

FAST MOVING TECHNOLOGY

*STÄUBLI*

# POWER cobot TX2touch range

Robotics | Experts in Man and Machine



STÄUBLI VISION

People drive change.  
Robots accelerate the pace.



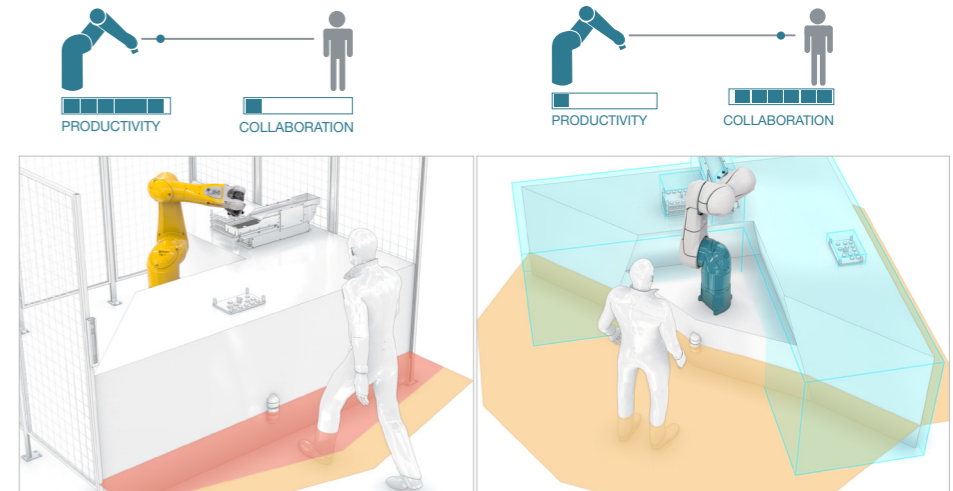
“Today, our robots work both for, and with, people. They have to be fast and precise, collaborative and agile, user-friendly and highly mobile. In all kinds of industries, they redefine performance. Even in the most sensitive environments, they make production smarter. Providing smart data, in an easily connected world, where we share our expertise. A world of solutions.”

People drive change, robots accelerate the pace.

**Christophe Coulongeat,**  
Group Division Manager Robotics

POWER COBOT RANGE

High productivity and  
safest collaboration



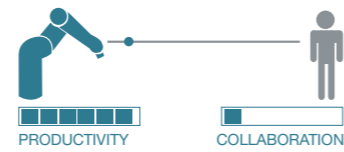
The TX2touch is a unique range of cobots designed for safe Man Robot Collaboration while maintaining high productivity. Based on the proven TX2 industrial robot, it offers safe operation thanks to its advanced skin technology, quick reaction time and embedded modular safety functions. TX2touch is the only cobot with the SIL3-PLe safety level. It is highly productive due to the performance, smart connectivity and reliability inherited from TX2 robots and its CS9 controller.

TX2touch POWER cobots and  
CS9 controller main benefits



PERFORMANCE

# Efficiently performing within your production



**Designed for smart integration**

- Large and efficient spherical working range
- High motion dexterity
- Integrated electrical and pneumatic user circuit including Cat5e
- Sealed vertical cable option bringing additional and smart integration options



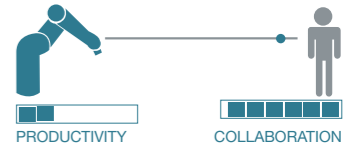
**TX2touch robotics arms kinematics**

- Over 125 years of experience in fast moving technology
- Light and rigid structure
- Patented JCS gearbox specially designed for compact robots:
  - high dynamics, agility and path precision also due to higher drive frequency
  - encapsulated in oil bath, perfect lubrication allows extremely high dynamics
- Compatible with NSF H1 food oil with no loss in performance
- Unique, 19-bit safe digital multi-turn absolute encoders, ready to operate with no initiation
- Outstanding precision for robot guided by camera and path precision
- Dynamic absolute calibration as a standard option for all Staubli robot arms



COLLABORATION

# Safely collaborating with human



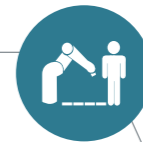
**Unique and modular SIL3-Plc safety functionalities**



- Thanks to the combined use of a set of 5 unique modular SIL3-PLc safety functionalities, the TX2touch cobot range is the safest on the market while maintaining a high level of productivity.

**Safe touch skin**

- The skin brings a supplementary functionality to enable the following SAFE issues:
  - When you touch the skin the robot stops
  - When you get hit by the robot it will not hurt you
  - When you get trapped by the robot it will not crush you
  - It is also equipped with status lights for functional diagnosis



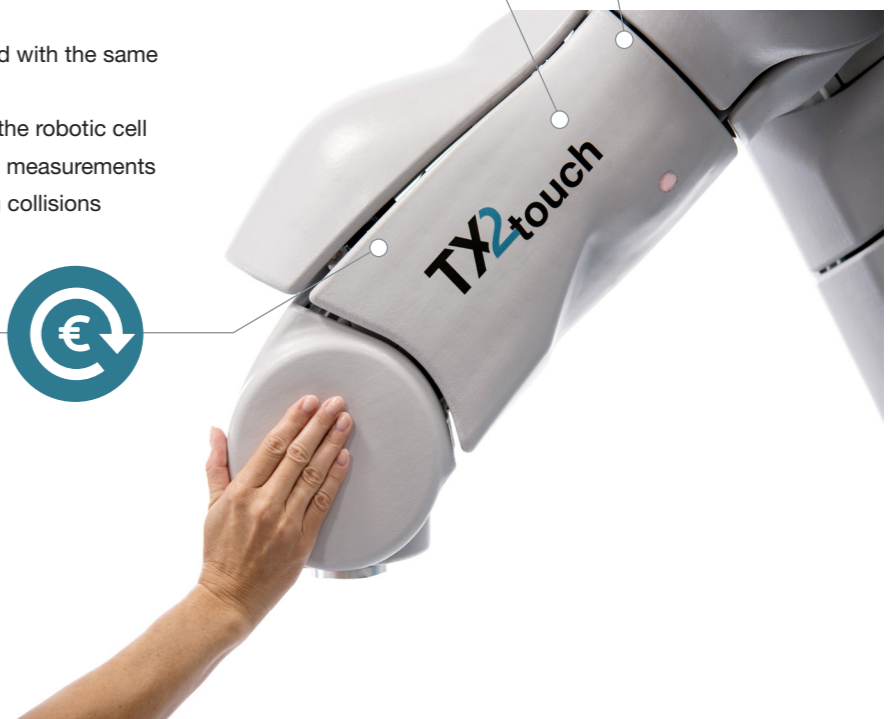
**Gripper padding**



- Skin pads for tools can be added with the same safety level
- Eases the safety certification of the robotic cell
- Protect the embedded cameras, measurements devices or gripper by preventing collisions

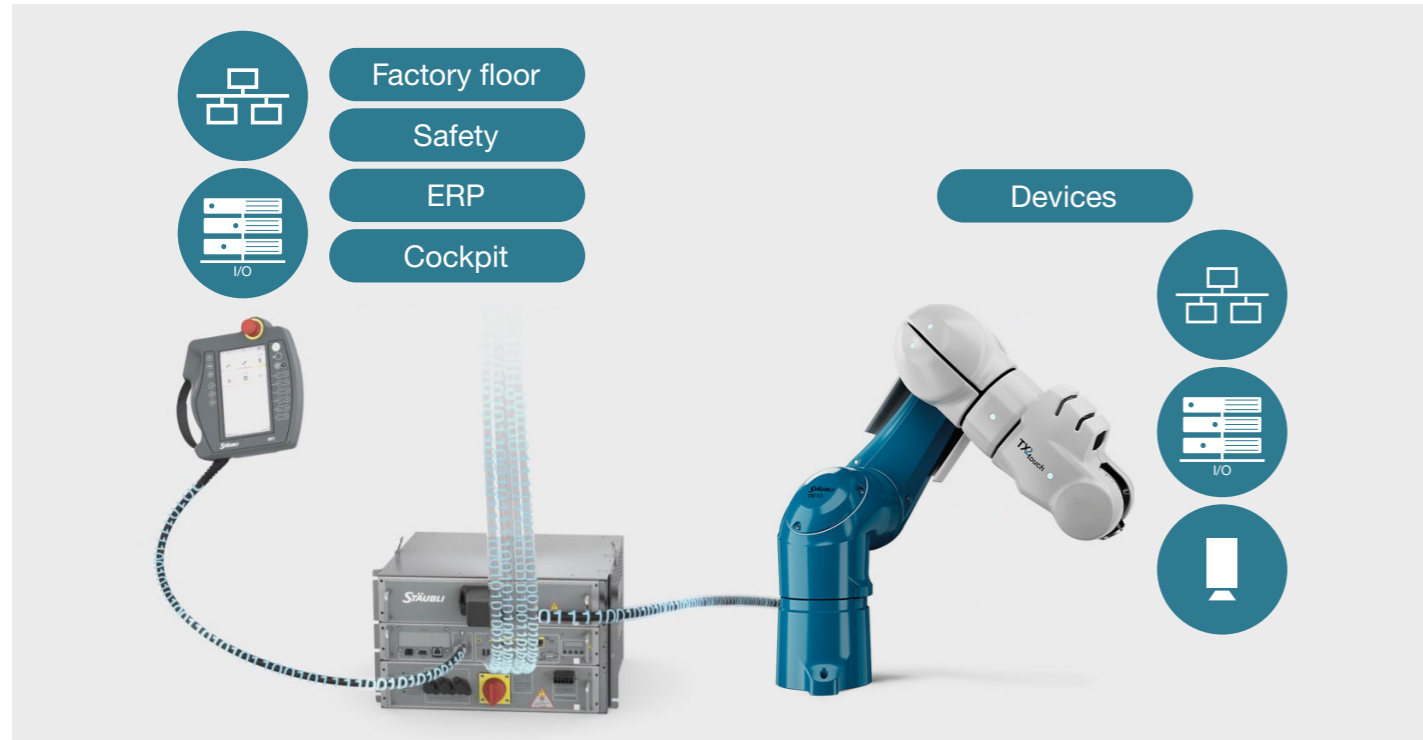
**Lowest total cost of ownership**

- Ready to move concept, no need for calibration
- No battery on the arm or in the controller
- Patented components, such as the JCS gearbox, with higher lifetime and lower maintenance issues
- Lower total cost of ownership and faster return on investment



CONNECTIVITY

# Fully connected to the production world



**Connectivity to the smart production**

- Compatibility with production devices and ERP
- Main standardized communications protocols, including real time Ethernet; available and configurable via a unique software suite
- Web server embedded in CS9 controller
- Smart data for digital production and cockpit
- Any system data accessible and linkable to all interfaces including OPC UA

**Connectivity to gripper and parts to be manufactured**

- Modular safe control of your parts to be produced even for "Batch size one"
- Encapsulated Ethernet Cat5e for multi-gripper, camera and sensors
- IP67 EtherCat I/O modules available for modular connections to peripheral devices
- Safe control on different types of valves:
  - 5/2 and 5/3 air pressure
  - 3/2 for vaccum
- Direct tubing for additional valves or devices available

TX2TOUCH COBOT RANGE AND CONTROL UNIT

# Main characteristics



MODEL	TX2touch-60	TX2touch-60L	TX2touch-90	TX2touch-90L	TX2touch-90XL
Load capacity	4.5 kg	3.7 kg	14 kg	12 kg	7 kg
Reach (between axis 1 and 6)	670 mm	920 mm	1000 mm	1200 mm	1450 mm
Number of degrees of freedom	6	6	6	6	6
Repeatability - ISO 9283	± 0.02 mm	± 0.03 mm	± 0.03 mm	± 0.035 mm	± 0.04 mm
Max cartesian speed	8.4 m/s	11.1 m/s	10.9 m/s	11.1 m/s	11.6 m/s
Weight	51 kg	52 kg	111 kg	114 kg	116 kg
Stäubli series controller	CS9	CS9	CS9	CS9	CS9



**CS9 controller** - (H x W x D) 270 x 445 x 365 mm - 38 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, FSoE Slave

**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
- Industrial chassis with air-air heat exchanger
- **OPC UA server**



**SP2 manual control unit: the power at your fingertips**

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),
- integrated web technology



● Stäubli Units    ○ Representatives/Agents

# Global presence of the Stäubli Group

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