



Designed by ionics

Low-pressure system equipped with ion implantation for flat treatment

The ionLAB equipment allows ion implantation of flat surfaces of 100x100 mm controlled by an automated XY table. The system is equipped with an ionGUN 2000: an industrial ion source able to use different gases and to reach ion beam currents of several milliampere with accelerating voltages up to 40 kV.

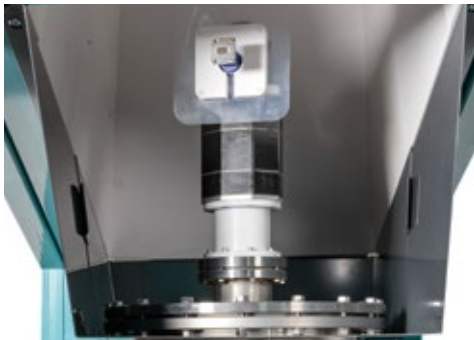
TECHNICAL DATA	
Power supply	General power: 400 V / 32 A Frequency: 10 GHz / 50 W Power: up to 600 W Ion energy: up to 40 kV Ion current: up to 15 mA
Vacuum pressure	10^{-6} / 10^{-7} mbar in Chamber and MAP
Number of ionGUN's used	1
Substrat size	L100xW100xH20 mm
Processing capacity	Batch processes
Dimensions of the machine	L2500xW1200xH2200 mm
Weight	750 kg
Water cooling system	Yes – demineralized water

Features

- ▲ Coating sources: ion implantation – PVD also available on request
- ▲ XY table available (moving: 100 mm/s max)
- ▲ Faraday's cup for the ionGUN 2000 integrated in the process chamber
- ▲ Fully integrated automated 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)



Applications

▲ Mechanical

- ▲ Increase hardness
- ▲ Corrosion resistance
- ▲ Low friction coefficient

▲ Decoration

- ▲ Scratch resistance
- ▲ Colors or surface finish
- ▲ Anti-reflective

▲ Biomedical

- ▲ Biocompatibility
- ▲ Antibacterial
- ▲ Low cytotoxicity

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

The innovation is supported by the Walloon Region through the WALIBEAM project which gathers major industrial actors in the fields of surface treatment of glass, metal and polymer.