

FAST MOVING TECHNOLOGY

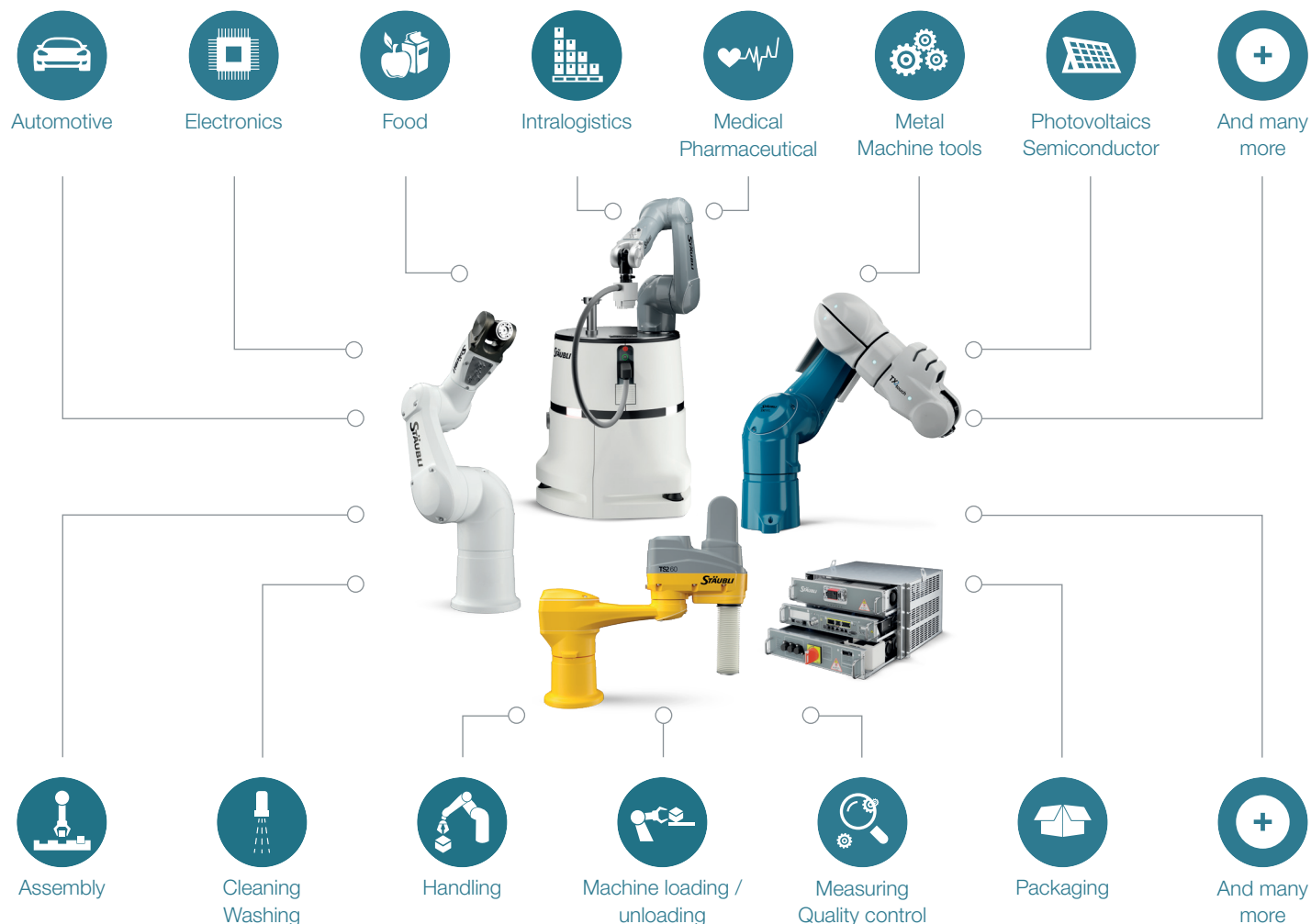
STÄUBLI

Product range

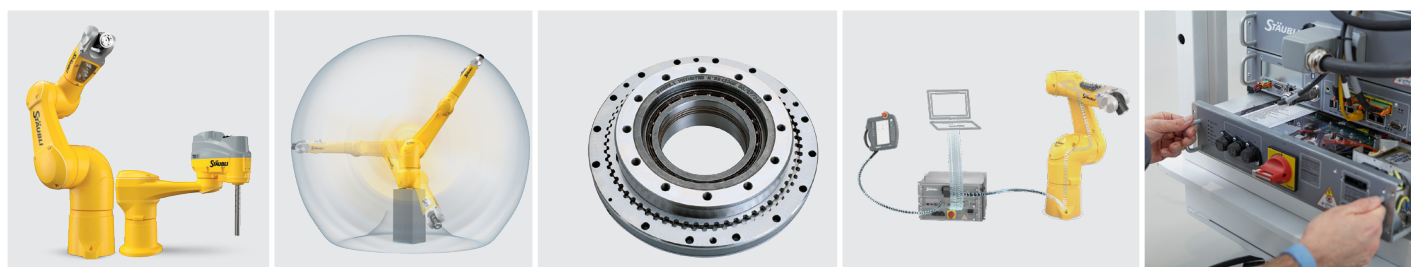
Robotics | Experts in Man and Machine








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



Main benefits



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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
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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	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	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	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	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	± 0.02 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)											
Protection class (wrist)	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	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 NSF H1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Robot controller	CS9 (1.7 kVA)	CS9 (1.7 kVA)	CS9 (1.7 kVA)	CS9 (1.7 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)

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



Sensitive environments	Harsh: automotive, metal														
HE: food, machine tools															
Sterilean: medical, pharma															
Super Cleanroom, Cleanroom: life sciences, semicon, photovoltaics															
ESD: automotive, electronics															

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.



Mobile robotics



AGV Platform Series
Our unique portfolio of modular AGV platform series delivers outstanding performance such as omni-directional motion, high positioning precision up to 2 mm and robustness transporting the highest payload from 5 tons up to 500 tons. Synchronized by our software, the Stäubli AGV fleet performs in the most efficient way by providing insights for data-driven decision making.



AGV Forklift Series
Our AGV Forklift is a very compact counterbalanced forklift that guarantees smooth and reliable material flow. With the patented drive technology, payload ranging up to 1,000 kg and configurable forks, our AGV Forklift series can be used very flexibly to transport EUR-pallets, racks, or lattice boxes. Our AGV Forklift is a key element for increasing the flexibility of smart production even in outdoor environments.



Mobile Robot Systems
Thanks to our deep expertise in industrial application with mobile platforms and best-in-class robots, we offer a unique design of high-performance Mobile Robot Systems. With the ability to work and navigate fully autonomously, the next level of flexible handling tasks can be executed for various applications.

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 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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