

Technical specifications:
Nanotec Scanning Probe Microscope
SPM Head



AFM Head

Nanotec® standard head for Scanning Force Microscopy. It includes the optical system for cantilever deflection measurement using the laser beam deflection method and the cantilever holder. Its design includes magnets for best stability of the system.

Overall Dimensions: 12 x 6 x 14 cm (4,8 x 2,4 x 5,6 inch)
Coarse horizontal positioning range: 4mm x 4mm (0.16 inch. x 0.16 inch.)
Two micrometer screws allow easy adjustment of the laser beam to focus on any cantilever
Axis view of cantilever and sample available for optical microscope combination
Two lateral screws allow the retention of the head from the chassis springs
Laser:
Wavelength: 632nm
Power: <1mW
High stability diode
Minimum laser beam diameter: 26-30um
Photodiode:
4-quadrants photodiode for simultaneous measurement of Normal Force and Lateral Force
Wide photodiode movement range helps finding the reflected spot easily using two screws for fixing the rough positioning of the photodiode and two micrometer screws for the fine adjustment
Cantilever holder:
Easy handling of the cantilever holder with magnetic fixing to the head.
The cantilever holder is designed for allowing easy use of multicantilever chips, including those with cantilevers in both sides without damaging the unused cantilevers
Cantilever holder placing conserving the last position
Piezoelectric scanner for dynamic modes integrated in the cantilevers holder
Easy access to the electronic signals going to the cantilever
Optional: MFM head removing the magnets