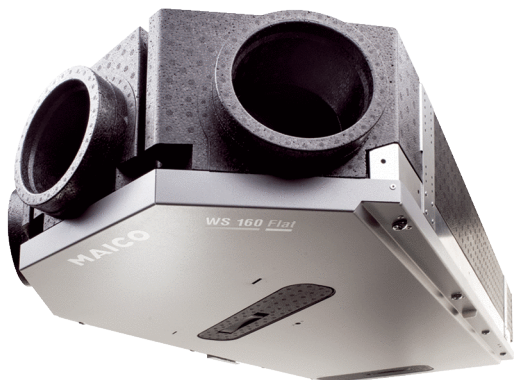


# WS 160 Flat KBET



## Short description

Centralised, highly-efficient ventilation units with EC fans and constant volumetric flow regulation, including preheating register, bypass and enthalpy heat exchanger, 2 supply air sockets and 1 exhaust air socket, air volume 40 - 160 m<sup>3</sup>/h, connection diameter 4 x DN 125, 4 SVR 125 plug connectors needed to connect folded spiral-seams ducts, including RLS 1 WR control panel, MAICO APP for mobile unit control, DIBT approval and passive house certificate, KNX, Modbus, Loxone and EnOcean connection possible

## Application examples

Low-energy house, Living room

Article number 0095.0093

## Technical data

Model	Comfort bypass model
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	-34,1 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)	0,34 Wh/m <sup>3</sup>
Power consumption in accordance with DIN EN 13141-7 (A7)	36 W
I <sub>max</sub>	4,6 A
Degree of protection	IP 00
DIBT approval	Yes
PHI certification	Yes
Installation site	Wall / ceiling
Installation site	Bathroom / Kitchen / Cellar / Storage tank / Jamb wall / Utility room / Heating room / Hall
System type	Centralised
Housing material	Plastic EPP/sheet steel
Heat exchanger material	Synthetic material
Inner coating material	Plastic EPP
Colour	black / traffic white
Weight	26,5 kg
Weight including packaging	32 kg
Filter class	ISO Coarse 80 % (G4) / ISO ePM1 55 % (F7)
Connection diameter	125 mm / 160 mm
Connection diameter of condensation drain	not required
Width	582 mm

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Height	230 mm
Depth	1.260 mm
Width with packaging	710 mm
Height with packaging	245 mm
Depth with packaging	1.365 mm
Airstream temperature at $I_{Max}$	-20 °C up to 50 °C
Degree of heat provision	84 %
Max. degree of heat provision in accordance with DIN EN 13141-7 (A7)	76 %
Heat exchanger construction type	Enthalpy cross-counterflow
Humidity recovery with enthalpy heat exchanger in accordance with DIN EN 13141-7 (A2)	53 %
Power of preheating register	0,7 kW
Position – exhaust air	left/right
Bypass	Yes
Frost protection	integrated
Zone shutter	No
Enthalpy heat exchanger	Yes
Antifreeze circuit	Yes
Summer circuit	ECO exhaust air / ECO supply air
Filter monitoring	time-controlled (controlled by differential pressure as option)
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	37 dB(A) (Spacing 1m, sound absorption 10 m <sup>2</sup> )
Approval number	Z-51.4-376
Packing unit	1 piece
Range	K
GTIN (EAN)	4012799950936

## 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>	–	24	31	34	36	29	18	6	45
<b>L<sub>WA5</sub> (dB(A))</b>	39	42	44	40	31	17	10	3	52
<b>L<sub>WA6</sub> (dB(A))</b>	39	42	43	40	39	20	15	4	53

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

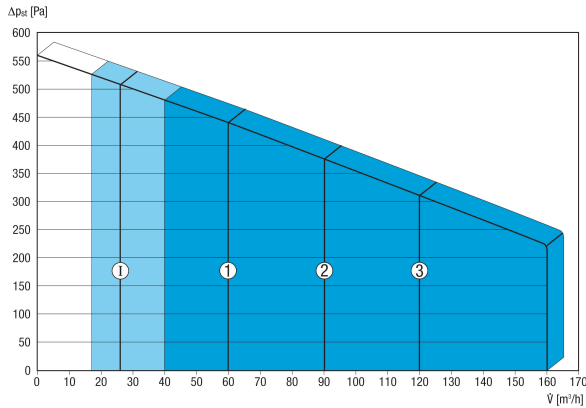
L<sub>WA5</sub>= free inlet sound power level in dB.

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

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$L_{WA5}$ ,  $L_{WA6}$  = sound power level emitted to the free surroundings. Measured at a subsequent operating point on the connections facing the room.  $L_{WA5}$  Exhaust air connections,  $L_{WA6}$  Supply air connections.  
 Operating point: Reference volumetric flow 112 m<sup>3</sup>/h and external pressure 50 Pa

## Characteristic curve



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

1 = 60 m<sup>3</sup>/h, reduced ventilation (RV)

2 = 90 m<sup>3</sup>/h, nominal ventilation (NV)

3 = 120 m<sup>3</sup>/h, intensive ventilation (IV)

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

Individual settings available:

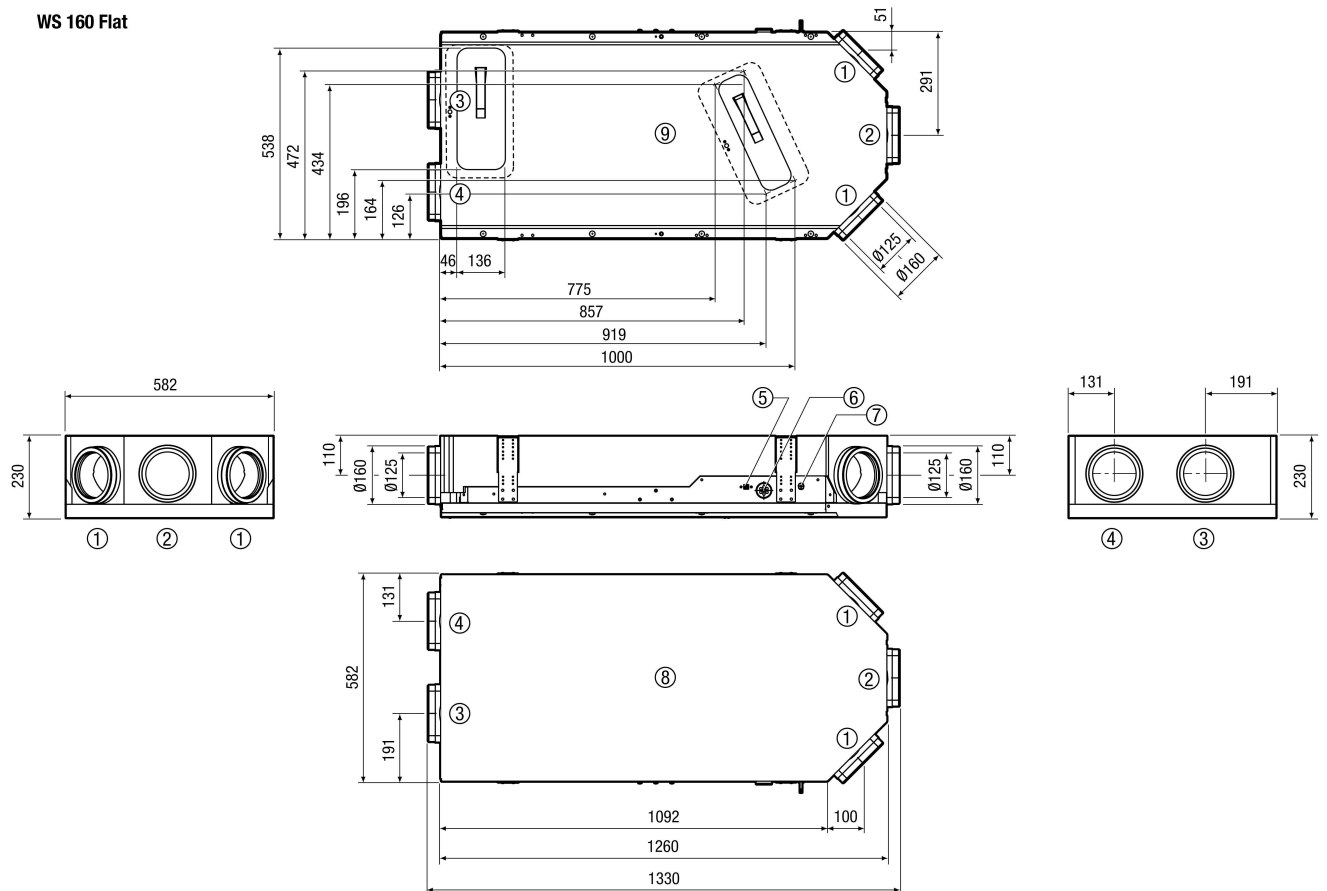
RV = 40 m<sup>3</sup>/h - 160 m<sup>3</sup>/h

NV = 40 m<sup>3</sup>/h - 160 m<sup>3</sup>/h

IV = 40 m<sup>3</sup>/h - 160 m<sup>3</sup>/h

Essential condition: RV < NV < IV !

## Dimensioned drawing [mm]



# WS 160 Flat KBET

- ① DN 125 / DN 160 supply air
- ② DN 125 / DN 160 exhaust air
- ③ DN 125 / DN 160 outside air
- ④ DN 125 / DN 160 outgoing air
- ⑤ USB connection
- ⑥ Cable feedthrough
- ⑦ Electric connections
- ⑧ View from above
- ⑨ View from below