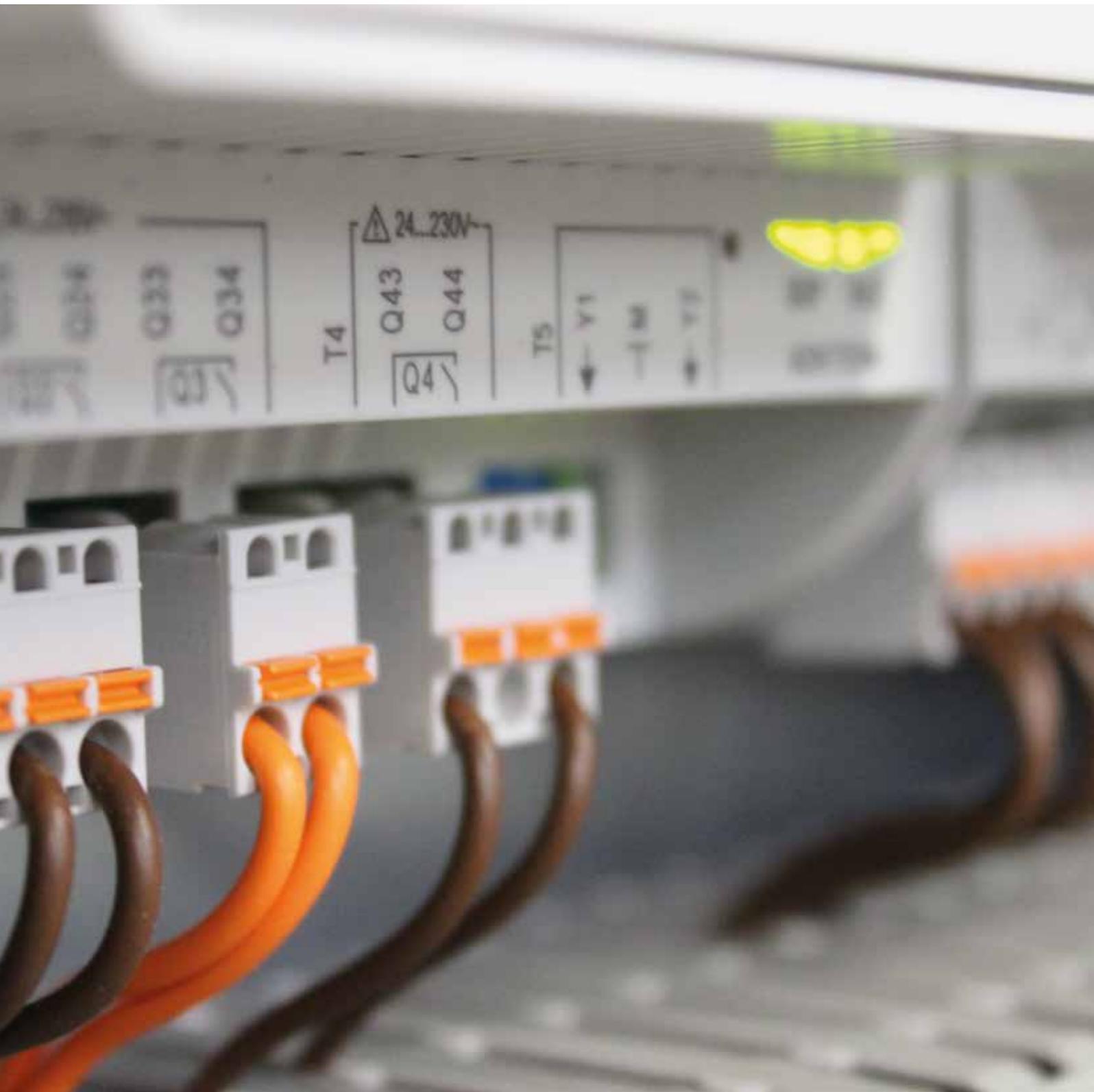


AL-KO

QUALITY FOR LIFE

ART – AL-KO CONTROL TECHNOLOGY
INTELLIGENTLY NETWORKED AIR HANDLING UNITS
AND CONTROL SYSTEMS



ART – AL-KO CONTROL TECHNOLOGY

INTELLIGENTLY NETWORKED AIR HANDLING UNITS AND CONTROL SYSTEMS

Configure your unit, including control system, with AL-KO and benefit from perfectly co-ordinated solutions from a single source.

YOUR OPTIONS

| **The right control system package to meet every need:**

AL-KO provides maximum flexibility both in terms of unit configuration and control system features. We create customised designs tailored your requirements.

| **Everything from a single source:**

Control technology precisely co-ordinated to the respective ventilation unit in combination with your efficient air handling unit creates an unbeatable package.

| **Extensive range of applications:**

We find the right solution – from regulating a temperature zone to complex applications, including integration within the building automation system.

| **Flexible supply limits:**

Our comprehensive system solutions, comprising optional individual services, allow you to come up with a comprehensive package tailored to your company's range of services. We would be happy to advise you on the combination of our services, e.g. from field units and pre- or comprehensive wiring, to switch cabinets and their installation location.



ART – AL-KO CONTROL TECHNOLOGY

UNIT AND CONTROL SYSTEM – EVERYTHING FROM A SINGLE SOURCE

YOUR APPLICATION ADVANTAGES

| **Factory tested:**

Following the successful wiring of the unit, it is factory tested by AL-KO. This is how we ensure the highest quality of our unit, including control system.

| **Practical operating options:**

Depending on the choice of control system package, the operating options can also be tailored to your requirements. Our offering in this respect ranges from a simple room control unit to system-specific visualisation.

| **System integration made easy:**

The factory-integrated data interfaces simplify the level of co-operation within the building automation system.

| **Convenient and simple:**

AL-KO specialists would be happy to commission the system for you. Thanks to the pre-adjusted parameterisation of the AL-KO control system, customised for the application, this is a quick and uncomplicated process.

We would be happy to assist you as far as the final inspection, and beyond, if required. For example, make the most of our retrofit services for system extensions and conversions.

Thanks to our variable AL-KO control technology, we are able to guarantee you a system solution that is optimised to your needs at an attractive price-performance ratio.

POTENTIAL APPLICATIONS

➤ **ART Starter Package:**

Is it your objective to ensure fresh, comfortable ambient air in the most convenient way possible? With the ART Starter Package we guarantee simple operation options that enable you to achieve your objective in a cost-effective manner.

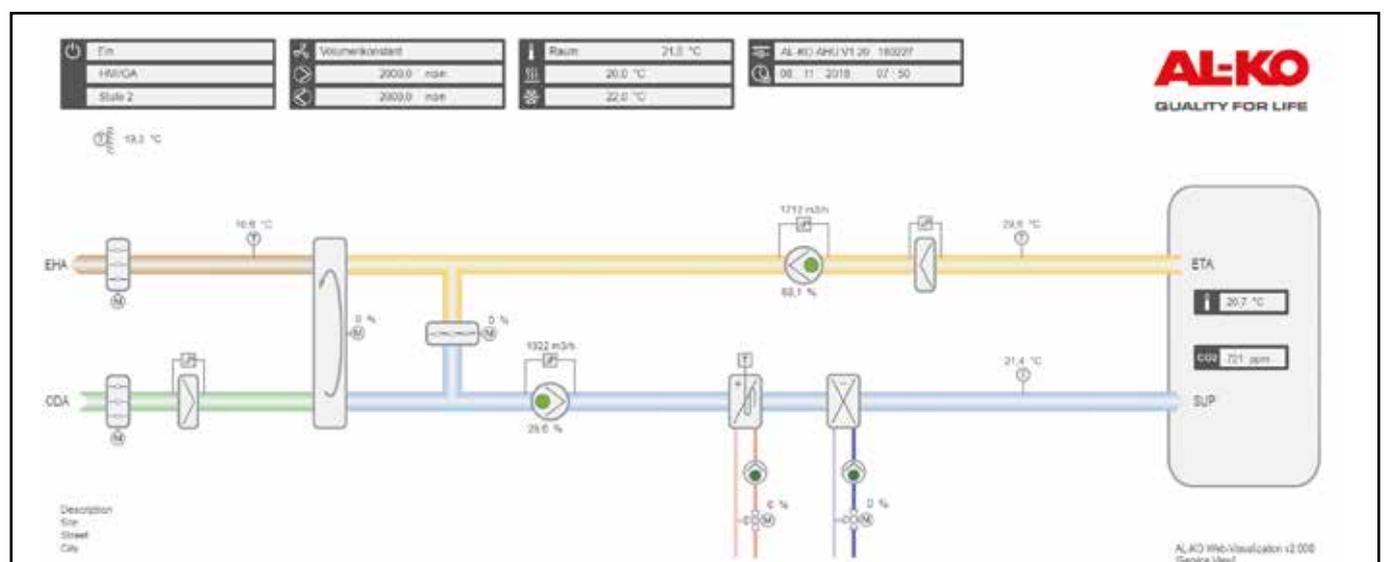
The package is ideal for uncomplicated control loops, e.g. function rooms, shops, club houses, municipal properties or workshops.

➤ **ART Pro Package:**

The ART Pro Package is perfect for demanding energy-optimised control strategies for single or multiple space temperature zones. You also have access to additional visualisation options, integration into building automation systems or special applications, such as ATEX.

Profit from our fully digitalised configuration process! We use efficient design tools to advise and support you when selecting the most suitable control system package.

System-specific visualisation based on current web technology



VERSATILITY IN COMBINATION WITH MAXIMUM OPERATIONAL CONVENIENCE

THE RIGHT CONTROL SYSTEM PACKAGE TO MEET EVERY NEED

AL-KO control technology provides various scalable solutions as control system packages tailored to your individual requirements and units:

	ART STARTER	ART PRO
Temperature regulation – advanced	x	x
Fan regulation – standard	x	x
Fan regulation – advanced		x
Space temperature zone regulation – standard		x
ECO functions – advanced		x
Comfort functions – standard	x	x
Comfort functions – advanced		x
Building protection – advanced	x	x
Air quality regulation – standard		x
Room humidity regulation – standard	x	x
Room humidity regulation – advanced		x
Web server with control schema		x
Standard operating unit		x
Room control unit – standard	x	x
Room control unit – advanced		x
Service operating unit	x	x
AL-KO remote access portal		x
Language support – standard	x	x
Language support – advanced		x
System check – standard	x	x
System check – advanced		x
Interfaces to building automation system – standard	x	x
Interfaces to building automation system – advanced		x
Flexibility of switch cabinet positioning	x	x
Switch cabinet accessories	x	x
Pre-wiring	x	x
Optional accessories for fan regulation	x	x
Optional accessories for filter monitoring	x	x
Optional accessories for dampers		x
Field units optional in ATEX model		x



ART STARTER room control unit



ART VP 4000 multi-function differential pressure transmitter



ART PRO switch cabinet operating unit

FIND OUT MORE ABOUT THE CONTENTS OF THE INDIVIDUAL SERVICE PACKAGES

Temperature regulation – advanced

- | Supply air regulation
- | Ambient air regulation
- | Supply air / space cascade
- | Supply air / space cascade – summer
- | Exhaust air regulation
- | Supply air / exhaust air cascade
- | Supply air / exhaust air cascade – summer

Fan regulation – standard

- | Duct pressure maintenance
- | Duct pressure maintenance with flow rate display
- | Flow rate regulation
- | Constant speed
- | Constant speed with flow rate display

Fan regulation – advanced

- | Supply air-guided exhaust air flow rate regulation
- | Exhaust air-guided supply air flow rate regulation

Space temperature zone regulation – standard

- | Application – zone regulation

ECO functions – advanced

- | Summer night cooling
- | Temperature reduction via time programme
- | Ventilation compensation via external temperature
- | Enthalpy recovery
- | HRC efficiency display

Comfort functions – standard

- | Supply air limitation
- | 2-step fan setpoint switching
- | Presence detector
- | Hygrostat
- | Time program

Comfort functions – advanced

- | Temperature boost – heating
- | Temperature boost – cooling
- | Temperature boost – heating and cooling
- | Priority on temperature during dehumidification
- | External setpoint specification

Building protection – advanced

- | Release of gas shut-off valve
- | Cooling down protection
- | Overheat protection
- | Fire damper management
- | Smoke alarm management

Air quality regulation – standard

- | Exhaust air quality regulation
- | Ambient air quality regulation

Room humidity regulation – standard

- | Exhaust air regulation
- | Space regulation

Room humidity regulation – advanced

- | Supply air regulation
- | Supply air / exhaust air cascade
- | Supply air / space cascade

Web server with control schema

- | HMI- visualisation

Standard operating unit

- | HMI – basic

Room control unit – standard

- | 1 room control unit

Room control unit – advanced

- | 2 room control units

Service operating unit

- | 1 plant room control unit



AL-KO remote access portal

- | Status request of systems via online map service
- | Energy optimisation and many other features



Language support – standard

- | HMI language: EN



Language support – advanced

- | HMI languages: DE | SE | DK | FI | PL | RU | ES | IT | FR | CN | NL | TK | LT



System check – standard

- | Heater return frost protection sensor
- | HRC frost protection



System check – advanced

- | Emergency stop input
- | Data logging



Interfaces to building automation system – standard

- | Remote on/off, status message



Interfaces to building automation system – advanced

- | Bus module BACnet IP
- | Bus module BACnet MSTP
- | Bus module LON
- | Modbus



Flexibility of switch cabinet positioning

- | Integrated
- | External installation
- | Uninstalled



Switch cabinet accessories

- | 3-phase display
- | Overvoltage protection
- | Short circuit resistance
- | Lighting
- | Heating
- | Fan
- | On-site consumer



Pre-wiring

- | Electrics – pre-wiring



Optional accessories for fan regulation

- | Pressure transmitter with display



Optional accessories for filter monitoring

- | Differential pressure display with switch contact
- | Differential pressure display with switch contact – digital display
- | Differential pressure display with switch contact – manometer



Optional accessories for dampers

- | Dampers with auxiliary contact
- | Dampers with spring return



Field units optional in ATEX model

- | Application – ATEX model

Make the most of the advantage and configure your air handling unit with the AL-KO field sales team, including optimal control system package.

We would be happy to advise you and come up with the ideal set of features for your air handling system.



EFFICIENT DESIGN SUPPORT

We are your systems expert! Design your air handling unit, including the appropriately customised control system, with your AL-KO contact partner. Profit from our 25+ years of experience in the field of control technology and our expert knowledge. With the intelligent AL-KO design software for units and control systems, we support you from the initial stages of design to commissioning the device and beyond.

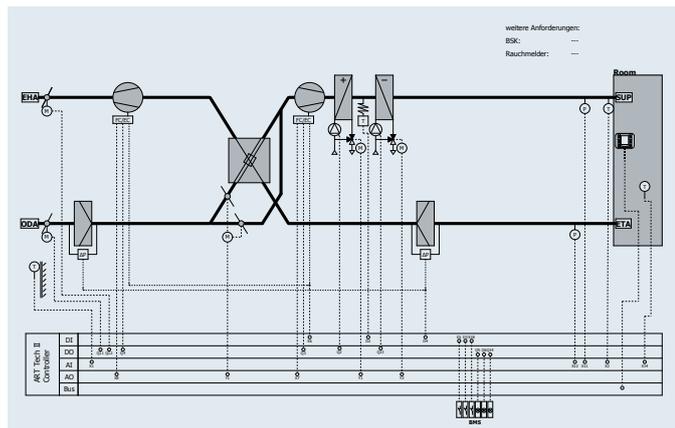
You will receive access to the design documents individually customised for your ventilation unit, such as:

- | Tender documents
- | Control schema
- | Cable route list
- | Function description
- | Circuit plan documents
- | Data point lists

This simplifies both the concept development phase, as well as the approval of the control system.



System-specific control schema and cable route list



Kabelübersicht

Unsere Angaben zu Kabeltypen und -querschnitten sind unverbindliche Richtwerte und bedürfen der Überprüfung der örtlichen Gegebenheiten durch den ausführenden Elektroinstallateur. Der ausführende Elektroinstallateur muss die Leistungen nach den gültigen örtlichen Vorschriften und LV-Anforderungen in Bezug auf Kabelart, Kabelquerschnitte, Spannungsfall, Spannungsfall, Leistungen, Verkabelung und Umgebungstemperatur überprüfen.

Kabelname	Quelle (von)	Ziel (bis)	Kabeltyp	Adresszahl	Querschnitt (mm²)	Funktionsfeld
W1	W1	W1	RS485	1	LS	Bedienung
W2	W2	W2	RS485	2	LS	Bedienung
W3	W3	W3	RS485	3	LS	Bedienung
W4	W4	W4	RS485	4	LS	Bedienung
W5	W5	W5	RS485	5	LS	Bedienung
W6	W6	W6	RS485	6	LS	Bedienung
W7	W7	W7	RS485	7	LS	Bedienung
W8	W8	W8	RS485	8	LS	Bedienung
W9	W9	W9	RS485	9	LS	Bedienung
W10	W10	W10	RS485	10	LS	Bedienung
W11	W11	W11	RS485	11	LS	Bedienung
W12	W12	W12	RS485	12	LS	Bedienung
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W99	W99	W99	RS485	99	LS	Bedienung
W100	W100	W100	RS485	100	LS	Bedienung

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Figures show configuration examples which are not available in every market.
Please ask your AL-KO advisor.

Provided by your AL-KO partner: