Equipment for tribological characterization of thin films

Application:
Determination of tribological properties (friction and wear) of thin films of inorganic materials (metals, semiconductors, conductors, magnetic materials, DLC), organic materials (polymers, plastics, paints), ceramics, composites and biomaterials deposited on cylindrical or paralelipipedical samples by ball on disc or pin on disc tests with rotative or linear motion.

Functional parameters:
Applied force:
0.5...60 N with resolution of 30 mN;
Maximum friction force: 20 N;
Maximum temperature: 150° C;
Rotating module:
- maximum rotation speed: 1500 rpm;
- maximum test radius: 30 mm;
Linear module: - speed: < 10 cm/s;
Sensor for online wear depth measurement: < 1.2 mm;
Sensor for electrical contact measurement: 0 - 1000 ohms;
Balls of 6 mm or 1.5 mm of steel, alumina, WC, sapphire;
Pins of 6 mm of steel;
Maximum sample size:
- cylindrical: diameter: 30 mm; height: 5-10 mm
- parallelepipedical:
  - length: 15-50 mm;
  - width: 15-30 mm;
  - height: 5-10 mm.