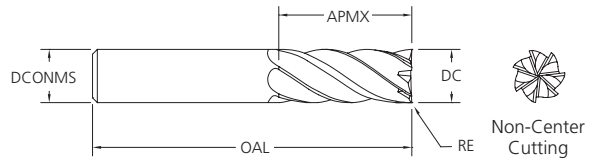
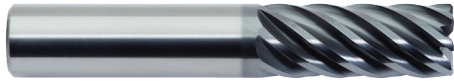


TuffCut® XR7 - Series 180



- 40% increase in productivity over a 5 flute tool.
- Designed specifically for Titanium, Inconel and similar materials.
- ALtima® Blaze coating for increased performance.

ALtima® Blaze		DC			DCONMS		OAL		APMX		RE	
Tool No.	EDP	Inch	mm	Decimal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
18023600B	18936		6	.2362		6		57		13		
18023601B	18938		6	.2362		6		57		13		0.5
18025000B	18900	1/4		.2500	1/4		2		3/8			
18025002B	18901	1/4		.2500	1/4		2		3/8		.015	
18025010B	18902	1/4		.2500	1/4		2-1/2		3/4			
18025011B	18967	1/4		.2500	1/4		2-1/2		3/4		.010	
18025012B	18903	1/4		.2500	1/4		2-1/2		3/4		.015	
18025013B	18968	1/4		.2500	1/4		2-1/2		3/4		.020	
18031500B	18944		8	.3150		8		63		19		
18031501B	18946		8	.3150		8		63		19		0.5
18037500B	18908	3/8		.3750	3/8		2-1/2		1/2			
18037502B	18909	3/8		.3750	3/8		2-1/2		1/2		.015	
18037504B	18932	3/8		.3750	3/8		2-1/2		1/2		.030	
18037510B	18910	3/8		.3750	3/8		2-1/2		1			
18037511B	18969	3/8		.3750	3/8		2-1/2		1		.010	
18037512B	18911	3/8		.3750	3/8		2-1/2		1		.015	
18037513B	18970	3/8		.3750	3/8		2-1/2		1		.020	
18037514B	18934	3/8		.3750	3/8		2-1/2		1		.030	
18039300B	18940		10	.3937		10		72		22		
18039301B	18942		10	.3937		10		72		22		0.5
18047201B	18501		12	.4724		12		84		32		0.5
18047203B	18503		12	.4724		12		84		32		1.0
18047205B	18505		12	.4724		12		84		32		2.0

TuffCut® End Mills Series 180

Inch	
DC	Tolerance
.2362	+0/- .0017
.2363-.3937	+0/- .0020
.3938-1.0000	+0/- .0025

Inch	
DCONMS	Tolerance (h6)
.2362	+0/- .00031
.2363-.3937	+0/- .00035
.3938-.7087	+0/- .00043
.7088-1.0000	+0/- .00051

Metric (mm)	
DC	Tolerance
6.00	+0/- .043
6.01-10.00	+0/- .050
10.01-20.00	+0/- .064

Metric (mm)	
DCONMS	Tolerance (h6)
6.00	+0/- .008
6.01-10.00	+0/- .009
10.01-18.00	+0/- .011
18.01-20.00	+0/- .013



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Inch	
RE	Tolerance
1/4 - 1	+ .001/- .001

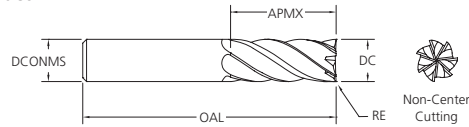
Metric (mm)	
RE	Tolerance
6.0 - 20.0	+ .025/- .025

ALtima® Blaze Coating Properties	
Micro Hardness (HV)	3200
Max. Working Temperature	1100°C 2012°F
Friction Coefficient	0.35

ALtima® Blaze

Featuring high temperature hardness and oxidation resistance that provides extreme wear resistance under all machining conditions.

TuffCut® XR7 - Series 180 *Continued*



ALtima® Blaze		DC			DCONMS		OAL		APMX		RE	
Tool No.	EDP	Inch	mm	Decimal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
18047207B	18507		12	.4724		12		84		32		3.0
18047209B	18508		12	.4724		12		84		32		4.0
18050000B	18512	1/2		.5000	1/2		3		5/8			
18050002B	18515	1/2		.5000	1/2		3		5/8		.015	
18050004B	18517	1/2		.5000	1/2		3		5/8		.030	
18050006B	18519	1/2		.5000	1/2		3		5/8		.060	
18050007B	18521	1/2		.5000	1/2		3		5/8		.090	
18050008B	18523	1/2		.5000	1/2		3		5/8		.125	
18050010B	18514	1/2		.5000	1/2		3		1-1/4			
18050011B	18971	1/2		.5000	1/2		3		1-1/4		.010	
18050012B	18516	1/2		.5000	1/2		3		1-1/4		.015	
18050013B	18972	1/2		.5000	1/2		3		1-1/4		.020	
18050014B	18518	1/2		.5000	1/2		3		1-1/4		.030	
18050016B	18520	1/2		.5000	1/2		3		1-1/4		.060	
18050017B	18522	1/2		.5000	1/2		3		1-1/4		.090	
18050018B	18524	1/2		.5000	1/2		3		1-1/4		.125	
18062500B	18532	5/8		.6250	5/8		3-1/2		3/4			
18062502B	18535	5/8		.6250	5/8		3-1/2		3/4		.015	
18062504B	18537	5/8		.6250	5/8		3-1/2		3/4		.030	
18062506B	18539	5/8		.6250	5/8		3-1/2		3/4		.060	
18062507B	18541	5/8		.6250	5/8		3-1/2		3/4		.090	
18062508B	18543	5/8		.6250	5/8		3-1/2		3/4		.125	
18062510B	18534	5/8		.6250	5/8		3-1/2		1-1/4			
18062512B	18536	5/8		.6250	5/8		3-1/2		1-1/4		.015	
18062514B	18538	5/8		.6250	5/8		3-1/2		1-1/4		.030	
18062516B	18540	5/8		.6250	5/8		3-1/2		1-1/4		.060	
18062517B	18542	5/8		.6250	5/8		3-1/2		1-1/4		.090	
18062518B	18544	5/8		.6250	5/8		3-1/2		1-1/4		.125	
18062901B	18509		16	.6299		16		92		42		0.5
18062903B	18510		16	.6299		16		92		42		1.0
18062905B	18511		16	.6299		16		92		42		2.0
18062907B	18513		16	.6299		16		92		42		3.0
18062909B	18527		16	.6299		16		92		42		4.0
18075000B	18570	3/4		.7500	3/4		4		1			
18075002B	18573	3/4		.7500	3/4		4		1		.015	
18075004B	18575	3/4		.7500	3/4		4		1		.030	
18075006B	18577	3/4		.7500	3/4		4		1		.060	

 TuffCut® End Mills
Series 180


Altima® Blaze		DC			DCONMS		OAL		APMX		RE	
Tool No.	EDP	Inch	mm	Decimal	Inch	mm	Inch	mm	Inch	mm	Inch	mm
18075007B	18579	3/4		.7500	3/4		4		1		.090	
18075008B	18581	3/4		.7500	3/4		4		1		.125	
18075009B	18583	3/4		.7500	3/4		4		1		.190	
180750012B	18585	3/4		.7500	3/4		4		1		.250	
18075010B	18572	3/4		.7500	3/4		4		1-1/2			
18075012B	18574	3/4		.7500	3/4		4		1-1/2		.015	
18075014B	18576	3/4		.7500	3/4		4		1-1/2		.030	
18075016B	18578	3/4		.7500	3/4		4		1-1/2		.060	
18075017B	18580	3/4		.7500	3/4		4		1-1/2		.090	
18075018B	18582	3/4		.7500	3/4		4		1-1/2		.125	
18075019B	18584	3/4		.7500	3/4		4		1-1/2		.190	
180750112B	18586	3/4		.7500	3/4		4		1-1/2		.250	
18078701B	18528		20	.7874		20		102		52		0.5
18078703B	18529		20	.7874		20		102		52		1.0
18078705B	18530		20	.7874		20		102		52		2.0
18078707B	18531		20	.7874		20		102		52		3.0
18078709B	18533		20	.7874		20		102		52		4.0
18010000B	18597	1		1.0000	1		4		1			
18010002B	18599	1		1.0000	1		4		1		.015	
18010004B	18601	1		1.0000	1		4		1		.030	
18010006B	18603	1		1.0000	1		4		1		.060	
18010007B	18615	1		1.0000	1		4		1		.090	
18010008B	18607	1		1.0000	1		4		1		.125	
18010009B	18609	1		1.0000	1		4		1		.190	
180100012B	18611	1		1.0000	1		4		1		.250	
18010010B	18598	1		1.0000	1		4		1-1/2			
18010012B	18613	1		1.0000	1		4		1-1/2		.015	
18010014B	18602	1		1.0000	1		4		1-1/2		.030	
18010016B	18604	1		1.0000	1		4		1-1/2		.060	
18010017B	18606	1		1.0000	1		4		1-1/2		.090	
18010018B	18608	1		1.0000	1		4		1-1/2		.125	
18010019B	18616	1		1.0000	1		4		1-1/2		.190	
180100112B	18612	1		1.0000	1		4		1-1/2		.250	



TuffCut® End Mills
Series 180

