

Fico MMS-LM



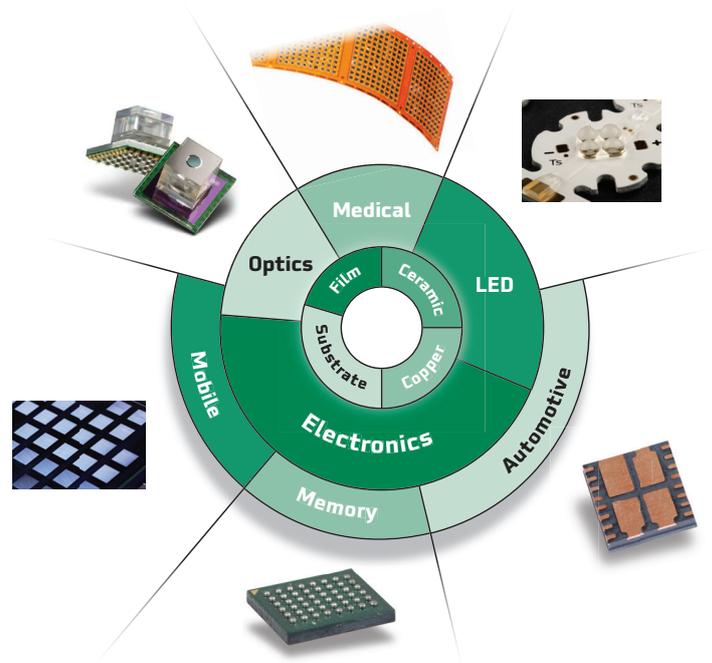
The Art of Manual Large Substrate Molding

Molding is a process where micro chips are encapsulated in plastic.

In line with the market trend of larger substrates, Fico has introduced a new large substrate manual molding machine. The MMS-LM can mold substrates of up to 102 x 280 mm and handles all current single sided packages.

The MMS-LM is used for molding process parameter optimization. Using the original molds, new products can be developed and optimized prior to large scale production. Besides that, the MMS-LM can be used for small production batches or offline cleaning of AMS-LM molds.

Future Proof Equipment



The Fico Approach

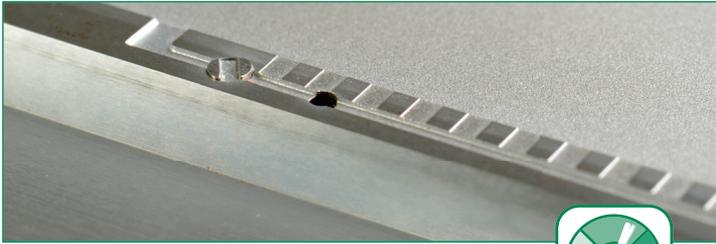
Conventional

- Moving blocks
- Complex handling
- Large and heavy mold

Fico MMS-LM

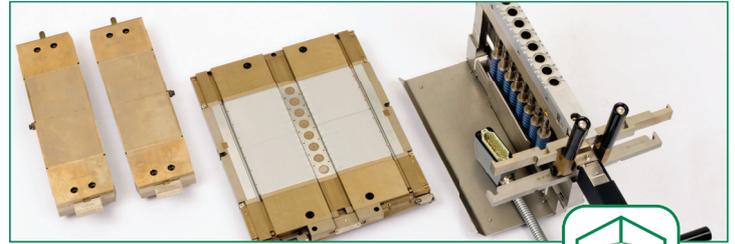
- 102 x 280 mm substrates
- Individually moving blocks
- 35% less moving parts
- Modular mold design





Vacuum

- Board vacuum
- Cavity vacuum
- Void free end product
- V-pin vacuum control
- Suited for complex molded underfill packages



Mold

- Solid mold design
- Laminated mold design
- Vacuum mold
- V-pin vacuum control
- High precision Fico quality



Molding Press

- Large substrate molding
- Topedge molding (low viscosity compounds)
- Adjustable high clamping force
- Dynamic Clamping Control (Flip Chip Bare Die)
- 17 process patents
- Board and cavity vacuum
- Individual, equal board clamping



Easy operation

- User friendly
- Touch screen operation
- Low maintenance
- Easy process optimization
- Ergonomic design
- Built in cleaning exhaust



Compatible

- Fully compatible automatic and manual machine
- Mold exchange to different systems
- Compatible with AMS-W molds
- Process parameter exchange
- Universal parts

Machine Dimensions

- WxDxH: 1210 x 1020 x 2012 mm
- Weight: approx. 850 kg

Leadframe Size

- Width: 65 - 102 mm
- Length: 100 - 280 mm

- Thickness: 0.1 - 1.5 mm
- Max. height: 2 mm

Supply Requirements

- Voltage: 208 - 480 VAC
- Frequency: 50 / 60 Hz
- Power rating: 7.5 kVA

- Compressed air: 5 - 10 bar
- Average air cons.: 1.5 m³ at 6 bar
- Factory exhaust: 300m³ at 50 Hz

Press & Mold

- Max. clamp force: 600 kN
- Max. mold opening: 90 mm

- Max. transfer pressure: 180 bar
- Pellet diameter: 11, 14, 14.3 mm
- Max. number of plungers: 10
- Max. cavity temp. diff.: 2°C
- Built in cleaning exhaust
- Easy installation