**Centralised ventilation unit WS 170 KBL**

Bypass model

Bypass model with preheating register, bypass, sound-optimised housing, with additional insulation and cross-counterflow heat exchanger.

Unit in left-hand version.

ISO Coarse 80 % (G4) filter in the exhaust air and ISO ePM1 55 % (F7) pollen filter in the outside air.

Patented automatic 100% bypass for passive summer night cooling with adjustable minimum supply air temperature limit.

Features

Compact, very quiet and energy-saving unit.

DC motors with integrated, automatic volumetric flow regulation for constant air volume (volumetric flow consistency).

Maximum heat recovery and time-saving adjustment.

Maximum air tightness. Good flexibility thanks to various connection options.

Sheet steel, powder coated housing.

Colour white aluminium

Inner cladding made from temperature-resistant and extremely noise- and heat-insulating plastic (EPP). The material is also characterised by its hygienic and non-hygroscopic properties. Tested by the Institut für Lufthygiene Berlin [Berlin Institute for Air Hygiene] according to VDI 6022 Part 1.

The narrow unit is particularly well-suited to installation in kitchens.

Simple filter change is possible without tools.

4 DN 125 duct connections. Can be equipped with plug-in connectors or duct bend (accessories).

Connection to KNX possible.

Connection to EnOcean possible (WS 170 KBR../WS 170 KBL..).

Integrated MODBUS interface (WS 170 KBR../WS 170 KBL..).

DIBT approval (exception WS 170..ET).

PH certification (exception for WS 170 R../WS 170 L.. and all WS 170..ET).

RLS 1 WR control unit

Included in scope of supply for all WS 170 units.

Switching the 4 ventilation levels, maintenance display, fault messages.

Optional with/without on/off switch.

Other control units can be connected in parallel.

RLS D1 WR digital control unit

Optional for WS 170 R.., WS 170 L.., WS 170 KR.. and WS 170 KL...

Control and power supply through a 2-core bus cable.

Digital status display, switching the 4 ventilation levels, time and date (weekly program, "Plus function", maintenance display and fault messages).

Plus function (summer operation): In eco mode, only the exhaust fan runs, so around 50 % less power is used.

Touch screen control unit RLS T1 WS

Optional for WS 170 KBR../WS 170 KBL...

Up to 6 operating modes possible.

2 automatic operating modes (Auto Sensor / Auto Time).

4 manual operating modes (ECO exhaust air / ECO supply air / OFF).

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The WS 170 KBR../WS 170 KBL.. units have an integrated web server and can be controlled with an app when at home or out and about, e.g. using a smartphone.

Live reports, user administration, control and setting using web tool, via tablet, laptop and PC.

Settings:

Needs-based automatic mode / Time-controlled automatic mode.

Manual operation / OFF.

ECO mode supply air or ECO mode exhaust air.

Filter queries, error messages.

Registration needed. For more info, see "www.air-home.de"

Controller

3 temperature sensors in outside -, outgoing and supply air connections.

1 combination sensor (temperature and humidity) in exhaust air connection.

Integrated excess humidity avoidance function.

Continuously variable needs-based adaptation of air volumes.

Can be extended with other PCBs (e.g. ZP 1, ZP 2).

ModBus

Units WS 170 KBR../WS 170 KBL...

Integrated MODBUS interface enables integration in the building control technology.

EnOcean

Units WS 170 KBR../WS 170 KBL...

Optional EnOcean plug-in module E-SM for integrating the ventilation unit into "EnOcean world" "www.enocean-alliance.org".

The data is transferred in the 868.3 MHz frequency band.

Only the following EnOcean Equipment Profiles (EEP) are supported by the E-SM plug-in module: EEP A5-04-01, EEP A5-09-08, EEP A5-09-04, EEP F6-02-01.

KNX

All WS 170 units can be connected to the KNX building control technology (www.knx.org).

WS 170 R../WS 170 L.. and WS 170 KR../WS 170 KL.. via an additional KNX fan coil actuator (provided by the customer).

WS 170 KBR../WS 170 KBL.. via optional KNX plug-in module K-SM accessory.

Heat exchanger/heat recovery

Highly efficient cross-counterflow heat exchanger made of plastic (PS).

Heat recovery up to 95 % and humidity recovery up to 66 %.

Hygiene certificate (no bacteria, virus growth/virus transfer) according to VDI 6022, sheet 1.

Heat exchanger can be cleaned with water, antimicrobial.

Units with enthalpy heat exchangers do not require a condensation connection.

Frost protection

Prevents the heat exchanger from freezing up at low temperatures.

Standard unit: Switching off the supply air fan.

Comfort and bypass units: Integrated, energy-saving and self-regulating PTC heat register for preheating exhaust air.

Recommendation: Combine units with heat recovery with a brine earth heat exchanger.

Fans

Forward curved centrifugal fans in the outside air or outgoing air.

Energy-efficient EC direct current motors with integrated volumetric flow consistency control.

Possibility of pressure consistency control via the optional additional circuit board ZP 2.

4 ventilation levels from 40 m³/h to 160 m³/h, can be adjusted continuously.

Mounting information

Easy, very time-saving mounting on the wall with the wall bracket included in the scope of delivery.

Housing lid can be folded up using quick-release locks.

Provide sound absorbers on the inlet and outlet sides.

Electrical connection

Ready for service.

Prepared for easy connection of sensors.

Potential-free contact e.g. for operating display.

Central inclusion in KNX/EIB bus possible.

Condensation drain

Condensation drain (3/4" hose connection or drain pipe with a diameter of 28 mm) at the bottom of the unit.

Connection to a siphon.

Sturdy, easy to clean, integrated condensate tank.

Plus function (summer operation)

WS 170, WS 170 K units.

In eco mode, only the exhaust fan runs, so around 50 % less power is used. Possible with RLS D1 WR digital control.

Technical data

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| --- | --- |
| Article: | WS 170 KBL |
| Model: | Bypass model, left |
| Number of ventilation levels: | 4 |
| Air flow volume: | 40 m³/h - 160 m³/h |
| Volumetric flow constant: | yes |
| Speed controllable: |  -  |
| Type of voltage: | Alternating current |
| Rated voltage: | 230 V |
| Frequency: | 50 Hz/60 Hz |
| Power consumption: | 21 W - 80 W At 100 Pa counter pressure |
| Imax: | 0,5 A With active 4 A frost protection heating |
| Degree of protection: | IP 00 |
| DIBT approval: | yes |
| PHI certification: | yes |
| Installation site: | Bathroom / Kitchen / Cellar / Storage tank / Jamb wall / Utility room / Heating room / Hall |
| System type: | Centralised |
| Housing material: | Sheet steel, powder coated |
| Heat exchanger material: | Synthetic material |
| Inner coating material: | Plastic EPP |
| Colour: | white aluminium |
| Weight: | 44,8 kg |
| Weight including packaging: | 50,7 kg |
| Filter class: | G4 / F7 |
| Connection diameter: | 125 mm |
| Connection diameter of condensation drain: | 3/4" hose connection or drain pipe with a diameter of 28 mm |
| Width: | 595 mm |
| Height: | 820 mm |
| Depth: | 435 mm |
| Width with packaging: | 640 mm |
| Height with packaging: | 990 mm |
| Depth with packaging: | 455 mm |
| Airstream temperature at IMax: | 50 °C |
| Ambient temperature: | 10 °C up to 40 °C |
| Degree of heat provision: | 94 % |
| Heat exchanger construction type: | Cross-counterflow |
| Bypass: | automatic |
| Frost protection: | integrated |
| Enthalpy heat exchanger: | No |
| Antifreeze circuit: | yes |
| Summer circuit: | Exhaust air |
| Filter monitoring: | with time control |
| Humidity control: | optional with HY 5, HY 5 I, HY 10 AP, HY 10 UP |
| CO2regulation: | SKD |
| Air quality control (optional): | EAQ 10/2 |
| KNX connection (optional): | to be supplied by the customer |
| MODBUS interface: | No |
| Control unit included in scope of delivery.: | RLS D1 WR |
| Control unit (optional): | RLS 1 WR |
| Wireless switch on/off (optional): | XE 1, XS 1 |
| EnOcean wireless integration (optional): | No |
| Mobile control: | No |
| Housing emission sound pressure level: | 32 dB(A) / 34 dB(A) / 35 dB(A) Spacing 1m, sound absorption 10 m² |
| Approval number: | Z-51.3-292 |
| Packing unit: | 1 piece |
| Range: | K |
| GTIN (EAN): | 4012799950868 |
| Article number: | 0095.0086 |

Manufacturer: MAICO

WS 170 KBL Centralised ventilation unit