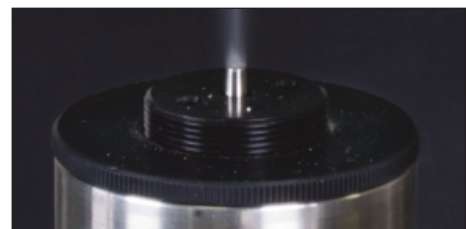


# JADE MKII

Elementary, flexible, single point selective soldering system



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# JADE MKII



Elementary, flexible, single point selective soldering system



Designed to meet the needs of the small/medium batch manufacturer who requires high levels of production flexibility, the Jade MKII entry-level system offers uncompromised selective soldering quality at a very low cost.

The Jade MKII is a handload system, incorporating a universally adjustable tooling carrier capable of accommodating PCB's or pallets up to 457 x 508mm (18" x 20").

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 the Jade MKII, 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, incorporating patented spiral solder return-to-bath technology offering reduced solder balling potential.**

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.



JET-TIP NOZZLE



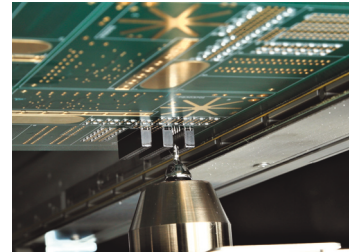
ULTRASONIC FLUX HEAD



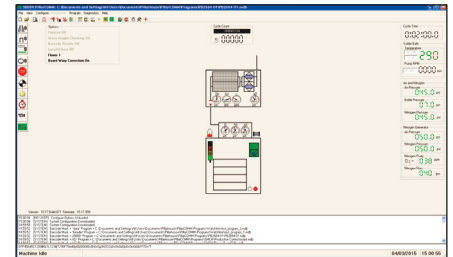
JET-WAVE NOZZLE



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1.5MM MICRO NOZZLE



## OPERATION

The Jade MKII 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 PillarPAD offline package allows the operator to produce programs independently from the machine using Gerber data.



PILLARGEN 40  
Nitrogen generation system



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#### STANDARD FEATURES

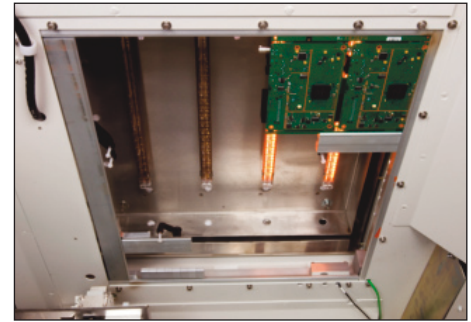
- Integral PC & Machine Mounted TFT Monitor
- Inerted Nitrogen System
- Auto Solder Top-Up (Wire Feed) & Solder Level Detect
- Drop-Jet Fluxer
- Internal Fume Extraction
- Colour Programming Camera
- Universally Adjustable Tooling Carriers
- Manual Fiducial Correction System
- PillarCOMMX Windows® Software
- PillarPAD Offline Programming System
- 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
- Day-To-Day Service Kit

#### MONITORING OPTIONS

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

#### SYSTEM OPTIONS

- Top Side Instant IR Pre-Heat
- Closed-Loop Temperature Control - via Pyrometer or Thermocouple
- Bottom Side IR Ring Heater
- Bottom Side Hot Nitrogen Selective Pre-Heat
- Automatic Fiducial Correction System
- Ultrasonic Fluxing
- Dual Drop-Jet/Ultrasonic Fluxing
- Laser PCB Warp Correction
- Micro Nozzle Assembly
- Solder Reel Identification
- Rapid Change Solder Bath and Pump System Capability - does not include solder bath and pump
- Solder Bath Coding (identifies correct solder bath for program, only suitable with Rapid Change Solder Bath and Pump System)
- Encoders on X, Y and Z Axis
- Larger PCB Handling Size
- Nitrogen Generator



TOP SIDE INSTANT IR PRE-HEAT



SOLDER BATH AND PUMP ASSEMBLY WITH DROP-JET FLUX HEAD AND PROGRAMMING CAMERA



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)

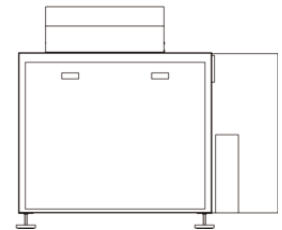
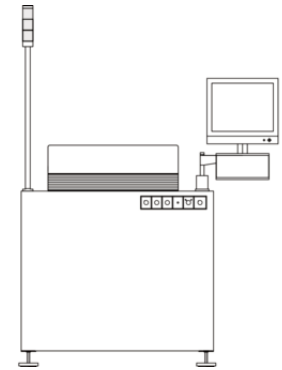
# JADE MKII



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## SPECIFICATIONS

Height:	1403mm / 55" - excluding light stack
Width:	1000mm / 40"
Depth:	1351mm / 53"
Board size:	457mm x 508mm / 18"x 20" - larger PCB size available upon request
Edge clearance:	Above / below 3mm
Height clearance:	Above 90mm / below 40mm nominal Above 190mm - special application
Solder:	Most commonly used solder types - including lead-free
Solder pot capacity:	8kg
Applicators:	AP style - 2.5mm to 16mm dia. Extended AP style - 2.5mm to 20mm dia. Micro Nozzle - 1.5mm to 2.5mm Jet-Tip style - 6mm to 20mm dia. Jet-Wave nozzle - up to 25mm width 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:	0.1mm
Repeatability:	+/- 0.05mm
Nitrogen usage:	35 litres gas/min. 5 bar pressure
Nitrogen purity:	99.995% or better
Air supply pressure:	5 bar / 72 psi
Power supplies:	Single phase + PE
Voltage:	208V - 250V
Frequency:	50/60Hz
Power:	4kVA
Power with IR pre-heat:	6.5kVA - Top side 8kVA - Top with bottom side ring heater
Transport:	Hand load
Tooling:	Integral adjustable board guides, includes finger extensions and board clamps
Programming:	PillarCOMM Windows® based 'Point & Click' interface



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