

SPS- 2000 Series Analytical Probe Stations

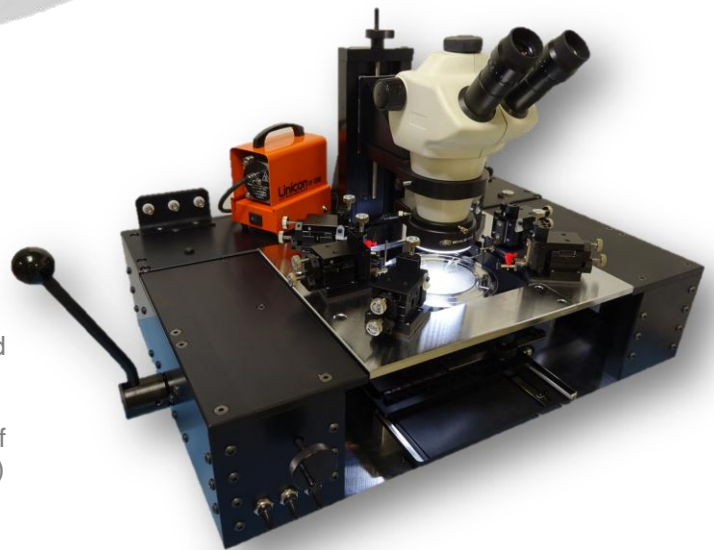
[Data Sheet](#)

microXact, inc.

The SPS-2000 Series is MicroXact's premier manual probe station designed to be flexible and easy to use. Our systems provide a level of high performance and affordability that puts these stations in a class of their own. With a variety of options available, including thermal wafer chucks, stereo zoom, compound or digital microscopes, and full RF enclosures, the flexibility of this system is nearly limitless.

Features

- Fully manual stage assembly with precision cross roller bearings with 100mm x 100mm range of motion (or larger). Also available with additional pre-load slide for easy loading and unloading of wafers or samples.
- Fully manual control of platen with coarse and fine adjustments and range of 12.7mm (more range available upon request).
- Smooth powder-coated steel platen holds up to 10 magnetic or vacuum-based positioners.
- High quality stereo zoom microscope with up to 200mm working distance and high-intensity LED lighting provide outstanding vision at magnifications ranging from 3.5X to 180X. Includes camera port.
- Isolated feed-through terminals located on both sides of station for convenient connection to micropositioners can be customized for BNC, Triax or DC pin connections or standard RF connections.
- Standard boom mount assembly for full-range XYZ positioning of microscope. XY range of 50mm x 50mm (higher range available)
- Available high resolution micropositioners with up to 100TPI screws for micron-level positioning of probes.
- Vacuum chucks offered in either polished or gold-plated brass as well as anodized aluminum. Vacuum ports adjustable for samples as small as 2.5mm.
- RF options available include customizable RF probes, RF biasable chuck, and shielding enclosures.



Specifications

Wafer Size

Up to 100mm standard, larger capacity available

XY Stage

Travel
Resolution

100mmx100mm standard, larger available
5 μ m

Platen

Travel
Adjustment
Planarity
Rigidity

12.7 mm or more
Dual coarse and fine control, better than 1.5 μ m repeatability
<12.7 μ m across 150 mm
<5 μ m for 4.5 kg

Chuck

Vacuum
Flatness
Breakdown Voltage
Isolation
Adjustment

Multi-zone vacuum
+/- 13 μ m
At least 500 V At Least 500V
At least 1G Ω
360° coarse, +/-6° fine

Microscope

High quality stereo zoom with up to 200mm working distance and magnification ranging from 3.5X to 180X

System

Terminals
Dimensions
Weight

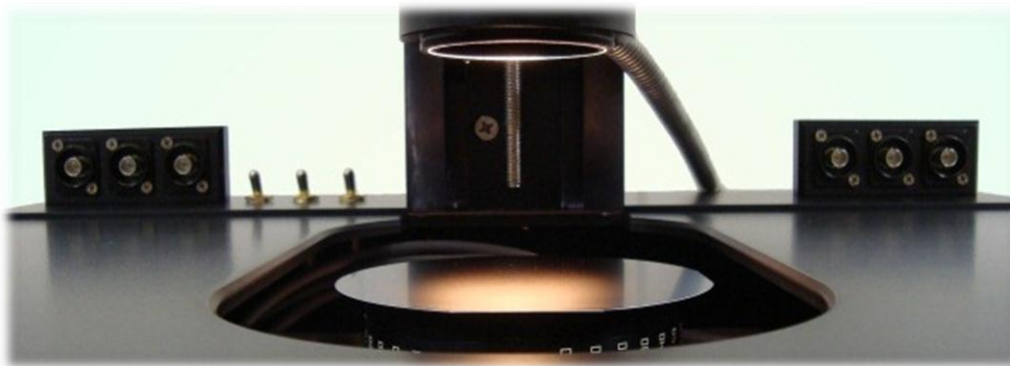
BNC, Triax, RF, or Banana plug
78cm wide x80cm deep x 58cm high
85kg to 95kg depending on options selected

Facility Requirements

Vacuum: <600 torr.
CDA: 60psi (Note: Only for pneumatic XY stage upgrade)

Shipping Information

Crate size 56cm wide x 51cm deep x 61cm high
Shipping weight up to 45kg depending on selected options



SPS-2000

www.microxact.com
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Accessories



Illuminator Shutter

Shutter system designed for the fiber optic ring light and halogen light source. System is integrated with the software for fully automated use. Makes automated testing of photosensitive devices easy while protecting halogen sources from the wear & tear of constant on/off switching.



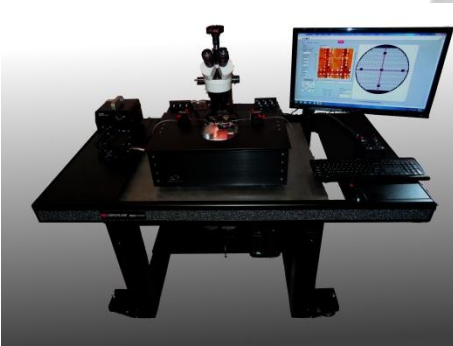
Digital Camera

Both the stereo zoom and Olympus BXFM microscopes include a third viewport for cameras. We offer compatible scope-mount digital cameras ranging from 1 megapixel to 10 megapixels. Included with the camera is software for image and video capture as well as dimension measurement capability.



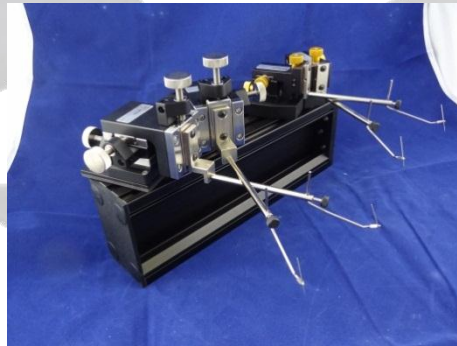
Thermal Vacuum Chuck

The TC-SYS-150 system includes a thermal controller with USB interface and Windows-compatible control software as well as a liquid nitrogen cooling system with 6-stage pump and 10-liter dewar.



Vibration Isolation Table

For high precision testing of the smallest features, vibration isolation is a necessity. We offer a full line of vibration isolation tables which we will customize for each probe station and application.



Micropositioners

For features 5 microns or larger we offer very affordable 3-axis positioners with 0.025" resolution per turn. These positioners have 0.300" of available travel in X, Y, & Z. For features smaller than 5 microns we offer a premium positioner with 0.500" of available travel in X, Y, & Z. These positioners are available in three resolutions ranging from 0.025" per turn to 0.010" per turn. All have the option of being configured with either magnetic (left) or vacuum-lock bases (right).



Seiwa Precision Microscopes

Seiwa microscopes offer a broad range of capabilities, all of which are the result of Seiwa's unparalleled engineering and craftsmanship. Whether your system requires an application-specific microscope, such as a multi-wavelength laser compatible scope (above), or a standard stereo zoom microscope, we can integrate any of these microscopes with a MicroXact probe station.

SPS-2000