



Pillarhouse  
INTERNATIONAL

# JADE PRODEX

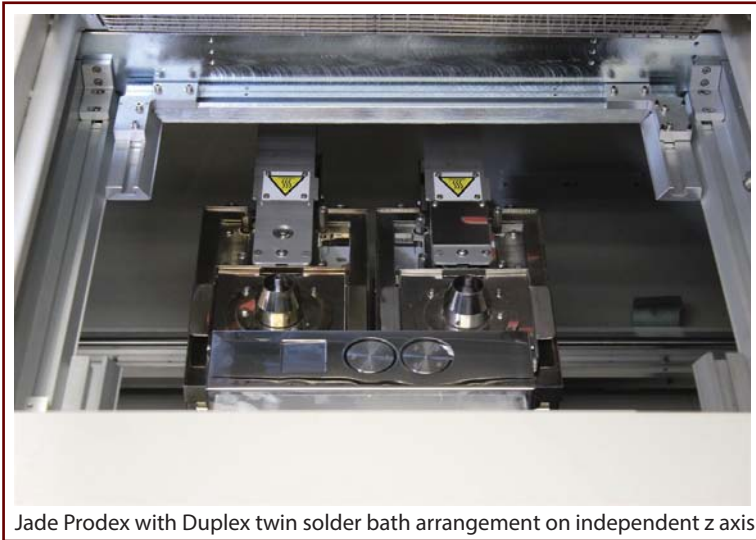
Ultra flexible, quick load twin PCB rotary table selective soldering system

- DC servo drives with encoders on X, Y & Z axis \*
- Rotary indexing table with twin adjustable work holding positions \*
- Adjustable tooling carrier holds PCB's up to 457mm x 508mm (18" x 20") \*
- Topside I.R. pre-heat
- Bottom side slide in/out I.R. pre-heat
- Closed loop pyrometer pre-heat control
- Automatic solder bath change
- Laser PCB warpage correction
- Drop-jet / ultrasonic dual control fluxing system with independent flux supply
- 1.5mm to 25mm single point nozzle capability, Jetwave, Multi-dip and 150mm wave nozzle
- Twin solder bath capability on independent Z axis
- Large solder bath configuration for dedicated single dip operations
- Trolley device with heated station for rapid solder bath changeover
- Pump rpm monitoring

\* Standard



# JADE PRODEX



Jade ProDEX with Duplex twin solder bath arrangement on independent z axis

## TECHNICAL SPECIFICATIONS

<b>Height (excluding light tower):</b>	1158mm (46")
<b>Height (including light tower):</b>	2025mm (80")
<b>Width (excluding rotate):</b>	1250mm (49")
<b>Width (including rotate):</b>	1460mm (57")
<b>Depth:</b>	2200mm (87")
<b>Board Size:</b>	457mm x 508mm (18" x 20") (larger PCB size available upon request)
<b>Edge Clearance:</b>	3mm
<b>Height Clearance:</b>	Above / below 40mm nominal, 90mm max.
<b>Solder:</b>	All commonly used solder types (including Lead Free).
<b>Solder Pot Capacity:</b>	8kg standard bath 20kg large bath
<b>Applicators:</b>	AP-1 style (2.5, 3, 4, 6, 8, 10, 12mm) Patented 1.5mm micro nozzle Extended and Jet-Tip nozzles (up to 25mm dia) Jet-Wave nozzles (up to 25mm width) Special dedicated nozzles available upon request
<b>Flux:</b>	Low maintenance drop-jet system. Low solids, no clean flux, pressurised and inerted system, optional water soluble system available
<b>X, Y &amp; Z Axis Resolution:</b>	0.15mm
<b>Repeatability:</b>	+/- 0.05mm
<b>Nitrogen Usage:</b>	35 litres gas/min per bath using single bath with standard AP solder nozzle, 5 bar pressure. Increased nitrogen usage with Duplex arrangement and/or product specific solder nozzles.
<b>Nitrogen Purity:</b>	99.995% or better
<b>Power Supplies:</b>	Three phase + Neutral + PE
<b>Voltage:</b>	230 Volts Phase to Neutral
<b>Frequency:</b>	50/60Hz
<b>Power:</b>	Maximum 6 kVA per phase
<b>Transport:</b>	Hand load
<b>Tooling:</b>	Integral adjustable board guides, includes finger extensions and board clamps
<b>Programming:</b>	Windows <sup>®</sup> based PillarCOMM 'Point & Click' programming

**Designed to meet the needs of the small batch manufacturer who requires high levels of production flexibility. The Jade ProDEX offers the ability to regularly change solder alloys without incurring expensive down time, whilst the solder bath cools down and heats up during a regular manual changeover process.**

The ProDEX is an offline system, incorporating a quick load twin PCB universally adjustable rotary table transport system to allow simultaneous load/unload during product processing.

In its basic format, the ProDEX is configured with a single solder bath. In its Duplex guise, the machine can be configured with twin adjacent solder baths on independent Z axis drives. This achieves increased production flexibility by permitting use of two different nozzle tip sizes which can be allocated as process requirements dictate within any particular area on a PCB.

All ProDEX configurations can be offered with optional automatic heated solder bath change stations. Using this system the non-operational solder bath and pump system is stationed at one of two heated park positions located at either side of the main machine. This heated station, maintains the correct solder temperature within the bath that is idle so that when changeover on the fly occurs, the replacement bath can resume immediate production. A single automatic solder bath change station is identified as a PLUS configuration, whilst twin stations (located at both sides of the machine) are identified as PLUS PLUS configurations. On this basis Duplex machines with the PLUS PLUS identity will operate with 4 individual solder bath and pump systems.

Solder baths are individually tagged so that incorrect solder alloys cannot be selected with respect to any specific customer generated program. The operational solder bath(s) has its own allocated solder feeder which is also tagged in order to prevent incorrect solder alloy top up.

The ProDEX series is controlled by a PC, through PILLARCOMM, a Windows based "Point & Click" interface with a PCB image display. Additionally our optional PillarPAD offline programming package allows the operator to produce programs independently from the machine using gerber data.



Trolley device with heated station

## STANDARD FEATURES

DC Servo Drives with encoders on X, Y & Z axis • Rotary indexing table with twin adjustable positions • Integral PC and machine mounted TFT monitor • Inerted nitrogen system • Auto solder top-up (wire feed) & solder level detect • Drop-jet fluxer • Manual fiducial correction system • Process viewing camera • Solder wave height measurement and correction system • Multiple level password protection • Light stack Tower • Solder bath exchange trolley • Two AP-1 solder nozzle tips • Internal fume extraction • Colour programming camera • PillarCOMM windows software • Initial Solder Fill (63:37 only) • Lead free compatible • Day to Day service kit

## OPTIONS

Ultrasonic fluxing • Dual drop-jet / ultrasonic fluxing • Flux presence sensor • Flux flow monitoring • Pump rpm monitoring • Nitrogen ppm monitoring • Topside instant I.R. pre-heat • Bottom side slide in/out I.R. pre-heat • Closed loop temperature control system via pyrometer • Twin solder bath capability on independent Z axis (Duplex) • Large solder bath for dedicated single dip applications • Automatic fiducial correction system • Laser board warpage control • 1.5mm micro nozzle • PillarPAD offline programming system • Nitrogen flow monitoring • Solder reel identification • Solder bath coding (identifies correct bath for program) • Larger PCB handling size • Nitrogen generator

Pillarhouse USA, Inc.  
201 Lively Blvd  
Elk Grove Village  
IL 60007  
USA

**Pillarhouse International Ltd.**  
Rodney Way  
Widford, Chelmsford  
Essex  
CM1 3BY  
England

Pillarhouse Soldering Systems  
(Suzhou) Co. Ltd.  
1288 Ru Yuan Road  
Xian Cheng  
Suzhou  
PRC

Tel: +1 847 593 9080  
Fax: +1 847 593 9084

Tel: +44 (0) 1245 491333  
Fax: +44 (0) 1245 491331

Tel/Fax: + 86 512 658 604 60

www.pillarhouse.co.uk