

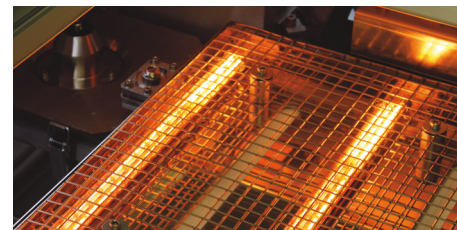
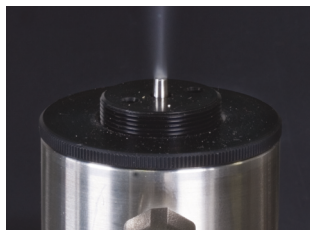
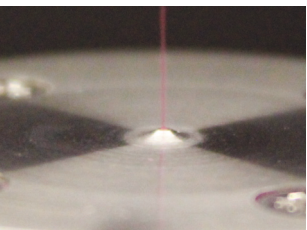
# JADE MKIV



Enhanced, entry-level, single point selective soldering system



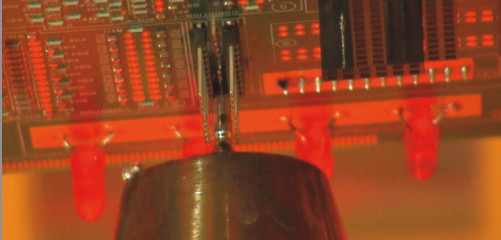
Pillarhouse  
INTERNATIONAL



# JADE MKIV



Enhanced, entry-level, single point selective soldering system



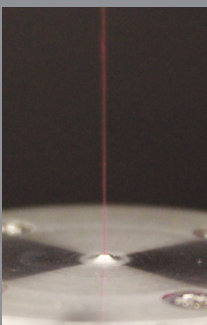
Designed to meet the needs of the small batch manufacturer who requires a high level of production flexibility, the Jade MKIV offers uncompromised selective soldering quality at a very low cost.

The Jade MKIV is a handload system, incorporating a universally adjustable tooling carrier capable of accommodating PCB's or pallets up to 508mm x 610mm (20" x 24").

Our 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 solid content fluxes as well as water-soluble fluxes.

**As part of the entry-level philosophy for this system, a 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 nozzle design or custom specialised nozzles.**

As with all Pillarhouse systems, the soldering process is enhanced by a hot nitrogen curtain which provides an inert atmosphere. This method of soldering also assists in the prevention of oxidisation and provides a local pre-heat to the joint, thus reducing thermal shock to localised components.



DROP-JET  
FLUX HEAD



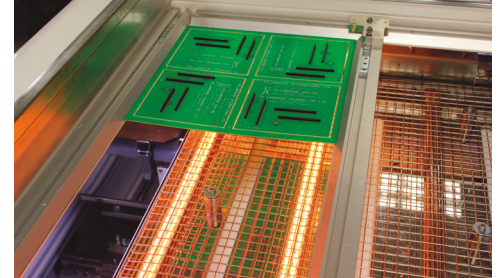
ULTRASONIC  
FLUX HEAD



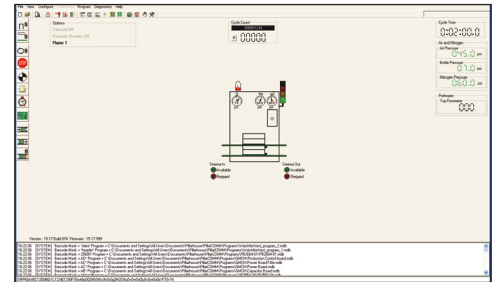
AP SOLDER NOZZLE



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SLIDE IN/OUT BOTTOM SIDE  
I.R. PRE-HEAT



## OPERATION

The Jade MKIV is controlled by a PC through our next generation PillarCOMM software - a Windows® based 'Point & Click' interface with PCB image display, as illustrated above.

Additionally, our optional PillarPAD offline package allows the operator to produce programs independently from the machine using Gerber data.



HIGH RESOLUTION  
PROCESS VIEWING CAMERA



#### STANDARD FEATURES

- Integral PC & Machine Mounted TFT Monitor
- Inerted Nitrogen System
- Auto Motorised Solder Wire Feed & Level Detect
- Drop-Jet Fluxer
- Internal Fume Extraction
- Colour Programming Camera
- Universally Adjustable Tooling Carriers
- Manual Fiducial Correction System
- PillarCOMM Windows® Software
- PillarPAD Offline Programming System
- New Rapid Change Solder Bath and Pump Design
- Pump RPM Monitoring (applicable to mechanical pump only)
- Thermal Nozzle Calibration System using Integrated Setting Camera (requires manual correction)
- Solder Wave Height Measurement
- Process Viewing Camera
- Multilevel Password Protection System
- Lead-Free Compatibility
- Set of AP Style Solder Nozzle Tips
- Accessory Kit

#### MONITORING OPTIONS

- Flux Presence Sensor - Thermistor Style
- Flux Spray and/or Flow
- O<sub>2</sub> PPM
- Nitrogen Flow
- Nozzle Nitrogen Purity

#### SYSTEM OPTIONS

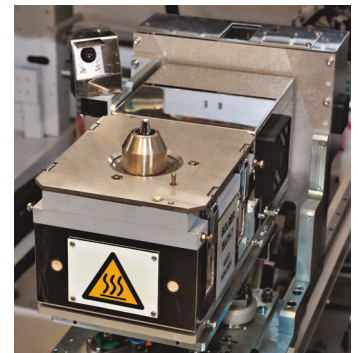
- Ultrasonic Fluxing
- Dual Drop-Jet/Ultrasonic Fluxing
- Top Side Instant IR Pre-Heat
- Bottom Side Slide In/Out IR Pre-Heat
- Closed-Loop Pyrometer Temperature Control
- Solder Reel Identification
- Solder Bath Coding (identifies correct bath for program)
- Automatic Fiducial Correction System
- Laser PCB Warp Correction



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AUTOMATIC NOZZLE  
CONDITIONING SYSTEM



NEXT GENERATION SOLDER  
BATH AND PUMP



ADDITIONAL SYSTEM OPTION - PillarCARE  
Pillarhouse's comprehensive after-sale  
service and process programme, available for all  
machines



Pillarhouse... Expect innovation  
[www.pillarhouse.co.uk](http://www.pillarhouse.co.uk)

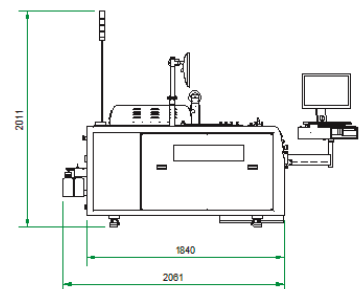
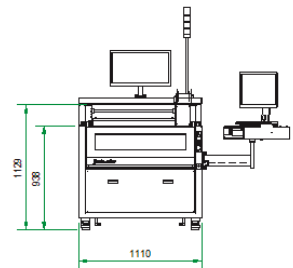
# JADE MKIV



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## SPECIFICATIONS

|                           |  |
|---------------------------|--|
| Height:                   | 2011mm/79" - including light stack   |
| Width:                    | 1110mm/43"   |
| Depth:                    | 2061mm / 81"   |
| Board size:               | Max. - 508mm x 610mm/20"x 24"  |
| Edge clearance:           | Above/below 3mm  |
| Height clearance:         | Above 95mm/below 45mm nominal  |
| Solder:                   | Most commonly used solder types - includes lead-free   |
| Solder pot capacity:      | 10kg / 22lb  |
| Applicators:              | AP style - 2.5mm to 16mm dia.<br>Extended AP style - 2.5mm to 20mm dia.<br>Micro Nozzle - 1.5mm to 2.5mm<br>Jet-tip style - 6mm to 40mm dia.<br>Jet-Wave nozzle - up to 25mm width<br>Special dedicated nozzles available upon request |
| Flux:                     | Low maintenance Drop-Jet system. Low solids (below 8%), no clean flux, pressurised and inerted system, optional water-soluble system available.  |
| X, Y & Z axis resolution: | 0.15mm   |
| Repeatability:            | +/- 0.05mm.  |
| Nitrogen supply pressure: | 5 bar/72 psi   |
| Nitrogen usage:           | 30-100 litres/min./1.06-3.53 CFM- solder nozzle configuration dependent  |
| Nitrogen purity:          | 99.995% or better  |
| Air supply pressure:      | 5 bar/72 psi   |
| Air usage:                | 10 litres/min./0.35 CFM  |
| Power Supplies:           | Single phase + PE  |
| Voltage:                  | 230V   |
| Frequency:                | 50/60Hz  |
| Power:                    | 14.5 kVA max. - machine configuration dependent  |
| Programming:              | PillarCOMM Windows® based 'Point & Click' interface  |



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