

# Busy helpers in difficult environments: autonomous walking robots from ANYbotics

ANYbotics AG has set its sights on becoming nothing less than the world leader in robot technology. With its walking robots designed for tough industrial requirements, the company is well on the way to achieving this ambitious goal.

Kids would love it if the ANYmal was available as a toy. But what looks at a distance like a lovable four-legged animal is actually a highly complex device that is the result of many years of development by the robotics team at the renowned Robotics Systems Lab at ETH Zurich. The passionate inventors designed the first four-legged walking robot in 2009. With a clear focus on inspection and monitoring tasks in harsh industrial environments, they continued to refine it. In 2016, they set up their own

commercially oriented company ANYbotics AG. Their brainchild – which they christened ANYmal – had by now properly learned to walk and was ready to show what it could do in tough practical use.

## The fully automated end-to-end inspection solution is now reality

ANYmal is an autonomous, intelligent walking robot equipped with high-resolution video technology, a thermal camera, noise and gas sensors, as well as a laser scanner. It finds its way around using a scanned map of the industrial plant and works out the shortest route between any two points. It avoids obstacles and holes and can easily climb up and down steep stairs. ANYmal senses discrepancies in machine operation and the environment and transmits the collected data to the plant operator's system in real time. The comprehensive integration of sensors, an IT platform and intelligent processing of the data allows genuine end-to-end inspection solutions to be implemented. The use of digital real-time data from the autonomous tours of inspection increases plant availability, enhances safety and reduces maintenance costs.



### Cross roller bearings

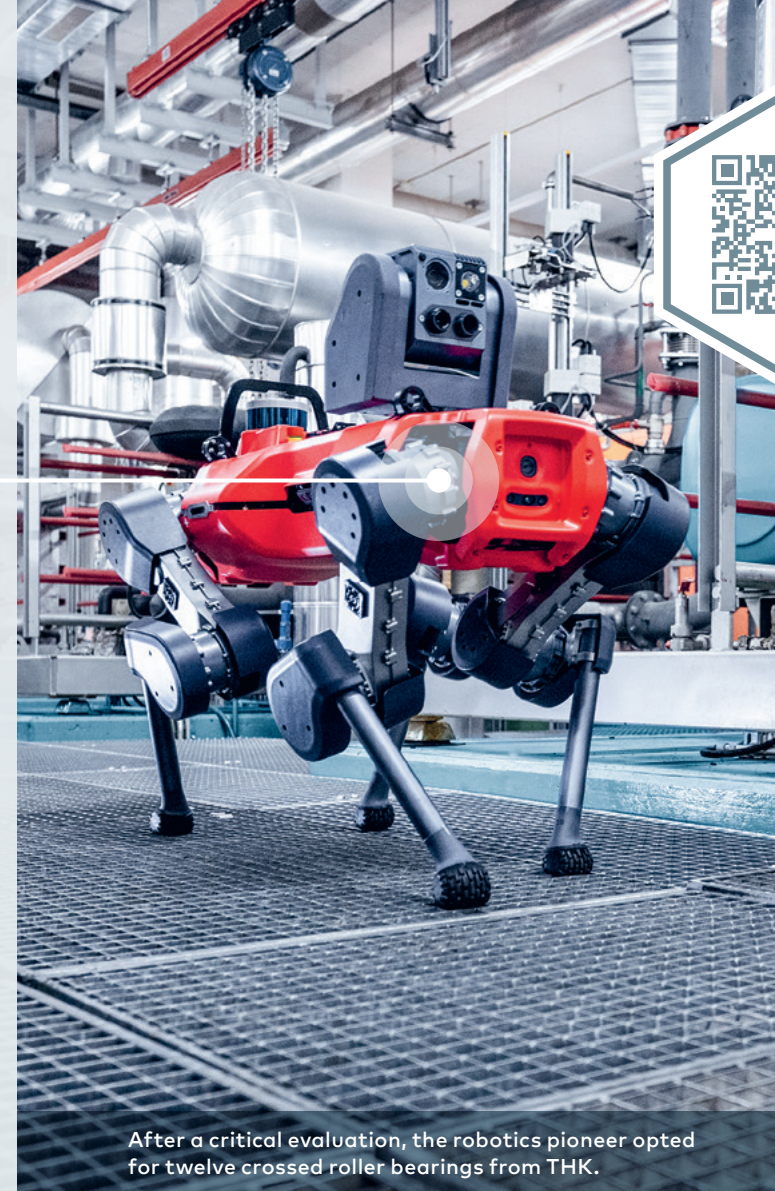
- Highest concentricity
- Extremely compact dimensions
- High rigidity due to right-angled staggered rollers

## The next big thing is already in the pipeline

ANYmal is successfully operated around the world by leading industrial companies that will attest to the significant increase in operational efficiency. But for Chief Operating Officer Martin Bühlmann, the possibilities of robotics for large-scale plant maintenance are far from exhausted: "We're still only at the start of a new era of autonomous intelligent robots. We're already working on models that will be able to perform field tasks such as collecting samples, operating valves or carrying out simple repair or assembly work."

## "Bachofen is an excellent companion in every respect."

With Bachofen, ANYbotics has a reliable companion on the road to



After a critical evaluation, the robotics pioneer opted for twelve crossed roller bearings from THK.



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*"The technical understanding that Bachofen contributes is worth its weight in gold. With their skills, expertise and solution-oriented approach, Bachofen's product specialists help us to cushion risks and ensure the high standard of quality that is essential for ANYmal's success."*

Martin Bühlmann, Chief Operating Officer

global market success. After a critical evaluation, the robotics pioneers chose cross roller bearings from THK. Martin Bühlmann: "It wasn't just the renowned quality and precision of THK's components that persuaded us to work with Bachofen, but also the excellent technical support. We have found that Bachofen is a versatile partner that is committed to our aims, responds quickly and flexibly to our concerns, and delivers what it promises."

In autumn 2022, with the launch of ANYmal X, the world's only Ex-certified walking robot, ANYbotics set yet another milestone in the development of robotics. Before long, the company had received 500 pre-orders from the oil, gas and chemical industries. Production of the 0-series is picking up speed. As a competent, reliable consulting and supply partner for sophisticated components, Bachofen is once again on board. ■

## ANYbotics AG, Zurich

As a developer of autonomous, intelligent walking robots for performing inspections and monitoring in poorly accessible industrial plants and safety-critical industrial environments, ANYbotics AG emerged as a spin-off from the world's leading robotics laboratory at ETH Zurich. The young company brought the first prototype walking robots onto the market and today offers comprehensive end-to-end robotic inspection solutions. ANYbotics AG's customers include leading companies from the energy supply, oil and gas production, chemical, mining and infrastructure sectors.

**Established**  
2016

**First offshore deployment of ANYmal**  
2018

**Development location**  
Zurich

**Number of employees**  
<100

**CEO**  
Dr Péter Fankhauser

**Bachofen customer**  
since 2018

**Website**  
www.anybotics.com