



# WOODWORKING



# MULTI-METALS

**Multi-Metals** controls the entire manufacturing process beginning with grade formulation. We incorporate a state-of-the-art powder processing plant to convert raw material into standard and custom grade formulations to meet industry and application-specific requirements. This capability allows us to maintain the tightest control possible on the metallurgy of the finished product.

**Advanced technologies** like injection molding as well as conventional compaction techniques are utilized to bring product to life. The most advanced robotics and process controls are implemented throughout our plant to ensure we deliver the product you specify and the quality you expect.

**Process flexibility** allows us to manufacture your product using the technology that serves you, our customer, the best. Our diverse sintering technologies include conventional vacuum, sinter-HIP (Hot Isostatic Press), and controlled-atmosphere, continuous-flow furnaces.

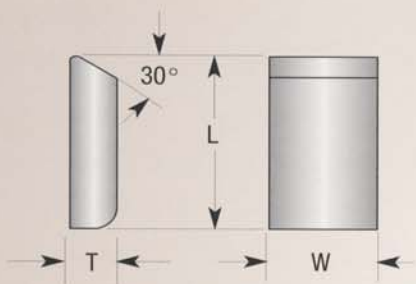
**A complete metallurgical laboratory**, featuring a Scanning Electron Microscope and an impressive array of other testing and analysis equipment, gives us the on-site capability to ensure that our quality standards are never compromised. Additionally, our technical expertise allows us to provide outstanding customer support in the form of failure analysis and process troubleshooting.

**Customer satisfaction** is our primary goal and our staff is among the most knowledgeable in the world. We support a multi-million dollar inventory spanning hundreds of part numbers allowing us to deliver your product quickly. We also offer custom stocking programs for non-standard items.



# Circular Saw Tip Blanks

## Conventional Style

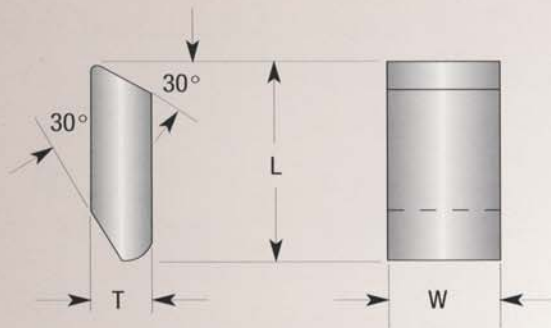
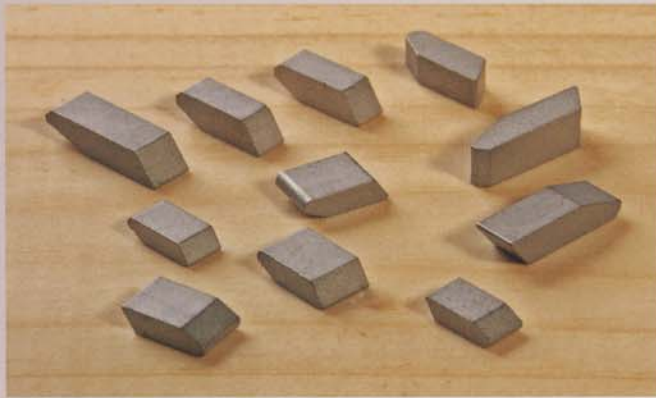


Catalog Number	Specifications		
	Length (L)	Thickness (T)	Width (W)
WA-7065	↑	↑	.065
WA-7070	↑	↑	.070
WA-7080	↑	↑	.080
WA-7085	↑	↑	.085
WA-7090	↑	↑	.090
WA-7100	↑	↑	.100
WA-7110	↑	↑	.110
WA-7115	↑	↑	.115
WA-7120	↑	↑	.120
WA-7125	↑	↑	.125
WA-7130	↑	↑	.130
WA-7135	↑	↑	.135
WA-7140	.250	.062	.140
WA-7145	↑	↑	.145
WA-7150	↑	↑	.150
WA-7160	↑	↑	.160
WA-7165	↑	↑	.165
WA-7180	↑	↑	.180
WA-7185	↑	↑	.185
WA-7190	↑	↑	.190
WA-7195	↑	↑	.195
WA-7200	↑	↑	.200
WA-7215	↑	↑	.215
WA-7230	↑	↑	.230
WA-7250	↑	↑	.250
WA-7260	↑	↑	.260
WA-7280	↓	↓	.280
WB-7085	↑	↑	.085
WB-7105	↑	↑	.105
WB-7120	↑	↑	.120
WB-7135	↑	↑	.135
WB-7150	.281	.078	.150
WB-7165	↑	↑	.165
WB-7180	↑	↑	.180
WB-7195	↑	↑	.195
WB-7200	↑	↑	.200
WB-7215	↓	↓	.215
WC-7100	↑	↑	.100
WC-7120	↑	↑	.120
WC-7135	.281	.093	.135
WC-7150	↑	↑	.150
WC-7165	↑	↑	.165
WC-7195	↓	↓	.195

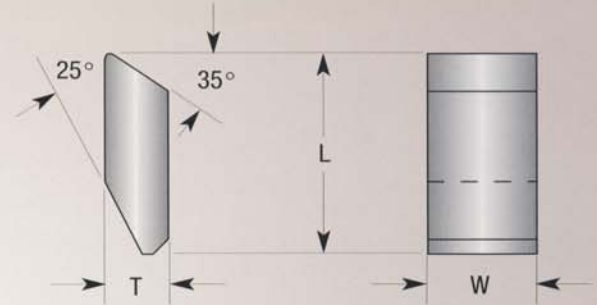
Catalog Number	Specifications		
	Length (L)	Thickness (T)	Width (W)
WD-7120	↑	↑	.120
WD-7135	↑	↑	.135
WD-7140	↑	↑	.140
WD-7150	↑	↑	.150
WD-7165	↑	↑	.165
WD-7180	↑	↑	.180
WD-7185	.312	.093	.185
WD-7200	↑	↑	.200
WD-7215	↑	↑	.215
WD-7230	↑	↑	.230
WD-7250	↑	↑	.250
WD-7281	↑	↑	.281
WD-7312	↓	↓	.312
WE-7150	↑	↑	.150
WE-7165	↑	↑	.165
WE-7185	↑	↑	.185
WE-7200	↑	↑	.200
WE-7225	.375	.093	.225
WE-7250	↑	↑	.250
WE-7281	↑	↑	.281
WE-7312	↓	↓	.312
WF-7140	↑	↑	.140
WF-7150	↑	↑	.150
WF-7165	↑	↑	.165
WF-7180	↑	↑	.180
WF-7190	↑	↑	.190
WF-7200	↑	↑	.200
WF-7210	↑	↑	.210
WF-7215	↑	↑	.215
WF-7225	↑	↑	.225
WF-7230	↑	↑	.230
WF-7250	↑	↑	.250
WF-7270	.500	.125	.270
WF-7280	↑	↑	.280
WF-7290	↑	↑	.290
WF-7312	↑	↑	.312
WF-7320	↑	↑	.320
WF-7375	↑	↑	.375
WF-7400	↑	↑	.400
WF-7437	↑	↑	.437
WF-7500	↑	↑	.500
WF-7562	↑	↑	.562
WF-7625	↑	↑	.625
WF-7687	↑	↑	.687
WF-7750	↓	↓	.750
WG-7150	↑	↑	.150
WG-7165	↑	↑	.165
WG-7180	↑	↑	.180
WG-7195	↑	↑	.195
WG-7215	↑	↑	.215
WG-7230	.375	.125	.230
WG-7250	↑	↑	.250
WG-7265	↑	↑	.265
WG-7280	↑	↑	.280
WG-7300	↑	↑	.300
WG-7350	↓	↓	.350
WH-7150	↑	↑	.150
WH-7165	↑	↑	.165
WH-7180	↑	↑	.180
WH-7200	↑	↑	.200
WH-7215	.344	.125	.215
WH-7230	↑	↑	.230
WH-7250	↑	↑	.250
WH-7265	↑	↑	.265
WH-7270	↓	↓	.270
WQ-7265	↑	↑	.265
WQ-7300	↑	↑	.300
WQ-7375	.375	.156	.375
WQ-7400	↑	↑	.400
WQ-7530	↑	↑	.530
WQ-7560	↓	↓	.560

# Circular Saw Tip Blanks

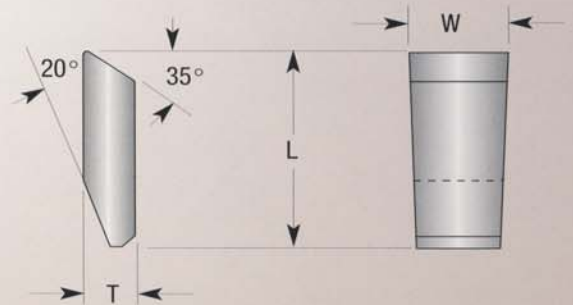
## European Style



Catalog Number	Specifications		
	Length (L)	Thickness (T)	Width (W)
WBC-7070	↑	↑	.070
WBC-7085	↑	↑	.085
WBC-7095	↑	↑	.095
WBC-7105	↑	↑	.105
WBC-7120	↑	↑	.120
WBC-7135	.281	.078	.135
WBC-7140	↑	↑	.140
WBC-7150	↑	↑	.150
WBC-7165	↑	↑	.165
WBC-7180	↑	↑	.180
WBC-7195	↓	↓	.195
WDC-7120	↑	↑	.120
WDC-7130	↑	↑	.130
WDC-7140	↑	↑	.140
WDC-7150	↑	↑	.150
WDC-7165	↑	↑	.165
WDC-7185	.312	.093	.185
WDC-7200	↑	↑	.200
WDC-7215	↑	↑	.215
WDC-7220	↑	↑	.220
WDC-7230	↑	↑	.230
WDC-7270	↓	↓	.270
WEC-7150	↑	↑	.150
WEC-7165	↑	↑	.165
WEC-7185	↑	↑	.185
WEC-7200	↑	↑	.200
WEC-7215	.375	.093	.215
WEC-7225	↑	↑	.225
WEC-7250	↑	↑	.250
WEC-7281	↑	↑	.281
WEC-7312	↓	↓	.312
WHC-7150	↑	↑	.150
WHC-7165	↑	↑	.165
WHC-7185	↑	↑	.185
WHC-7200	.344	.125	.200
WHC-7220	↑	↑	.220
WHC-7240	↓	↓	.240



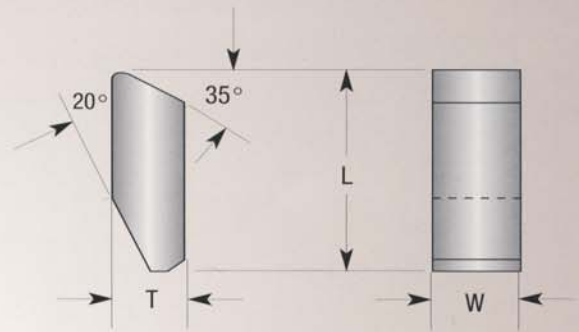
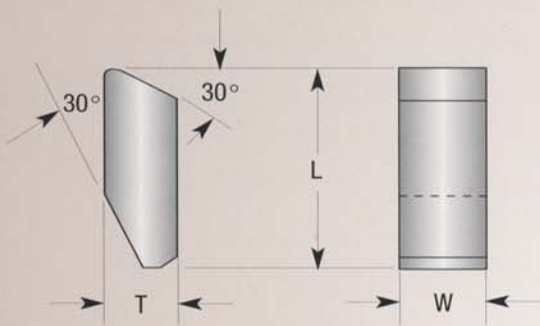
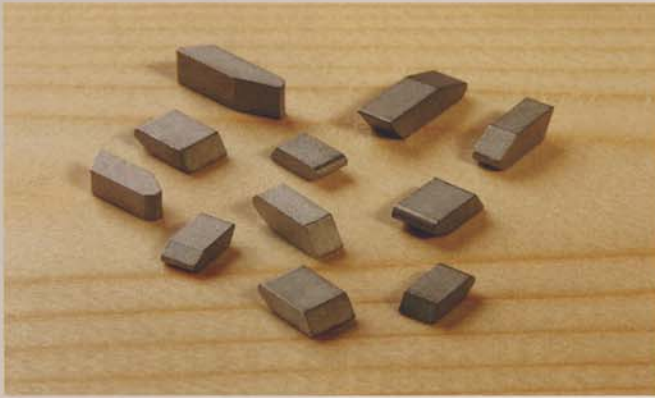
Catalog Number	Specifications		
	Length (L)	Thickness (T)	Width (W)
WXC-7130	↑	↑	.130
WXC-7135	↑	↑	.135
WXC-7140	.438	.125	.140
WXC-7150	↑	↑	.150
WXC-7170	↑	↑	.170
WXC-7180	↓	↓	.180



Catalog Number	Specifications		
	Length (L)	Thickness (T)	Width (W)
WRC-7125	↑	↑	.125
WRC-7150	↑	↑	.150
WRC-7165	↑	↑	.165
WRC-7170	↑	↑	.170
WRC-7185	↑	↑	.185
WRC-7200	↑	↑	.200
WRC-7220	↑	↑	.220
WRC-7230	.531	.125	.230
WRC-7250	↑	↑	.250
WRC-7265	↑	↑	.265
WRC-7280	↑	↑	.280
WRC-7312	↑	↑	.312
WRC-7370	↑	↑	.370
WRC-7390	↓	↓	.390

# Circular Saw Tip Blanks

## European Style

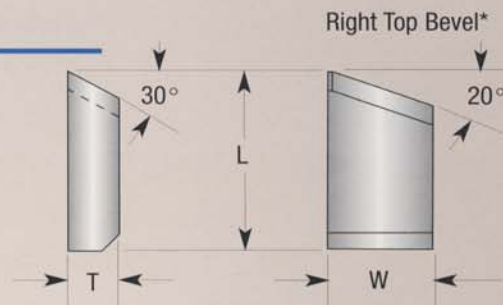
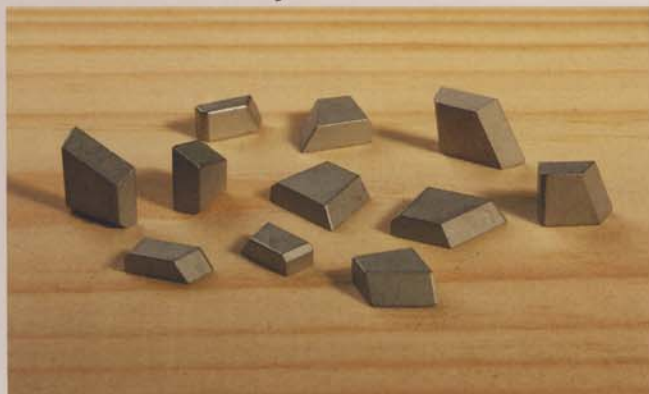


Catalog Number	Specifications				
	Length (L)	Thickness (T)	Width (W)		
WGC-7110	↑	↑	.110		
WGC-7120			.120		
WGC-7125			.125		
WGC-7130			.130		
WGC-7135			.135		
WGC-7140			.140		
WGC-7150			.150		
WGC-7160			.160		
WGC-7170			.170		
WGC-7180			.180		
WGC-7185			.185		
WGC-7190			.190		
WGC-7200			.375	.125	.200
WGC-7210			.210		
WGC-7220			.220		
WGC-7230			.230		
WGC-7240			.240		
WGC-7250			.250		
WGC-7260			.260		
WGC-7270			.270		
WGC-7280	.280				
WGC-7290	.290				
WGC-7300	.300				
WGC-7310	.310				
WGC-7320	↓	↓	.320		

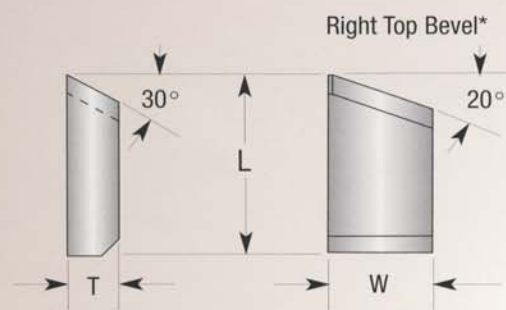
Catalog Number	Specifications				
	Length (L)	Thickness (T)	Width (W)		
WFC-7120	↑	↑	.120		
WFC-7125			.125		
WFC-7130			.130		
WFC-7140			.140		
WFC-7150			.150		
WFC-7160			.160		
WFC-7170			.170		
WFC-7180			.180		
WFC-7190			.190		
WFC-7200			.200		
WFC-7210			.505	.125	.210
WFC-7215			.215		
WFC-7220			.220		
WFC-7230			.230		
WFC-7240			.240		
WFC-7250			.250		
WFC-7260			.260		
WFC-7270			.270		
WFC-7280			.280		
WFC-7290			.290		
WFC-7300	.300				
WFC-7312	↓	↓	.312		

# Circular Saw Tip Blanks

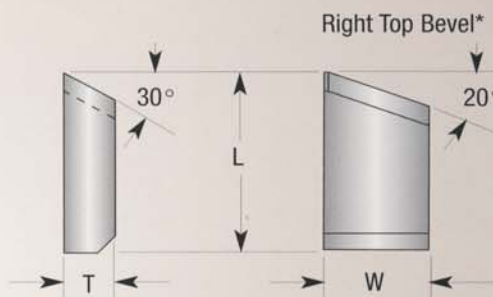
Left/Right Hand (Alternate Top Bevel)  
Conventional Style



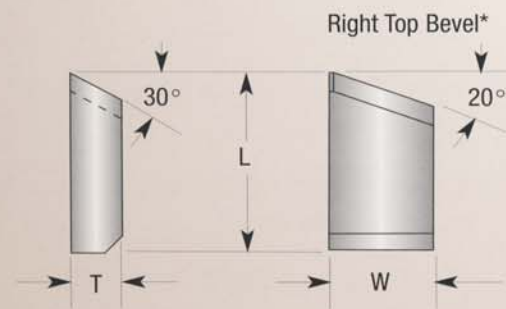
Catalog Number		Specifications			
Left Top Bevel	Right Top Bevel	Length (L)	Thickness (T)	Width (W)	
WD-7150LH	WD-7150RH	.315	.097	.150	
WD-7170LH	WD-7170RH			.170	
WD-7180LH	WD-7180RH			.180	
WD-7190LH	WD-7190RH	.200	.190	.190	
WD-7200LH	WD-7200RH			.200	
WD-7215LH	WD-7215RH			.215	



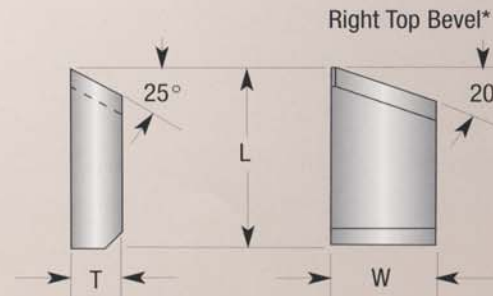
Catalog Number		Specifications			
Left Top Bevel	Right Top Bevel	Length (L)	Thickness (T)	Width (W)	
WB-7130LH	WB-7130RH	.281	.078	.130	
WB-7150LH	WB-7150LH			.150	
WB-7170LH	WB-7170RH			.170	
WB-7190LH	WB-7190RH			.190	
JL-4	JR-4			.315	.078
JL-5	JR-5	.170			
JL-6	JR-6	.190			



Catalog Number		Specifications			
Left Top Bevel	Right Top Bevel	Length (L)	Thickness (T)	Width (W)	
C-2484-1	C-2484-2	.312	.125	.150	
C-2485-1	C-2485-2			.170	
C-2486-1	C-2486-2			.190	
C-2487-1	C-2487-2			.220	
C-2488-3	C-2488-4			.240	
C-2488-1	C-2488-2			.250	
C-2488-5	C-2488-6	.344	.125	.150	
WH-7150LH	WH-7150RH			.170	
WH-7170LH	WH-7170RH			.190	
WH-7190LH	WH-7190RH	.375	.125	.170	
WG-7170LH	WG-7170RH			.190	
WG-7190LH	WG-7190RH			.220	
WG-7220LH	WG-7220RH			.240	
WG-7240LH	WG-7240RH			.250	
WG-7250LH	WG-7250RH			.265	
WG-7265LH	WG-7265RH			.290	
WG-7290LH	WG-7290RH			.345	
WF-7250LH	WF-7250RH	.500	.125	.250	



Catalog Number		Specifications			
Left Top Bevel	Right Top Bevel	Length (L)	Thickness (T)	Width (W)	
WE-7200LH	WE-7200RH	.375	.097	.200	
WE-7225LH	WE-7225RH			.225	
WE-7240LH	WE-7240RH			.240	
WE-7265LH	WE-7265RH			.265	
WE-7290LH	WE-7290RH	.315	.290	.290	
WE-7315LH	WE-7315RH			.315	
WE-7345LH	WE-7345RH			.345	

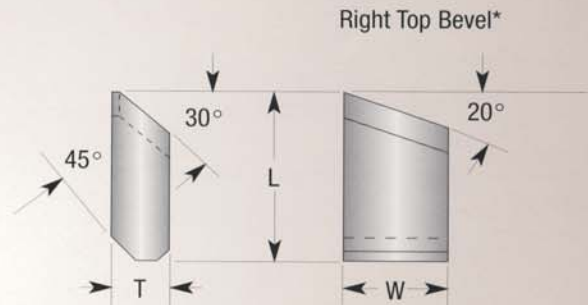
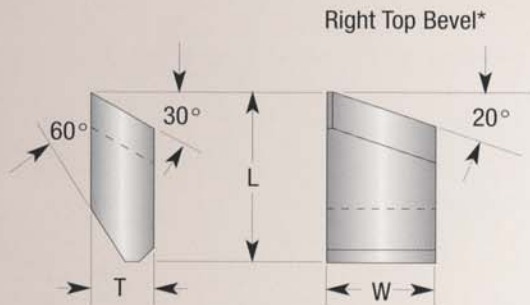
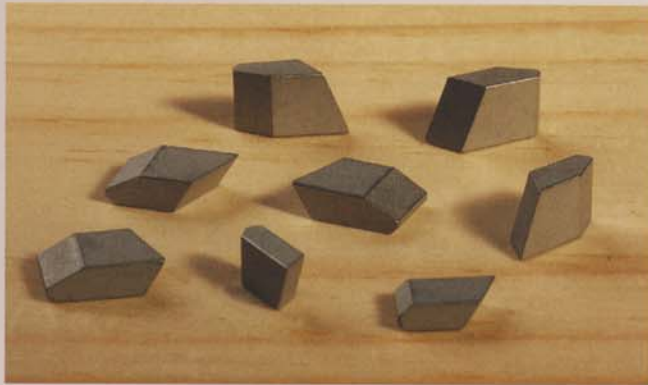


Catalog Number		Specifications			
Left Top Bevel	Right Top Bevel	Length (L)	Thickness (T)	Width (W)	
C-1164 LH	C-1164 RH	.315	.075	.218	
C-1165 LH	C-1165 RH			.250	

\*Left Top Bevel also available

# Circular Saw Tip Blanks

Left/Right Hand (Alternate Top Bevel)  
European Style

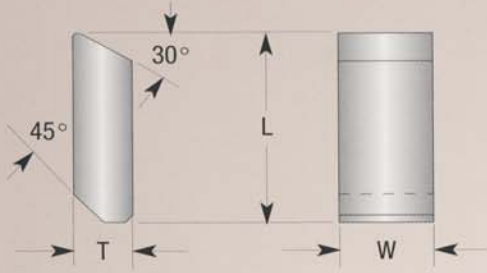


Catalog Number		Specifications				
Left Top Bevel	Right Top Bevel	Length (L)	Thickness (T)	Width (W)		
WGC-7150LH	WGC-7150RH	↑	↑	.150		
WGC-7160LH	WGC-7160RH			.160		
WGC-7170LH	WGC-7170RH			.170		
WGC-7180LH	WGC-7180RH			.180		
WGC-7190LH	WGC-7190RH			.190		
WGC-7200LH	WGC-7200RH			.200		
WGC-7210LH	WGC-7210RH			.375	.125	.210
WGC-7220LH	WGC-7220RH					.220
WGC-7230LH	WGC-7230RH					.230
WGC-7240LH	WGC-7240RH					.240
WGC-7250LH	WGC-7250RH					.250
WGC-7265LH	WGC-7265RH					.265
WGC-7290LH	WGC-7290RH					.290

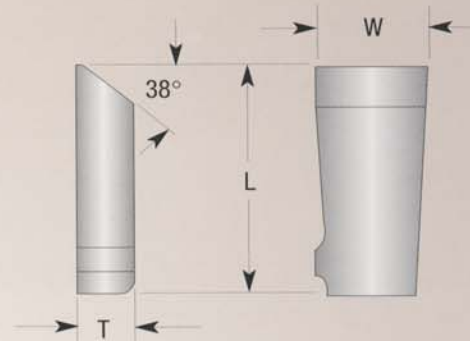
Catalog Number		Specifications				
Left Top Bevel	Right Top Bevel	Length (L)	Thickness (T)	Width (W)		
WDC-7150LH	WDC-7150RH	↑	↑	.150		
WDC-7170LH	WDC-7170RH			.170		
WDC-7180LH	WDC-7180RH			.315	.097	.180
WDC-7190LH	WDC-7190RH					.190
WDC-7200LH	WDC-7200RH					.200
WDC-7215LH	WDC-7215RH					.215
WDC-7250LH	WDC-7250RH					.250

\*Left Top Bevel also available

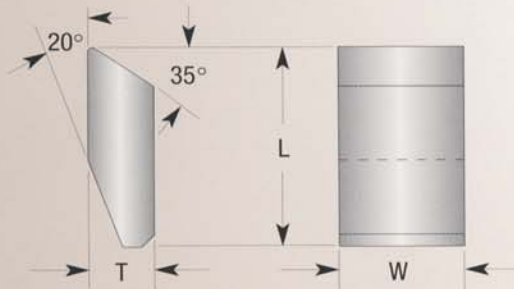
# Specialty Saw Tips



Catalog Number	Specifications				
	Length (L)	Thickness (T)	Width (W)		
MFC-7120	↑	↑	.120		
MFC-7140			.140		
MFC-7150			.150		
MFC-7165			.165		
MFC-7180			.180		
MFC-7185			.185		
MFC-7190			.190		
MFC-7200			.421	.118	.200
MFC-7215			.215		
MFC-7230			.230		
MFC-7250			.250		
MFC-7270			.270		
MFC-7280			.280		
MFC-7290			.290		
MFC-7320	↓	↓	.320		

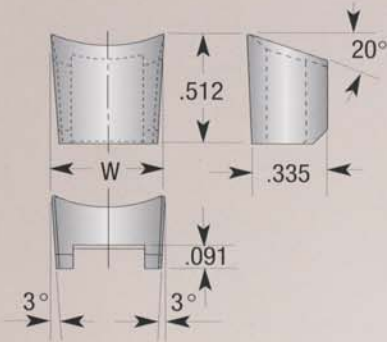


Catalog Number	Specifications				
	Length (L)	Thickness (T)	Width (W)		
C-1122-1	↑	↑	.155		
C-1122-2			.165		
C-1122-3			.180		
C-1122-4			.190		
C-1122-5			.200		
C-1122-6			.210		
C-1122-7			.220		
C-1122-8			.230		
C-1122-9			.240		
C-1122-10			.541	.125	.250
C-1122-11			.260		
C-1122-12			.270		
C-1122-13			.280		
C-1122-14			.290		
C-1122-15			.310		
C-1122-16			.320		
C-1122-17			.330		
C-1122-18			.130		
C-1122-19			.145		
C-1122-20	↓	↓	.340		



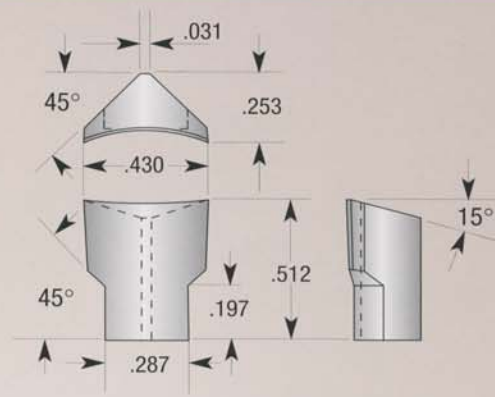
Catalog Number	Specifications				
	Length (L)	Thickness (T)	Width (W)		
C-3628-1	↑	↑	.255		
C-3628-2			.625		
C-3628-3			.140		
C-3628-4			.135		
C-3628-5			.280		
C-3628-6			.180		
C-3628-7			.225		
C-3628-8			.250		
C-3628-9			.270		
C-3628-10			.300		
C-3628-11			.205		
C-3628-12			.505	.150	.125
C-3628-13			.160		
C-3628-14			.190		
C-3628-15			.230		
C-3528-16			.385		
C-3628-17			.415		
C-3628-18			.375		
C-3628-19			.500		
C-3628-20			.430		
C-3628-21			.670		
C-3628-22			.330		
C-3628-23	↓	↓	.310		

## Specialty Saw Tips

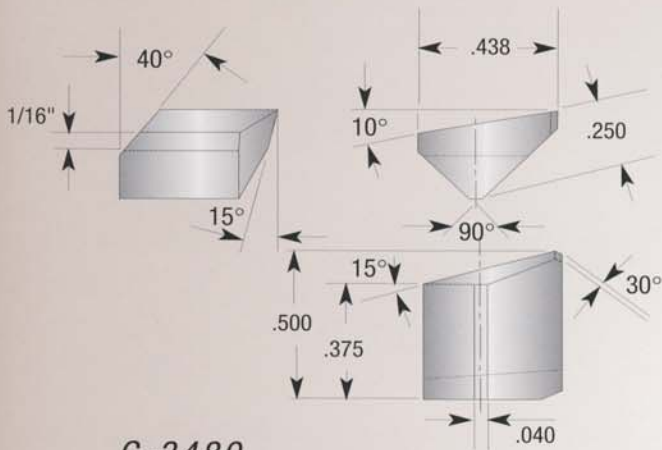


**C-4454**

Available in .500 and .470 kerf

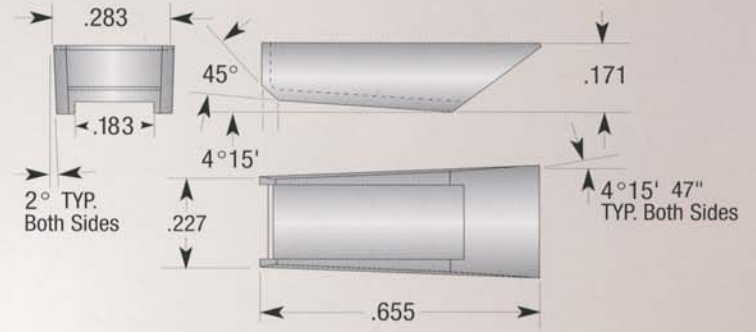


**C-4283**



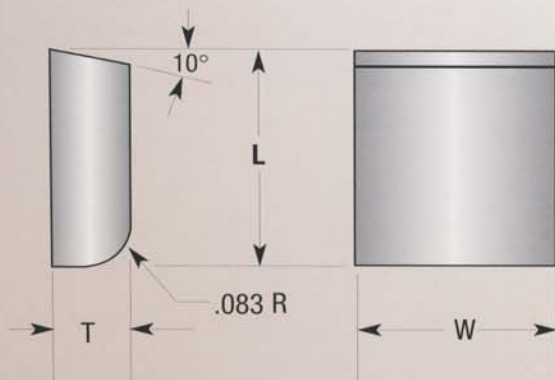
**C-3480**

Available in Left and Right Hand



**C-4402**

## Metal Cutting Saw Tips Blanks



Catalog Number

Specifications

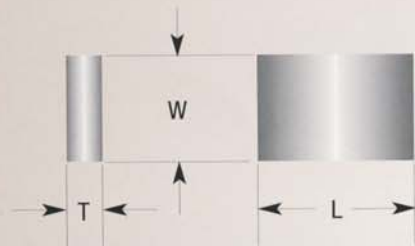
	Length (L)	Thickness (T)	Width (W)
125G150	↑	↑	.150
125G180	↑	↑	.180
125G200	↑	↑	.200
125G230	↑	↑	.230
125G250	.375	.125	.250
125G270	↑	↑	.270
125G300	↑	↑	.300
125G330	↓	↓	.330
<hr/>			
170H215	↑	↑	.215
170H230	↑	↑	.230
170H250	↑	↑	.250
170H270	↑	↑	.270
170H280	↑	↑	.280
170H300	↑	↑	.300
170H310	.375	.170	.310
170H330	↑	↑	.330
170H350	↑	↑	.350
170H365	↑	↑	.365
170H400	↑	↑	.400
170H450	↑	↑	.450
170H510	↑	↑	.510
170H585	↑	↑	.585
170H613	↓	↓	.613
<hr/>			
190F330	.500	.190	.330
190F400	↑	↑	.400
190F450	↑	↑	.450
190F510	↓	↓	.510

# Unground Rectangular Blanks

## Style 1000 and Strobe



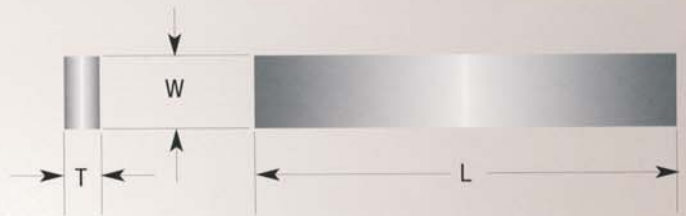
**Standard Blanks  
Style 1000**



Catalog Number      Specifications

Catalog Number	Specifications		
	Thickness (T)	Width (W)	Length (L)
1010	↑	1/8	5/8
1015		5/32	1/4
1020	1/16	3/16	1/4
1025		1/4	1/4
1030	↓	1/4	5/16
1035	↑	1/8	3/4
1040		3/16	5/16
1050		3/16	1/2
1060		1/4	3/8
1070	3/32	1/4	1/2
1080		5/16	3/8
1090		3/8	3/8
1100		3/8	1/2
1105	↓	7/16	1/2
1110	↑	3/16	3/4
1120		1/4	1/2
1130		1/4	5/8
1140		1/4	3/4
1150		5/16	7/16
1160		5/16	1/2
1170	1/8	5/16	5/8
1180		3/8	1/2
1190		3/8	3/4
1200		1/2	1/2
1210		1/2	3/4
1213		5/8	5/8
1215	↓	3/4	3/4
1220	5/32	3/8	9/16
1230		3/8	3/4
1240	↓	5/8	5/8
1244	↑	1/4	1/2
1250		5/16	7/16
1260		5/16	5/8
1270		3/8	1/2
1280		3/8	5/8
1290	3/16	3/8	3/4
1300		7/16	5/8
1310		7/16	13/16
1320		1/2	1/2
1330		1/2	3/4
1340	↓	3/4	3/4

**Unground Rectangular  
Strobe Blanks**

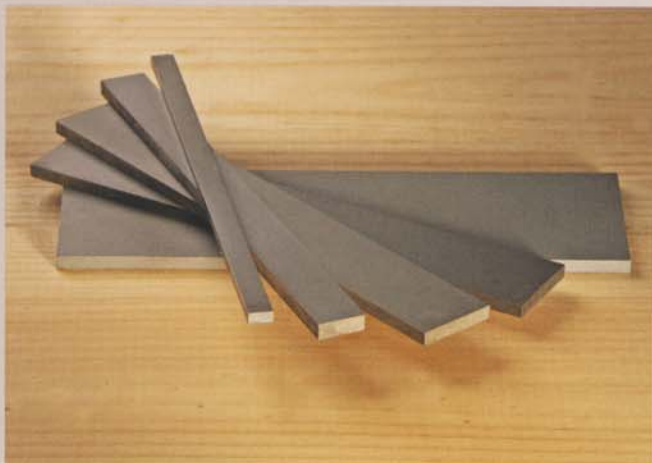


Size

1/8 x .120 x 1			1/8 x .120 x 1.281			1/8 x .120 x 1.250			1/8 x .120 x 1.313		
(T)	(W)	(L)	(T)	(W)	(L)	(T)	(W)	(L)	(T)	(W)	(L)
.130			.130			.130			.130		
.140			.140			.140			.140		
.150			.150			.150			.150		
.160			.160			.160			.160		
.170			.170			.170			.170		
.180			.180			.180			.180		
.190			.190			.190			.190		
.200			.200			.200			.200		
.210			.210			.210			.210		
.220			.220			.220			.220		
.230			.230			.230			.230		
.240			.240			.240			.240		
.250			.250			.250			.250		
.260			.260			.260			.260		
.270			.270			.270			.270		
.280			.280			.280			.280		
.300			.300			.300			.300		

# Unground Rectangular Blanks

## Style STB



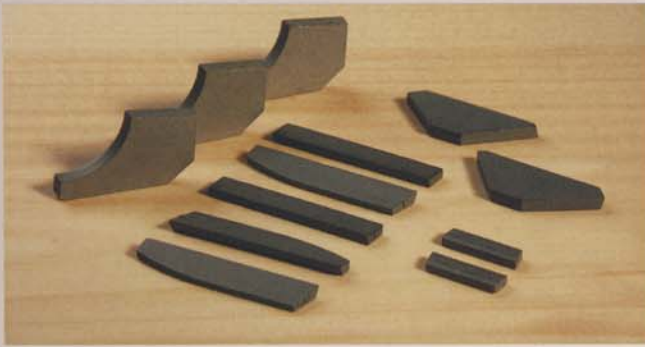
### Catalog Number Specifications

Catalog Number	Thickness (T)	Width (W)	Length (L)	
STB-24A	↑	1/8	1	
STB-24C		1/8	1 1/4	
STB-24B		1/8	3	
STB-24E		1/8	3/4	
STB-26A		1/16	3/16	1
STB-26C	3/16		3	
STB-28A	1/4		1	
STB-28B	1/4		1 1/4	
STB-28D	1/4		3	
STB-34A	↑	1/8	1	
STB-34		1/8	5	
STB-36A		3/16	1 1/4	
STB-36B		3/16	1	
STB-38A		1/4	1	
STB-38B	3/32	1/4	1 1/2	
STB-38D		1/4	5	
STB-310A		5/16	2	
STB-310B		5/16	3	
STB-310C		5/16	5	
STB-312	3/8	5		
STB-48A	1/8	1/4	1	
STB-48B		1/4	1 1/4	
STB-48C		1/4	2 1/4	
STB-48D		1/4	3	
STB-410A	↑	5/16	1 1/2	
STB-410C		5/16	2 1/2	
STB-410B		5/16	3	
STB-412D		1/8	3/8	1
STB-412A			3/8	2
STB-412B	3/8		3	
STB-416A	1/2		1	
STB-416B	1/2		1 1/2	
STB-416D	1/2	1/2	2 1/2	
STB-416C		1/2	3	
STB-68A	↑	1/4	3	
STB-610A		5/16	3	
STB-612A		3/16	3/8	3
STB-616B			1/2	2 1/2
STB-616A		1/2	3	
STB-620A		5/8	3	
STB-812A	1/4	3/8	3	
STB-816A		1/2	3	
STB-820A		5/8	3	
STB-824A		3/4	3	

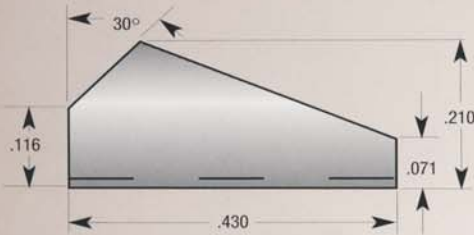
### Catalog Number Specifications

Catalog Number	Thickness (T)	Width (W)	Length (L)		
STB-68	↑	1/4	↑		
STB-610		5/16			
STB-612		3/8			
STB-616		1/2			
STB-620		3/16		5/8	6
STB-624	3/16	3/4	6		
STB-628		7/8			
STB-632		1			
STB-636		1 1/8			
STB-640		1 1/4			
STB-648	1 1/2	1 1/2			
STB-512	↑	3/8	↑		
STB-516		1/2			
STB-520		5/8			
STB-524		3/4			
STB-528		5/32		7/8	6
STB-532	5/32	1	6		
STB-536		1 1/8			
STB-540		1 1/4			
STB-548		1 1/2			
STB-812		1/4		3/8	6
STB-816	1/2				
STB-820	5/8				
STB-824	3/4				
STB-316	↑	1/2	↑		
STB-320		5/8			
STB-324		3/4			
STB-328		3/32		7/8	6
STB-332		1			
STB-336	3/32	1 1/8	6		
STB-340		1 1/4			
STB-348		1 1/2			
STB-46		↑		3/16	↑
STB-48E				1/4	
STB-410	5/16				
STB-412-C	3/8				
STB-416	1/2				
STB-420	1/8	5/8	6		
STB-424		3/4			
STB-428		7/8			
STB-432		1			
STB-436		1 1/8			
STB-440	1/4	1 1/4	↓		
STB-448		1 1/2			

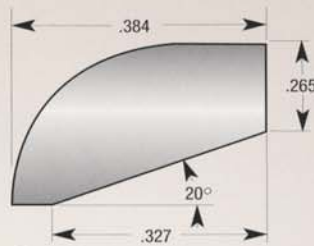
# Router Blanks



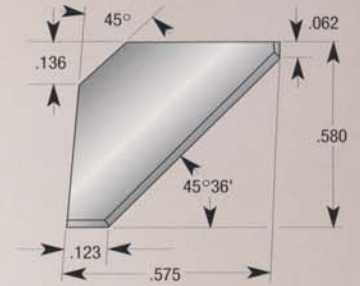
Below are just a few of our most popular router blank designs. Multi-Metals has tooling for hundreds of designs from the simplest to the most intricate, and are available in a multitude of grades. We have a variety of production capabilities, including our unique injection molding process, that allows us to rarely pass up the opportunity to provide the design that best suits your needs. Contact us with your design and if we do not already possess tooling to your specifications, we will work with you to find the most economical means of producing your design.



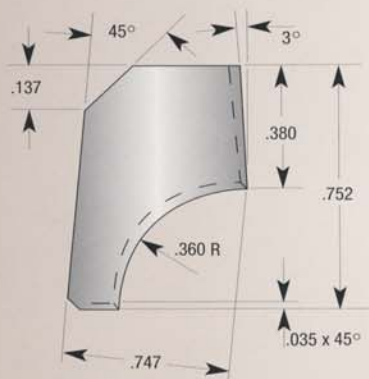
C-3324



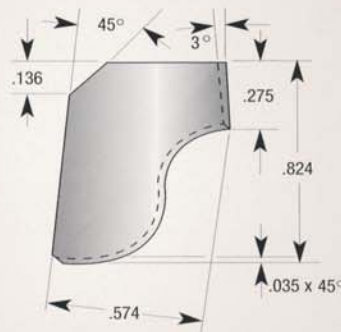
C-4296



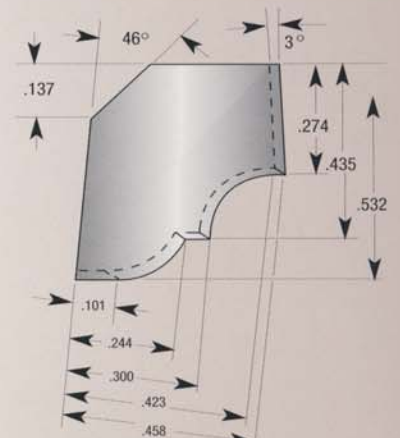
C-4493



C-4488



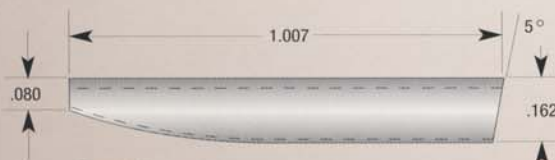
C-4490



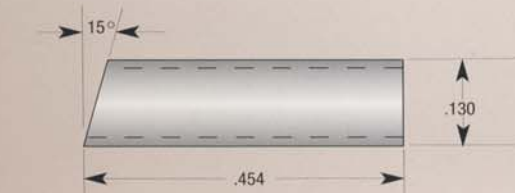
C-4494



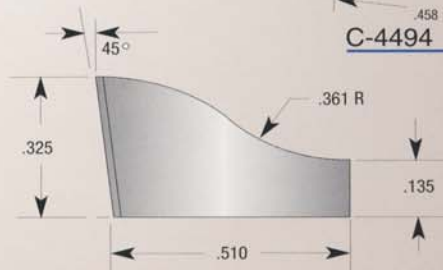
C-3047-1



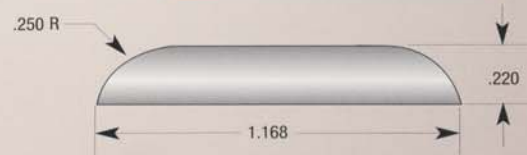
C-4086



C-3026



C-3555



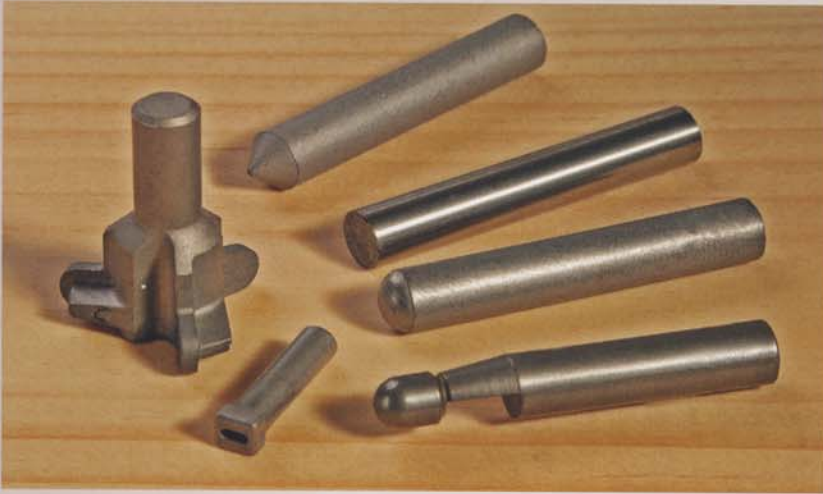
C-4144



C-4143

## **Solid Carbide Routers**

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Multi-Metals utilizes our versatile injection molding process to provide solid carbide router designs for the most demanding woodworking applications. From simple “blank” designs to elaborate, near-net-shape designs that require a minimum of grinding, we possess the ability to deliver your needs. Contact us with your requirements and let our expertise go to work for you.

## **Custom Cutter Blanks**

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Multi-Metals employs an array of production methods to produce even the most complicated cutter blank design. Whether you are producing custom molding or intricate cabinet designs, we can help you bring your ideas to life. Contact us with your designs and let our customer service and engineering departments show you how we can combine design with economy to produce the most efficient tooling available.

# Grade Chart

Grade	Cobalt%	Other	HRA	Density (g/cc)	TRS (PSI)
<b>Submicron</b>					
XM4	6.00	0.15% TaC	93.0-94.0	14.85-15.05	280,000
XM10	10.00	0.2% VC	91.8-92.8	14.32-14.52	390,000
<b>Fine</b>					
RD55	5.50		92.0-93.0	14.90-15.10	315,000
HOM2	6.00	0.2% VC	91.6-92.4	14.925-14.975	320,000
OM3	4.50		91.7-92.7	15.00-15.20	240,000
OM2	6.00		91.2-92.2	14.85-15.05	333,000
<b>Medium</b>					
1M2	6.00		90.5-91.5	14.85-15.05	390,000
HOM1	8.50		90.0-90.9	14.675-14.725	335,000
OM1	9.00		89.5-90.5	14.55-14.75	390,000
1M12	10.50		89.0-90.0	14.40-14.60	400,000
1M13	12.00		88.0-89.5	14.25-14.45	400,000
<b>Coarse</b>					
2M2	6.00		89.5-90.5	14.85-15.05	335,000
2M12	10.50		88.0-89.0	14.40-14.60	400,000
2M16	16.00		86.2-87.2	13.85-14.05	420,000
2M25	25.00		83.0-84.0	13.05-13.25	435,000
<b>Extra Coarse</b>					
25M12	10.50		87.5-88.5	14.40-14.60	400,000
25M16	16.00		85.4-86.4	13.85-14.05	430,000
<b>Metalcutting</b>					
MC85	8.50	8% TiC, 11.5% TaC	90.8-91.8	12.45-12.65	276,000
MC90	9.00	6% TiC, 9.85% TaC	90.8-91.8	12.90-13.10	290,000
MC115	11.50	4% TiC, 9.05% TaC	90.0-91.0	13.20-13.40	348,000
<b>Nickel Grades</b>					
NF10		10% nickel	89.5-90.5	14.35-14.55	319,000
CN10		10% nickel	87.6-88.6	14.35-14.55	334,000

Tolerances for significant dimensions are shown. All other dimensions are shown as nominal values only. We have determined manufacturing tolerance based on industry standards, our expertise in carbide production, and our understanding of the industry the component is used in. Final acceptance of the product will take manufacturing tolerances, product use and past shipments into consideration. As needed, the customer may request other dimensions be held to specific tolerances during contact with Multi-Metals.

## Terms & Conditions

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1. **Warranty:** We will replace any material which is proven defective within 90 days after receipt of same by customer when properly used for the purpose specified in the order, but no claim for labor or damage will be allowed. Claims for errors must be made on receipt of material.
2. **Over and Under Shipments:** We reserve the right to over or under ship 10% of the specified quantity and orders will be closed out and invoiced with shortages or overages.
3. **Terms and Conditions of all quotations are contingent upon strikes, accidents and other causes beyond our reasonable control.**
4. **Dies and tools used in manufacturing shall remain the property of Multi-Metals.**
5. **Material can only be returned after obtaining authorization. Returned material must be carefully packed and insured for shipment as we will not accept responsibility for damaged or lost product while enroute to us.**
6. **Special, non-standard items cannot be canceled or returned for exchange or credit. Standard items can only be returned after our consent is first obtained and after determining whether or not our standard 15% handling charge is applicable.**
7. **Modification:** No terms or conditions, other than those stated herein, and no agreement or understanding in any way modifying the terms and conditions herein stated, shall be binding upon the seller unless made in writing and signed by the authorized sales agent.
8. **Delivery:** Estimated delivery is based on production time required to process order commencing with date order is received by us.
9. **Verification of Credit Rating:** Quotations are submitted subject to verification of a satisfactory credit rating.

### WARNING

**THIS PRODUCT CONTAINS  
POTENTIALLY HAZARDOUS  
INGREDIENTS** including Tungsten  
Carbide and Cobalt, with some  
grades containing one or more of  
the following ingredients: Tantalum  
Carbide, Chromium Carbide,  
Chromium, or Nickel.  
**Read Material Safety  
Data Sheet**

### WARNING

#### TUNGSTEN CARBIDE/COBALT/NICKEL

Exposure to cobalt/nickel powder, to dust or to coolant mist from grinding this product may cause nose, throat, skin, or eye irritation, or temporary or permanent respiratory disease, which may lead to disability or death. If you experience any symptoms of these problems, such as tightness in chest, shortness of breath, coughing, wheezing, loss of appetite, or nausea, immediately discontinue exposure to the powder, dust or mist, consult a physician and advise physician you have been exposed to cobalt and/or nickel.

Avoid breathing powder, dust or coolant mist from grinding.

Avoid skin contact with powder, dust or coolant mist.

Use protective devices and adequate ventilation.

Keep dust level below OSHA and ACGIH levels.

Wash hands thoroughly after using and before smoking or eating.

Dispose of materials in accordance with local, state and/or Federal regulations.



**MULTI-METALS**  
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