

EFK EASY FINISHING KIT

WITH PLUG&PLAY FROM SIMULATION TO THE HIGH QUALITY SERIES FINISHING PROCESS

The Universal Robots+ FerRobotics Easy Finishing Kit (EFK) is the perfect package to start automating surface finishing processes. It delivers the Plug and Play cobot tool ACF-Kit, with the unique Active Compliant Technology by FerRobotics and the intuitive robot simulation software RoboDK for path programming, as well as collision and reach tests without programming knowledge. The flexible finishing tool brings the highest quality in every process because of automated tolerance compensation and the best real time force control (active force compliance). The RoboDK Software is a powerful and cost-effective simulator for robots and robot programming. RoboDK's simulation and offline programming tools allows you to program your UR robots outside the production environment, eliminating production downtime caused by shop floor programming. Easily simulate and program your cobot offline from your 3D models and deploy URP and SCRIPT robot programs with just a few clicks. The FerRobotics Easy Finishing Kit is compatible with the robot models UR10, UR10e and UR16e.

Surface treatment: Sanding, grinding, polishing, cleaning, deburring, finishing **All materials:** Steel, aluminum, titanium, magnesium, carbon, plastic, wood, ceramic, coconut fiber...







UR+ CERTIFIED

READY-TO-USE PACKAGE SOLUTION FOR INDUSTRY 4.0

- User-friendly plug&play package solution
- Cobot-compatible surface treatment tools with integrated real time force control
- For all materials and even complex shaped surfaces

QUICK, FLEXIBLE, SAFE

- High performance and functionally optimized system for immediate integration
- Rapid job modulation directly by the end user
- Automated tolerance compensation

PLUG&PLAY START UP

- Intuitive graphical user interface:
 No programming skills are required
- Program your robot with a few clicks
- Easily setup your simulation using drag & drop

EASIEST PATH PROGRAMMING

- · Surface & edge following
- · Allows offline programming
- Cycle time calculation
- Robot calibration

Control of the feed rate

Control of the contact force on surfaces by Active Compliant Technology

Control of the rotation speed

COMPACT AND SIMPLE

PRECISE APPLICATION OF FORCE

DEVICES ARE ARTIFICIALLY CONDITIONED

HARDWARE SPECIFICATIONS ACF-K

| Ordercode | Max. Force (pull/ push) [N] | Stroke [mm] | Dimensions [mm] | Dead weight [kg] | Power Supply | Bolt circle ISO 9409-1 | Communication Interfaces |
|--------------|-----------------------------------|----------------|--------------------|------------------------|---|---------------------------|--|
| ACF-K/109/04 | 100 | 35 | 205 x 160 x 320 | 3.9 | 24 V DC / 4 A Ø 6 mm compressed air, max. 7 bar, 30 µm, ISO 8573-1 Kl.3 - (oil & water free) Ø 12mm compressed air for the devices, max. 6.2 bar | ø 50 | Standard: Ethernet TCP/IP Optional: Modbus TCP, Ethernet IP, DeviceNet, Profibus, ProfiNet, Ethernet XML |

HARDWARE SPECIFICATIONS TOOLS

| Ordercode | Item description | Vacuum Kit |
|--------------------|---|------------|
| ACF-K/Dyn/56819 00 | FerRobotics ACF-Kit - Random Orbital Sander 5" (127 mm) Dia. 0.28 hp (209 W), 12,000 RPM, 3/16" (5 mm) excentric stroke | 1 |
| ACF-K/Dyn/56830 00 | FerRobotics ACF-Kit - Random Orbital Sander 6" (152 mm) Dia. 0.28 hp (209 W), 12,000 RPM, 3/16" (5 mm) excentric stroke | ✓ |
| ACF-K/Dyn/5781400 | FerRobotics ACF-Kit - Jitterbug Orbital Sander 3-2/3" (93 mm) W x 7" (178 mm) L, 0.28 hp (209 W), 10,000 RPM, 3/32" (2 mm) excentric stroke | 1 |
| ACF-K/Dyn/15360 00 | FerRobotics ACF-Kit - Belt File 0.7 hp (515 W), 23,000 RPM, for 1/4" - 1" (6-25 mm) W x 24" (610 mm) L Belts | |
| ACF-K/Dyn/1321400 | FerRobotics ACF-Kit - Die Grinder 0.7 hp (515 W), 4,500 RPM, 5/8"-11 Arbor | |
| ACF-K/Dyn/52276 00 | FerRobotics ACF-Kit - Die Grinder 0.7 hp (515 W), 15,000 RPM, 1/4" & 6mm Collets | |
| ACF-K/Dyn/52276 01 | FerRobotics ACF-Kit - Die Grinder Angular 0.7 hp (515 W), 15,000 RPM, 1/4" & 6mm Collets | |
| ACF-K/Dyn/54771 00 | FerRobotics ACF-Kit - Angular Grinder 4" (102 mm) Dia. 0.7 hp (515 W), 12,000 RPM, 3/8" - 24 Spindle Thread | |
| ACF-K/Dyn/5263500 | FerRobotics ACF-Kit - Angular Grinder 5" (127 mm) Dia.1.3 hp (956 W), 12,000 RPM, 5/8"-11 Spindle Thread | |
| ACF-K/Dyn/52639 00 | FerRobotics ACF-Kit - Angular Grinder 5" (127 mm) Dia. 1.3 hp (956 W), 12,000 RPM, M14x2 Spindle Thread | |

SOFTWARE SPECIFICATIONS ROBODK

| Infos | RoboDK UR Simulation | | | | |
|--------------------------|---|--|--|--|--|
| Includes a URCap plugin: | No - It generates URP and SCRIPT files. Post processors can be linked to 3rd party libraries. | | | | |
| Compatibility: | UR3, UR5, UR10, CB2, CB3.0, CB3.1 | | | | |