R&D cluster tool SAF for vacuum deposition

Simple, adjustable, flexible

Simple:
Easy and simple tool control and maintenance.

Adjustable:
Customized configuration and setup.

Flexible:
Wide spectrum of possible technological processes.

Options:
• Any solo process chamber.
• Cluster with necessary process chambers.
• Customized arrangements and instrumentation.
• Additional chambers.

Sidrabe
Develops and manufactures customized and standard vacuum deposition equipment responding to the changes in the innovative materials market with unique solutions.

Coating systems are intended for a wide range of applications and industries, such as: battery, astrooptics, medical, energy control, automotive, displays, electronics and others.

Vacuum deposition systems:
• Roll-to-roll systems for different materials (plastic films, metallic foils and strips, paper, fabrics, foam materials).
• Large 3D objects coating systems.
• Powder coating systems.
• Other vacuum deposition systems.

R&D and Engineering Works:
• Contract research.
• Technology transfer from research to industrial scale.
• Production of coated material.
• Development of design documentation.

Additional manufacturing works:
• Manufacturing of winding systems for roll-to-roll machines.
• Manufacturing of evaporation boats.
• Retrofit of vacuum deposition equipment.

R&D Cluster Tool SAF

Purpose:
• Research and development work, feasibility study and general academic work in the field of thin film technologies.
• Sample manufacturing aimed at product prototyping for market evaluation of out-of-box technologies

Developed, produced and backed by Sidrabe:
• Experience and innovations in vacuum technology since 1962.
• Experienced and knowledgeable partner all the way from idea into production equipment.

Design advantages
• 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.
• Central chamber equipped with 8 flanges for chambers of choice.

Dimensions, full set: (LxWxH) 3x3x2 m
Weight, full set: 2.8 t
Installed power: 50 kW
Cooling water: 2.7 m³/h

Processing chambers and features
• Substrate loading and unloading.
• Substrate storage.
• Pre-treatment.
• Deposition:
  • Electron Beam evaporation;
  • Thermal evaporation;
  • Thermal sublimation;
  • Magnetron sputtering;
  • Other deposition processes.
• Residual gas analysis/Mass Spectrometry.
• Plasma emission monitoring.
• Glove box.
• Blanked-off flanges allow customized instrumentation.
• Various substrates (metal, glass, plastic, ceramic) with standard size 50x50x5 mm.
• Ion pretreatment
• Contact and contactless heating and cooling.
• Multi-layer stacks without venting
• Uniform due to substrate rotation
• Debris-free due to upward deposition.
• Base pressure 10⁻⁷ mbar.
• Process control.

A. Balabkins, C.P.G. Schrauwen
Sidrabe, Inc
17 Krustpils St., Riga, Latvia LV-1073
Phone: +371 67248606, Fax: +371 67139506
E-mail: balabkins@sidrabe.eu, cor.schrauwen@sidrabe.eu
www.sidrabe.com