

# THIN LAYERS DEPOSITON

VAKUUM SERVIS S.R.O., VSE1200A

Vacuum system VS1200 was initially designed for PVD (Physical Vapor Deposition) deposition of large substrates or set of small samples fixed in rotating calotte. It allows deposition of thin layers including multiple layers of different materials (sandwiches). Adhesion is improved by means of high output ion source. Ion Assisted Deposition is used in case of oxides deposition to achieve high-quality layers.

## APPLICATION

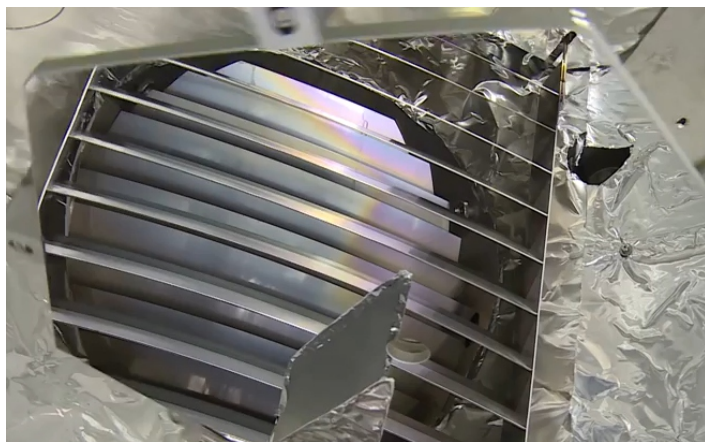
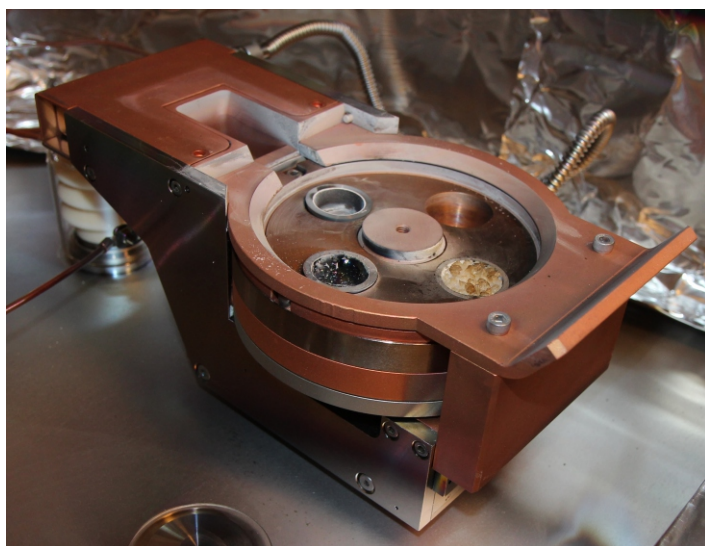
- > Reflective layers for UV, VIS and near infra wavelength range
- > Protective layers of SiO<sub>2</sub>, HfO<sub>2</sub>, TiO<sub>2</sub>, and Ta<sub>2</sub>O<sub>5</sub>
- > Beam splitters, band filters

## MATERIAL/SUBSTRATE TYPES

- > Solid substrates - glass, plastics, metal pieces
- > Maximum dimension of substrate up to 1000 mm OD
- > Deposited layers: Al, Cr, SiO<sub>2</sub>, MgF<sub>2</sub>, ZnS, TiO<sub>2</sub>, HfO<sub>2</sub>, Ta<sub>2</sub>O<sub>5</sub>

## MODES, CONDITIONS AND PRECISION

- > Technical vacuum up to  $5 \cdot 10^{-5}$  Pa
- > Means of deposition: thermal vaporization, electron gun
- > Reactive deposition in O<sub>2</sub> atmosphere (optional)
- > Ion Assisted Deposition (IAD)
- > Surface activation: Argon discharge, low-energy ion pre-cleaning



DETAILED INFORMATION ON REQUEST



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