

Precision Mechatronics launches new range of Atmospheric Plasma Technology products

Sydney, 16 September 2012 – Precision Mechatronics launched its new, upgraded range of high-speed atmospheric plasma systems during the Semicon exhibition in Taipei, Taiwan, from 5 to 7 September. Since the acquisition of US-based Surfx Technologies last year, Precision Mechatronics has been working on the existing Surfx Atomflo plasma systems to even improve the technology and its ease of use.

Surfx Technologies is a specialist company offering high-speed atmospheric plasma technology for treating microelectro-mechanical systems (MEMS), microfluidics, semiconductors, solar cells, medical devices, sensors, plastics and composites. The acquisition provides Precision Mechatronics with a competitive edge in clean atmospheric plasma technology, which can be applied for cleaning, etching, deposition, surface activation, bonding and surface modulation of advanced materials.

The advantage of atmospheric plasmas is their ease of use, cost effectiveness, and ability to continuously treat materials of any size and shape. Furthermore, the reactive gas flows out of the plasma source and around and through complex parts, such as MEMS. The Atomflo is unique in that it is a particle-free plasma source, and generates significantly less particle contamination than vacuum plasmas.

For surface preparation in aerospace and other applications, Surfx Technologies has commercialised a variable chemistry, atmospheric pressure inert-gas plasma. "This technology presents a real opportunity to revolutionise surface preparation and adhesive bond performance of composite structures," says Precision Mechatronics' CEO Jason Thelander.

Existing customers for Atomflo plasma systems include renowned companies within the aerospace industry, who apply the technology for composite material surface treatments. Together with Precision Mechatronics' capabilities, those companies will in future receive fully automated solutions and support through improved technology.

The Atomflo range of plasma systems has not only undergone a complete re-design to improve the product's useability for industry applications, it also features essential upgrades which allow users to monitor the process.

"In the past, users have always been concerned about how they were to know when the plasma treatment process was done," Mr Thelander explains. "The new integrated end-point detection and our unique real-time spectroanalysis ensure users know when the process is finished and provide them with a 'felt' plasma experience."

Other enhanced features include a new-version controller, a better, more user-friendly interface, a ten-times faster reacting control network, and a world-first sub-100°C plasma gas operation through water cooling. The latter makes the technology even more suitable for medical applications, where low process temperatures are required.

The plasma head has also been re-designed and because the gas unit is the only part that needs to be calibrated, service is much easier now since users will simply receive a new module and don't have to wait for a service engineer to come on-site.

"Our team of PhD Scientists and Application Specialists based in California has been supplying solutions to high-tech industries in the USA for close to a decade, and we have identified this technology as a good fit for our company on a number of levels," Mr Thelander says. "In combination with our Integration & Automation capability, we will also be able to provide custom engineered solutions to high volume and/or high value manufacturing processes."

Apart from the aerospace industry, Precision Mechatronics will provide automated surface preparation solutions for adhesive bonding in the medical device and semiconductor packaging industry. Precision Mechatronics also offers ongoing support to existing and new customers and has the capability to fully automate the atmospheric plasma technology.

Contact Precision Mechatronics today to arrange a trial at our North Ryde facility or in our labs based in California.

About Precision Mechatronics

Precision Mechatronics Pty Ltd provides custom-designed, custom-built and fully installed equipment solutions for many industries and environments. We can service the automation requirements of the following types of industries: Semiconductor packaging and test systems, telecommunications, photonics, mining, medical and life sciences.

Located in Sydney, Australia, the company is geographically positioned to provide a responsive service and timely support to the Asia Pacific region. Precision Mechatronics can also locate its highly-trained service staff wherever their skills are needed.

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