

2210 In-Circuit Probing Station

Introduction

As circuit board sizes become large and complex, testing delidded devices while on the circuit board can be challenging. Engineers need flexible ways of holding circuit boards while simultaneously viewing and probing circuit elements. Because of these demands, Micromanipulator designed the 2210 In-Circuit Probing Station.

The Model 2210 In-Circuit Probing Station is one of a new series of application specific analysis tools from Micromanipulator. It's designed to accommodate the needs of those performing diagnostic probing on board-mounted delidded packaged devices.

Circuit boards as large as 20" x 20" (50cm x 50cm) may be installed on the electrically isolated vacuum board support towers. The towers are movable about the mounting table to permit probing on variously shaped boards. Two 24" (60cm) long vacuum platens move independently to position vacuum base manipulators and probes over the wide circuit board area.

The 2210 features 24" x 24" (60cm x 60cm) X-Y microscope travel and two 4" x 24" (10cm x 60cm) manipulator platens with individual positioning controls. Sample sizes up to 20" x 20" (50cm x 50cm) may be accommodated with the "mini-tower" sample support pedestals. The 2210 station is built on a vibration isolation table for stability.

Features:

- Independently movable platens, 4" x 24" (10cm x 60cm), for positioning vacuum base manipulators over a wide area with lock-down feature.
- Four electrically isolated, vacuum hold-down board support towers permit probing on a wide range of circuit board shapes and sizes.

- Supports StereoZoom or Compound microscopes.
- X and Y microscope controls allow precision positioning over a 24" x 24" viewing area.
- Vibration isolation air table is provided as standard with the system.
- Convenient vacuum distribution manifolds for manipulators and circuit board support towers.
- Massive microscope mount and crane assembly for maximum stability.
- Platen adjustment for elevating probes and circuit board access.
- Locking devices on microscope X-Y translation rails.

Specifications

Platens

- Accepts 10 or more vacuum base manipulators.
- 10 BNC jacks for probe connections located on platens (5 on each side).
- Aluminum construction, black anodized for durability.
- Top surface grounded to white connector at rear.
- Convenient vacuum distribution manifold at rear.

Lift Control

- Manual Z-axis height variable 0.5" (1.27cm).

Translation Control

- Manually positioned with thumbscrew friction locks.

Circuit Board Supports

- Four circuit board supports, utilizing vacuum hold-down, rigidly accommodate variously shaped boards up to 20" (47.5 cm) x 20" (47.5 cm).
- Aluminum construction, black anodized for durability.
- Convenient vacuum distribution manifold at rear (same manifold described above for platen).
- Electrically isolated.

Microscope Post

- Vertical positioning, focus mount only.
- X-Y translation: 24" x 24" (57cm x 57cm) with fast manual coarse positioning and fine adjustment.
- Positional lock-down.
- Coarse and fine focus control (standard on scope).

Table

- Model MM1201-01-1Q-GR vibration isolation table.
- Vertical air suspension.
- Active servo-controlled automatic leveling system.
- 12 dB/octave isolation rate (above 2 Hz, theoretical).
- Omnidirectional vibration isolation.



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Dimensions and Finish

Size: 36" x 31" x 46" (wide x deep x high)

(91.5cm x 79cm x 117cm)

Overall depth with microscope rear overhang: 41" (104 cm)

Finish: Grained black anodized aluminum for long life

Weight: 545 lbs. (245 kg) (Floor mounted)

Shipping Information

- Carton #1:
Wood pallet base with 3-ply cardboard attached
- Carton #2:
Double wall carton on skid with 4" foam between
inner and outer boxes

Carton sizes:

- Carton #1: 36" x 41" x 36" (wide x deep x high)
(91.5cm x 104cm x 91.5cm)
- Carton #2: 37" x 39" x 32" (wide x deep x high) including
4" pallet (94cm x 99cm x 81cm)

Shipping Weight:

Carton #1: 500 lbs. (225 kg)

Carton #2: 125 lbs. (56 kg)

Facility Requirements

- Power: 110V/60Hz standard, 220V/50Hz optional (2 amps)
- Air: Shop air: 80 psi
- Vacuum: 20" mercury required for manipulators and for circuit
board supports board supports

Specifications subject to change without notice.