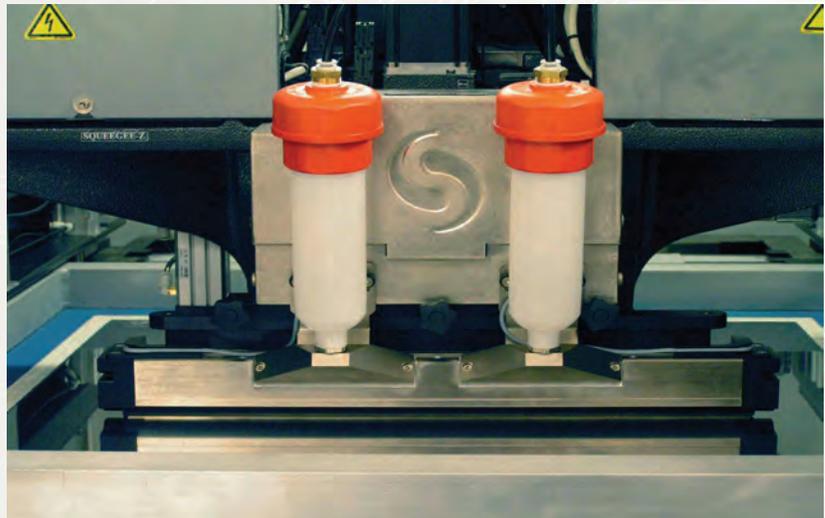


# EnclosedFlow™ Printing System

**The latest generation printing system from MPM provides unparalleled process control, repeatability and reliability.**



MPM's EnclosedFlow chamber printing system offers improved volume deposition and maintainability and at the same time reduces process cycle time, paste waste, and operator intervention. Offered on MPM Momentum® series and Accela® printers, EnclosedFlow provides unprecedented process control and reliability.

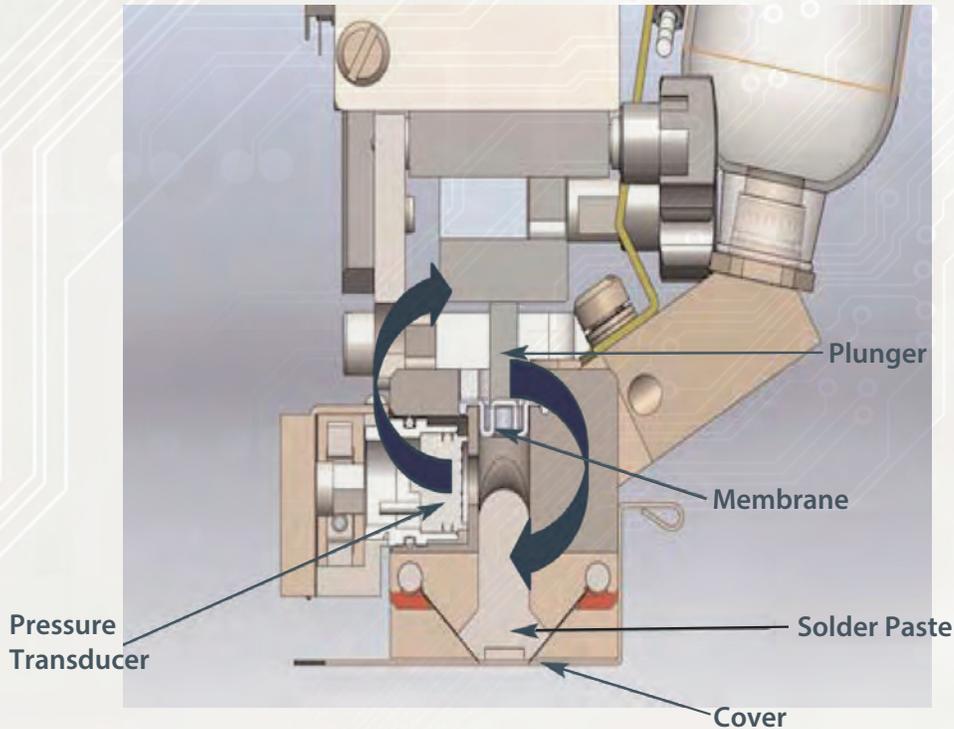
EnclosedFlow features an all new positive-displacement, servo-driven pressure system that controls paste pressures to within  $\pm 0.1$  psi, setting a new standard in the industry. This precise pressure control system enables printing fine pitch features such as 01005s and 0.3mm pitch CSPs, with up to 50% greater volume and 25% lower deviation over squeegee blades.

The system also benefits from a modular, detachable chamber. Changeover times from one size to another, or from one paste type to another take less than five minutes. This is especially beneficial in a high-mix environment where chambers full with paste can be stored in appropriate environments for weeks at a time, reducing paste waste and changeover time.

One of the goals during the development of the EnclosedFlow system was ease of cleaning over previous enclosed chamber printing systems. The system achieves that goal with a smaller number of simple parts to clean with no augers, gears, or perforated drums to clean as with other systems.

# EnclosedFlow™ Printing System

## Closed-Loop Operation



The system control software for EnclosedFlow is new as well, providing full control of head print and fill configuration along with comprehensive SPC and diagnostic tools. In addition to control, repeatability, and reliability enhancements, EnclosedFlow offers reduced cycle time - up to 1 second per board - making this new technology an integral part of quality improvement/cost reduction initiatives in any print process.

ITW EAE is a division of Illinois Tool Works, Inc. It is a consolidation of all of its Electronic Assembly Equipment and Thermal Processing Technology. The group includes world-class products from MPM, Camalot, Electrovert (Speedline), Vitronics Soltec and Despatch.

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# MPM

Electronic Assembly Printers

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