

AIR TECHNOLOGY

AL-KO

QUALITY FOR LIFE



INTELLIGENT CONTROL TECHNOLOGY

AL-KO CONTROL UNIT

For an energy efficiency
optimized control

Sustainable technology for a healthy indoor climate

For more than 50 years AL-KO Air Technology has been providing solutions for clean air wherever people come together. As a leading manufacturer of ventilation and air handling systems, we provide custom-tailored solutions in time-proven AL-KO quality for the complex requirements of various applications.

Your challenge

Do you need to air-condition only one temperature zone? Or are you looking for a complex application inclusive integ into the building automation system? For all requirements, AL-KO CONTROL offers an energetically optimized control strategy for your ventilation and air handling unit.



Our solution

Configure your unit including control with AL-KO and benefit from perfectly matching solutions from a single source. The modular control technology always has the right solution ready and enables secure remote access with AL-KO REMOTE CONTROL. AL-KO supplies controls in a complete package with field devices, control cabinet, and pre- or complete wiring. Control hardware from well-known manufacturers such as Siemens is used.

Your benefits



Everything from a single source: Ventilation unit with integrated control



Advisory support through efficient, digital planning tools



End-to-end digitized configuration process



All units and control units can be factory tested and pre-wired if desired

Units at a glance

AL-KO control technology can be used for those AL-KO units:



Available planning data from the very beginning

In order to simplify both the design phase and the approval of the control by the customer, AL-KO control technology offers access to individually tailored planning documents from the moment the offer is made, such as:

- Tender texts
- Control scheme
- Cable pull list & circuit diagram documentation
- System-specific functional description
- Data point lists



Simple system integration through standardized data protocols (BACnet, Modbus)



All planning documents available from quotation creation onwards



Comprehensive service package: from factory tests to final commissioning and retrofitting



Large portfolio of control and field devices (field devices optional in ATEX version)

Proven hardware and software solutions

From configuration and installation to operation of the control system, we support you with proven hardware and software solutions, all of which can be individually adapted to your requirements.

Our customized services and solutions

1. Control configurator

Take advantage of our offer and configure your AHU together with the AL-KO sales representative. We will be happy to advise you – together we will find the ideal equipment for your system.

2. Control options

AL-KO has the right control element for every customer requirement – from simple step switches to touch panels.

3. Remote access

- Secure remote access to your AHU with AL-KO REMOTE CONTROL
- Take advantage of the AL-KO Try & Test package, which is free for the first two years

4. Pre-wiring

Industrial prefabrication saves a lot of costs and time on the construction site and leads to quick and smooth commissioning.

- Electrical – pre-wiring for fast commissioning
- Factory tested: Factory tested after wiring to ensure AL-KO quality
- Optional: halogen-free cabling (no PVC insulation)

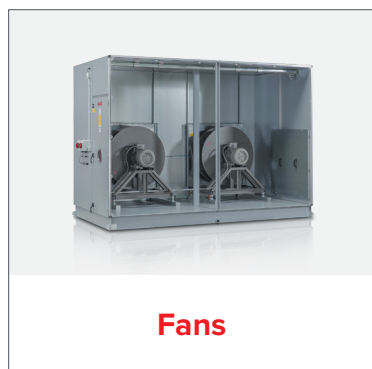
5. Commissioning

The AL-KO specialist staff will be happy to carry out the commissioning for you. Thanks to the pre-parameterised AL-KO control system, this is quick and uncomplicated. Or your commissioning technician supports you on site via AL-KO REMOTE CONTROL.



Selected field devices can also be supplied in ATEX version

Optional control equipment



- Volume flow or duct pressure display
- Individual evaluation of fan alarm
- Individual evaluation of the repair switch



- Digital Display by pressure sensor optionally with switch contact
- Analog display by means of a pressure gauge



- With spring return damper motor
- Status feedback via auxiliary contact switch or with steadily feedback

Control cabinet: Wide range of customization options

Flexible positioning

The control cabinet can be flexibly positioned:

- On-site
- Installed
- Integrated

Optional components

For the control cabinet, AL-KO offers a wide range of optional components:

- 3-phase display
- Surge protection
- Increased short circuit resistance
- Control cabinet lighting
- Control cabinet heating
- Control cabinet fan
- Supply to additional on-site consumers

Well connected with building automation

The AL-KO CONTROL UNIT offers practical interfaces to building automation:

- BACnet IP bus module
- BACnet MSTP bus module
- Modbus IP
- Modbus RTU
- Network connection for HMI4WEB or AL-KO REMOTE CONTROL
- Remote on/off + operating message + group fault message

Twelve functions make the difference

The extensive functions of the AL-KO control unit cover almost all requirements in the use of your ventilation and air handling unit. They can be configured exactly according to your needs.



1 Fan control

- Constant speed with/without volume flow display
- Duct pressure stabilization with/without volume flow display
- Volume flow control
- Supply air-led exhaust air volume flow control
- Exhaust air-led supply air volume flow control



2 Temperature regulation

- Room air control
- Supply air control
- Supply air-room cascade
- Supply air-room cascade (summer)
- Exhaust air control
- Supply air-exhaust air cascade
- Supply air-exhaust air cascade (summer)



3 Activation of heating and cooling units

- Hot water, cold water registers in different hydraulic versions
- Cooler with heating function
- Split units
- Heat pumps



4 Humidity control (dehumidification, humidification)

- Exhaust air control
- Room control
- Supply air control
- Supply air-exhaust air cascade
- Supply air-room cascade



5 Air quality (CO₂, VOC)

- Exhaust air control
- Room control



6 Timer programs / demand-based control

- Timer programs
 - Individually adjustable for weekdays
 - Temperature (comfort / economy)
 - Air volume (level 1 to level 7)
 - Up to 8 switching times
- Exception and vacation calendar
- 2-level fan set point changeover
- Presence detector and humidity switch



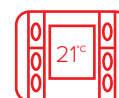
7 Comfort functions

- External set point specification for temperature and humidity
- Single filter evaluation digital or analog
- Optional room temperature measurement via wireless sensors with up to four measuring points
- Temperature boost: heating or cooling
- Draught limitation
- Priority is given to temperature during dehumidification



8 Economy functions

- Timer program
- Summer night cooling
- Temperature reduction via timer program (comfort / economy) or day/night switching
- Fan compensation via outside temperature
- Enthalpy recovery
- Efficiency display of heat recovery



9 Room climate zone control

- Six individual room zones
- Volume flow controller minimum / maximum
- Variable
- Type of control
 - Temperature
 - Volume flow
 - CO₂



10 Swimming pool control

- Operating modes: Stand-by, bathing, hot bathing mode
- Special temperature and humidity control strategy
- Recirculation damper for moisture retention
- Mixed air flap for rapid heating and frost protection function



11 System check

- Heater return antifreeze sensor
- Heat recovery frost protection temperature and pressure
- Emergency stop input
- Data logging
- Local priority operating level



12 Building protection

- Cooling and/or overheating protection
- Fire damper control
 - TÜV-certified control cabinets for fire dampers and smoke detectors
- Smoke detector control
 - Smoke detector with optional DBIT approval
 - Venturi pipe for smoke detectors, designed for the device cross-section, can be shortened according to customer requirements
- Flow monitor for gas valve release

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QUALITY FOR LIFE

AL-KO AIRTECH

AL-KO Airtech specializes in the manufacturing and distribution of ventilation and extraction systems. Airtech comprises **AL-KO Air Technology** and **AL-KO Extraction Technology**. These divisions develop and produce customized ventilation and air handling systems, as well as a broad spectrum of industrial extraction systems for diverse areas of application. What started out as a village blacksmith's shop in 1931 is now an international brand. Then and now, our brand promise "QUALITY FOR LIFE" stands for unique product and service quality.

AL-KO Air Technology

- 50 years of experience in ventilation and air handling technology
- More than 10,000 ventilation and air handling units per year
- All systems in time-proven AL-KO quality
- Tailor-made for customer-specific requirements
- All expertise from a single source
 - Planning and consultation
 - Digital tools
 - Air and climate technology
 - Plant control
 - Comprehensive service packages

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