



# ORISSA SYNCHRODEX

Flexible, in-line, modular selective soldering system















## **ORISSA SYNCHRODEX**

# Flexible, in-line, modular selective soldering system



Designed as a modular system, the Synchrodex range of in-line equipment offers the ultimate in flexibility with the ability to upgrade to high-speed throughput when multiple modules are placed together.

Supplied as standard with our patented design Drop-Jet fluxer, this system offers accurate, controlled flux deposition either prior to or during the optional top side pre-heat function. Pre-heat can be controlled via an optional top side closed-loop pyrometer system for optimum temperature profile regulation.

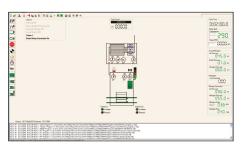
Our low maintenance solder bath and pump mechanism moves in three axes. Solder is applied using our proven technology - single point AP nozzle design - incorporating patented spiral solder return-to-bath technology, offering increased wave stability with reduced potential for solder balls. The system can also accommodate our latest generation Micro Nozzle, together with Jet-Wave, Wide-Wave and dedicated multi-tube single dip solder technology.

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





TOP SIDE PRE-HEAT OPTION

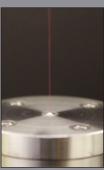


#### OPERATION

The Synchrodex is controlled by a PC through PillarCOMMX, 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



DROP-JET FLUX HFAD



150MM WAVE NOZZLE



PILLARGEN 80 Nitrogen generation system



#### STANDARD FEATURES

In-Line Motor Driven Auto Width Adjust Throughfeed Synchronous

Movement Conveyor

Conveyor Side Clamping

Integral PC & Machine Mounted TFT Monitor

Auto Motorised Solder Wire Feed & Level Detect

Heated Inerted Nitrogen System

Drop-Jet Fluxer

Set of AP Solder Nozzle Tips

Internal Fume Extraction

Solder Wave Height Measurement & Correction System

Colour Programming Camera

Light Stack Tower

Windows® based PillarCOMMX 'Point & Click' interface

PillarPAD Offline Programming System

Auto Fiducial Recognition & Correction System

Flux Level Sensor

Multilevel Password Protection

SMEMA Compatible

Process Viewing Camera with Record Feature

Lead-Free Solder Capability

Day-To-Day Service Kit

### MONITORING OPTIONS

Flux Presence Sensor - Thermistor Style

Flux Spray and/or Flow

Pump RPM

 $O_2$  PPM

Nitrogen Flow

### **OPTIONS**

Ultrasonic Fluxing

Dual Drop-Jet/Ultrasonic Fluxing

Top Side Instant IR Pre-Heat

Closed-Loop Pyrometer Temperature Control

Bottom Side Hot Nitrogen Selective Pre-Heat

Laser PCB Warp Correction

Solder Reel Identification

Solder Bath Coding (identifies correct bath for program)

Encoders on X, Y and Z Axis

Nitrogen Generator





JET-WAVE SOLDER NOZZLE



TWIN FIXED PITCH AP SOLDER NOZZLE



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

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



# **ORISSA SYNCHRODEX**

#### **SPECIFICATIONS**

Height: 1615mm / 63" - excluding light stack

Width: 813mm / 32" 2024mm/80" Depth:

Board size: Max. - 457mm x 610mm / 18"x 24"

Min. - 102mm x 102mm / 4"x 4"

Edge clearance: Above/below 3mm

Below 40mm - above 45mm Height clearance:

100mm - upon request

Extraction: Fan: 276mm dia. Rating: 1000m<sup>3</sup>/hr / 589 CFM

Solder: Most commonly used solder types - including lead-free

15kg standard - 25kg large bath Solder pot capacity:

Applicators: AP style - 2.5 - 16mm dia.

Extended and Jet-Tip nozzles - up to 25mm dia.

Jet-Wave nozzles - up to 25mm width

150mm Wave nozzle

Flux: Low maintenance Drop-Jet system. Low solids

> (below 8%), no clean flux, pressurised and inerted system, optional water-soluble system available

Flux tank capacity: 1 litre

50 dots/second Fluxer speed:

4.0-6.0mm / 0.16-0.24" Deposition size:

X, Y & Z axis resolution: 0.15mm +/- 0.05mm Repeatability: Nitrogen supply pressure: 5 bar / 72 psi

30-100 litres/min. - solder nozzle configuration dependent Nitrogen usage:

Nitrogen purity: 99.995% or better 5 bar / 72 psi Air supply pressure:

10 litres/min. / 0.35 CFM Air usage: Power Supplies: Single phase + PE

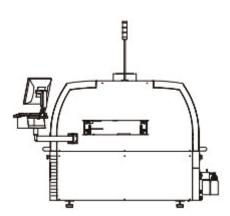
230V Voltage: Frequency: 50/60Hz

Max. power is machine configuration dependent Power:

Transport: Conveyor

PillarCOMMX Windows® based 'Point & Click' interface Programming:





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