



# ficonTEC

## ASSEMBLYLINE AL1000

Platform for Automated Micro Component Assembly & Test

The ficonTEC AL1000 are standardized machines for industrial micro assembly processes. The high precision motion system combined with an open software platform allows the integration of a large number of applications in micro optics and mechanics assembly and test. Permanent vision and force control ensures high precision assembly, even of very sensitive components.

The software recipe capability allows the machine to handle different applications only by choosing a new parameter and eventually changing the pick up tools and the assembly station. This makes the machine an optimal partner for R&D and production.

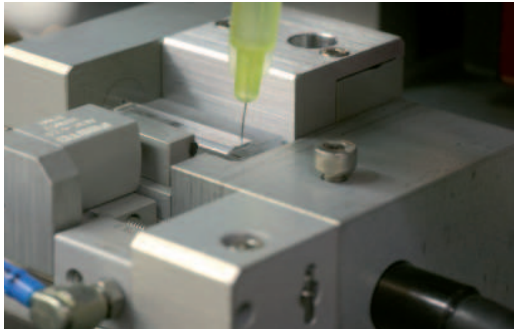


### APPLICATIONS

- + Lens to CCD array alignment and assembly
- + Fully automated FTTx transceiver assembly
- + Assembly of beam shaping optics
- + Lens stack assembly
- + X-Ray detector assembly
- + Micro tool assembly for medical applications
- + Fully automated assembly of LIDAR sensors for automotive application
- + MEMS & MOEMS
- + Your application

### FEATURES

- + Sensitive force detectors for process reliability and component safety
- + Integration of adhesive bonding (UV-curing), laser welding or soldering
- + Flexible implementation of external test equipment and external routines
- + 1  $\mu\text{m}$  precision in XYZ
- + High precision rotary motion
- + Tip and tilt alignment functionality
- + Customized assembly stations
- + Multiple tools for different component layouts
- + Active alignment capability
- + Operator initiated remote service
- + Data based operating parameter
- + Component traceability



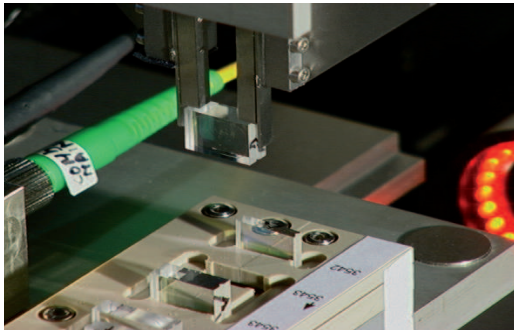
Various assembly stations

#### FLEXIBILITY

- + Different component feeding
- + Modular software architecture
- + Flexible vision system
- + Recipe basee process concept

#### VARIOUS BONDING TECHNIQUES

- + UV-curing adhesive material
- + Laser micro welding
- + Soldering



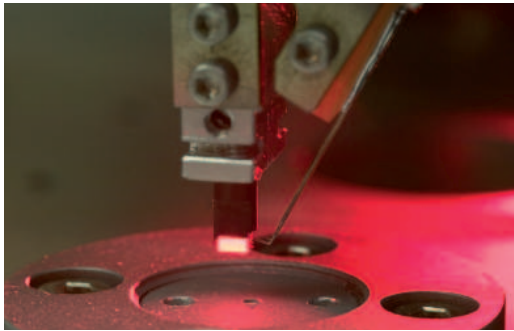
Top and bottom positioning process

#### COMPONENT TYPES

- + Chips from 0.2 x 0.2 mm to several cm
- + Micro optics
- + Micro electronics
- + Micro mechanics

#### COMPONENT FEEDING

- + GelPak
- + WafflePak
- + Blue Tape
- + Custom designed carriers
- + Inline capability



Online component test prior component assembly

#### MAIN MOTION SYSTEM

	X, Y, Z Axis	Phi-Z Axis
Travel:	500, 500, 100 mm	90°
Speed:	1, 1, 0.2 m/s	20°/s
Accuracy:	± 10, 5, 5 µm	± 10 µm
Resolution:	< 0.5 µm	2"
Repeatability:	± 2 µm	± 5"

Please contact us for further information

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