

WS 250



Short description

Centralised ventilation unit with very effective heat recovery, EC motors with constant volumetric flow regulation, 4 x DN 160, including digital control unit, frost protection heating, bypass, DIBT and passive energy house approval, 100 - 250 m³/h, KNX connection possible

Application examples

Single-family house, Passive energy house, Office, Waiting room

Article number 0095.0050

Technical data

Number of ventilation levels	3
Air flow volume	100 m ³ /h - 250 m ³ /h
Volumetric flow constant	yes
Speed controllable	–
SEC average	-32,4 kWh/(m ² *a)
Energy efficiency class	B
Type of voltage	Alternating current
Rated voltage	230 V
Frequency	50 Hz/60 Hz
Power consumption	30 W - 95 W (At 100 Pa counter pressure)
I _{max}	6,9 A (With active frost protection heating)
Degree of protection	IP 00
Electrical plug-type connection	Earthing contact
DIBT approval	yes
PHI certification	yes
Installation site	Cellar / Storage tank / Jamb wall / Utility room / Heating room
System type	Centralised
Heat exchanger material	Synthetic material
Colour	Pure white, similar to RAL 9010
Weight	79 kg
Weight including packaging	87,5 kg
Filter class	G4 / F7 / G4 / F7
Connection diameter	160 mm
Connection diameter of condensation drain	1/2" hose connection
Width	759 mm
Height	854 mm
Depth	531 mm
Width with packaging	780 mm
Height with packaging	985 mm

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Depth with packaging	550 mm
Airstream temperature at I_{Max}	50 °C
Degree of heat provision	92 %
Heat exchanger construction type	Cross-counterflow
Bypass	automatic
Frost protection	integrated
Enthalpy heat exchanger	optional (WSET 250)
Antifreeze circuit	yes
Summer circuit	Exhaust air
Filter monitoring	pressure controlled
Humidity control	optional with HY 5, HY 5 I, HY 10 AP, HY 10 UP
CO ₂ regulation (optional)	SKD + relay (supplied by the customer)
Air quality control (optional)	EAQ 10/1
KNX connection (optional)	to be supplied by the customer
MODBUS interface	No
Control unit included in scope of delivery.	yes
Control unit (optional)	No
Wireless switch on/off (optional)	XE 1, XS 1
EnOcean wireless integration (optional)	No
Mobile control	No
Housing emission sound pressure level	36 dB(A) (Spacing 1m, sound absorption 10 m ²)
Approval number	Z-51.3-104
Packing unit	1 piece
Range	K
GTIN (EAN)	4012799950509

Sound power level in octave range

	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Total
L_{WA2}, Level 2 (dB(A))	29	34	29	33	24	22	20	16	38
L_{WA5}, Level 2 (dB(A))	28	37	39	40	40	40	34	26	48
L_{WA6}, Level 2 (dB(A))	18	27	26	31	39	26	17	8	41

L_{WA2}= housing sound power level in dB.

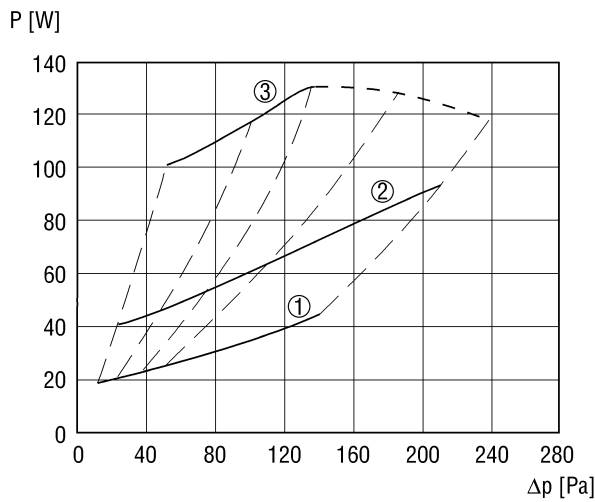
L_{WA5}= free inlet sound power level in dB.

L_{WA6}= free outlet sound power level in dB.

L_{WA5}, L_{WA6} = sound power level emitted to the free surroundings. L_{WA5} Exhaust air connections, L_{WA6} Supply air connections.
Measured at air volume of 150 m³/h.

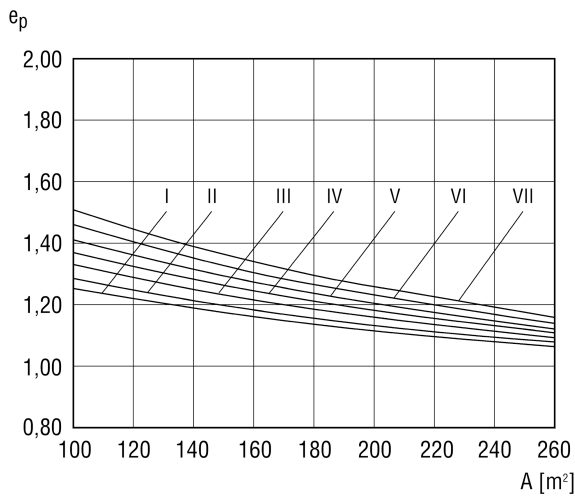
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Characteristic curve



- ① Step 1: 100 m³/ h
- ② Step 2: 150 m³/ h
- ③ Step 3: 250 m³/ h

Characteristic curve



- I - $Q_h = 30 \text{ kWh}/(\text{m}^2\text{a})$
- II - $Q_h = 40 \text{ kWh}/(\text{m}^2\text{a})$
- III - $Q_h = 50 \text{ kWh}/(\text{m}^2\text{a})$
- IV - $Q_h = 60 \text{ kWh}/(\text{m}^2\text{a})$
- V - $Q_h = 70 \text{ kWh}/(\text{m}^2\text{a})$
- VI - $Q_h = 80 \text{ kWh}/(\text{m}^2\text{a})$
- VII - $Q_h = 90 \text{ kWh}/(\text{m}^2\text{a})$

Heating system

Transfer: Radiators with 1 K thermostat valve

Storage: no storage

Distribution: heated, interior, 55°C / 45°C , controlled pump

Generation: Condensation boiler within the thermal sleeve

Heated drinking water

Storage: Indirectly heated storage tank within thermal sleeve

Distribution: Central within the building, without circulation, horizontal distribution within the thermal sleeve

Generation: central with condensation boiler

Taken into account: 12.5 kWh/(m²a)

Ventilation

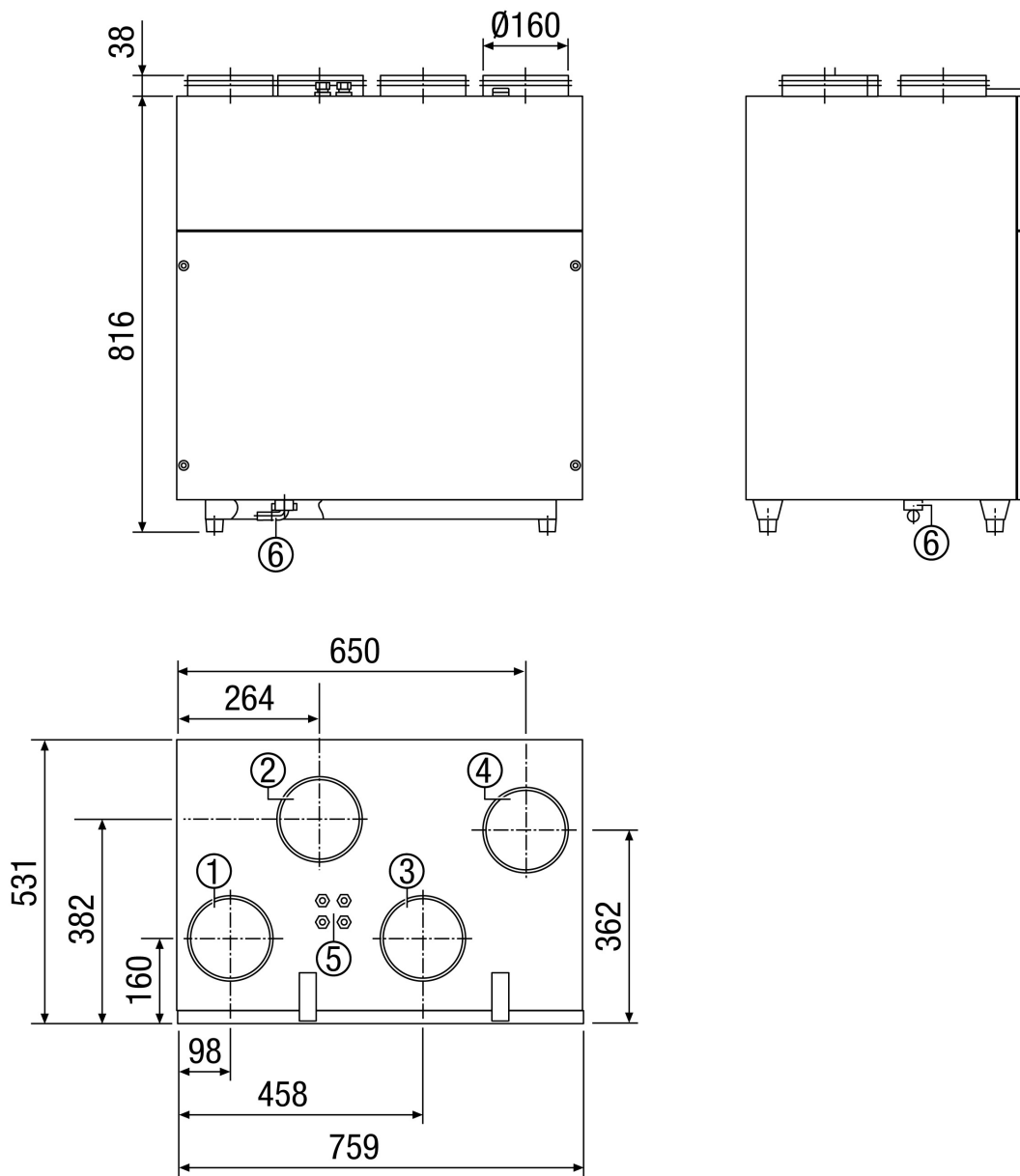
Transfer: Ventilation system with an exhaust air temperature of 20° C

Distribution: Central supply air and exhaust air system

Generation: WS 250

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Dimensioned drawing [mm]



- ① Outgoing air
- ② Supply air
- ③ Exhaust air
- ④ Outside air
- ⑤ Electrical connection
- ⑥ Condensation connection