



Explorer 600 Solar

The Cryofox Explorer 600 Solar is a compact high vacuum unit for Thin Film production.

The Explorer 600 Solar is ideal for solar cell development.

On the supply side of raw materials for 1st generation solar cells bottlenecks are occurring and therefore the focus is to develop and manufacture 2nd generation thin film solar cells.

The Explorer 600 Solar is ideal for development groups who focus on 2nd generation solar cell development and small scale production. It is also ideal for related electrode/TCO research for 3rd generation solar cells.

The process technology is based on sputter deposition with DC/RF magnetrons which makes it possible to do coatings on silicon, glass substrates, and web samples.

The Explorer 600 Solar is a very versatile unit for solar cell research and development.



Due to the very compact size of the plant, it is easy to transport and fit into existing laboratory facilities. It requires only an 850 mm wide and 1900 mm high door opening.

All Cryofox systems can be integrated in clean room facilities.

All Cryofox systems are developed, designed, and manufactured by Polyteknik AS.

Mechanics

- Deposition throwing distance: DC/RF: 100-150 mm approx.
- Stainless steel chamber (optional: electro polished)
- Substrate tool with tilt and rotation for plane substrates (wafers) – up to 2-3 inch/50-75 mm
- Substrate cooling
- Substrate heating (optional)
- Footprint:
Vacuum unit: D1044 x W816 x H1848 mm
Control unit: D1044 x W624 x H1848 mm

Process

- Magnetrons DC/RF – circular (5 pcs.)
- Plasma pre-treatment in load lock

Process supply

- Dry pump
- Turbo or Cryopump for high vacuum
- Two or more mass flow controllers for gas supply
- Water cooling

Process Control

- Receipt control with fully automatic process
- Fully automatic or manual control of the process
- Very good HMI on top of robust PLC control
- Internet access for machine control and operation (optional)
- Data logging function (optional)
- Thickness monitor with double crystals and connected to the control system
- RGA (residual gas analyzer) and logging PC (optional)

AUX. Equip.

- Chiller (optional)