

BMEP 3T/5T Servo Electric Press

Fast Facts

Benchtop electric press for the application of compliant pin products

- Servo electric press
- PCB capacity of 18" x 24" [460mm x 610mm]
- Press force capacity of 3 or 5 tons [27 or 44 kN]
- Ability to monitor and control force, distance and speed for every press cycle
- Full SPC data of every component pressed for quality assurance and traceability
- Database driven software for simple programming and automatic setup
- Small foot-print for low to medium volume product levels
- Engineered and manufactured using processes independently certified to internationally recognized quality standards ISO-9001:2000 and Telecommunications Industry Standard TL 9000

BMEP. The BMEP series of servo electric presses provides the ability to process most compliant pin connector applications in a compact benchtop system. Board size capacity and press force range allow the system to handle a wide range of applications for low to medium production volume operations.

Servo Drive Precision. Each system is supplied with a servo electric drive with force feedback control. BMEPs are available in either 3 ton [27 kN] or 5 ton [44 kN] force capacity to handle most compliant pin connectors on the market today. Compared to pneumatic or hydraulic systems, the BMEP is quiet, efficient, and does not suffer from oil leaks that can damage PCBs. With PC control, the servo driven BMEP provides an easily programmed press system with automatic set up from press cycle to press cycle. The system reaches levels of precision and accuracy not available in a pneumatic or hydraulic press.

Monitor and Control For Quality. Force, distance and speed are the core parameters of any press cycle. With feed back and PC control, BMEP systems can monitor and control each characteristic of every press stroke run on the press in real-time. If any aspect of that press cycle is outside of specified limits, the BMEP can stop the press, mid-stroke, to prevent damage to the PCB and reduce or eliminate rework and/or scrap. This gives BMEP systems a distinct advantage over pneumatic or hydraulic systems which can not offer the same level of control. Common problems such as

PCB holes out of tolerance (too big or too small), missing connectors, improper connectors used and, in some cases, bent pins can be detected and reported to eliminate quality problems.

Eliminate Operator Error. Quality is provided not only through the monitoring and control of the press cycle, but also through the avoidance of operator error. By pre-programming the parameters of connector applied, the BMEP will automatically adjust set-up parameters from one press cycle to the next. There is no need for (and therefore no chance of operator error associated with) adjusting stroke, stops or force adjustments from one cycle to the next. Even simple errors of using the wrong connector or tool can be eliminated to assure proper application of every connector and avoid costly scrap.

Simple Operation. PC control of BMEP systems allows for simple and flexible programming. All data for connectors and tools are entered and stored in databases. If future production uses the same connector, there is no need to re-enter the specifications. These specifications allow the BMEP to automatically set up and control each press cycle to reduce operator intervention and human error. Every press cycle completed can be serialized and stored for full quality traceability. Finally, icon driven software with visual cues and operator interaction assure that each press cycle is completed correctly the first time.



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General Specifications

Description

Benchtop servo electric press system with PC control. Typical applications include the application of compliant pin connectors to PCBs or PCBs onto compliant pin housings. System is capable of monitoring and controlling the force, distance and speed of a press cycle and maintaining quality records of every press cycle in real-time.

Performance

Drive Z – Electric servo drive, ball-screw

Board Size - 18"x24" [460mm x 610 mm]

Force Capacity – 3T - 3 tons [27 kN]

5T – 5 tons [44 kN]

Speed – Press stroke 3-5 seconds. Note that board load/unload is manual

Tooling

Insertion Tool Type – Flat-rock or header

Max Tool Length – 8" [200 mm]

Max Tool Width – 1.25" [32 mm]

Support Tool – Support fixture

Control and Interface

Parameters – Force, distance, speed

Controller - PC

Operating System - Windows XP Pro

Interface – Mouse and keyboard (touch screen monitor is optional)

Services

Power - 120 VAC, 1 ph, 15 A, 50/60 Hz

Air – Shop air of 5 CFM at 80 psi

Dimensions – W – 31" [785 mm]

L – 24" [610 mm]

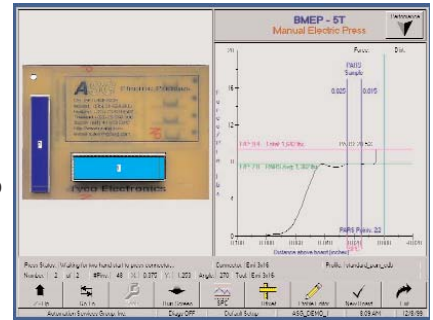
H – 33" [840 mm]

Note: does not include PC or monitor

Weight – 400 lbs [182 kg]

Run Time Press Monitoring

The run time screen provides complete operator interface and feedback. Each press cycle is monitored for Force vs Distance and data is clearly displayed. Press stroke status is shown to acknowledge proper application or error information. A picture of the end product can also be used to guide the operator through the pressing sequence to reduce operator error.



Options

Light Curtain

Each BMEP system is supplied with standard 2 hand tie-down activation. An optional light curtain can be supplied that will not allow the start of the press cycle and will stop the system if at any time if the light curtain is broken.

Tool In Place Sensor

This sensor system assures the insertion tool being used is centered under the press ram to avoid damage to the connector or PCB. This system uses a light source in the press ram to interact with reflective tape (not provided) on the insertion tool. If the tool is not properly centered and the light reflection is not detected, the press will not begin a press cycle.

Air Table with Footswitch

This option provides pneumatic plumbing in the press tabletop and an activation footswitch to allow for an "air bearing" surface between the support fixture and the tabletop. This greatly reduces the effort to slide the PCB, fixture, connector and tool stack-up under and back out of the press during each cycle.

Touch Screen Monitor

Provides a touch screen monitor in place of the standard non-touch screen. Allows for simple input for programming and operation of the press system.

Barcode Scanner

Provides bar code scanner system to allow for serialization of PCBs.