



ROBOTIC PROCESS SYSTEMS

OPUS-3 Miniature Wave Selective Soldering System

INTRODUCTION:

The OPUS-3 is a miniature wave multi-axis Cartesian Robot designed specifically for selectively soldering through-hole and odd-form components into mixed-technology PCBs, molded modules, and other odd-form assemblies without any special tooling. The system conforms to SMEMA in-line manufacturing standards, is CE labeled, and is ideally suited for applications where the product is manufactured in small or large lot quantities and high product mix.

The board handler is an optional manual load EF or edge-conveyor (In-Line operation) mounted to the robot, expanding between 4"-18" under program control. Theta-rotation is optional, as is pneumatic, or servo-driven tilt-axis used to provide peel-back found on wave solder systems, found to be useful in preventing bridging and icicles. The PCB is processed through the fluxing, and the soldering operation with no operator intervention. The robot then delivers the processed PCB back to the operator, or alternately to the down stream conveyor completing the cycle.

The Solder Station features miniature wave Gaussian soldering technology for exceptional keep-away, lead protrusion clearance & thermal-demand capability.

The solder pot is leaf-free capable, and features automatic level sensing, solder make-up, and PID temperature controls, including independent N2 heating also with PID temperature controls. Solder nozzles are magnetically coupled & quick-change; many systems have been fitted with multiple unique solder nozzles for simultaneously soldering many boards or features at a time.

The unique and innovative features of the OPUS-3 Selective Soldering System enable the system to solder almost any feature, and any thermal demand without requiring special tools such as vision, or pre-heating. The exceptional flexibility, performance, productivity, and value of the OPUS-3 make it a powerful tool to add to your post-reflow production soldering solutions.

APPLICATIONS:

Selective solder through-hole components following SMT reflow
Selective solder RF Shields
Selective solder wires & cables to PCB's and molded modules
Selective solder SMT components
Selective solder SMT edge-connectors

FEATURES:

- CE Labeled
- Designed to meet UL/OSHA safety requirements
- SMEMA machine interface
- CamConductor off-line programming software
- Programming/set-up camera
- Handles PCB's up to 450 x 450 mm
- Coordinated motion with optional tilt-axis achieve peel-back to help prevent bridges and icicles
- Lead-Free compatible solder management system
- Quick-Change solder pot
- Automatic solder level sensor and make-up
- Quick-change magnetic solder nozzles
- Solder nozzles-3 in set, wide range available
- Computer, with Windows interface



BENEFITS:

- High Productivity
- Repeatable quality result
- Exceptional keep-away capability <1.5-mm
- Exceptional lead protrusion clearance >5-mm
- Exceptional thermal capability with dynamic wave
- Quick-change solder pots
- Low maintenance
- Program off-line in minutes
- Small footprint
- Low cost

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