STÄUBLI
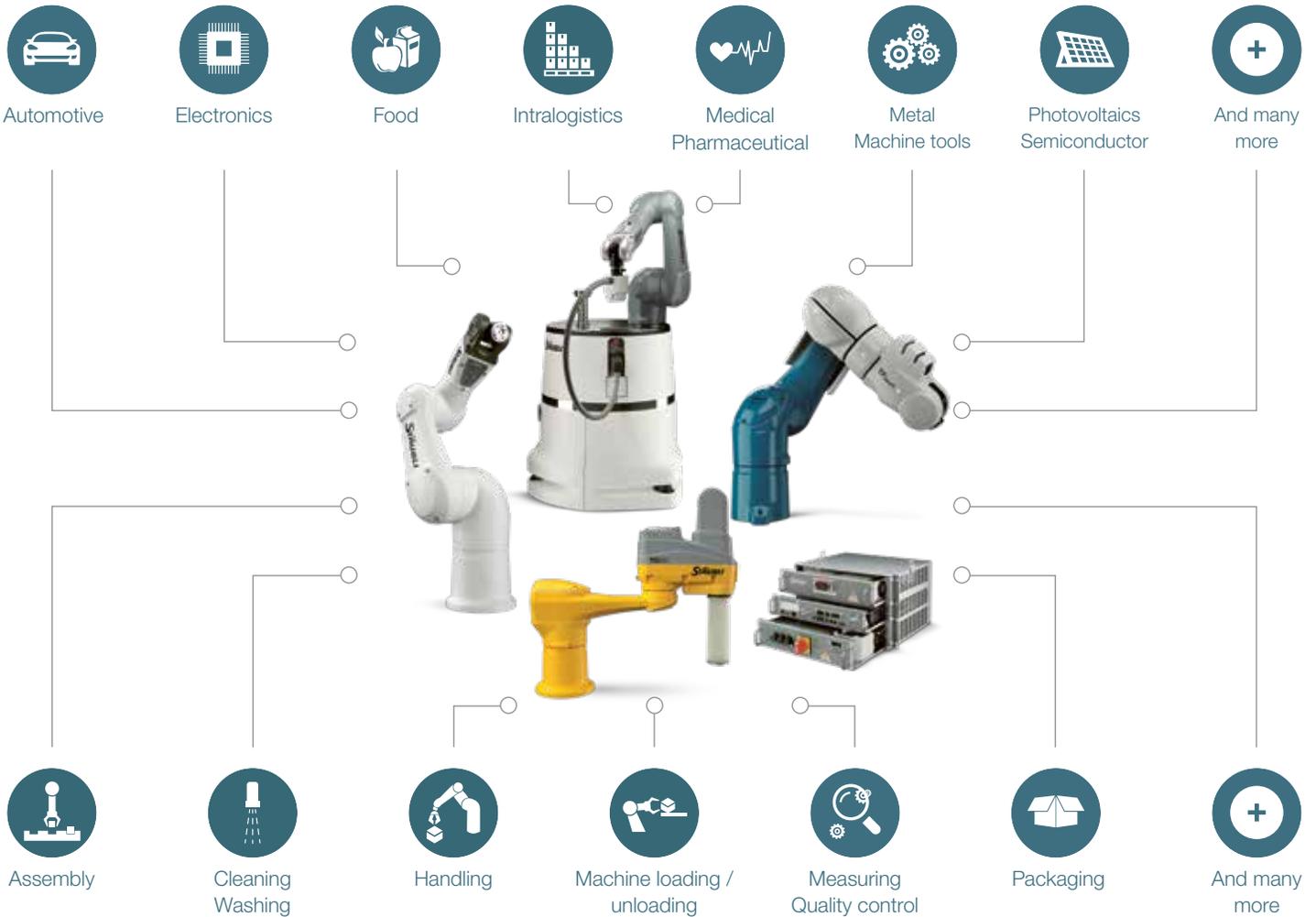
Product range

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

Assembly

Cleaning Washing

Handling

Machine loading / unloading

Measuring Quality control

Packaging

And many more

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

Connectivity to the smart production
- Integrated electrical and pneumatic user circuit including Cat 5e
- 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)	CS8C HP (4.6 kVA)	

Standard robots

Collaborative options

| **Unique modular SIL3-PLe safety functionalities** (option) | | | | | | | SIL3-PLe | SIL3-PLe | SIL3-PLe | SIL3-PLe | SIL3-PLe | SIL3-PLe | SIL3-PLe | SIL3-PLe | SIL3-PLe | | |

POWER cobot TX2touch range (safe touch skin)

Sensitive environments

Harsh: automotive, metal

HE: food, machine tools

Stericlean: medical, pharma

Super Cleanroom, Cleanroom: life sciences, semicon, photovoltaics

ESD: automotive, electronics

(1) For ceiling version, 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.

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

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.

WFT Modular individual platform systems

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

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

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

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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Global presence
of the Stäubli Group

www.staubli.com

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