The P300 is a fully automatic insertion machine for processing reeled press-fit and thru-hole components into PCBs. Available in either a stand alone unit or integrated into a SMEMA or Siemens compatible production line, the P300 is focused at increasing throughput by lowering cycle times and the scrap associated with human application errors. Boards up to 15.5” x 23.5” [400 x 600mm] can be processed and are positioned on the X\Y table by stepper motors. Each contact is seated in the PCB via product specific insertion tooling. Each tooling set is comprised of an insertion head (upper tooling), an anvil (lower tooling), and a product feeding mechanism. Quick change mounting fixtures are available for up to 3 insertion heads to minimize changeover time. A multi-tasking control unit controls and monitors the entire system throughout the production cycle. An optional insertion force monitoring system allows the verification of every component applied for quality assurance.

A wide range of optional equipment is available for further performance enhancement and versatility to meet a wide range of application requirements.

**Fast Facts**

- Standard insertion rate up to 1.5 per second at 0.2 in [5.08 mm] pitch
- Optional servo drives for insertion rate up to 3 per second at 0.2 in [5.08 mm] pitch
- Optional automatic tool changer can apply up to 3 different products.
- Available as stand-alone or in-line system
- Apply products at up to 7 different angles.
- Active anvil for PCB support, insertion verification and optional force monitoring.
- CNC based multitasking control system.
- Quick change tooling packs allow production flexibility.
- Able to process any manufacturer's reeled thru-hole or press-fit products.
- Range of options available to meet specific application requirements.
- SMEMA interface

- Stepper motors position the PCB under the insertion tool for fast cycle times.
- Board handling capacity up to 15.5" x 23.5" [400 x 600mm].
- Quick change tooling mounting fixture for reduced changeover time.
- Standard insertion rates of up to 90 pins/min or 60 receptacles/min at a 0.2” [5.08 mm] pitch.
- Optional servo motors for insertion rates up to 3 insertions per second at a 0.2” [5.08 mm] pitch.
- Capable of applying a wide range of reeled components with product specific insertion tools.
- Rotary insertion tooling allows the application of components at up to 7 different angles without a reduction in throughput.
Machine Description

- Automatic pin insertion machine for the application of reeled pins, tabs, receptacle and similar products into PCBs.

Physical Dimensions

- Height — 70.5 in [1790 mm]
- Width/Depth (including reel holders) — 108.5 in [2754 mm]
- Length — 91 in [2310 mm] with conveyor
- Length — 57.5 in [1460 mm] without conveyor
- Conveyor Belt Height (adjustable) — 37.6 ± .6 in. [955 mm ± 15mm]
- Weight — Approx. 3,520 lb [1600 kg]

Component Capability

- Reeled components. Can be press-fit or thru-hole solder components such as pins, tabs and receptacles. Can apply products from TE or other manufacturers.

Performance

- Maximum insertion rate — 3 cycles per second at a pitch of 0.2 in [5.08 mm] (with optional servo drives)
- Optional Press Force Monitoring of every component applied
- Insertion Head Change — 3 sec.
- Board Load — approx. 8 sec.
- Board Unload — approx. 8 sec.
- Optional in-line capability

Vision

- Optional downward looking vision system for automatic insertion location correction.

Board Capacity

- Max. Board Size — 23.5 x 15.5 in [600 x 400 mm]
- Standard left to right feed

Insertion Heads

- Capable of up to 3 insertion heads on an optional automatic changer system.
- Automatic changer positions one active insertion head to central servo drive.
- Rotary insertion finger on each insertion head allows the application of products at up to 7 different angles without rotating PCB.

Tooling

- Tooling is custom made to specific component specifications.
- Tooling conversion kits allow quick changeover of different products.

Required Services

- Electrical
  - Up to 480 volts \ 20 Amperes 3 phases
  - The actual volt/Amp requirement is application dependent and will be discussed at the time of quotation to assure the machine meets the available facility power.
- Air Supply
  - 600 kPa dried air

Operator Interface

- CNC interface multitasking computer