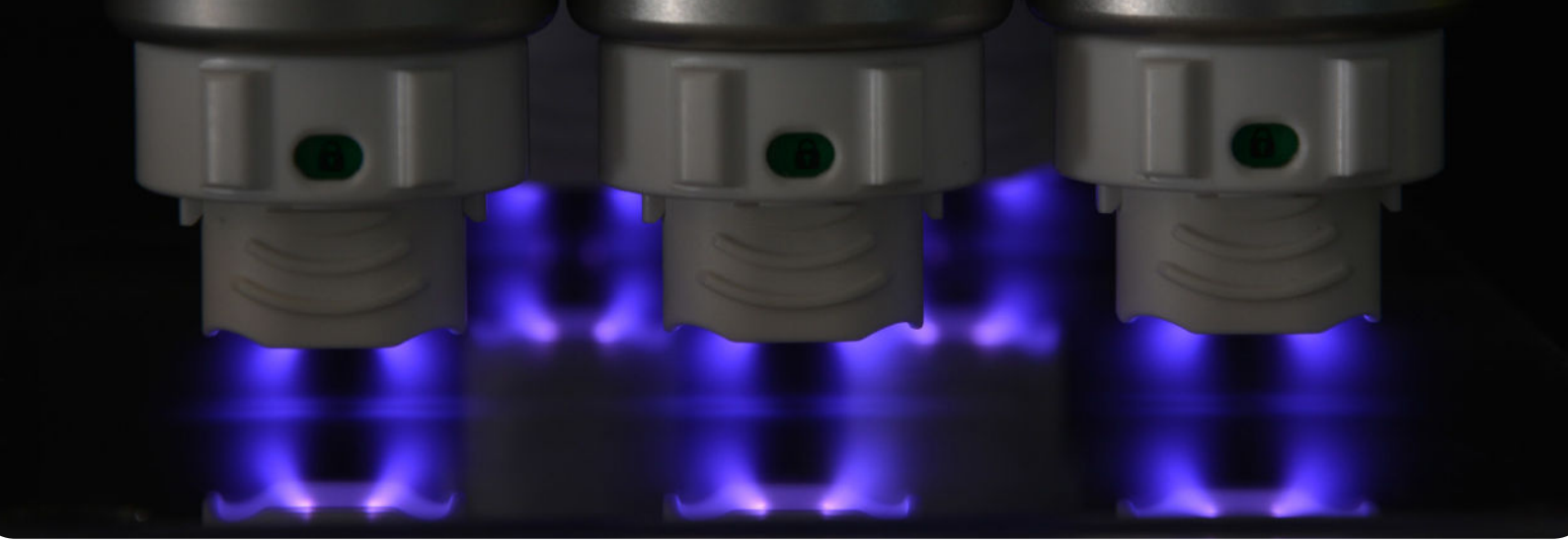

piezobrush® PZ3-i

Compact plasma integration for the integration in production lines

The PiezoBrush PZ3-i has been specially developed for integration into new and existing production lines. It enables intuitive operation, comprehensive process control in automated production processes and is therefore compact, safe and efficient. With a maximum power consumption of 18 W, it uses the Piezoelectric Direct Discharge (PDD®) technology to generate highly efficient cold plasma.

Fields of application

- Inkjet, marking and pad printing
- Bonding processes with epoxy, polyurethane and cyanoacrylates etc.
- Potting and dispensing technology
- Joining and assembly technology
- Laboratory and medical technology
- Packaging technology
- Microbiology, microfluid and food technology

Possible use cases

- Activation of surfaces of a wide variety of base materials
- Optimization of bonding, printing and lamination processes
- Surface treatment of plastics, glasses, ceramics, metals, composites and natural materials
- Selective improvement of the wettability of a wide variety of surfaces
- Fine cleaning of surfaces
- Alternative to chemical primers, flame treatment processes and mechanical roughening

Technical data

Electrical connection: 24 V DC
Power consumption: max. 18 W
Weight: 370 g
Plasma temperature: < 50 °C
Typical treatment distance: 2 – 10 mm
Typical treatment width: 5 – 29 mm, depending on process parameters
Integration unit with gas connection

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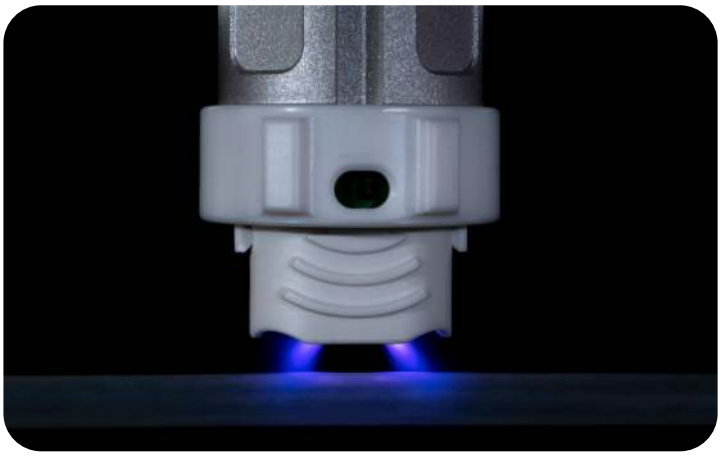
piezobrush® PZ3-i

Different treatment speed

The PiezoBrush PZ3-i can be easily integrated into new and existing production lines. The typical treatment speed varies depending on the application. For ultra-fine cleaning, a treatment speed 1 - 15 mm/s is possible, for gluing processes 10 - 150 mm/s, and for printing processes 100 - 1500 mm/s.

Versatile exchange modules

Different surfaces must be activated with the appropriate accessories. The choice of the exchange module depends on the electrical conductivity of the component to be treated and the process parameters.



- ◇ **Module Standard:** for electrically non-conductive substrates such as plastics, ceramics, or glass
- ◇ **Module Nearfield:** for electrically conductive materials such as metals, CFK, indium tin oxide (ITO), or conductive plastics
- ◇ **Module Needle:** for very small or hard to reach areas for non-conductive materials
- ◇ **Module Nearfield Needle:** for very small or hard to reach areas for conductive materials
- ◇ **Module Multigas:** for operation with different gases such as nitrogen, argon, or helium

Extensive communication possibilities

The control and status query of the PiezoBrush PZ3-i is possible via two different communication types. The easiest way is the control via electrical switching signals with the possibility of status query. In addition, it is also possible to implement digital bus communication based on the CANopen® protocol. In this case, there are even more options for controlling and querying the status of the device and thus a higher degree of process control.

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