TRA PX-2D

Desktop SMT Pick and Place Machine

Vision-assisted placement for prototyping and batch production

2 PLACEMENT HEADS / 4 CCD CAMERAS



5,500 CPH
Stated placement speed

54 stations
Component feeder capacity

320 × 450 mm
Maximum PCB size

Flexible placement for mixed assemblies

Dual fiducial alignment registers the PCB to the placement program. Tape feeders and an IC tray support mixed assemblies with resistors, capacitors, LEDs and integrated circuits.

Technical Specifications

TRA PX-2D | Desktop vision-assisted SMT placement

PLACEMENT & PCB HANDLING	
Placement heads / rotation	2 heads / 0-360°
Stated placement speed	Up to 5,500 components/hour
Nozzle type	JUKI-series suction nozzles
Component height	≤ 5.5 mm standard / ≤ 11 mm customized
PCB size	10 × 10 mm minimum / 320 × 450 mm maximum
PCB thickness	≤ 2 mm
Axis travel	X/Y 430 × 530 mm / Z 10 mm (standard catalogue)

FEEDING, VISION & CONTROL	
Feeder capacity	54 tape feeder stations
Tape widths listed	8, 12, 16, 24 and 32 mm (configuration dependent)
IC supply	10 front IC positions / 1 rear IC tray
Tube feeding	Optional vibration feeder
CCD vision system	3 component cameras / 1 PCB camera
Maximum recognition area	22 × 22 mm
PCB alignment	Dual fiducial recognition
Controller and data formats	Industrial PC / CSV and TXT placement files
Programming	Online and offline / Windows 7 as documented

UTILITIES & DIMENSIONS	
Electrical supply	AC 220 V ±10%, 50 Hz
Rated power / air pressure	230 W / 0.4 MPa
Main machine dimensions	990 × 730 × 375 mm (L × W × H)
Machine weight	85 kg

Configuration checks

Confirm tray clearance, feeder allocation, placement accuracy and vacuum rating for the configuration ordered. Throughput varies with component mix and vision settings.

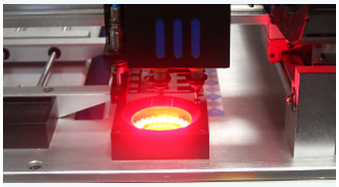
Machine Details

Placement, component recognition, feeding and board support



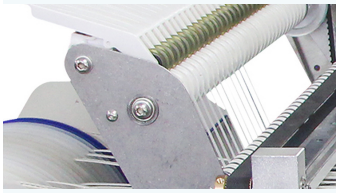
01 Dual nozzles

2 placement heads use JUKI-series nozzles selected for the component package.



02 CCD recognition

Dedicated cameras check component position and support pickup offset correction.



03 Tape feeding

Automatic cover-tape removal exposes the components for pickup.



04 PCB clamping

The clamping mechanism holds the board in position during placement.

From setup to placement

Prepare the job	Load the placement data, assign parts to feeder positions and select the appropriate suction nozzles.
Register the PCB	Clamp the board and use two fiducials to align the placement coordinates to its position and rotation.
Verify and place	Use the component cameras to check pickup offsets before placing components on the board.

Typical assemblies

Use the machine for prototype boards, small and medium batches, or electronics training. Supported package families include common SMT passives, LEDs, SOT, SOP, QFN and BGA. Check each part against the nozzle, height and recognition limits.

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