

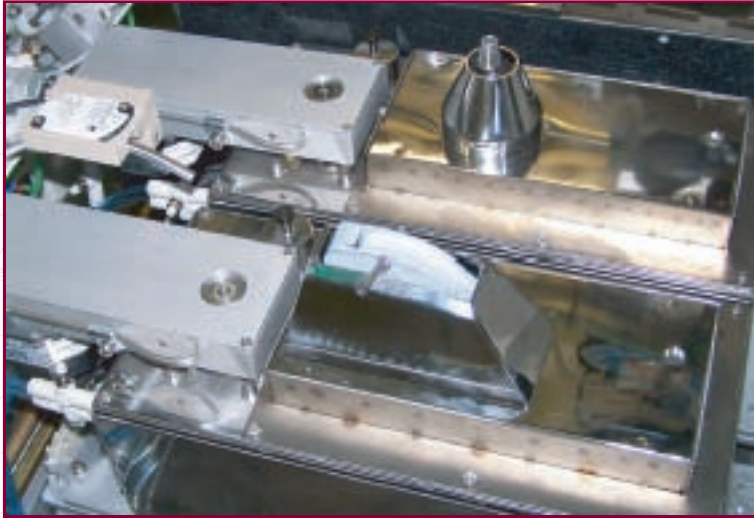
TOPAZ E *series*

In-line modular selective soldering machine

- In-line or stand alone operation
- Modular upgradeability
- Windows XP operating package
- Inert soldering atmosphere
- Optional 'bolt-on' pre-heater and pre-fluxer
- Lead free compatible



TOPAZ E series



Designed for both small and large batch 'selective soldering' the Topaz E series is ideal for the large manufacturer and small subcontractor alike. The Topaz E series incorporates a five-axis PCB movement system along with a flexible conveyor transport system, which as a result offers uncompromised flexibility, and fast cycle times when multiple modules are incorporated in-line.

The E series range consists of three specification levels; the E200, E300 and E400. The E200 incorporates Double Z and 355 degrees PCB rotation. The E300 offers the additional benefits of encoders on all axes, providing closed loop monitoring and control of the PCB positioning system. The E400 is based on the successful features of the E200, but with the option of multiple bath configurations, including the new small form-factor solder bath. The use of multiple solder baths enables different solder types to be used on the same machine if required and for two different nozzle types to be used. The E series is designed to integrate into a production line or be used as a 'stand alone' system.

Upon entering the machine on an adjustable belt drive conveyor, the PCB stops at a pre-determined pick up point where the preferred tooling option removes the board from the conveyor and presents it to the fluxing station. The ultrasonic fluxing system or optional drop jet accommodate all types of commonly used flux, and provides an atomized spray formation or select droplets.

The soldering process utilizes many different solder nozzles, ranging from the universal AP-1 for individual point soldering, the Jetwave® for connectors or more product specific nozzles for dedicated applications. All solder applicators are of a quick fit side clamp location style, which in turn facilitates easy re-tooling and product changeover. Slide out solder bath assemblies are used for ease of maintenance and nozzle change. After completion of the fluxing and soldering operation the PCB is returned to the conveyor and exits the machine.

Soldering is enhanced by an inerted and heated Nitrogen curtain which provides an inert atmosphere for the soldering process and also assists in the prevention of oxidation whilst providing a local pre-heat to the joint, thus reducing thermal shock to localized components. Additional fluxing and pre-heat options are available through the optional modular In-line fluxer and modular in-line pre-heat systems.

The Topaz E series machines are controlled by a PC, which permits machine operation through PillarCOMM, a Windows® based interface. The system offers unlimited program storage for individual programs, each of which can have up to 1600 combined flux and solder joints. The programming is self teach with a cross-hair being displayed on the PC display, which also acts as a process-viewing display.

Specification

Solder: All commonly used solder types

Lead Free: Optional

Applicators: Various e.g. AP-1, Jetwave®, Jettube, Weir, or Multi-Dip etc.

Flux: Low solids no clean & rosin. Spray: 3.00 - 12.00mm dia. 2 x 1 liter containers
Pressurized inerted system - 2psi. Low maintenance system. Flux level sensor

Nitrogen usage: Variable dependent on applicator type-50-150 liters per min/bath

Purity: 99.998%, 5 bar minimum pressure

Electrical Supply: E 200 / E 300 - Single phase + PE, 240 Volts, 50/60Hz, 5.7kVA
E 400 - Single phase + PE, 208-240 Volts, 50/60Hz, 5.7kVA

Board size: E 200 & E 300 Max. 305 x 305mm (Max PCB size subject to inspection by Pillarhouse)
E 400 Max. 305 x 254mm (Max PCB size subject to inspection by Pillarhouse)
Min. 102 x 125mm-longer boards can be accommodated in some cases

Edge clearance: Above / below 3.00mm

Height Clearance: Above / below 38.00mm

Transport: Edge belt conveyor (left to right or right to left feed direction)

Smema: Compatible - Std 1.2

X-Y Axes: Resolution: +/- 0.05mm Repeatability: 0.05mm

Z Axis: With optional Double Z action (E200 / 300 / 400) Resolution: 0.05mm
Repeatability: 0.05mm

Tooling: Quick release adjustable edge clamp tooling (optional)
Quick release dedicated vacuum tooling (optional)
Quick release dedicated gripper tooling (optional)

Programming: Windows based PillarCOMM programming, Unlimited programs, each with up to 1600 combined flux and solder joints

Options

In-line IR Pre-heating unit (slave or standalone)

In-line Fluxing unit (slave or standalone)

PCB warpage correction system

Fiducial recognition and correction

Dual track load/unload conveyor

Large solder bath for multi-dip applications
Dual modular solder baths

AP-1, Jetwave®, Multi-dip solder nozzles

Motorized edge clamp tooling / conveyor adjustment

Lead free solder bath assembly

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