

INNOVATIVE PLASMA TECHNOLOGY

efficient and reliable

piezo brush® PZ2

Effective plasma device for manual use

The piezobrush® PZ2 is a compact plasma handheld device for use in laboratories, pre-development and assembly of small series (with the possibility of automation). With a maximum power consumption of 30 W cold-active plasma is generated with a temperature of less than 50°C using Piezoelectric Direct Discharge (PDD®) technology. This plasma is used for highly efficient increase of the surface energy on many materials, as well as for germ and odour reduction.

Fields of application

- ◇ Joining technology
- ◇ Development and optimization of production processes
- ◇ Research facilities and laboratories
- ◇ Microbiology, microfluidics and food technology
- ◇ Medical technology and dental technology
- ◇ Prototype and architectural model construction
- ◇ Small-lot production



Applications

- ◇ Activation of surfaces using a wide variety of materials
- ◇ Optimization of bonding, varnishing, printing and coating processes
- ◇ Surface treatment of plastics, glass, ceramics, metals, composites and natural materials
- ◇ Ultrafine cleaning and odour reduction

Technical details

Electrical connection: 110 – 240 V / 50 – 60 Hz / 15 V DC

Power consumption: max. 30 W

Weight: 180 g

Version: handheld with power supply unit, integrated fan

Plasma temperature: <50 ° C

Typical treatment distance: 2 – 10 mm

Typical treatment width: 5 – 20 mm





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Application examples plasma activation with the piezobrush PZ2

Printing on plastics

Many plastics such as polytetrafluoroethylene (PTFE) are difficult to print on. In the picture, only the right side has been treated with plasma before printing. The comparison clearly shows that the plasma pre-treatment of the substrate leads to a uniform print image, as well as to considerably better adhesion of the inks.



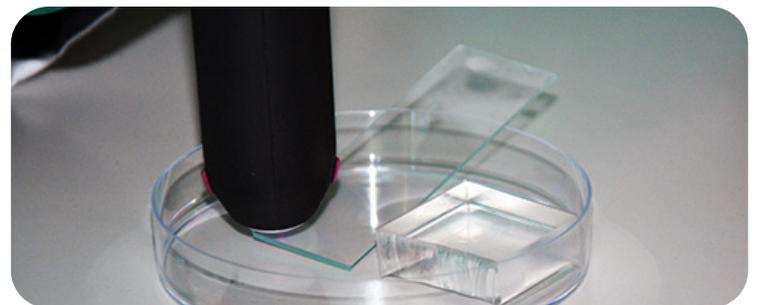
Bonding of 3D printed parts

Large parts are often produced in 3D printing as individual parts and then bonded - but often with considerable adhesion problems. A plasma pre-treatment results in a significant improvement of adhesion. Up to three times higher bond strength can be achieved without the use of environmentally harmful wet chemical primers.



Adhesion improvement PDMS and glass

In microfluidic chip manufacturing, polydimethylsiloxane chips (PDMS) are often bonded to glass carriers, which is nearly impossible without pre-treatment. If the two surfaces are pre-treated with the piezobrush® PZ2, it is then very easy to establish a successful bond between PDMS and the glass substrate.



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