Controller Specifications

- **Model**: TSL3200E
- **Controller**: TSL3200E
- **Number of Control Axes**: Maximum 5 axes
- **Motion Modes**: PTU/NC (Continuous path control, Circular, Breakout)
- **Storage Capacity**: Approx. Total: 128,000 point data + 20,600 steps
  - 1 program: 1,000 point data + 3,000 steps
- **Number of Registered Programs**: Maximum 256
- **External Memory**: USB memory
- **Programming Language**: SCL (similar syntax to Basic)
- **Teaching Assistant**: TP5000, TP15000 (Optional, Programs can also be written on PC)
- **I/O Signals**: 8 inputs / 8 outputs (Plus or minus common connection)
- **Lists Control Signals**: Maximum 6 inputs / 8 outputs
- **Jog method**: Jogging (PCS)
- **Communication Ports**: RS232D: 2 Ports, Ethernet: 1 Port, USB: 1 Port (for external memory)
- **Functions**: Interpolative functions, self-diagnosis, I/O Control and Communications during motion, Coordinate Calculations, Built-in FLC, Conveyor Synchronization (optional), etc.
- **Robot Inverter**: Integrated DC 190 to 2400V, 50/60Hz
- **Power supply**: (Optional) 300-380VAC, 50/60Hz (using external power supply)
- **PC software for Programming Support**: Optional, in addition to the basic software
- **Options**: Additional Axis (Max. 2 axes), I/O Extension, IO Cable, Field-bus (Ethernet, CANopen, CC-Link, EtherCAT, PROFIBUS), Conformance to various Industrial Standards

### Teach pendant

- **Model**: TP1000-6ax
- **Teach Pendant**: Standard, Teach pendant

- **Model**: TP3000
- **Teach Pendant equipped with graphic operation keys**: Optional

---

**SM1704S-3000-B8 SM1704S-3000-B8**
TVM Series

Toshiba Machine’s vertical articulated Robot TVM series achieves high inertia and strong payload capabilities up to 20 kg, while at the same time the robot body has a reduced weight. In addition to three variations in arm lengths, the operating range can be further expanded by mounting the robot on an optional linear actuator.

The Robot TVM series, in combination with its function-rich controller and software solutions such as programming-support PC software and 3D vision bin-picking package, is applicable to a wide range of automation needs and contribute to efficiency, and cost and labor saving.

<table>
<thead>
<tr>
<th>Robot Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>Number of Controlled Axes</td>
</tr>
<tr>
<td>Arm Length (mm)</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>1st Arm</td>
</tr>
<tr>
<td>2nd Arm</td>
</tr>
<tr>
<td>3rd Arm</td>
</tr>
<tr>
<td>Maximum Load (Max Y/L)</td>
</tr>
<tr>
<td>Working Envelope (deg)</td>
</tr>
<tr>
<td>X-axis (L1)</td>
</tr>
<tr>
<td>Y-axis (L2)</td>
</tr>
<tr>
<td>Z-axis (L3)</td>
</tr>
<tr>
<td>Tilt (L4)</td>
</tr>
<tr>
<td>Maximum Speed (mm/s)</td>
</tr>
<tr>
<td>L1</td>
</tr>
<tr>
<td>L2</td>
</tr>
<tr>
<td>L3</td>
</tr>
<tr>
<td>L4</td>
</tr>
<tr>
<td>L5</td>
</tr>
<tr>
<td>L6</td>
</tr>
<tr>
<td>Allowable Moment of Inertia (kgm²)</td>
</tr>
<tr>
<td>Positioning repeatability X-Y-Z</td>
</tr>
<tr>
<td>Robot Body Mass (kg)</td>
</tr>
</tbody>
</table>

For all TVM Series

External view

View A: Details of tool flange

View B: Base mounting dimensions

View C

View D

View E

View F

TVM1200

TVM1200

TVM1500

TVM900

TVM Series

External dimensions and operation range

The point P is the cross point of J6 and J6 axes.

Point P operation range

Position P

- Vertical: 150° ~ 80°
- Horizontal: 0° ~ 360°
- Tilt: 1° ~ 1.5°

External dimensions and operation range

The point P is the cross point of J6 and J6 axes.

Point P operation range

Position P

- Vertical: 150° ~ 80°
- Horizontal: 0° ~ 360°
- Tilt: 1° ~ 1.5°

External dimensions and operation range

The point P is the cross point of J6 and J6 axes.

Point P operation range

Position P

- Vertical: 150° ~ 80°
- Horizontal: 0° ~ 360°
- Tilt: 1° ~ 1.5°