

FAST MOVING TECHNOLOGY

STÄUBLI

TX90 Range

6 axis industrial robots





A unique 4 axis and 6 axis robot range for all applications

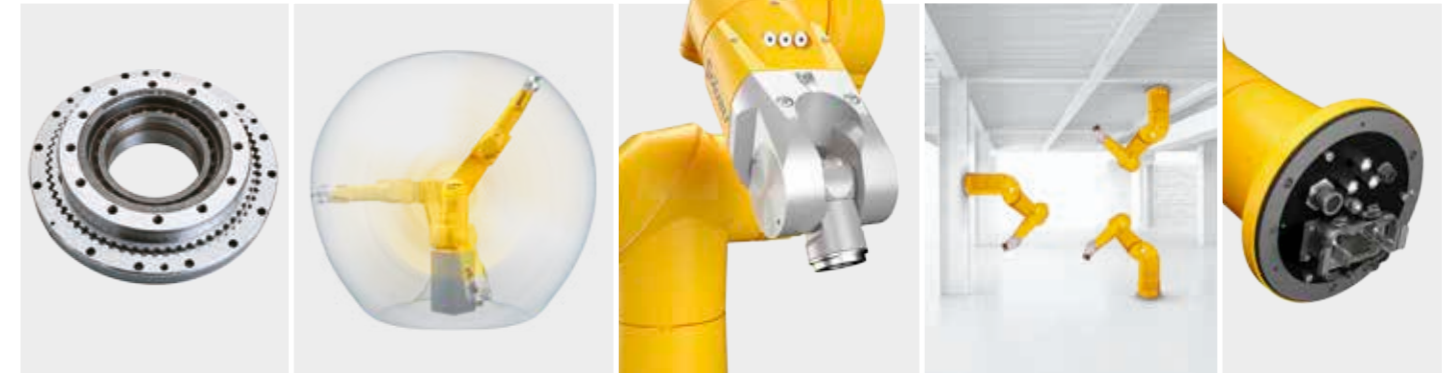
Whenever industrial companies need speed, repeatability or reliability, Stäubli robots provide the most appropriate answer. To satisfy its customers, Stäubli Robotics has developed specific solutions, meeting the needs of all industries: electronics, medical, automotive, food, plastics, mechanical or painting.

Designed to work in the most hostile environments, but also to meet stringent cleanroom requirements, Stäubli robots demonstrate their efficiency in all circumstances.

With performance always in mind.

MAN AND MACHINE

Reliability, flexibility, performance



High precision, long life time and reduced maintenance
JCS gearbox designed by Staubli

Optimum use of the work area
Less floorspace needed, large work envelope

Eliminating complex cable management
Connections directly on the robot forearm

Flexible integration on the production line
Multiple attachment methods

Work in difficult environments
Vertical outlet, complete protection of connection

The added values of Staubli robot arms

TX 6-axis industrial robots features an articulated arm for extraordinary dexterity and flexibility. This range of robots is designed to handle various applications in many industrial sectors. The compactness

of the arm and the large work envelope allow maximum utilization of cell workspace. The integration of the robot on the production line is easier thanks to multiple attachment methods (floor, wall, ceiling). The robot

arm's rugged, fully enclosed structure makes it ideal for applications in harsh environments.



TX90L model

Optimum cleanliness, arm motion freedom and production reliability

- All cables and pipes routed through the arm removing obstacles from the work area
- Enclosed structure

Texture and color customization

- Choice of arm finish

Precise trajectory performance

- Increased part quality
- Reduced rework costs

Certifications



Characteristics

MODEL	TX90	TX90L	TX90XL
Maximum load	14 kg (20 kg under conditions)	12 kg (15 kg under conditions)	7 kg (9 kg under conditions)
Nominal load	7 kg	6 kg	5 kg
Reach (between axis 1 and 6)	1000 mm	1200 mm	1450 mm
Number of degrees of freedom	6	6	6
Repeatability – ISO 9283	± 0,03 mm	± 0,035 mm	± 0,04 mm
Stäubli CS8 series controller	CS8C	CS8C	CS8C
Weight	111 kg	114 kg	116 kg

MAXIMUM SPEED			
Axis 1	400°/s	400°/s	400°/s
Axis 2	400°/s	390°/s	350°/s
Axis 3	430°/s	420°/s	410°/s
Axis 4	540°/s	540°/s	540°/s
Axis 5	475°/s	475°/s	475°/s
Axis 6	760°/s	760°/s	760°/s
Maximum speed at load gravity center	10,42 m/s	10,54 m/s	11,09 m/s
Maximum inertia axis 5	1,5 kg.m ²	1,25 kg.m ²	1 kg.m ²
Maximum inertia axis 6	0,25 kg.m ²	0,20 kg.m ²	0,15 kg.m ²
Brakes	All axis		

WORK ENVELOPE			
Maximum reach between axis 1 and 5 (R. M)	900 mm	1100 mm	1350 mm
Maximum reach between axis 2 and 5 (R. M2)	850 mm	1050 mm	1300 mm
Minimum reach between axis 1 and 5 (R.m1)	200 mm	272 mm	327 mm
Minimum reach between axis 2 and 5 (R.m2)	256 mm	320 mm	391 mm
Reach between axis 3 and 5 (R.b)	425 mm	550 mm	650 mm

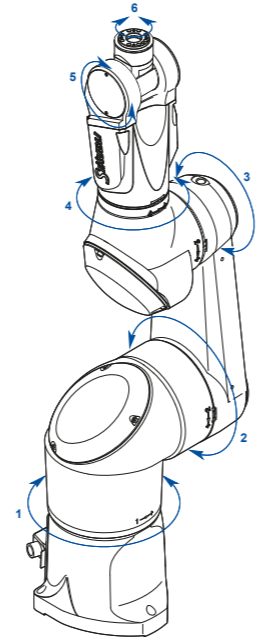
RANGE OF MOTION	
Axis 1 (A)	± 180°
Axis 2 (B)	+147,5°/-130°
Axis 3 (C)	± 145°
Axis 4 (D)	± 270°
Axis 5 (E)	+140°/-115°
Axis 6 (F)	± 270° ⁽¹⁾

INSTALLATION ENVIRONMENT	
Working temperature according to NF EN 60 204-1	+5°C to +40°C
Humidity according to NF EN 60 204-1	30% to 95% max. non-condensation
Attachment method	Floor/Wall/Ceiling
Vertical cable outlet	•
Pressurized version	•

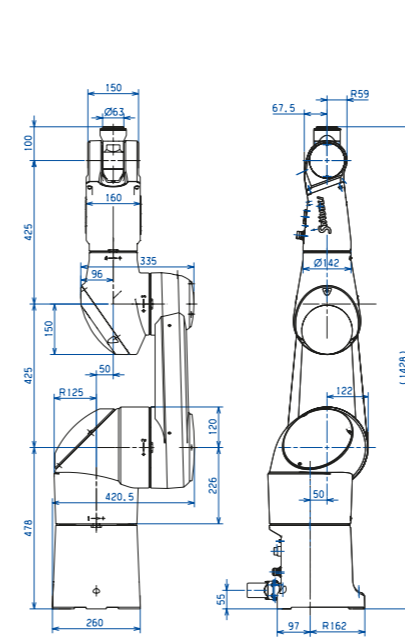
FOREARM CONNECTIONS	
Pneumatic	2 solenoid valves 5/2-way (compressed air) or 3/2-way (vacuum) monostable 1 direct line between the base and the forearm
Electrical	1 female 19-contact socket (7 twisted pairs including 2 shielded, 3 power contacts)
Cleanroom standard ISO 14644-1	5
Protection class according to standard EN 60529	IP65 / IP67

MARKET SPECIFIC VERSIONS	
HE (Humid Environment) version	•
CR class 4 cleanliness (Cleanroom) - ISO 14644-1	•
SCR class 2 cleanliness (Supercleanroom) - ISO 14644-1	•
Stericlean version	•
Plastics - Euromap 12/67 and SPI interface	•
Paint - ATEX (Europe), Factory Mutual or cCSAus (USA) certifications	•
ElectroStatic Discharge (ESD)	•
NSF H1 Food graded oil	•

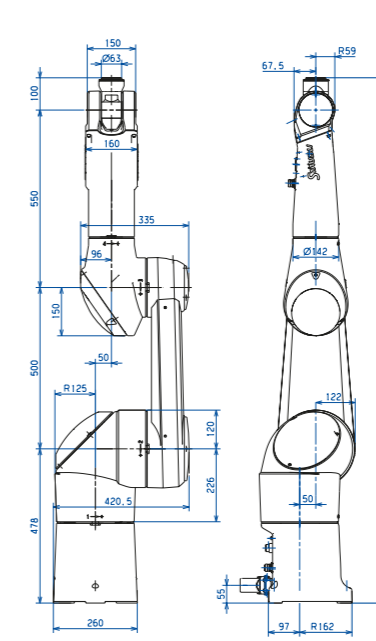
Motion range



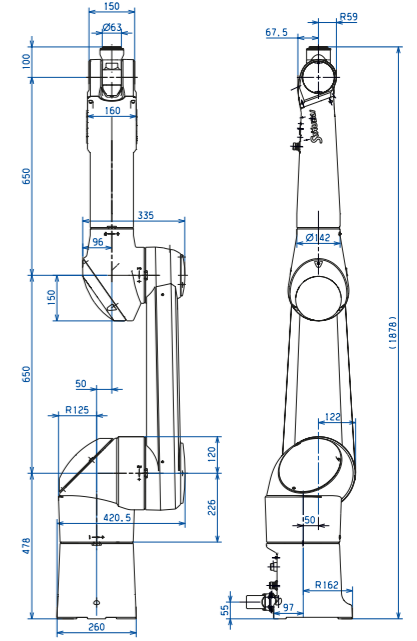
TX90 dimensions



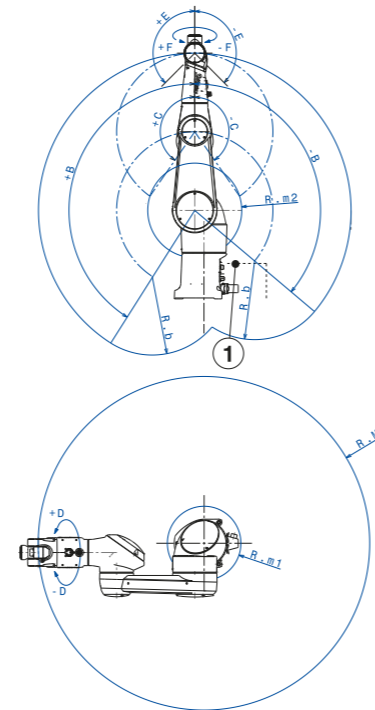
TX90L dimensions



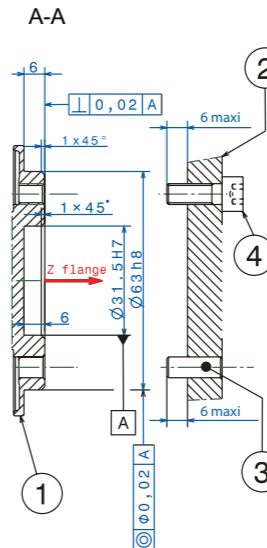
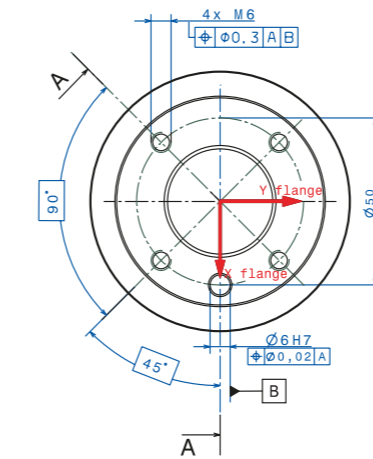
TX90XL dimensions



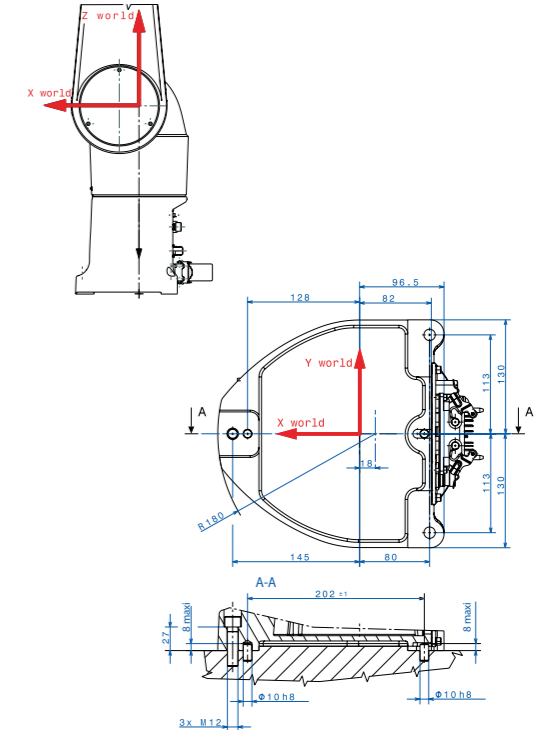
Work envelope



Wrist



Mounting (not for vertical cable outlet option)



(1) Software configurable up to ± 18000°.



■ Staubli Units ○ Agents

Global presence of the Staubli Group

www.staubli.com