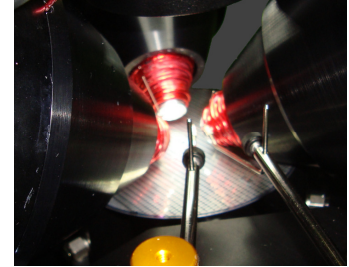


DATA SHEET for MPS-C-300 & MPS-C-350 Magnetic Probe Stations



The MPS-C-300 and MPS-C-350 are the world's first probe stations capable of immersing a sample in a fully controllable 3 dimensional magnetic field. MicroXact's truly unique design enables wafer-level testing of spintronic devices, nanoscale electronics and many other materials & devices where magnetic fields are required for accurate test and measurement.



Features

- Arbitrary three dimensional orientation of applied magnetic field with respect to wafer orientation.
- Field can be set and controlled by any of three modes: Single value, linear ramp, or user-defined profile.
- Continuous operation with magnetic fields up to 3kOe (0.3T). Capable of higher fields for time-limited experiments.
- Model MPS-C-350 upgrade enables continuous operation with fields up to 6kOe (0.6T).
- Designed to handle 100mm wafers, upgradable to 150mm wafers.
- Precision wafer handling system consists of cross bearing/rod slides and manual micropositioners for locating wafer within the field. Vacuum-lock supports designed for 100mm wafers Upgradable to 150mm.
- Platen made of anodized aluminum for vacuum-lock probe manipulators

- Includes industrial grade 11X-80X zoom microscope with 5MP camera digital camera real-time inspection and measurement. Included software enables quick & easy image/video capture.
- Isolated feed-through terminals for convenient connection to probe manipulators can be customized for BNC, Triax or Banana plug connections.
- Available high resolution manipulators with 80TPI screws for micron-level positioning of probes.
- Integrated vacuum ports and toggle switches for vacuum-lock probe manipulators.

Specifications

Magnetic Field

- Field orientation accuracy: $\pm 1^\circ$ for model 300, $\pm 0.1^\circ$ for model 350.
- Field uniformity across 10mm diameter area: 2% for model 300, <1% for model 350.
- Field stability: better than 1% for both models.

Vacuum chuck

- Designed for 100mm wafers. Upgradable to 150mm wafers.
- Range of motion: 36mm x 36mm.
- Position repeatability: $\pm 2.5\mu\text{m}$.
- Breakdown voltage $\geq 500\text{V}$.
- Isolation (chuck to ground) $> 1\text{G}\Omega$.
- Vacuum controlled by toggle switch.

Power supplies

- Includes three Sorensen/Ametek XG60-14 power supplies.
- Maximum voltage output: 60VDC each.
- Maximum current output: 14Amps each.

Gauss meters

- Includes three Magnetic Instrumentation, Inc. Model 2100 gauss meters.
- Resolution: 300mG to 300kG
- Sampling period: 100ms to 2.5 seconds.

Dimensions

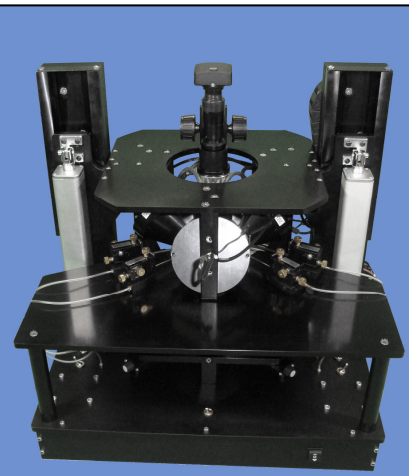
- Station: 58cm wide x 50cm deep x 80cm high.
- Cabinet: 52cm wide x 60cm deep x 44cm high.
- Weight: 100kg to 110kg depending on options.

Facility Requirements

- Vacuum: <600 torr.
- 110VAC, 35 Amps

Shipping Information

- Crate size 92cm wide x 92cm deep x 160cm high.
- Shipping weight up to 130kg depending on selected options.



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