



## INNOVATIVE PLASMATECHNOLOGY

efficient and reliable

### piezo brush PZ3-i

## Compact plasma solution for integration into production systems

The PiezoBrush PZ3-i has been specially developed for integration into new and existing production systems. It impresses with intuitive operation and comprehensive process control in automated production processes and is designed to be compact, safe and efficient. With a maximum electrical power consumption of 18 W, highly efficient cold plasma is generated using Piezoelectric Direct Discharge (PDD) technology.

### Applications

- ◇ Inkjet, marking and pad printing
- ◇ Potting and dispensing technology
- ◇ Joining and assembly technology
- ◇ Laboratory and medical technology
- ◇ Packaging technology
- ◇ Microbiology, microfluid and food technology

### Fields of application

- ◇ Activation of surfaces of a wide variety of 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 solvents, primers, flame treatment and mechanical roughening

### Technical details

Integration unit with gas connection

Electrical connection: 24 V DC

Power consumption: max. 18 W

Weight: 370 g

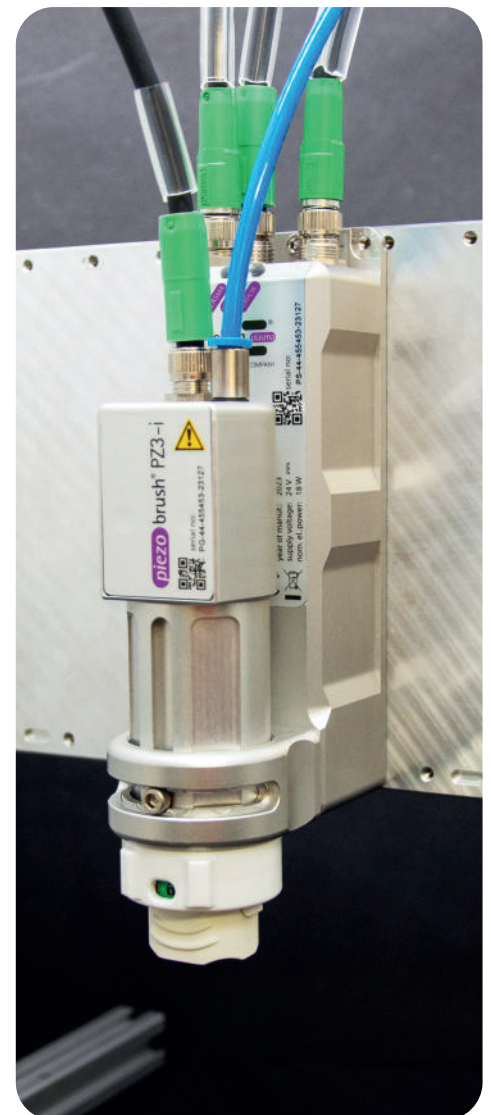
Plasma temperature: < 50 °C

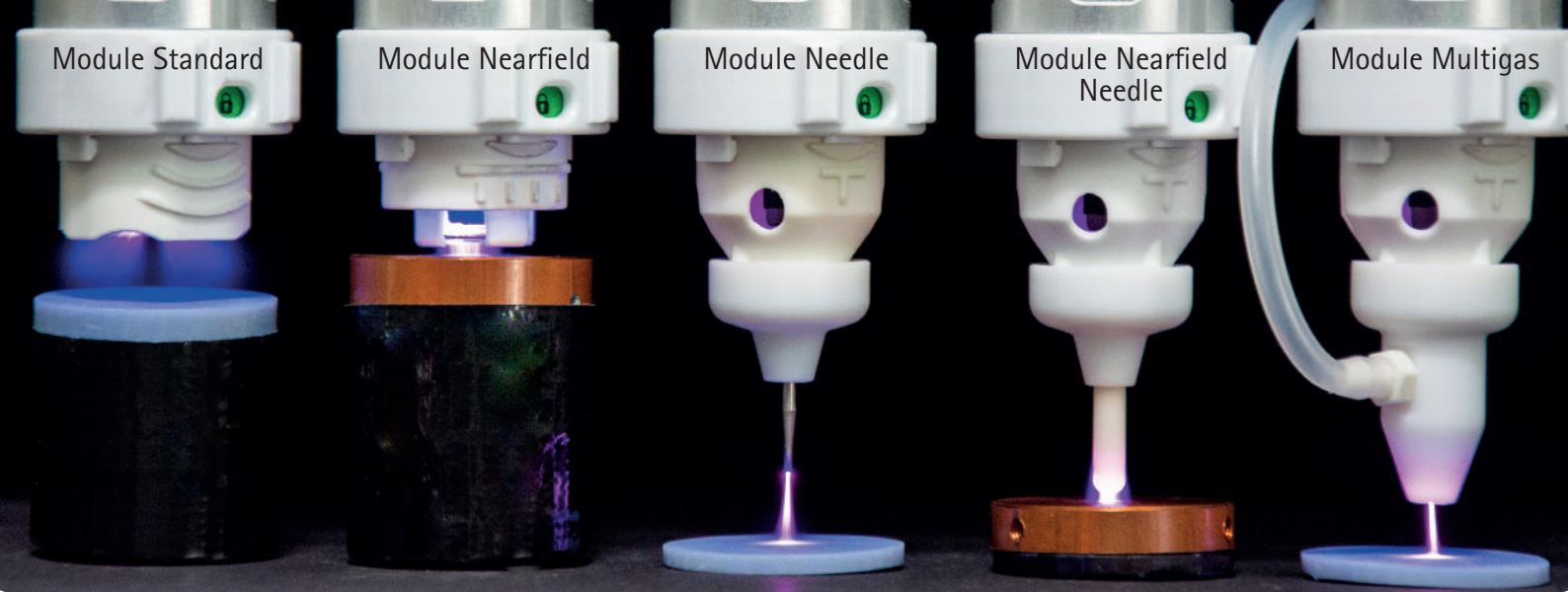
Typical treatment distance: 2 – 10 mm

Typical treatment width: 5 – 29 mm

Typical treatment speed:

- ◇ Ultrafine cleaning: 1 - 15 mm/s
- ◇ Adhesive bonding processes: 10 - 150 mm/s
- ◇ Printing processes 100 - 1500 mm/s.





## piezo brush PZ3-i

Examples of use: plasma activation with the PiezoBrush PZ3-i

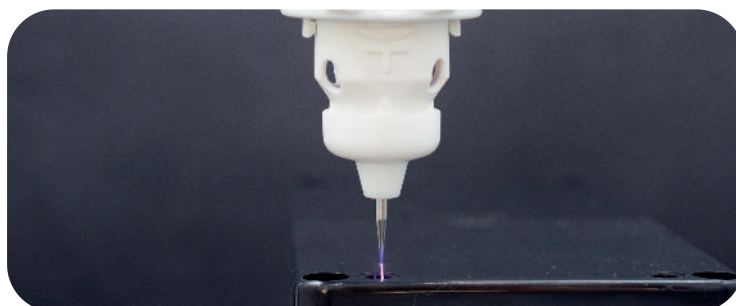
### Plasma for marking printing

Many PTFE fabrics are difficult to print using continuous inkjet printing. Plasma treatment with the PiezoBrush PZ3-i can ensure good legibility of the printed data matrix code and its durability even under difficult conditions such as friction and temperature.



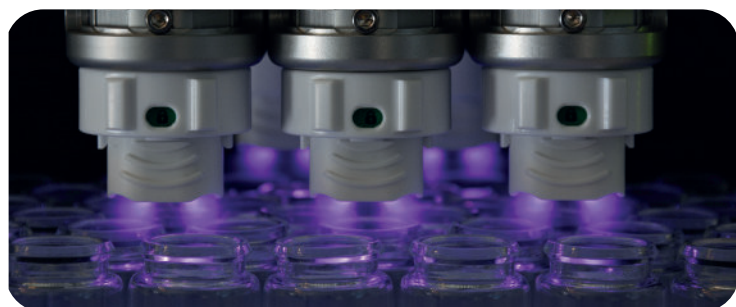
### Surface preparation before bonding

In display production, a secure and stable bond between the plastic housing and the display is essential. Plasma treatment with Module Needle is ideal for pre-treating the narrow adhesive joints so that the subsequently applied adhesive wets well and is optimally distributed in the adhesive joint, creating the strongest possible adhesive bond.



### Flexible row solution

By arranging several PiezoBrush PZ3-i integration units next to and behind each other, it is possible to treat surfaces beyond the typical treatment width of atmospheric pressure plasma. The plasma system remains just as flexible as it is compact and, in addition, is particularly efficient.



The PiezoBrush PZ3-i can be controlled and its status queried by means of electrical switching signals or digital bus communication based on CANopen®.

The plasma handheld device PiezoBrush PZ3 can be used to validate the plasma process prior to integration into series production. The technology and modules in the handheld device and in the integration unit are identical, so it delivers analogous results to the PiezoBrush PZ3-i.

Different surfaces require the appropriate accessories to be activated in order to achieve a good result in the end. That's why there are five different modules for the PiezoBrush series - see cover picture above.



relyon plasma GmbH  
A TDK Group Company  
Osterhofener Straße 6  
93055 Regensburg - Germany

Tel.: +49 941 60098-0  
Fax: +49 941 60098-100  
www.relyon-plasma.com  
info-relyon@tdk.com

relyon <sup>®</sup> plasma

A TDK GROUP COMPANY