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Series 1500 / 1560

High Speed Cutting (HSC) End Mills - Single Flute



Application and Competitive Advantages of Series 1500 / 1560 End Mills



- Mill flexible laminates with greatest productivity and material removal rates.
- Excellent grinding finish for high-quality panel surface finish & clean edges.
- Unique flute geometry reduces chatter and heat.
- Sharp rake angle for perfect chip formation.
- Open flute form and optimized helix for best debris removal.
- **Series 1500:** Standard single flute end mill.
- **Series 1560:** Single flute end mill for flexible materials and adhesive layers.
- DLC coatings available upon request.

DRILLS

END MILLS

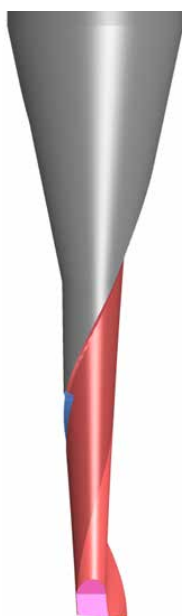
ROUTERS

SCORING / ENGRAVING /
COUNTERSINKS

Series 1500

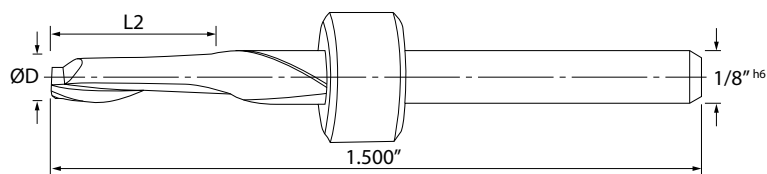
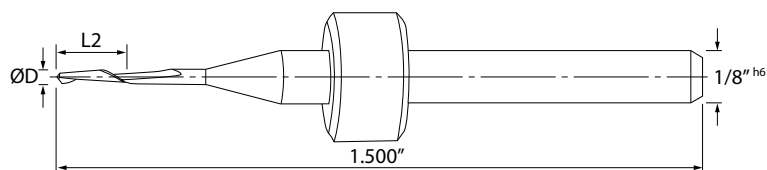
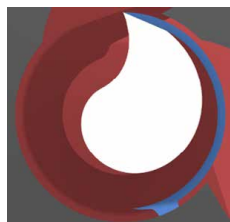


Series 1560



Series 1500

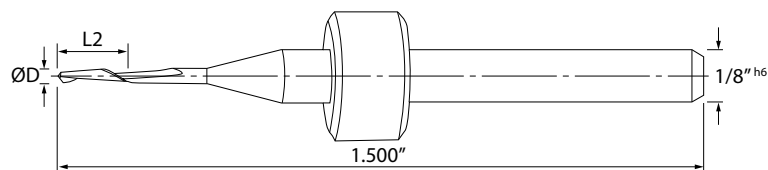
Series 1560



Series 1500

High Speed Cutting (HSC) End Mills - Single Flute

Diameter Range
0.0312" ~ 0.1250" | 1.27mm ~ 2.00mm



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions					
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	End Style	Tolerance ØD (in)	Tolerance ØD (mm)
1500.0312.150D	1/32"	0.0312	0.150	3.81	30°	Drill Point	+0/-0.0010	+0/-0.025
1500.0500.197	1.27mm	0.0500	0.197	5.00	30°	Drill Point	+0/-0.0010	+0/-0.025
1500.0625.200D	1/16"	0.0625	0.200	5.08	30°	Drill Point	+0/-0.0010	+0/-0.025
1500.0625.200F1	1/16"	0.0625	0.200	5.08	26°	Square	+0/-0.0010	+0/-0.025
1500.0625.250	1/16"	0.0625	0.250	6.35	30°	Drill Point	+0/-0.0010	+0/-0.025
1500.0787.315	2.00mm	0.0787	0.315	8.00	28°	Square	+0/-0.0010	+0/-0.025
1500.0938.375	3/32"	0.0938	0.375	9.53	33°	Square	+0/-0.0010	+0/-0.025
1500.1250.400	1/8"	0.1250	0.400	10.16	30°	Drill Point	+0/-0.0020	+0/-0.050

Standard Flute Length | **DLC Coated**



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions					
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	End Style	Tolerance ØD (in) Before Coating	Tolerance ØD (mm) Before Coating
1500.0312BC150D	1/32"	0.0312	0.150	3.81	30°	Drill Point	+0/-0.0010	+0/-0.025
1500.0500BC197	1.27mm	0.0500	0.197	5.00	30°	Drill Point	+0/-0.0010	+0/-0.025
1500.0625BC200D	1/16"	0.0625	0.200	5.08	30°	Drill Point	+0/-0.0010	+0/-0.025
1500.0625BC200F1	1/16"	0.0625	0.200	5.08	26°	Square	+0/-0.0010	+0/-0.025
1500.0625BC250	1/16"	0.0625	0.250	6.35	30°	Drill Point	+0/-0.0010	+0/-0.025
1500.0787BC315	2.00mm	0.0787	0.315	8.00	28°	Square	+0/-0.0010	+0/-0.025
1500.0938BC375	3/32"	0.0938	0.375	9.53	33°	Square	+0/-0.0010	+0/-0.025
1500.1250BC400	1/8"	0.1250	0.400	10.16	30°	Drill Point	+0/-0.0020	+0/-0.050

DLC coated tools are available upon request. Specific price and delivery information will be quoted upon inquiry.
 A coating thickness of up to 0.003 mm per side applies to all cutting diameters.



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "" with "-" (XXX-XXXX.XXXX)
 Additional diameters and special ring colors available upon request.



For recommended cutting conditions please visit: www.kyoceraprecisiontools.com/pcb/speeds-feeds or
 Review starting recommendations on **Page 79**



Series 1500

Single flute end mill designed for routing or milling printed circuit boards, plexiglass, soft materials, or soft metals.

Excellent for:

- Teflon / PTFE
- Flex Materials

DRILLS

END MILLS

ROUTERS

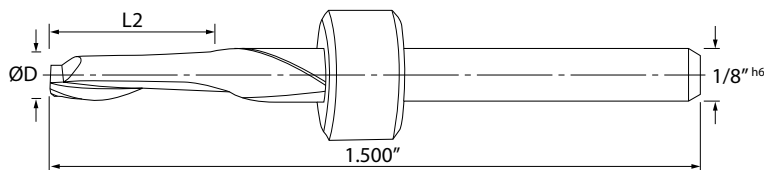
SCORING / ENGRAVING /
COUNTERSINKS

Series 1560

High Speed Cutting (HSC) End Mills - Single Flute
for flexible materials and adhesive layers

Diameter Range

0.0217" ~ 0.0787" | 0.55mm ~ 2.00mm



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in)	Tolerance ØD (mm)
1560.0217.138	0.55mm	0.0217	0.138	3.50	30°	+0/-0.0010	+0/-0.025
1560.0315.094	0.80mm	0.0315	0.094	2.39	30°	+0/-0.0010	+0/-0.025
1560.0394.118	1.00mm	0.0394	0.118	3.00	30°	+0/-0.0010	+0/-0.025
1560.0453.157	1.15mm	0.0453	0.157	4.00	30°	+0/-0.0010	+0/-0.025
1560.0472.142	1.20mm	0.0472	0.142	3.61	30°	+0/-0.0010	+0/-0.025
1560.0630.189	1.60mm	0.0630	0.189	4.80	30°	+0/-0.0010	+0/-0.025
1560.0787.236	2.00mm	0.0787	0.236	6.00	30°	+0/-0.0010	+0/-0.025

Series 1560

Single flute end mill designed for routing or milling flexible printed circuit boards, plexiglass, or soft materials.

Excellent for:

- Teflon / PTFE
- Flex Materials
- Thick Aluminum laminates

Standard Flute Length | DLC Coated



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in) Before Coating	Tolerance ØD (mm) Before Coating
1560.0217BC138	0.55mm	0.0217	0.138	3.50	30°	+0/-0.0010	+0/-0.025
1560.0315BC094	0.80mm	0.0315	0.094	2.39	30°	+0/-0.0010	+0/-0.025
1560.0394BC118	1.00mm	0.0394	0.118	3.00	30°	+0/-0.0010	+0/-0.025
1560.0453BC157	1.15mm	0.0453	0.157	4.00	30°	+0/-0.0010	+0/-0.025
1560.0472BC142	1.20mm	0.0472	0.142	3.61	30°	+0/-0.0010	+0/-0.025
1560.0630BC189	1.60mm	0.0630	0.189	4.80	30°	+0/-0.0010	+0/-0.025
1560.0787BC236	2.00mm	0.0787	0.236	6.00	30°	+0/-0.0010	+0/-0.025

DLC coated tools are available upon request. Specific price and delivery information will be quoted upon inquiry.

A coating thickness of up to 0.003 mm per side applies to all cutting diameters.



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "R" with "-" (XXX-XXXX.XXXX)
Additional diameters and special ring colors available upon request.



For recommended cutting conditions please visit: www.kyoceraprecisiontools.com/pcb/speeds-feeds or
Review starting recommendations on **Page 79**

DRILLS

END MILLS

ROUTERS

SCORING / ENGRAVING /
COUNTERSINKS

Series 1600 / 1603 / 1660

Universal PCB End Mills - 2 Flutes

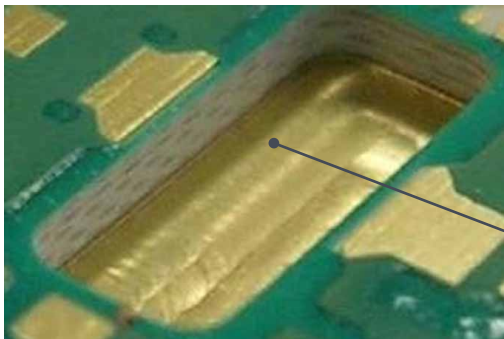


Application and Competitive Advantages of Series 1600 / 1603 / 1660 End Mills



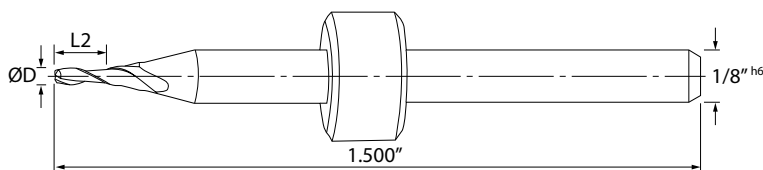
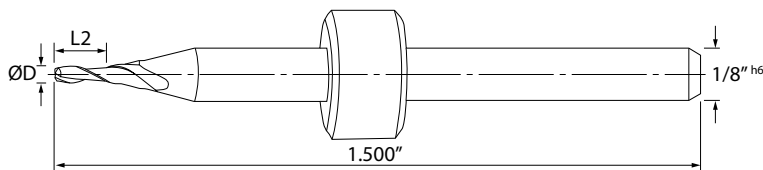
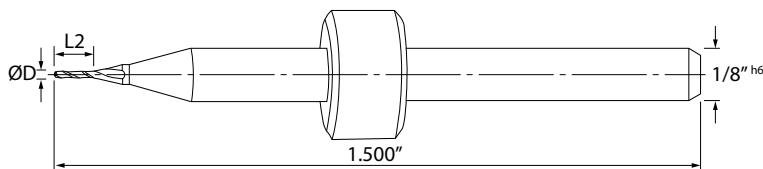
- General PCB board milling in low-, medium- and high-stack panels. End mills feature a cylindrical flute form (square end).
- Wide application range – suitable for milling most common PCB materials.
- Accurate and precise tool geometry – excellent flute finish.
- **Series 1600:** general purpose milling. DLC coatings available on request.
- **Series 1603:** ideal for plexiglas, soft PCB materials and non-ferrous metals.
- **Series 1660:** ideal for flexible laminates with a positive rake of 16°.

Clean Pocket Milling with Excellent Bottom Surface



Flat point angle with zero dish

Burnished ready for plating



Series 1600

Series 1603

Series 1660

DRILLS

END MILLS

ROUTERS

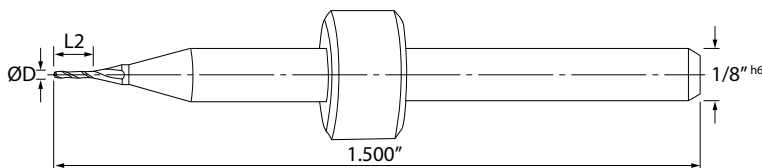
SCORING / ENGRAVING /
COUNTERSINKS

Series 1600

Universal PCB End Mills - 2 Flutes
for General Purpose Milling

Diameter Range

0.0118" ~ 0.1250" | 0.30mm ~ 3.00mm



Standard & Extended Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in)	Tolerance ØD (mm)
1600.0118.045	0.30mm	0.0118	0.045	1.14	30°	+0/-0.0010	+0/-0.025
1600.0150.050	0.38mm	0.0150	0.050	1.27	30°	+0/-0.0010	+0/-0.025
1600.0157.079	0.40mm	0.0157	0.079	2.00	30°	+0/-0.0010	+0/-0.025
1600.0177.079	0.45mm	0.0177	0.079	2.00	30°	+0/-0.0010	+0/-0.025
1600.0197.079	0.50mm	0.0197	0.079	2.00	30°	+0/-0.0010	+0/-0.025
1600.0197.118	0.50mm	0.0197	0.118	3.00	30°	+0/-0.0010	+0/-0.025
1600.0217.065	0.55mm	0.0217	0.065	1.65	30°	+0/-0.0010	+0/-0.025
1600.0236.079	0.60mm	0.0236	0.079	2.00	30°	+0/-0.0010	+0/-0.025
1600.0276.120	0.70mm	0.0276	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0312.120	1/32"	0.0312	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0315.120	0.80mm	0.0315	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0315.157	0.80mm	0.0315	0.157	4.00	30°	+0/-0.0010	+0/-0.025
1600.0354.120	0.90mm	0.0354	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0394.120	1.00mm	0.0394	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0394.200	1.00mm	0.0394	0.200	5.08	30°	+0/-0.0010	+0/-0.025
1600.0472.138	1.20mm	0.0472	0.138	3.50	30°	+0/-0.0010	+0/-0.025
1600.0472.210	1.20mm	0.0472	0.210	5.33	30°	+0/-0.0010	+0/-0.025
1600.0500.200	0.0500"	0.0500	0.200	5.08	30°	+0/-0.0010	+0/-0.025
1600.0551.195	1.40mm	0.0551	0.195	4.95	30°	+0/-0.0010	+0/-0.025
1600.0591.250	1.50mm	0.0591	0.250	6.35	30°	+0/-0.0010	+0/-0.025
1600.0625.250	1/16"	0.0625	0.250	6.35	30°	+0/-0.0010	+0/-0.025
1600.0630.188	1.60mm	0.0630	0.188	4.78	30°	+0/-0.0010	+0/-0.025
1600.0630.250	1.60mm	0.0630	0.250	6.35	30°	+0/-0.0010	+0/-0.025
1600.0630.315	1.60mm	0.0630	0.315	8.00	30°	+0/-0.0010	+0/-0.025
1600.0787.340	2.00mm	0.0787	0.340	8.64	30°	+0/-0.0010	+0/-0.025
1600.0938.390	3/32"	0.0938	0.390	9.91	30°	+0/-0.0010	+0/-0.025
1600.0945.390	2.40mm	0.0945	0.390	9.91	30°	+0/-0.0010	+0/-0.025
1600.1181.500	3.00mm	0.1181	0.500	12.70	30°	+0/-0.0010	+0/-0.025
1600.1250.500	1/8"	0.1250	0.500	12.70	30°	+0/-0.0020	+0/-0.050

Series 1600

Two flute end mill designed for routing or milling printed circuit boards, plexiglass, soft materials, or soft metals.

Suitable for:

- FR-4
- Polyimides
- Teflon / PTFE
- High copper content laminates
- High speed laminates



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "R" with "-" (XXX-XXXX.XXXX)
Additional diameters and special ring colors available upon request.



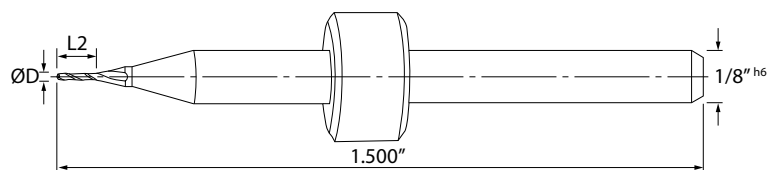
For recommended cutting conditions please visit: www.kyoceraprecisiontools.com/pcb/speeds-feeds or
Review starting recommendations on **Page 79**

Series 1600

Universal PCB End Mills - 2 Flutes
for General Purpose Milling

Diameter Range

0.0118" ~ 0.1250" | 0.30mm ~ 3.00mm



Standard & Extended Flute Length | DLC Coated



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in) Before Coating	Tolerance ØD (mm) Before Coating
1600.0118BC045	0.30mm	0.0118	0.045	1.14	30°	+0/-0.0010	+0/-0.025
1600.0150BC050	0.38mm	0.0150	0.050	1.27	30°	+0/-0.0010	+0/-0.025
1600.0157BC079	0.40mm	0.0157	0.079	2.00	30°	+0/-0.0010	+0/-0.025
1600.0177BC079	0.45mm	0.0177	0.079	2.00	30°	+0/-0.0010	+0/-0.025
1600.0197BC079	0.50mm	0.0197	0.079	2.00	30°	+0/-0.0010	+0/-0.025
1600.0197BC118	0.50mm	0.0197	0.118	3.00	30°	+0/-0.0010	+0/-0.025
1600.0217BC065	0.55mm	0.0217	0.065	1.65	30°	+0/-0.0010	+0/-0.025
1600.0236BC079	0.60mm	0.0236	0.079	2.00	30°	+0/-0.0010	+0/-0.025
1600.0276BC120	0.70mm	0.0276	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0312BC120	1/32"	0.0312	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0315BC120	0.80mm	0.0315	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0315BC157	0.80mm	0.0315	0.157	4.00	30°	+0/-0.0010	+0/-0.025
1600.0354BC120	0.90mm	0.0354	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0394BC120	1.00mm	0.0394	0.120	3.05	30°	+0/-0.0010	+0/-0.025
1600.0394BC200	1.00mm	0.0394	0.200	5.08	30°	+0/-0.0010	+0/-0.025
1600.0472BC138	1.20mm	0.0472	0.138	3.50	30°	+0/-0.0010	+0/-0.025
1600.0472BC210	1.20mm	0.0472	0.210	5.33	30°	+0/-0.0010	+0/-0.025
1600.0500BC200	0.0500"	0.0500	0.200	5.08	30°	+0/-0.0010	+0/-0.025
1600.0551BC195	1.40mm	0.0551	0.195	4.95	30°	+0/-0.0010	+0/-0.025
1600.0591BC250	1.50mm	0.0591	0.250	6.35	30°	+0/-0.0010	+0/-0.025
1600.0625BC250	1/16"	0.0625	0.250	6.35	30°	+0/-0.0010	+0/-0.025
1600.0630BC188	1.60mm	0.0630	0.188	4.78	30°	+0/-0.0010	+0/-0.025
1600.0630BC250	1.60mm	0.0630	0.250	6.35	30°	+0/-0.0010	+0/-0.025
1600.0630BC315	1.60mm	0.0630	0.315	8.00	30°	+0/-0.0010	+0/-0.025
1600.0787BC340	2.00mm	0.0787	0.340	8.64	30°	+0/-0.0010	+0/-0.025
1600.0938BC390	3/32"	0.0938	0.390	9.91	30°	+0/-0.0010	+0/-0.025
1600.0945BC390	2.40mm	0.0945	0.390	9.91	30°	+0/-0.0010	+0/-0.025
1600.1181BC500	3.00mm	0.1181	0.500	12.70	30°	+0/-0.0010	+0/-0.025
1600.1250BC500	1/8"	0.1250	0.500	12.70	30°	+0/-0.0020	+0/-0.050

DLC coated tools are available upon request. Specific price and delivery information will be quoted upon inquiry.
A coating thickness of up to 0.003 mm per side applies to all cutting diameters.



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "" with "-" (XXX-XXXX.XXXX)
Additional diameters and special ring colors available upon request.



For recommended cutting conditions please visit: www.kyoceraprecisiontools.com/pcb/speeds-feeds or
Review starting recommendations on **Page 79**



Series 1600

Two flute end mill designed for routing or milling printed circuit boards, plexiglass, soft materials, or soft metals.

Suitable for:

- FR-4
- Polyimides
- Teflon / PTFE
- High copper content laminates
- High speed laminates

DRILLS

END MILLS

ROUTERS

SCORING / ENGRAVING /
COUNTERSINKS

Series 1603

Universal PCB End Mills - 2 Flutes

for plexiglass, soft PCB materials and non-ferrous metals

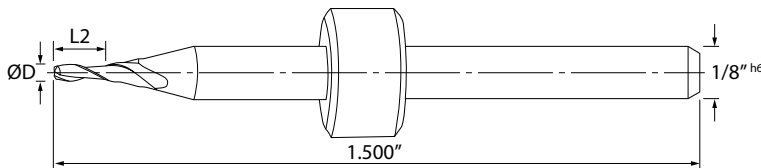
Diameter Range

0.0472" ~ 0.1250" | 1.20mm

DRILLS

END MILLS

ROUTERS



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions					Ring Color
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in)	Tolerance ØD (mm)	
1603Q0472.210	1.20mm	0.0472	0.210	5.34	30°	+0/-0.0010	+0/-0.025	Black
1603Q0625.250	1/16"	0.0625	0.250	6.35	30°	+0/-0.0010	+0/-0.025	Red
1603Q0938.390	3/32"	0.0938	0.390	9.91	30°	+0/-0.0010	+0/-0.025	Black
1603Q1250.500	1/8"	0.1250	0.500	12.70	30°	+0/-0.0020	+0/-0.050	Black

Series 1603

Two flute flat point end mill designed for routing or milling printed circuit boards, plexiglass, soft materials, or soft metals.

Excellent for:

- Rigid laminates



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "R" with "-" (XXX-XXXX.XXXX)
Additional diameters and special ring colors available upon request.

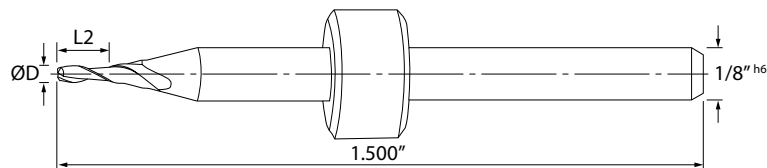


For recommended cutting conditions please visit: www.kyoceraprecisiontools.com/pcb/speeds-feeds or
Review starting recommendations on **Page 79**

Series 1660

Universal PCB End Mills - 2 Flutes
for flexible laminates with a positive rake of 16°

Diameter Range
0.0315" ~ 0.0630" | 0.80mm ~ 1.60mm



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in)	Tolerance ØD (mm)
1660.0315.093	0.80mm	0.0315	0.093	2.36	30°	+0/-0.0010	+0/-0.025
1660.0630.295	1.60mm	0.0630	0.295	7.50	16°	+0/-0.0010	+0/-0.025



Series 1660

Two flute end mill designed for routing or milling flexible printed circuit boards, plexiglass, or soft materials.

Excellent for:

- Flexible laminates



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "" with "-" (XXX-XXXX.XXXX)
Additional diameters and special ring colors available upon request.



For recommended cutting conditions please visit: www.kyoceraprecisiontools.com/pcb/speeds-feeds or
Review starting recommendations on **Page 79**

Series 1730 / 1735

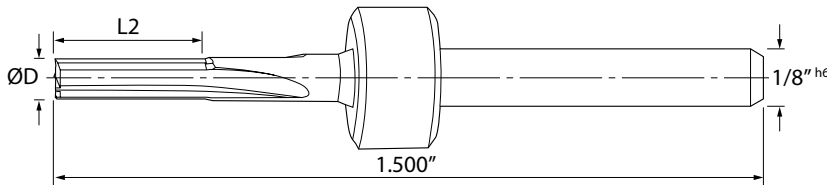
High Precision Cutting (HPC) End Mills - 3 Flutes



Application and Competitive Advantages of Series 1730 / 1735 End Mills



- High performance end mills with zero helix (straight flute) for high-precision milling and routing applications.
- Both series are designed for side- and plunge milling.
- **Series 1730:** most suitable for milling soft PCB materials, non-ferrous metals and gold tab connectors. Side milling only (no end cut).
- **Series 1735:** ideal for flex products and PTFE milling (radially & axially).
- The tool geometries of both series enable excellent surface finishes, high dimensional accuracy and sharp, accurate and clean panel edges.



DRILLS

END MILLS

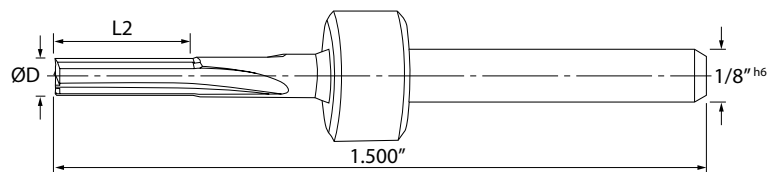
ROUTERS

SCORING / ENGRAVING /
COUNTERSINKS

Series 1730

High Precision Cutting (HPC) End Mills - 3 Flutes for milling soft PCB materials, non-ferrous metals and gold tab connectors

Diameter Range
0.0315" ~ 0.0945" | 0.80mm ~ 2.40mm



Side milling only
(no end cut)

Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in)	Tolerance ØD (mm)
1730.0315.120	0.80mm	0.0315	0.120	3.05	0°	+0/-0.0010	+0/-0.025
1730.0630.315	1.60mm	0.0630	0.315	8.00	0°	+0/-0.0010	+0/-0.025
1730.0787.320	2.00mm	0.0787	0.320	8.13	0°	+0/-0.0010	+0/-0.025
1730.0945.394	2.40mm	0.0945	0.394	10.00	0°	+0/-0.0010	+0/-0.025



Series 1730

Three flute zero helix cutter designed for side routing printed circuit boards, gold tab connectors, soft materials, or soft metals.

Excellent for:

- Gold
- Aluminum
- Copper
- Teflon / PTFE



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "" with "-" (XXX-XXXX.XXXX)
 Additional diameters and special ring colors available upon request.



For recommended cutting conditions please visit: www.kyoceraprecisiontools.com/pcb/speeds-feeds or
 Review starting recommendations on **Page 79**

Series 1735

High Precision Cutting (HPC) End Mills - 3 Flutes
for flex products and PTFE milling (radially & axially)

Series 1735 End Mills designed to provide an ultra-fine edge finish on soft PCB laminate materials and metals that require flawless edges. End Style allows surface milling and plunging.

Flex products, Aramid reinforced materials, PTFE, most soft materials, and gold fingers are prime examples of the challenges posed to PCB Fabrication Departments worldwide. In some cases, parameters can be adjusted with standard tools to address the rough edges, raised burrs, and/or fibers. There are, however, cases that require special tools and methods. Specific to these cases, Kyocera Precision Tools introduces an upgrade to the 1730 design with surface milling and plunging capabilities.

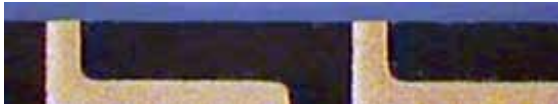
In addition, these tools generally eliminate the requirement of entry material that is sometimes needed on this type of work when using conventional cutters.

** This product requires specific processes and operating parameters.
For optimal results, please contact a Kyocera Precision Tools field engineer.*

Material: PTFE

Series 1735 Smooth edges and cleanly cut PTFE fibers	Conventional Cutters Rough edges and poorly cut fibers
	

Material: Gold Tabs/Connectors

Series 1735 Clean edges and no gold lifting or deformation


- Smooth edges
- No gold lifting
- No deformation
- Clean cut PTFE fibers

DRILLS

END MILLS

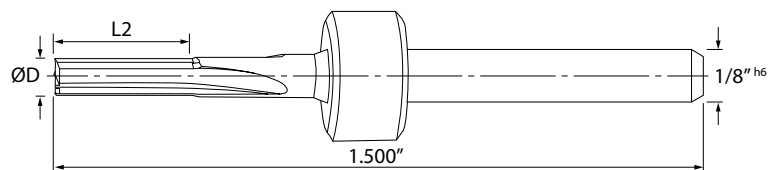
ROUTERS

SCORING / ENGRAVING /
COUNTERSINKS

Series 1735

High Precision Cutting (HPC) End Mills - 3 Flutes
for flex products and PTFE milling (radially & axially)

Diameter Range
0.0315" ~ 0.1250" | 0.80mm ~ 2.40mm



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in)	Tolerance ØD (mm)
1735.0315.138	0.80mm	0.0315	0.138	3.50	0°	+0/-0.0010	+0/-0.025
1735.0630.315	1.60mm	0.0630	0.315	8.00	0°	+0/-0.0010	+0/-0.025
1735.0945.315	2.40mm	0.0945	0.315	8.00	0°	+0/-0.0010	+0/-0.025
1735.1250.500	1/8"	0.1250	0.500	12.70	0°	+0/-0.0020	+0/-0.050



Series 1735

Three flute zero helix cutter designed for side routing printed circuit boards, gold tab connectors, soft materials, or soft metals.

Excellent for:

- Gold
- Aluminum
- Copper
- Teflon / PTFE



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "" with "-" (XXX-XXXX.XXXX)
Additional diameters and special ring colors available upon request.



For recommended cutting conditions please visit: www.kyoceraprecisiontools.com/pcb/speeds-feeds or
Review starting recommendations on **Page 79**

Series 1800

Universal PCB End Mills - 4 Flutes



Application and Competitive Advantages of Series 1800 End Mills

- Engineered for general PCB milling in low-, medium- and high-stack panels. End mills feature a cylindrical flute form (square end).
- Wide application range as these end mills accommodate successful machining of most common PCB materials.
- Tool geometry is engineered for achieving excellent surface finishes with high feed rates.

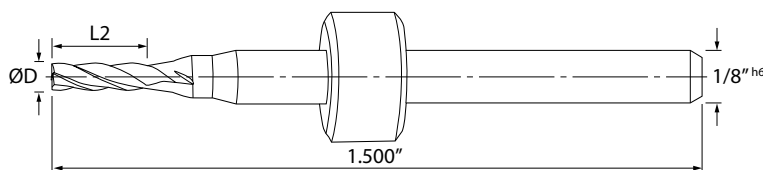
Diameter Range

0.0625" ~ 0.1250"

DRILLS

END MILLS

ROUTERS



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Helix Angle	Tolerance ØD (in)	Tolerance ØD (mm)
1800.0625.200	1/16"	0.0625	0.200	5.08	30°	+0/-0.0010	+0/-0.025
1800.0938.438	3/32"	0.0938	0.438	11.13	30°	+0/-0.0010	+0/-0.025
1800.1250.500	1/8"	0.1250	0.500	12.70	30°	+0/-0.0020	+0/-0.050

Series 1800

Four flute end mill designed for routing or milling printed circuit boards.

Suitable for:

- FR-4
- Polyimides
- Teflon / PTFE
- High copper content laminates
- High speed laminates



Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "R" with "-" (XXX-XXXX.XXXX)
Additional diameters and special ring colors available upon request.



For recommended cutting conditions please visit:
www.kyoceraprecisiontools.com/pcb/speeds-feeds