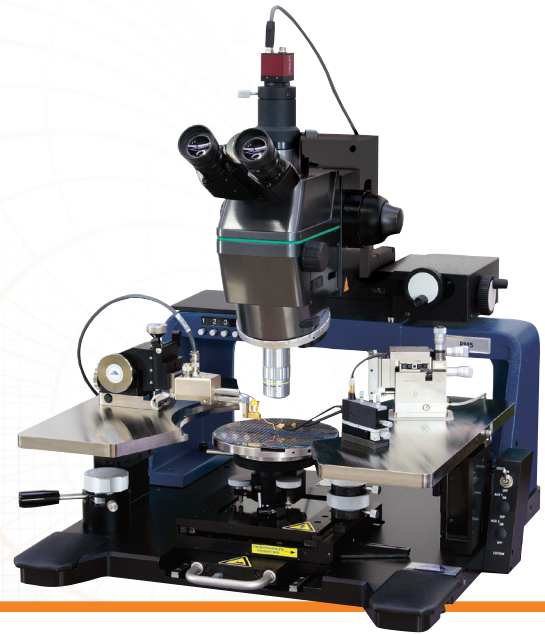


# PM5

## 150 mm Manual Probe System



### DATA SHEET

The PM5 is the most cost-effective and simple yet highly precise probing solution for wafers and substrates up to 150 mm. Application flexibility is for DC, RF, mm-wave and sub-THz measurements, device and wafer characterization tests (DWC), failure analysis (FA), submicron probing, MEMS and optoelectronic engineering tests. It can also be used as a flexible probe card for special wafer-level reliability (WLR) applications, allowing up to 20 positioners to be placed on the stable platen at one time.

The platen drive distributes force equally over two massive, stable columns to the base of the system. Its height can be adjusted up to 40 mm allowing quick and easy setup of the system. The highly repeatable contact separation of 200  $\mu\text{m}$  ensures excellent contact performance. The stability of the system is further maintained by the cast microscope bridge.

The modular design concept allows mounting of the microscope, giving you the freedom to upgrade the system from the simplest manual microscope stages to the most sophisticated programmable microscope movements, or to simply add a non-contact vibration analyzer for testing MEMS at wafer level.

Ergonomically, the PM5 has been designed with the operator in mind. All knobs are located to allow easy and precise movement of the chuck stage with just one hand. A pull-out stage permits quick and ergonomic loading and unloading of your device under test (DUT).

### FEATURES / BENEFITS

|             |   |
|-------------|---|
| Flexibility | <ul style="list-style-type: none"><li>Ideal for all applications such as RF, mm-wave and sub-THz characterization, failure analysis, DWC, MEMS and optoelectronic tests and WLR</li><li>Works as flexible probe card with up to 20 positioners</li><li>Large number of accessories available, such as laser cutters, platens and chucks for RF, mm-wave and sub-THz testing</li></ul> |
| Stability   | <ul style="list-style-type: none"><li>Massive, web-cast frame</li><li>Superior vibration attenuation</li><li>Rigid microscope bridge</li></ul>  |
| Ease of use | <ul style="list-style-type: none"><li>Comfortable and ergonomic operation</li><li>Straightforward layout of controls</li><li>Low-profile design</li><li>Simple microscope operation</li><li>Quick and ergonomic change of DUT through pull-out stage</li></ul>  |

## SPECIFICATIONS

**Wafer / Substrate Size** Up to 150 mm (6 inch) diameter

### X / Y / Theta Stage

|                                |                    |
|--------------------------------|--------------------|
| Planarity over 150 mm (6 inch) | < 10 $\mu\text{m}$ |
| Resolution                     | 5 $\mu\text{m}$    |
| Range of movement              | 155 mm x 155 mm    |
| Load stroke Y axis             | 90 mm              |
| Z height adjustment range      | 10 mm              |
| Z contact / Separation stroke  | 3 mm               |
| Theta travel (standard)        | 360°               |
| Theta travel, fine (optional)  | $\pm 10^\circ$     |

### Chuck

|                                   |                          |
|-----------------------------------|--------------------------|
| Planarity                         | 3 $\mu\text{m}$          |
| Vertical rigidity 150 mm (6 inch) | <15 $\mu\text{m}$ / 10 N |

### Probe Platen

|                             |                  |
|-----------------------------|------------------|
| Fixation type               | Vacuum, magnetic |
| Travel range                | 40 mm            |
| Contact / Separation stroke | 0.2 mm           |
| Repeatability               | 1 $\mu\text{m}$  |

### Utilities

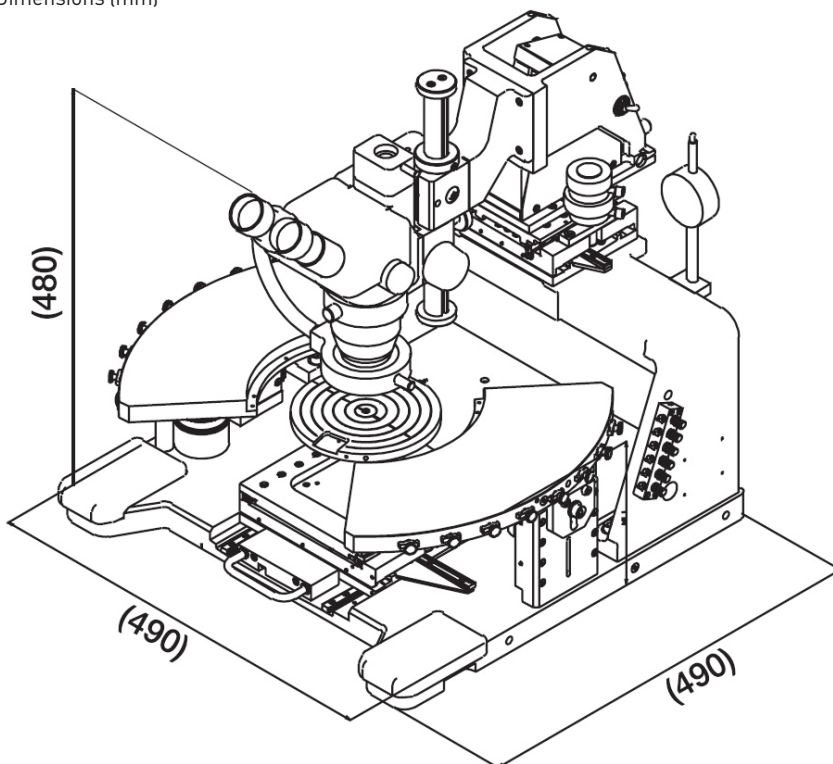
|                |          |
|----------------|----------|
| Vacuum         | -0.8 bar |
| Compressed air | 4 bar    |

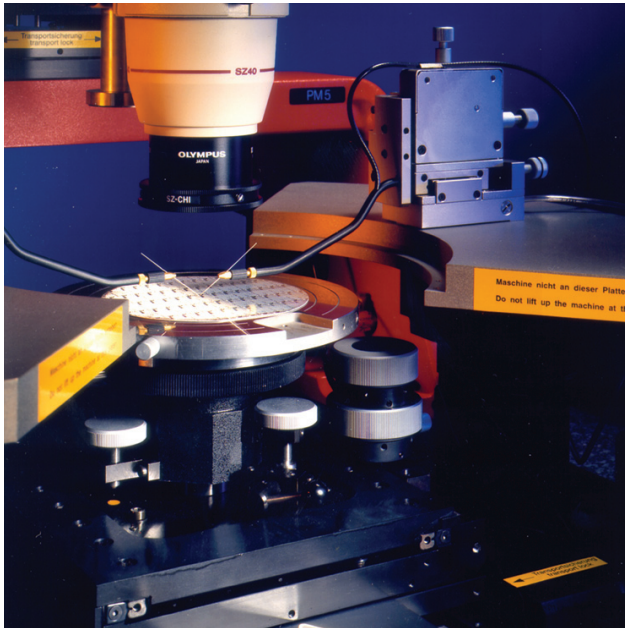
Performance may vary based on application and compliance requirements. Additional performance data may be available upon request.

## PHYSICAL DIMENSIONS

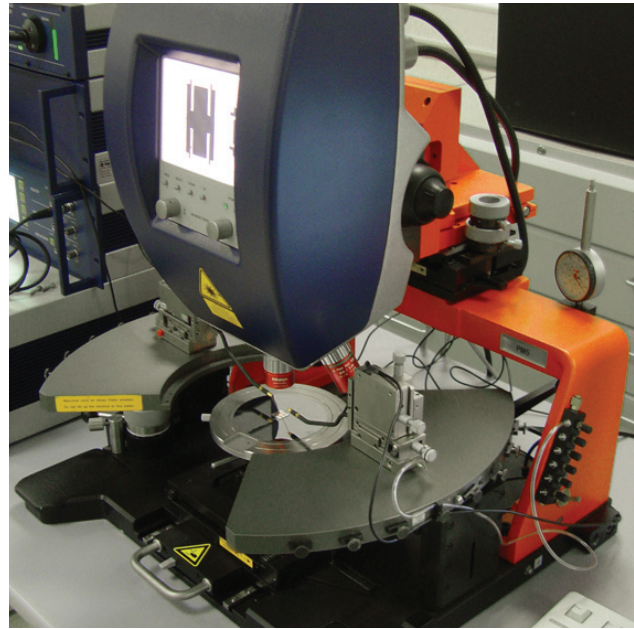
Weight 60 kg (132 lb.)

Dimensions (mm)

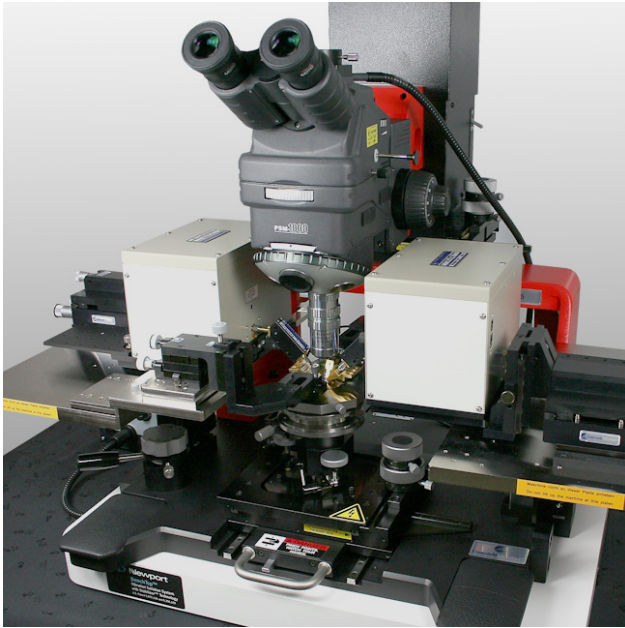




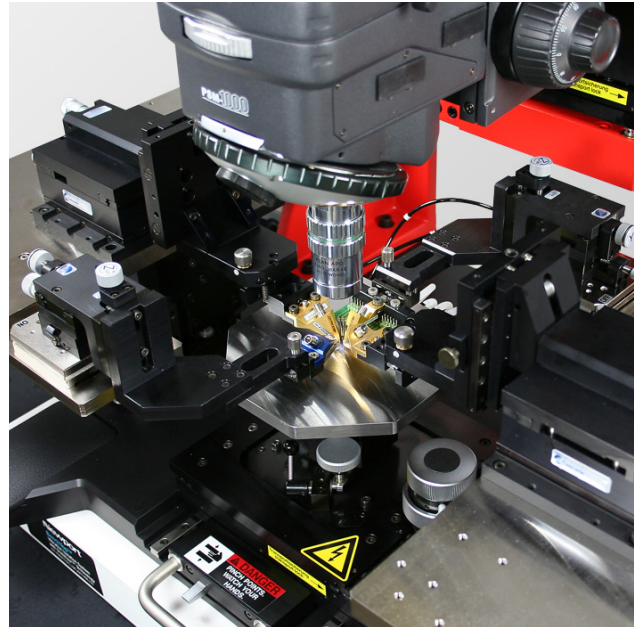
Design verification with PM5



MEMS testing with PM5 and Polytec MSA 400



RF testing with PM5 (low cost option)



RFIC engineering test

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