

Technical data for the M-WRG

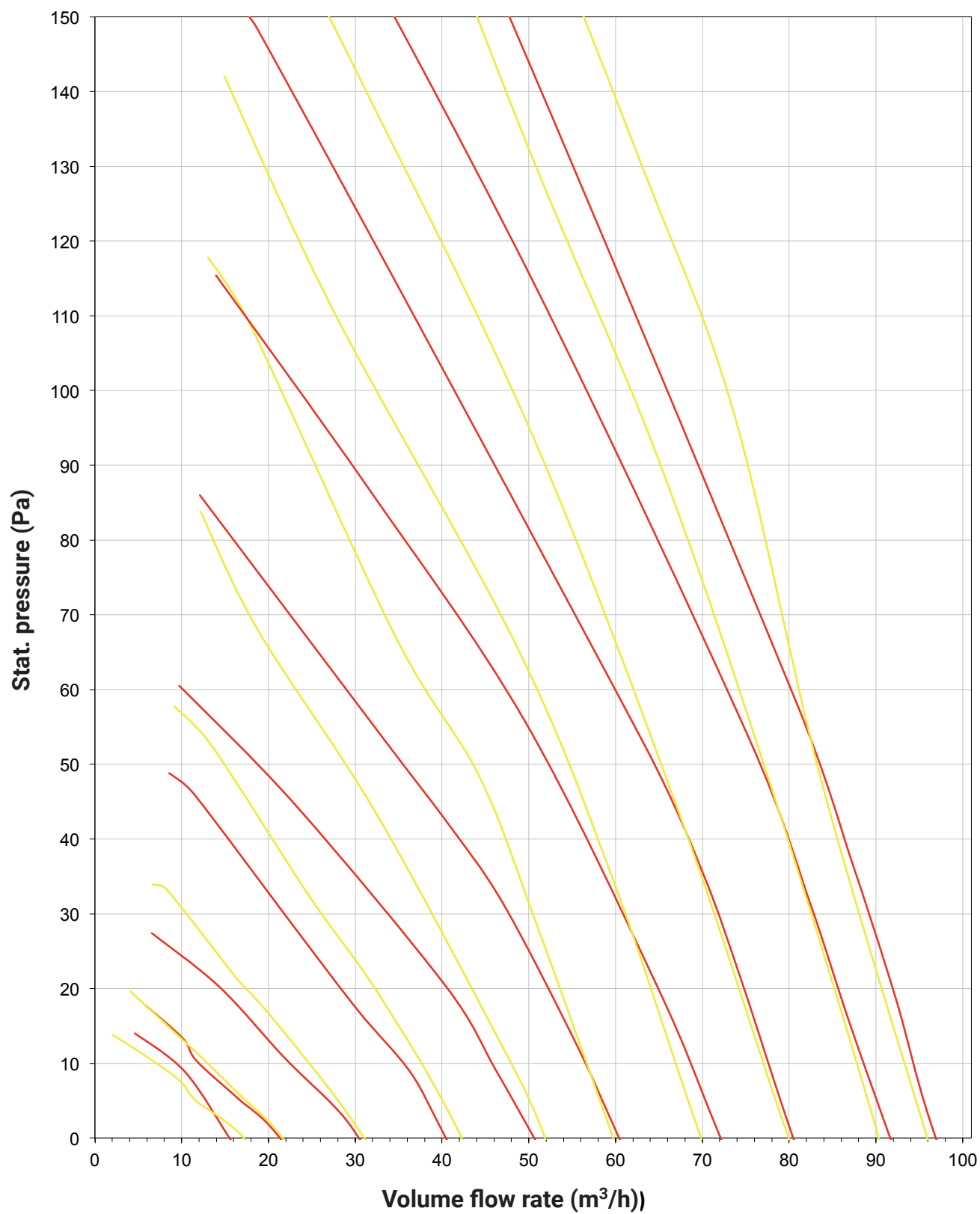
Unit types	M-WRG-S	M-WRG-S/Z-T (F, FC)
Type of system	Decentralised, heat recuperation	
Air flow (m³/h)	15 to 97	
Output control	4-level on the unit, 10-level with accessories	6-level on the pushbutton sensor or via three-step rotary switch (provided by customer), 10-level with accessories or with humidity/CO2 sensors
Heat exchanger	Cross-flow	
Max. heat recovery efficiency, η_0 , DIN EN 13141-8 (%)	71	
Moisture recovery η_x (%)	No	
Motor / supply air fan / extract air fan	EC direct current, radial	
Electrical power consumption (W), free blowing	2.5 to 37	
Standby power consumption (W)	Roughly 1 W (according to manufacturer)	
Specific electrical power consumption of the fans (W/m³/h) at 40 m³/h / ref. vol. flow rate 69 m³/h, free blowing	0.14 / 0.24	
Constant volume flow rate / balanced ventilation	No / Yes	
Max. current consumption (A)	0.16	
Operating voltage (V) / mains frequency (Hz)	85 – 265 / 50 – 60	
Sound pressure level surface-mount (LpA in dB, 10 m²)	19.0 to 46	
Sound pressure level flush-mount (LpA in dB, 10 m²)	15.5 to 46.5	
Sound pressure level for integrated into wall U² with ductwork connection on extract air side (LpA in dB, 10 m²)	12.4 to 41.9	
Sound insulation for weighted standardised sound level difference, unit in use, depending on installation version ($D_{n,e,w}$ in dB)	50 to 56	
Permitted temperature range of outdoor air during operation at a room temperature of at least 20 °C (in °C)	-22 to +40	
Permitted ambient air humidity during operation (% RH)	Up to approx. 70	
Weight (kg)	7.3	
Colour	White similar to RAL 9010	
Outdoor air / exhaust air connection (DN)	100	
Dimensions (W x H x D) in mm	388 x 409 x 196	
Possible installation methods	Surface-mount, flush-mount, integrated into wall U²	
Ductwork connection possible?	Yes, with accessories	
Visible unit depth surface-mount/flush-mount/integrated into wall U² (mm)	196 / 66 / -	
Filter type	Round filter cartridges for outdoor air and extract air	
Outdoor air / extract air filter class, optional allergy filter/activated charcoal filter for outdoor air (ISO 16890-1:2016-12 or EN 779: 2012-10)	ISO ePM10 65 % (G4) / ISO ePM10 65 % (G4), ISO ePM1 60 % (F7) / ISO ePM10 60 % (M6)	
Filter monitoring with filter change indicator	Time-dependent, audible	Time-dependent, audible or visual via InControl pushbutton sensor
Condensate drain	Via exhaust air pipe/outer wall terminal or condensate connection provided by the customer	
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)	No	
IP code (standard/with protective cap for mains switch/ with integrated into wall U2 installation version)	IPX1 / IPX4 / IPX5	
Humidity control	Optional with accessories	Optional with accessories or with F unit version
CO2 control	Optional with accessories	Optional with accessories or with FC unit version
Automatic mode (humidity and CO2 control)	Optional with accessories	Optional with accessories or with FC unit version
TÜV-tested	Yes	
Tested to/compliant with VDI 6022 sheet 1	W-377516-23-Zd¹	
Passivhaus certificate (PHI)	No	
National technical approval (DIBt)	Z-51.3-138	
Energy efficiency class	B/A²	B/A²

¹ With the optional outdoor air filter ISO ePM1 60% (F7)

² In combination with the external wireless humidity / CO2 sensor or with humidity / CO2 sensors (F, FC unit version)

Pressure-volume flow rate characteristics

Supply air / extract air



— Supply air — Extract air

Variable unit functions

		M-WRG functions															
		Central															
		Decentralised															
		Operation at the unit		4-way wireless push-button switch		Wireless remote control		InControl push-button sensor		App		Modbus (BMS, Loxone and KNX) ¹					
Unit types		M-WRG-S	M-WRG-S....-S/Z-T	M-WRG-S/Z-T-F	M-WRG-S/Z-T-FC	M-WRG-S/...S/Z-T	M-WRG-S/Z-T-F	M-WRG-S/Z-T-FC	M-WRG-S/Z-T	M-WRG-S/Z-T-F	M-WRG-S/Z-T-FC	M-WRG-S/Z-S....-S/Z-T	M-WRG-S/Z-T-F	M-WRG-S/Z-T-FC	M-WRG-S M	M-WRG-S M-F	M-WRG-S M-FC
Functions																	
10 ventilation levels						X	X	X				X	X	X	X	X	X
4 ventilation levels		X	X	X	X				X	X	X						
Extract air operation									X								
Supply air operation									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						
Variable humidity control (RH)							X	X					X	X		X	X
CO ₂ control											X						
Variable CO ₂ control								X						X			X
Automatic mode RH + CO2					X												
Variable automatic mode RH + CO2								X						X			X
Temporary intensive ventilation		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
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
Ventilation for moisture protection with humidity control, CANNOT BE SWITCHED OFF, optional				X	X		X	X		X	X		X	X		X	X
Audible/visual filter change indicator		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						
Sensor values display							X	X				X	X	X	X	X	X
RH supply air > RH extract air display										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
Operating status						X	X	X				X	X	X	X	X	X
Operating status LED			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

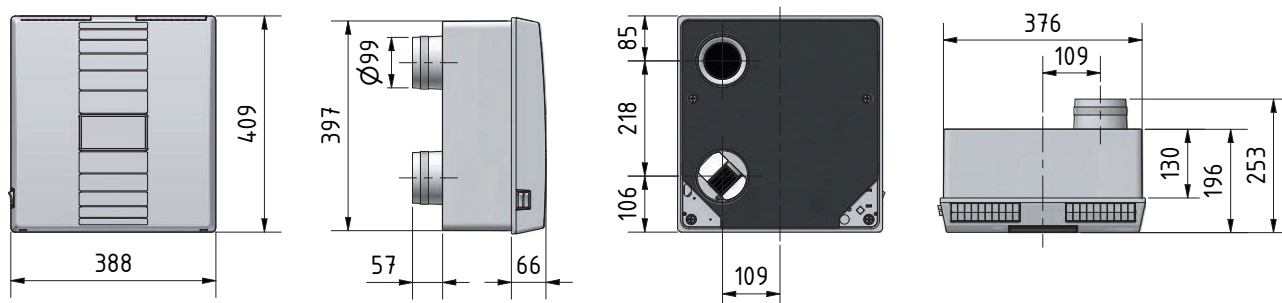
¹ An M-WRG-KNX-GW (part no. 5048) is needed for KNX. For Loxone and other system suppliers, the bus cable must be installed as a Modbus RTU. You will find further details in the Modbus operating and installation instructions.

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

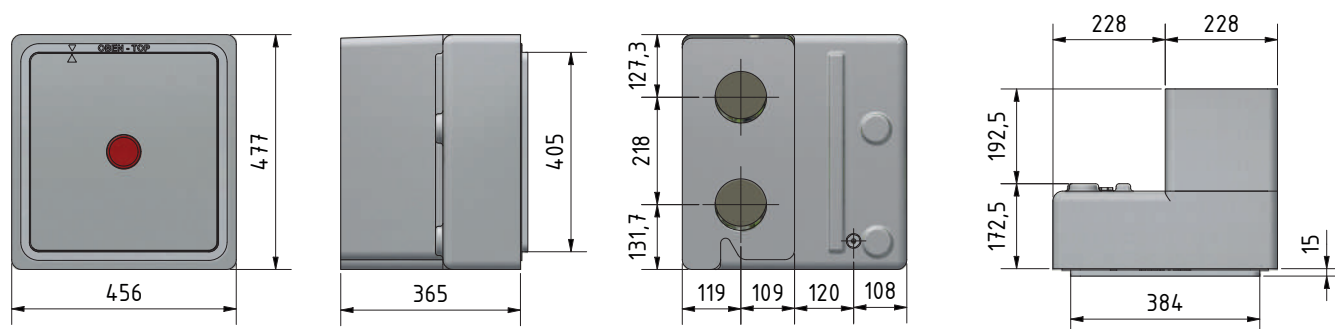
Dimensions

VENTILATION UNIT



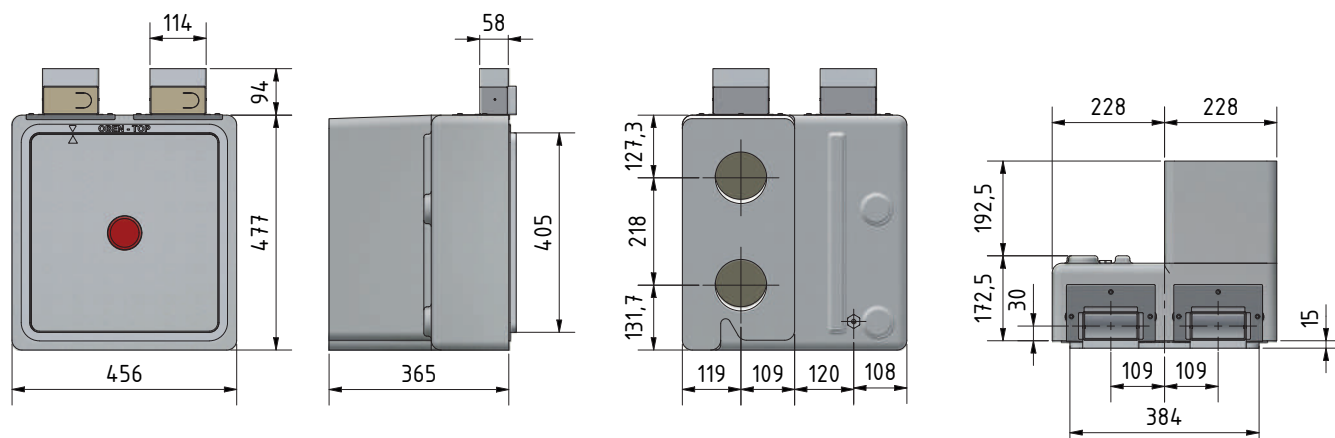
FLUSH-MOUNT INSTALLATION KIT FRAME CONSTRUCTION / SOLID CONSTRUCTION

Dimension 365 mm is variable, can be cut to length according to the wall structure (including internal plaster, external render and insulation); min. 175 mm thick, max. variable (wall structures that are greater than 600 mm will be compensated through longer ventilation pipes, part no. 5580)



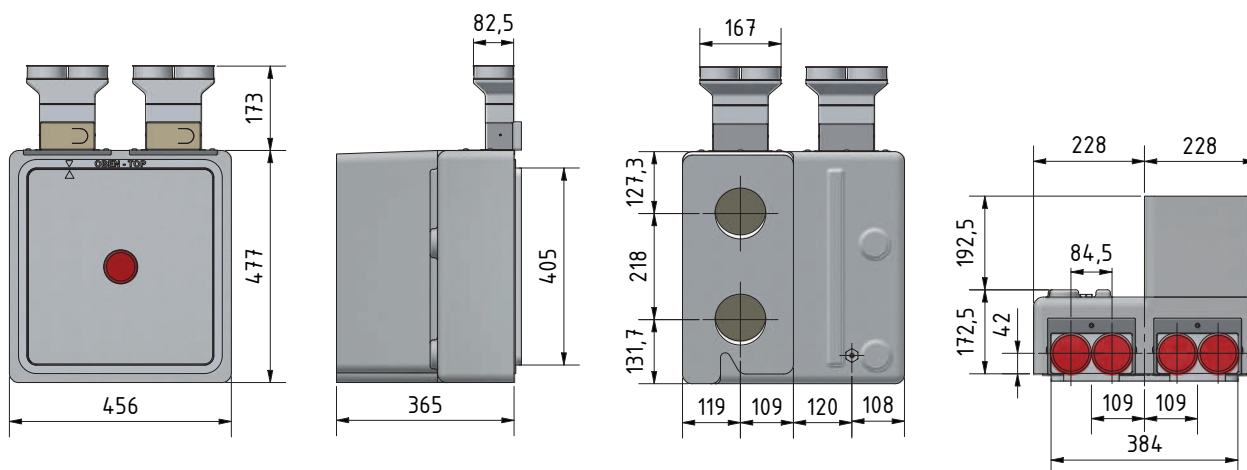
Installation depth with plastering trim at least 187.5 mm (solid construction only)

FLUSH-MOUNT INSTALLATION KIT WITH FLAT DUCTWORK CONNECTION



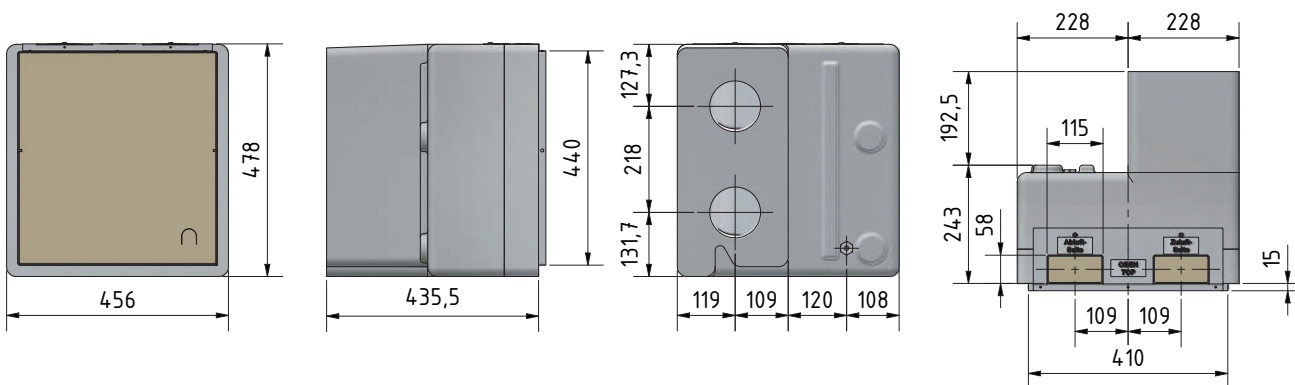
Installation depth with plastering trim at least 187.5 mm (solid construction only)

FLUSH-MOUNT INSTALLATION KIT WITH FLEXIBLE PIPE CONNECTION



Installation depth with plastering trim at least 187.5 mm (solid construction only)

U² FLUSH-MOUNT INSTALLATION KIT

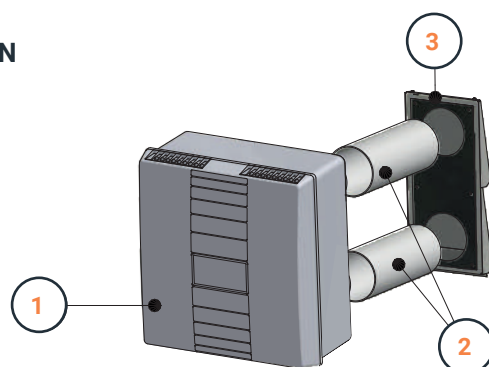


Dimension 435.5 mm is variable, can be cut to length according to the wall structure (including internal plaster, external render and insulation);
min. 243 mm thick, max. variable (wall structures that are greater than 670 mm will be compensated through longer ventilation pipes, part no. 5580)

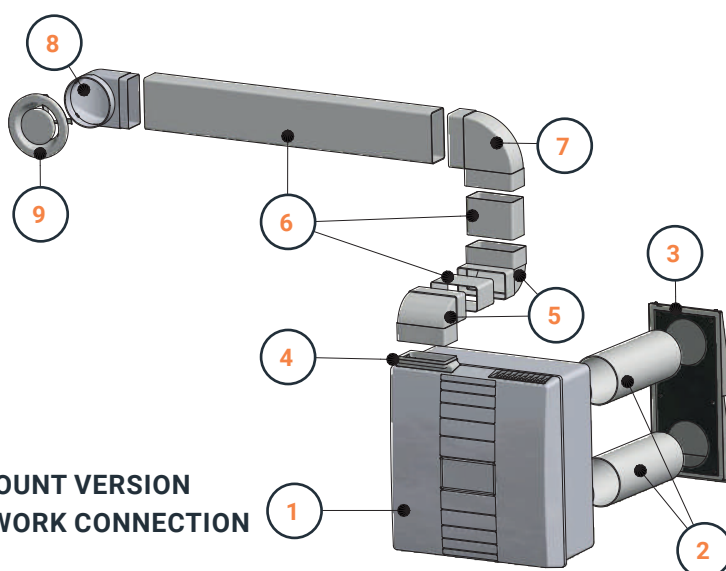
Installation depth with plastering trim at least 258 mm (solid construction only)

System overview

SURFACE-MOUNT VERSION



SURFACE-MOUNT VERSION WITH DUCTWORK CONNECTION

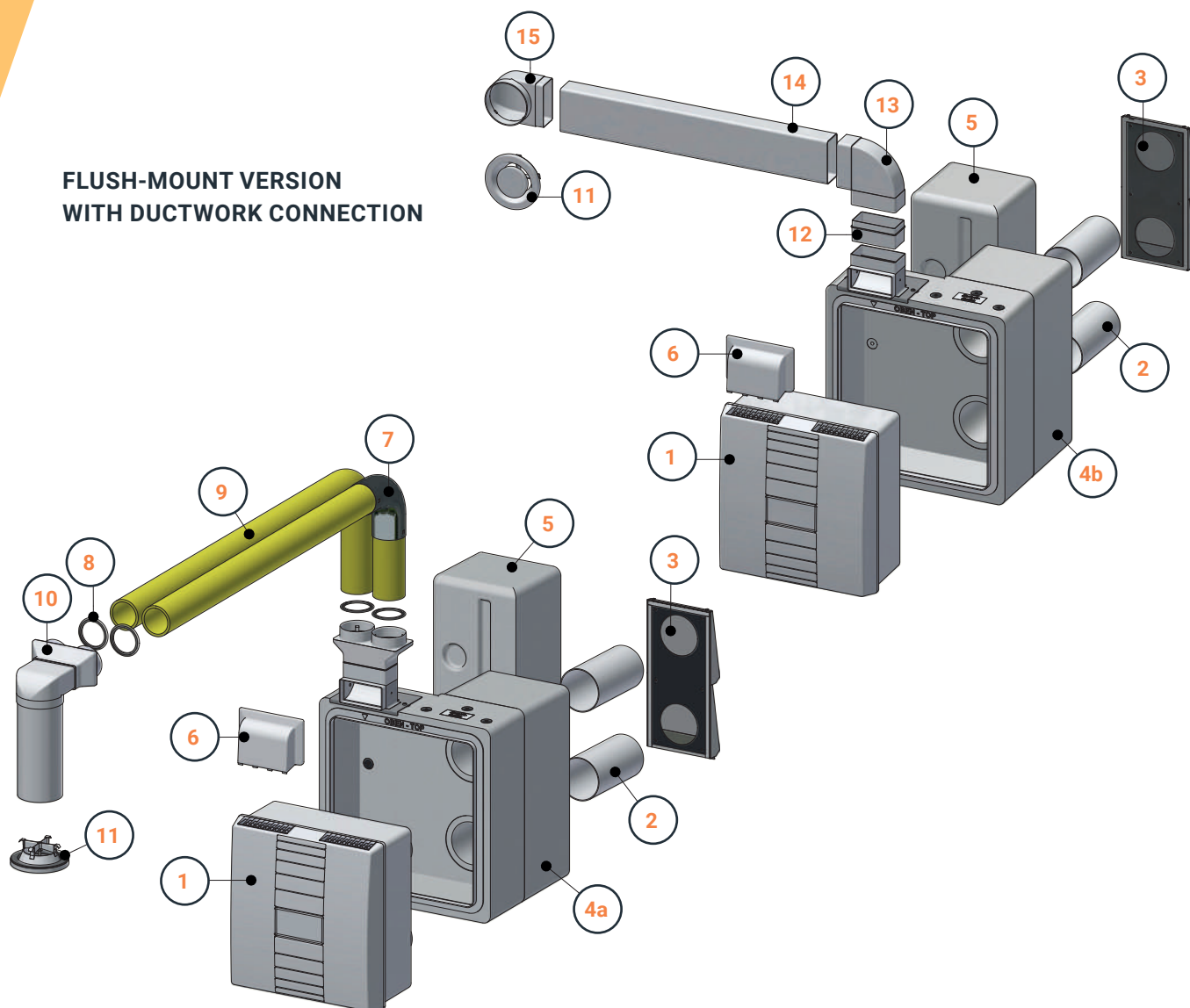


List of components

	Part no.	Type	Description
1		Unit type	All M-WRG units
2	5574	M-WRG-LR 50	Outdoor air and exhaust air pipe DN 100 - 2 x 0.5 m*
3	5150	M-WRG-ES	Outer wall terminal stainless steel pod
4	5374	M-WRG-KA	Duct adapter when running surface-mount flat ductwork
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 WITH DUCTWORK CONNECTION

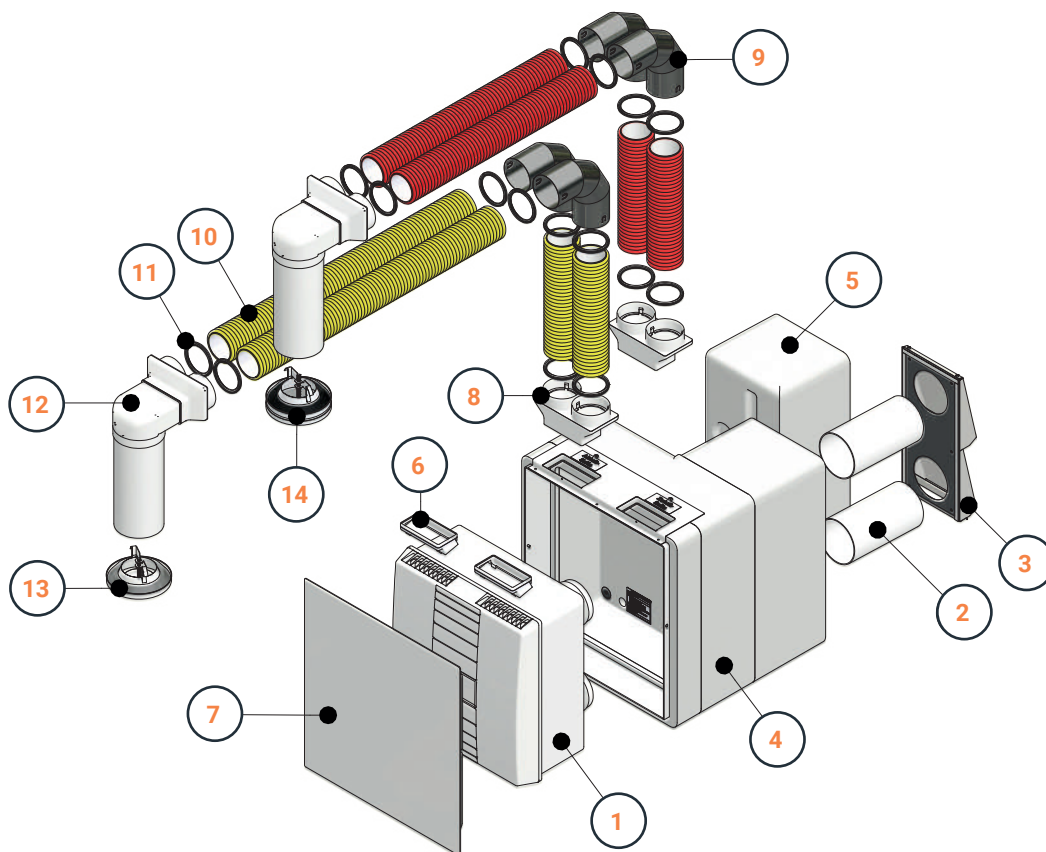


List of components

	Part no.	Type	Description
1		Unit type	All M-WRG units
2	5574	M-WRG-LR 50	Outdoor air and exhaust air pipe DN 100 - 2 x 0.5 m
3	5150	M-WRG-ES	Outer wall terminal stainless steel pod
4a	5051-21/75 (5051-22/75)	M-WRG-M/MB-FR75/1 (-FR75/2)*	Flush-mount installation kit for solid construction with adapter(s) for 75 mm flexible pipe connection
4b	5051-11 (5051-12)	M-WRG-M/MB-FK-1 (-FK2)*	Flush-mount installation kit for solid construction with adapter(s) for flat ductwork connection 110 x 54 mm
5	5575-5	M-WRG-M/Fü	Optional: Filler piece for all flush-mount installation kits
6	5365	M-WRG-KA/UP	Duct adapter when running flush-mount flat ductwork or flexible pipe
7	5056-42/75	M-WRG-FR-B75	Flexible pipe 90° bend DN 75 (sealing rings needed)
8	5056-41/75	M-WRG-FR-DR75	Flexible pipe sealing ring DN 75
9	5056-40/75	M-WRG-FR75	Flexible pipe 75 mm
10	5056-10/75	M-WRG-DK 2x75/100	Ceiling box flexible pipe connection 2 x 75 mm to DN 100
11	5056-30/A (5056-31-00)	M-WRG-FR-TVA	Poppet valve, extract air, DN 100
12	5375-00 or 5590	M-WRG-FSA lang or M-WRG-FK-F	Fitting adapter, long – for connecting two flat ductwork fittings or flat ductwork 110 x 54 mm, 1 m long
13	5592	M-WRG-FK-B	Flat ductwork 90° bend, horizontal, sleeves on both sides
14	5590	M-WRG-FK-F	Flat ductwork 110 x 54 mm
15	5579-10	M-WRG-RR-FK	Adapter 90° DN 100 to flat ductwork 110 x 54 mm

* For frame constructions use the M-WRG-M/FK1 / -M/FK2 or -M/FR75/1 / -M/FR75/2 types

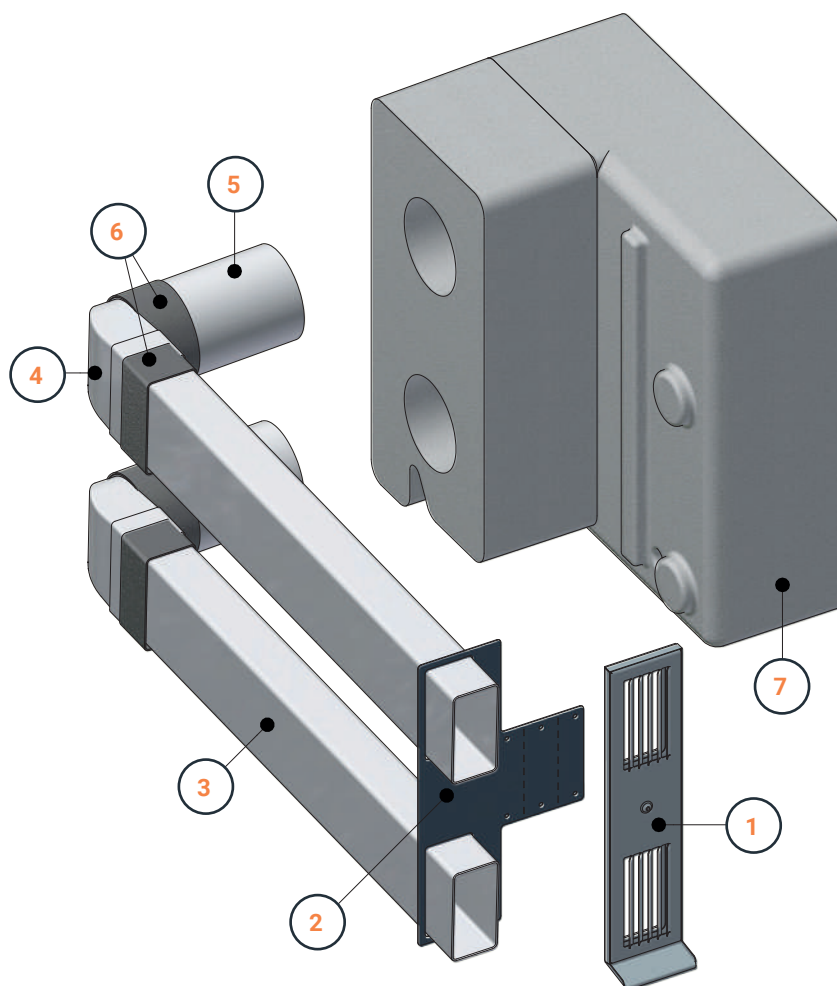
U² INTEGRATED INTO WALL SOLUTION WITH DUCTWORK CONNECTION



List of components

	Part no.	Type	Description
1		Unit type	All M-WRG units with external control unit or central controller
2	5574	M-WRG-LR50	Outdoor air and exhaust air pipe DN 100 - 2 x 0.5 m
3	5150	M-WRG-ES	Outer wall terminal stainless steel pod
4	5052	M-WRG-M/MB-U ²	U ² flush-mount installation kit
5	5575-5	M-WRG-M/Fü	Optional: Filler piece for all flush-mount installation kits
6	5052-90	M-WRG-U ² AK	U ² adapter kit
7	5052-10-04	M-WRG-U ² AD/WS-2	U ² cover
8	5056-00/75	M-WRG-FRA-75	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 (sealing rings needed)
10	5056-40/75	M-WRG-FR/75	Flexible pipe 75 mm
11	5056-41/75	M-WRG-FR-DR/75	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
13	5056-30/A	M-WRG-FR-TVA	Poppet valve, extract air, DN 100
14	5056-30/Z	M-WRG-FR-TVZ	Poppet valve, supply air, DN 100

AIR DUCT SYSTEM IN THE WINDOW REVEAL

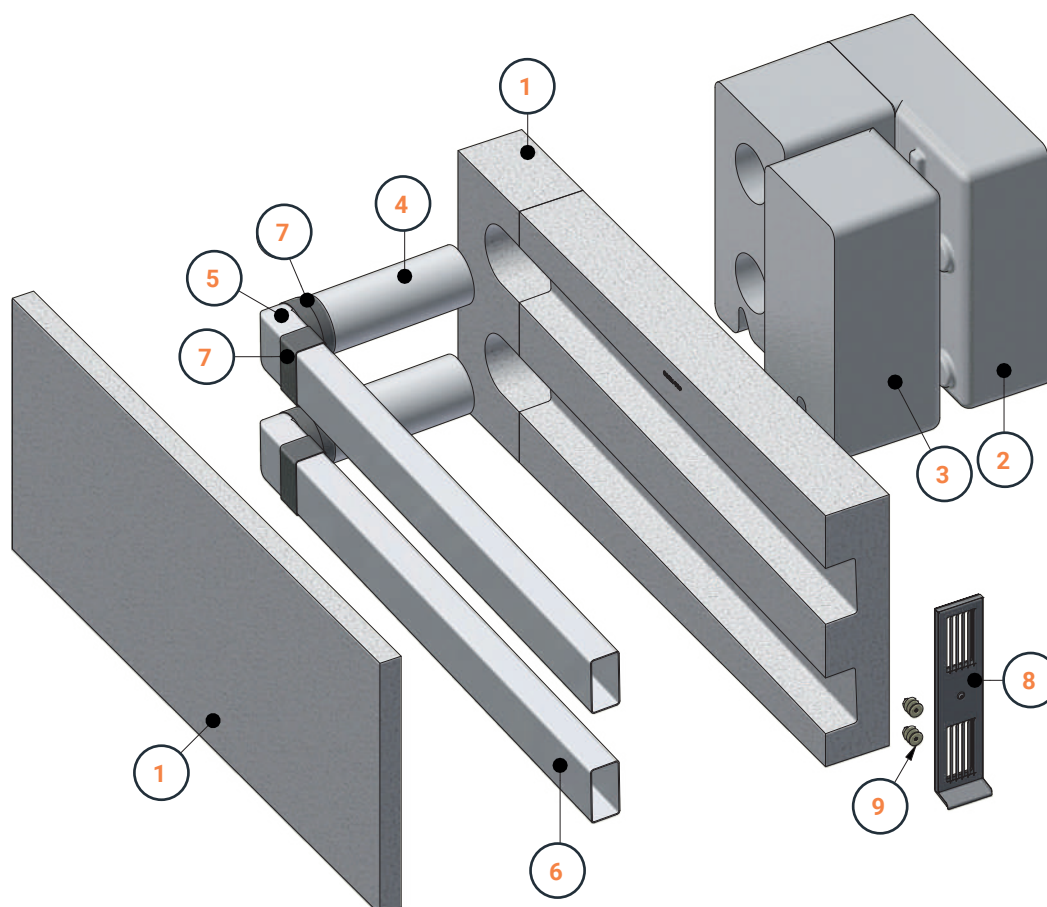


List of components

	Part no.	Type	Description
1	5159	M-WRG-EFL/AP	Surface-mount outer wall terminal
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 100 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	5051	M-WRG-M/MB	Flush-mount installation kit

WINDOW REVEAL SOLUTION WITH ETICS INSTALLATION KIT

(also available for monolithic wall structures)



List of components

	Part no.	Type	Description
1	5053-00	M-WRG-MSF-W-re	Window reveal installation kit M-WRG-MSF right (for ETICS)
	5053-01	M-WRG-MSF-W-li	Window reveal installation kit M-WRG-MSF left (for ETICS)
	5053-10	M-WRG-MSF-M-re	Window reveal installation kit M-WRG-MSF right (monolithic wall structure)
	5053-11	M-WRG-MSF-M-li	Window reveal installation kit M-WRG-MSF left (monolithic wall structure)
2	5050...	M-WRG-M...	Flush-mount installation kit
	5051...	M-WRG-M/MB...	
	5052	M-WRG-M/MB-U²	
3	5575-5	M-WRG-M/Fü	Option: Filler piece for all flush-mount installation kits
4	5574	M-WRG-LR 50	Outdoor air and exhaust air pipe DN 100 - 2 x 0.5 m
5	5579-10	M-WRG-RR-FK	Adapter 90°, DN 100 to flat ductwork 110 x 54 mm
6	5590	M-WRG-FK-F	Flat ductwork 110 x 54 mm, 1 m long
7	5599	M-WRG-BB	Butyl tape, 20 m roll, one roll sufficient for roughly 10 installation kits
8	5159	M-WRG-EFL/AP	Outer wall terminal for window reveal
	5160	M-WRG-EFL/AP-P	
9	–	–	e.g. Würth insulation anchors W-ID 50, part no. 090350050 (provided by the customer)