

Precision and Vacuum Technology



# DEPOSITION CLUSTER TOOL

Multi-chamber MBE system

3" 1400°C 2 axes manipulator



Load-lock chamber with storage



5 axes manipulator



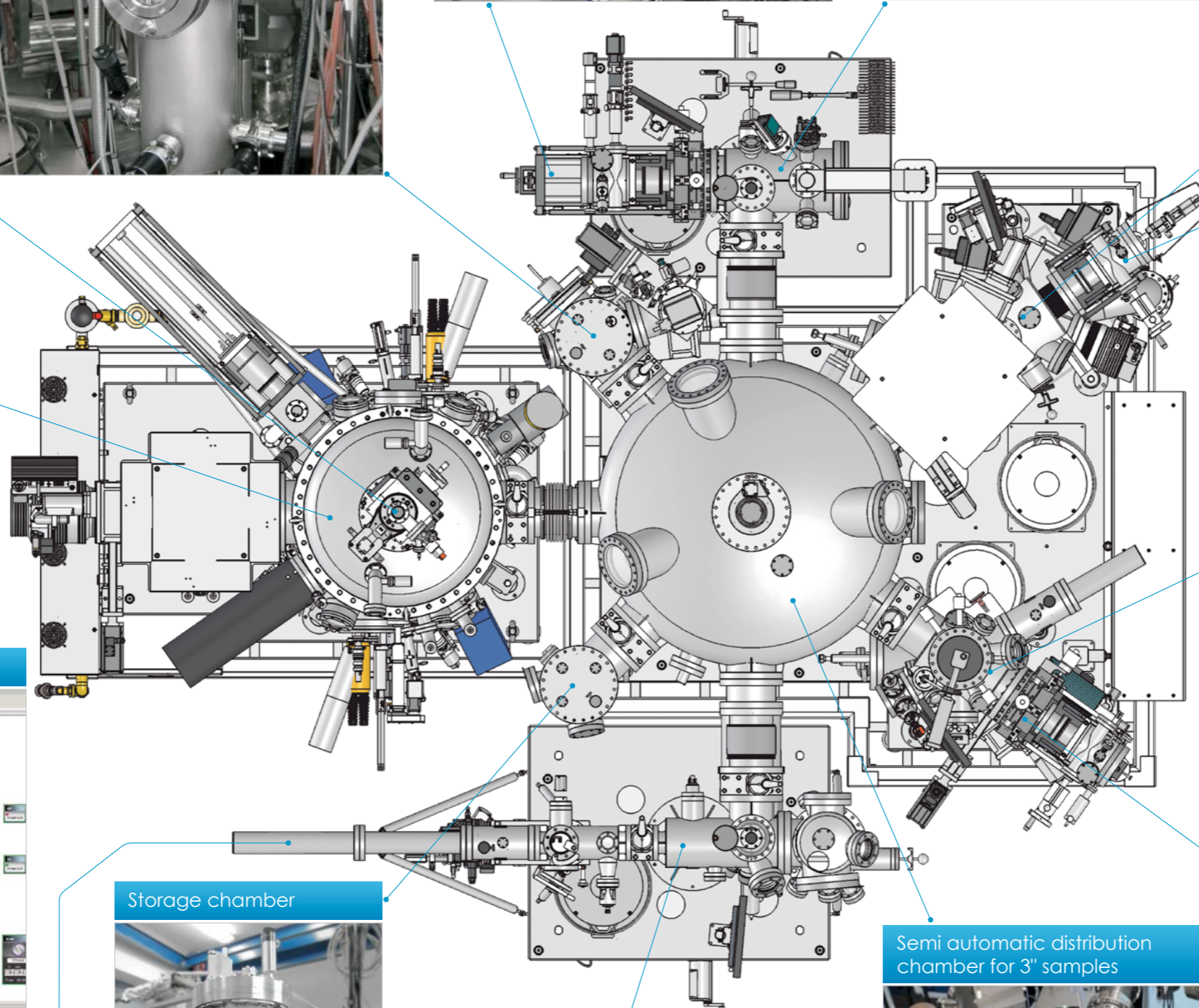
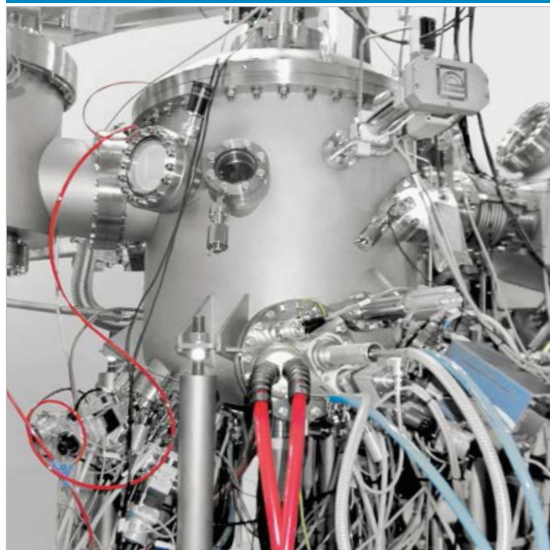
MOKE chamber for Kerr effect measurement



Preparation chamber for sample etching and structure modification



MBE chamber



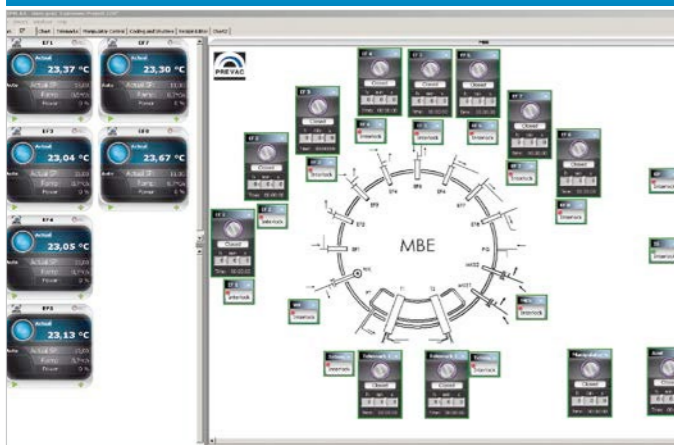
3 axes manipulator



Preparation chamber with 1700°C heating stage



Software for MBE chamber



Storage chamber



Semi automatic distribution chamber for 3" samples



5 axes manipulator



Independent tip and samples loading system for SPM



Reorientation chamber for STM



## DESCRIPTION

MBE multi-chamber system for metallic multi-layers from magnetic materials. Features in-situ characterisation of sample magnetic properties, topography and crystallography.

The system consists of:

- MBE chamber. Equipped with E-guns for 12 materials and 8 effusion cells. With in situ RHEED system. Deposition processes are fully software programmed and controlled via PLC controller. The chamber is equipped with powerful pumping system including cryo-panels. Samples can be heated up to 1400°C
- Radial distribution chamber. Semi-automatic transfer/distribution for reliable movement of up to 3" sample holders between preparation and characterisation chambers.
- Preparation chamber with LEED optics and both direct and e-beam heating (up to 1700°C for small samples)
- Preparation chamber with high energy ion source for sample etching, preparation and structure modification
- MOKE characterisation chamber, for in-situ Kerr effect measurements
- Integrated SPM chamber with additional tip and sample loading system
- Additional chambers for sample introduction and storage

## FEATURES

- 10<sup>-11</sup> mbar vacuum level
- Semi-automatic transfer of 3" sample holders and smaller samples
- 1400°C Heating of 3" sample holders in MBE chamber
- 1700°C EB heating of smaller holders in the preparation chamber
- MBE E-guns with closed loop control by RGA
- Full software control of the MBE process
- Ion assist prep chamber with 25kV ion source with differential pumping
- Low vibration design of the system, especially for SPM and MOKE
- Independent intro for tips and samples for SPM
- UHV Kerr effect analysis chamber
- All process chambers with thermocouple and pyrometer temperature control
- LCD visualisation of complete system status



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If you need any further information, please do not hesitate to contact our sales department

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