

Premium Mold Making Cutting Tools


**New Metric
80% Core
Ballnose End Mills**



Made in the U.S.A.

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80% Core 2 Flute Coated Solid Carbide End Mills – Ball Nose



- 80% core geometry offers added strength and excellent rigidity for profile milling and contouring applications
 - Less push
 - Reduced chatter
 - Improved chip extraction produces excellent finishes in valleys and pockets
 - AlTiN Coated for longer tool life
 - Designed for hard metal milling up to 58 HRC
- Premium micro grain carbide
- H6 Shank tolerance for heat shrink applications
- Cutting diameter tolerance +.0000 -.0015
- Eliminates rough finish commonly left by typical 4 flute tools

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Coating
80-2125P	Ball Nose	2	1/8"	1/2"	1/8"	4"	AlTiN
80-2126P	Ball Nose	2	1/8"	1/2"	1/8"	6"	AlTiN
80-2187P	Ball Nose	2	3/16"	3/4"	3/16"	4"	AlTiN
80-2188P	Ball Nose	2	3/16"	3/4"	3/16"	6"	AlTiN
80-2250P	Ball Nose	2	1/4"	3/4"	1/4"	4"	AlTiN
80-2251P	Ball Nose	2	1/4"	3/4"	1/4"	6"	AlTiN
80-2312P	Ball Nose	2	5/16"	3/4"	5/16"	4"	AlTiN
80-2313P	Ball Nose	2	5/16"	3/4"	5/16"	6"	AlTiN
80-2375P	Ball Nose	2	3/8"	7/8"	3/8"	4"	AlTiN
80-2376P	Ball Nose	2	3/8"	7/8"	3/8"	6"	AlTiN
80-2377P	Ball Nose	2	3/8"	7/8"	3/8"	8"	AlTiN
80-2500P	Ball Nose	2	1/2"	1"	1/2"	4"	AlTiN
80-2501P	Ball Nose	2	1/2"	1"	1/2"	6"	AlTiN
80-2502P	Ball Nose	2	1/2"	1"	1/2"	8"	AlTiN
80-2503P	Ball Nose	2	1/2"	1"	1/2"	12"	AlTiN

80% Core Metric 2 Flute Coated Solid Carbide End Mills – Ball Nose



- 80% core geometry offers added strength and excellent rigidity for profile milling and contouring applications
 - Less push
 - Reduced chatter
 - Improved chip extraction produces excellent finishes in valleys and pockets
 - AlTiN Coated for longer tool life
 - Designed for hard metal milling up to 58 HRC
- Premium micro grain carbide
- H6 Shank tolerance for heat shrink applications
- Cutting diameter tolerance $+.000 \text{ } -.038 \text{ mm}$
- Eliminates rough finish commonly left by typical 4 flute tools

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Coating
80-2236P	Ball Nose	2	6 mm	18 mm	6 mm	100 mm	AlTiN
80-2237P	Ball Nose	2	6 mm	18 mm	6 mm	150 mm	AlTiN
80-2315P	Ball Nose	2	8 mm	20 mm	8 mm	100 mm	AlTiN
80-2316P	Ball Nose	2	8 mm	20 mm	8 mm	150 mm	AlTiN
80-2393P	Ball Nose	2	10 mm	22 mm	10 mm	100 mm	AlTiN
80-2394P	Ball Nose	2	10 mm	22 mm	10 mm	150 mm	AlTiN
80-2472P	Ball Nose	2	12 mm	25 mm	12 mm	100 mm	AlTiN
80-2473P	Ball Nose	2	12 mm	25 mm	12 mm	150 mm	AlTiN

80% Core 2 Flute Coated Solid Carbide End Mills – Ball Nose Profile



- 80% core geometry offers added strength and excellent rigidity for profile milling and contouring applications
 - Less push
 - Reduced chatter
 - Improved chip extraction produces excellent finishes in valleys and pockets
 - AlTiN Coated for longer tool life
 - Designed for hard metal milling up to 58 HRc
- Premium micro grain carbide
- H6 Shank tolerance for heat shrink applications
- Larger shank with 3° draft angles, gives extra reach with added strength
- Cutting diameter tolerance +.0000 -.0015
- Eliminates rough finish commonly left by typical 4 flute tools

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Coating
82-2032P	Ball Nose	2	1/32"	1/16"	1/4"	4"	AlTiN
82-2062P	Ball Nose	2	1/16"	1/8"	1/4"	4"	AlTiN
82-2093P	Ball Nose	2	3/32"	3/16"	1/4"	4"	AlTiN
82-2125P	Ball Nose	2	1/8"	1/4"	1/4"	4"	AlTiN
82-2126P	Ball Nose	2	1/8"	1/4"	3/8"	4"	AlTiN
82-2187P	Ball Nose	2	3/16"	3/8"	3/8"	4"	AlTiN
82-2250P	Ball Nose	2	1/4"	1/2"	3/8"	4"	AlTiN
82-2312P	Ball Nose	2	5/16"	5/8"	3/8"	4"	AlTiN
82-2375P	Ball Nose	2	3/8"	3/4"	1/2"	4"	AlTiN
82-2437P	Ball Nose	2	7/16"	7/8"	1/2"	4"	AlTiN

80% Core 2 Flute Coated Solid Carbide End Mills – Corner Radius



- 80% core geometry offers added strength and excellent rigidity for profile milling and contouring applications
 - Less push
 - Reduced chatter
 - Improved chip extraction produces excellent finishes in valleys and pockets
 - AlTiN Coated for longer tool life
 - Designed for hard metal milling up to 58 HRC
- Premium micro grain carbide
- H6 Shank tolerance for heat shrink applications
- Cutting diameter tolerance +.0000 -.0015
- Eliminates rough finish commonly left by typical 4 flute tools

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Corner Radius	Coating
81-2187P	Corner Radius	2	3/16"	3/4"	3/16"	4"	0.020"	AlTiN
81-2188P	Corner Radius	2	3/16"	3/4"	3/16"	6"	0.020"	AlTiN
81-2250P	Corner Radius	2	1/4"	3/4"	1/4"	4"	0.030"	AlTiN
81-2251P	Corner Radius	2	1/4"	3/4"	1/4"	6"	0.030"	AlTiN
81-2375P	Corner Radius	2	3/8"	7/8"	3/8"	4"	0.030"	AlTiN
81-2376P	Corner Radius	2	3/8"	7/8"	3/8"	6"	0.030"	AlTiN
81-2500P	Corner Radius	2	1/2"	1"	1/2"	4"	0.030"	AlTiN
81-2501P	Corner Radius	2	1/2"	1"	1/2"	6"	0.030"	AlTiN
81-2502P	Corner Radius	2	1/2"	1"	1/2"	8"	0.030"	AlTiN
81-2503P	Corner Radius	2	1/2"	1"	1/2"	12"	0.030"	AlTiN

Variable 4 Flute Coated Solid Carbide End Mills – Square End



- Unique variable flute geometry reduces harmonics and diminishes chatter so higher feed rates can be obtained
- High performance variable helix
- Reduces tool changes
- Designed for rough cut and finish milling
- Replaces typical old fashioned 4 flute end mills
- High output geometry
- Premium micro grain carbide
- H6 Shank tolerance for heat shrink applications
- AlTiN Coated for longer tool life
- Ideal for hard to machine materials such as P-20, stainless steel and pre-heat treated metals up to 45 HRC

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Coating
90-4093SCP	Square End	Variable 4	3/32"	1/2"	3/32"	2"	AlTiN
90-4125SCP	Square End	Variable 4	1/8"	1/2"	1/8"	1 1/2"	AlTiN
90-4156SCP	Square End	Variable 4	5/32"	5/8"	5/32"	2"	AlTiN
90-4187SCP	Square End	Variable 4	3/16"	5/8"	3/16"	2"	AlTiN
90-4250SCP	Square End	Variable 4	1/4"	3/4"	1/4"	2 1/2"	AlTiN

Variable 4 Flute Coated Solid Carbide End Mills – Corner Radius



- Unique variable flute geometry reduces harmonics and diminishes chatter so higher feed rates can be obtained
- High performance variable helix
- Reduces tool changes
- Designed for rough cut and finish milling
- Replaces typical old fashioned 4 flute end mills
- High output geometry
- Premium micro grain carbide
- H6 Shank tolerance for heat shrink applications
- Cutting diameter tolerance +.0000 -.0015
- AlTiN Coated for longer tool life
- Ideal for hard to machine materials such as P-20, stainless steel and pre-heat treated metals up to 45 HRc

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Corner Radius	Coating
90-4125P	Corner Radius	Variable 4	1/8"	1/2"	1/8"	1 1/2"	0.015"	AlTiN
90-4126P	Corner Radius	Variable 4	1/8"	3/4"	1/8"	2 "	0.015"	AlTiN
90-4187P	Corner Radius	Variable 4	3/16"	5/8"	3/16"	2"	0.020"	AlTiN
90-4188P	Corner Radius	Variable 4	3/16"	3/4"	3/16"	2 1/2"	0.020"	AlTiN
90-4250P	Corner Radius	Variable 4	1/4"	3/4"	1/4"	2 1/2"	0.020"	AlTiN
90-4251P	Corner Radius	Variable 4	1/4"	1 1/8"	1/4"	3"	0.020"	AlTiN
90-4312P	Corner Radius	Variable 4	5/16"	7/8"	5/16"	2 1/2"	0.020"	AlTiN
90-4313P	Corner Radius	Variable 4	5/16"	1 1/8"	5/16"	3"	0.020"	AlTiN
90-4375P	Corner Radius	Variable 4	3/8"	7/8"	3/8"	2 1/2"	0.030"	AlTiN
90-4376P	Corner Radius	Variable 4	3/8"	1 1/8"	3/8"	3"	0.030"	AlTiN
90-4437P	Corner Radius	Variable 4	7/16"	1"	7/16"	2 3/4"	0.030"	AlTiN
90-4438P	Corner Radius	Variable 4	7/16"	2"	7/16"	4"	0.030"	AlTiN
90-4500P	Corner Radius	Variable 4	1/2"	1"	1/2"	3"	0.030"	AlTiN
90-4501P	Corner Radius	Variable 4	1/2"	2"	1/2"	4"	0.030"	AlTiN
90-4625P	Corner Radius	Variable 4	5/8"	1 1/4"	5/8"	3 1/2"	0.030"	AlTiN
90-4626P	Corner Radius	Variable 4	5/8"	2 1/4"	5/8"	5"	0.030"	AlTiN
90-4750P	Corner Radius	Variable 4	3/4"	1 1/2"	3/4"	4"	0.030"	AlTiN
90-4751P	Corner Radius	Variable 4	3/4"	2 1/4"	3/4"	5"	0.030"	AlTiN
90-4752P	Corner Radius	Variable 4	3/4"	3"	3/4"	6"	0.030"	AlTiN
90-4100P	Corner Radius	Variable 4	1"	1 1/2"	1"	4"	0.030"	AlTiN
90-4101P	Corner Radius	Variable 4	1"	2 1/4"	1"	5"	0.030"	AlTiN
90-4102P	Corner Radius	Variable 4	1"	3"	1"	6"	0.030"	AlTiN
90-4103P	Corner Radius	Variable 4	1"	4"	1"	7"	0.030"	AlTiN

Variable 4 Flute Coated Solid Carbide End Mills – Extended Reach Corner Radius



- Extra long shanks for hard to reach machining
- Unique variable flute geometry reduces harmonics and diminishes chatter so higher feed rates can be obtained
- High performance variable helix
- Reduces tool changes
- Designed for rough cut and finish milling
- Replaces typical old fashioned 4 flute end mills
- High output geometry
- Premium micro grain carbide
- H6 Shank tolerance for heat shrink applications
- Cutting diameter tolerance $+.0000 - .0015$
- AlTiN Coated for longer tool life
- Ideal for hard to machine materials such as P-20, stainless steel and pre-heat treated metals up to 45 HRC

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Corner Radius	Coating
90-4125-4P	Corner Radius	Variable 4	1/8"	1/2"	1/8"	4"	0.020"	AlTiN
90-4187-4P	Corner Radius	Variable 4	3/16"	5/8"	3/16"	4"	0.020"	AlTiN
90-4250-4P	Corner Radius	Variable 4	1/4"	3/4"	1/4"	4"	0.020"	AlTiN
90-4312-4P	Corner Radius	Variable 4	5/16"	7/8"	5/16"	4"	0.020"	AlTiN
90-4375-4P	Corner Radius	Variable 4	3/8"	7/8"	3/8"	4"	0.020"	AlTiN
90-4500-4P	Corner Radius	Variable 4	1/2"	1"	1/2"	4"	0.060"	AlTiN
90-4507-060P	Corner Radius	Variable 4	1/2"	1"	1/2"	6"	0.060"	AlTiN

Extended Reach 4 Flute Coated Solid Carbide End Mills – Ball Nose



- Extra long shanks for hard to reach machining
- Premium micro grain carbide
- H6 shank tolerance for heat shrink applications
- Cutting diameter tolerance +.0000 - .0015
- 30° helix general purpose ball nose
- Shorter flute length for maximum strength
- TiAlN coated for extended tool life

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Coating
51-4125P	Ball Nose	4	1/8"	1/2"	1/8"	4"	TiAlN
51-4126P	Ball Nose	4	1/8"	1/2"	1/8"	6"	TiAlN
51-4187P	Ball Nose	4	3/16"	5/8"	3/16"	4"	TiAlN
51-4188P	Ball Nose	4	3/16"	5/8"	3/16"	6"	TiAlN
51-4250P	Ball Nose	4	1/4"	3/4"	1/4"	4"	TiAlN
51-4251P	Ball Nose	4	1/4"	3/4"	1/4"	6"	TiAlN
51-4312P	Ball Nose	4	5/16"	7/8"	5/16"	4"	TiAlN
51-4313P	Ball Nose	4	5/16"	7/8"	5/16"	6"	TiAlN
51-4375P	Ball Nose	4	3/8"	7/8"	3/8"	4"	TiAlN
51-4376P	Ball Nose	4	3/8"	7/8"	3/8"	6"	TiAlN
51-4500P	Ball Nose	4	1/2"	1"	1/2"	4"	TiAlN
51-4501P	Ball Nose	4	1/2"	1"	1/2"	6"	TiAlN
51-4626P	Ball Nose	4	5/8"	1 1/4"	5/8"	6"	TiAlN
51-4751P	Ball Nose	4	3/4"	1 1/2"	3/4"	6"	TiAlN

Extended Reach 4 Flute Coated Solid Carbide End Mills – Square End



- Extra long shanks for hard to reach machining
- Premium micro grain carbide
- H6 shank tolerance for heat shrink applications
- Cutting diameter tolerance +.0000 - .0015
- 30° helix general purpose ball nose
- Shorter flute length for maximum strength
- TiAlN coated for extended tool life

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Coating
41-4125P	Square End	4	1/8"	1/2"	1/8"	4"	TiAlN
41-4126P	Square End	4	1/8"	1/2"	1/8"	6"	TiAlN
41-4187P	Square End	4	3/16"	5/8"	3/16"	4"	TiAlN
41-4188P	Square End	4	3/16"	5/8"	3/16"	6"	TiAlN
41-4250P	Square End	4	1/4"	3/4"	1/4"	4"	TiAlN
41-4251P	Square End	4	1/4"	3/4"	1/4"	6"	TiAlN
41-4312P	Square End	4	5/16"	7/8"	5/16"	4"	TiAlN
41-4313P	Square End	4	5/16"	7/8"	5/16"	6"	TiAlN
41-4375P	Square End	4	3/8"	7/8"	3/8"	4"	TiAlN
41-4376P	Square End	4	3/8"	7/8"	3/8"	6"	TiAlN
41-4500P	Square End	4	1/2"	1"	1/2"	4"	TiAlN
41-4501P	Square End	4	1/2"	1"	1/2"	6"	TiAlN
41-4626P	Square End	4	5/8"	1 1/4"	5/8"	6"	TiAlN
41-4751P	Square End	4	3/4"	1 1/2"	3/4"	6"	TiAlN

Variable 3 Flute Coated Solid Carbide End Mills

Corner Radius (For Machining Aluminum)



- Premium micro grain carbide
- H6 shank tolerance for heat shrink applications
- Cutting diameter tolerance +.0000 - .0004
- New advanced hydrogen free hard carbon coating out performs TIN, TICN, ZRN in aluminum and nonferrous applications
- Small corner radius for added strength
- Ideal for spindle speeds above 5000 rpm
- Designed for rough cut and finish milling

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length	Corner Radius	Coating
42-3125P	Corner Radius	3	1/8"	1/2"	1/8"	1 1/2"	0.007"	Hard Carbon
42-3126P	Corner Radius	3	1/8"	3/4"	1/8"	2"	0.007"	Hard Carbon
42-3127P	Corner Radius	3	1/8"	1"	1/8"	3"	0.007"	Hard Carbon
42-3187P	Corner Radius	3	3/16"	5/8"	3/16"	2"	0.010"	Hard Carbon
42-3188P	Corner Radius	3	3/16"	3/4"	3/16"	2 1/2"	0.010"	Hard Carbon
42-3189P	Corner Radius	3	3/16"	1 1/8"	3/16"	3"	0.010"	Hard Carbon
42-3250P	Corner Radius	3	1/4"	3/4"	1/4"	2 1/2"	0.010"	Hard Carbon
42-3251P	Corner Radius	3	1/4"	1 1/8"	1/4"	3"	0.010"	Hard Carbon
42-3252P	Corner Radius	3	1/4"	1 1/2"	1/4"	4"	0.010"	Hard Carbon
42-3312P	Corner Radius	3	5/16"	7/8"	5/16"	2 1/2"	0.010"	Hard Carbon
42-3313P	Corner Radius	3	5/16"	1 1/8"	5/16"	3"	0.010"	Hard Carbon
42-3314P	Corner Radius	3	5/16"	1 3/4"	5/16"	4"	0.010"	Hard Carbon
42-3375P	Corner Radius	3	3/8"	7/8"	3/8"	2 1/2"	0.010"	Hard Carbon
42-3376P	Corner Radius	3	3/8"	1 1/8"	3/8"	3"	0.010"	Hard Carbon
42-3377P	Corner Radius	3	3/8"	1 3/4"	3/8"	4"	0.010"	Hard Carbon
42-3500P	Corner Radius	3	1/2"	1 1/4"	1/2"	3"	0.010"	Hard Carbon
42-3501P	Corner Radius	3	1/2"	2"	1/2"	4"	0.010"	Hard Carbon
42-3502P	Corner Radius	3	1/2"	3"	1/2"	6"	0.010"	Hard Carbon
42-3625P	Corner Radius	3	5/8"	1 1/4"	5/8"	3 1/2"	0.010"	Hard Carbon
42-3626P	Corner Radius	3	5/8"	2 1/4"	5/8"	5"	0.010"	Hard Carbon
42-3627P	Corner Radius	3	5/8"	3"	5/8"	6"	0.010"	Hard Carbon
42-3750P	Corner Radius	3	3/4"	1 1/2"	3/4"	4"	0.010"	Hard Carbon
42-3751P	Corner Radius	3	3/4"	2 1/4"	3/4"	5"	0.010"	Hard Carbon
42-3752P	Corner Radius	3	3/4"	3"	3/4"	6"	0.010"	Hard Carbon
42-3100P	Corner Radius	3	1"	1 1/2"	1"	4"	0.010"	Hard Carbon
42-3101P	Corner Radius	3	1"	2 1/4"	1"	5"	0.010"	Hard Carbon
42-3102P	Corner Radius	3	1"	3"	1"	6"	0.010"	Hard Carbon

Extended Reach 2 Flute Solid Carbide End Mills Ball Nose (For Machining Aluminum)



- Extra long shank for hard to reach machining
- Premium micro grain carbide
- H6 shank tolerance for heat shrink applications
- Cutting diameter tolerance +.0000 - .0015
- 30° helix general purpose ball nose
- Great for cutting aluminum molds
- Shorter flute length for maximum strength

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length
50-2125P	Ball Nose	2	1/8"	1/2"	1/8"	4"
50-2126P	Ball Nose	2	1/8"	1/2"	1/8"	6"
50-2187P	Ball Nose	2	3/16"	5/8"	3/16"	4"
50-2188P	Ball Nose	2	3/16"	5/8"	3/16"	6"
50-2250P	Ball Nose	2	1/4"	3/4"	1/4"	4"
50-2251P	Ball Nose	2	1/4"	3/4"	1/4"	6"
50-2312P	Ball Nose	2	5/16"	7/8"	5/16"	4"
50-2313P	Ball Nose	2	5/16"	7/8"	5/16"	6"
50-2375P	Ball Nose	2	3/8"	7/8"	3/8"	4"
50-2376P	Ball Nose	2	3/8"	7/8"	3/8"	6"
50-2377P	Ball Nose	2	3/8"	7/8"	3/8"	8"
50-2500P	Ball Nose	2	1/2"	1"	1/2"	4"
50-2501P	Ball Nose	2	1/2"	1"	1/2"	6"
50-2502P	Ball Nose	2	1/2"	1"	1/2"	8"
50-2503P	Ball Nose	2	1/2"	1"	1/2"	10"
50-2504P	Ball Nose	2	1/2"	1"	1/2"	12"
50-2626P	Ball Nose	2	5/8"	1 1/4"	5/8"	6"
50-2751P	Ball Nose	2	3/4"	1 1/2"	3/4"	6"

Extended Reach 2 Flute Solid Carbide End Mills Square End (For Machining Aluminum)



- Extra long shank for hard to reach machining
- Premium micro grain carbide
- H6 shank tolerance for heat shrink applications
- Cutting diameter tolerance +.0000 - .0015
- 30° helix general purpose square end
- Great for cutting aluminum molds
- Shorter flute length for maximum strength

Part Number	End Style	Number of Flutes	Flute Diameter	Flute Length	Shank Diameter	Overall Length
40-2125P	Square End	2	1/8"	1/2"	1/8"	4"
40-2126P	Square End	2	1/8"	1/2"	1/8"	6"
40-2187P	Square End	2	3/16"	5/8"	3/16"	4"
40-2188P	Square End	2	3/16"	5/8"	3/16"	6"
40-2250P	Square End	2	1/4"	3/4"	1/4"	4"
40-2251P	Square End	2	1/4"	3/4"	1/4"	6"
40-2312P	Square End	2	5/16"	7/8"	5/16"	4"
40-2313P	Square End	2	5/16"	7/8"	5/16"	6"
40-2375P	Square End	2	3/8"	7/8"	3/8"	4"
40-2376P	Square End	2	3/8"	7/8"	3/8"	6"
40-2377P	Square End	2	3/8"	7/8"	3/8"	8"
40-2500P	Square End	2	1/2"	1"	1/2"	4"
40-2501P	Square End	2	1/2"	1"	1/2"	6"
40-2502P	Square End	2	1/2"	1"	1/2"	8"
40-2503P	Square End	2	1/2"	1"	1/2"	10"
40-2504P	Square End	2	1/2"	1"	1/2"	12"
40-2626P	Square End	2	5/8"	1 1/4"	5/8"	6"
40-2751P	Square End	2	3/4"	1 1/2"	3/4"	6"

Ejector Pin Counterbores



- Manufactured from high speed steel with precision ground cutting edges for even chip load and fast smooth chip clearance.
- Angled pilot for easy pick up holes
- Pilot diameter on counterbore tool is .002" - .004" smaller than corresponding ejector pin body diameter
- Built in 45° chamfer provides clearance for radius under ejector pin head

Part Number	Counterbore Body Diameter	Ejector Pin Body Diameter	Overall Length	Pilot Length	Shank Diameter
ECB-9	9/32"	1/8"	2-5/8"	3/16"	1/4"
ECB-11	5/16"	5/32"	2-3/4"	3/16"	1/4"
ECB-13	13/32"	3/16"	3-1/4"	3/16"	3/8"
ECB-15	7/16"	7/32"	3-3/8"	1/4"	3/8"
ECB-17	15/32"	1/4"	3-9/16"	1/4"	7/16"
ECB-19	15/32"	9/32"	3-9/16"	1/4"	7/16"
ECB-21	17/32"	5/16"	3-7/8"	5/16"	1/2"
ECB-23	19/32"	11/32"	4-1/4"	5/16"	1/2"
ECB-25	21/32"	3/8"	4-1/2"	5/16"	5/8"
ECB-29	23/32"	7/16"	4-3/4"	5/16"	5/8"
ECB-33	25/32"	1/2"	5-1/8"	5/16"	5/8"
ECB-37	29/32"	5/8"	5-5/8"	5/16"	5/8"
ECB-41	1-1/32"	3/4"	6-1/4"	5/16"	5/8"
ECB-47	1-9/32"	1"	6-1/4"	5/16"	5/8"

Carbide Reamers



- Designed to work with PCS Oversized Ejector Pins
- Micro-grain carbide material
- Extra long shank for easy access to holes within a deep cavity
- Four or six flutes to check size precisely
- Extra long flute lengths for greater hole straightness
- Shank diameters smaller than reamer diameter to avoid seizing
- Straight flute

Part Number	Decimal Size	Number of Flutes	Fractional Size	Flute Length	Overall Length	Shank Dia.
RC-5	.0625	4	1/16"	1/2"	4"	.057
RC-7	.0938	4	3/32"	3/4"	4"	.088
RC-9	.125	4	1/8"	7/8"	4"	.120
RC-11	.1562	6	5/32"	1"	4"	.151
RC-13	.1875	6	3/16"	1"	4-1/2"	.182
RC-15	.2188	6	7/32"	1-1/8"	5"	.213
RC-17	.250	6	1/4"	1-1/8"	5"	.245
RC-21	.3125	6	5/16"	1-3/8"	5"	.307
ROS-4	.0517	4	3/64" OS	1/2"	4"	.046
ROS-5	.0673	4	1/16" OS	1/2"	4"	.062
ROS-6	.0829	4	5/64" OS	1/2"	4"	.077
ROS-7	.0986	4	3/32" OS	3/4"	4"	.093
ROS-9	.1298	4	1/8" OS	7/8"	4"	.125
ROS-10	.1454	6	9/64" OS	1"	4"	.140
ROS-11	.1610	6	5/32" OS	1"	4"	.155
ROS-13	.1923	6	3/16" OS	1"	4-1/2"	.187
ROS-15	.2236	6	7/32" OS	1-1/8"	5"	.218
ROS-17	.2548	6	1/4" OS	1-1/8"	5"	.249
ROS-21	.3173	6	5/16" OS	1-3/8"	5"	.312
ROS-25	.3798	6	3/8" OS	1-1/2"	5"	.374

Sprue Bushing Reamers



- High speed steel
- Left hand spiral, right hand cut
- 2° 13'13" included angle
- 1/2" taper per foot

Hand Reamers

Machine Reamers

Part Number	Number of Flutes	Shank Diameter	Flute Length	Large End Diameter	Overall Length	Small End Diameter
HR-1	4	5/16"	6"	3/8"	8"	7/64"
HR-2	6	1/2"	10-1/2"	5/8"	12-5/8"	13/64"
MR-1	3	5/16"	6"	3/8"	8"	7/64"
MR-2	3	1/2"	10-1/2"	5/8"	12-5/8"	13/64"



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