CASE STUDY



preeflow eco-DUO600

preeflow flowscreen

Two part precision dosing system from preeflow



Customer benefits

- · Reduction of rejects
- Minimised material consumption
- Improvement of product quality
- Precise, repeatable material application
- Productivity increase through stable dispensing processes



preeflow® precision dispensing system improves quality and reduces rejects of automobile parts

The automobile manufacturing industry places high demands on suppliers with regard to process reliability, quality and efficiency. To meet these challenges, a preeflow customer had to optimise his application of a two-part sealant to make a form-in-place (FIP) gasket. In his previous process, the dispensed sealant bead exceeded the tolerance limits at the point where the gasket loop completed and the sealant overlapped itself. In addition, a key process variable – the material dispense pressure - could not be monitored during application. The result was a high reject rate, and poor productivity due to process variability and the resultant need for heightened and laborious QA inspection.



Completed material application with even material join

The preeflow team helped the customer to significantly improve the production process through implementation of more accurate dispensing technology. For process reliability, a two-part dispensing system from preeflow® in now used. The eco-DUO600 is a volumetric metering, mixing and dispensing unit which uses a progressive cavity pump principle to deliver precise amounts of the mixed sealant. The preeflow systems have precision control of the material output (which can be dynamically changed); this means that the FIP gasket application is very consistent along its entire dispensed path, including at the problematic area of the join.

The EC200-DUO controller includes material pressure monitoring and control. The preeflow eco-DUO system can be connected to the preeflow flowscreen monitoring unit, a device for showing the material process pressures on a graphic display.

Stable process for mass production is very important. With the help of the eco-DUO pressure sensors in combination with the flowscreen, the dispensing parameters can be displayed graphically in real time. Pressure fluctuations that can occur, for example, due to a blocked or defective dispensing needle, contamination, or cured material, are displayed in real time. This means that errors can be rectified immediately and the number of rejects can be minimised.

Peter Swanson, Managing Director of preeflow's UK distributor, Intertronics, said:

"Accuracy and repeatability are key concerns of our customers, and we frequently recommend preeflow dispensing systems in these types of scenarios. Whether our customers are dispensing a single-part or a two-part material, we have found preeflow systems provide a very high level of reliability combined with ease of use and real-time monitoring."

The preeflow eco-DUO system, which operates using the endless piston principle, along with the flowscreen pressure monitor, provide a repeatable and stable dispensing process. The system combines the benefits of reduced material costs with improved product quality.

preeflow eco-DUO600 Precision Metering, Mixing and Dispensing System

- Genuine volumetric meter, mix and dispense dosing
- Viscosity independent
- · Suck back effect
- Easy to clean
- Controllable dosing flow

Applications include: Precise dispensing for Electronics Packaging, SMD/SMT, Semiconductor, LCD/LED/OLED, Medical, Biological Chemistry, Laboratory, Photovoltaic, Optics and Photonics

preeflow flowscreen Monitoring Unit

- Helps achieve optimum dispensing/dosing process control
- Provides process assurance

Applications include: Measurable, consistent liquid flow enabled by the use of preeflow eco-DUO 600 combined with the flowscreen helps users to achieve reliability, safety and standards compliance in a wide range of industries, including: Life Sciences, Laboratory, Pharmaceutical, Research & Development, Electronics & Microelectronics, Photonics, Process Engineering, Industrial, Education & Academia



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