

FAST MOVING TECHNOLOGY

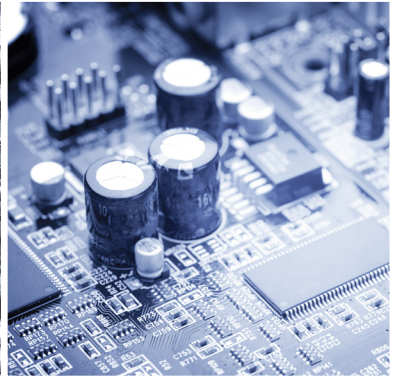
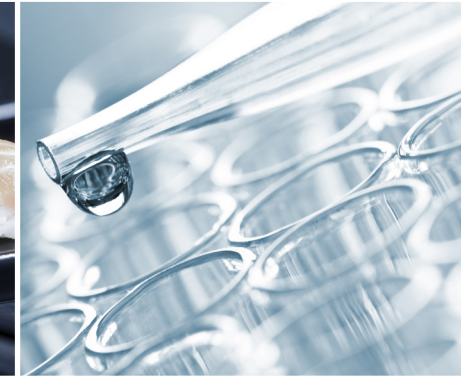
***STÄUBLI***

# TX2-60 Range

6 axis industrial robot







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

Whenever industrial companies need speed, repeatability and 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.**



COLLABORATIVE ROBOTS

# Protecting people, production and investment



Industrial TX2 robots: new generation of high-performance, fast and safe 6-axis robots. These robots redefine performance thanks

to a perfect balance between speed, rigidity, size and work envelope. These pioneering robots can be used in all areas, including

sensitive and restrictive environments thanks to their unique characteristics.



TX2-60L model



- Eliminating complex cable management**  
Connections directly on the robot forearm
- High precision, long life and reduced maintenance**  
JCS gearbox designed by Stäubli
- Optimum use of the work area**  
Less floorspace needed, large work envelope
- Work in difficult environments**  
Vertical outlet, complete protection of connections
- Flexible integration on the production line**  
Multiple attachment methods

## The added values of Stäubli robot arms

- All arm data is secured**
  - Data saved on easily accessible DSI board
  - Easier maintenance and problem solving
  - Reduced downtime and maintenance costs
- Precise trajectory performance**
  - Increased part quality
  - Reduced rework costs
- Optimum cleanliness, arm motion freedom and production reliability**
  - All cables and pipes routed through the arm removing obstacles from the work area
  - Enclosed structure
- High levels of safety**
  - Absolute encoders SIL3 PLe certified

**Certifications**

Pending

# Characteristics

MODEL	TX2-60	TX2-60L
Maximum load	4,5 kg, 9.9 lb (9 kg, 19.8 lb under conditions)	3,7 kg, 8.2 lb (5 kg, 11 lb under conditions)
Nominal load	3,5 kg, 7.7 lb	2 kg, 4.4 lb
Reach (between axis 1 and 6)	670 mm, 26.3 in	920 mm, 36.2 in
Number of degrees of freedom	6	6
Repeatability - ISO 9283	± 0,02 mm	± 0,03 mm
Stäubli series controller	CS9	CS9
Weight	52,2 kg, 114.6 lb	52,5 kg, 114.6 lb

MAXIMUM SPEED		
Axis 1	435°/s	435°/s
Axis 2	410°/s	385°/s
Axis 3	540°/s	500°/s
Axis 4	995°/s	995°/s
Axis 5	1065°/s	1065°/s
Axis 6	1445°/s	1445°/s
Maximum speed at load gravity center	8,4 m/s	11,1 m/s
Maximum inertia axis 5	0,325 kg.m²	0,125 kg.m²
Maximum inertia axis 6	0,1 kg.m²	0,032 kg.m²
Brakes	All axes	

WORK ENVELOPE		
Maximum reach between axis 1 and 5 (R.M)	600 mm, 23.6 in	850 mm, 33.4 in
Minimum reach between axis 1 and 5 (R.m1)	190 mm, 7.4 in	209 mm, 8.2 in
Minimum reach between axis 2 and 5 (R.m2)	189 mm, 7.4 in	208 mm, 8.1 in
Reach between axis 3 and 5 (R.b)	310 mm, 12.2 in	450 mm, 17.7 in

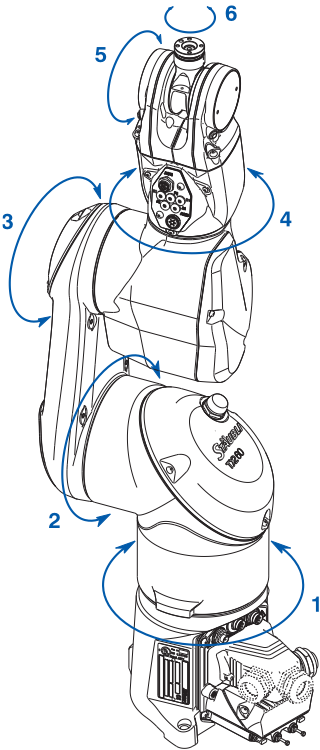
RANGE OF MOTION		
Axis 1 (A)	± 180°	± 180°
Axis 2 (B)	± 127,5°	± 127,5°
Axis 3 (C)	± 142,5°	± 152,5°
Axis 4 (D)	± 270°	± 270°
Axis 5 (E)	+132,5°/-122,5°	+132,5°/-121°
Axis 6 (F)	± 270° (1)	± 270° (1)

INSTALLATION ENVIRONMENT		
Working temperature according to NF EN 60 204-1	+5°C to +40°C, +41°F to +104°F	
Humidity according to NF EN 60 204-1	30% to 95% max non-condensing	
Attachment methods	Floor/Wall/Ceiling	
Vertical cable outlet version	•	
Pressurized version	•	

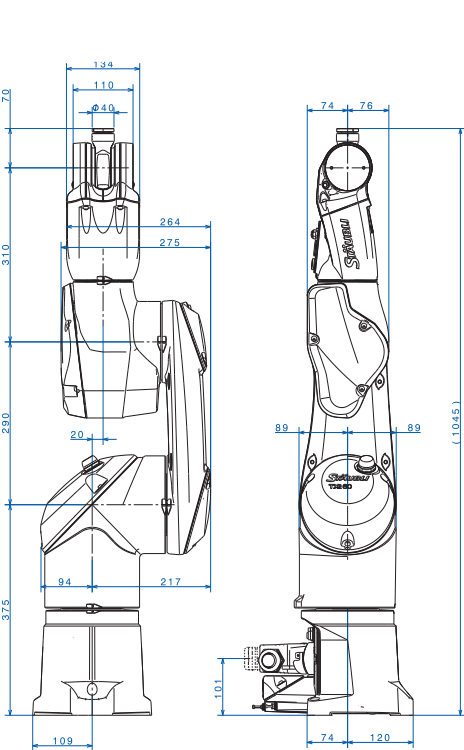
FOREARM CONNECTIONS		
Pneumatic	2 direct lines between base and forearm or 2 optional solenoid valves : Bi-stable solenoid valves 5/2 « pressure » or Mono-stable « center close » solenoid valves 5/3 « pressure » or Mono-stable solenoid valves 3/2 « vacuum »	
Electrical	10 electrical lines I/O and Multibus cable inside the arm + 3 electrical lines + 4 Multibus cable cat 5e lines, DIN M12	
Cleanroom standard ISO 14644-1	5	
Protection class according to EN 60529	IP65 / IP67	

MARKET SPECIFIC VERSIONS		
ESD (ElectroStatic Discharge) version	•	
HE (Humid Environment) version	•	
SCR (Supercleanroom) - class 2 cleanliness - ISO 14644-1	•	
Stericlean version	•	

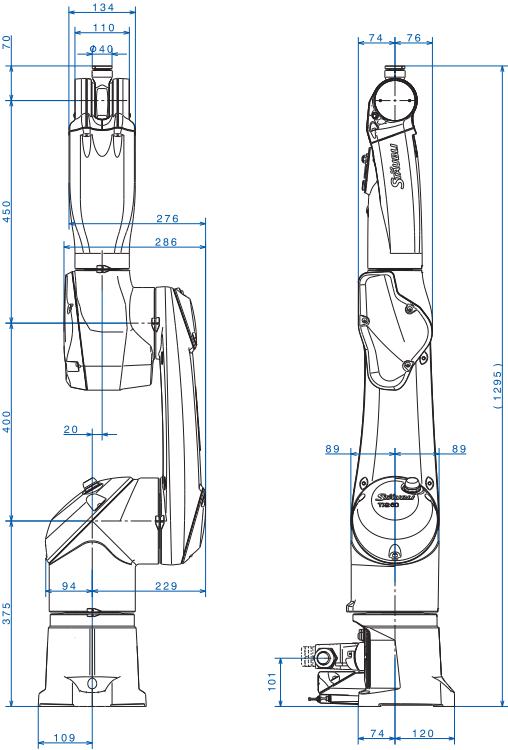
Motion range



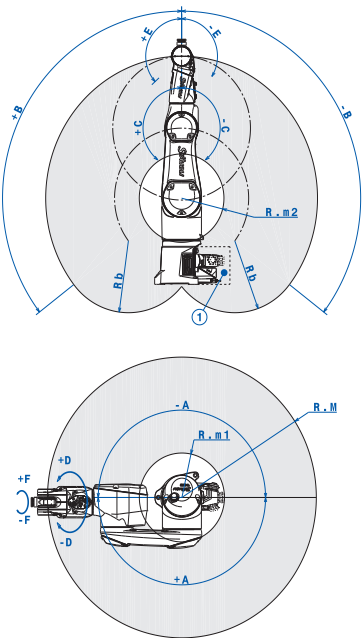
TX2-60 dimensions



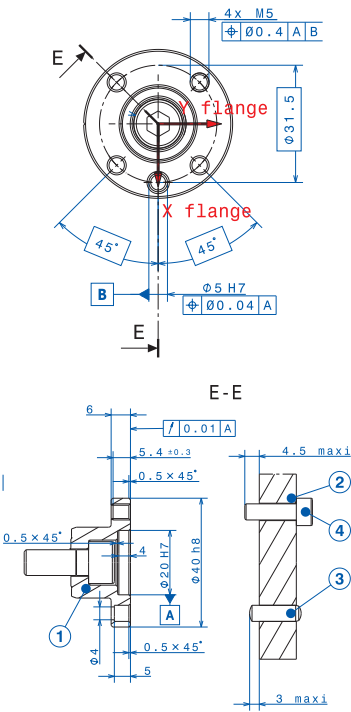
TX2-60L dimensions



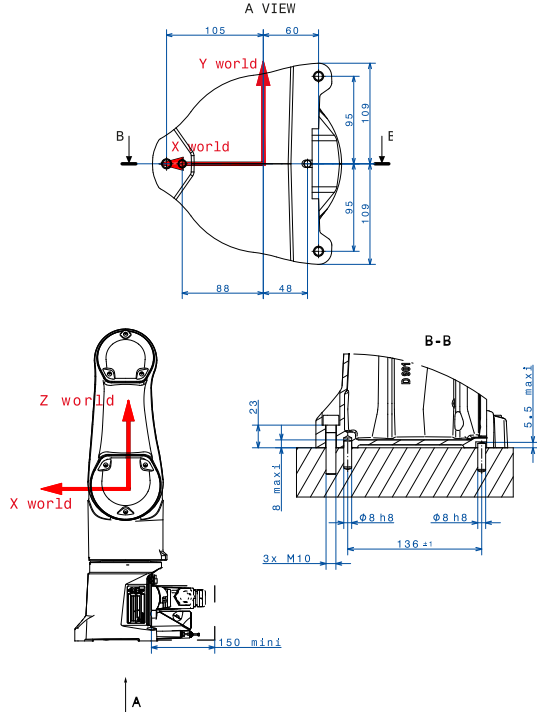
Work envelope



Wrist



Mounting (not for vertical cable outlet option)



(1) Software configurable up to ± 11 250°



■ Stäubli Units    ○ Agents

# Global presence of the Stäubli Group

[www.staubli.com](http://www.staubli.com)