

Probe station system

Manufacturer: Micromanipulator

Mode: 450PM-HR

Descriptions:

The Model 450PM 8” probe station offers stable and reliable probing performance. It is based on a design of Micromanipulator’s Model 4060 probe station. The 450PM-HR probe stations could provide stability with open, flexible designs that incorporate precise, dependable mechanics. The 450PM-HR features the high stability 4060/8000 series microscope bridge structure to support high resolution compound microscopes. The Model 450PM-HR provides a probe station solution for everyday analytical probing, and offers standard options so as to configure it for specific needs. Thermal chucks, manipulators, unique probe holders, vibration isolation tables, and camera systems are contained in the system.



Specifications:

	Mode		Micromanipulator 450PM-A-HR
No	Specification	Qty	Yes/No
1	The proposed probe station system is the precise positioning of thin needles on the surface of semiconductor devices to acquire signals. The vendor must ensure all necessary hardwares are included.		Yes
	Probe station specification	1	
2	Stage size: > 6" x 6".		Yes
3	With stage and platen control.		Yes
4	With anti back lash lead screw driven stage and platen drive.		Yes
5	Station platen: z-axis translation via platen fine lift control.		Yes
6	With four point platen support and single piece solid assembly.		Yes
7	Resolution: within 50 micron per rotation.		Yes
8	Material: Aluminum.		Yes
9	With 4-point platen lead-screw drive.		Yes
10	Front platen: > 10".		Yes
11	Area: > 18"x20".		Yes
12	Manual platen travel: at least 1".		Yes
13	Vacuum manifold with control valves.		Yes
14	Microscope bridge support, with at least 4"x4" X-Y translation		Yes
15	X,Y,Z manual microscope drive: at least 4"x4"x2"		Yes
16	Wafer chuck: > 6".		Yes
17	Accepted wafer size: 4" to 8"		Yes
18	Wafer stage resolution: 1 micron per degree or better.		Yes
19	Chuck flatness: fluctuation within 15 micron.		Yes
20	Theta motion on fixed post: > 270 degree theta travel range.		Yes
21	Vacuum ring.		Yes

22	Nickel plated Aluminum surface.		Yes
	Microscope specification	1	
23	Fixed Trinocular Head Microscope with eyepieces		Yes
24	Magnification range: 150x to 1500x or better		Yes
25	Eyepiece extender: > 1.5x, > 30mm.		Yes
26	Adjustable LED on-board illuminator		Yes
27	Centerable objective mount		Yes
28	C-mount adapter: accepts CCD cameras		Yes
29	Voltage: Selectable		Yes
	Probe tips (large)	10	
30	Tip radius: < 1 micron Tip diameter: < 0.5" Point taper length: <1" Tungsten shank: 10 to 30 mil		Yes
	Probe tips (small)	10	
31	Tip radius: < 0.5 micron Tip diameter: < 0.01" Point taper length: < 0.50" Tungsten shank: 10 to 30 mil		Yes
	Objectives	3	
32	Magnification: 2x, WD \geq 33 mm	1	Yes
33	Magnification: 10x, WD \geq 33 mm	1	Yes
34	Magnification: 20x, WD \geq 18 mm	1	Yes
	Vibration isolation table	1	
35	With front and rear support bars should be provided. Parameter: at least 30" (D) x 35" (W) x 2" with stainless steel top		Yes
	Manipulators	4	
36	Left-hand manipulator. Vacuum control: vacuum base with O-ring to allow directional movement. 90 degree mount. Lead screw. Capable of probing at least 1 micron geometries.	2	Yes

37	Right-hand manipulator Vacuum control: vacuum base with O-ring to allow directional movement. 90 degree mount. Lead screw. Capable of probing at least 1 micron geometries.	2	Yes
	Triaxial probe holder	4	
38	> 25" long triaxial cable terminates in a 3-tab triaxial connector.		Yes
	Light tight enclosure	1	
39	Outside parameter: > 40" (D) x 36" (W) x 40" (H)		Yes
40	Inside parameter: > 36" (D) x 34" (W) x 36" (H)		Yes
41	Material: steel.		Yes
42	Door configuration: roll-top.		Yes
43	Color: black.		Yes
44	Pins and quick latches should be available for easy disassembly of front or rear to allow access to station for setup or for transport.		Yes
45	Segments should mate with compressible foam light seals.		Yes
46	Accepts > 5 feedthrough panels		Yes
47	All segments should be grounded with ground straps		Yes
	Triaxial feedthrough panel	1	
48	Triaxial connections: >6 connectors.		Yes
49	Feedthrough panels		Yes
	Isolation sub-table	1	
50	Available for use with vibration isolation tables and light tight enclosures to isolate the enclosure from the vibration isolation table, allowing operators to open or close the enclosure without transmitting vibration to the probe station.		Yes
51	Includes modification of light tight enclosure (bottom holes and dark boots)		Yes
	Chuck adaptor	1	

52	To hold small parts for positioning individual die or other small flat objects.		Yes
	Air compressor (to use with vibration isolation tables for external air supply)	1	Yes
53	Noise level: < 80 dB/1 m		Yes
54	Voltage: 220 ~ 240 V.		Yes
	Vacuum pump	1	
55	Motor: < 1 HP		Yes
56	Oil-less with vacuum gauge		Yes
57	Hose length: > 6'		Yes
58	With vacuum relief regulator: 2 port manifold.		Yes
	Hot chuck plumbing	1	
59	Available for future upgrade.		Yes
	Warranty	1	
60	At least 12 months		Yes