

MICRO-ASSEMBLY MACHINE DIE BONDER

GLUE DISPENSING & DIE BONDING



ISP SYSTEM YOUR PARTNER IN PRECISION ENGINEERING

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1 — COMPLETE ASSEMBLY PROCESS ON A SINGLE PLATFORM

The machine is able to handle the dispensing of different adhesive material followed by the placement of the die as part of a single process set-up which minimizes the floor-space in your clean room.

The glue dispensing system is located on the left side of the granite reference block, while the right hand side integrates the die pick and place. This unique architecture offers a more compact and stable system to ensure better performance.





2 — ADVANCED GLUE DISPENSING SYSTEM

The time-pressure glue dispensing system is able to realize different kind of glue patterns such as dots, cross or bespoke patterns dedicated to your application.







To make sure your process stays reliable on a long term basis, ISP-system's glue dispensing equipment integrates an automatic needle calibration in X, Y, and Z direction which is combined with a 100% post dispensing quality inspection.

3 — HIGHLY ACCURATE DIE POSITIONING

The leading edge Cartesian robot embedded on the machine is designed for high speed movement and high precision placement. It includes a low weight gantry system equipped with powerful linear motors engineered for fast acceleration at submicron resolution. Together with our advanced vision system, the machine enables die placement with just a few microns-accuracy in X, Y, Z and 5/100th of a degree in Θ with a 100% post bond inspection.





4 — LEADING EDGE AUTOMATIC WAFER FEEDER

Direct Pick from Wafers minimizes die handling and simplifies supply chain :

Thin and fragile dies are directly picked from the wafer by synchronizing the movement of the pick head and the ejection needle. To secure the die placement, the pick head integrates an adjustable 50g force control.



Wafer result mapping and ink dot recognition ensures only know-good-dies are processed, thus ensuring a high yield.

5 — ERGONOMIC AND USER FRIENDLY

The machine is designed according to ergonomic consideration. The user friendly interface enables a quick and easy access to your production parameters. Therefore new products are configured in just a few steps. In addition the main functions are located on the front of the machine allowing an ergonomic access to operations such as ejection needle, syringe, or rubber replacement.



6 — MASS PRODUCTION DESIGN WITH FULL CUSTOMIZATION POSSIBILITIES

The station is a fully automated machine designed for mass production which includes product and process traceability, conveyors, indexing stations, and automatic feeder.

This machine is built on a common platform which can be configured to meet specific customer's requirements. Our 20 years experiences as a special machine builder allow us to design and manufacture high precision production equipments for micro-assembly and die-attach applications.

FEATURES	VALUES
X, Y, Z die placement repetition accuracy	+/- 30 μm @ 5S
Theta die placement repetition accuracy	+/- 0,05° @ 5S
Unit per hour	600
Z force control	+/- 25 g (up to +/- 1 g on request)
Wafer loader	6" and 8" (more dimensions on request)
Tape & reel loader	Up to 4 feeders (available as an option)
Weight	1200 kg
Dimensions	1200 x 1600 x 2000 mm

