

Rotenberg
integrated systems

RE-123 Robotic Acid Etching Machine For Dental Implants

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Advanced and automated surface treatment solution for dental implants

In the world of dental implants manufacturing surface treatment must maintain high repeatability and a stable process in order to achieve the highest osseointegration rates.
Rotenberg RE-123 is a compact and advance solution which provide a fully automated process with a high throughput in a very small footprint.
The machine is built around a specially designed fume hood and provides a fully automated process that includes implants acid etching and washing.
By controlling all quality relevant parameters, a homogeneous roughness and clean surface is realized.
The highly flexible design enables process customization according to customer needs while the machine friendly user interface provides an easy programing.
By using a specially designed robot to handle the implants thru the process the risk of a human error is eliminated and process operation become simple and safe.

Features and benefits



Low cost of ownership
- An economical use of acids
- High throughput in a small foot print

Flexibility
- Machine customization according to customer recipe
- Programmable process parameters

Ease of use
- An un mend controlled and monitored process
- Short and simple operation training
- User friendly graphic interface

Safety
- Standard fume hood encloser
- Minimal acid handling



Quality control
- Traceable processing with batch number and log in information
- Password protection for process programing.

Easy maintenance
- User friendly graphical maintenance screens for monitoring all system components.

Technical Data

Machine layout

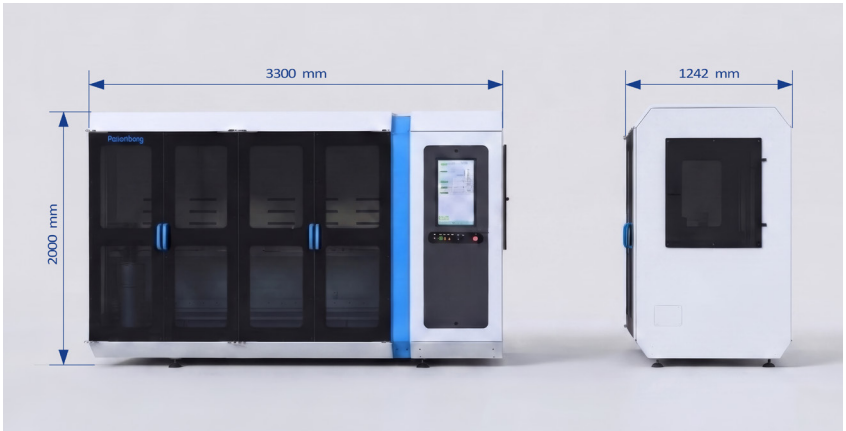
- Standard fume hood construction with ventilated upper and lower sections.
- Upper section includes process tubs, lower section includes acid storage and flow control elements.
- Internal 60 liters heating tank for DI water.

Process

1. Manual sealing of implants platform and loading into a dedicated tray.
2. Manual loading trays to the machine (4 positions)
3. Machine process
    - 3.1. Wetting
    - 3.2. First etching (option)
    - 3.3. Rinse washing
    - 3.4. Second etching
    - 3.5. Rinse washing
    - 3.6. Fine washing using ultrasonic
    - 3.7. Deeping in DI water

programmable process parameters

- Process sequence
- Etching time
- Etching temperature
- Acid mixture parameters
- Acid boosting during process
- Bauble removal
- Washing cycles
- Washing time
- Washing temperature
- Waste disposal
- Acids life time
- Washing water PH level (option)



Software & user interface

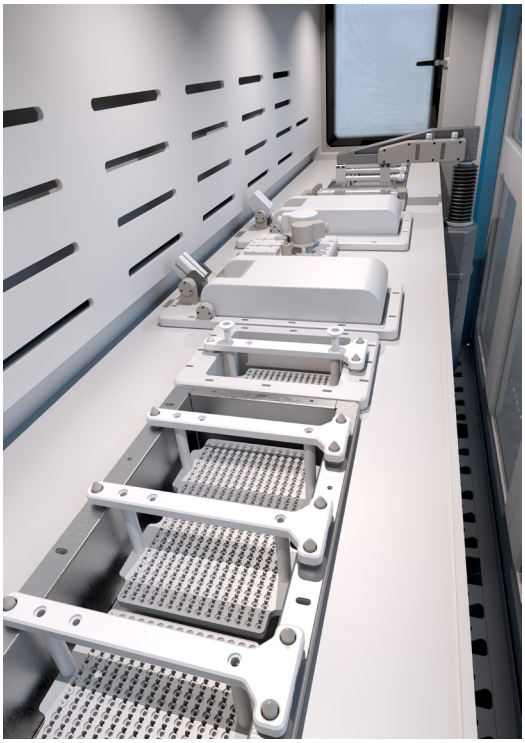
- Graphic user interface using 21" touch screen
- 3 levels of users (operator, programmer and maintenance) protected by password
- Graphic process monitoring, settings, programming and maintenance screens
- Data recording (option)
- Web connectivity

Waste handling

- Used acids can be automatically drained into an 80 liters dedicated tank in the machine for later disposal.
- Washing water can be programmed to drain to the waste tank or sewage.

Technical Specifications

Capacity 1000-500 implants per hour
DI Water consumption 10-24 liter per hour
Power: 3X380VAC 18KW 40A
Air supply: 5-7bar dry air 0.05m3/hr
Weight :1000 kg
DI water flow capacity: 2000l/hr
Ventilation system flow capacity: 2000m3/hr





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