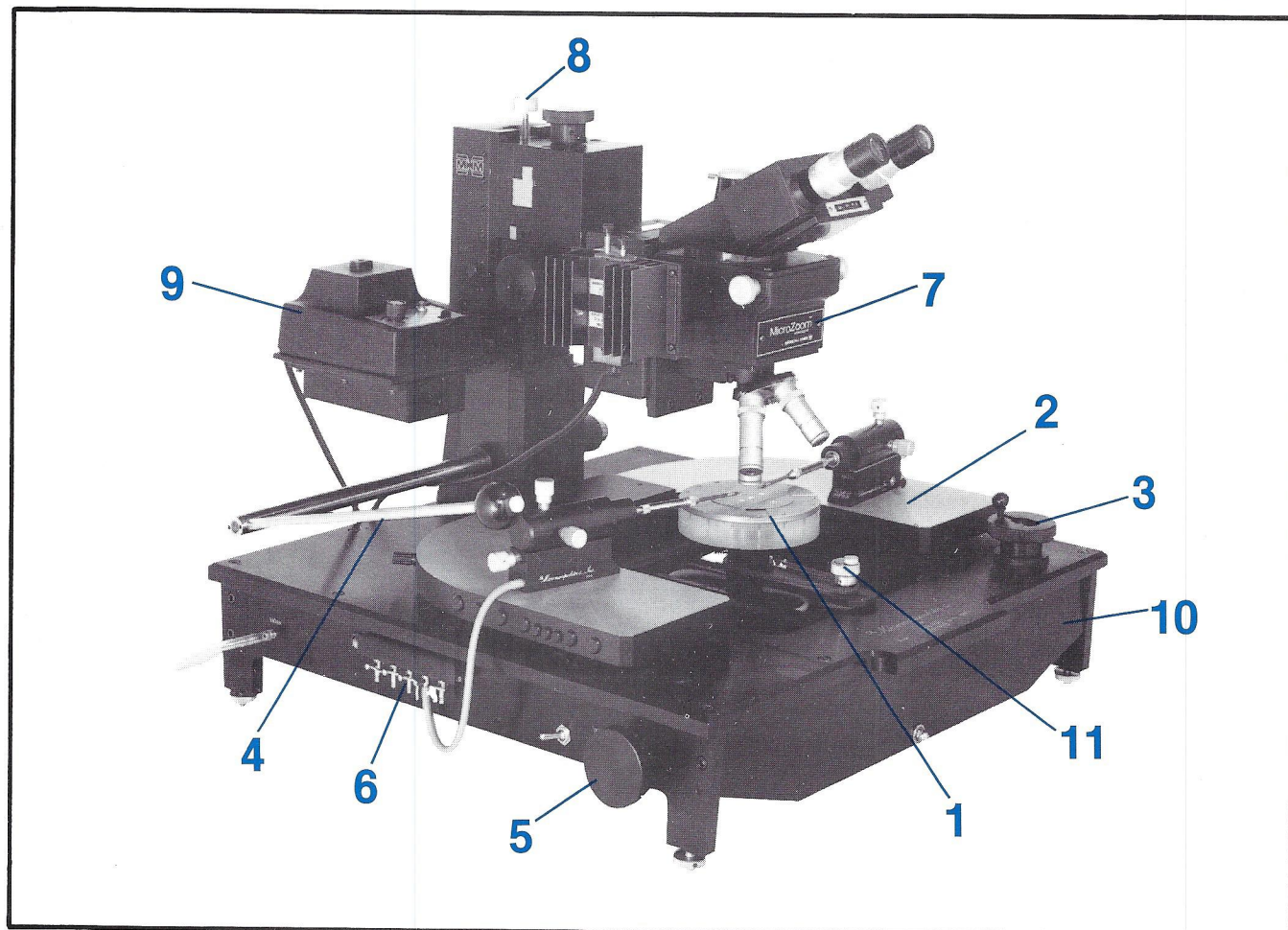


MODEL 6100

TEST STATION



- 1** Vacuum stage accommodates large wafers (up to 6" optional), easily replaced by optional socket stage for packaged device probing
- 2** 150 square inch platen holds 10 or more vacuum based manipulators as well as probe card holder
- 3** Platen fine lift control allows all probes to be raised or lowered with submicron precision and excellent repeatability
- 4** Fast lift lever quickly raises optics and probes more than one inch for convenient device or fixturing changes
- 5** Stage X-Y controls allow fast wafer scanning
- 6** Convenient vacuum distribution manifolds for vacuum based manipulators
- 7** MicroZoom® microscope mounted on very stable post with full 1" x 1" x 1" movement in X-Y-Z
- 8** Microscope lift delay allows probes to be raised an adjustable amount before optics raise as well
- 9** Microscope illuminator transformer is system-mounted; continuously variable rheostat provides precise noise-free illumination control
- 10** Massive baseplate is fully braced for rigidity and vibration attenuation. Attractive black anodized finish won't chip, providing decades of service
- 11** Locking theta rotation control provides full 360° rotation, conveniently located



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DESCRIPTION

The Model 6100 is a powerful, economical analytical probe station for large wafers or packaged devices. Fast X-Y stage movement controls allow 5" wafers (6" optional) to be rapidly scanned. Conversion from a wafer prober to a packaged device prober or hot/cold stage (and back again) can be accomplished in a matter of seconds using the optional socket stage adapter. The vacuum stage is permanently planarized at the factory, so no adjustments are needed when it is replaced.

The industry's highest precision Models 450/550 manipulators with convenient vacuum bases can be mounted on the large platen. The platen moves vertically with submicron precision in a true plane. Both probe card and individual analytical probes can be raised or lowered in increments of a micron or less, with excellent repeatability. This capability greatly facilitates changes in probes, devices, or test fixturing.

Submicron resolution is possible with the high magnifications of the MicroZoom® microscope. High power, however, demands high stability, planar motions, and large X-Y translation. The 6100's microscope post has the strength and mass necessary for a clear, stable image at high magnifications. An X-Y movement of 1" x 1" allows large devices to be completely scanned — even if the operator neglects to center the device. The 1" vertical movement allows probes and optics to be raised for sample changes or fixturing adjustments.

The 6100 is an excellent foundation on which to build a complete probing system tailored to your needs by adding some of the many accessories available. Micromanipulator offers the industry's widest selection, including a hot/cold stage, active low capacitance FET probe, shielded probes for high frequency or low signal levels, ultrasonic cutter for quickly cutting hard materials, probe card holders, packaged device socket cards, and much more.

SPECIFICATIONS

PLATEN

Accepts 10 or more vacuum based manipulators
Polished anodized aluminum surface
1 in. (25 mm) thick honeycomb construction for maximum stability
Convenient vacuum distribution on sides

Fine Lift Control

True planar vertical motion, convenient knob control
Resolution: 0.3 micron per degree revolution
Range: 0.5 in. (12.7 mm)

Fast Lift Control

Raises platen and microscope with adjustable microscope lift delay
Range 1.35 in. (34.3 mm)
Three locking up positions
Resolution: 18:1 reduction (handle:platen)

X-Y STAGE

Stage Movement

Range of motion 6 in. x 6 in. (152 mm x 152 mm)
Movement and vacuum stage permanently planarized at factory
Theta rotation control full 360° with convenient locking knob
X-Y control knobs are located on either side
Resolution of X-Y movement:
Coarse Control: 1.7 revolutions per inch (25.4 mm)

Vacuum Stage

Standard 5 in. (127 mm), optional 6 in. (152.4 mm) with dual tweezer slots
Gold plated brass for low contact resistance
Flatness ± 0.0005 in. (± 12 microns)
Electrical isolation exceeds 5000 megohms at 500VDC
Electrically wired to connector on platen

Optional Socket Stage

Conversion time vacuum to socket and back to vacuum stage less than 60 seconds
Accepts P.C. cards with ZIF sockets for probing packaged devices while operating
Locking handle for theta rotation control

MICROSCOPE AND POST

Microscope Post

Vertical positioning ± 1.4 in. (± 36 mm) by moving pin support
Vertical motion 0 - 1.35 in. (34.3 mm) by platen fast lift handle or fine control knob with adjustable delay
X-Y translation: 1 in. x 1 in. (25.4 mm x 25.4 mm) with convenient knob control
Factory planarized X-Y translation
Coarse/fine focus control

Microscope

B&L MicroZoom® with 2:1 zoom in body
3 long working distance objectives (2.25X, 8X, 25X)
Quadruple nosepiece accepts optional 50X objective
Trinocular head with camera port, 10X eyepieces
Coaxial illuminator with system mounted transformer and infinite rheostat control

DIMENSIONS AND FINISH

Size

24 in. (61 cm) wide x 24 1/8 in. (61 cm) deep x 22 in. (56 cm) high

Finish

Grained black anodized aluminum for long life

Weight

150 lbs. (68 kg)

SHIPPING INFORMATION

Double wall carton on skid with 4 in. foam between inner and outer boxes
Carton size 39 in. (99 cm) long x 37 in. (94 cm) wide x 32 in. (81 cm) high including 4" pallet
Shipping weight 206 lbs. (94kg) approximate.

FACILITY REQUIREMENTS

Power

117V/60Hz standard, 220V/50Hz optional

Vacuum

20 in. mercury required for vacuum stage, vacuum based manipulators

Table

Special vibration isolation tables usually not required due to excellent system stability

(Specifications subject to change without notice)

