

Technical data for the M-WRG-II

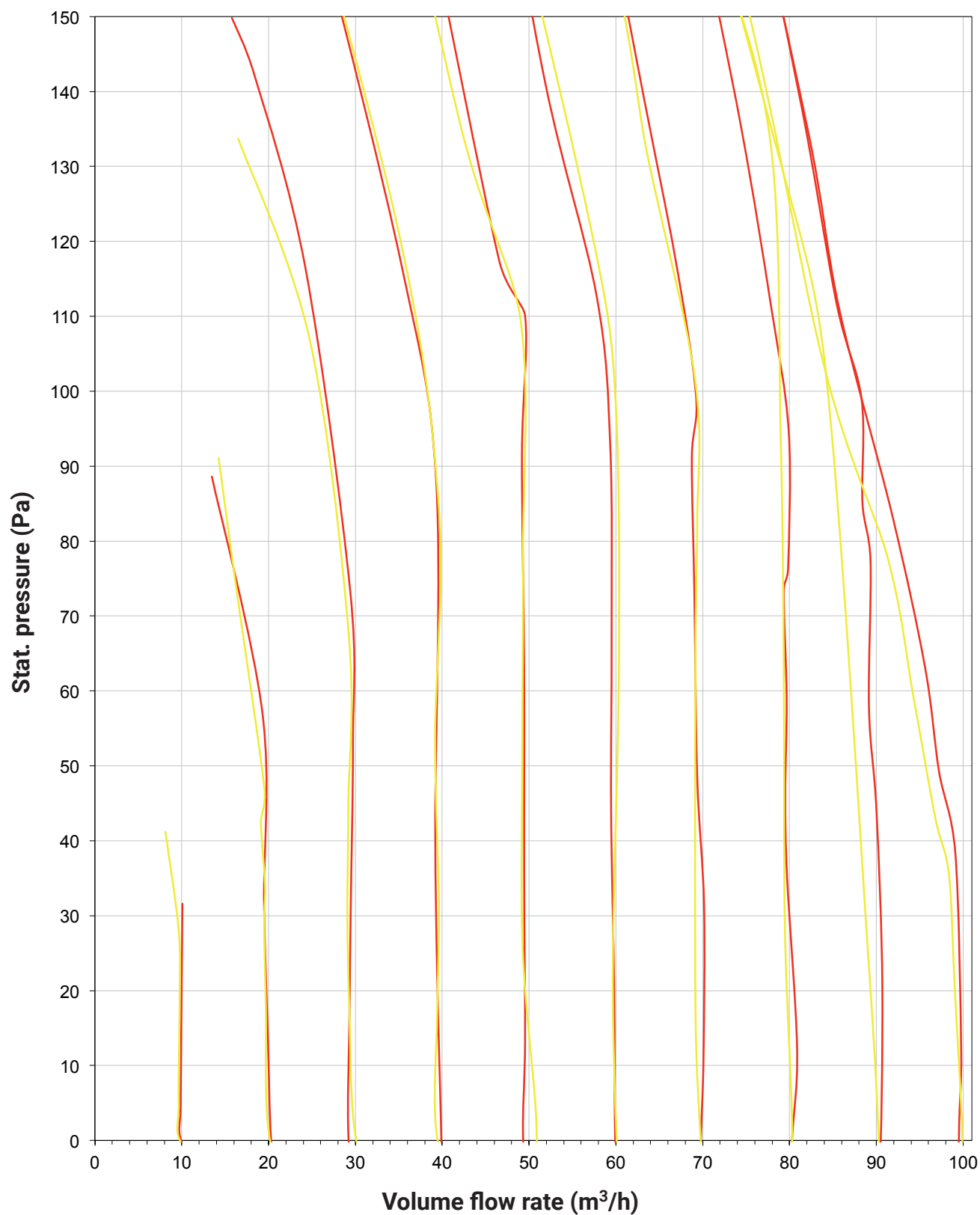
Unit types	M-WRG-II P / M-WRG-II E	M-WRG-II P (F, FC) / M-WRG-II E (F, FC)
Type of system	Decentralised, heat recuperation	
Air flow (m ³ /h)	10 to 100	
Output control	5-level on the unit, 10-level with accessories	5-level on the unit, 10-level with accessories, infinitely variable with humidity/CO ₂ sensors
Heat exchanger	Cross-counterflow / enthalpy cross-counterflow	
Max. heat recovery efficiency, η_0 , DIN EN 13141-8 (%)	94 / 87	
Effective heat recovery PHI (%), U ² version with ductwork connection	82 / 78	
Moisture recovery η_x PHI (%)	No / 55	
Motor / supply air fan / extract air fan	EC direct current, radial	
Electrical power consumption (W), free blowing	4.6 to 52.4 / 4.5 to 51.2	
Standby power consumption (W)	0.8	
Specific electrical power consumption of the fans (W/m ³ /h) at ref. vol. flow rate 70 m ³ /h, free blowing	0.33 / 0.31	
Constant volume flow rate, balanced ventilation	Yes	
Max. current consumption (A)	0.41 / 0.42	
Operating voltage (V) / mains frequency (Hz)	85 – 265 / 50 – 60	
Sound pressure level surface-mount (LpA in dB, 10 m ²)	17.5 to 48.1 / 11.6 to 46.7	
Sound pressure level flush-mount (LpA in dB, 10 m ²)	13.0 to 47.5 / 12.3 to 46.1	
Sound pressure level flush-mount with ductwork connection on extract air side (LpA in dB, 10 m ²)	12.6 to 46.4 / 12.3 to 44.6	
Sound pressure level for integrated into wall U ² with ductwork connection on extract air side (LpA in dB, 10 m ²)	6.5 to 42.1 / 11.3 to 42.6	
Sound insulation for weighted standardised sound level difference, unit in use, depending on installation version ($D_{n,e,w}$ in dB)	51 to 70	
Permitted temperature range of outdoor air during operation at a room temperature of at least 20 °C (in °C)	-18 to +40	
Permitted ambient air humidity during operation (% RH)	Up to approx. 70	
Weight (kg)	8.4 / 9.4	
Colour	White similar to RAL 9010	
Outdoor air / exhaust air connection (DN)	100	
Dimensions (W x H x D) in mm	364 x 590 x 218	
Possible installation methods	Surface-mount, flush-mount, integrated into wall U ²	
Ductwork connection possible?	Yes, with accessories	
Visible unit depth surface-mount/flush-mount/integrated into wall U ² (mm)	218 / 58 / -	
Filter type	Round filter cartridges for outdoor air and extract air	
Outdoor air / extract air filter class, optional activated charcoal filter for outdoor air (ISO 16890-1:2016-12 or EN 779: 2012-10)	ISO ePM1 60 % (F7) / ISO Coarse 60 % (G4), ISO ePM2.5 55 % (F7)	
Filter monitoring with filter change indicator	Runtime-controlled, audible and visual	
Condensate drain	Via condensate connection / not required ¹	
Fully automatic cover flap control (when switching On / Off, in Standby mode and if the power fails)	Yes	
"Unit OFF" input (smoke detector, window contact)	Yes, optional	
IP code (standard / with integrated into wall U ² installation version)	IPX4 / IPX5	
Humidity control	Optional with accessories	Yes
CO ₂ control	Optional with accessories	Yes, with -FC unit version
Automatic mode (humidity and CO ₂ control)	Optional with accessories	Yes, with -FC unit version
TÜV-tested	Yes	
Tested to/compliant with VDI 6022 sheet 1	W-377517-23-Zd	
Passivhaus certificate (PHI)	1327vs03 / 1328vs03	
National technical approval (DIBt)	Z-51.3-431	
Energy efficiency class	B/A ²	A

¹ If used for the intended use as described in the operating instructions and if not exposed to excessive humidity

² In combination with the external wireless humidity or CO₂ sensor

Pressure-volume flow rate characteristics

Supply air / extract air



— Supply air — Extract air

Variable unit functions

Functions \ Unit types without and with enthalpy		M-WRG-II functions																	
		Central																	
		Decentralised																	
		Operation at the unit			4-way wireless pushbutton switch			Wireless remote control			InControl pushbutton sensor			App			Modbus (BMS, Loxone and KNX) ¹		
		M-WRG-II P	M-WRG-II P-F	M-WRG-II P-FC	M-WRG-II P...	M-WRG-II P...F	M-WRG-II P...FC	M-WRG-II P...	M-WRG-II P...F	M-WRG-II P...FC	M-WRG-II P-T	M-WRG-II P-T-F	M-WRG-II P-T-FC	M-WRG-II P-T	M-WRG-II P-T-F	M-WRG-II P-T-FC	M-WRG-II P-M	M-WRG-II P-M-F	M-WRG-II P-M-FC
10 ventilation levels								X	X	X				X	X	X	X	X	X
5 ventilation levels		X																	
4 ventilation levels			X	X	X	X	X				X	X	X						
Extract air operation											X			X	X	X			
Supply air operation											X	X		X	X	X			
Variable extract air operation								X	X	X				X	X	X	X	X	X
Variable supply air operation								X	X	X				X	X	X	X	X	X
Humidity control (RH)			X			X						X	X						
Variable humidity control (RH)									X	X					X	X		X	X
CO2 control													X						
Variable CO2 control										X						X			X
Automatic mode RH + CO2				X			X												
Variable automatic mode RH + CO2										X						X			X
Temporary intensive ventilation		X	X	X	X	X	X				X	X	X						
Variable temporary intensive ventilation								X	X	X				X	X	X	X	X	X
Variable timer program														X	X	X	X	X	X
Control input		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Optional unit OFF input (smoke detector, 24 V window contact)		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Minimum ventilation program to DIN 18017-3, factory setting, CANNOT BE SWITCHED OFF, optional		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ventilation for moisture protection with humidity control, CANNOT BE SWITCHED OFF, optional			X	X		X	X		X	X		X	X		X	X		X	X
VOC sensor for monitoring the outdoor air quality, not in combination with minimum ventilation ²				X			X			X			X			X			X
Visual filter change indicator		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Reading the operating hours								X	X	X				X	X	X	X	X	X
Reading the operating hours with accessories		X	X	X	X	X	X				X	X	X						
Sensor values display								X	X	X				X	X	X	X	X	X
VOC supply air > CO2 extract air display ²				X												X			X
RH supply air > RH extract air display			X	X								X	X		X	X		X	X
Visual fault indicator LED / symbol		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Operating status								X	X	X				X	X	X	X	X	X
Operating status LED		X	X	X	X	X	X				X	X	X						
Frost protection function		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

¹ An M-WRG-KNX-GW (part no. 5048) is needed for KNX. For Loxone and other system suppliers, the bus cable must be installed as a Modbus RTU. You will find further details in the Modbus operating and installation instructions.

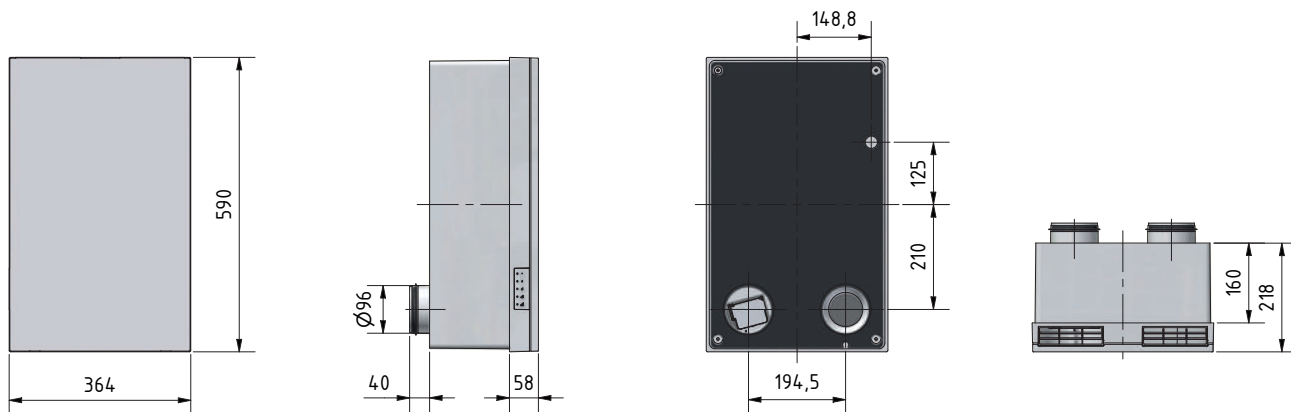
² Optional supply air VOC sensor required.

Use of customer's own three-step rotary switch, functions as for 4-way wireless pushbutton switch apart from LED display

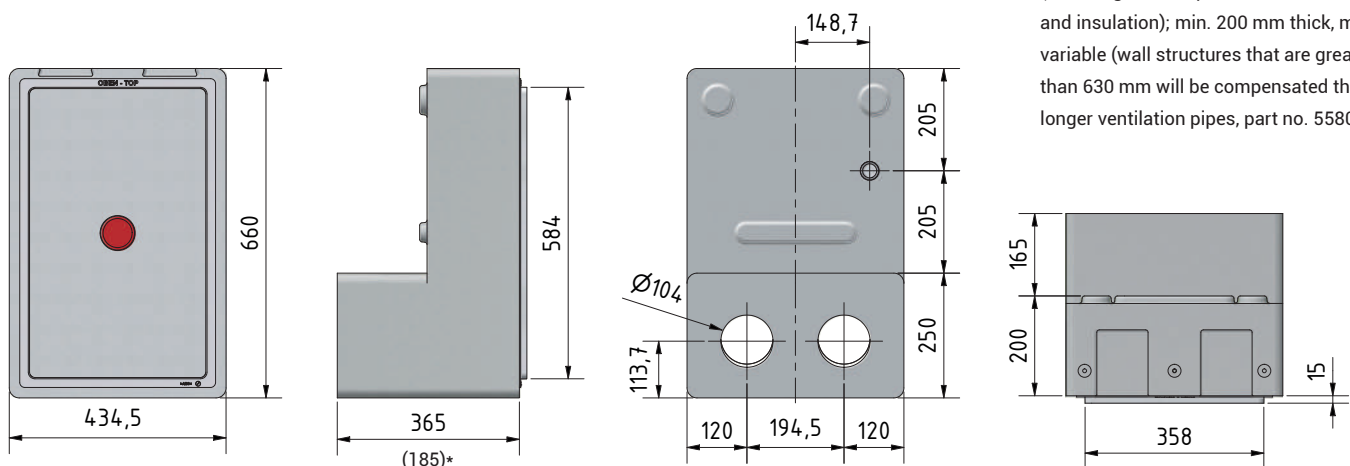
App works in combination with operation on the unit, 4-way wireless pushbutton switch, wireless remote control, InControl pushbutton sensor

Dimensions

VENTILATION UNIT



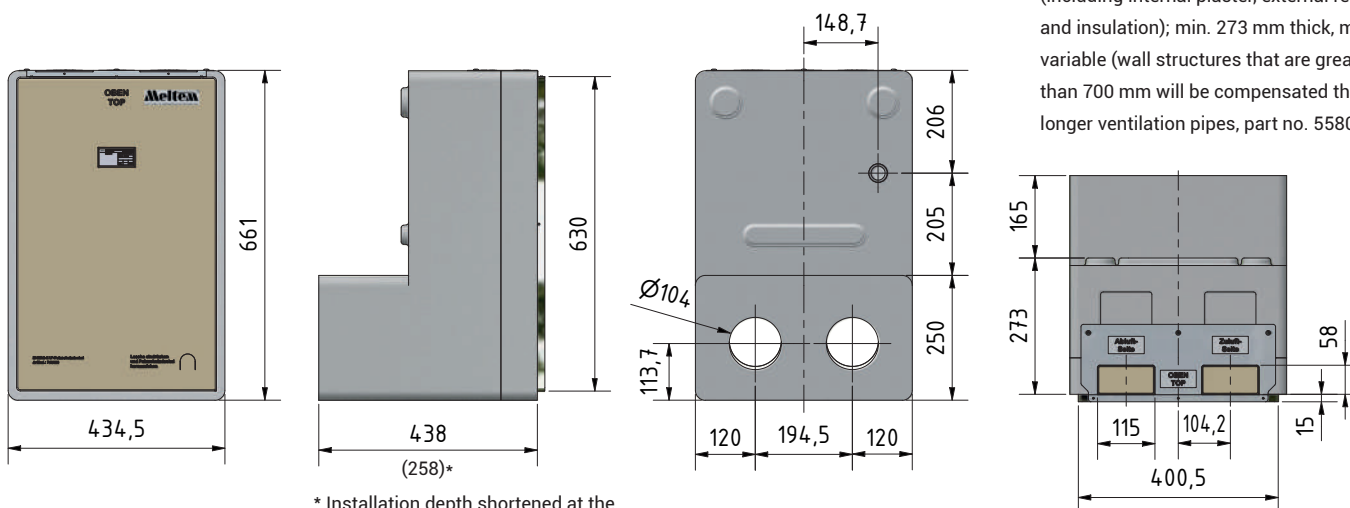
FLUSH-MOUNT INSTALLATION KIT FRAME CONSTRUCTION / SOLID CONSTRUCTION



Dimension 365 mm is variable, can be cut to length according to the wall structure (including internal plaster, external render and insulation); min. 200 mm thick, max. variable (wall structures that are greater than 630 mm will be compensated through longer ventilation pipes, part no. 5580)

* Installation depth shortened at the factory to minimum dimension of 185 mm without plastering trim

FLUSH-MOUNT INSTALLATION KIT INTEGRATED INTO WALL U²

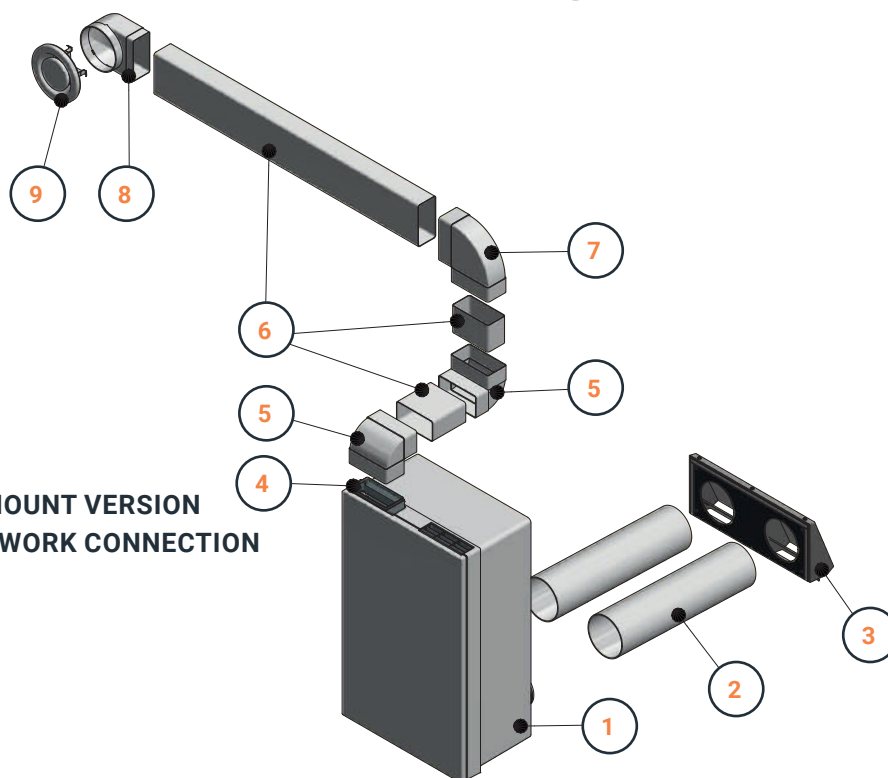
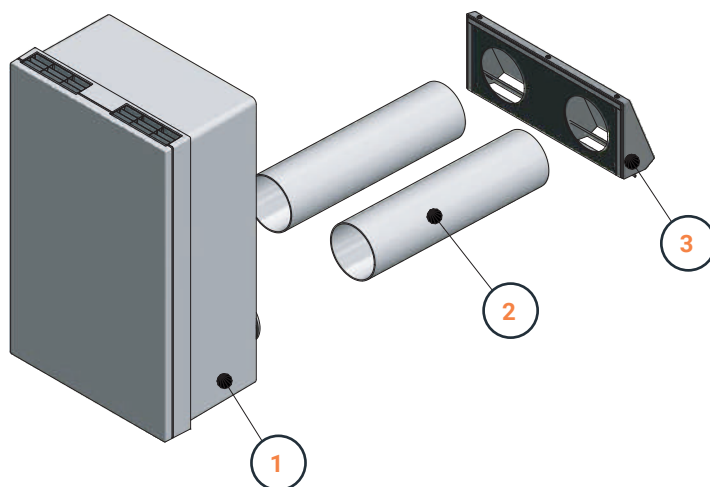


Dimension 438 mm is variable, can be cut to length according to the wall structure (including internal plaster, external render and insulation); min. 273 mm thick, max. variable (wall structures that are greater than 700 mm will be compensated through longer ventilation pipes, part no. 5580)

* Installation depth shortened at the factory to minimum dimension of 258 mm without plastering trim

System overview

SURFACE-MOUNT VERSION



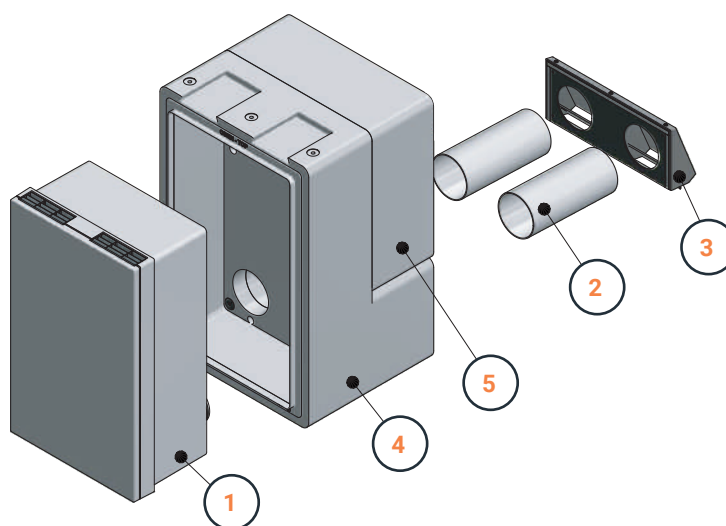
SURFACE-MOUNT VERSION WITH DUCTWORK CONNECTION

List of components

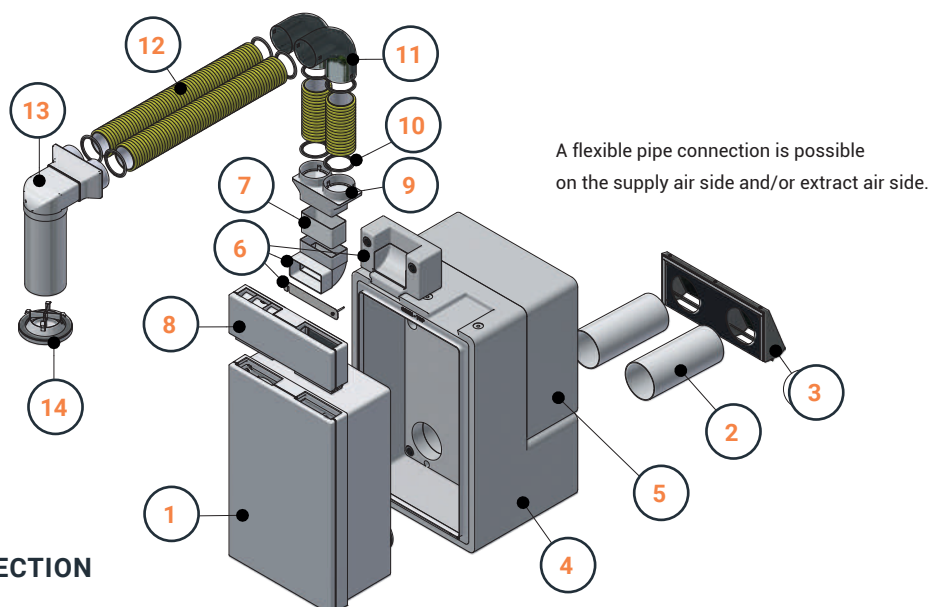
Part no.	Type	Description
1	Unit type	M-WRG-II ventilation unit (no condensate connection needed for enthalpy heat exchanger)
2	5574	M-WRG-LR 50 Outdoor air and exhaust air pipe DN 100 - 2 x 0.5 m*
3	730000	M-WRG-II ES Outer wall terminal stainless steel pod
4	731000	M-WRG-II KA Surface-mount duct adapter
5	5593	M-WRG-FK-W Flat ductwork elbow 90° vertical, sleeves on both sides
6	5590	M-WRG-FK-F Flat ductwork 110 x 54 mm
7	5592	M-WRG-FK-B Flat ductwork 90° bend, horizontal, sleeves on both sides
8	5579-10	M-WRG-RR-FK Adapter 90° DN 100 to flat ductwork 110 x 54 mm
9	5056-30/A	M-WRG-FR-TVA Poppet valve, extract air DN 100, alternatively as a plastic version

* For wall structures (including internal plaster, external render and insulation) that are more than 470 mm thick, use longer ventilation pipes, part no. 5580.

FLUSH-MOUNT VERSION



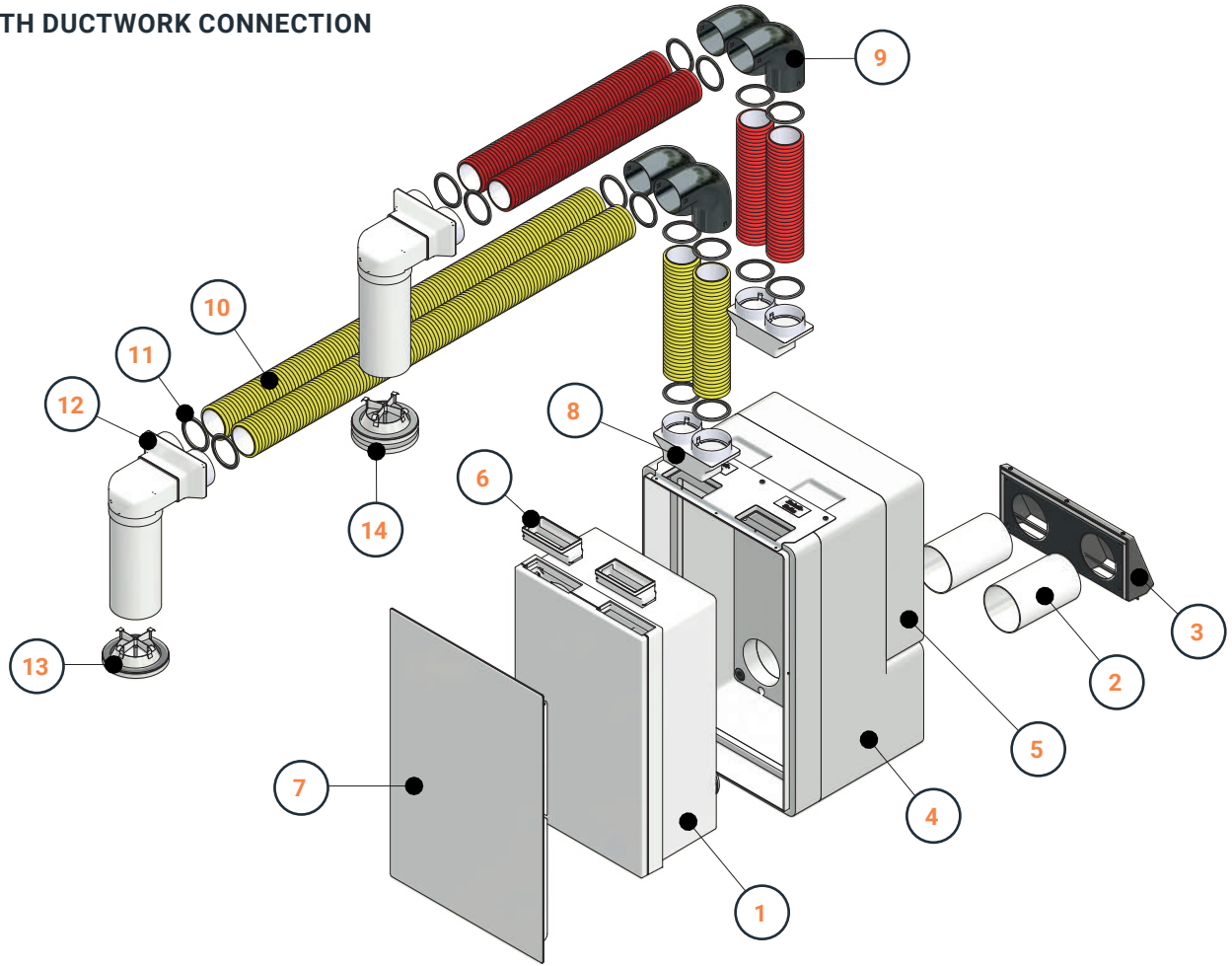
FLUSH-MOUNT VERSION WITH DUCTWORK CONNECTION



List of components

Part no.	Type	Description
1	Unit type	M-WRG-II ventilation unit (no condensate connection needed for enthalpy heat exchanger)
2 5574	M-WRG-LR 50	Outdoor air and exhaust air pipe DN 100 - 2 x 0.5 m
3 730000	M-WRG-II ES	Outer wall terminal stainless steel pod
4 711000	M-WRG-II M/MB	Flush-mount installation kit for solid construction
5 735003	M-WRG-II M/FÜ	Filler piece installation kit
6 731003	M-WRG-II AD-UP	Ductwork connection adapter for flush-mount installation kit, includes flat ductwork elbow 90°
7 5590	M-WRG-FK-F	Flat ductwork 110 x 54 mm, alternatively M-WRG-FSA fitting adapter
8 731002	M-WRG-II KA-UP	Duct adapter for flush-mount M-WRG-II units
9 5056-00/75	M-WRG-FRA75	Flexible pipe adapter 75 mm to flat ductwork system 110 x 54 mm
10 5056-41/75	M-WRG-FR-DR75	Flexible pipe sealing ring DN 75
11 5056-42/75	M-WRG-FR-B75	Flexible pipe 90° bend DN 75
12 5056-40/75	M-WRG-FR75	Flexible pipe 75 mm
13 5056-10/75	M-WRG-DK 2x75/100	Ceiling box, flexible pipe connection 2 x 75 mm to DN 100, alternatively as steel sheet version
14 5056-30/A	M-WRG-FR-TVA	Poppet valve, extract air DN 100, alternatively as a plastic version

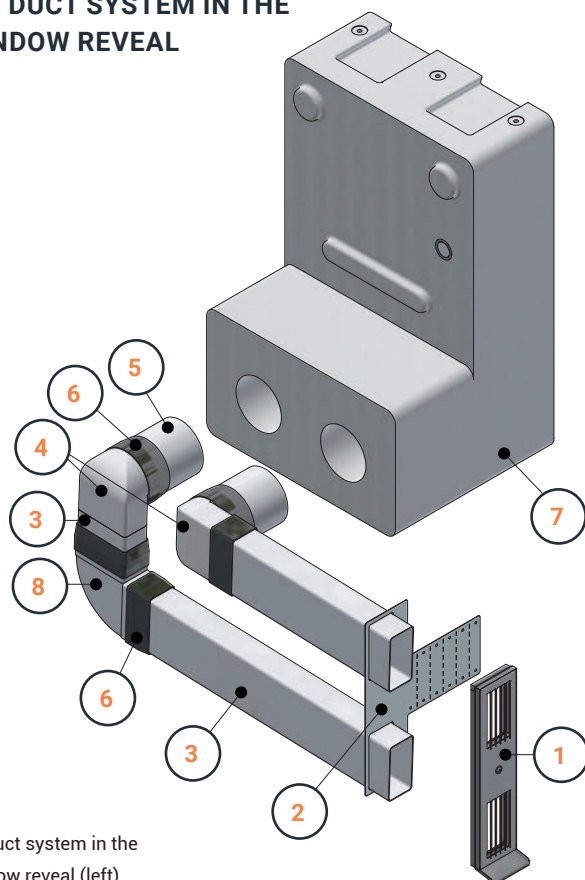
**INTEGRATED INTO WALL U²
WITH DUCTWORK CONNECTION**



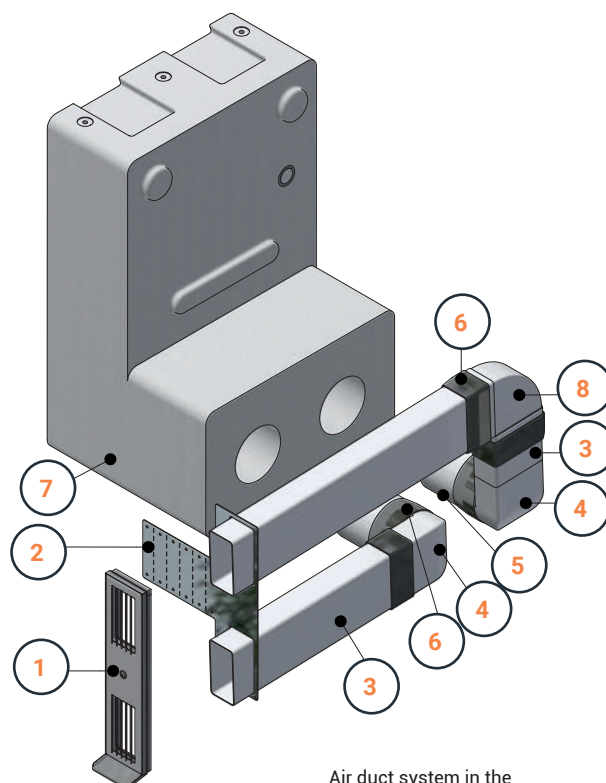
List of components

Part no.	Type	Description
1	Unit type	All M-WRG-II units with external control unit or central controller (no condensate connection needed for enthalpy heat exchanger)
2 5574	M-WRG-LR 50	Outdoor air and exhaust air pipe DN 100 - 2 x 0.5 m
3 730000	M-WRG-II ES	Outer wall terminal stainless steel pod
4 712000	M-WRG-II M-U ²	Integrated into wall U ² installation kit
5 735003	M-WRG-II M/FÜ	Filler piece installation kit
6 731001	M-WRG-II U ² AK	U ² adapter kit
7 735100	M-WRG-II U ² AD/WS	U ² cover
8 5056-00/75	M-WRG-FRA75	Flexible pipe adapter 75 mm to flat ductwork system 110 x 54 mm
9 5056-42/75	M-WRG-FR-B75	Flexible pipe 90° bend DN 75
10 5056-40/75	M-WRG-FR75	Flexible pipe 75 mm
11 5056-41/75	M-WRG-FR-DR75	Flexible pipe sealing ring DN 75
12 5056-10/75	M-WRG-DK 2x75/100	Ceiling box, flexible pipe connection 2 x 75 mm to DN 100, alternatively as steel sheet version
13 5056-30/A	M-WRG-FR-TVA	Poppet valve, extract air DN 100, alternatively as a plastic version
14 5056-30/Z	M-WRG-FR-TVZ	Poppet valve, supply air DN 100, alternatively as a plastic version

AIR DUCT SYSTEM IN THE WINDOW REVEAL



Air duct system in the window reveal (left)



Air duct system in the window reveal (right)

No condensate connection needed for enthalpy heat exchanger.

List of components

	Part no.	Type	Description
1	5159	M-WRG-EFL/AP	Outer wall terminal for window reveal, surface-mount
2	5512-01	M-WRG-EFL/MHL	Assembly aid for window reveal
3	5590	M-WRG-FK-F	Flat ductwork 110 x 54 mm
4	5579-10	M-WRG-RR-FK	Adapter 90° DN 100 to flat ductwork 110 x 54 mm
5	5574	M-WRG-LR 50	Outdoor air and exhaust air pipe DN 100 - 2 x 0.5 m
6	5599	M-WRG-BB	Butyl tape (20 m/roll)
7	711000	M-WRG-II M/MB	Flush-mount installation kit
8	5592	M-WRG-FK-B	Flat ductwork 90° bend, horizontal, sleeves on both sides