

# WS 320 KBR



## Short description

Centralised, highly-efficient ventilation units with EC fans, constant volumetric flow regulation, including preheating register, bypass and cross-counterflow heat exchanger, supply and exhaust air on right, air volume 80 - 320 m<sup>3</sup>/h, connection diameter 4 x DN 160, 4 SVR 160 plug connectors needed to connect folded spiral-seams ducts, including RLS 1 WR control panel, MAICO APP for mobile unit control, DIBT approval, KNX, Modbus, Loxone and EnOcean connection possible

## Application examples

Low-energy house, Living room

Article number 0095.0264

## Technical data

|  |  |
|--|--|
| Air flow volume  | 80 m <sup>3</sup> /h - 320 m <sup>3</sup> /h |
| SEC average  | -41,6 kWh/(m <sup>2</sup> *a)                |
| Energy efficiency class                                  | A  |
| Type of voltage  | Alternating current                          |
| Rated voltage  | 230 V  |
| Frequency  | 50 Hz/60 Hz                                  |
| Power consumption in accordance with DIN EN 13141-7 (A7) | 37 W   |
| Stand-by power consumption                               | < 1 W  |
| I <sub>max</sub>   | 11 A   |
| Degree of protection                                     | IP 40  |
| DIBT approval  | Yes  |
| PHI certification  | Yes  |
| SPI value  | 0,22 Wh/m <sup>3</sup>                       |
| Installation site  | floor / wall                                 |
| 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   | 67 kg  |
| Weight including packaging                               | 79,19 kg                                     |
| Filter class   | ISO Coarse 85 % (G4) / ISO ePM1 80 % (F7)    |
| Connection diameter                                      | 160 mm                                       |
| Connection diameter of condensation drain                | 1 1/2" (screen valve)                        |
| Width  | 841 mm                                       |
| Height   | 857 mm                                       |
| Depth  | 598 mm                                       |
| Width with packaging                                     | 900 mm                                       |
| Height with packaging                                    | 1.120 mm                                     |

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|--|--|
| Depth with packaging   | 650 mm   |
| Airstream temperature at $I_{Max}$                                   | -20 °C up to 40 °C   |
| Max. degree of heat provision in accordance with DIN EN 13141-7 (A7) | 96 %   |
| Heat exchanger construction type                                     | Cross-counterflow  |
| Power of preheating register   | 1,8 kW   |
| Position – exhaust air   | right  |
| Bypass   | Yes  |
| Frost protection   | integrated   |
| Enthalpy heat exchanger  | No   |
| Antifreeze circuit   | Yes  |
| Summer circuit   | ECO exhaust air / ECO supply air                           |
| Filter monitoring  | with time control  |
| Humidity control   | integrated   |
| CO <sub>2</sub> regulation (optional)                                | 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                                | 36 dB(A) (Spacing 1m, sound absorption 10 m <sup>2</sup> ) |
| Approval number  | Z-51.3-382   |
| Packing unit   | 1 piece  |
| Range  | K  |
| GTIN (EAN)   | 4012799952640  |

## 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> (dB(A))</b> | 19    | 29     | 39     | 40     | 38    | 30    | 20    | 20    | 44    |
| <b>L<sub>WA5</sub> (dB(A))</b> | 35    | 35     | 34     | 33     | 37    | 28    | 15    | 15    | 42    |
| <b>L<sub>WA6</sub> (dB(A))</b> | 40    | 44     | 46     | 45     | 46    | 29    | 19    | 16    | 52    |

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

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

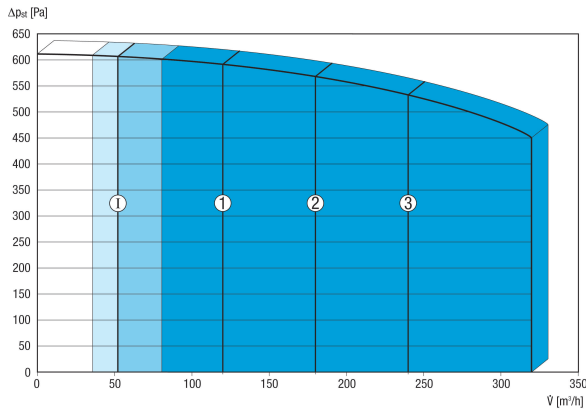
L<sub>WA6</sub>= free outlet sound power level in dB.

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: Reference volumetric flow 210 m<sup>3</sup>/h and external pressure 50 Pa

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## Characteristic curve



The figures shown indicate the preset ventilation levels ("factory settings").

1 = 120 m³/h, reduced ventilation (RV)

2 = 180 m³/h, nominal ventilation (NV)

3 = 240 m³/h, intensive ventilation (IV)

I = Interval or "humidity protection operation" depending on RV

Individual settings available:

RV = 80 m³/h - 320 m³/h

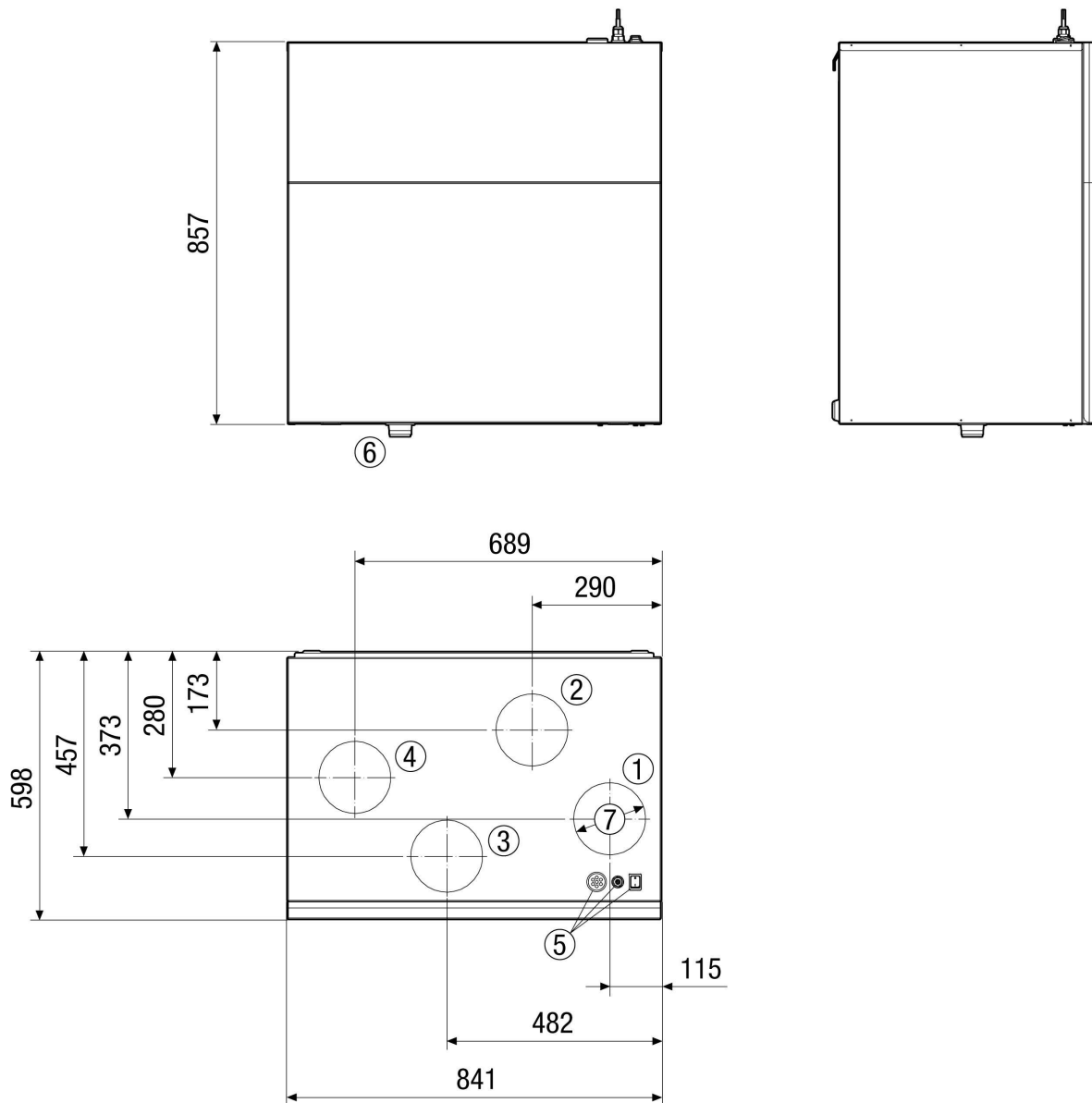
NV = 80 m³/h - 320 m³/h

IV = 80 m³/h - 320 m³/h

Essential condition: RV < NV < IV !

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Dimensioned drawing [mm]



- ① DN 160 supply air
- ② DN 160 exhaust air
- ③ DN 160 outside air
- ④ DN 160 outgoing air
- ⑤ Unit switches / electric connections
- ⑥ Condensation drain
- ⑦ for DN 160 plug connector