XP-2 High Performance Surface Profiler

Profiler Specifications

System can be used till 100 micron range

Sample Stage Diameter 200mm

Sample Thickness 30mm maximum

Scan Length Range 50mm maximum

X-Y Stage Translation 150mm X 178mm

Vertical Range 400µm maximum (200µm if up and down step is used)

Vertical Resolution 1Å at 10µm, 15Å at 100µm, 62Å at 400µm

Stylus Tip Radius 2.0 microns

Stylus Force Range .05-10mg (programmable)

Profilometer Operating steps

- Turn on the vacuum pump from the service corridor
- Switch **ON** the main **Power Supply**
- Switch **ON** the computer
- Switch **ON** the power to the **XP Profiler from the back panel**
- **Double-click** on the **XP2 software**  icon located on the desktop
- The main screen is displayed with a dialogue box asking "**Home the System**" before moving on, at the screen prompt, **Left Click** the **Yes** button to continue. The system will move the stage and measurement head stage to their home positions
- A dialogue box appears with a message **"Homing is Complete"**. **Left click** on the **OK** button to continue
- The system is now ready to use
- **Loading the sample**: Open the sample stage cover & place the sample on the stage table and close the sample stage door cover
- **Click** on the Vacuum radio button located on the Main software screen
- Ensure that the stylus is raised enough so as to not hit the sample
- Move the stage in Y direction using the X-Y stage controls or use the Load Position button until the sample is positioned under the measurement head (Stylus)
- Use the X-Y controls to "fine" position the sample for measurement
- The stylus can be raised or lowered at any time by using the mouse and left clicking on the up or down arrows located in the Z stage control panel
- Press the **setup button** located on the Main software screen and edit the parameters according to the requirement
- **Click** on the **Engage** button located on the Z stage control panel

- **Click** on **Scan** if the stylus is positioned at the required place
- The **Real Time Scan Display** (located on the main screen below the Video window) shows a trace as it is generated

- The Data Display Analysis screen is displayed; the Reference & Measurement cursors appear at their preset position

  Level Data- Place the reference (R) and measurement (M) cursors at the data which represents the substrate surface

  Data width - the horizontal distance between the R & M cursors along the X axis

  Delta Height - the vertical distance between the R & M cursors where they intersect the profile along the Z axis

- For **Saving** data , go to **File-→ Save Data File**
- To remove the sample from the instrument, move the Z Stage by using "up" arrow to lift the stylus off the sample surface to a safe distance
- Click on the LOAD POSITIONS on the X-Y stage control panel. Open the stage door switch off the vacuum and remove the sample from the stage table
- Close the software and shut down the computer and system