AAK™ 415/515
ACTIVE ANGULAR KIT
TOOL CHANGER + 90°-DRIVE

SYSTEM SOLUTION WITH TOOL CHANGER FOR
FLEXIBLE SURFACE TREATMENT

The AAK product family 415/515 is a precisely coordinated system package based on Active Compliant Technology (ACT) and a tool change system optimized for robot use. Sophisticated changeover tools, with straight and 90-degree drive, enable rapid job modulations as a plug-and-play system. This integrated complete solution automates the industrial machining process with individual control of all process parameters: Rotation speed, contact force and feed rate. The end effector with tool taper holder is available in 2 different power versions, with a fully integrated servo motor providing the powerful drive. It is universally compatible with all common abrasive attachments - so no special or manufacturer-dependent consumables are required. The AAK 415/515 product family is ideal for many types of surface treatment and offers the highest process quality from one source. The system design is compact and lightweight. The enormously robust end effector is designed for industrial use, requires little maintenance and delivers performance 24/7.

Surface treatment: Axial/radial brushing, angle grinding, deburring, eccentric polishing, cutting, satin finishing...,...

All materials: Steel, aluminum, titanium, magnesium, carbon, plastic, wood, ceramic,...

PATENTED
TECHNOLOGY

FERROBOTICS
perfect feeling

AAK™ 415/515
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Defined contact force
Interactive compensation of surface tolerances up to 35.5 mm with guaranteed constant real contact force. No adjustment of robot paths.

Integrated gravity compensation
The defined process force remains constant even with changing orientations. No additional programming effort in the application required.

Passive safety and high-speed control
Mechatronic actuator and sensor element with high process reliability due to robust mechanical design with integrated passive safety and high-speed control.

Flexible automation
The versatile and user-friendly tool taper changer with a wide range of tools, is suitable for surface finishing of almost all shapes and materials. The automated tool change (pick-up from tool magazine) is fast, easy and flexible.

AAK 415/515
- even contact force
- automated tolerance compensation
- minimal programming effort and almost no start-up time
- automates almost all manual grinding work

Control of the feed rate by the robot

Control of the contact-force on surfaces by ACT

Control of the rotation speed

Fast tool change, universally compatible with common abrasive attachments

SPECIFICATIONS

Ordercorde	AAK/415	AAK/515
Max. force (push/pull) [N]	100	160
Stroke [mm]	35.5	35.5
Dimensions [mm]	Max. 220 x 194 x 259 Bolt circle ISO 9409-1-80-6-M8 standard flange ø 80	Max. 240 x 210 x 280 Bolt circle ISO 9409-1-80-6-M8 standard flange ø 80
Dead weight [kg]	~ 7	~ 12
Power supply	• 24 V DC (Control circuit) • 400 -480 V AC / 50-60 Hz (Main circuit) • ø 8 mm air supply, max. 7 bar, 30 µm, ISO 8573-1 Kl.3 (oil & water free)	
Max. speed [rpm]	10,000	10,000
Rated motor power (S1) [W]	500	1,000
Motor peak power (S2) [W]	785	2,000
Tool Changing System	Tool changer for • Axial Brushing • Grinding • Deburring • Eccentric • Polishing	**FLEXIBLE!** MULTIFUNCTIONAL 90-DEGREE-DRIVE • Cutting • Satin finishing • Radial brushing
Air consumption [l/min]	5 – 10	
Ambient temperature during operation [°C]	+5 ... +45	
Protection class	IP65 / if equipped with adequate filters	

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> IN PRINCIPLE, EVERY MANUAL SURFACE TREATMENT CAN BE AUTOMATED, SINCE THIS TOOL CHANGER SYSTEM IS MULTIFUNCTIONAL AND THEREFORE SUITABLE FOR ALMOST ALL APPLICATIONS.
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> Dr. Ronald Naderer, CEO