

# YARO COBOTS

## Technical Specifications

YARO Cobot by YardStick Robotics (a Rheinmetall company) works where others can't — outdoors, offshore, underground, even in space. Built for harsh, unpredictable environments, it handles dangerous tasks humans shouldn't, enabling a new generation of robots for real-world applications.

|                              | YARO-1105   | YARO-0808                  | YARO-1608                   | YARO-1310                   | YARO-1115                   | YARO-0820                   |
|------------------------------|---|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <b>Payload</b>               | 5 kg  | 8 kg                       | 8 kg                        | 10 kg                       | 15 kg                       | 20 kg                       |
| <b>Reach</b>                 | 1100 mm   | 800 mm                     | 1600 mm                     | 1300 mm                     | 1100 mm                     | 800 mm                      |
| <b>Protection class</b>      | IP 67 & 69   ATEX-ready   |                            |                             |                             |                             |                             |
| <b>Operating temperature</b> | -20° to 50°C  |                            |                             |                             |                             |                             |
| <b>Repeatability</b>         | < 0.1 mm (ISO 9283)   |                            |                             |                             |                             |                             |
| <b>DOF</b>                   | 6   |                            |                             |                             |                             |                             |
| <b>EEF speed (max)</b>       | 1m/s  |                            |                             |                             |                             |                             |
| <b>Mechanical brakes</b>     | In all joints   |                            |                             |                             |                             |                             |
| <b>Torque measurement</b>    | Yes   |                            |                             |                             |                             |                             |
| <b>Force /Torque Sensing</b> | Yes, prepared for 6-DOF sensor at wrist   |                            |                             |                             |                             |                             |
| <b>Tool flange</b>           | ISO 9409  |                            |                             |                             |                             |                             |
| <b>Interfaces</b>            | 24V DC / 2 A, MODBUS RTU (e.g. for optional Gripper), 100Base Ethernet (e.g. for optional Camera) |                            |                             |                             |                             |                             |
| <b>Conformity</b>            | ISO 10218-1, ISO 13849-1, Cat.3 PL d  |                            |                             |                             |                             |                             |
| <b>Robot mounting</b>        | Any orientation   |                            |                             |                             |                             |                             |
| <b>Weight</b>                | 28 kg   | 27 kg                      | 44 kg                       | 45 kg                       | 44 kg                       | 36 kg                       |
| <b>Power consumption</b>     | 350 W (avg)<br>850 W (max)  | 350 W (avg)<br>850 W (max) | 450 W (avg)<br>1050 W (max) | 500 W (avg)<br>1200 W (max) | 500 W (avg)<br>1200 W (max) | 500 W (avg)<br>1200 W (max) |

*\*Technical details and features are customizable upon specific request and subject to changes during development*

|             | YARO-1105            | YARO-0808   | YARO-1608   | YARO-1310   | YARO-1115   | YARO-0820   |
|-------------|----------------------|-------------|-------------|-------------|-------------|-------------|
| <b>Axes</b> | <b>Working Range</b> |             |             |             |             |             |
| <b>A1</b>   | +/- 360 deg          | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg |
| <b>A2</b>   | +/- 360 deg          | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg |
| <b>A3</b>   | +/- 165 deg          | +/- 165 deg | +/- 165 deg | +/- 165 deg | +/- 165 deg | +/- 165 deg |
| <b>A4</b>   | +/- 360 deg          | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg |
| <b>A5</b>   | +/- 360 deg          | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg |
| <b>A6</b>   | +/- 360 deg          | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg | +/- 360 deg |
| <b>Axes</b> | <b>Maximum Speed</b> |             |             |             |             |             |
| <b>A1</b>   | 228 deg/s            | 228 deg/s   | 162 deg/s   | 162 deg/s   | 162 deg/s   | 162 deg/s   |
| <b>A2</b>   | 228 deg/s            | 228 deg/s   | 162 deg/s   | 162 deg/s   | 162 deg/s   | 162 deg/s   |
| <b>A3</b>   | 270 deg/s            | 270 deg/s   | 288 deg/s   | 228 deg/s   | 228 deg/s   | 228 deg/s   |
| <b>A4</b>   | 420 deg/s            | 420 deg/s   | 270 deg/s   | 270 deg/s   | 270 deg/s   | 270 deg/s   |
| <b>A5</b>   | 420 deg/s            | 420 deg/s   | 276 deg/s   | 276 deg/s   | 276 deg/s   | 276 deg/s   |
| <b>A6</b>   | 420 deg/s            | 420 deg/s   | 276 deg/s   | 276 deg/s   | 276 deg/s   | 276 deg/s   |

| <b>Tech pendant</b>      |   |
|--------------------------|---|
| <b>Dimensions</b>        | 380 x 240 x 70 mm                             |
| <b>Screen Resolution</b> | 2304 x 1440                                   |
| <b>Cable</b>             | No  |
| <b>Communication</b>     | Wireless                                      |
| <b>User Interface</b>    | Intuitive Programming GUI                     |
| <b>Protection Class</b>  | IP 67   |
| <b>Emergency Stop</b>    | Wireless, Safety-Certified (Cat.4/ PLe, SIL3) |
| <b>3-position Switch</b> | Safety-Certified (Cat.4/ PLe, SIL3)           |

| <b>Control unit</b>      |  |
|--------------------------|--|
| <b>Dimensions</b>        | 245 x 520 x 480 mm   |
| <b>Operating Voltage</b> | 230V AC  |
| <b>Power Consumption</b> | Overall including arm supply: 280 W (avg), 650 W (max)   |
| <b>Protection Class</b>  | IP65   |
| <b>Interfaces</b>        | 2x Ethernet, EtherCAT for Arm control, Analog and Digital I/Os (up to 16 flexibly configurable), RFID Interface for access control |
| <b>Communication</b>     | Ethernet (1 kHz Control Frequency), further comm. protocols on request   |
| <b>Programming</b>       | Intuitive GUI, ROS 2   |
| <b>Weight</b>            | 13.5 kg  |
| <b>Emergency Stop</b>    | Wireless + Wired, Safety-Certified (Cat.4/ PLe, SIL3)  |



### YardStick Robotics GmbH

Anne-Conway-Str. 6  
28359 Bremen, Germany  
info@yardstick-robotics.com  
https://yardstick-robotics.com