

CRYOFOX EXPLORER 700

The Cryofox Explorer 700 is a multi process unit for vacuum thin film deposition



Cryofox 

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The Explorer 700 is a generic unit for sputtering and E-beam deposition of high demand thin films. The system concept incorporates ideal features for optical coatings, Lift-off and MEMS applications, and a wide range of general material research applications.

The split chamber system layout is based on long throw E-beam sources and short distance DC/RF sputtering sources. Due to the free selection and combination of E-Beam and sputtering sources, there can be designed and produced a huge numbers of multi layer combinations without breaking vacuum.

By Lift Off process there is a need for a very uniform line of incidence of the deposition material during the coating process. The Explorer 700 has due to a very long throwing distance by the E-beam sources, state of art specifications in this field of application.

For optical coatings it has an optimal layout for classic E-beam depositions. If the sputtering sources are included into the system, advanced sputtering of optical coatings is a valuable feature of the system.

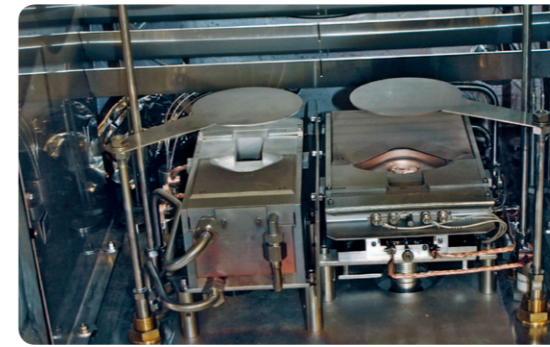
In the field of MEMS-manufacturing the Explorer 700 has unique benefits, due to the free selection of layers with full side coverage of resist (high pressure sputtering) or low side coverage by E-beam deposition.



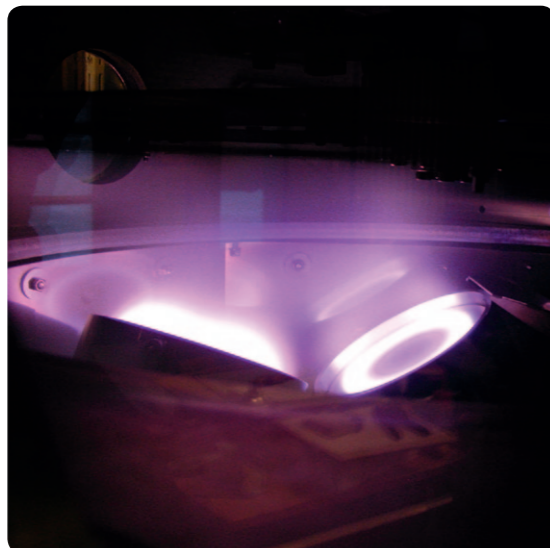
The split chamber system offers valuable savings due to reduced oxidisation of deposition materials, and short pump down time by substrate loading.

The Explorer 700 is very suitable for reactive and non-reactive deposition.

The Explorer 700 can easily be integrated in clean room facilities.



COOL and CLEVER technology



Co-deposition with tilted DC- and RF-magnetrons

MECHANICS

- Deposition throwing distance: E-Beam: 1060 mm approx. DC/RF: 150 mm approx.
- Stainless steel chamber, Electro polished
- Controlled substrate movement and rotation
- Substrate heating
- Substrate heating (optional)



PROCESS

- E-Beam – single or co-deposition, multiple crucibles
- Magnetrons DC/RF – 6" circular, maximum 4 of
- Thermal evaporation (optional)
- Plasma pre-treatment in load lock
- Ion etch system (optional)

PROCESS SUPPLY

- Dry backing pump
- Turbo or cryopump for high vacuum
- One or multiple mass flow controllers for gas supply
- Water cooling

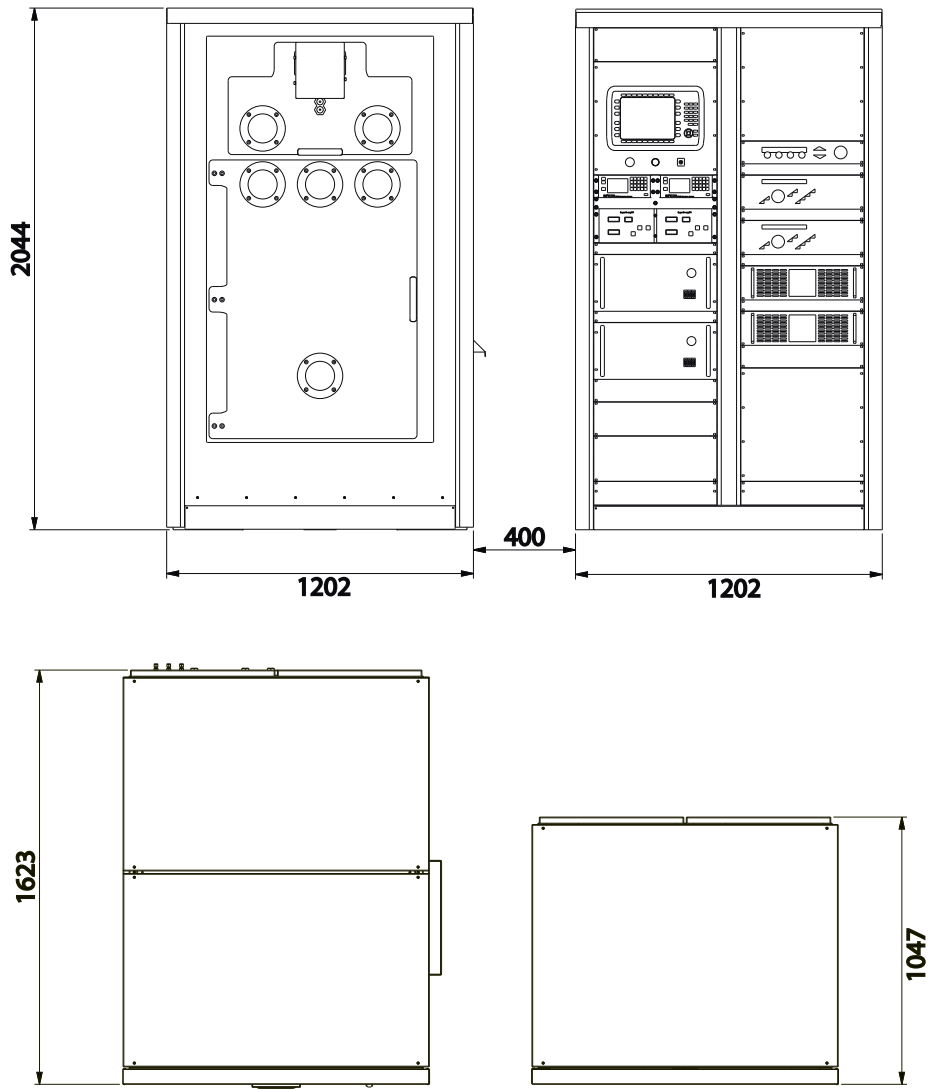
PROCESS CONTROL

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

AUX. EQUIP.

- Chiller (optional)

FOOTPRINT



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REPRECENTIVE: