



Pillarhouse
INTERNATIONAL

JADE-HANDEX

Quick load twin PCB rotary table selective soldering system

- Twin PCB rotary adjustable tooling carrier holds board's up to 457mm x 508mm
- Drop-jet fluxing system
- Pump rpm monitoring option
- O2 ppm monitoring option
- Programmable flux bottle pressure
- Inert soldering atmosphere
- Topside I.R. pre-heat and closed loop temperature control option
- Solder wave height measurement and correction option
- Fiducial recognition and correction system
- Self diagnosing control system
- On screen PCB navigation using board image (Jpeg or Gerber)
- Mass flow meter option to set and log individual flows
- Lead free compatible



JADE-HANDEX



Solder nozzle, nitrogen shroud, Drop-Jet fluxer and programming camera assembly

TECHNICAL SPECIFICATIONS

- Solder:** All commonly used solder types (including Lead Free).
- Applicators:** AP-1 style 2.5, 3, 4, 6, 8, 10, 12mm tip sizes - extended tips and Jet-Tip nozzles also available, up to 25mm dia. Jet-Wave nozzles available up to 25mm width. Special dedicated nozzles available upon request, including 150mm wide wave nozzle as shown below.
- Flux:** Low maintenance Drop-Jet system. Low solids, no clean flux, pressurized and inerted system, optional water soluble system available.
- X, Y & Z Axis**
- Resolution:** 0.15mm.
- Repeatability:** +/- 0.05mm.
- Nitrogen usage:** 35 litres gas/min. 5 bar pressure.
- Nitrogen Purity:** 99.995% or better.
- Electrical Supply:** Single phase + PE, 208-250 Volts, 50/60Hz, 4kVA. (recommend 230-250 Volts when using I.R pre-heat and up to 6.5kVA).
- Board size:** 457mm x 508mm (twin PCB capability enables loading during process) requires 3mm edge clearance bottom side.
- Edge clearance:** Above / below 3mm.
- Height clearance:** Above 95mm / below 45mm nominal.
- Transport:** Hand load.
- Tooling:** Twin integral adjustable board guides, includes finger extensions and board clamps.



Optional 150mm wide wave solder nozzle and nitrogen shroud.

Designed to meet the needs of lean manufacturing, the Jade-Handex offers high speed flexible throughput at minimal cost.

The Jade-Handex is equipped with a revolutionary twin PCB rotary table transport system to allow simultaneous load / unload during product processing.

Our new generation patented Drop-Jet design fluxer offers quick and effective flushing of the pressurised flux chamber. This helps to keep maintenance levels to a minimum whilst enabling use of higher solids content fluxes as well as water soluble fluxes.

As part of the entry level philosophy for this system, a newly designed low maintenance solder bath and pump mechanism has been developed which moves in three axes of movement whilst not limiting access to the PCB. Solder is applied using proven technology through our AP-1 nozzle design or custom specialised nozzles, incorporating patented spiral solder return to bath technology offering reduced solder balling potential.

As with more sophisticated Pillarhouse systems, the soldering process is enhanced by an inerted hot Nitrogen curtain which provides an inert atmosphere for the soldering process and also assists in the prevention of oxidation. This process provides a local pre-heat to the joint thus reducing thermal shock to localised components.

The Jade-Handex is controlled by a PC, through PillarCOMM, a Windows® based "Point & Click" interface with PCB image display, as illustrated below. Additionally, our optional PillarPAD offline package allows the operator to produce programs independently from the machine using Gerber data.



Jade-Handex adjustable tooling rotate mechanism.

OPTIONS

- Ultrasonic fluxing
- Dual Drop-Jet / Ultrasonic fluxing
- Pump rpm monitoring
- O2 ppm monitoring
- Topside instant I.R pre-heat
- Closed loop temperature control system enabling profile recording
- Solder wave height measurement and correction system
- Bottom side hot nitrogen selective pre-heat
- Fiducial recognition and correction system
- Multiple level password protection
- PillarPAD offline programming system
- Nitrogen flow monitoring
- Mass flow meter
- Solder reel identification
- Solder bath coding (identifies correct bath for program)
- Encoders on X, Y and Z axis
- Nitrogen generator

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