

ECO-VENTILATION



SINGLE-ROOM
ENERGY RECOVERY
VENTILATORS



**TWINFRESH
EXPERT RW1-50**

SMART HOUSE

Fresh air
in your house!



TwinFresh Expert is a new series of single-room energy recovery ventilators


TwinFresh Expert is the most state-of-the-art and efficient solution for a comfortable indoor climate and required air exchange in renovated premises, brand new recently inhabited houses or reconstructed apartments.

TwinFresh Expert RW1-50 features

- ▶ Controlled by Android or iOS smartphone through the cloud server from any part of the world.
- ▶ Wi-Fi communication between several ventilators for coordinated operation.
- ▶ Efficient supply and extract single-room ventilation up to 50 m³/h.
- ▶ High-tech ceramic energy regenerator with max. heat recovery efficiency of 97 %.
- ▶ Reversible EC motors with low energy demand of 4.45 W and safe voltage of 12 V.
- ▶ Integrated automation.
- ▶ Silent operation 21 dB(A) @ 1 m.
- ▶ Easy mounting and servicing.
- ▶ Filters with total filtration class G3 (optionally F8) provide air cleaning.
- ▶ Rated for continuous operation.
- ▶ Frost- and condensate-free.



Ceramic energy regenerator

 The high-tech ceramic regenerator with heat recovery efficiency up to 97 % is used for heating of supply air by means of the extract air heat recovery. Due to its honeycomb structure, the unique heat exchanger has larger air contact area and excellent heat conducting and accumulating properties. The ceramic regenerator has a special anti-bacterial treatment to prevent bacteria generation inside of it. The antibacterial treatment is rated for 10 year operation.

One of the best heat recovery efficiency on the market due to innovative hexagonal structure of the heat exchanger cells.



The specially designed front panel can be closed manually to ensure 100% air tightness and protection against wind.



Easy maintenance.
The indoor unit is opened by pressing the latches on both sides.



Integrated air shutters prevent air back drafting.

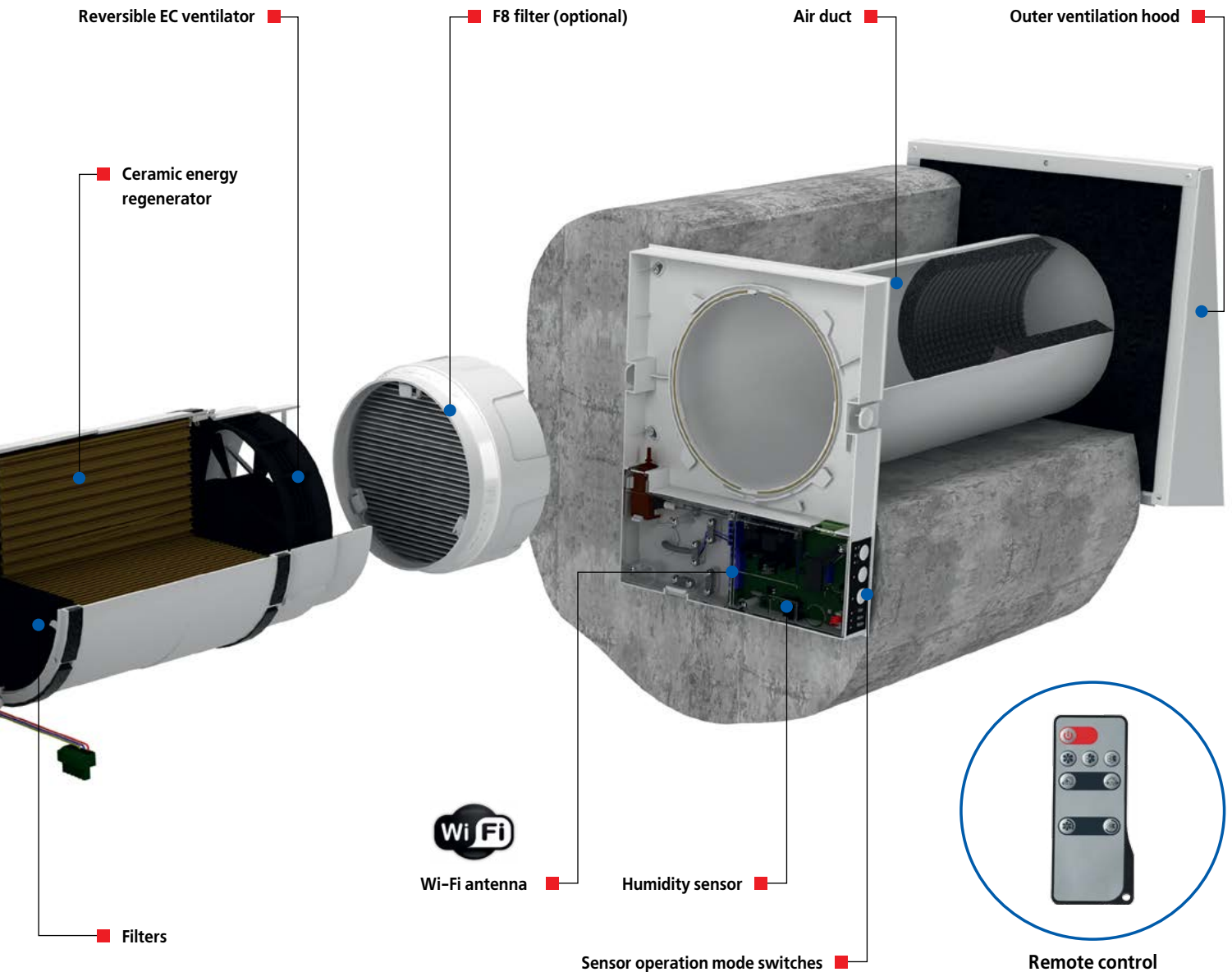
Decorative front panel





Reversible EC motor

Air is supplied or extracted by a reversible axial fan with EC motor. Due to EC technology the fan has outstanding low energy demand. The fan is powered by safe voltage 12 V. The motor has integrated overheating protection and ball bearings for long service life.



Air filters

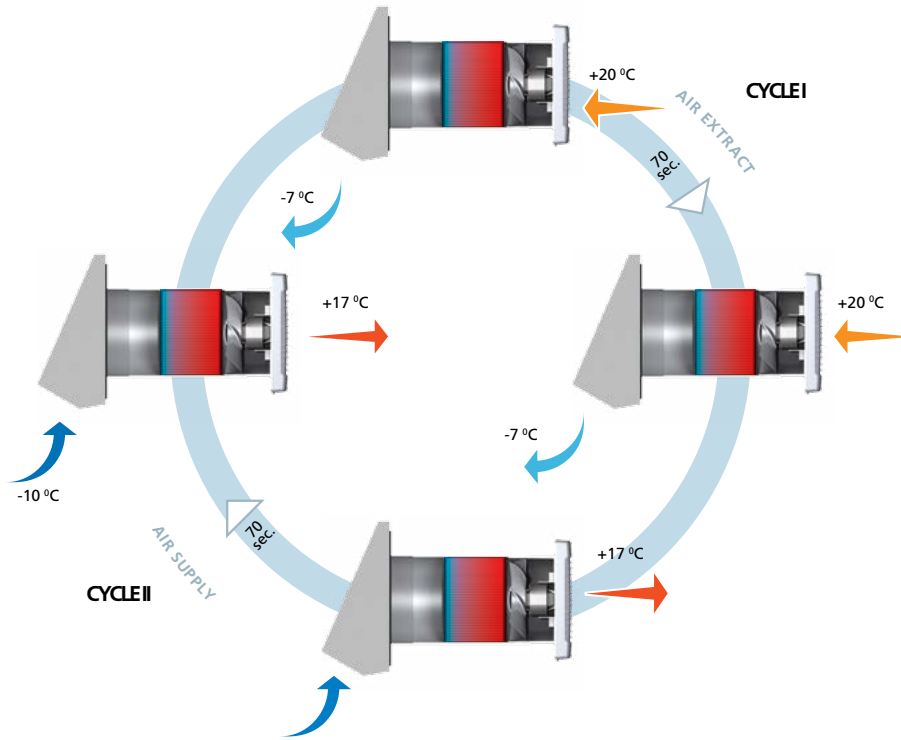
Two built-in filters with the total filtration class G3 are used for supply and extract air filtration. The filters ensure fresh air cleaning of dust and insects and prevent the ventilator parts from contamination. The filters have antibacterial treatment. The filters are cleaned either with a vacuum cleaner or flushed with water with no harm to the antibacterial treatment. F8 filter is available as an option; being installed it reduces the maximum airflow down to 40 m³/h. Air purification with optional F8 filter PM 2.5 99%.

SINGLE-ROOM ENERGY SAVING VENTILATION

TwinFresh ventilator functioning

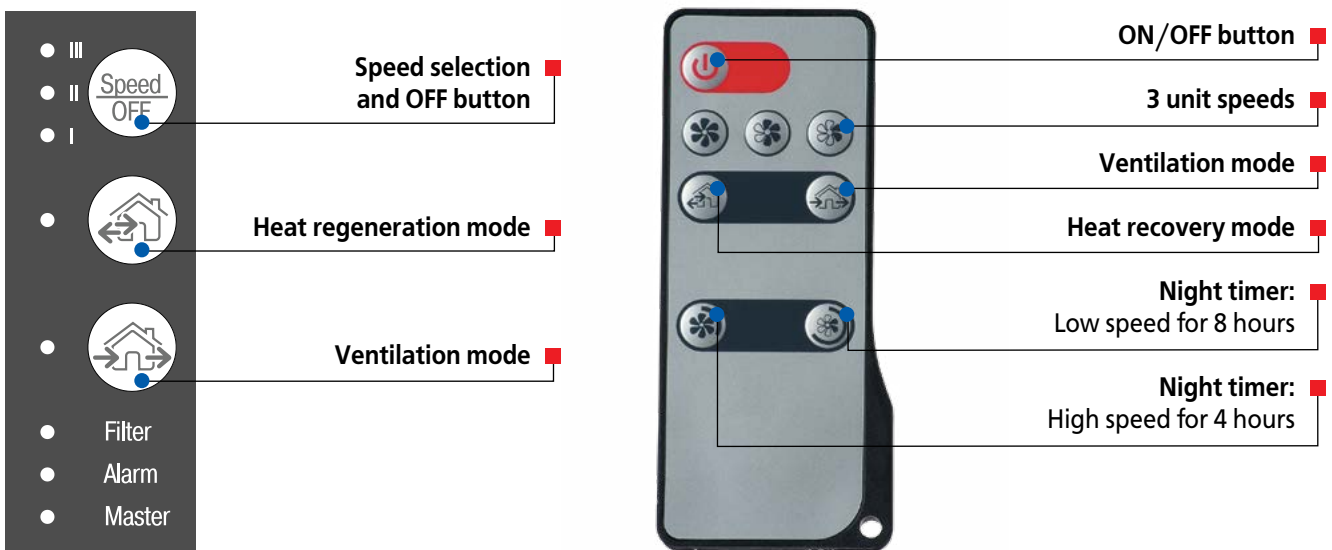
The ventilator is designed both for reversible mode with energy regeneration and supply or extract mode with no regeneration.

- ▶ **CYCLE I.** Warm stale air is extracted from the premise, flows through the ceramic regenerator and transfers up to 97% of the accumulated heat and moisture to it. As the ceramic regenerator gets warmed up, the ventilator switches to the supply mode.
- ▶ **CYCLE II.** Clean cold intake air flows through the regenerator and absorbs accumulated heat and humidity. In 70 seconds, after cooling of the ceramic regenerator, the ventilator is switched to the extract air mode and a new cycle starts.



Control

Operation modes are controlled by means of sensor control panel located on the ventilator casing or the remote control.



Control

The ventilators can be connected by Wi-Fi for synchronized operation.



Special app is available at Google Play market and App Store operation.



The **TwinFresh Expert RW1-50** ventilator can be connected to a laptop for advanced settings:

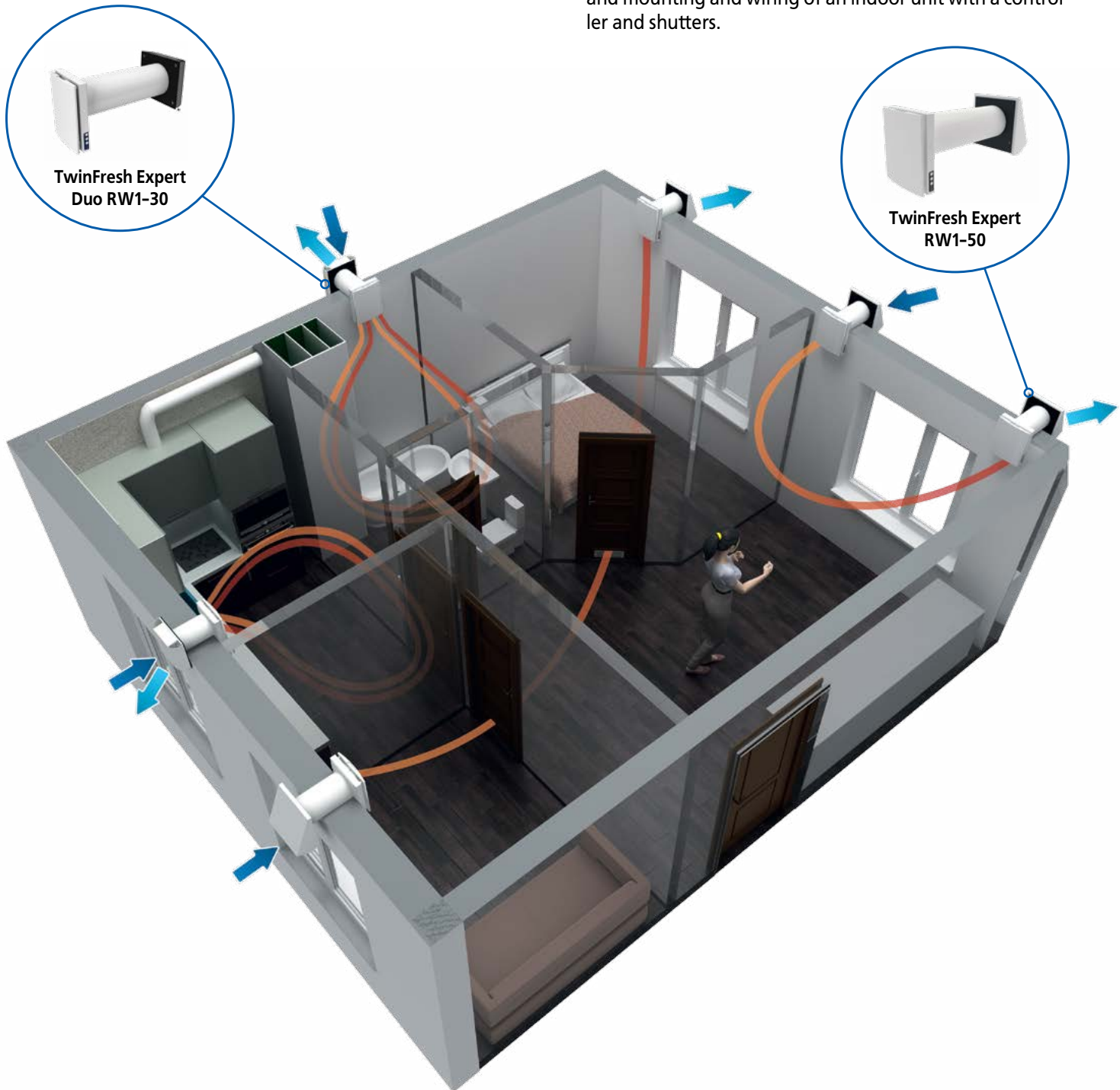
- ▶ Master or slave.
- ▶ Supply or exhaust operation in ventilation mode.
- ▶ Connection through a Wi-Fi router or directly to a smartphone.

Mounting

The ventilator is designed for through-the-wall installation inside a prepared hole in an outer wall of the building. The best ventilation solution is pairwise installation of reverse phase connected ventilators. Some units ensure supply of fresh air to the room and the other units extract air from the premise. This way the most efficient balanced ventilation is arranged.

In case of brand new construction, the ventilators are mounted in two stages:

1. Pre-installation at the stage of the indoor finishing and outer decorative wall finishing. It includes installation of an air duct, an outer ventilation hood and cable installation.
2. Final mounting before commissioning of a house. It includes installation of a regenerator with a fan and filters and mounting and wiring of an indoor unit with a controller and shutters.



Technical data

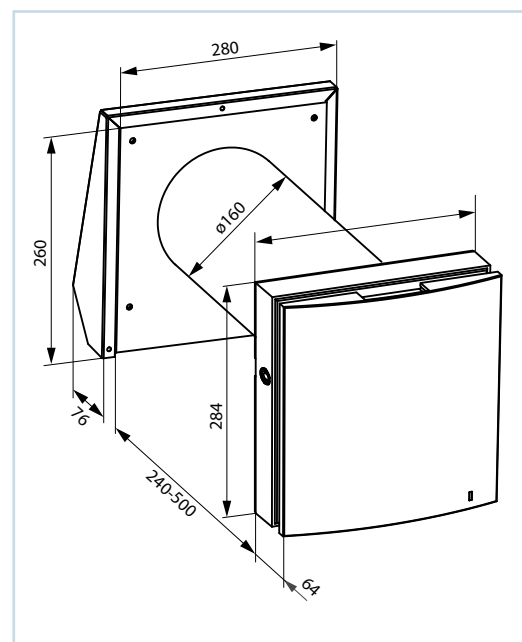
Model	TwinFresh Expert RW1-50		
	1	2	3
Speed	1	2	3
Supply voltage, 50/60 Hz [V]	1~100-240		
Power [W]	4.45	5.08	7.06
Max. current consumption [A]	0.035	0.040	0.059
Air flow in ventilation mode [m ³ /h]	15	30	50
Air flow in heat recovery mode [m ³ /h]	8	15	25
RPM [min ⁻¹]	800	1300	1900
SFP [W/l/s]	2.14	1.22	1.02
Sound pressure level at 1 m distance [dB(A)]	20	27	30
Sound pressure level at 3 m distance [dB(A)]	11	18	21
Outdoor sound pressure attenuation [dB(A)]	42		
Transported air temperature [°C]	from -15 up to +50		
Regenerating efficiency [%]	97	90	82
Regenerator type	Ceramic		
Ingress Protection	IP 24		

Energy Labeling & Ecodesign

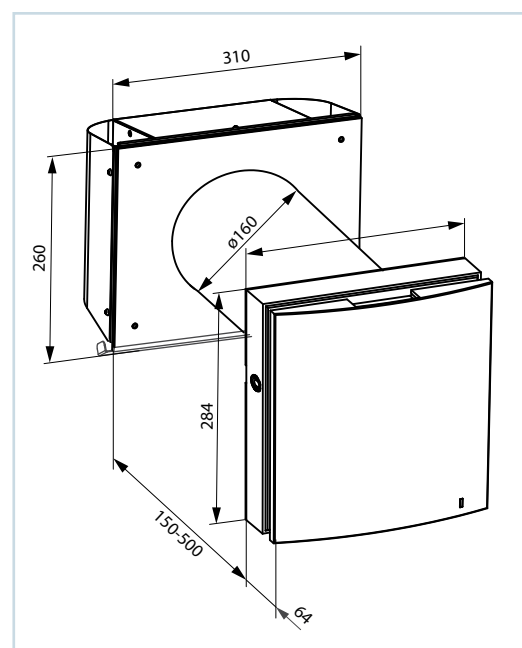
Model	TwinFresh Expert RW1-50					
	Cold		Average		Warm	
Specific energy consumption (SEC), kWh/(m ² .a)	-86.5	A+	-41.8	A	-16.2	E
Type of ventilation unit	Bidirectional					
Type of drive installed	Variable speed					
Type of heat recovery system	Regenerative					
Thermal efficiency of heat recovery, %	90%					
Maximum flow rate, m ³ /h	25					
Electric power input, W	7.1					
Sound power level, dB(A)	38					
Reference flow rate, m ³ /s	0.004					
Reference pressure difference, Pa	0					
Specific power input (SPI), W/(m ³ /h)	0.339					
Control typology	Local demand control					
Maximum internal leakage rates, %	0					
Maximum external leakage rates, %	0					
Mixing rate of bidirectional units, %	1					
Airflow sensitivity at +20 Pa and -20 Pa	0.40					
The indoor/outdoor air tightness, m ³ /h	0.5					
The annual electricity consumption (AEC), kWh electricity/a	Cold		Average		Warm	
	197		197		197	
The annual heating saved (AHS), kWh primary energy/a	Cold		Average		Warm	
	9141		4673		2113	

Overall dimensions [mm]

TwinFresh Expert RW1-50



TwinFresh Expert RW1-50-2





Accessories



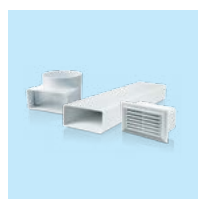
MVVM 162 05
Outer ventilation hood for installation from indoor



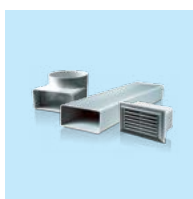
RC TwinFresh Expert RA-50
Remote control



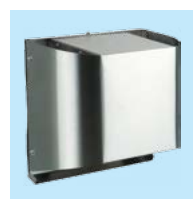
EH-2 grey 160
Grey painted stainless steel outer hood for thin walls



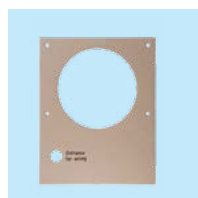
NP 160 white
Set for corner mounting



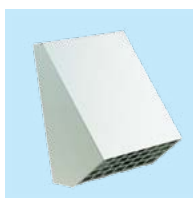
NP 160 chrome
Set for corner mounting



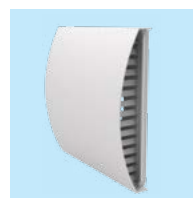
EH-2 chrome 160
Brushed stainless steel outer hood for thin walls



T TwinFresh Expert R-50
Cardboard template for installation of the inner block



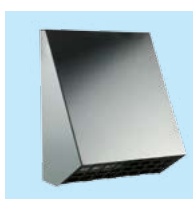
EH white 160
White painted aluminium outer hood



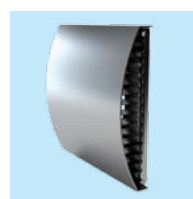
EH-14 160
White plastic outer hood



SF TwinFresh Expert R-50 F8
F8 filter (1 pcs.)



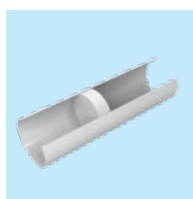
EH chrome 160
Brushed stainless steel outer hood



EH-14 chrome 160
Brushed stainless steel outer hood



SF TwinFresh Expert R-50 G3
G3 filter kit (2 pcs.)



Duct 160-500
500 mm long duct with a foamed polystyrene plug
Duct 160-700
700 mm long duct with a foamed polystyrene plug



TwinFresh Expert RW-50 completion kit

- Inner block
- Cartridge with energy regenerator, fan and two filters
- Sound insulating material
- Remote control



CO₂-1
CO₂ sensor
CO₂-2
CO₂ sensor

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11/2017

