

SCORING / ENGRAVING / COUNTERSINKS

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Series 2002

Universal PCB Scoring / Engraving Tools



Application and Competitive Advantages of Series 2002 PCB Scoring / Engraving Tools

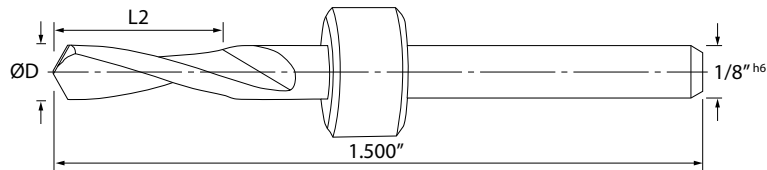
- Suitable for general PCB board scoring / engraving applications.
- Precision ground with an excellent cutting-edge quality.
- Wide application range with multi point end cuts (30°, 45°, 60°, 90°, 120°).

DRILLS

END MILLS

ROUTERS

SCORING / ENGRAVING /
COUNTERSINKS

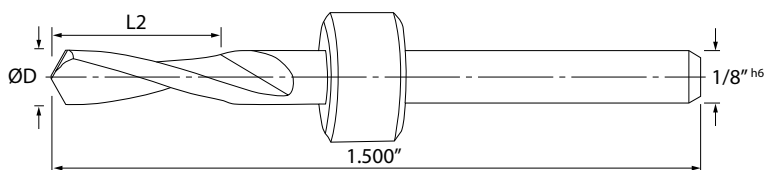


Series 2002

Universal PCB Scoring / Engraving Tools

Diameter Range

0.0625" ~ 0.1250" | 3.00mm



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions				
			Length of Cut (in) L2	Length of Cut (mm) L2	Point Angle	Tolerance ØD (in)	Tolerance ØD (mm)
2002.0625.030	1/16"	0.0625	0.551	14.00	30°	+0/-0.0003	+0/-0.008
2002.1181.030	3.00mm	0.1181	0.492	12.50	30°	+0/-0.0003	+0/-0.008
2002.1250.030	1/8"	0.1250	0.551	14.00	30°	+0/-0.0003	+0/-0.008
2002.1250.045	1/8"	0.1250	0.551	14.00	45°	+0/-0.0003	+0/-0.008
2002.1250.060	1/8"	0.1250	0.551	14.00	60°	+0/-0.0003	+0/-0.008
2002.1250.090	1/8"	0.1250	0.551	14.00	90°	+0/-0.0003	+0/-0.008
2002.1250.120	1/8"	0.1250	0.551	14.00	120°	+0/-0.0003	+0/-0.008



Series 2002

Two flute scoring tool available with specified scoring angle.

Suitable for:

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



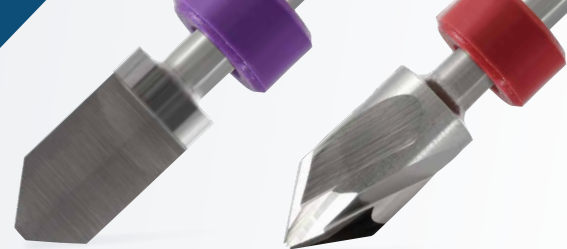
Part Numbers above include rings set at 0.800" - For Ringless Part Number, replace series "" with "-" (XXX-XXXX.XXXX)
Additional diameters and special ring colors available upon request.



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

Series 2000 / 2400

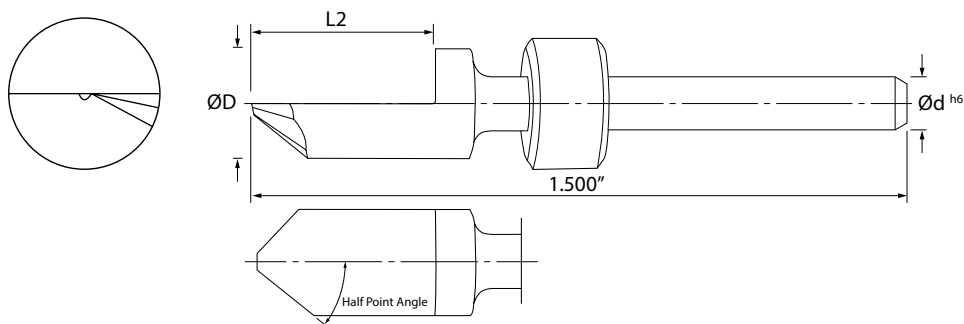
Universal PCB Countersinks



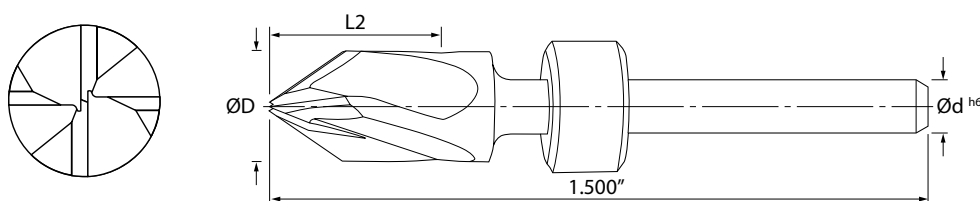
Application and Competitive Advantages of Series 2000 / 2400 PCB Countersinks

- Suitable for a wide range of PCB countersinking applications.
- Strong and highly accurate brazing supports a perfect center line and high application accuracy.
- **Series 2000:** Single Flute Countersinks – perfect for maximum debris removal. Available in multi point end cuts (82°, 90°, 100°).
- **Series 2400:** Four Flute Countersinks – perfect for universal finishing. Available in multi point end cuts (60°, 82°, 90°, 100°, 120°, 140°).

Series 2000



Series 2400



DRILLS

END MILLS

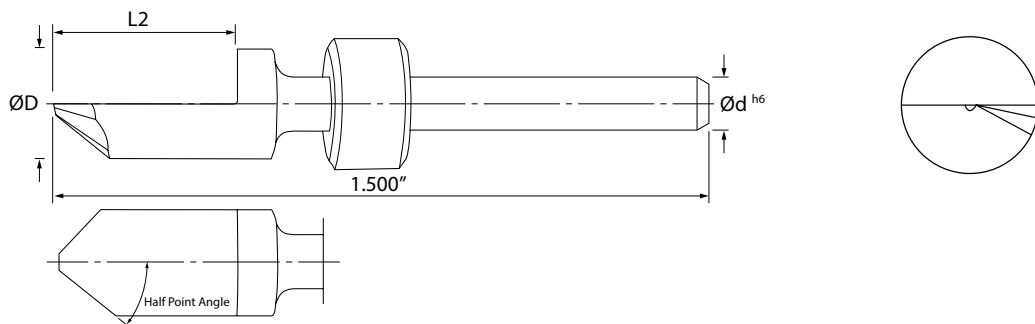
ROUTERS

SCORING / ENGRAVING /
COUNTERSINKS

Series 2000

Universal PCB Countersinks - 1 Flute

End Cut Angles
82°, 90°, 100°



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions					
			Length of Cut (in) L2	Length of Cut (mm) L2	Shank Diameter Ød	Point Angle	Tolerance ØD (in)	Tolerance ØD (mm)
2000.2500.082A1	1/4"	0.2500	0.500	12.70	1/8"	82°	+0.0005/-0.0005	+0.013/-0.013
2000.2500.090A1	1/4"	0.2500	0.500	12.70	1/8"	90°	+0.0005/-0.0005	+0.013/-0.013
2000.2500.100A1	1/4"	0.2500	0.500	12.70	1/8"	100°	+0.0005/-0.0005	+0.013/-0.013



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**



DRILLS

END MILLS

ROUTERS

SCORING / ENGRAVING /
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Series 2000

Single flute countersink tool with specified countersink angle.

Suitable for:

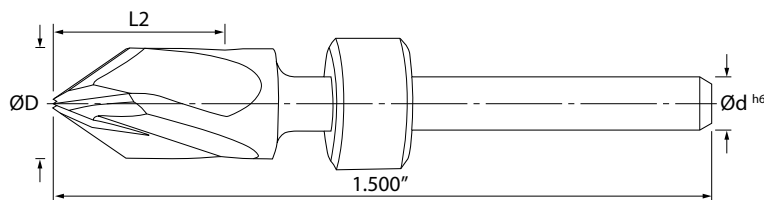
- FR-4
- Polyimides
- Teflon / PTFE
- High copper content laminates
- High speed laminates

Series 2400

Universal PCB Countersinks - 4 Flute

End Cut Angles

60°, 82°, 90°, 100°, 120°, 140°



Standard Flute Length



Part Number	Cutting Diameter ØD	Decimal Inch ØD	Dimensions					
			Length of Cut (in) L2	Length of Cut (mm) L2	Shank Diameter Ød	Point Angle	Tolerance ØD (in)	Tolerance ØD (mm)
2400.2500.060G1	1/4"	0.2500	0.500	12.70	1/8"	60°	+0.0005/-0.0005	+0.013/-0.013
2400.2500.082	1/4"	0.2500	0.500	12.70	1/8"	82°	+0.0005/-0.0005	+0.013/-0.013
2400.2500.090	1/4"	0.2500	0.500	12.70	1/8"	90°	+0.0005/-0.0005	+0.013/-0.013
2400.2500.100	1/4"	0.2500	0.500	12.70	1/8"	100°	+0.0005/-0.0005	+0.013/-0.013
2400.2500.120	1/4"	0.2500	0.500	12.70	1/8"	120°	+0.0005/-0.0005	+0.013/-0.013
2400.2500.140	1/4"	0.2500	0.500	12.70	1/8"	140°	+0.0005/-0.0005	+0.013/-0.013
2400-6250.090A1	5/8"	0.6250	0.630	16.00	1/4"	90°	+0.0005/-0.0005	+0.013/-0.013

*Part Number 2400-6250.090A1 is a Ringless Part Number due to 1/4" Shank Diameter

Series 2400

Four flute countersink tool with specified countersink angle.

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.



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DRILLS

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