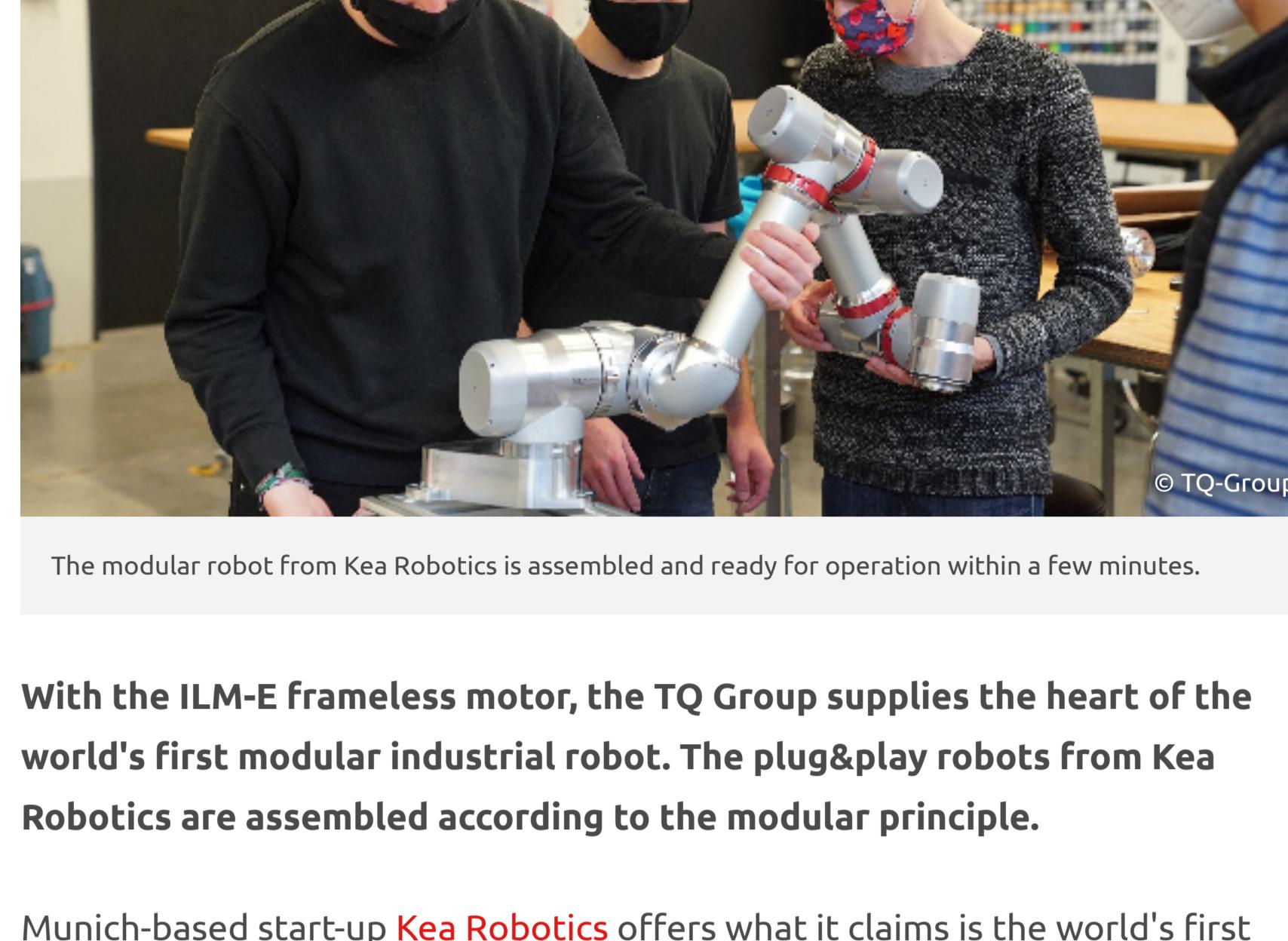


TQ-Group and Kea Robotics

First industrial robot based on the modular principle

17. März 2021, 10:04 Uhr | [Andrea Gillhuber](#)



The modular robot from Kea Robotics is assembled and ready for operation within a few minutes.

With the ILM-E frameless motor, the TQ Group supplies the heart of the world's first modular industrial robot. The plug&play robots from Kea Robotics are assembled according to the modular principle.

Munich-based start-up [Kea Robotics](#) offers what it claims is the world's first fully modular industrial robot. The robots can be individually assembled and adapted within a short time like a modular system.

A robot consists of up to 20 modules. The module library is made up of motor modules consisting of high-performance motors, encoders and backlash-free gears. Connector modules are available in different sizes and connect the actuator joints. Rigid construction and electrical passages allow quick assembly of an industrial robot. Base modules are used to place the robots on their platforms and supply them with power. These modules are available for various machine integrations. The modules are extended by connectors, controllers and connecting devices. The modules are available in different diameters.

The finished robot has a reach of up to 2.3 m and can move loads of up to 15 kg at a maximum of 2 m/s. The repeatability is 0.1 mm. The mechanical helper meets protection class IP54.

Immediately after configuring the robot, Kea's proprietary software generates a digital twin that knows the kinematics and dynamics of the plug-and-play robot and can simulate the application.

Motors from the TQ Group keep things moving

The modules of the Plug&Play robot are set in motion by the houseless ILM-E (internal rotor motor evolution) motors from the [TQ-Group](#). They offer a torque of 3 Nm at a weight of 360 g. A high winding density and compact design ensure low power loss as well as long life, according to the company. Manufactured in Germany, the motor can be quickly and easily adapted to a wide range of applications.

After completion of the industrial test phase with selected users, the Kea robots will initially be used in the processing industry and in laboratories. Further applications are to follow.



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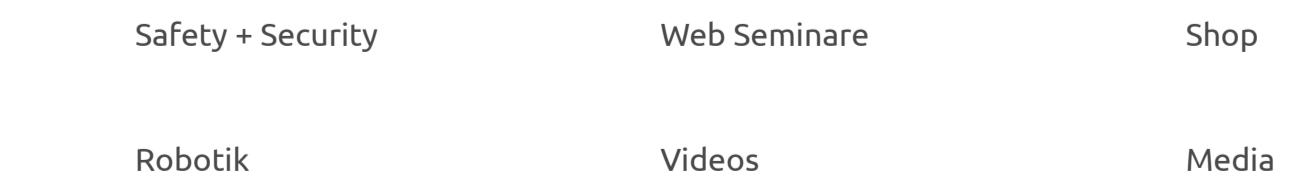
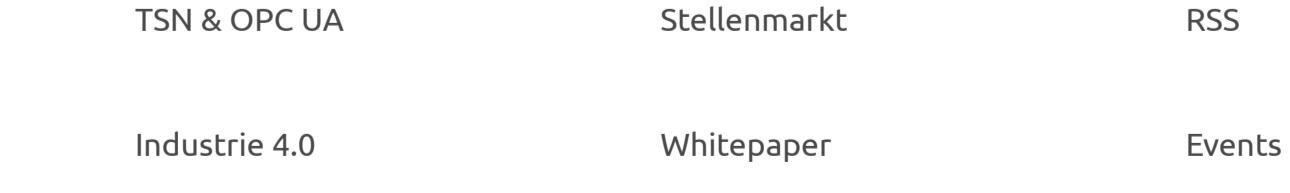
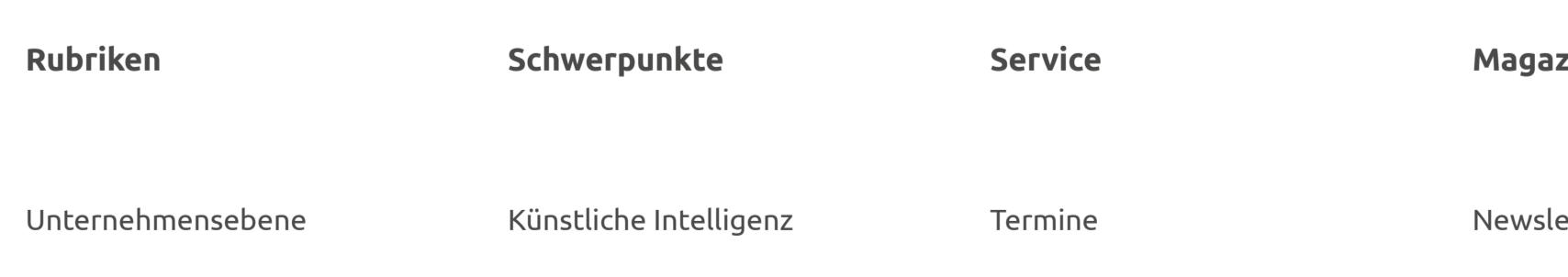
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