

FAST MOVING TECHNOLOGY

STÄUBLI

Product range

Robotics | Experts in Man and Machine








A unique industrial robot range, power cobots and mobile robot systems for many industries



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
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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
- 
Connectivity to the smart production
 - Integrated electrical and pneumatic user circuit including Cat5e
 - Compatibility with production devices, ERP and standardized protocols including OPC UA
 - Web server embedded in CS9 controller
- 
Consistent reliability for secured payback
 - Lower total cost of ownership and faster return on investment
 - Long lifetime and low maintenance; all subcomponents are easily accessible and exchangeable



	TS2-40	TS2-60	TS2-80	TS2-100	TP80	TX2-40	TX2-60	TX2-60L	TX2-90	TX2-90L	TX2-90XL	TX2-140	TX2-160	TX2-160L	TX200	TX200L
Load capacity	8.4 kg	8.4 kg	8.4 kg	8.4 kg	1 kg	2 kg	4.5 kg	3.7 kg	14 kg	12 kg	7 kg	40 kg	40 kg	25 kg	130 kg	80 kg
Reach at wrist	460 mm	620 mm	800 mm	1000 mm	800 mm	515 mm	670 mm	920 mm	1000 mm	1200 mm	1450 mm	1510 mm	1710 mm	2010 mm	2194 mm	2594 mm
Number of axes	4	4	4	4	4	6	6	6	6	6	6	6	6	6	6	6
Repeatability X-Y (ISO 9283)	± 0.01 mm	± 0.01 mm	± 0.015 mm	± 0.02 mm	± 0.05 mm	± 0.02 mm	± 0.02 mm	± 0.03 mm	± 0.03 mm	± 0.035 mm	± 0.04 mm	± 0.05 mm	± 0.05 mm	± 0.05 mm	± 0.06 mm	± 0.1 mm
Stroke	200 mm or 400 mm (option)	200 mm or 400 mm (option)	200 mm or 400 mm (option)	200 mm or 400 mm (option)	100 mm or 200 mm (option)											
Protection class (wrist)	Up to IP65	Up to IP65	Up to IP65	Up to IP65	Up to IP65	IP65 (67)	IP65 (67)	IP65 (67)	IP65 (67)	IP65 (67)	IP65 (67)	IP65 (67)	IP65 (67)	IP65 (67)	IP65 (67)	IP65 (67)
Cycles per minute (4 axis), Max cartesian speed (6 axis)	240 ppm	220 ppm	200 ppm	170 ppm		8.6 m/s	8.4 m/s	11.1 m/s	10.9 m/s	11.1 m/s	11.6 m/s	9.5 m/s	10.3 m/s	12.2 m/s	12 m/s	14 m/s
Weight	38 kg	39 kg	40 kg	41 kg	68 kg	29 kg	52 kg	53 kg	114 kg	117 kg	119 kg	250 kg	260 kg	265 kg	980 kg	1000 kg
Multiple mounting attachments																
Food oil H1 NSF	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Robot controller	CS9 (1.7 kVA)	CS9 (1.7 kVA)	CS9 (1.7 kVA)	CS9 (1.7 kVA)	CS8C MP (3 kVA)	CS9 (1.5 kVA)	CS9 (1.7 kVA)	CS9 (1.7 kVA)	CS9 (2 kVA)	CS9 (2 kVA)	CS9 (2 kVA)	CS9 MP (3kVA)	CS9 MP (3kVA)	CS9 MP (3kVA)	CS9 MP (3kVA)	CS8C HP (4.6 kVA)

Collaborative options	Unique modular SIL3-PLe safety functionalities (option)															

Sensitive environments	Harsh: automotive, metal															

(1) For ceiling version, consult us. (2) Consult us.

Unique modular SIL3-PLe safety functionalities



Safe limited speed
The robot switches to a reduced speed (≤ 250 mm/s) as soon as the operator enters the environment, regaining full speed once the operator is gone.

Safe zone
Safe zone ensure safe limited arm performance within predefined areas.

Safe stop
The robot slows down as the operator approaches, stops during the interaction, and starts up again at the end of the interaction.

Safe tool
Safe tool is supervising robot's tools or grippers dimension and speed.

POWER cobot TX2touch range

The TX2touch is a unique range of cobots designed for safe Man-Robot Collaboration while maintaining high productivity. Based on the proven TX2 industrial robot, it offers safe operation thanks to its advanced skin technology, quick reaction time and embedded modular safety functions. TX2touch is the only cobot with the SIL3-PLe safety level. It is highly productive due to the performance, smart connectivity and reliability inherited from TX2 robots.

Safe touch
The cobot reacts in 10 ms whenever it comes into contact with an operator. Contact is harmless, since the cobot's skin is up to 20 mm thick to optimize the safety of all Man-Robot interactions.



HelMo mobile robot system

The HelMo mobile robot system is an autonomously driving and navigating vehicle that has been developed especially for Man-Robot Collaboration.

In combination with the TX2 robot and the CS9 robot controller including features like safe speed, safe stop and safe zone/safe tool, a safe collaboration is guaranteed.

Three integrated laser scanners are permanently monitoring the system's surrounding and ensuring precise navigation and safety.



WFT Modular individual platform systems

When it comes to linking different manufacturing processes together, Stäubli WFT provides the right solution.

The patented omnidirectional drive technology brings to our wide range of AGVs unrivaled precision, dexterity, and safe motion performance for the factory floor.

Even in the most stringent or sensitive environments like cleanroom, its Automated Guided Vehicles (AGVs) are ready to tackle your challenges.

Thanks to high connectivity, Stäubli WFT AGVs deliver smart data to automate and monitor your intralogistics tasks for more production modularity and predictability.



Powerful software solutions for smart production



Stäubli
Robotics
Controls

Perfectly adapted to each user profile



Stäubli
Robotics
Suite

Efficient and easy programming for faster payback



VAL 3 Language

Advanced robotics environment to build high basic to high-end applications.



UniVAL

uniVAL is a “plug and play” solution to program Stäubli’s entire range of robots with your generic motion controllers or PLCs.

uniVAL drive

uniVAL plc



Development Studio

Develop your entire cell offline, visualize it in 3D and calculate your cycle time.



Maintenance Studio

Remote-controller access with 3D visualization of the robot cell.

Controller range

CS9 / CS9 MP



(H x W x D) 270 x 445 x 365 mm - 38 kg
(H x W x D) 297 x 445 x 365 mm - 44 kg

- IP20
- 1 GB RAM
- USB ports
- 2 GB CFAST
- Serial link RS232, 2 Ethernet ports (Socket, FTP Server/Client)
- EtherCAT Master

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

Optional for CS9 model:

- PCIe card: **ASI** Master, **CCLink** Client, **Profibus DP** Master & Slave, **Ethernet IP** Scanner & Adapter, **ProfiNet** IO-Controller & Device, **EtherCAT** Master & Slave, **Sercos III** Master & Slave, **PowerLink** Controlled Node
- Remote I/O
- **OPC UA server**

CS8C MP



(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
- Modbus TCP/IP Server

Optional for CS8C MP 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**

CS8C HP



(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

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.



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