

scorpion.

The new Essemtec Scorpion high speed jet dispenser

Essemtec introduces its revolutionary high speed jet system Scorpion that is designed for high volume surface mount adhesives jetting and semiconductor packaging applications.

The Scorpion offers proven features and plug & play options that make it even more flexible for process control.

- Laser height measurement
- Automatic dot presence recognition
- Geometrical fiducial recognition
- Automatic needle cleaning station
- Cartridge/nozzle heat control

The Scorpion high speed piezo jet mechanism delivers precise volumes of fluids in dots, lines, surfaces and free form patterns.



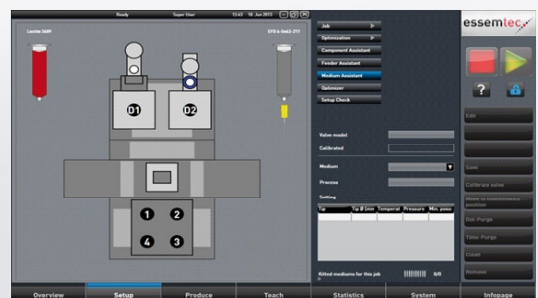
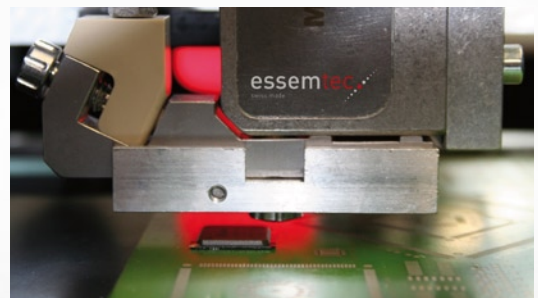
Fastest non contact jetting

The unique piezo actuator design can develop frequencies up to 800 Hz to jet a wide range of fluids such as adhesives, epoxies, underfill, coatings, lubricants, fluxes and more.

The high power actuator mechanism can jet fluids with viscosities up to 2'000'000 cps. One model can handle multiple applications.

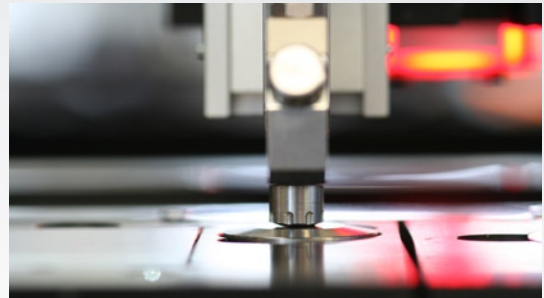
Flexible parameter settings for process control

The eDis software features an intuitive interface and user-friendly environment, allowing you to create programs within minutes. The fluid jetting parameters can be configured to jet precise volumes as small as 2nl with an accuracy of +/- 3%. With fine parameter settings the dot diameter as small as 180 microns can be reached.

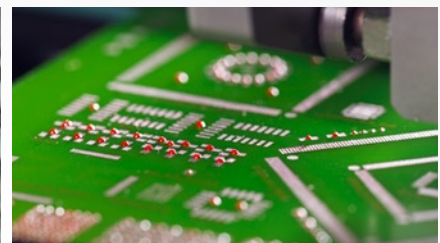
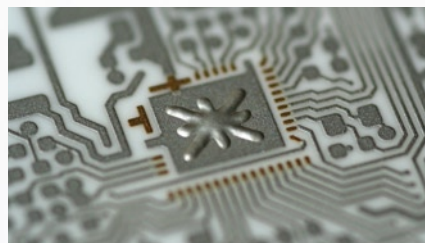


Ultra small fluid box - Low cost of ownership

Waste of expensive fluids is minimized with our fluid path of less than 70 micro liters. The one piece fluid box with few serviceable parts reduces maintenance and cleaning time to a minimum while the piezo driver goes maintenance free for over 80 million cycles. System down time during process change-overs is minimized with a quick valve exchange.



Multiple head configurations allow jetting of different fluids within one process. Up to four Z-axes with valves or placement nozzles can be controlled independently.



LED/MEMS packaging

Cavity fill, Silicone phosphor

Die attach

Conductive/Non-conductive

Glue dispensing

SMT glue dispensing

Process specifications

SMT Applications	SMA, Solder paste, Conductive adhesives
Semiconductor Packaging	Underfill, Encapsulant, Dam & Fill, Die attach
Dispensing mode	Dot, Line, Curve, Interpolated curves on multiple layers
Valve types	Jet valve, Archimedian screw valve & Time pressure valve, Piezo slider valve
Valve heating (optional)	Nozzle (80°C), Cartridge heating (40°C)
Max dispense area (XY)	600 mm x 400 mm
Z-axis travel	80 mm programmable
Conveyor	3 stage, edge clamping with vacuum support
Substrate heating (optional)	Based on applications
Clean room (optional)	ISO 7 (standard), class 10'000

Scorpion machine specifications

XY placement accuracy	+/- 50 microns @ 3 sigma
XY acceleration	2g peak
XY velocity	2 m/s peak
Z axis accuracy	20 microns @ 3 sigma
Foot print	1300 mm x 1450 mm
Weight	1450 Kg

