Product range
Robotics | Experts in Man and Machine
A unique industrial robot range, power cobots and mobile robot systems for many industries

- Automotive
- Electronics
- Food
- Intralogistics
- Medical
- Pharmaceutical
- Metal
- Machine tools
- Photovoltaics
- Semiconductor
- And many more

- Packaging
- Electronics
- Photovoltaics
- Semiconductor
- Measuring
- Quality control
- And many more

- Packaging
- Assembly
- Cleaning
- Washing
- Handling
- Machine loading / unloading
- Measuring
- Quality control

Main benefits

**SMART DESIGN**
- Encapsulated arms, no external cables
- Compatible with all environments from harsh and dirty to sterile
- IP65/67 for the entire arm with pressurization kit

**INTEGRATION FLEXIBILITY**
- Large and efficient work envelope
- Multiple mounting possibilities for flexible and scalable integration
- Small footprint for entire range

**HIGH PERFORMANCE**
- Patented JCS gearbox specially designed for compact robots bringing high dynamics, agility and path precision
- Compatible with NSF H1 food oil with no loss in performance
- 19-bit multiturn absolute encoder technology
- Integrated electrical and pneumatic user circuit including Cat5e
- Compatibility with all production devices, ERP and standardized protocols including OPC UA
- Web server embedded in CS9 controller

**CONNECTIVITY TO THE SMART PRODUCTION**
- Lower total cost of ownership and faster return on investment
- Most energy efficient robot system based on VDMA norm 24608
- Long lifetime and low maintenance; all subcomponents are easily accessible and exchangeable

**CONSISTENT RELIABILITY FOR SECURED PAYBACK**
<table>
<thead>
<tr>
<th>Model</th>
<th>TX2</th>
<th>TX2-</th>
<th>CS8</th>
<th>CS9</th>
<th>CS8</th>
<th>CS9</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of axes</strong></td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td><strong>Nominal payload</strong></td>
<td>± 0,01 mm</td>
<td>± 0,01 mm</td>
<td>± 0,03 mm</td>
<td>± 0,015 mm</td>
<td>± 0,03 mm</td>
<td>± 0,1 mm</td>
</tr>
<tr>
<td><strong>Maximum payload</strong></td>
<td>2,4 kg</td>
<td>8,4 kg</td>
<td>620 mm</td>
<td>2594 mm</td>
<td>1000 mm</td>
<td>2500 mm</td>
</tr>
<tr>
<td><strong>Robot controller</strong></td>
<td>(1,7 kVA)</td>
<td>(1,7 kVA)</td>
<td>(1,5 kVA)</td>
<td>(1,7 kVA)</td>
<td>(2 kVA)</td>
<td>(2 kVA)</td>
</tr>
<tr>
<td><strong>Tool changing system</strong></td>
<td>Bellows, screw cover and bellows</td>
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</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1450 mm</td>
<td>1710 mm</td>
<td>20 kg</td>
<td>100 kg</td>
<td>15 kg</td>
<td>15 kg</td>
</tr>
<tr>
<td><strong>Life sciences, semicon, photovoltaics</strong></td>
<td></td>
<td></td>
<td>68 kg</td>
<td>100 kg</td>
<td>8 kg</td>
<td>14 kg</td>
</tr>
<tr>
<td><strong>HE (optional)</strong></td>
<td></td>
<td></td>
<td>400 mm (option)</td>
<td>400 mm (option)</td>
<td>800 mm</td>
<td>800 mm</td>
</tr>
<tr>
<td><strong>Harsh (optional)</strong></td>
<td></td>
<td></td>
<td>200 mm or 400 mm (option)</td>
<td>200 mm or 400 mm (option)</td>
<td>620 mm</td>
<td>620 mm</td>
</tr>
<tr>
<td><strong>Safe zone/safe tool, a safe collaboration is ensured.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**SAFE TOUCH**

The cobot's skin is up to 20 mm thick to optimize the safety of contact with an operator. Contact is harmless, since the skin technology, quick reaction time and safety functionalities ensure safe operation thanks to its advanced features like safe speed, safe stop and safety. In combination with the TX2touch rounding and ensure precise navigation permanently monitoring the system's surroundings.

Three integrated laser scanners are permanently monitoring the environment, regaining full performance within predefined Safe Zones. Safe Zones ensure safe limited arm movement and Safe Stop for connection and charging functions. Safe Tool is supervising robot's performance within predefined tool change station.

**SAFE ZONES**

Tool changing system

Optical and acoustical status feedback

Robust drive unit

Gripper padding

Arm kinematics inherited from TX2 robots

Tool changing system

Embedded CS9 controller

Tool changing system

Gripper padding

Safe touch skin

Safe Tool is supervising robot's performance within predefined Safe Zones. Safe Zones ensure safe limited arm movement and Safe Stop for connection and charging functions. Safe Tool is supervising robot's performance within predefined tool change station.

**SAFE STOP**

The cobot switches to a reduced speed (≤ 250 mm/s) as soon as the operator enters the environment, regaining full speed. Safe Tool is supervising robot's performance within predefined Safe Zones. Safe Zones ensure safe limited arm movement and Safe Stop for connection and charging functions. Safe Tool is supervising robot's performance within predefined tool change station.

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Controller range

**CS9**

- (H x W x D) 270 x 445 x 365 mm - 38 kg
- IP20
- 1 GB RAM
- USB ports
- 2 GB CFAST
- Serial link RS232, 2 Ethernet ports (Socket, FTP Server/Client)
- EtherCAT Master

**CS8C**

- (H x W x D) 481 x 445 x 455 mm - 60 kg
- IP20 (IP54 option)
- 512 Mb RAM
- USB ports
- 2 GB Nand Flash
- Communication RS232/422 serial link, 2 Ethernet ports (Socket, FTP Server/Client)
- 1 or 2 boards 16/16 digital I/O, optional

**CS8C paint / CS8C HP**

- (H x W x D) 1035 x 850 x 780 mm - 140 kg
- (H x W x D) 1035 x 607 x 815 mm - 140 kg
- IP54
- 512 Mb RAM
- USB ports
- 2 GB Nand Flash
- Communication RS232/422 serial link, 2 Ethernet ports (Socket, FTP Server/Client)
- 1 or 2 boards 16/16 digital I/O, optional
- Modbus TCP/IP Server
- OPC UA server as an option

**CS8C M**

- (H x W x D) 520 x 200 x 300 mm - 17 kg
- IP20
- 512 Mb RAM
- USB ports
- 2 GB Flash disk
- Communication RS232/422 serial link, 2 Ethernet ports (Socket, FTP Server/Client)
- 1 or 2 boards 16/16 digital I/O, optional
- Modbus TCP/IP Server
- OPC UA server as an option

Optional for CS8 models:


Optional for CS9 model:

- Modbus TCP/IP Server & Client, Sercos III Slave, Ethernet IP Adapter, ProfiNet IO-Device, EtherCAT Slave, PowerLink Controlled Node

Optional for CS8C M, CS8C, CS8C paint and CS8C HP models: Modbus TCP/IP Client, CanOpen Master, Profibus DP Master & Slave, DeviceNet Master & Slave, Ethernet IP Scanner / Adapter, ProfiNet IO-Controller and IO-Device, EtherCAT Slave, PowerLink Slave, OPC UA server

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**SP2 manual control unit**

This unique terminal combines a lightweight design, ergonomics (for left- or right-handed user) and robustness to deliver advantages in all environments:

- Built-in programming, maintenance and supervision,
- Safety functions (3-position dead-man control, emergency stop),
- Ease of use, graphics and intuitive interface,
- Integrated Web technology.
Global presence of the Stäubli Group

www.staubli.com