



SMART PRESS-FIT PLATFORM

INTELLIGENT PRESS-FIT FOR RELIABLE CONNECTIONS

The Smart Press-Fit Platform is a premiere solution for challenging press-fit components, offering superior performance and a modern, robust alternative to traditional solder joint connections. It uses enhanced vision, precision force control and real-time monitoring to maximize product quality and efficiency.

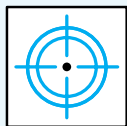
The Smart Press-Fit Platform delivers repeatable performance and quick-change capability in a user-friendly design for demanding applications. Features include:

- Force control with digital load cell provides high precision and repeatability
- User-friendly interface for intuitive operation
- Downward-looking camera enables automatic alignment
- Automated conveyor adjusts for range of PCB sizes
- Flexible bottom-side tooling lifts and rotates
- RFID-enabled pressing tool management facilitates mixed-component applications
- Supports handheld and fixed PCB barcode readers

VIDEO



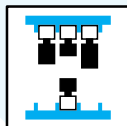
BENEFITS & VALUE



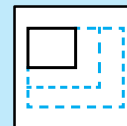
PRECISION PRESS CONTROL
Real-time sensors monitor pressure, position and speed, enabling $\pm 0.01\text{mm}$ positional & $\leq 0.5\%$ force repeatability



MICRO FORCE DETECTION
Precisely detects anomalies and pin issues at the early stage of the press-fit process and stops it prematurely to avoid damage



SMART TOOLING CHANGEOVER
11 onboard press-fit fixtures with RFID verification expedites product changes to maintain flexible production



SUITABLE FOR A RANGE OF PCB SIZES
Supports PCBs from **150mm x 150mm** up to **550mm x 870mm**, making it easy to handle both small modules and large backplanes

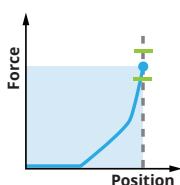


CONVENIENT RECIPE MANAGEMENT
User-friendly interface and simplified management of **>1000 records** streamlines high-mix production

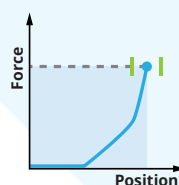


STRONG PRESSING FORCE
Handles a wide range of high-performance devices and high-density connectors with a maximum pressing force of **50kN (5 tons)**

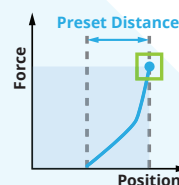
MULTIPLE PRESSING MODES



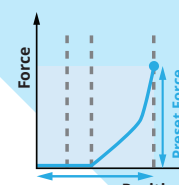
Position Mode
The press punch moves down to a defined absolute position



Force Mode
The press punch presses to a defined force



Distance Mode
The press punch presses to a relative distance

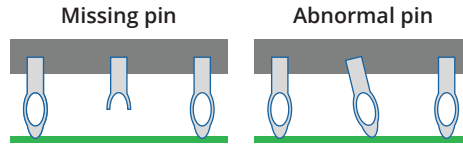


Multiple Mode
All modes can be applied interchangeably per demands

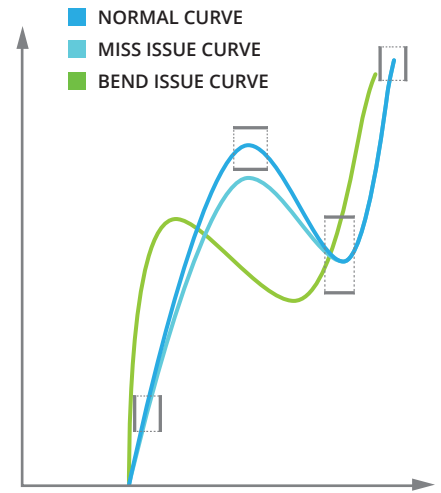
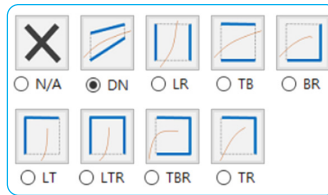


Smart Curve Checking

Maintain piece of mind knowing that your press-fit processes are being monitored against established baseline curves to detect anomalies.



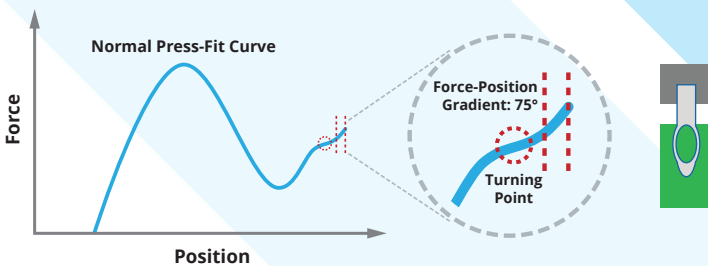
Curve profiles



- For pressing abnormalities, the curve can be compared against a normal curve to pinpoint issues
- The “frame limit” can be set in the recipe, so that if the curve is out of the frame during pressing, the machine will stop the process
- An alarm prompt then enables the user to send the PCB out or continue pressing the remaining components

Intelligent Detection — Identifying the Turning Point

During the press-fit process, minor bends in the force-position curve indicate whether the pin is fully seated on the PCB. Identifying this “turning point” is the key to a perfect press-fit process.



The Smart Press-Fit Platform monitors the force-position angle at each turning point and when the key angle of 75° is reached, the system immediately halts pressing to avoid damage to the PCB or component pins.

Smart Press-Fit Platform Specifications	
Max Force	3,000 kgf / 5,000 kgf
Force Repeatability	$\leq 0.5\% \text{ F.S.}$
Max Stroke	100mm
Lower Press Position Repeatability	$\pm 0.01\text{mm}$
Max Press Velocity	40mm/s
Top-Side Clearance	100mm
Bottom-Side Clearance	48mm
Max Component Height	65mm (component + board thickness)
Max Velocity	200mm/s
Max PCB Thickness	12mm
Max Carrier size (L x W x T)	600 x 900 x 12mm (transfer weight 15kg max)
Press Range (L x W)	150mm x 150mm (min) 550mm x 870mm (max - no vision)
XY Position Repeatability	$\pm 0.01\text{mm}$
Camera Resolution	6.1 $\mu\text{m}/\text{pixel}$
Camera Field of View	FOV: 15mm x 12.5mm / DOF: 1mm
Pass Line	930mm $\pm 30\text{mm}$ (auto in-line)

www.uic.com
universal@uic.com

MC-7751

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