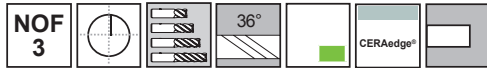
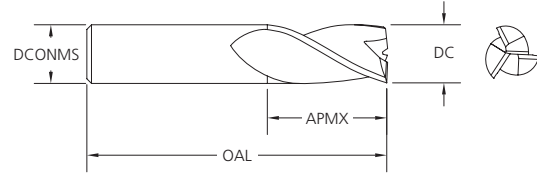


TuffCut® X-AL - Series 138CE



CORNER RADIUS OPTIONS AVAILABLE.
CONTACT CUSTOMER SERVICE FOR PRICING.



CERAedge®		DC			DCONMS		OAL		APMX		Stock Status
Tool No.	EDP	Inch	mm	Decimal	Inch	mm	Inch	mm	Inch	mm	• Stocked
											○ Non-Stocked
13812501CE	07988	1/8		.1250	1/8		1-1/2		1/4		•
13812503CE	07990	1/8		.1250	1/8		1-1/2		3/8		•
13812504CE	07992	1/8		.1250	1/8		1-1/2		1/2		•
13812506CE	07994	1/8		.1250	1/8		2		3/4		•
13818751CE	07996	3/16		.1875	3/16		2		3/8		•
13818752CE	07998	3/16		.1875	3/16		2		1/2		○
13818753CE	08000	3/16		.1875	3/16		2-1/2		5/8		○
13818754CE	08002	3/16		.1875	3/16		2-1/2		3/4		•
13818755CE	08004	3/16		.1875	3/16		2-1/2		1		•
13823620CE	08006		6.0	.2362		6.0		58.0		13.0	•
13825000CE	08008	1/4		.2500	1/4		2		3/8		•
13825001CE	08010	1/4		.2500	1/4		2		1/2		•
13825003CE	08012	1/4		.2500	1/4		2		5/8		○
13825004CE	08014	1/4		.2500	1/4		2-1/2		3/4		•
13825005CE	08016	1/4		.2500	1/4		3		1		•
13825007CE	08018	1/4		.2500	1/4		3		1-1/4		•
13831500CE	08020		8.0	.3150		8.0		64.0		19.0	•
13837500CE	08022	3/8		.3750	3/8		2		1/2		•
13837504CE	08024	3/8		.3750	3/8		2-1/2		3/4		○
13837505CE	08026	3/8		.3750	3/8		2-1/2		1		•
13837506CE	08028	3/8		.3750	3/8		3		1-1/4		○
13837507CE	08030	3/8		.3750	3/8		3-1/2		1-1/2		○
13837508CE	08032	3/8		.3750	3/8		4		2		○
13839370CE	08034		10.0	.3937		10.0		70.0		22.0	•
13847240CE	08036		12.0	.4724		12.0		84.0		26.0	•

Inch		Metric (mm)	
DC	Tolerance	DC	Tolerance
1/8 - 1	+ .000/- .0005	6.00 - 20.00	+ .000/- .013



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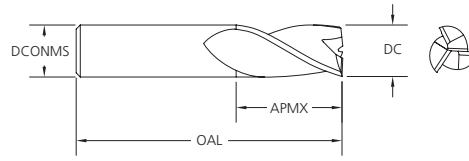
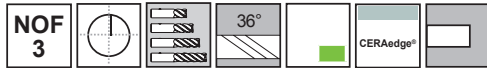


Hardness that makes it the 3rd hardest material when compared to industrial diamonds.

- Toughness that is comparable to Titanium.
- Lubricity that approaches Teflon.
- Extreme heat tolerance.
- Non-reactive to Titanium.

CERAedge® Coating Properties	
Microhardness (HV)	3400
Max. Service Temperature	1100° C / 2012° F
Friction Coefficient	0.25
Coating Thickness	2-3 microns
Color	Light Gray

TuffCut® X-AL - Series 138CE *Continued*



CERAEAGE®		DC			DCONMS		OAL		APMX		Stock Status
Tool No.	EDP	Inch	mm	Decimal	Inch	mm	Inch	mm	Inch	mm	• Stocked
											○ Non-Stocked
1385000CE	08038	1/2		.5000	1/2		3		5/8		•
1385001CE	08040	1/2		.5000	1/2		3		3/4		•
1385002CE	08042	1/2		.5000	1/2		3		1		○
1385003CE	08044	1/2		.5000	1/2		3		1-1/4		•
1385004CE	08046	1/2		.5000	1/2		4		1-1/2		•
1385005CE	08048	1/2		.5000	1/2		4		2		•
1385006CE	08050	1/2		.5000	1/2		4		2-1/4		○
1385007CE	08052	1/2		.5000	1/2		6		2-1/2		○
13855120CE	08054		14.0	.5512		14.0		84.0		26.0	•
13862503CE	08056	5/8		.6250	5/8		3-1/2		1-1/4		○
13862504CE	08058	5/8		.6250	5/8		4		1-5/8		○
13862506CE	08060	5/8		.6250	5/8		5		2-1/2		○
13862507CE	08062	5/8		.6250	5/8		6		3-1/4		○
13862990CE	08064		16.0	.6299		16.0		89.0		32.0	•
13875001CE	08066	3/4		.7500	3/4		4		1		•
13875004CE	08068	3/4		.7500	3/4		4		1-5/8		•
13875005CE	08070	3/4		.7500	3/4		5		2		○
13875006CE	08072	3/4		.7500	3/4		5		2-1/4		•
13875007CE	08074	3/4		.7500	3/4		5		2-1/2		○
13875008CE	08076	3/4		.7500	3/4		6		3		○
13878740CE	08078		20.0	.7874		20.0		102.0		38.0	○
13810002CE	08080	1		1.0000	1		4		1-1/2		○
13810003CE	08082	1		1.0000	1		5		2		○
13810005CE	08084	1		1.0000	1		6		3		○
13810006CE	08086	1		1.0000	1		6		3-1/2		○

TuffCut® End Mills
Series 138CE

