TMT-R9800S FEATURES

1. Unlike typical Cartesian robots the Thermaltronics Robot, Model TMT-R9800S, is equipped with full vision, (eyes) to verify the procedure being undertaken and does not simply follow a pre-determined program. In this respect it has an observation mode, a verification mode and as a result – a decision making capability. (Basically a brain). This capability of collecting and utilizing data for production processing is one of the most important factors necessary to meet the requirements of Industry 4.0 standards.

2. Through the use of servo motors and precision ballscrews, the Thermaltronics Robotic system is able to accurately meet the requirements of high speed operation, repeatability and durability. The software is designed to transform system commands into functional operating procedures and with its 6-axis capability, 360° independent fixture rotation, solder tip and solder wire feeding operation from separate axis control, the applications extend beyond conventional soldering and dispensing operations.

3. Application programming is made simple by using full image-merging and mapping techniques.

4. Dynamic laser height measurement/adaptive control, ensures precision soldering repeatability.

5. A full vision mapping system with fiducial marks, provides for intelligent decision making during procedural operations.

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TMT-R9800S SPECIFICATIONS

Input Line Voltage
- TMT-R9800PS-1: 100-110 VAC
- TMT-R9800PS-2: 220-240 VAC

Servo Motor Axis: 6 Axis

Camera View: 290mm x 200mm

PCBA Size Max: 200mm x 200mm with rotation

Soldering Region Max: 190mm x 170mm

Dynamic Range of Shaft
- X Axis: 290mm Standard
- Y Axis: 200mm Standard
- Z1, Z2 Axis: 70mm
- R Axis: 360°

Shaft Speed
- X, Y & Z Axis: 0.1 ~ 300 mm/sec
- R Axis: 0.1 ~ 450°/sec

Positioning Repeatability
- X, Y & Z Axis: ±0.01 mm
- R Axis: ±0.02°

Camera resolution: 0.015mm

Air Pressure: Max. 6 Bar/ 87 psi

Solder wire diameter range: 0.3 ~ 1.6 (mm)

Controller: Industrial Computer

Operating System: Windows 7 Professional

Soldering System: 120 watts (40 watts RF output)

Curie Heat Technology: 320C ~ 475C (Tip cartridge pre-defined)

Power Supply: 100 ~ 240V AC

Power Consumption: 1 KVA

Dimensions: 800mm (H) x 702mm (D) x 620mm (W)

Weight: 125 KG

SOFTWARE INTERFACE
SOFTWARE INTERFACE

R SERIES TIP CARTRIDGES

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6 = Temperature Sensitive  7 = Standard Applications  8 = High Performance

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HARDWARE FEATURES

DUAL ARM SYSTEM
- Soldering Tip and Solder Wire Feeder are located on two different arms, this simulates the operator’s soldering process.

VISION SYSTEM
- High resolution Camera for image recognition, scanning & fiducial marks.
- Programming is done on the image.

LASER HEIGHT MEASUREMENT
- Real time laser measurement eliminates height variance in soldering
- Check for missing parts & board warpage

SOLDER TIP CALIBRATION
- Easy to use tip calibration
- Maintain high accuracy & repeatability during soldering processes

TIP CLEANING SYSTEM
- Two types of cleaning: air blower & brass brush
- Solder tip can move separately from the solder wire feeder

FINE TUNING
- Fine tuning system for solder tip and solder wire feeder
- Fast and accurate system setup