

## Profilometer



The mechanical profilometer is used to measure surface topography electromechanically by moving a sample below a diamond-tipped stylus, as well as to quantify roughness or 2D topographical variations.

As the sample stage moves, the diamond stylus scans over the surface of the sample with a specific contact force, depending on the material being measured. The small variations in the vertical movement of the stylus according to the position are measured and recorded simultaneously during the scanning, revealing the topographical structure of the surface sample.

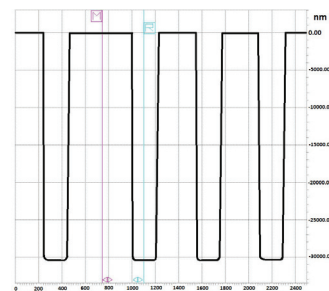
A mechanical profilometer can measure small vertical features ranging in height from 1 nm to 262  $\mu\text{m}$ .

### Technical specifications

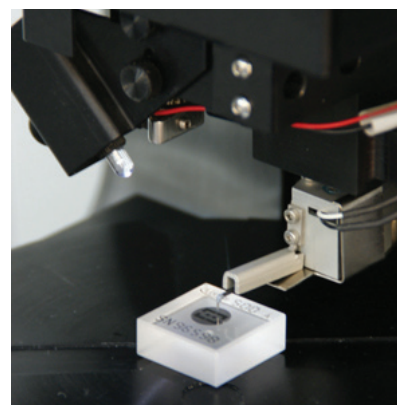
- Computer controlled measurements
- High-resolution camera for color video of a 2.6 mm area.
- Variable intensity illumination for viewing samples with differing reflectivity.
- Stylus radius: 2.5  $\mu\text{m}$  and 5  $\mu\text{m}$
- Stylus tracking force: 1-15 mg
- Vertical Range: up to 262  $\mu\text{m}$
- Scan Length Range: from 50  $\mu\text{m}$  to 30 mm
- Vertical Resolution: down to 1  $\text{\AA}$
- Horizontal Resolution is controlled by the scan speed
- Mechanical and optical components for sample placement, viewing and scanning.
- Manual Stage X-Y Position and sample stage rotation.

### Contact person:

Marina Cazorla  
mcazorla@ibecbarcelona.eu



Multiple step profile measurement



Diamond tip on calibration sample

### Manufacturer

Veeco Instruments

### Model

DEKTAK 6M

**NANOTECHNOLOGY**  
**PLATFORM**

**OPPORTUNITIES FOR YOUR RESEARCH**

[www.ibecbarcelona.eu/corefacilities](http://www.ibecbarcelona.eu/corefacilities)  
[nanotechnology@ibecbarcelona.eu](mailto:nanotechnology@ibecbarcelona.eu)