

Trade show preview Bondexpo – Product launch of the compact plasma integration piezobrush® PZ3-i

Relyon plasma from Regensburg, a subsidiary of TDK Electronics AG, is presenting the innovative plasma system piezobrush® PZ3-i at Bondexpo in Stuttgart, the International Trade Show for Adhesive Bonding Technology. Based on PDD® technology, this compact integration solution is suitable for a wide range of surface applications.

Regensburg/Stuttgart. Bondexpo opens its doors from October 5-8, 2021, after being cancelled last year. Relyon plasma will present the compact integration solution piezobrush® PZ3-i for the first time in hall 5 at booth 5505. Cold pressure plasma is used to optimally prepare hydrophobic surfaces for bonding by increasing the surface energy and to enable a stable adhesion process.

Piezobrush® PZ3-i – Plasma as the industry standard of the future

The highlight of this year's trade show appearance is the presentation of the compact integration solution piezobrush® PZ3-i for the first time ever. The cold plasma device is designed for integration into existing production lines and is therefore compact, safe, and efficient. Thus, it is ideally suited for pre-treatment prior to gluing, printing, and laminating. Due to its compact and robust housing, it is easy and uncomplicated to implement the piezobrush® PZ3-i in inline systems. In addition, comprehensive process control is possible in automated production processes, ensuring traceability. The device is intuitive to operate and can be serviced without tools.

Flexible treatment widths due to modularity

With an average treatment width of 5 - 29 mm (CDA), the piezobrush® PZ3-i is very well suited for the pre-treatment of adhesive grooves or for printing on low-energy materials. With other process gases such as nitrogen, treatment widths of up to 50 mm are possible. For many applications, however, even larger treatment widths are required. Due to the modular design, the individual units can be easily arranged in a row to achieve larger treatment widths that can be individually adapted to the application.

The piezobrush® PZ3-i with PDD® technology generates highly effective cold plasma. Based on the experience with the predecessor model piezobrush® PZ2-i, which is already in use at many customer sites, the piezobrush® PZ3-i was developed according to user needs to close the gap between handheld devices and high-performance inline devices. For example, the company IKA®-Werke GmbH & Co. KG uses the predecessor to glue autoclavable pipettes.

Up to now, high-performance systems have been used for automated plasma processes. These are optimized for high process speeds, but this is associated with relatively high demands on process accuracy and control. Especially with temperature-sensitive substrates, overheating of the sample must be avoided. The piezobrush® PZ3-i, on the other hand, simplifies the use of plasma due to the low plasma temperature of less than 50 °C, the supply with low-voltage cables and an occupational safety due to contact safety and low emissions. This opens new application possibilities: With the piezobrush® PZ3-i, it is now possible to achieve optimal and reproducible adhesion results with little effort.

Use cases at the booth

Relyon plasma is looking forward to welcoming interested visitors at the booth. They can experience the new development piezobrush® PZ3-i, the handheld device piezobrush® PZ3 as well as the PAA® technology in action directly on-site and ask the experts application questions. In addition, trade show visitors can also bring their own substrates so that they can see the benefits of plasma treatment for themselves.

Technical data of the piezobrush® PZ3-i:

Supply voltage	24 V DC
Power consumption	Max. 18 W
Design	Integration unit with gas connection
Weight	380 g
Plasma temperature	< 50°C
Treatment distance	2 – 10 mm
Treatment width	5 – 29 mm (CDA) 5 – 50 mm (nitrogen)

About relyon plasma GmbH

Relyon plasma GmbH, based in Regensburg, Germany, and a subsidiary of TDK Electronics AG, sees itself true to the motto “rely on plasma” as a professional supplier of innovative plasma systems and service provider for customer-specific process solutions. Thanks to many years of professional experience in the industry, relyon plasma offers a wide range of specialized plasma components for manual applications and inline processes. Atmospheric pressure plasma is used to disinfect, clean, modify and functionalize a wide range of surfaces. The materials can thus be optimally prepared for gluing, varnishing, and printing.

Contact:

relyon plasma GmbH
Osterhofener Str. 6
93055 Regensburg
Germany
Christina Wimmer
+49 941 60098230
c.wimmer@relyon-plasma.com
www.relyon-plasma.com

Picture credits:



Picture 1: piezobrush[®] PZ3-i device consisting of driver housing and module mount



Picture 2: Linking of several piezobrush[®] PZ3-i single units for larger treatment widths



Picture 3: Use of the predecessor model piezobrush[®] PZ2-i for bonding polypropylene (PP)
Source: IKA[®]-Werke GmbH & Co. KG