

FAST MOVING TECHNOLOGY

***STÄUBLI***

# TX2-90 range

**6 axis industrial robots**



Characteristics

|                              | TX2-90                                                                            | TX2-90L   | TX2-90XL  |
|------------------------------|-----------------------------------------------------------------------------------|-----------|-----------|
| Load capacity                | 14 kg                                                                             | 12 kg     | 7 kg      |
| Reach (between axis 1 and 6) | 1000 mm                                                                           | 1200 mm   | 1450 mm   |
| Number of degrees of freedom | 6                                                                                 | 6         | 6         |
| Repeatability - ISO 9283     | ± 0.02 mm                                                                         | ± 0.02 mm | ± 0.02 mm |
| Weight                       | 114 kg                                                                            | 117 kg    | 119 kg    |
| UL certification             | ✓                                                                                 | ✓         | ✓         |
| Attachment methods           |  |           |           |

Performance

|                                      |            |            |            |
|--------------------------------------|------------|------------|------------|
| Joint speed -axis 1                  | 330°/s     | 345°/s     | 330°/s     |
| Joint speed -axis 2                  | 340°/s     | 340°/s     | 350°/s     |
| Joint speed -axis 3                  | 430°/s     | 420°/s     | 410°/s     |
| Joint speed -axis 4                  | 540°/s     | 540°/s     | 540°/s     |
| Joint speed -axis 5                  | 475°/s     | 475°/s     | 475°/s     |
| Joint speed -axis 6                  | 760°/s     | 760°/s     | 760°/s     |
| Maximum speed at load gravity center | 10.9 m/s   | 11.1 m/s   | 11.6 m/s   |
| Maximum inertia axis 5               | 1.5 kg.m²  | 1.25 kg.m² | 1 kg.m²    |
| Maximum inertia axis 6               | 0.25 kg.m² | 0.20 kg.m² | 0.15 kg.m² |
| Brakes                               | All axes   |            |            |

Work envelope and range of motion

|                                           |        |         |         |
|-------------------------------------------|--------|---------|---------|
| Maximum reach between axis 1 and 5 (R. M) | 900 mm | 1100 mm | 1350 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  |

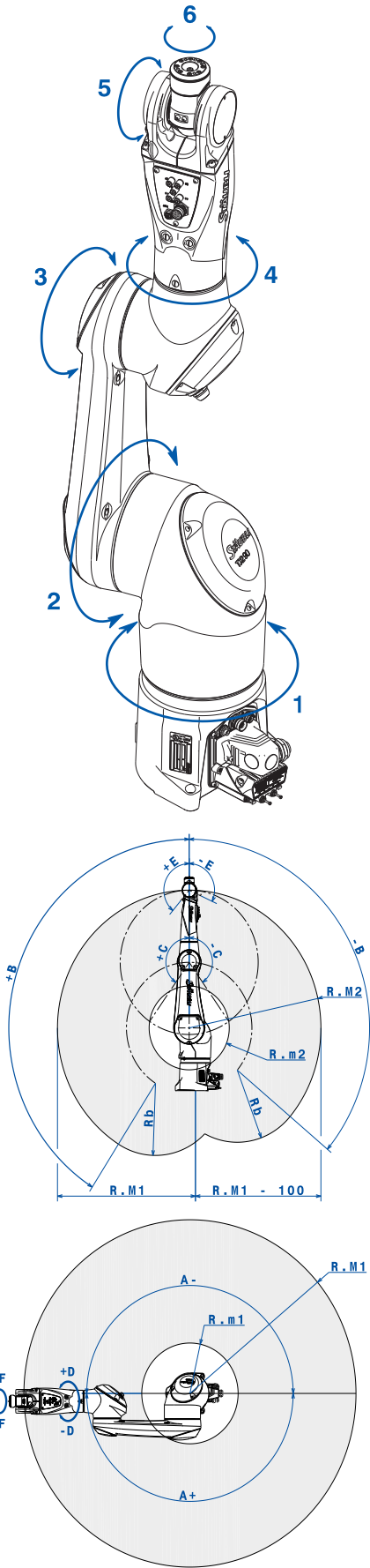
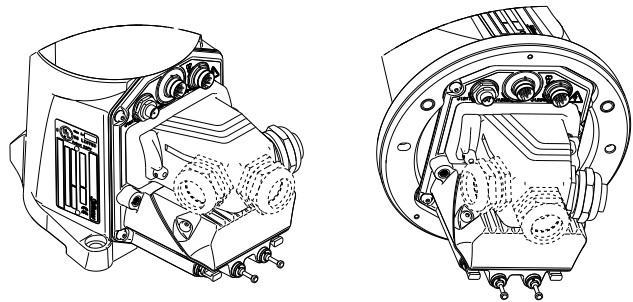
|            |                |
|------------|----------------|
| Axis 1 (A) | ± 180°         |
| Axis 2 (B) | ± 147.5°/-130° |
| Axis 3 (C) | ± 145 °        |
| Axis 4 (D) | ± 270°         |
| Axis 5 (E) | + 140°/-115°   |
| Axis 6 (F) | ± 270° (1)     |

(1) Software configurable up to ± 11 250°

Installation environment

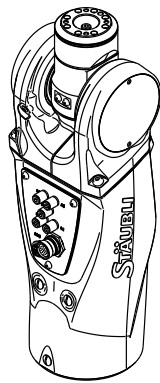
|                                                 |                               |
|-------------------------------------------------|-------------------------------|
| Working temperature according to NF EN 60 204-1 | +5°C to +40°C                 |
| Humidity according to NF EN 60 204-1            | 30% to 95% max non-condensing |
| Vertical cable outlet version                   | Available                     |
| Pressurized version                             | Available                     |
| Controller                                      | CS9                           |
| Cleanroom standard ISO 14644-1                  | 5                             |
| Protection class according to EN 60529          | IP65/IP67                     |

Cable outlet horizontal and vertical (option)

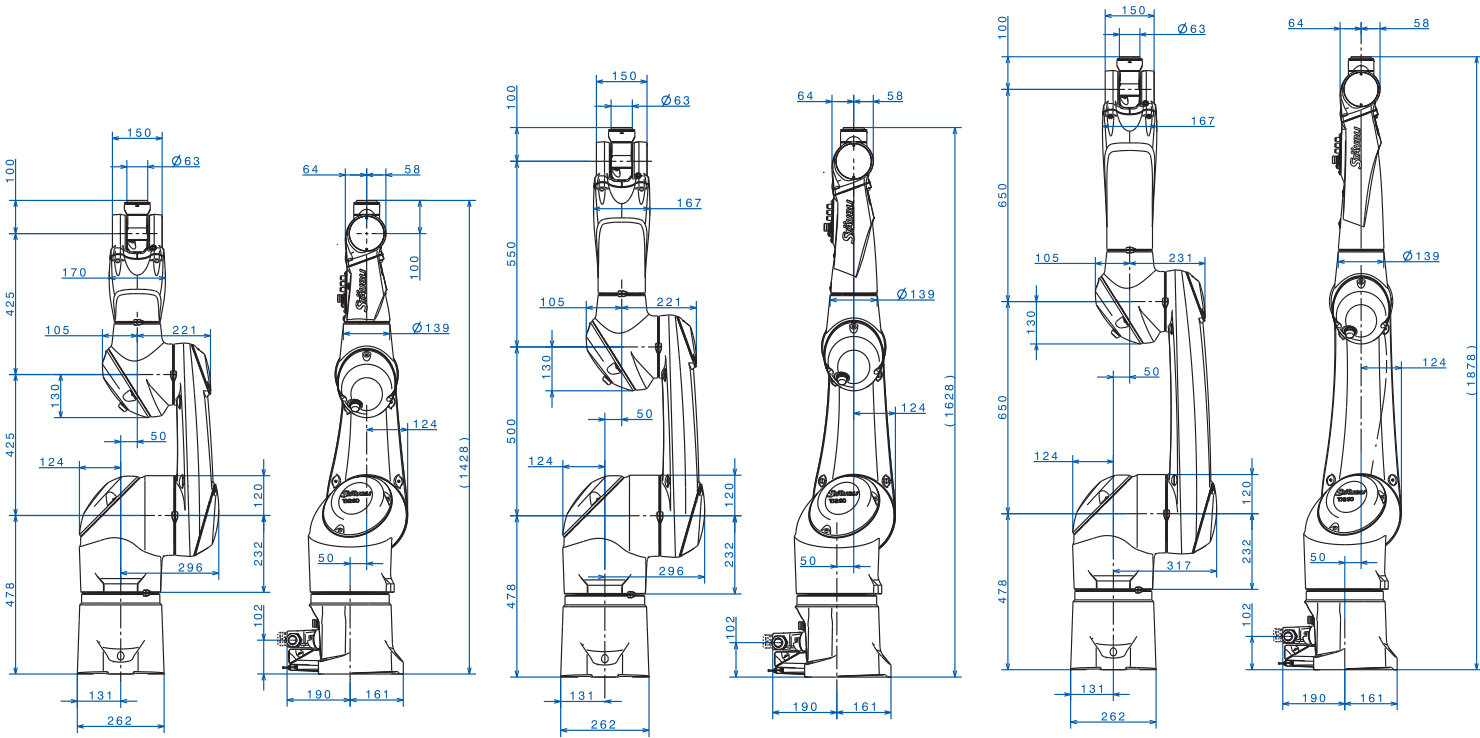


User interface

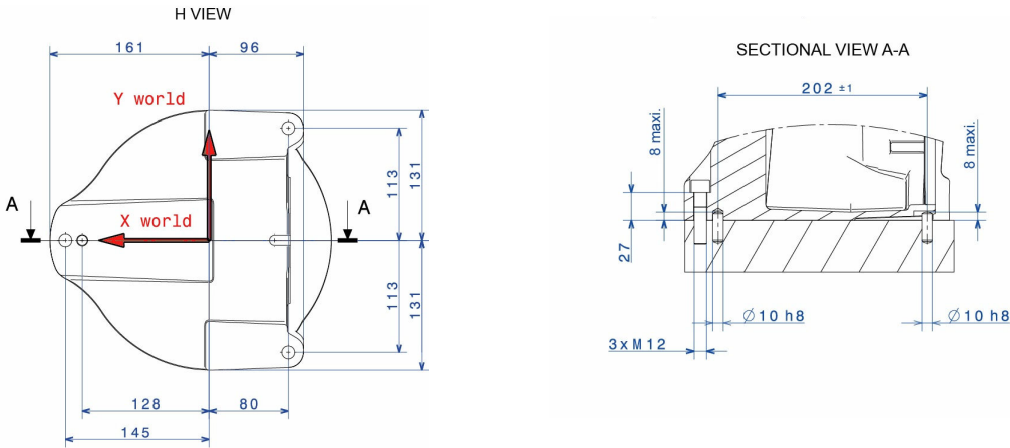
| FOREARM CONNECTIONS |                                                                                                                                                                                                                                        |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pneumatic           | 2 direct lines between base and forearm or 2 optional solenoid valves:<br>bi-stable solenoid valves 5/2 « pressure » or mono-stable « center close »<br>solenoid valves 5/3 « pressure » or Mono-stable solenoid valves 3/2 « vacuum » |
| Electrical          | 10 electrical lines I/O<br>+ 3 electrical lines + 1 Multibus cable (4 lines cat 5e lines), DIN M12                                                                                                                                     |



Dimensions



Mounting (not for vertical cable outlet option)



Sensitive environment versions

|                                                        |           |
|--------------------------------------------------------|-----------|
| Harsh (Automotive, Metal)                              | Available |
| ESD (ElectroStatic Discharge) version                  | Available |
| HE (Humid Environment)                                 | Available |
| Stericlean                                             | Available |
| SCR (Supercleanroom) - class 2 cleanliness ISO 14644-1 | Available |

Available options

|                       |                         |
|-----------------------|-------------------------|
| Vertical cable outlet | for smarter integration |
| H1 oil and grease     | for hygienic demands    |



● Stäubli Units    ○ Representatives/Agents

# Global presence of the Stäubli Group

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