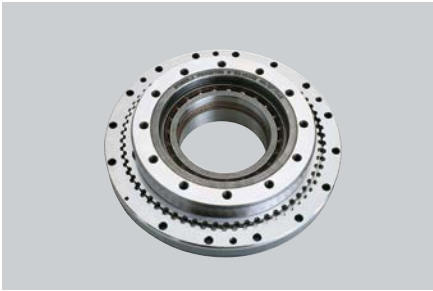


## Product range



# The added value of Stäubli robot arms

## Versions adapted to various environments



- JCS gearbox designed by Stäubli for high precision, high performance and reliability, long lifetime, and reduced maintenance.



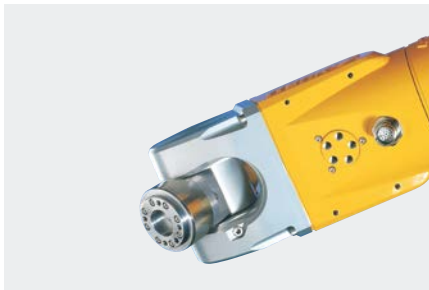
- Small base for a reduced footprint.
- Enclosed arm structure (IP65) allows for the robot to perform extremely clean applications, and the possibility to pressurize the arm adds a level of protection while working in hostile environments.



- Large spherical work envelope.



- Cable outlets and connections located underneath the robot base for improved protection (optional).



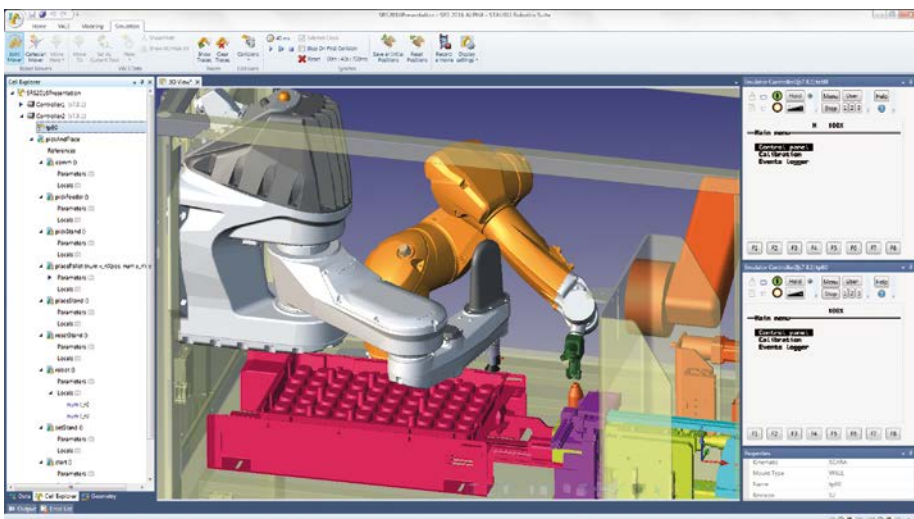
- Electrical and pneumatic connections located on the forearm near the tool flange.



- Multiple robot mounting possibilities (Floor/Wall/Ceiling).

## Comprehensive software solutions

### Simulation and offline programming software workbench



### Three distinct approaches to program a Stäubli robot

#### VAL 3 language

Language for the development of robotic applications.

#### VALproducts solutions

Simplified programming interface.

#### uniVAL drive / uniVAL plc

Driving the Stäubli robots with a motion controller or a simple PLC.

# A complete range of robots

## Standard arm range



	TS20	TS40	TS60	TS80
	LOW PAYLOAD 4 axis (1 to 8 kg)			
<b>MODEL</b>	TS20	TS40	TS60	TS80
<b>Maximum payload <sup>(1)</sup> (kg)</b>	1	8	8	8
<b>Nominal payload (kg)</b>	0,5	2	2	2
<b>Reach at wrist (mm)</b>	220	400	600	800
<b>Number of axes</b>	4	4	4	4
<b>Repeatability to ISO 9283 (mm)</b>	±0,01	±0,01	±0,01	±0,01
<b>Protection class (*wrist)</b>	IP10	IP54	IP54	IP54
<b>Working range</b>				
Axis 1	±133°	±105°	±125 / ±140° <sup>(1)</sup>	±140°
Axis 2	±131°	±143°	±150°	±155°
Axis 3	100 mm	200 or 400 mm (option)	200 or 400 mm (option)	200 or 400 mm (option)
Axis 4	±250°	±500° <sup>(3)</sup>	±500° <sup>(3)</sup>	±500° <sup>(3)</sup>
Axis 5	-	-	-	-
Axis 6	-	-	-	-
<b>Maximum speed</b>				
Axis 1	1205°/s	650°/s	490°/s	490°/s
Axis 2	1715°/s	800°/s	610°/s	585°/s
Axis 3	645 mm/s	2220 mm/s	2220 mm/s	2220 mm/s
Axis 4	3760°/s	1929°/s	1929°/s	1929°/s
Axis 5	-	-	-	-
Axis 6	-	-	-	-
<b>Arm weight (kg)</b>	15	50	55	57
<b>Mounting positions</b>	Floor	Floor/Wall		
<b>Robot controller</b>	CS8C M	CS8C		
<b>Market specific robots</b>				
<b>Paint</b>				
<b>Plastics</b>				
<b>Cleanroom</b>				
<b>Supercleanroom</b>				
<b>Stericlean</b>				
<b>High Speed Machining</b>				
<b>Humid Environment / Food</b>				
<b>ElectroStatic Discharge (ESD)</b>		x	x	x
<b>NSF H1 Food graded oil</b>		(4)	(4)	(4)



	TX40	TX60	TX60L	TX90	TX90L	TX90XL	RX160	RX160 HD	RX160L	TX200	TX200L	TX340 SH	
	LOW PAYLOAD 6 axis (1 to 10 kg)			MEDIUM PAYLOAD 6 axis (10 to 100 kg)						HEAVY PAYLOAD 6 axis (over 100 kg)			
<b>MODEL</b>	TX40	TX60	TX60L	TX90	TX90L	TX90XL	RX160	RX160 HD Reinforced wrist version	RX160L	TX200	TX200L	TX340 SH Shelf	
<b>Maximum payload <sup>(1)</sup> (kg)</b>	2,3	9	5	20	15	9	34	34	28	150 <sup>(2)</sup>	100 <sup>(2)</sup>	190 <sup>(1)</sup>	
<b>Nominal payload (kg)</b>	1,7	3,5	2	7	6	5	20	20	14	100 <sup>(2)</sup>	60 <sup>(2)</sup>	165	
<b>Reach at wrist (mm)</b>	515	670	920	1000	1200	1450	1710	1710	2010	2194	2594	3680	
<b>Number of axes</b>	6	6	6	6	6	6	6	6	6	6	6	6	
<b>Repeatability to ISO 9283 (mm)</b>	±0,02	±0,02	±0,03	±0,03	±0,035	±0,04	±0,05	±0,05	±0,05	±0,06	±0,1	±0,1	
<b>Protection class (*wrist)</b>	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 (*67)	IP65 Agrée	
<b>Working range</b>													
Axis 1	±180°	±180°	±180°	±180°	±180°	±180°	±160°	±160°	±160°	±180°	±180°	±180°	
Axis 2	±125°	±127,5°	±127,5°	+147,5°/ -130°	+147,5°/ -130°	+147,5°/ -130°	±137,5°	±137,5°	±137,5°	±120°	±120°	-50°/ +170°	
Axis 3	±138°	±142,5°	±152,5°	±145°	±145°	±145°	±150°	±150°	±150°	+145°/ -140°	+145°/ -140°	-18,8°/ -288°	
Axis 4	±270°	±270°	±270°	±270°	±270°	±270°	±270°	±270°	±270°	±270°	±270°	±270°	
Axis 5	+133,5°/ -120°	+132,5°/ -122,5°	+132,5°/ -122,5°	+140°/ -115°	+140°/ -115°	+140°/ -115°	+120°/ -105°	+120°/ -120°	+120°/ -105°	±120°	±120°	±125°	
Axis 6	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	±270° <sup>(3)</sup>	
<b>Maximum speed</b>													
Axis 1	555°/s	435°/s	435°/s	400°/s	400°/s	400°/s	200°/s	200°/s	200°/s	160°/s	160°/s	85°/s	
Axis 2	475°/s	410°/s	385°/s	400°/s	390°/s	350°/s	200°/s	200°/s	200°/s	160°/s	160°/s	90°/s	
Axis 3	585°/s	540°/s	500°/s	430°/s	420°/s	410°/s	255°/s	255°/s	255°/s	160°/s	160°/s	110°/s	
Axis 4	1035°/s	995°/s	995°/s	540°/s	540°/s	540°/s	315°/s	315°/s	315°/s	260°/s	260°/s	130°/s	
Axis 5	1135°/s	1065°/s	1065°/s	475°/s	475°/s	475°/s	360°/s	360°/s	360°/s	260°/s	260°/s	130°/s	
Axis 6	1575°/s	1445°/s	1445°/s	760°/s	760°/s	760°/s	870°/s	870°/s	870°/s	400°/s	400°/s	195°/s	
	27	51	52	111	114	116	248	248	250	980	1000	1430	
<b>Mounting positions</b>	Floor/Wall/Ceiling						Floor/Ceiling			Floor/Ceiling <sup>(1)</sup>		Floor	
<b>Robot controller</b>	CS8C						CS8C			CS8C HP		CS8C	
<b>Market specific robots</b>													
<b>Paint</b>													
<b>Plastics</b>	x	x	x	x	x	x	x	x	x	x	x	x	
<b>Cleanroom</b>	x	x	x	x	x	x	x	x	x	x	x	x	
<b>Supercleanroom</b>	x	x	x	x	x	x	x	x	x	x	x	x	
<b>Stericlean</b>	x	x	x	x	x	x	x	x	x	x	x	x	
<b>High Speed Machining</b>	(4)	(4)	(4)	x	x	x	x	x	x	x	x	x	
<b>Humid Environment / Food</b>		x	x	x	x	x	x	x	x	x	x	x	
<b>ElectroStatic Discharge (ESD)</b>		x	x	x	x	x	(4)	(4)	(4)	(4)	(4)	(4)	
<b>NSF H1 Food graded oil</b>		(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	

(1) Under special conditions, consult us. (2) For ceiling version, consult us. (3) Can be configured by software up to ±18000°. (4) Consult us.

## Specialized robot arms to cover all requirements



**High Speed Machining**

6-axis hsm (high speed machining) robots designed for machining operations:

- Extremely rigid and precise,
- Dedicated VALhsm software (spindle management interface),
- Possibility to machine many materials (aluminum, stainless steel, composites, resins, wood, glass, brass, inconel, stone,...) with high precision.

**Plastics**

6-axis robots made for the Plastics industry:

- Ease of use by operators (dedicated VALplast software),
- Built-in communications with IMM (pre-wired EUROMAP/ SPI interface),
- Additional operations at the foot of the press.

**Cleanroom/ Supercleanroom**

TX Cleanroom (CR) and Supercleanroom (SCR) range developed to meet clean environment needs (semiconductor, pharmaceutical):

- High cleanliness ISO class 2/3 for SCR versions,
- ISO class 4 for CR.

**Stericlean**

TX Stericlean robots designed for VHP decontamination process:

- Fully hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) resistant,
- High reliability proven by the leaders in life sciences,
- Systems and user connections protected under the base of the robot.

**Humid Environment**

6-axis TX HE (Humid Environment) robots ideally suited for applications in very humid environments (water jet cutting, cleaning, food processing):

- Resistant to liquids with pH between 4.5 and 8.5,
- Waterproof (IP65 enclosed arm structure, IP67 wrist, arm pressurization),
- Protection of structures and components (surface finishing, cable connection under the foot of the robot),
- Easy cleaning.

	TP80
<b>FAST PICKER</b>	TP80
<b>Maximum payload <sup>(1)</sup> (kg)</b>	1
<b>Nominal payload (kg)</b>	0,5
<b>Reach at wrist (mm)</b>	800
<b>Number of axes</b>	4
<b>Repeatability to ISO 9283 (mm)</b>	±0,05
<b>Protection class (*wrist)</b>	IP54 standard, IP65 with bellows
<b>Working range</b>	
Axis 1	±117°
Axis 2	±153°
Axis 3	100 mm
Axis 4	±500°
Axis 5	-
Axis 6	-
<b>Maximum speed</b>	
Axis 1	600°/s
Axis 2	1600°/s
Axis 3	1790 mm/s
Axis 4	2850°/s
Axis 5	-
Axis 6	-
<b>Arm weight (kg)</b>	68
<b>Mounting positions</b>	Wall
<b>Robot controller</b>	CS8C
<b>Market specific robots</b>	
<b>Paint</b>	
<b>Plastics</b>	
<b>Cleanroom</b>	
<b>Supercleanroom</b>	
<b>Stericlean</b>	
<b>High Speed Machining</b>	
<b>Humid Environment / Food</b>	
<b>ElectroStatic Discharge (ESD)</b>	
<b>NSF H1 Food graded oil</b>	

	TX250 paint
<b>PAINTING</b>	TX250 paint
<b>Maximum payload <sup>(1)</sup> (kg)</b>	10
<b>Nominal payload (kg)</b>	5
<b>Reach at wrist (mm)</b>	2547,5
<b>Number of axes</b>	6
<b>Repeatability to ISO 9283 (mm)</b>	<sup>(4)</sup>
<b>Protection class (*wrist)</b>	IP65
<b>Working range</b>	
Axis 1	±160°
Axis 2	±137,5°
Axis 3	±150°
Axis 4	±360°
Axis 5	±360°
Axis 6	±360°
<b>Maximum speed</b>	
Axis 1	156°/s
Axis 2	143°/s
Axis 3	208°/s
Axis 4	394°/s
Axis 5	394°/s
Axis 6	594°/s
<b>Arm weight (kg)</b>	250
<b>Mounting positions</b>	Floor/Ceiling
<b>Robot controller</b>	CS8C paint
<b>Market specific robots</b>	
<b>Paint</b>	x
<b>Plastics</b>	
<b>Cleanroom</b>	
<b>Supercleanroom</b>	
<b>Stericlean</b>	
<b>High Speed Machining</b>	
<b>Humid Environment / Food</b>	
<b>ElectroStatic Discharge (ESD)</b>	
<b>NSF H1 Food graded oil</b>	

## A unique platform of CS8 controllers pilots all Stäubli robot arms



MODEL	CS8C M	CS8C		CS8C paint	CS8C HP
<b>Dimensions (H x W x D) (mm)</b>	520 x 200 x 258,5	331 x 445 x 455	481 x 445 x 455	1035 x 850 x 780	1035 x 607 x 815
<b>Protection class</b>	IP20	IP20 (IP54 optional)	IP20 (IP54 optional)	IP54	IP54
<b>Storage capacity</b>	512 Mb RAM				
<b>Backup</b>	2 GB Flash disk and USB port				
<b>Communication</b>	RS232/422 serial link, 2 Ethernet ports (Socket, FTP Server/Client)				
<b>Inputs/Outputs (I/O)</b>	1 or 2 boards 16/16 digital I/O, optional				1 or 2 boards 16/16 digital I/O, optional
<b>Field bus</b>	<b>Modbus TCP/IP</b> Server (standard), Client (option) <b>Profibus DP</b> Master & Slave, <b>DeviceNet</b> Master & Slave, <b>CanOpen</b> Master <b>Ethernet IP</b> Scanner / Adapter, <b>ProfiNet</b> IO-Controller and IO-Device, <b>EtherCAT</b> Slave, <b>PowerLink</b> Slave				
<b>Weight (kg)</b>	17	50	60	140	140
<b>Stäubli robot arm</b>	<b>TS20</b>	<b>TS40, TS60, TS80, TX40, TX60, TX60L, TX90, TX90L, TX90XL</b>	<b>RX160, RX160L, RX160 HD, TP80</b>	<b>TX250 paint</b>	<b>TX200, TX200L, TX340 SH</b>



### SP1 manual control unit: The power of Stäubli at your fingertips

This unique terminal combines a lightweight design (700 g), 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, presence detection).



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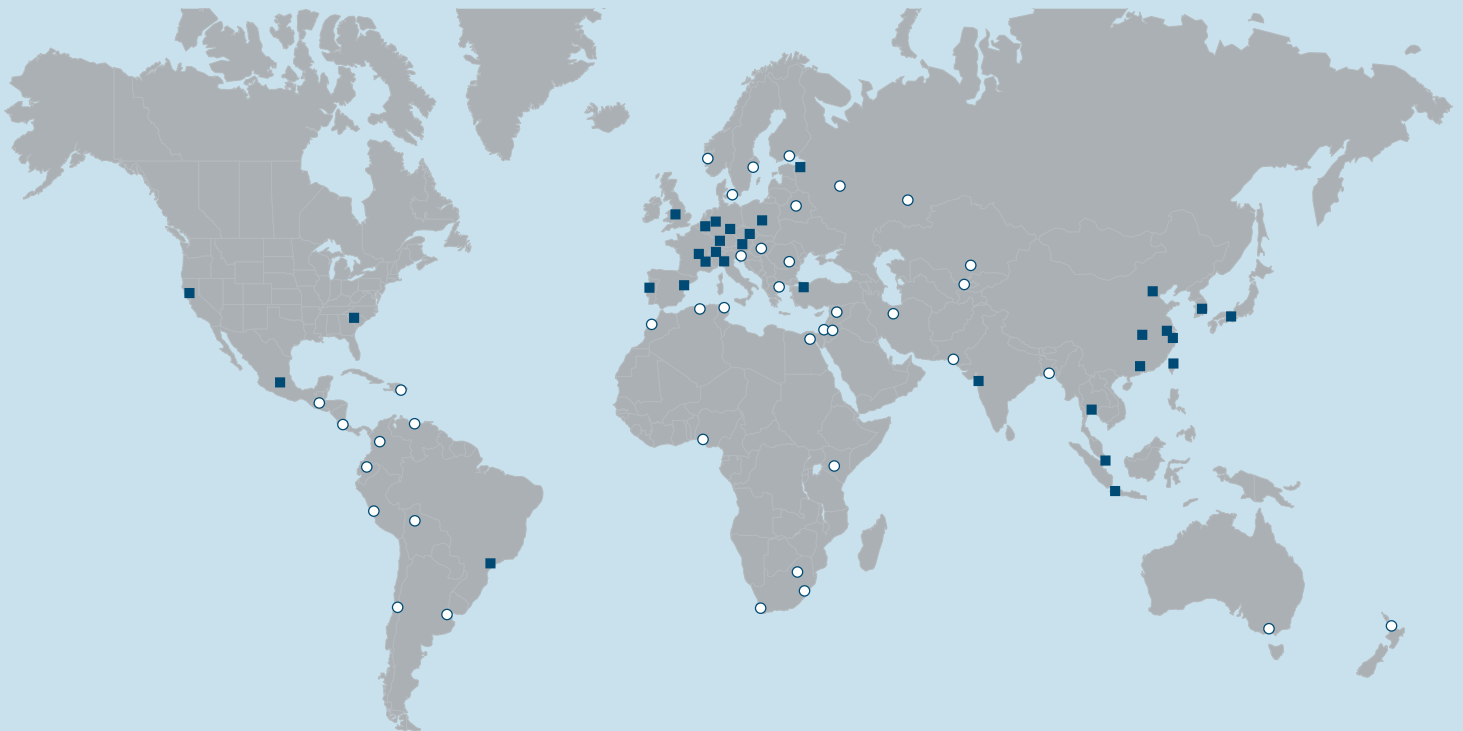
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### International: priority to proximity

- Stäubli Units
- Partners

For additional information, please visit us at  
[www.staubli.com/robotics](http://www.staubli.com/robotics)