## Specification

<table>
<thead>
<tr>
<th>Model</th>
<th>High-Speed Compact Modular Mounter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Board size</strong></td>
<td></td>
</tr>
<tr>
<td>Single lane conveyor</td>
<td>520×30 ~ 640×100×200 (mm)</td>
</tr>
<tr>
<td>Dual lane conveyor</td>
<td>500 × 50 ~ 260 × 250 (mm)</td>
</tr>
<tr>
<td>Component height</td>
<td>6/120/205/33 mm</td>
</tr>
<tr>
<td>Component size</td>
<td></td>
</tr>
<tr>
<td>Laser recognition</td>
<td>0402/01050 (≤350 mm)</td>
</tr>
<tr>
<td>Vision recognition</td>
<td>Standard camera (≤350 mm)</td>
</tr>
<tr>
<td></td>
<td>High-resolution camera (≤350 mm)</td>
</tr>
<tr>
<td>Placement speed</td>
<td></td>
</tr>
<tr>
<td>Standard</td>
<td>38,000CPH</td>
</tr>
<tr>
<td>Option</td>
<td>76,000CPH</td>
</tr>
<tr>
<td>Placement accuracy</td>
<td></td>
</tr>
<tr>
<td>Laser recognition</td>
<td>≤±0.04 mm</td>
</tr>
<tr>
<td>Vision recognition</td>
<td>≤±0.02 mm</td>
</tr>
<tr>
<td>Component loading quantity</td>
<td>≤±0.04 mm in case of 8mm tape on Electric double tape feeder</td>
</tr>
<tr>
<td>Power supply</td>
<td>3.5kVA</td>
</tr>
<tr>
<td>Air consumption</td>
<td>0.5 ± 0.05MPa</td>
</tr>
<tr>
<td>Machine dimensions (W × D × H)</td>
<td>1,250 × 2,060 × 1,440 (mm)</td>
</tr>
<tr>
<td>Max. (approximately)</td>
<td>1,800kg</td>
</tr>
</tbody>
</table>

### Options

- **Component handling and feeders**
  - Standard: 6-component handling and feeders
  - Option: 3-component handling and feeders

- **Software**
  - Standard: Virus measurement software (white list)
  - Option: Force control function
  - Option: Nozzle function
  - Option: Force measurement software (white list)

- **Inspection function**
  - Standard: Vision recognition
  - Option: Laser recognition

- **Component recognition Camera (VCS)**
  - Standard: Standard camera

- **Conveyor**
  - Standard: High-resolution camera (27mm view camera)

- **Operations system**
  - Standard: High-resolution camera (27mm view camera) / Component recognition Camera (VCS) (6mm view camera)

- **Operating air pressure**
  - Standard: 0.5 ± 0.05MPa

- **Apparent power**
  - Standard: 200 × 415VAC, 3-phase

- **Board size**
  - Standard: 50×50

### References

- For details of JUKI ECO PRODUCTS, refer to: [http://www.juki.co.jp/eco_e/index.html](http://www.juki.co.jp/eco_e/index.html)
- The machine complies with the "Juki Group Green Procurement Guidelines" on the use of hazardous substances, which is stricter than other restrictions, such as those of the RoHS Directive.
- For details of JUKI ECO PRODUCTS, refer to: [http://www.juki.co.jp/eco_e/index.html](http://www.juki.co.jp/eco_e/index.html)
- The RX-6 is an eco-friendly product which complies with JUKI ECO PRODUCTS standards for protecting the environment.
- The RoHS Directive is an EU Directive limiting the use of 6 hazardous substances (lead, hexavalent chromium, mercury, cadmium, PBB, and PBDE) in electrical and electronic equipment. The Juki Green Procurement Guideline is the voluntarily established criteria to eliminate not only the aforementioned six substances, but also other ones which also adversely affect the environment.
JUKI's already reliable technology has evolved to an all new level RX-6/RX-6B feature High Productivity, Flexibility and Quality in compact foot print

- **RX-6**
- **RX-6B**

- Compact footprint: the width is just 1.25 m
- Equipped with standard Placement Monitor inspection function. Further improvement of production quality.
- Replaceable heads allow you to configure a production line best suited to the current requirements.
- High-speed component placement using high-speed non-stop vision recognition
- Wide range of components and boards: tall components, large components and large boards.

**3E EVOLUTION CONCEPT**

- Easy to use
- More Easy to use
- Economical
- More Economical
- Expandable
- More Expandable

- Evolving into even more attractive products.
- Expanding further the sales and services.
- Aim to achieve even more enhanced customer satisfaction.
- Together with our customers we will continue evolving even further.
1. High Quality

Quality: Prevent defective PWBS and support rapid cause analysis to provide corrective action.

An ultra-miniature camera built into the head section captures component pick-and-place images in real-time. An analysis is run for presence/absence and traceability information can be temporarily saved. This unique function prevents defective PWBS and reduces the time for root cause failure analysis.

- **Component presence check**
  - The machine analyzes automatically. If a missing component is detected, the machine stops automatically and an error will be displayed.

- **Root cause failure analysis**
  - If an error is detected, the machine displays error messages and details to the operator.

- **Component upside down**
  - If a component is placed upside down, an error is displayed and the machine stops automatically.

- **Placement correction**
  - The OPASS function uses the machine’s downward looking camera to check the location of solder paste vs. the pads and corrects the placement accordingly. This function reduces defects caused by misalignment of paste on the pads.

- **Component verification system (CVS)**
  - The new CVS unit can check six components simultaneously, reducing check and changeover times.

- **Check the resistance, capacitance and polarity**
  - By measuring the resistance, capacitance, or polarity before production starts, the machine can prevent incorrect components from being placed. The new CVS unit can check six components simultaneously, reducing check and changeover times.

- **Rapid solution**
  - Analysis including the following items: date/time, cause of an error, nozzle, feeder number, head number and barcode (option).

- **Accessibility**
  - The number and barcode of the feeder is displayed as the paste number.

2. High Productivity

Productivity: Machine construction for high-speed component placement and small-footprint design.

- **High-speed component placement in a very compact footprint**
  - Each machine is equipped with two heads, each with its own laser sensor. Components are centered in-flight between the pick and placement locations. Direct travel between the pick and placement position enables high-speed placement with great accuracy.

- **Components**
  - The PWB transport wait time is minimized, which can improve the effective tact for high-speed production. The PWB transport wait time is 1.25 mm wide.

- **Non-stop recognition**
  - Dual centering technology: Each head includes a laser centering module. In addition, dual upward looking strobing cameras capture images in high-speed for large, fine pitch, or odd-form components.

- **Vision recognition technology**
  - Dual cameras for high-speed placement of large and odd-form components.

- **Non-stop vision recognition technology**
  - Dual cameras enable high-speed recognition of each component type, based on size, shape, and design.

- **Placement and small-footprint design**
  - Dual centering methods allow the machine to utilize the fastest and best method for each component type.

- **Space saving design**
  - The space saving design allows two heads and two beams per machine, with space-saving design enabling high-speed non-stop vision recognition for each component.

- **Tape supply device TRBS**
  - The space saving design tray supply device TRBS will allow the user to apply tape feeders also on the rear side of the machine.

- **Special tape feeders**
  - The maximum number of tape feeders on the TRBS is 14 pieces for 8 mm tape. Wide type tape feeder is also available.
3. High Flexibility

Flexibility: Wide component range

The 6 nozzle head supports components from 0402 (01005) up to 50mm square and height up to 33mm. The 3 nozzle head supports an even wider variety: from 0402 (01005) chips up to 100mm square or 50mm×180mm long connectors with height up to 33mm. These heads are designed to handle a wide variety of components from ultra miniature resistors to large ICs or connectors.

Flexibility: Flexibility by changing the head unit

The rear head can be changed between a 6 nozzle head and a 3 nozzle head, giving greater flexibility to configure the production line according to the current requirements.

Flexibility: Easy load control

Precise placement force is available using precision designed nozzles along with a load cell. Placement force up to 50N is available for components requiring press-in.

Flexibility: 3D or Package-on-package (PoP) support

3D or Package-on-package (PoP) placement is possible using the optional fluxer units. Support for both flux or solder paste is available.

Flexibility: Large PWB support

Board size up to 905mm×900mm² is standard. LED lights or LED back lights are easily handled with no special hardware.

4. JUKI Basic Technology

Basic Technology: JUKI is proud to offer laser centering technology for high speed, accurate placement.

The machine can recognize components of various shapes: from an ultra miniature components such as 0402 (01005) chips up to 50mm² square components such as PLCCs, SOPs, BGAs, and QFPs. When the machine recognizes a component with laser, variations such as shape, color, and reflection do not matter.

Basic Technology: New laser sensor

New generation laser sensor, LNC120

Each nozzle has independent Z and θ-axis control

Each nozzle has independent Z and theta control for superior flexibility, accuracy, and redundancy. The height and angle of each nozzle can be controlled precisely.

Basic Technology: Independent Z and θ-axes control

Flexible lighting improves fiducial measurement accuracy

A non-contact laser sensor measures the height of the PWB to prevent excessive force on components and reduce the risk of damage. This sensor can also measure the pick height more accurately and faster than other methods.

Basic Technology: Reliable, high-precision recognition

The OCC is a downward looking camera used for fiducial recognition and bad mark detection. Fiducial lighting allows the machine to accurately recognize poor contrast fiducials, pattern recognition, and flexible printed circuits (FPC). It can also detect bad board marks to prevent waste of components.

Basic Technology: Height measurement function

A non-contact laser sensor measures the height of the PWB to prevent excessive force on components and reduce the risk of damage. This sensor can also measure the pick height more accurately and faster than other methods.

Basic Technology: On-the-fly component check

Laser detects presence of components.

Component state check

Laser checks if the component falls before placement.

Component dimension check

Laser calculates the following data for each component: component shape, Angle, Center, Width.

Component fall check

Laser checks if the component falls before placement.

Laser check if the component is properly released on the board after placement.