



The MPC™ 2000 Integrated Circuit Cross-Sectioning System is designed to accurately remove a pre-specified amount of material from a microelectronic sample without the need for operator intervention. Accurate cross-sectioning within $\pm 1\mu\text{m}$ of a target feature is possible due to high precision provided by a combination of the precision power head, the low-runout drive plate, and the lapped, stainless-steel platen. This high accuracy reduces the possibility of grinding beyond the target plane.

Benefits of the MPC 2000

The benefits of such accuracy

include a reduced number of grinding steps resulting in greater sample throughput: A rough grind is used to bring the plane of polish to within a few microns of the target, and a fine grind is then used to section into the target feature itself.

Subsequent polishing can then be performed to remove any remaining scratches. Another feature, unattended operation, saves time by allowing the user to walk away and perform other tasks.

Accurate Sample Positioning

The MPC 2000 System incorporates a digital micrometer,

for sample positioning. The accessory Remote Digital Display provides the freedom to position the micrometer readout in a convenient place, while enlarging the display or enhanced readability.

Operator's Time is Saved

The accessory swing-in/swing-out microscope makes sample tilt alignment simple. By aligning the sample with the microscope cross hair, the target features are quickly aligned with the plane of polish. This eliminates the tedious check, tilt, grind, recheck routine.

MPC™ 2000

BUEHLER®



Technical Data

System Configuration:

8" (203mm) Precision Grinder/Polisher base with electricity driven head

Operation:

Semi-Automatic

Mains Power:

100-115V/60Hz/1 phase or
220-240V/50Hz/1 phase

Water:

¼" (6.4mm) O.D. Nylon supply tube from
40-100 psi (275-690kPa) water source

Base Motor:

1HP (746 watts)

Platen Speeds:

1-50 rpm

Head Oscillation:

22 cycles/minute

Weight:

Tabletop unit: 200 lbs. (91kg)

Flush mount unit: 100 lbs. (46kg)

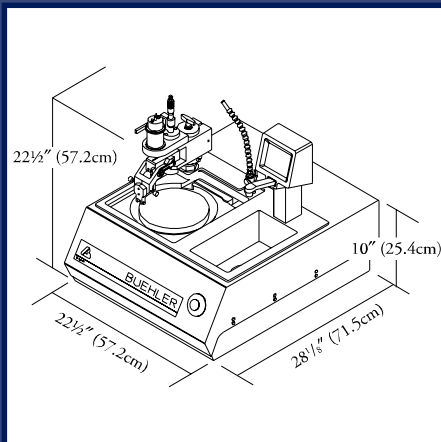
Dimensions:

Tabletop unit:

22½" W x 21⅞" D x 22½" H
(57.2cm x 71.5cm x 57.2cm)

Flush mount unit:

22½" W x 16½" D x 13" H
(54.6cm x 41.9cm x 33.0cm)



Dimensions for the MPC 2000 Integrated Circuit Cross-Sectioning System



41 Waukegan Road • Lake Bluff, Illinois 60044

Tel: (847) 295-6500 • Fax: (847) 295-7929

Sales: (800) BUEHLER • (800-283-4537)

Web Site: <http://www.buehler.com>

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System Specifications

49-3001-160 MPC 2000 Integrated Circuit Cross-Sectioning System, tabletop unit, includes MPC 2000 Power Head complete with digital micrometer and oscillating motor mounting post with adjustable floating mount, 8" (203mm) slow speed ECOMET® Grinder/Polisher with 1-50 rpm variable speed range, aluminum alloy base casting with integral bowl and rinsing sink, bowl wash, flexible hose water supply, steel cabinet, precision ground drive plate, plumbed for DI water, dial indicator ad mounting jig, precision lapped stainless-steel platen, 4 SEM cross-sectioning paddles, 40-8150 mounting wax, abrasive film applicator roller, hex wrench set, and operating instructions, for 115V/60Hz/1 phase operation.

49-3001-250 MPC 2000 Integrated Circuit Cross-Sectioning System, tabletop unit, same as 49-3001-160 but for 230V/50Hz/1 phase operation.

49-3002-160 MPC 2000 Integrated Circuit Cross-Sectioning System, flush mount unit, same as 49-3001-160 but without steel cabinet. Packaged for user installation.

49-3002-250 MPC 2000 Integrated Circuit Cross-Sectioning System, flush mount unit, same as 49-3001-250 but without steel cabinet. Packaged for user installation.

49-3002-160T MPC 2000 Integrated Circuit Cross-Sectioning System, flush mount unit, same as 49-3001-160 but without steel cabinet. To be ordered with TECH-MET® Table for factory installation.

49-3002-250T MPC 2000 Integrated Circuit Cross-Sectioning System, flush mount unit, same as 49-3001-250 but without steel cabinet. To be ordered with TECH-MET® Table for factory installation.

Accessories

40-4064 Precision Lapped Stainless-Steel Platen. Corrosion resistant and hardened to prevent marring.

60-5152 Tilt Alignment Microscope Assembly, includes 200x focusing microscope with alignment cross-hair, light source with power adapter, and locking swing-in/swing-out position mount. 12V power supplied by MPC 2000.

60-5153 Remote Digital Display, includes digital display console with 3 ft. adapter cord for connecting to digital micrometer. Includes power supply.

Compatible with both 115V and 230V systems.

Additional Accessories for the MPC 2000 System

Part No.	MPC 2000 Integrated Circuit Cross-Sectioning System
40-8150	Mounting Wax, Crystal Bond 509
60-5313	SEM Cross-Sectioning Paddle, ⅛" (3.2mm) Arbor
60-6049	Tweezer, Self Locking Fine Point
60-6050	Precision Tweezer Kit: Stainless Steel, Non-Magnetic, Acid-Resistant (one of each below)
60-6051	Tweezer 1, Fine General Purpose
60-6052	Tweezer 2, Short Fine Point
60-6053	Tweezer 3, Long Fine Point
60-6054	Tweezer 4, Fine Curved Point
60-6055	Tweezer 5, Fine Serrated Point
60-6056	Tweezer 6, Large General Purpose
60-6060	Probe Kit: Stainless Steel, Non-Magnetic (one of each below)
60-6061	Probe 1, Straight
60-6062	Probe 2, Double-Angle
60-6063	Probe 3, Hook
60-6064	Probe 4, Angle
60-6075	Abrasive Film Applicator, 4" Roller