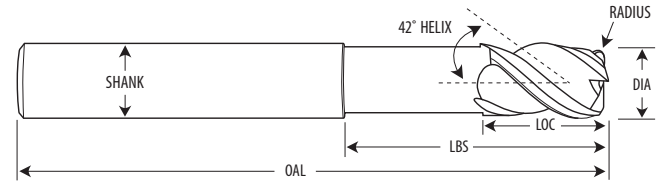
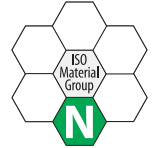
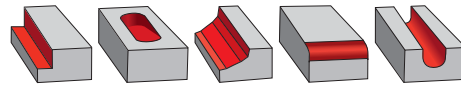
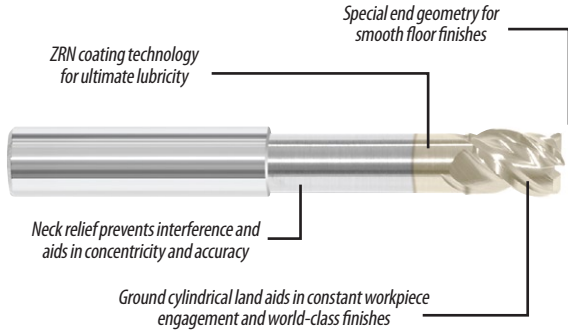
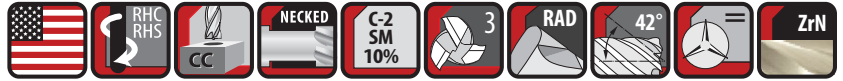


# HIGH PERFORMANCE END MILLS FOR ALUMINUM

# ÂVALANCHE<sup>3LR</sup>



DIAMETER TOLERANCE: +0.000 / -0.002"      SHANK TOLERANCE: +0.0000 / -0.0004"

DIA	DEC IN	LOC	SHANK	OAL	LBS	RADIUS	ZrN
1/8	0.1250	1/4	1/8	1-1/2	1/2	0.010	274-131001D
						0.015	274-131002D
						0.020	274-131003D
						0.030	274-131004D
1/8	0.1250	1/4	1/8	3	1-3/8	0.010	274-131005D
						0.015	274-131006D
						0.020	274-131007D
						0.030	274-131008D
3/16	0.1875	5/16	3/16	2	1/2	0.010	274-131021D
						0.015	274-131022D
						0.020	274-131023D
						0.030	274-131024D
3/16	0.1875	5/16	3/16	3	1-3/8	0.010	274-131025D
						0.015	274-131026D
						0.020	274-131027D
						0.030	274-131028D
1/4	0.2500	3/8	1/4	2-1/2	1-1/8	0.015	274-131041D
						0.030	274-131042D
						0.060	274-131043D
						0.090	274-131044D
1/4	0.2500	3/8	1/4	4	2-1/8	0.015	274-131045D
						0.030	274-131046D
						0.060	274-131047D
						0.090	274-131048D
1/4	0.2500	3/4	1/4	4	2-1/8	0.015	274-131049D
						0.030	274-131050D
						0.060	274-131051D
						0.090	274-131052D
5/16	0.3125	7/16	5/16	2-1/2	1-1/8	0.015	274-131071D
						0.030	274-131072D
						0.060	274-131073D
5/16	0.3125	13/16	5/16	4	2-1/8	0.015	274-131074D
						0.030	274-131075D
						0.060	274-131076D
3/8	0.3750	1/2	3/8	3	1-1/2	0.015	274-131091D
						0.030	274-131092D
						0.060	274-131093D
						0.090	274-131094D
						0.120	274-131095D
3/8	0.3750	1/2	3/8	4	2-1/8	0.015	274-131096D
						0.030	274-131097D
						0.060	274-131098D
						0.090	274-131099D
						0.120	274-131100D



DIA	DEC IN	LOC	SHANK	OAL	LBS	RADIUS	ZRN
3/8	0.3750	1	3/8	4	2-1/8	0.015	274-131101D
						0.030	274-131102D
						0.060	274-131103D
						0.090	274-131104D
						0.120	274-131105D
1/2	0.5000	5/8	1/2	3	1-3/8	0.015	274-131131D
						0.020	274-131132D
						0.030	274-131133D
						0.060	274-131134D
						0.090	274-131135D
1/2	0.5000	5/8	1/2	4	2-3/8	0.120	274-131136D
						0.015	274-131140D
						0.020	274-131141D
						0.030	274-131142D
						0.060	274-131143D
1/2	0.5000	5/8	1/2	6	3-3/8	0.090	274-131144D
						0.120	274-131145D
						0.015	274-131150D
						0.020	274-131151D
						0.030	274-131152D
1/2	0.5000	1-1/4	1/2	6	3-3/8	0.060	274-131153D
						0.090	274-131154D
						0.120	274-131155D
						0.015	274-131160D
						0.020	274-131161D
5/8	0.6250	3/4	5/8	3-1/2	1-5/8	0.030	274-131162D
						0.060	274-131163D
						0.090	274-131164D
						0.120	274-131165D
						0.030	274-131201D
5/8	0.6250	3/4	5/8	5	2-3/8	0.060	274-131202D
						0.090	274-131203D
						0.120	274-131204D
						0.030	274-131211D
						0.060	274-131212D
5/8	0.6250	3/4	5/8	6	3-3/8	0.090	274-131213D
						0.120	274-131214D
						0.030	274-131221D
						0.060	274-131222D
						0.090	274-131223D
5/8	0.6250	1-1/2	5/8	6	3-3/8	0.120	274-131224D
						0.030	274-131231D
						0.060	274-131232D
						0.090	274-131233D
						0.120	274-131234D
3/4	0.7500	1	3/4	4	2	0.030	274-131271D
						0.060	274-131272D
						0.090	274-131273D
						0.120	274-131274D
						0.156	274-131275D
3/4	0.7500	1	3/4	5	3	0.190	274-131276D
						0.030	274-131281D
						0.060	274-131282D
						0.090	274-131283D
						0.120	274-131284D
3/4	0.7500	1	3/4	6	3-1/2	0.156	274-131285D
						0.190	274-131286D
						0.030	274-131291D
						0.060	274-131292D
						0.090	274-131293D
3/4	0.7500	1	3/4	6	3-1/2	0.120	274-131294D
						0.156	274-131295D
						0.190	274-131296D



# HIGH PERFORMANCE END MILLS FOR ALUMINUM



DIA	DEC IN	LOC	SHANK	OAL	LBS	RADIUS	ZRN
3/4	0.7500	1	3/4	7	4-1/2	0.030	274-131311D
						0.060	274-131312D
						0.090	274-131313D
						0.120	274-131314D
						0.156	274-131315D
3/4	0.7500	1	3/4	8	5-1/2	0.190	274-131316D
						0.030	274-131331D
						0.060	274-131332D
						0.090	274-131333D
						0.120	274-131334D
3/4	0.7500	1-5/8	3/4	6	3-1/2	0.156	274-131335D
						0.190	274-131336D
						0.030	274-131341D
						0.060	274-131342D
						0.090	274-131343D
3/4	0.7500	1-5/8	3/4	6	3-1/2	0.120	274-131344D
						0.156	274-131345D
						0.190	274-131346D
						0.030	274-131401D
						0.060	274-131402D
1	1.0000	1-1/4	1	5	2-1/2	0.090	274-131403D
						0.120	274-131404D
						0.156	274-131405D
						0.190	274-131406D
						0.250	274-131407D
1	1.0000	1-1/4	1	6	3-1/2	0.030	274-131421D
						0.060	274-131422D
						0.090	274-131423D
						0.120	274-131424D
						0.156	274-131425D
1	1.0000	1-1/4	1	6	3-1/2	0.190	274-131426D
						0.250	274-131427D
						0.030	274-131431D
						0.060	274-131432D
						0.090	274-131433D
1	1.0000	1-1/4	1	7	4-1/2	0.120	274-131434D
						0.156	274-131435D
						0.190	274-131436D
						0.250	274-131437D
						0.030	274-131441D
1	1.0000	1-1/4	1	8	5-1/2	0.060	274-131442D
						0.090	274-131443D
						0.120	274-131444D
						0.156	274-131445D
						0.190	274-131446D
1	1.0000	2	1	7	4-1/2	0.250	274-131447D
						0.030	274-131461D
						0.060	274-131462D
						0.090	274-131463D
						0.120	274-131464D
1	1.0000	2	1	8	5-1/2	0.156	274-131465D
						0.190	274-131466D
						0.250	274-131467D
						0.030	274-131471D
						0.060	274-131472D
1	1.0000	2	1	8	5-1/2	0.090	274-131473D
						0.120	274-131474D
						0.156	274-131475D
						0.190	274-131476D
						0.250	274-131477D



MILLING RECOMMENDATIONS



Surface Feet Per Minute (SFM)  
Radial Depth of Cut (RDOC)

Inches Per Tooth (IPT)

PROFILING

Workpiece Material Group	SFM based on RDOC				IPT* (BASELINE)							
	Cutting Diameter Engaged				Cutting Diameter							
	10%	20%	30%	50%	3/16†	1/4†	5/16	3/8	1/2	5/8	3/4	1
Aluminum /Aluminum Alloys < 10% Si	2000	1800	1200	900	0.0018	0.0025	0.0032	0.0037	0.0050	0.0065	0.0075	0.0100
Aluminum /Aluminum Alloys > 10% Si	1500	1200	1000	800	0.0018	0.0025	0.0032	0.0037	0.0050	0.0065	0.0075	0.0100
<b>Non-Ferrous</b>												
Brass	900	800	600	500	0.0025	0.0032	0.0037	0.0050	0.0065	0.0075	0.0100	0.0120
Cu/Cu Alloys / Magnesium	1000	800	600	500	0.0025	0.0032	0.0037	0.0050	0.0065	0.0075	0.0100	0.0120
Plastics	900	800	600	500	0.0025	0.0032	0.0037	0.0050	0.0065	0.0075	0.0100	0.0120

*CHIP THINNING Adjustments	
RDOC	Increase IPT
50%	None
30%	2 x
20%	3.1 x
10%	3.8 x

†1/4" AND SMALLER DIAMETERS: Use caution when Profiling more than 50% or Slotting more than 25%



Surface Feet Per Minute (SFM)  
Radial Depth of Cut (RDOC)

Inches Per Tooth (IPT)

SLOTTING

Workpiece Material Group	SFM			IPT* (BASELINE)							
	Cutting Diameter Engaged			Cutting Diameter							
	25%	50%	100%	3/16†	1/4†	5/16	3/8	1/2	5/8	3/4	1
Aluminum /Aluminum Alloys < 10% Si	2000	1500	1000	0.0040 - 0.0060	0.0040 - 0.0080	0.0060 - 0.0090	0.0070 - 0.0120	0.0100 - 0.0450	0.0150 - 0.0450	0.0150 - 0.0450	0.0150 - 0.040
Aluminum /Aluminum Alloys > 10% Si	1500	1200	800	0.0040 - 0.0060	0.0040 - 0.0080	0.0060 - 0.0090	0.0070 - 0.0120	0.0100 - 0.0450	0.0150 - 0.0450	0.0150 - 0.0450	0.0150 - 0.040
<b>Non-Ferrous</b>											
Brass	600	500	400	0.0040 - 0.0060	0.0040 - 0.0080	0.0060 - 0.0090	0.0070 - 0.0120	0.0100 - 0.0450	0.0150 - 0.0450	0.0150 - 0.0450	0.0150 - 0.040
Cu/Cu Alloys / Magnesium	500	400	300	0.0025	0.0032	0.0037	0.0050	0.0065	0.0075	0.0100	0.0120
Plastics	1200	1000	800	0.0040 - 0.0060	0.0040 - 0.0080	0.0060 - 0.0090	0.0070 - 0.0120	0.0100 - 0.0450	0.0150 - 0.0450	0.0150 - 0.0450	0.0150 - 0.040

