

R&D CLUSTER TOOL SAF FOR VACUUM DEPOSITION SIMPLE, ADJUSTABLE, FLEXIBLE

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Exploiting the fully controlled process environments offered by reduced pressures or in vacuum in R&D inevitably calls for versatile, reliable equipment and a variety of basic processes. To satisfy this need Sidrabe teams have developed a modular cluster tool based on their experience and innovations in vacuum technology gathered since 1962 as an experienced and knowledgeable partner all the way from idea into production equipment.



The SAF25/50 multifunctional R&D cluster tool.
Dimensions (LxWxH) 3x3x2 m.
Weight 2800 kg.
Installed power 50 kW
Cooling water 2.7 m³/h

The SAF25/50 multifunctional R&D cluster tool is intended for research and development works as well as for feasibility studies and more general academic work in the field of thin film technologies. The cluster tool is a multifunctional, expandable, modular and flexible system. The tool comprises an input/output chamber with ion gun, central substrate transfer chamber with radial telescopic transport arm and up to 7 deposition and treatment chambers. The substrate of metal, glass or plastic is positioned horizontally on a holder. Deposition zones are configured for substrate rotation or displacement during upward deposition.

The cluster tool is modular, expandable and flexible. Each chamber can operate independently due to individual pumping, control and utility flange. Deposition chambers and sources are interchangeable due to identical design of the chambers and utility flanges. All chambers can operate simultaneously. The central chamber is equipped with 8 flanges for chambers of choice.

The first cluster tool was designed in collaboration with the University of Latvia, Institute of Solid State Physics (www.cfi.lv). A fully equipped cluster tool is now operating in the clean rooms of ISSP. Right now there is an ongoing European Project [1] and a major part of the research is carried out on the cluster tool SAF. Several single-chamber SAF systems are also used for R&D works by different European companies.

[1] "When and how ODS particles are formed? - X-ray Absorption Spectroscopy and ab initio modelling of ODS steels" (EUROfusion Enabling Research Project, Juris Purans, <http://www.dragon.lv/exafs/>)