



## AAK™ 591/691 ACTIVE ANGULAR KIT WITH 90°-DRIVE

SYSTEM SOLUTION WITH 90°-DRIVE  
FOR FLEXIBLE SURFACE TREATMENT

The AAK 591/691 product family is a finely tuned system package based on the Active Compliant Technology (ACT) and an 90-degree-drive optimized for robot use. This integrated complete solution automates the industrial surface treatment process with individual control of all process parameters: rotation speed, contact force and feed rate. The end-effector is available in 2 different power versions, with a fully integrated servo motor providing the powerful drive. The system is universally compatible with all common abrasive attachments - so no special or manufacturer-dependent consumables are required. The AAK 591/691 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:** Grinding, polishing, satin finishing, radial brushing, cleaning, deburring, cutting,...

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

**PATENTED**  
TECHNOLOGY

  
**FERROBOTICS**  
perfect feeling

# AAK™ 591/691

## ACTIVE ANGULAR KIT

### DEFINED CONTACT FORCE

Interactive compensation of surface tolerances from 35.5 up to 48 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 end-effector can be equipped with a wide range of tools and is suitable for surface finishing of almost all shapes and materials. The system is universally compatible with all common abrasive attachments.



### AAK 591/691

- even contact force
- automated tolerance compensation
- minimal programming effort and almost no start-up time
- automates almost all manual surface treatment tasks




Control of the feed rate by the robot

Control of the contact force on surfaces by ACT

Angle grinder with doubled output and 90-degree-drive

Control of the rotation speed

## SPECIFICATIONS

Ordercode	AAK/591	AAK/691
Max. force (push/pull) [N]	160	250
Stroke [mm]	35.5	48
Dimensions [mm]	Max. 240 x 210 x 280 Bolt circle ISO 9409-1-80-6-M8 Standard flange ø 80	Max. 343 x 299 x 354 Bolt circle ISO 9409-1-80-6-M8 Standard flange ø 80
Dead weight [kg]	~ 9	~ 20
Power supply	<ul style="list-style-type: none"> <li>• 24 V DC</li> <li>• 380 - 500 V AC</li> <li>• ø 8 mm air supply, max. 7 bar, 30 µm, ISO 8573-1 KL3 (oil &amp; water free)</li> </ul>	
Max. speed [rpm]	10,000	8,500
Rated motor power (S1) [W]	1,000	3,000
Motor peak power (S2) [W]	2,000	5,900
Surface Treatment	ER16 clamping system and common threaded output drive <ul style="list-style-type: none"> <li>• Grinding</li> <li>• Polishing</li> <li>• Deburring</li> <li>• Satin finishing</li> <li>• Cutting</li> <li>• Radial brushing</li> </ul> 	
Air consumption [l/min]	5 - 10	
Ambient temperature during operation [°C]	+5 ... +45	
Protection class	IP65 / if equipped with adequate filters	



THIS INDUSTRY-PROVEN TOOL IS MULTIFUNCTIONAL AND SUITABLE FOR A WIDE RANGE OF APPLICATIONS.

Dr. Ronald Naderer, CEO

