

ionPRO¹⁸⁰⁰



Designed by ionics

Ion implantation industrial line dedicated to the treatment of large surfaces

The ionPRO industrial line is dedicated to the treatment of large flat parts with the innovative ion implantation technology. Five ionGUNS 2000 arranged in line ensure the efficiency and homogeneity of the ion implantation treatment. The lock chamber is composed of two loading plates allowing a continuous treatment in the process chamber. The treated surface area reaches 1600x1800 mm with a maximum speed of 150 mm/s.

TECHNICAL DATA	
Power supply	General power: 400V / 125 A Per implanter: <ul style="list-style-type: none"> • 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 ionGUN's used	5
Substrate size	1800x1600x75 mm (Max 200 kg)
Processing capacity	Continuous or batch processes
Dimensions of the machine	L13000xW7500xH3000 mm
Weight	4000 kg
Water cooling system	Yes – 1 demineralized water and 1 regular water

Features

- ▲ Coating sources: ion implantation - PVD also available on request
- ▲ XY table of 2 m available
- ▲ Load and lock system
- ▲ Lock chamber allowing continuous treatment in the process chamber
- ▲ Fully integrated automated control system
- ▲ Any gas can be used: Ar, He, N₂, O₂, SiH₄ as well as mixtures

Option

- ▲ 2 or 3 cathodes (max L 2000 mm, rotating) and 1 ion source for surface preparation



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.