

# WS 170 KBR



## Short description

Centralised ventilation unit with very effective heat recovery through cross-counterflow exchanger, EC motors with constant volumetric flow regulation, supply and exhaust air on the right, 4 x DN 125, including frost protection heating, bypass, RLS 1 WR control unit and mobile control by app, DIBT and passive house approval, 40 - 160 m<sup>3</sup>/h, 23 - 46 m<sup>3</sup>/h in interval mode, KNX and EnOcean connection possible, 4 x SVR 125 plug connector or 90° B90-125 elbow needed to connect folded spiral-seams ducts (order as accessories)

## Application examples

Article number 0095.0087

Low-energy house, Single-family house, Passive energy house, Living room, Office

## Technical data

Model	Bypass model, right
Number of ventilation levels	4
Air flow volume	40 m <sup>3</sup> /h - 160 m <sup>3</sup> /h
Volumetric flow constant	yes
SEC average	-38,6 kWh/(m <sup>2</sup> *a)
Energy efficiency class	A
Type of voltage	Alternating current
Rated voltage	230 V
Frequency	50 Hz/60 Hz
SPI value in accordance with DIN EN 13141-7 (A7)	0,32 Wh/m <sup>3</sup>
Power consumption	21 W - 80 W (At 100 Pa counter pressure)
Power consumption in accordance with DIN EN 13141-7 (A7)	35 W
Stand-by power consumption	< 1 W
I <sub>max</sub>	0,5 A (With active 4 A frost protection heating)
Degree of protection	IP 00
DIBT approval	yes
PHI certification	yes
Installation site	Wall
Installation site	Bathroom / Kitchen / Cellar / Storage tank / Jamb wall / Utility room / Heating room / Hall
System type	Centralised
Housing material	Galvanised sheet steel, powder coated
Heat exchanger material	Synthetic material
Inner coating material	Plastic EPP
Colour	Traffic white (RAL 9016)
Weight	44,9 kg
Weight including packaging	49,73 kg
Filter class	ISO Coarse 80 % (G4) / ISO ePM1 55 % (F7)
Connection diameter	125 mm

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Connection diameter of condensation drain	3/4" hose connection or drain pipe with a diameter of 28 mm
Width	435 mm
Height	820 mm
Depth	595 mm
Width with packaging	455 mm
Height with packaging	970 mm
Depth with packaging	640 mm
Airstream temperature at $I_{Max}$	-20 °C up to 60 °C
Ambient temperature	10 °C up to 40 °C
Max. degree of heat provision in accordance with DIN EN 13141-7 (A7)	95 %
Heat exchanger construction type	Cross-counterflow
Power of preheating register	0,74 kW
Position – exhaust air	right
Bypass	yes
Frost protection	integrated
Enthalpy heat exchanger	No
Antifreeze circuit	yes
Summer circuit	Exhaust air / supply air
Filter monitoring	with time control
Humidity control	integrated
CO <sub>2</sub> regulation	SKD
Air quality control (optional)	EAQ 10/3
KNX connection (optional)	K-SM
MODBUS interface	integrated
Control unit included in scope of delivery.	RLS 1 WR, App
Control unit (optional)	RLS T2 WS, RLS G1 WS
EnOcean wireless integration (optional)	E-SM
Mobile control	yes
Housing emission sound pressure level	32 dB(A) / 34 dB(A) / 35 dB(A) (Spacing 1m, sound absorption 10 m <sup>2</sup> )
Packing unit	1 piece
Range	K
GTIN (EAN)	4012799950875

## Sound power level in octave range

	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Total
<b>L<sub>WA2</sub>, Step 1 (dB(A))</b>	23	29	28	28	26	20	14	4	34
<b>L<sub>WA5</sub>, Step 1 (dB(A))</b>	25	36	34	34	38	30	18	5	43
<b>L<sub>WA6</sub>, Step 1 (dB(A))</b>	25	36	37	35	42	32	20	6	45

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	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Total
<b>L<sub>WA2</sub>, Level 2 (dB(A))</b>	27	28	29	29	28	21	15	3	36
<b>L<sub>WA5</sub>, Level 2 (dB(A))</b>	26	36	36	36	41	32	19	4	44
<b>L<sub>WA6</sub>, Level 2 (dB(A))</b>	26	37	39	37	44	35	23	8	46
<b>L<sub>WA2</sub>, Level 3 (dB(A))</b>	22	29	32	31	30	23	17	4	37
<b>L<sub>WA5</sub>, Level 3 (dB(A))</b>	18	35	37	37	44	37	22	8	46
<b>L<sub>WA6</sub>, Level 3 (dB(A))</b>	23	36	40	39	47	40	25	11	49

L<sub>WA2</sub>= housing sound power level in dB.

L<sub>WA5</sub>= free inlet sound power level in dB.

L<sub>WA6</sub>= free outlet sound power level in dB.

L<sub>WA5</sub>, L<sub>WA6</sub> = sound power level emitted to the free surroundings. Measured at a subsequent operating point on the connections facing the room. L<sub>WA5</sub> Exhaust air connections, L<sub>WA6</sub> Supply air connections.

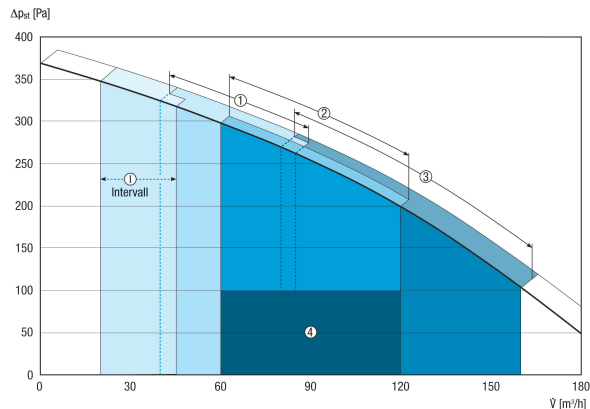
Operating point, level 1: Air volume 70 m³/h and external pressure 100 Pa

Operating point, level 2: Air volume 100 m³/h and external pressure 100 Pa

Operating point, level 3: Air volume 130 m³/h and external pressure 100 Pa

In accordance with DIN 45635, Part 38, April 1986.

## Characteristic curve

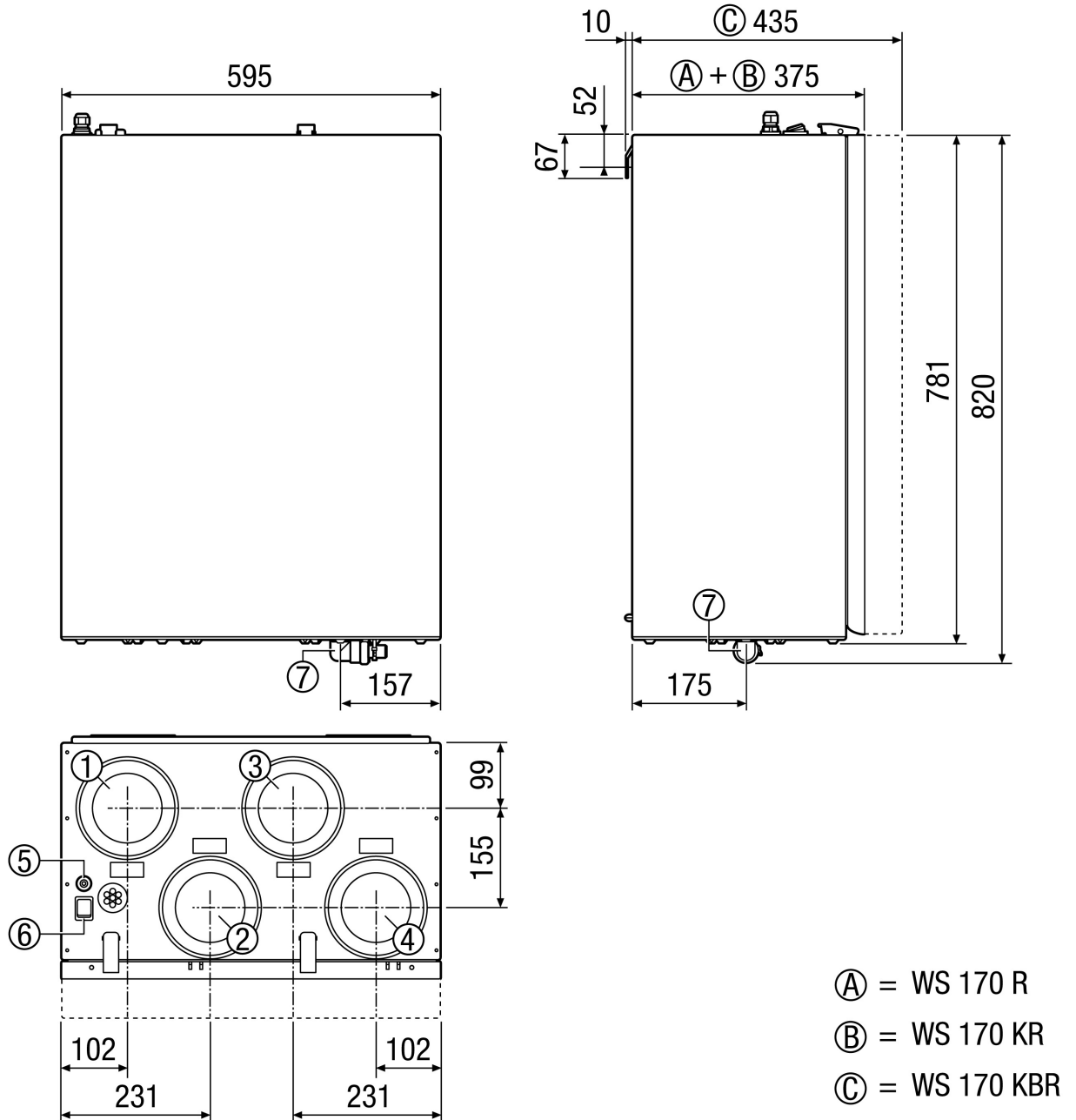


I - Interval / vacation operation for humidity protection

- ① Reduced ventilation
- ② Nominal ventilation
- ③ Intensive / Party operation
- ④ Recommended setting range

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Dimensioned drawing [mm]



- ① DN 125 outgoing air
- ② DN 125 outside air
- ③ DN 125 exhaust air
- ④ DN 125 supply air
- ⑤ Cable screw-connection
- ⑥ Main switch
- ⑦ Condensation connection