

piezo brush[®] PZ3

Efficient plasma device for use in the dental laboratory

The piezobrush® PZ3 has been developed as a compact handheld plasma device for use in laboratories. With a maximum power consumption of 18 W, cold-active plasma with a temperature of less than 50°C is generated using piezoelectric direct discharge (PDD®) technology. Plasma is used for highly efficient surface energy enhancement on many materials, as well as for germ and odor reduction.

Fields of application

- Surface pre-treatment of dentures, abutments or crowns prior to coating or bonding
- Intermediate and final cleaning of prosthetic work
- Pre-treatment of surfaces before finishing



Possible applications

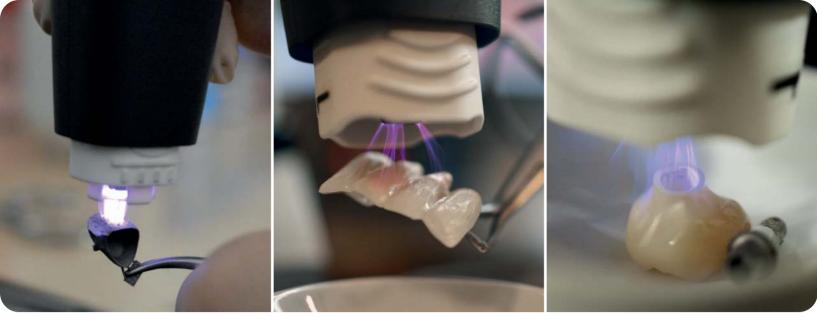
- ♦ Bonding of abutments and prosthetics
- Improved adhesion between resin, metal and ceramic
- ♦ Improved color appearance and shortened process times for color individualization
- ♦ Support and replacement of the effect of chemical primers by plasma
- ◊ Improved durability of veneers, e.g. on chrome-cobalt-molybdenum

Technical data

Electrical connection: 110-240 V / 50-60 Hz Power consumption: max. 18 W Weight: 110g Design: handheld unit with power supply, integrated fan Plasma temperature: < 50 °C Typical treatment distance: 2 - 10 mm Typical treatment width: 5 - 29 mm







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Application examples of plasma in the dental laboratory

Veneering of prosthetics

When veneering metallic prosthetics, e.g. chrome-cobaltmolybdenum, chipping may occur due to the high stress caused by the patient.Treating the metal surface with the Nearfield module before applying the metal primer significantly improves the bond with the subsequently applied opaquer. In this way, costly complaints and repairs can be prevented in advance.



Color individualization

Color individualization often involves the use of high-gloss polishes which are difficult to wet, as a result of which the color fluids often roll off the surface. This causes the color pigments contained in them to accumulate at one point on the denture, creating an uneven color appearance. With a prior plasma treatment, the denture is completely and evenly wetted with the fluid, leading to a uniform surface usually already during the first firing process.

Bite splint with polycarbonate and silicone

In the bite splint with elastic bite core, the fixed base is made of polycarbonate and the opposing bite block is made of silicone. To make the connection more reliable, the depressions are plasma-treated with the piezobrush® PZ3 for 30 seconds each after roughening. This activates the surface and makes it more wettable for the bonder, allowing it to penetrate even the finest grooves. In addition, the silicone spreads evenly without forming gaps, resulting in stronger adhesion between the polycarbonate and the silicone.







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