



Entry-level single point selective soldering system





# JADE MK II

### Entry-level 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 MK II entry-level system offers uncompromised selective soldering quality at a very low cost. The Jade MK II is a hand load system, incorporating a universally adjustable tooling carrier capable of accommodating PCB's or pallets up to 457 x 508mm.

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, 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 preheat to the joint, thus reducing thermal shock to localised components.



1.5MM MICRO-NOZZLE



#### OPERATION

The Jade MKII is controlled by a PC, through PillarCOMM, 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.



JET-TIP NOZZLE



JET-WAVE NOZZLE



ULTRASONIC FLUX HEAD

PILLARGEN 40 Nitrogen generation system









TOPSIDE INSTANT IR PREHEAT



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

#### STANDARD FEATURES

Integral PC and machine mounted TFT monitor Inerted Nitrogen system Auto solder top-up (wire feed) & solder level detect Drop-Jet fluxer Set of AP style solder nozzle tips Internal fume extraction Colour programming camera Solder wave height measurement and correction Universally adjustable tooling carrier Thermal nozzle calibration system using integrated setting camera (requires manual correction) PillarCOMM Windows® based 'Point & Click' interface Lead-free compatible PillarPAD offline programming system Day-to-day service kit Multiple level password protection Manual fiducial correction system

#### MONITORING OPTIONS

Flux presence sensor - thermistor style Flux spray, flow and spray & flow Pump rpm O<sub>2</sub> ppm Nitrogen flow

#### SYSTEM OPTIONS

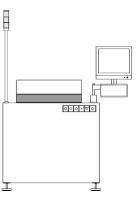
Top-side instant IR preheat Closed loop temperature control - via pyrometer or thermocouple Bottom-side IR ring heater Bottom-side hot Nitrogen selective preheat Automatic fiducial correction Ultrasonic fluxing Dual Drop-Jet / ultrasonic fluxing Laser PCB warp correction Micro nozzle assembly Solder reel identification Rapid change solder bath and pump system capability - does not include solder bath and pump Solder bath coding - identifies correct bath for program - only suitable for use with rapid change solder bath and pump system Encoders on X, Y and Z axis Larger PCB handling size Nitrogen generator

 Pillarhouse... Expect innovation www.pillarhouse.co.uk



## 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 preheat:	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	



P

ΙΝΤ

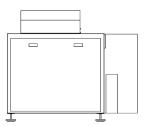
ERNATIO

ouse

NAL

Z

Ŋ



Pillarhouse International Ltd.	www.pillarhouse.co.uk
Rodney Way, Widford, Chelmsford, Essex CM1 3BY UK	Tel: +44 (0) 1245 491333 Fax: +44 (0) 1245 491331
Pillarhouse USA, Inc.	www.pillarhouseusa.com
201 Lively Blvd, Elk Grove Village, IL 60007 USA	Tel: +1 847 593 9080 Fax: +1 847 593 9084
Pillarhouse (Suzhou) Soldering Systems Co., Ltd.	www.pillarhouse.cn
11 Yuanqi Road, Xiangcheng, Suzhou, China 215131	Tel: +86 512 6586 0460 Fax: +86 512 6959 0567