TX90 series industrial robots

Automotive and equipment manufacturers
Cleanroom
Food
Life Sciences and pharma
Machine tending
Painting
Plastics

RS
Scara / 4 axis

TX
Low payload / 6 axis

RX
Medium payload / 6 axis

RX
Heavy payload / 6 axis
### Model Characteristics

<table>
<thead>
<tr>
<th>Model</th>
<th>TX30</th>
<th>TX30L</th>
<th>TX30XL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum load</strong></td>
<td>20 kg</td>
<td>15 kg</td>
<td>12 kg</td>
</tr>
<tr>
<td><strong>Nominal load</strong></td>
<td>7 kg</td>
<td>6 kg</td>
<td>5 kg</td>
</tr>
<tr>
<td><strong>Reach (between axis 1 and 6)</strong></td>
<td>1000 mm</td>
<td>1200 mm</td>
<td>1450 mm</td>
</tr>
<tr>
<td><strong>Number of degrees of freedom</strong></td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Repeatability - ISO 9283</strong></td>
<td>± 0.03 mm</td>
<td>± 0.035 mm</td>
<td>± 0.04 mm</td>
</tr>
<tr>
<td><strong>Motion range</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Axis 1 (A)</td>
<td>± 180°</td>
<td>± 180°</td>
<td>± 180°</td>
</tr>
<tr>
<td>Axis 2 (B)</td>
<td>±147,5°/-130°</td>
<td>±147,5°/-130°</td>
<td>±147,5°/-130°</td>
</tr>
<tr>
<td>Axis 3 (C)</td>
<td>± 145°</td>
<td>± 145°</td>
<td>± 145°</td>
</tr>
<tr>
<td>Axis 4 (D)</td>
<td>± 270°</td>
<td>± 270°</td>
<td>± 270°</td>
</tr>
<tr>
<td>Axis 5 (E)</td>
<td>+140°/-115°</td>
<td>+140°/-115°</td>
<td>+140°/-115°</td>
</tr>
<tr>
<td>Axis 6 (F)</td>
<td>± 270°(2)</td>
<td>± 270°(2)</td>
<td>± 270°(2)</td>
</tr>
<tr>
<td><strong>Maximum reach between axis 1 and 5 (R. M)</strong></td>
<td>900 mm</td>
<td>1100 mm</td>
<td>1350 mm</td>
</tr>
<tr>
<td><strong>Minimum reach between axis 1 and 5 (R. m1)</strong></td>
<td>850 mm</td>
<td>1050 mm</td>
<td>1300 mm</td>
</tr>
<tr>
<td><strong>Minimum reach between axis 2 and 5 (R. m2)</strong></td>
<td>250 mm</td>
<td>272 mm</td>
<td>327 mm</td>
</tr>
<tr>
<td><strong>Minimum reach between axis 3 and 5 (R. b)</strong></td>
<td>256 mm</td>
<td>320 mm</td>
<td>381 mm</td>
</tr>
<tr>
<td><strong>Axis 1</strong></td>
<td>425 mm</td>
<td>550 mm</td>
<td>650 mm</td>
</tr>
<tr>
<td><strong>Axis 2</strong></td>
<td>400°/s</td>
<td>400°/s</td>
<td>400°/s</td>
</tr>
<tr>
<td><strong>Axis 3</strong></td>
<td>400°/s</td>
<td>390°/s</td>
<td>410°/s</td>
</tr>
<tr>
<td><strong>Axis 4</strong></td>
<td>430°/s</td>
<td>400°/s</td>
<td>410°/s</td>
</tr>
<tr>
<td><strong>Axis 5</strong></td>
<td>540°/s</td>
<td>540°/s</td>
<td>540°/s</td>
</tr>
<tr>
<td><strong>Axis 6</strong></td>
<td>475°/s</td>
<td>475°/s</td>
<td>475°/s</td>
</tr>
<tr>
<td><strong>Axis 6</strong></td>
<td>760°/s</td>
<td>760°/s</td>
<td>760°/s</td>
</tr>
</tbody>
</table>

### Work Envelope

- **Maximum speed at load gravity center**
  - Axis 1: 10,42 m/s
  - Axis 2: 10,04 m/s
  - Axis 3: 11,09 m/s

### Mounting (not for vertical cable outlet option)

- **Brakes**: All axis
- **Pneumatic**: 2 solenoid valves 5/2-way (compressed air) or 3/2-way (vacuum) monostable
- **Electrical**: 1 female 19-contact socket (7 twisted pairs including 2 shielded, 3 power contacts)

### Installation Environment

- **Working temperature**: According to standard directive NF EN 60 204-1
  +5°C to +40°C
- **Humidity**: 30% to 95% max. non-condensing

### Vertical cable outlet version

- **Pressurized version**
- **HE (Humid Environment) version**

### Market Specific Versions

- **CR Cleanroom - class 4 cleanliness - ISO 14644-1**
- **SCR Cleanroom - class 2 cleanliness - ISO 14644-1**
- **Plastics - Euromap 12/67 interface**
- **Paint pour applications, homologation Ceinelc (Europe) et Factory Mutual ou cCSAus (USA)**

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1. Under special conditions, consult us.
2. Software configurable up to ±18000°.
3. Pressurization kit: necessary for use in an environment with high dust levels or with substantial liquid splashing. This kit generates positive pressure in the arm. Factory installation only and required with Pressurization kit.
4. Pressurization kit: necessary for use in an environment with high dust levels or with substantial liquid splashing. This kit generates positive pressure in the arm. Factory installation only and required with Pressurization kit.
5. Version HE (Humid Environment): designed for use in humid and oxidizing environments. The arm components are painted individually, providing additional arm protection against oxidation and corrosion. Factory installation only and required with Pressurization kit.
The TX90 robot series feature unique benefits to fit in all environments providing the best possible process quality and increased productivity.

**Product benefits**

**WRIST**  
IP67 rating, submersible, high robustness, limited built-up on wrist.

**STÄUBLI PATENTED REDUCTION GEAR SYSTEMS**  
Unmatched precision, flexibility and speed, high rigidity, reduced maintenance.

**FOREARM CONNECTIONS**  
Electrical and pneumatic connections close to the tool, user lines already installed.

**RIGID STRUCTURE**  
Better dynamic performance.

**ENCLOSED STRUCTURE**  
Easy to clean and use in clean or hostile environments.

**ARM FINISH**  
Smooth or textured, color customization.

**MULTIPLE ATTACHMENT METHODS**  
Adaptability and flexibility (floor, ceiling, wall).

**VERTICAL CABLE OUTLET VERSION**  
Better cable protections, use in clean environment.

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