Polymer Dispensing and Masking Cell

DISP3-TBL3 is a fully programmable robotic masking and dispensing cell with quality check functions built in. It is designed to handle parts up to 24 inches long with a max weight of 50 lbs (larger models available). Integrated vision and 3D scanner allows the system to compensate for inaccurate part features.

FEATURES AND SPECIFICATIONS

- Offline programming interface with Motion Program Generator
- Polymer or other viscous material dispensing for application such as:
  - Masking, brazing, chemical welding, or gluing
- 6-axis articulated robotic arm
- Vision guidance for precise part feature locating
- Automatic tool change system
- Part load area with safety interlocks
- Rotary actuator for changing part orientation
- Part scans allow the system to compensate for part features inaccuracies up to +/- 1mm
- Precise dispensing tool with no-drip via adjustable suck-back amount.
- Fully enclosed on single base/platform for easy re-location
- Touch screen based operator interface
- Small footprint (2250mm x 1750mm including controller)
Cell Models

**DISP3-TBL3:** complete robotic masking and dispensing cell equipped with a 3 kg 6-axis articulated robotic arm with 27”(700mm) reach, all necessary tools, part presentation, operator interface, and safety enclosure.

**DISP6-TBL3:** cell with 6 kg robot and 54”(1,370mm) reach.

**DISP20-TBL3:** 20 kg robotic arm with 65”(1,650mm) reach.

Programming Interface

Programming is done through offline software interface where both virtual and real robot cells are calibrated. The user will be able to import new part models, mark features such as holes as targets, and generate robot motion programs automatically. Benefits and features:

- Initial part programming from 3D models without actual parts
- Easy offline program changes
- Programming of new parts with minimal production interruptions
- Verification of motion paths and reach ability study
- Automatic motion path generation based on final dispensing targets (i.e. holes)
- Adjustment of pertinent dispensing process parameters

Options

- Ultraviolet Light curing of dispensed material
- Eddy current coating thickness inspection (optional)
  - Used for thickness verification of coating such as ceramic.
- QC Pin check of hole blockage status.
  - Recognizes and records any blocked holes by pin insertion method.
- Batch part loading
  - Static part trays
  - Indexer for larger batch load