

High speed for your IGBT production

Efficient high-voltage pin insertion into substrates

HIGHLIGHTS

Speed

Up to 350 pins per minute for efficient production.

Quality and Safety

Force-monitored pin insertion and 3D inspection systems to achieve high quality and safety.

Cleanliness

Dirt deposits on the end product are avoided by horizontal placement.

Space-saving

Compact design allows transportation even in a freight elevator.

Modularity

expandable to other processes from assembly to packaging thanks to the modular design.

Precision

exact positioning of the placement nests with cross slide and clamping device.

Flexibility

Quick changeover via reprogramming on the HMI. Changeover for mechanical components without tools.

Availability

Double feeding of contact strips enables changeover during production process. Up to 8 contact feeders are possible per machine.



up to 350 pins
per Minute



3D camera inspection



Clean room compatible
Class ISO 7

Reliable and in the smallest space

The solution

Insertion:

- Horizontal high-voltage pin insertion into substrates at high-speed
- Press-in force monitoring for best quality
- 2 individually controllable placement pushers for increased flexibility in insertion of different pin types
- 3 positions per guide bar in the insertion tool for insertion of a greater variance in contact lengths of the same contact type
- Contact strip feeders with strip doubling control for reliable contact strip feeding and waste reduction

Inspection:

- Optical inspection of the contact strips ensures fewer rejects and material waste
- Individually programmable adjustment for automatic correction of the insertion depth
- Non-contact measurement of true position and pin height with 3D camera technology enables gentle handling and helps to avoid scratches or damage to the end product.
- 100% inline measurement of the substrates before pin insertion
- Automatic correction of the pin insertion position
- Storage of all measurement data in a database
- Extensive analysis via the Eberhard Digital Cockpit

Handling:

- Vacuum holders on the handling unit and at all process stations ensure gentle handling of the substrates to protect them from damage.
- High positioning accuracy is achieved by a servo-driven cross slide with clamping device, which is required for precise and fast loading.

Variant changeover:

- Quick changeover thanks to the rapid-change system
- Modular tool design for more flexibility in production of several product variants
- Expandable with additional processes thanks to the modular design



TECHNICAL DATA:

Speed: 350 Pins per minute

Positioning accuracy: $\pm 0,025$ mm
(cross slide)

Insertion angle: 0-360° in 1° steps
(„integral number“)

Availability: up to 8 contact feeders per machine

Max. size of IGBT : approx. 330x330 mm
(cross slide of the insertion unit)

Changeover time: < 5 min possible