



**YARO-COBOTS. YOUR CUSTOMISED SOLUTION
FOR HARSH ENVIRONMENTS**



SHAPING THE FUTURE: CUSTOMISED COBOT-SOLUTIONS FOR HIGHEST DEMANDS

While conventional robotic systems are mainly used in well-defined, structured environments, Yardstick Robotics identifies innovative ways to implement robotic operations in challenging environments. Yardstick Robotics' YARO Cobots are the ideal solution for companies that need reliable and strong robots for extreme work environments. No matter if extreme heat, frost, high humidity/splash water, dirt and dust – YARO Cobots operate safely and reliably.

One doesn't fit all

At Yardstick Robotics, we are convinced that the key to a successful implementation of robotic solutions is to first understand the specific challenges of our customers. That is why it is very important for us to work closely with our

customers, analysing their individual needs and problems. Together we develop customised solutions perfectly tailored to the respective requirements.

This collaborative approach makes sure that our YARO Cobots fulfil all technical requirements. Moreover, it also ensures that they are optimally integrated into existing processes and work-flows.



OUR BASIC PACKAGES FOR COBOT CONTROL

User interface package

- **Web-based GUI:** manage your Cobot effortlessly from any device (tablet, PC, etc.).
- **API for ROS2 Control:** seamless integration with Gazebo, ROS2-control and more.
- **Programming by demonstration:** simplify programming by showing the Cobot what you want it to do.

Robot safety package

- **Safety control:** advanced safety measures for maximum protection.
- **Programming of required safety functions:** comprehensive set of safety functions, specifically for Cobot systems.
- **Safe teach-pendant with GUI:** simple and safe user interface for guidance

EXPAND YOUR COBOT WITH ADDITIONAL FUNCTION PACKAGES

Object recognition package

- **OR software:** advanced object recognition capabilities
- **Camera:** high-quality vision

End effector stabilisation package

- **Stabilisation software:** smooth operation in dynamic environments.
- **Sensor:** includes an IMU for real-time feedback and control.

Force/compliance control package

- **Compliance control software:** precise force control
- **Sensors:** includes force-torque wrist sensors for advanced control.

Sensor head package

- **Customised sensor head development:** tailor-made for your specific application requirements.
- **Manipulator arm integration:** seamlessly attached for optimal performance

Vibration Control Package

- **Vibration damping software:** ensures precision and accuracy.
- **Sensors:** force-torque base sensors for advanced stability

TECHNICAL DATA

	YARO - 5 *	YARO - 10 *	YARO - 20 *
EEF speed:	> 1m/s	> 1m/s	> 1m/s
Repetition accuracy:	+/- 1mm (ISO 9283)	+/- 1mm (ISO 9283)	+/- 1mm (ISO 9283)
Joint speed:	20 – 77 rpm	20 – 77 rpm	20 – 77 rpm
Protection class:	IP 66 – 68	IP 66 – 68	IP 66 – 68
Operating temperature:	- 20° to 60°	- 20° to 60°	- 20° to 60°
Reach:	850 mm	1104 mm	1070 mm
Payload:	5 kg	10 kg	20 kg
DOF:	6	6	6
Mechanical brakes:	in all joints	in all joints	in all joints
Torque sensors:	in all joints	in all joints	in all joints
Tool flange:	ISO 9409	ISO 9409	ISO 9409
Interfaces:	RS-485, Ethernet	RS-485, Ethernet	RS-485, Ethernet
Conformity:	ISO 10218-1 ISO 13489-1 Cat.3 PL d	ISO 10218-1 ISO 13489-1 Cat.3 PL d	ISO 10218-1 ISO 13489-1 Cat.3 PL d

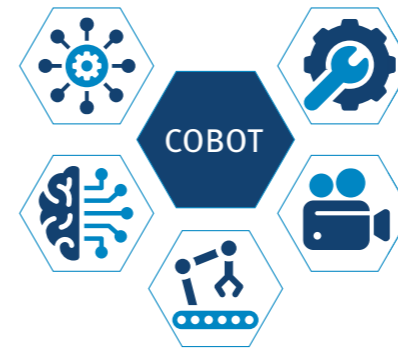
* Indicative data. Final specifications depend on the customer's modular configuration.

CUSTOM ENGINEERING WITH KI FOR MAXIMUM ADAPTABILITY FOR INDIVIDUAL CHALLENGES

In a fully digitalised IoT-environment, we rely on customised CAD and AI software stacks in order to quickly respond to individual customer requirements. This not only enables faster implementation, but also allows for scaling in previously unused application areas.

With our model-based development and the use of artificial intelligence, we create customised solutions and unleash economic potential in previously non-automated industries.

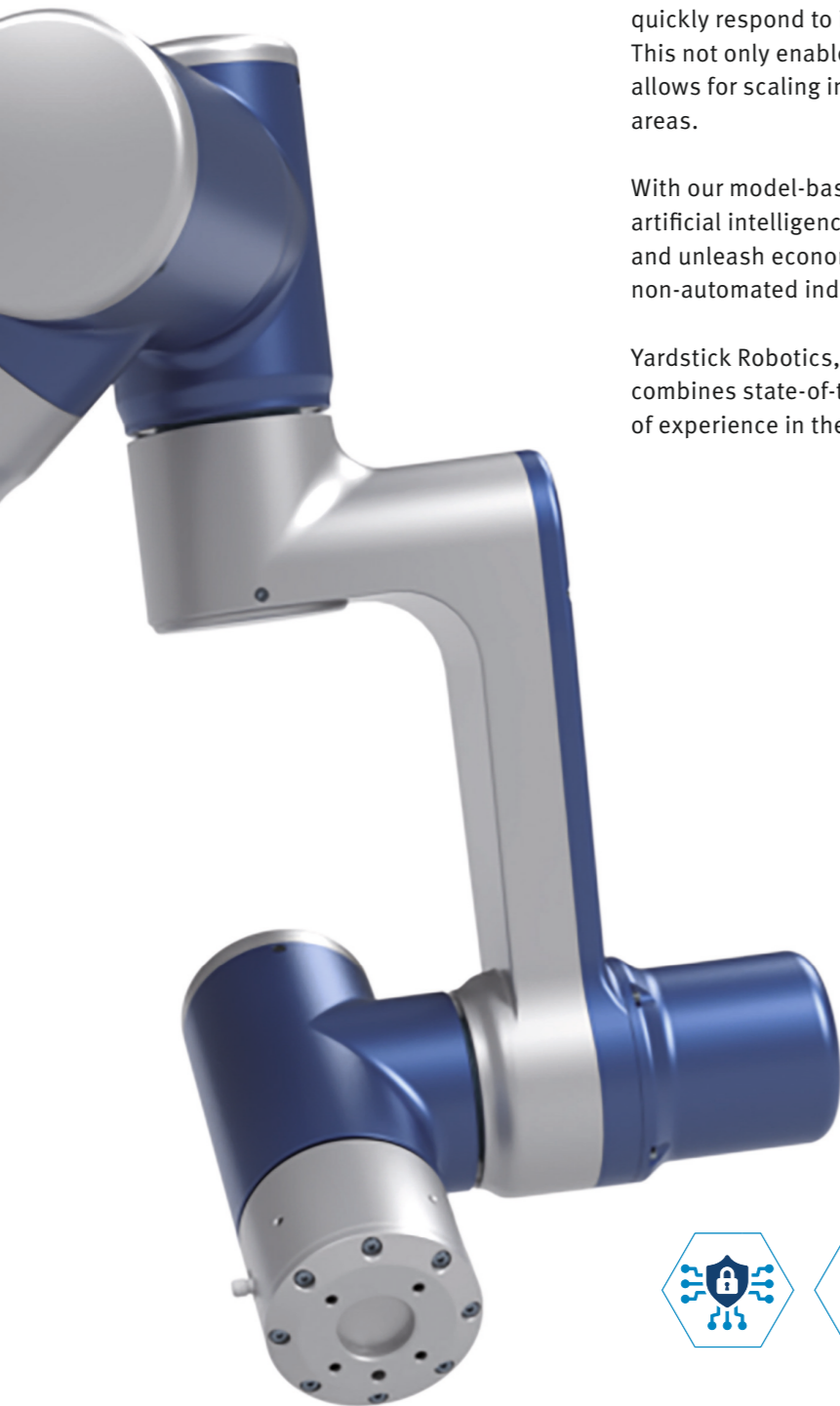
Yardstick Robotics, a subsidiary of Rheinmetall AG, combines state-of-the-art technology with decades of experience in the field of industrial technology



CONFORMITY AT THE HIGHEST LEVEL

The Cobots from Yardstick Robotics set standards in terms of safety and reliability. With comprehensive safety certifications in accordance with ISO 10218-1, ISO 13489-1 and Cat.3 PL d and complete fulfilment of the functional safety requirements of the Safety Controller in accordance with IEC 61508, you are well protected. Whether rain, wind, sand or dust – the Cobots from Yardstick Robotics are always ready for the job. Thanks to protection class IP66, they are completely dustproof and protected against strong water jets.

Our Cobots are not only robust, but also intelligent: automatic switch-off in case of danger detection and enhanced collision avoidance are part of the standard equipment and guarantee maximum safety. Invest in Cobots from Yardstick Robotics and experience customised automation solutions, even under the most extreme conditions. With our Cobot you are perfectly equipped for an efficient and safe future in automation.



INTUITIVE. SIMPLE INITIAL START-UP AND OPERATION

The intuitive programming, setup and handling of the Cobots from Yardstick Robotics Cobots set new standards. Our user-friendly interface makes setting up and control of the Cobots significantly easier – even for users without in-depth programming skills. Thanks to the graphical user interface and clearly structured menus, programmes can be effortlessly created, adapted and optimised using drag-and-drop. This saves valuable training time and increases productivity. Less time for training and customisation means that you can use the Cobots from Yardstick Robotics efficiently for your tasks straight away.

For advanced users, the Cobots are equipped with a ROS2 interface. For ‘Taylor-made’ programming and implementation.



THE YARO COBOTS – A CLASS OF THEIR OWN

Harsh environments: The Cobots from Yardstick Robotics are specially developed for challenging areas of application. The YARO Cobots open up new opportunities for your automation projects. Thanks to their robust design outdoor operations and applications under heavy water jets are now possible without any problems. But versatility does not stop there – they also show their strengths in traditional dry indoor environments. Entirely according to your preferences and requirements, the YARO Cobots offer maximum flexibility and outstanding adaptability.

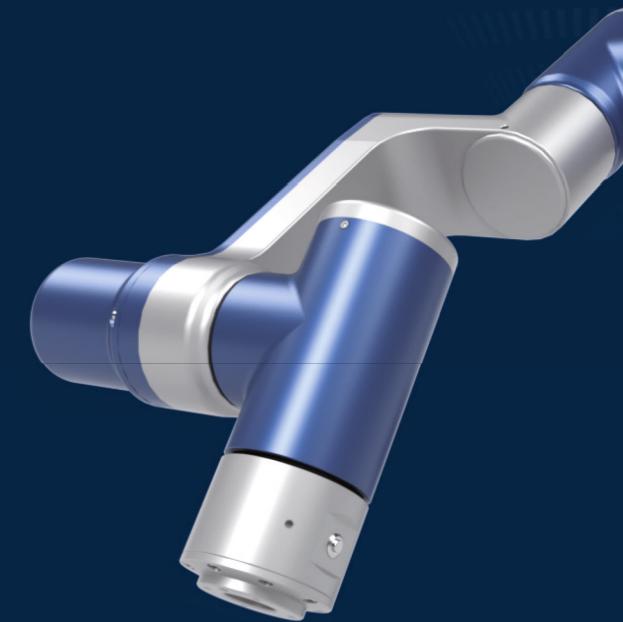
Experience the freedom to realise your applications wherever you need them. The YARO Cobots adapt to your needs and deliver top performance in any environment – whether indoors or outdoors.

- **YARO Cobots ‘Made in Germany’:** quality and precision from Germany.
- **Custom engineering:** we offer customised solutions for every application and every environment. Efficient and cost-effective.
- **Digital services:** in combination with AI, the YARO Cobots offer an infinite number of solutions - throughout the entire product life cycle.

Contact us today to find out more about the YARO Cobots from Yardstick Robotics and find out how we can revolutionise your industrial processes together. Let’s work together to develop the perfect solution for your requirements!

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YARDSTICK ROBOTICS: PIONEERING COBOTS FOR DEMANDING ENVIRONMENTS

Why YARO Cobots?

At Yardstick Robotics, we firmly believe that the future of automation lies in intelligent collaboration between man and machine. The use of robotic systems offers significant growth opportunities in numerous industries and the possibility to generate long-term competitive advantages. While conventional robotic systems are predominantly implemented in well-defined, sterile environments, Yardstick Robotics identifies innovative ways to utilise robotic applications in demanding environments.

Our approach is built on model-based development and the use of artificial intelligence to create customised solutions and unleash the economic potential in previously non-automated industries. Our Cobots are more than just tools.

They are partners in helping to make workplaces safer and more productive. In a fully digitalised IoT-environment we rely on customised CAD and AI software stacks to quickly respond to individual customer requirements. This does not only enable faster implementation, but also the scaling in previously unused fields of application.



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