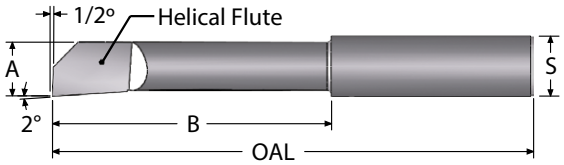
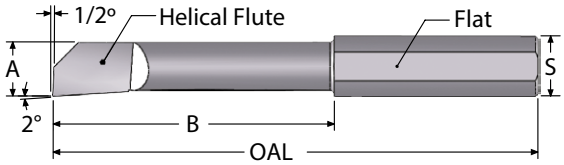
BORING BARS - HELICAL - SOLID CARBIDE

- Positive high shear tool design reduces cutting force
- ALTiN+ coating helps extend tool life
- Stocked in both uncoated and ALTiN+ coating
- Made with premium submicron grade carbide



HELICAL BACK RAKE
WITHOUT FLAT

"A" MIN BORE	"B" MAX DEPTH	"S" SHANK DIA.	OAL	ORDER #		EDP #	
				UNCOATED	AlTiN+	UNCOATED	AlTiN+
0.025	0.093	0.125	1.50	HB25	HB25A	215916	216192
0.027	0.125	0.125	1.50	HB27	HB27A	215922	216198
0.031	0.156	0.125	1.50	HB31	HB31A	215928	216204
0.031	0.187	0.125	1.50	HB31L	HB31LA	215934	216210
0.036	0.156	0.125	1.50	HB36	HB36A	215940	216216
0.036	0.250	0.125	1.50	HB36L	HB36LA	215946	216222
0.042	0.250	0.125	1.50	HB42	HB42A	215952	216228
0.042	0.312	0.125	1.50	HB42L	HB42LA	215958	216234
0.052	0.312	0.125	1.50	HB52	HB52A	215964	216240
0.057	0.312	0.125	1.50	HB57	HB57A	215970	216246
0.060	0.375	0.125	1.50	HB60	HB60A	215976	216252
0.060	0.500	0.125	1.50	HB60L	HB60LA	215982	216258
0.070	0.437	0.125	1.50	HB70	HB70A	215988	216264
0.080	0.500	0.125	1.50	HB80	HB80A	215994	216270
0.085	0.500	0.125	1.50	HB85	HB85A	216000	216276
0.090	0.500	0.125	1.50	HB90	HB90A	216006	216282
0.090	0.625	0.125	1.50	HB90L	HB90LA	216012	216288
0.100	0.562	0.125	1.50	HB100	HB100A	215880	216156
0.100	0.625	0.125	2.00	HB100L	HB100LA	215886	216162
0.110	0.562	0.125	1.50	HB110	HB110A	215892	216168
0.110	0.625	0.125	2.00	HB110L	HB110LA	215898	216174
0.115	0.625	0.125	1.50	HB120	HB120A	215904	216180
0.115	0.625	0.125	2.00	HB120L	HB120LA	215910	216186



HELICAL BACK RAKE
WITH FLAT

"A" MIN BORE	"B" MAX DEPTH	"S" SHANK DIA.	OAL	ORDER #		EDP #	
				UNCOATED	AlTiN+	UNCOATED	AlTiN+
0.025	0.093	0.125	1.50	HB25F	HB25FA	215919	216195
0.027	0.125	0.125	1.50	HB27F	HB27FA	215925	216201
0.031	0.156	0.125	1.50	HB31F	HB31FA	215931	216207
0.031	0.187	0.125	1.50	HB31LF	HB31LFA	215937	216213
0.036	0.156	0.125	1.50	HB36F	HB36FA	215943	216219
0.036	0.250	0.125	1.50	HB36LF	HB36LFA	215949	216225
0.042	0.250	0.125	1.50	HB42F	HB42FA	215955	216231
0.042	0.312	0.125	1.50	HB42LF	HB42LFA	215961	216237
0.052	0.312	0.125	1.50	HB52F	HB52FA	215967	216243
0.057	0.312	0.125	1.50	HB57F	HB57FA	215973	216249
0.060	0.375	0.125	1.50	HB60F	HB60FA	215979	216255
0.060	0.500	0.125	1.50	HB60LF	HB60LFA	215985	216261
0.070	0.437	0.125	1.50	HB70F	HB70FA	215991	216267
0.080	0.500	0.125	1.50	HB80F	HB80FA	215997	216273
0.085	0.500	0.125	1.50	HB85F	HB85FA	216003	216279
0.090	0.500	0.125	1.50	HB90F	HB90FA	216009	216285
0.090	0.625	0.125	1.50	HB90LF	HB90LFA	216015	216291
0.100	0.562	0.125	1.50	HB100F	HB100FA	215883	216159
0.100	0.625	0.125	2.00	HB100LF	HB100LFA	215889	216165
0.110	0.562	0.125	1.50	HB110F	HB110FA	215895	216171
0.110	0.625	0.125	2.00	HB110LF	HB110LFA	215901	216177
0.120	0.625	0.125	1.50	HB120F	HB120FA	215907	216183
0.120	0.625	0.125	2.00	HB120LF	HB120LFA	215913	216189

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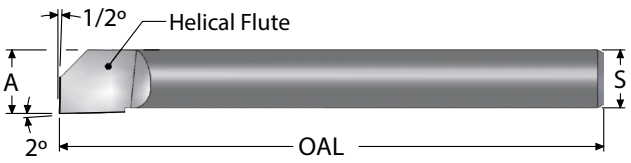
BORING BARS - HELICAL - SOLID CARBIDE



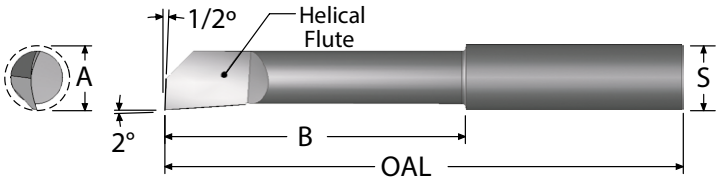
- Bar features an adjustable max bore depth
- ALTiN+ coating provides better surface finish
- Positive high shear tool design reduces cutting force
- Made with premium submicron grade carbide

HELICAL BACK RAKE

"A" MIN BORE	"S" SHANK DIA.	OAL	ORDER #		EDP #	
			UNCOATED	AlTiN+	UNCOATED	AlTiN+
0.130	0.1093	1.50	HB135	HB135A	215736	215832
0.145	0.1250	1.50	HB150	HB150A	215739	215835
0.145	0.1250	2.50	HB150L	HB150LA	215742	215838
0.174	0.1562	1.50	HB180	HB180A	215745	215841
0.174	0.1562	2.00	HB180L	HB180LA	215751	215847
0.174	0.1562	3.00	HB180EL	HB180ELA	215748	215844
0.205	0.1875	1.50	HB210	HB210A	215754	215850
0.205	0.1875	3.00	HB210L	HB210LA	215757	215853
0.235	0.2187	1.50	HB240	HB240A	215760	215856
0.235	0.2187	3.00	HB240L	HB240LA	215763	215859
0.284	0.2500	2.50	HB300	HB300A	215766	215862
0.284	0.2500	3.50	HB300L	HB300LA	215769	215865
0.345	0.3125	3.00	HB360	HB360A	215772	215868
0.345	0.3125	5.00	HB360L	HB360LA	215775	215871
0.470	0.4375	3.00	HB480	HB480A	215778	215874
0.470	0.4375	6.00	HB480L	HB480LA	215781	215877

Go to Single Point Tools Overview

BORING BARS - HELICAL - SOLID CARBIDE



"A" minimum bore diameter refers to the size of the hole that is produced when the tools are rotated on centerline. These tools are designed to be used for both mill and lathe applications.

"A" MIN BORE	"B" MAX DEPTH	"S" SHANK DIA.	OAL	ORDER #		EDP #	
				UNCOATED	ALTiN+	UNCOATED	ALTiN+
0.020	0.062	0.125	1.50	HB020062	HB020062A	216294	216570
0.025	0.062	0.125	1.50	HB025062	HB025062A	216297	216573
0.025	0.125	0.125	1.50	HB025125	HB025125A	216300	216576
0.030	0.125	0.125	1.50	HB030125	HB030125A	216303	216579
0.030	0.187	0.125	1.50	HB030187	HB030187A	216306	216582
0.035	0.125	0.125	1.50	HB035125	HB035125A	216309	216585
0.035	0.187	0.125	1.50	HB035187	HB035187A	216312	216588
0.040	0.187	0.125	1.50	HB040187	HB040187A	216315	216591
0.040	0.250	0.125	1.50	HB040250	HB040250A	216318	216594
0.050	0.312	0.125	1.50	HB050312	HB050312A	216321	216597
0.060	0.375	0.125	1.50	HB060375	HB060375A	216324	216600
0.070	0.437	0.125	1.50	HB070437	HB070437A	216327	216603
0.080	0.500	0.125	1.50	HB080500	HB080500A	216330	216606
0.090	0.500	0.125	1.50	HB090500	HB090500A	216333	216609
0.100	0.562	0.125	1.50	HB100562	HB100562A	216336	216612
0.120	0.625	0.125	1.50	HB120625	HB120625A	216342	216618
0.120	1.000	0.125	2.00	HB1201000	HB1201000A	216339	216615
0.135	0.750	0.1875	2.00	HB135750	HB135750A	216348	216624
0.135	1.000	0.1875	2.00	HB1351000	HB1351000A	216345	216621
0.150	1.000	0.1875	2.00	HB1501000	HB1501000A	216351	216627
0.150	1.250	0.1875	2.00	HB1501250	HB1501250A	216354	216630
0.180	1.000	0.1875	2.00	HB1801000	HB1801000A	216357	216633
0.180	1.250	0.1875	2.50	HB1801250	HB1801250A	216360	216636
0.180	1.500	0.1875	2.50	HB1801500	HB1801500A	216363	216639

"A" MIN BORE	"B" MAX DEPTH	"S" SHANK DIA.	OAL	ORDER #		EDP #	
				UNCOATED	ALTiN+	UNCOATED	ALTiN+
0.210	1.000	0.250	2.50	HB2101000	HB2101000A	216366	216642
0.210	1.250	0.250	2.50	HB2101250	HB2101250A	216369	216645
0.210	1.500	0.250	2.50	HB2101500	HB2101500A	216372	216648
0.240	1.000	0.250	2.50	HB2401000	HB2401000A	216375	216651
0.240	1.500	0.250	2.50	HB2401500	HB2401500A	216378	216654
0.240	1.750	0.250	3.00	HB2401750	HB2401750A	216381	216657
0.300	1.000	0.312	2.50	HB3001000	HB3001000A	216384	216660
0.300	1.500	0.312	2.50	HB3001500	HB3001500A	216387	216663
0.300	1.750	0.312	3.00	HB3001750	HB3001750A	216390	216666
0.360	1.000	0.375	2.50	HB3601000	HB3601000A	216393	216669
0.360	1.500	0.375	2.50	HB3601500	HB3601500A	216396	216672
0.360	1.750	0.375	3.00	HB3601750	HB3601750A	216399	216675
0.360	2.000	0.375	4.00	HB3602000	HB3602000A	216402	216678
0.360	2.250	0.375	4.00	HB3602250	HB3602250A	216405	216681
0.360	2.500	0.375	4.00	HB3602500	HB3602500A	216408	216684
0.480	1.500	0.500	3.00	HB4801500	HB4801500A	216411	216687
0.480	2.000	0.500	3.00	HB4802000	HB4802000A	216414	216690
0.480	2.500	0.500	4.00	HB4802500	HB4802500A	216417	216693
0.480	3.000	0.500	4.00	HB4803000	HB4803000A	216420	216696
0.480	3.500	0.500	6.00	HB4803500	HB4803500A	216423	216699
0.480	4.000	0.500	6.00	HB4804000	HB4804000A	216426	216702
0.480	4.500	0.500	6.00	HB4804500	HB4804500A	216429	216705

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SOLID CARBIDE BORING BAR FEED AND SPEED CHART

MATERIAL	HB/Rc	SPEED (SFM)		CUTTING CONDITIONS						
				FEED IPR	TOOL DIAMETER					
		UNCOATED	ALTiN+		.015-.045	.050-.100	.110-.160	.180-.230	.290-.320	.360+
					MAX DOC	MAX DOC	MAX DOC	MAX DOC	MAX DOC	MAX DOC
CAST IRON	160 HB	75-200	200-550	.0005-.010	0.006	0.008	0.010	0.014	0.020	0.031
CARBON STEEL	18 Rc	75-200	200-450	.0005-.007	0.003	0.005	0.006	0.008	0.012	0.017
ALLOY STEEL	20 Rc	75-200	200-425	.0005-.007	0.003	0.004	0.005	0.007	0.010	0.015
TOOL STEEL	25 Rc	75-175	175-300	.0005-.005	0.002	0.003	0.004	0.006	0.008	0.012
300 STAINLESS STEEL	150 HB	75-175	175-350	.0005-.005	0.003	0.003	0.004	0.006	0.008	0.013
400 STAINLESS STEEL	195 HB	75-210	130-420	.0005-.005	0.002	0.003	0.004	0.006	0.008	0.012
HIGH TEMP ALLOY (Ni & Co BASE)	20 Rc	50-130	130-300	.0005-.004	0.002	0.003	0.003	0.005	0.007	0.010
TITANIUM	25 Rc	50-120	120-275	.0005-.005	0.003	0.004	0.005	0.006	0.009	0.014
HEAT TREATED ALLOYS (38-45Rc)	40 Rc	50-100	100-200	.0005-.005	0.002	0.002	0.003	0.004	0.006	0.009
ALUMINUM	100 HB	75-250	250-750	.0005-.015	0.011	0.015	0.019	0.026	0.038	0.056
BRASS, ZINC	80 HB	75-300	250-650	.001-.010	0.009	0.012	0.015	0.021	0.030	0.045

SFM = Surface Feet Per Minute DOC = Depth of Cut IPR = Inches Per Revolution

Starting parameters only. Length-to-diameter ratios, setup, and machine rigidity may affect performance.

SFM = .262 × DIAMETER × RPM
RPM = 3.82 × SFM ÷ DIAMETER
IPM = FPT × Number of Teeth × RPM

Meters/Min = SFM × .3048
Millimeters/Rev = IPR x 25.40

SOLID CARBIDE BORING TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
RAPID FLANK WEAR	CUTTING CONDITIONS	Check for excessive speed and feed - See chart.
	TOOL	Select a coated tool.
	PART	Make sure prior operation did not work harden the metal.
BUILT-UP EDGE	TOOL	Select a coated tool.
	CUTTING FORCE	Check for excessive feed rate (IPR) - See chart.
	HEAT	Use the SCT coolant holder. If coolant is not available, use shop air and a coated tool.
CORNER BREAKAGE	CUTTING CONDITIONS	Check for excessive feed and speed and depth of cut - see chart.
	TOOL	Select a tool with a radius. A radius is stronger than a sharp corner.
	PART	Check the drilled hole.
SURFACE TOO ROUGH	CUTTING CONDITIONS	Check for excessive feed rate (IPR) - See chart.
	BUILT-UP EDGE	See above (Built-Up Edge).
CHATTER	SET UP	Set tool above center. Reduce the overhang ratio. Clamping length should be at least 3x the boring bar diameter. Change the speed of the machine. Speed change may break up harmonics and reduce chatter.
	BORING BAR	Select the largest diameter boring bar that will bore the required diameter.
TAPER SMALLER IN BACK	CHIP PACKING	If the boring bar is too large to allow chips to evacuate, then the chips may pack on the tool and cause the bar to deflect away from the bore.
	PROGRAM	If the taper is consistent, then the program can be altered to bore a taper in opposite direction resulting in a straight hole.
TAPER BIGGER IN BACK	CUTTING FORCES	Reduce forces. Deflecting bar below center causes hole to become larger.
	BUILT-UP EDGE	Built-up edge will cause the hole to become larger until the built edge breaks off, then the hole becomes smaller.
	PROGRAM	If taper is consistent, then the program can be altered to bore a taper in the opposite direction resulting in a straight hole.

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GROOVING TOOL FEED AND SPEED CHART

MATERIAL	HB/Rc	SPEED (SFM)		CUTTING CONDITIONS				
				TOOL DIAMETER				
		UNCOATED	ALTiN+	.060 -0.080	.090 -.120	.187	.250-.312	.375+
				MAX FPR	MAX FPR	MAX FPR	MAX FPR	MAX FPR
CAST IRON	160 HB	75-200	200-550	0.0010	0.0012	0.0017	0.0031	0.0044
CARBON STEEL	18 Rc	75-200	200-450	0.0007	0.0008	0.0011	0.0022	0.0030
ALLOY STEEL	20 Rc	75-200	200-425	0.0006	0.0007	0.0010	0.0019	0.0026
TOOL STEEL	25 Rc	75-175	175-300	0.0005	0.0006	0.0008	0.0015	0.0022
300 STAINLESS STEEL	150 HB	75-175	75-350	0.0006	0.0007	0.0010	0.0019	0.0026
400 STAINLESS STEEL	195 HB	75-210	130-420	0.0005	0.0006	0.0008	0.0016	0.0023
HIGH TEMP ALLOY (NICKEL & COBALT BASE)	20 Rc	50-130	130-300	0.0004	0.0005	0.0007	0.0013	0.0017
TITANIUM	25 Rc	50-120	120-275	0.0005	0.0006	0.0008	0.0016	0.0022
HEAT TREATED ALLOYS (38-45Rc)	40 Rc	50-100	100-200	0.0004	0.0004	0.0006	0.0011	0.0016
ALUMINUM	100 HB	75-250	250-750	0.0022	0.0026	0.0037	0.0065	0.0085
BRASS, ZINC	80 HB	250-300	250-650	0.0018	0.0021	0.0030	0.0053	0.0079

SFM = Surface Feet Per Minute FPR = Feed Per Revolution

Starting parameters only. Length-to-diameter ratios, setup, and machine rigidity may affect performance.

GROOVING TOOL TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
RAPID FLANK WEAR	CUTTING CONDITIONS	Check for excessive speed - see chart.
	TOOL	Select a coated tool.
	PART	Make sure prior operation did not work harden the material.
BUILT-UP EDGE	TOOL	Select a coated tool.
	CUTTING FORCE	Check for excessive speed rate (IPR) - see chart.
	HEAT	Use the SCT coolant holder. If coolant is not available, use shop air and a coated tool.
CHATTER	CUTTING CONDITIONS	Reduce RPM and increase feed rate within the feed and speed chart parameters.
	CLAMPING	Clamping length should be a minimum of 3x the shank diameter in the tool holder. Check tool holding rigidity.
	TOOL	Hone cutting edge. A light hone (0.0001-0.0003 inch) will help keep force constant.
TOOL BREAKAGE	CUTTING CONDITIONS	Check for excessive feed rate (IPR) - see chart.
	CHIP PACKING	Stagger - Peck grooving.

SINGLE POINT THREADING TECHNICAL CHART

MATERIAL	HB/Rc	SPEED (SFM)		FIRST PASS DEPTH TOOL DIAMETER					
		UNCOATED	ALTiN+	.040-.050	.060-.092	.120-.152	.180-.232	.290-.362	.373+
CAST IRON	160 HB	75-200	200-550	0.003	0.004	0.005	0.007	0.008	0.009
CARBON STEEL	18 Rc	75-200	200-450	0.003	0.005	0.006	0.007	0.008	0.009
ALLOY STEEL	20 Rc	75-200	200-425	0.003	0.004	0.005	0.006	0.007	0.008
TOOL STEEL	25 Rc	75-175	175-300	0.002	0.003	0.004	0.005	0.006	0.007
300 STAINLESS STEEL	150 HB	75-175	175-350	0.003	0.003	0.004	0.005	0.006	0.007
400 STAINLESS STEEL	195 HB	75-210	130-420	0.003	0.004	0.005	0.006	0.006	0.007
HIGH TEMP ALLOY (NICKEL & COBALT BASE)	20 Rc	50-130	130-300	0.002	0.003	0.003	0.004	0.005	0.005
TITANIUM	25 Rc	50-100	120-275	0.003	0.003	0.004	0.005	0.006	0.007
HEAT TREATED ALLOYS (38-45Rc)	40 Rc	50-100	100-200	0.002	0.002	0.003	0.004	0.004	0.005
ALUMINUM	100 HB	75-250	200-750	0.004	0.005	0.007	0.008	0.010	0.011
BRASS, ZINC	80 HB	75-300	250-650	0.003	0.005	0.006	0.007	0.008	0.009

Parameters are a starting point based on machinability rating at hardness listed.
Check machinability rating of the material to be machined and adjust First Pass Depth.

Helpful Formulas and Information

$$\text{PITCH} = \frac{1}{\text{TPI}}$$

TPI = Threads Per Inch

ACME Thread Depth = Pitch × 0.5

Stub ACME Thread Depth = Pitch × 0.3

NPT Pipe Thread Depth = Pitch × 0.76

Internal 60° Thread Depth = Pitch × 0.54

Feed Rate = Pitch × Number of Thread Starts

Minimum Depth per Pass should not be less than 0.0003

Threads not ending in a relief need at least one thread pitch length of pullout

Make sure feed rate calculation does not exceed the maximum feed rate of the machine

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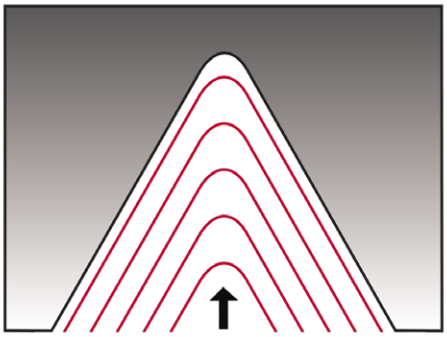
SINGLE POINT THREADING TROUBLESHOOTING

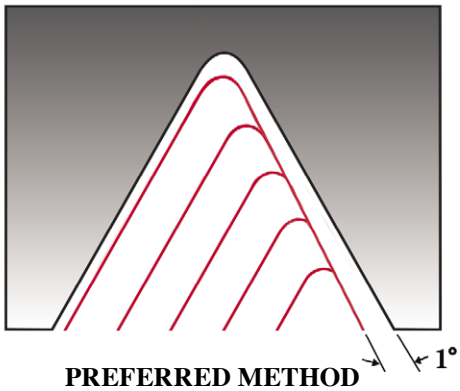
PROBLEM	CAUSE	SOLUTION
RAPID FLANK WEAR	CUTTING CONDITIONS	Check for excessive speed - see chart.
	PART	Make sure prior operation did not work harden the material.
	TOOL	Select a coated tool.
BUILT-UP EDGE	TOOL	Select a coated tool.
	CUTTING FORCE	Increase the number of passes.
	HEAT	Use the SCT coolant holder. If coolant is not available, use shop air and a coated tool.
CORNER BREAKAGE	CUTTING CONDITIONS	Reduce the depth-of-cut on the first pass.
	PROGRAM	If there is no thread relief, withdraw the tool on an angle.
	PART	End in thread relief.
CHIPS WRAPPING AROUND TOOL	TOOL	Use a tool that is at least 30% smaller than the hole diameter.

RADIAL INFEED



NOT RECOMMENDED

MODIFIED FLANK



PREFERRED METHOD

Radial Infeed is not recommended. Modified flank at 1° is recommended.

For unfavorable length-to-diameter ratios or difficult-to-machine materials, the number of passes will need to be increased up to 40% more.

Depth of cut per pass should not be less than 0.0003 inch.

SINGLE POINT CBN & PCD TECHNICAL & APPLICATION

PCD TIPPED TOOL INFORMATION

SCT PCD tools and inserts are excellent for continuous cutting of a wide range of non-ferrous and non-metal materials.
The products are precision ground for machining to sub-micron finishes with maximum tool life.
PCD allows for higher cutting speeds with longer tool life.

MATERIAL	BHN/Rc	SPEED RANGE (SFM)	FEED IPR	SINGLE POINT PCD TIPPED BARS			
				TOOL DIAMETER			
				.120-160	.180-.230	.290-.320	.360+
				MAX DOC	MAX DOC	MAX DOC	MAX DOC
LOW SILICON ALUMINUM	225-350 BHN	1000-5000	.001-.007	0.015	0.021	0.03	0.045
HIGH SILICON ALUMINUM	270-425 BHN	600-3000	.001-.007	0.015	0.021	0.03	0.045
METAL MATRIX COMPOSITIES	N/A	500-2000	.001-.007	0.008	0.012	0.02	0.03
COPPER ALLOYS, BRASS, BRONZE	80-120 BHN	750-3500	.001-.007	0.015	0.021	0.03	0.045
PRESINTERED TUNGSTEN CARBIDE	140-300 BHN	100-350	.001-.005	0.003	0.005	0.007	0.012
ACRYLICS	N/A	700-1500	.001-.007	0.015	0.021	0.03	0.045
FIBERGLASS	N/A	600-1000	.001-.007	0.012	0.02	0.03	0.045
GRAPHITES	N/A	600-1000	.001-.007	0.015	0.021	0.03	0.045
NYLON, PLASTIC	N/A	700-1500	.001-.007	0.015	0.021	0.03	0.045
HARD RUBBER	N/A	500-2500	.001-.007	0.015	0.021	0.03	0.045

As the DOC decreases the feed rate can increase DOC = Depth of Cut SFM = Surface Feet per Minute

APPLICATION GUIDELINES

- Make sure the machine and setup is rigid and solid. Chatter will cause chipping.
- Tool height when boring should be slightly above center. Tool deflection will put the tool on center.
- Do not stop the machine with the tool in cut. This will result in tool breakage.
- Use of coolant will reduce heat and improve surface finish.
- Do not contact the tool to a hard surface prior to the machining process- this will cause chipping.
- Higher speeds minimize tool buildup.
- Depth of cut should not exceed 70% of PCD tip length.

CBN TIPPED TOOL INFORMATION

SCT CBN tools and inserts are excellent for continuous cutting of a wide range of hardened steels, powdered metals, cast irons and super alloys. The products are precision ground with hones for machining to sub-micron finishes with maximum tool life.
CBN tipped tools and inserts can take the place of grinding.

MATERIAL	BHN/Rc	SPEED RANGE (SFM)	FEED IPR	SINGLE POINT CBN TIPPED BARS			
				TOOL DIAMETER			
				.120-160	.180-.230	290-.320	.360+
				MAX DOC	MAX DOC	MAX DOC	MAX DOC
HEAT TREATED ALLOY	45-60Rc	200-600	.001-.005	0.003	0.004	0.006	0.009
TOOL STEEL	45-60Rc	200-600	.001-.005	0.003	0.004	0.006	0.009
NODULAR IRON	N/A	600-1500	.001-.005	0.006	0.01	0.02	0.03
PEARLITIC IRON	220-240BHN	600-2500	.001-.007	0.006	0.01	0.02	0.03
WHITE/CHILLED IRON	54-60Rc	200-500	.001-.005	0.005	0.008	0.012	0.015
SUPER ALLOY Ni BASE	240-475 BHN	200-800	001-.005	0.003	0.004	0.006	0.025
COBOLT BASED ALLOY, STELLITE	45-55Rc	200-500	.001-.005	0.003	0.004	0.006	0.009
INCONELS	45-55Rc	200-500	.001-.005	0.003	0.004	0.006	0.009

As the DOC decreases the feed rate can increase DOC = Depth of Cut SFM = Surface Feet per Minute

APPLICATION GUIDELINES

- Make sure the machine and setup is rigid and solid. Chatter will cause chipping
- Tool height when boring should be slightly above center. Tool deflection will put the tool on center.
- Do not stop the machine with the tool in cut. This will result in tool breakage.
- Coolant use is not advised as it could cause thermal cracking.
- Do not contact the tool to a hard surface prior to the machining process. This will cause chipping.
- Depth of cut should not exceed 30% of CBN tip length.

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