



Spindles for machining with robots

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Robot

The Autonox robot is a specialist for machining tasks in the milling sector.

The robot mechanics in this area were specially developed for applications requiring maximum rigidity, excellent vibration damping, and maximum precision. The 6-axis kinematics (6DoF) are characterized by a particularly robust design: Axes 2, 3, and 5 are generally supported on both sides, which significantly increases structural rigidity.

For use in demanding environments, selected models are additionally protected against abrasive dust, liquids, and other influences. They can be pressurized with sealing air to further increase their service life. Media lines for the end effector can be routed safely and space-savingly within the robot structure.

Spindle unit

Weiss Spindeltechnologie specialized in the development and production of high-precision spindle units. The company supplies a complete spectrum of standardized as well as individual solutions and realizes their embedding in complete electromechanical systems. For use on robots, the spindles are designed especially for the high demands on the weight and on the smallest possible number of different operating media.

Motor cooling: water

Bearing lubrication: grease

Tool change: pneumatic/ manual

Connection spindle to robot: ISO9409-1

	RS3	RS4	RS5	RS6
Power [kW]	16.5	16.5	16.5	25
Weight [kg]	62	58	58	60
Speed [rpm]	24,000	16,000	21,000	8,000
Torque [Nm]	20.0	20.0	20.0	60.0
Rated current [A]	29	34	34	70
Interface	HSK-A50	HSK-A63	HSK-A63	HSK-A63

Individual solutions available upon request.

Optionally, secondary encoders can be installed directly on the gears – for even more precise position feedback.

Of particular note is the articulated-arm robot artic.mtr6-2407-100kg (AT_00033-SE01):

Developed in close collaboration with Fraunhofer IFAM and Siemens, this model sets new standards in rigidity and machining quality. The robot even masters milling tempered steel with impressive precision – regardless of the tool position (TCP). The result: consistently high machining quality, maximum process reliability, and maximum efficiency.

The optional available equipment of the spindle with the ISO 9409-1 standardized interface to the robot is another advantage of WEISS spindles.



Further information such as drawings, data sheets and CAD data can be found on our homepage.

