

Recommended Parameters for Graphite Machining by End Mills

End mill diameter (mm)	Machine speed (rpm)	Cutting speed (sfm)	Feed rate (fpt) in (mm)	Operation
.5mm	20,000 – 60,000	80 – 245	.0002 – .0005 (.005-.013)	Finish
1mm	16,000 – 60,000	130 – 500	.0005 – .001 (.013-.025)	Finish
2mm	8,000 – 60,000	160 – 1,000	.001 – .002 (.025-.020)	General
			.0005 – .001 (.013-.025)	Finish
3mm	6,000 – 60,000	200 – 2,000	.001 – .002 (.025-.050)	General
			.0005 – .001 (.013-.025)	Finish
4mm	4,000 – 60,000	200 – 3,000	.001 – .002 (.025-.050)	General
			.0005 – .001 (.013-.025)	Finish
6mm	3,000 – 50,000	200 – 3,300	.002 – .004 (.050-.100)	General
			.001 – .002 (.025-.050)	Finish
8mm	2,500 – 42,000	200 – 3,400	.002 – .004 (.050-.100)	General
			.001 – .002 (.025-.050)	Finish
10mm	2,000 – 36,000	200 – 3,500	.003 – .005 (.075-.125)	General
			.001 – .003 (.025-.075)	Finish
12mm	1,500 – 30,000	200 – 4,000	.003 – .005 (.075-.125)	General
			.001 – .003 (.025-.075)	Finish

Diamond – the hardest, most wear resistant material in the world – and since the 1960's, a preferred material for the tool manufacturing industry.

Toolmakers have taken advantage of the properties of using Poly-Crystalline Diamond (PCD) tool inserts. However, they are limited because PCD can only be made into flat shapes.

CVD Diamond Corporation addresses this limitation using a Chemical Vapor Deposition (CVD) technique to coat tungsten carbide with pure diamond.

We are now offering a newly expanded line of end mills for machining non-ferrous materials, available in sizes from .5mm to 12mm cutting diameters with standard and extra long lengths, long reach micro tools and Rigid Mills.

CVD Diamond's tools are of the highest quality. They provide increased tool life, and hold tolerance on the workpiece much longer than any other tools. This means increased productivity and lower tooling cost; in short, a better product.

For more information on how CVD Diamond Corporation can meet your need for long lasting tools, please call 1-877-457-9903 or visit our website www.cvddiamond.com



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Diamond Coated End Mills

CVD Diamond Corporation makes diamond coated end mills of the highest quality. Testing has shown and customers have verified that our end mills last longer than any other tools available on the market today.

We offer a complete range of end mills in Ball Nose, Square End, and Square End With a radius, in cutting diameters as small as .5mm, and up to 12mm in diameter.



Standard Length End Mills						ORDER NUMBER		
Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Flutes	Radius	Ball Nose	Square End	Square with Radius
3mm	3mm	12mm	38mm	4		MB03003-120384		
					.38mm	MS03003-120384	MR03003-120384-38	
4mm	4mm	15mm	50mm	4		MB04004-150504		
					.50mm	MS04004-150504	MR04004-150504-50	
6mm	6mm	20mm	63mm	4		MB06006-200634		
					.50mm	MS06006-200634	MR06006-200634-50	
8mm	8mm	20mm	63mm	4		MB08008-200634		
					.50mm	MS08008-200634	MR08008-200634-50	
10mm	10mm	25mm	63mm	4		MB10010-250634		
					.50mm	MS10010-250634	MR10010-250634-50	
12mm	12mm	25mm	75mm	4		MB12012-250754		
					.50mm	MS12012-250754	MR12012-250754-50	



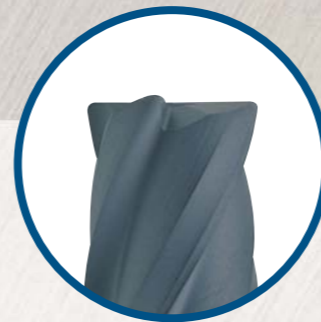
Ball Nose



Square End



Extra Long End Mills						ORDER NUMBER		
Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Flutes	Radius	Ball Nose	Square End	Square with Radius
3mm	3mm	25mm	75mm	4		MB03003-250754		
					.38mm	MS03003-250754	MR03003-250754-38	
4mm	4mm	25mm	100mm	4		MB04004-251004		
					.50mm	MS04004-251004	MR04004-251004-50	
6mm	6mm	38mm	150mm	4		MB06006-381504		
					.50mm	MS06006-381504	MR06006-381504-50	
8mm	8mm	38mm	150mm	4		MB08008-381504		
					.50mm	MS08008-381504	MR08008-381504-50	
10mm	10mm	38mm	150mm	4		MB10010-381504		
					.50mm	MS10010-381504	MR10010-381504-50	
12mm	12mm	38mm	150mm	4		MB12012-381504		
					.50mm	MS12012-381504	MR12012-381504-50	



Radius



Micro Tools						ORDER NUMBER		
Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Flutes	Radius	Ball Nose	Square End	Square with Radius
.5mm	3mm	1.5mm	38mm	2		MB00503-020382		
					.25mm	MS00503-020382		
1mm	3mm	3mm	38mm	4		MB01003-030384		
					.25mm	MS01003-030384	MR01003-030384-25	
2mm	3mm	6mm	38mm	4		MB02003-060384		
					.25mm	MS02003-060384	MR02003-060384-25	



Long Reach Micro Tools							ORDER NUMBER			
Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Flutes	Reach	Relief Diameter	Radius	Ball Nose	Square End	Square with Radius
.5mm	3mm	1.5mm	38mm	2	4mm	.43mm		MB00503-020382L		
							.25mm	MS00503-020382L		
1mm	3mm	3mm	50mm	4	10mm	.90mm		MB01003-030504L		
							.25mm	MS01003-030504L	MR01003-030504-25L	
2mm	3mm	6mm	50mm	4	20mm	1.88mm		MB02003-060504L		
							.25mm	MS02003-060504L	MR02003-060504-25L	



Metric Rigid Mills						ORDER NUMBER		
Cutting Diameter	Shank Diameter	Flute Length	Overall Length	Flutes	Radius	Ball Nose	Square End	Square with Radius
3mm	3mm	3mm	75mm	4		MB03003-030754		
					.38mm	MS03003-030754	MR03003-030754-38	
4mm	4mm	4mm	75mm	4		MB04004-040754		
					.50mm	MS04004-040754	MR04004-040754-50	
6mm	6mm	6mm	100mm	4		MB06006-061004		
					.50mm	MS06006-061004	MR06006-061004-50	
12mm	12mm	12mm	150mm	4		MB12012-121504		
					.50mm	MS12012-121504	MR12012-121504-50	