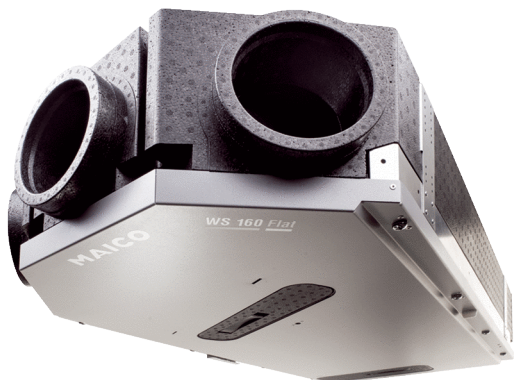


# WS 160 Flat ET



## Short description

Centralised, highly-efficient ventilation units with EC fans and constant volumetric flow regulation, including enthalpy cross-counterflow exchanger, 2 supply air connections (left and right) and 1 exhaust air connection (centre), air volume 40 - 160 m<sup>3</sup>/h, connection diameter 4 x DN 125, 4 SVR 125 plug connectors or 90° B90-125 elbow needed to connect folded spiral-seams ducts (order as accessories), the DN160 folded spiral-seam duct can also be placed directly on the EPP connection, including RLS 1 WR control unit, including integrated web server and MAICO app (air@home) for mobile unit control, live reports via web tool, DIBT approval and passive house certificate, KNX and EnOcean connection possible

Article number 0095.0090

## Application examples

Low-energy house, Living room

## Technical data

Model	Standard 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
Stand-by power consumption	< 1 W
I <sub>max</sub>	1,1 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

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Connection diameter of condensation drain	not required
Width	582 mm
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 <sub>Max</sub>	-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 %
Position – exhaust air	left/right
Bypass	No
Frost protection	No
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	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)	4012799950905

## 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.

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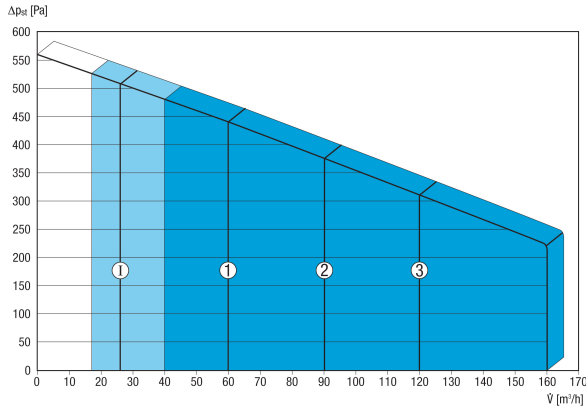
$L_{WA5}$  = free inlet sound power level in dB.

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

$L_{WA5}$ ,  $L_{WA6}$  = sound power level emitted to the free surroundings. 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

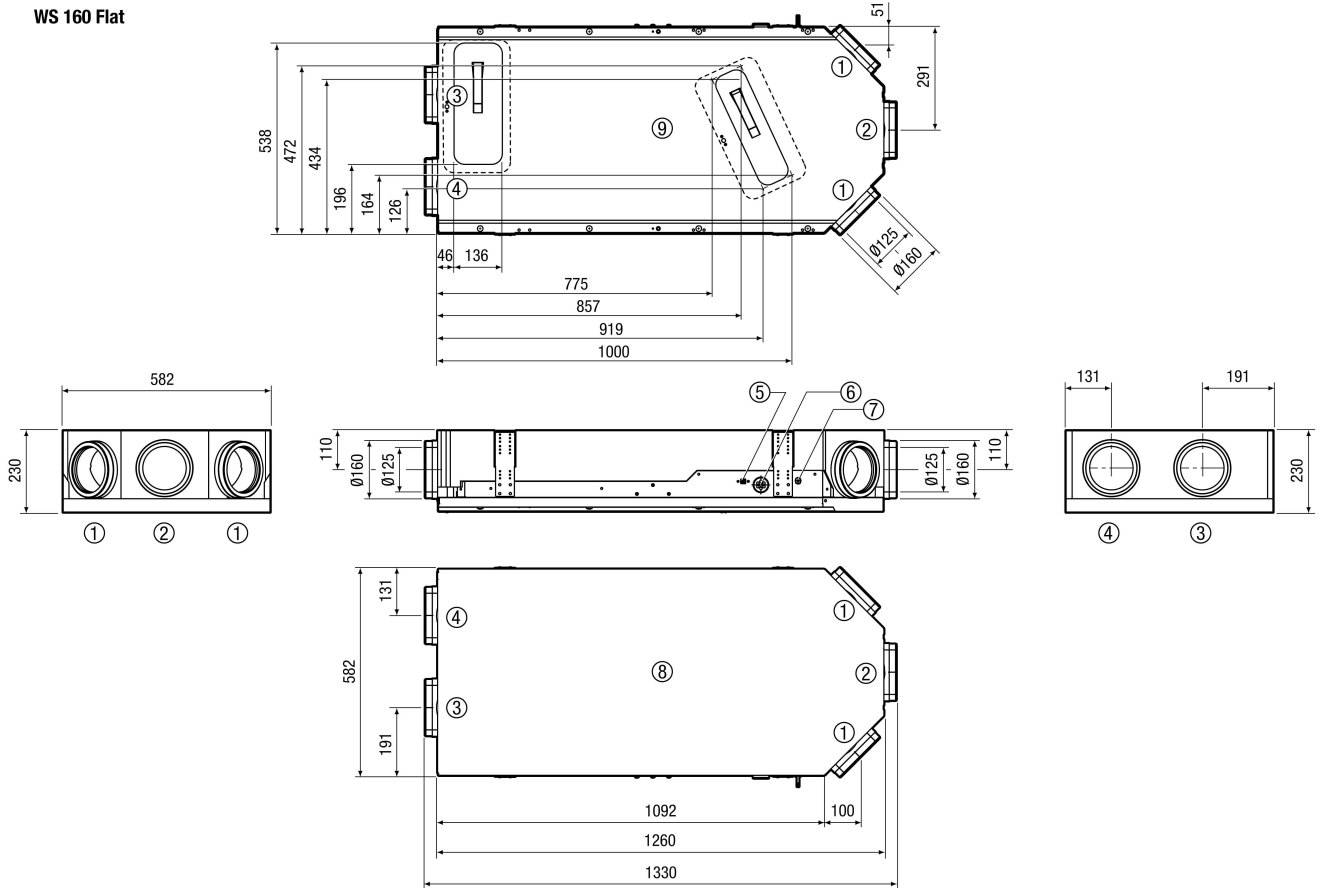
NV = 40 m<sup>3</sup>/h - 160 m<sup>3</sup>/h

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

Essential condition: RV < NV < IV !

# WS 160 Flat ET

Dimensioned drawing Left-hand version [mm]



- 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
- Dimensions, for right-hand version see [www.maico-ventilatoren.com](http://www.maico-ventilatoren.com)