	3/64"	Ø 1/8"	3"	803-0013
#1 x 60°	Ø 3/64" (.047")	3/64"	Ø 1/8"	4"	803-0014
#1 x 60°	Ø 3/64" (.047")	3/64"	Ø 1/8"	5"	803-0015
#1 x 60°	Ø 3/64" (.047")	3/64"	Ø 1/8"	6"	803-0016
#2 x 60°	Ø 5/64" (.078")	5/64"	Ø 3/16"	3"	803-0023
#2 x 60°	Ø 5/64" (.078")	5/64"	Ø 3/16"	4"	803-0024
#2 x 60°	Ø 5/64" (.078")	5/64"	Ø 3/16"	5"	803-0025
#2 x 60°	Ø 5/64" (.078")	5/64"	Ø 3/16"	6"	803-0026
#3 x 60°	Ø 7/64" (.109")	7/64"	Ø 1/4"	3"	803-0033
#3 x 60°	Ø 7/64" (.109")	7/64"	Ø 1/4"	4"	803-0034
#3 x 60°	Ø 7/64" (.109")	7/64"	Ø 1/4"	5"	803-0035
#3 x 60°	Ø 7/64" (.109")	7/64"	Ø 1/4"	6"	803-0036
#4 x 60°	Ø 1/8" (.125")	1/8"	Ø 5/16"	4"	803-0044
#4 x 60°	Ø 1/8" (.125")	1/8"	Ø 5/16"	5"	803-0045
#4 x 60°	Ø 1/8" (.125")	1/8"	Ø 5/16"	6"	803-0046
#4½ x 60°	Ø 9/64" (.141")	9/64"	Ø 3/8"	4"	803-0454
#4½ x 60°	Ø 9/64" (.141")	9/64"	Ø 3/8"	5"	803-0455
#4½ x 60°	Ø 9/64" (.141")	9/64"	Ø 3/8"	6"	803-0456
#5 x 60°	Ø 3/16" (.1875")	3/16"	Ø 7/16"	4"	803-0054
#5 x 60°	Ø 3/16" (.1875")	3/16"	Ø 7/16"	5"	803-0055
#5 x 60°	Ø 3/16" (.1875")	3/16"	Ø 7/16"	6"	803-0056
#6 x 60°	Ø 7/32" (.219")	7/32"	Ø 1/2"	5"	803-0065
#6 x 60°	Ø 7/32" (.219")	7/32"	Ø 1/2"	6"	803-0066
#7 x 60°	Ø 1/4" (.250")	1/4"	Ø 5/8"	6"	803-0076
#8 x 60°	Ø 5/16" (.3125")	5/16"	Ø 3/4"	6"	803-0086

CARBIDE DECIMAL ENDMILLS

SQUARE END -----	7-20
STANDARD-----	7-8
STANDARD COATED-----	9-10
STUB-----	11-12
LONG REACH-----	13
LONG FLUTE LONG REACH-----	14
EXTRA LONG FLUTE-----	15
LONG SHANK LONG REACH STUB-----	16-20
BALL END -----	21-34
STANDARD-----	21-22
STANDARD COATED-----	23-24
STUB-----	25-26
LONG REACH-----	27
LONG FLUTE LONG REACH-----	28
EXTRA LONG FLUTE-----	29
LONG SHANK LONG REACH STUB-----	30-34
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4 FLUTE STUB-----	36
SPECIALS -----	37-40
HARD MILL-----	37
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SQUARE END -----	43-54
STANDARD-----	43
STUB-----	43
STANDARD COATED-----	44
LONG FLUTE LONG REACH-----	45
LONG REACH STUB-----	45
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STANDARD-----	55
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LONG SHANK LONG REACH-----	61
LONG SHANK LONG REACH STUB-----	62
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SINGLE END STUB DECIMAL-----	93-94
SINGLE END STANDARD FRACTIONAL-----	95
DOUBLE END STANDARD FRACTIONAL-----	96
DOUBLE END STUB FRACTIONAL-----	97
DOUBLE END LONG FRACTIONAL-----	98
BALL END -----	99-106
SINGLE END STANDARD DECIMAL-----	99-100
SINGLE END STUB DECIMAL-----	101-102
SINGLE END STANDARD FRACTIONAL-----	103
DOUBLE END STANDARD FRACTIONAL-----	104
DOUBLE END STUB FRACTIONAL-----	105
DOUBLE END LONG FRACTIONAL-----	106
METRIC MICRODRILLS -----	107-116

COBALT

HSS DRILL AND COUNTERSINKS

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Materials	End Mills		End Mill Dia. (FPT) Inches		Drills	Drills Dia. (IPR) Inches	
	Speed	(SFM)	Up to 1/4"	Up to 1/2"		Up to 1"	Speed
Aluminum & Aluminum Alloys	300-500	.0002-.002	.002-.004	.004-.008	300-500	.0005-.002	.002-.003
	200-300	.0002-.002	.002-.003	.003-.006	200-400	.0005-.002	.002-.003
Brass/Bronze	125-200	.0005-.002	.002-.003	.003-.007	125-300	.0005-.002	.002-.003
Cast Iron (S)	90-110	.0003-.001	.001-.002	.002-.004	100-200	.0005-.002	.002-.003
Cast Iron (H)	250-350	.0002-.002	.002-.003	.003-.006	150-300	.0005-.002	.002-.003
Copper	75-180	.0003-.001	.001-.003	.003-.006	75-180	.0005-.002	.002-.003
Ductile Iron	200-300	.0006-.003	.003-.006	.006-.012	200-400	.0005-.002	.002-.003
Fiber	300-600	.0005-.002	.002-.004	.004-.008	300-500	.0005-.002	.002-.003
Graphite	200-300	.0003-.001	.001-.003	.003-.007	75-180	.0005-.002	.002-.003
Magnessium	60-120	.0003-.001	.001-.002	.002-.004	75-180	.0005-.002	.002-.003
Malleable Iron	300-500	.0006-.003	.003-.007	.006-.015	200-500	.0005-.002	.002-.003
Nickel	150-250	.0006-.003	.003-.006	.006-.012	75-180	.0005-.002	.002-.003
Plastic	300-350	.0006-.003	.003-.006	.006-.012	200-300	.0005-.002	.002-.003
Plastic Glass Filled	200-250	.0003-.001	.001-.002	.002-.004	100-300	.0005-.002	.002-.003
Rubber	100-125	.0002-.0006	.0006-.001	.001-.004	50-100	.0005-.002	.002-.003
Stainless Steel (S)	150-200	.0005-.002	.002-.003	.003-.005	100-180	.0005-.002	.002-.003
Stainless Steel (H)	90-120	.0002-.001	.001-.002	.002-.006	30-100	.0005-.002	.002-.003
Steel/Low Carbon	100-250	.0002-.001	.001-.002	.002-.006	50-100	.0005-.002	.002-.003
Steel/Med Carbon	300-350	.0003-.001	.001-.003	.003-.006	125-300	.0005-.002	.002-.003
Titanium	250-300	.0005-.002	.002-.004	.004-.008	250-300	.0005-.002	.002-.003
Tool Steel							
Wood							
Zinc							

SPEEDS & FEEDS

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Up to 50x the tool life as AD**

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