



Versatile low-pressure system equipped with ion implantation and plasma PVD technologies for flat parts and powders treatment

The ionLAB100™ equipment allows ion implantation and/or PVD-PECVD coating on flat surface of 100x100mm or powders and grains up to 100 ml, controlled by a fully automated system. This versatility makes it an ideal equipment for academic purposes or for industrial R&D projects, as it can accommodate a wide range of sample sizes and types, catering to diverse research needs and applications. The system is equipped with one ionGUN2000™ for ion implantation of samples when higher corrosion resistance, hardness or reduced friction is required. ionLAB100™ could also be adapted to accommodate PVD systems instead of ionGUN2000™, or in combination with it, to benefit from the pre- or post-implantation for activation of surface prior to coating deposition, or enhancement of adhesion between various sputtered layers.

TECHNICAL DATA	
Power supply	General power: 400 V / 32 A
ionGUN power supply	Frequency: 10 GHz / 50 W Power: up to 600 W Ion energy: up to 40 kV Ion current: up to 15 mA
Vacuum pressure	10 ⁻⁷ mbar in MAP* / 10 ⁻⁶ mbar in chamber
Number of ionGUNS and/or cathodes	1 ionGUN and/or 1 cathode
Flat parts substrate size	L100xW100xH20 mm
PVD and PECVD power supply	DC, Pulsed DC, or RF
Powder mixer	Vibrating container - up to 100 ml
Processing capacity	Batch processes
Dimensions of the machine	L2500xW1200xH2200 mm
Weight	1000 kg
Water cooling system	Yes – demineralized water

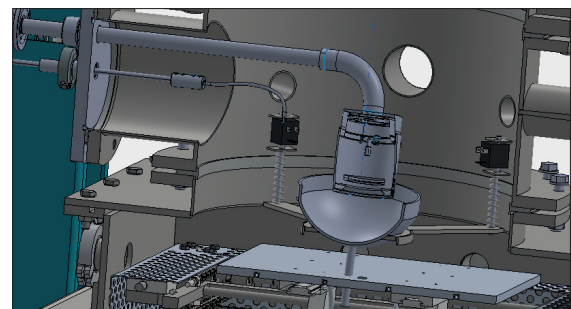
* MAP : Micro-Accelerator of Particles

Features

- ▲ Low-pressure surface treatment adapted to a wide range of materials.
- ▲ Surface treatment technology: ion implantation, PVD and PECVD.
- ▲ XY table available (moving: 100 mm/s max).
- ▲ Faraday's cup for the ionGUN2000™ integrated in the process chamber.
- ▲ Fully integrated control system with intuitive HMI.
- ▲ Any gas can be used: Ar, He, N₂, O₂, SiH₄ as well as mixtures.

Option

- ▲ Circular PVD cathode (max 3-inch / 76 mm).
- ▲ Advanced powder mixing equipment.



Applications

▲ **Mechanical**

- ▲ Enhanced hardness
- ▲ Corrosion resistance
- ▲ Friction coefficient

▲ **Decoration**

- ▲ Anti-scratch
- ▲ Colored finish
- ▲ Anti-reflective

▲ **Biomedical**

- ▲ Biocompatibility
- ▲ Antibacterial
- ▲ Blocking metal diffusion

Treated materials are metals, ceramics, polymers and elastomers, glass, sapphire, cermets, textiles, carbon fibers,...

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