

## CORRECT VENTILATION IN A READY-BUILT HOUSE?



### COMFORTABLE CLIMATE IN YOUR HOUSE

Installation of TwinFresh single-room reversible ventilators with energy regeneration is the most state-of-the-art and practical way to arrange a comfortable microclimate and the required air exchange in refurbished premises, brand new recently inhabited houses or reconstructed apartments.



**THE SINGLE ROOM VENTILATORS TWINFRESH OFFER THE BEST COST-SAVING SOLUTION FOR ARRANGEMENT OF ENERGY SAVING VENTILATION OF SEPARATE ROOMS IN APARTMENTS, COTTAGES, SOCIAL AND COMMERCIAL PREMISES.**



### Cost-saving

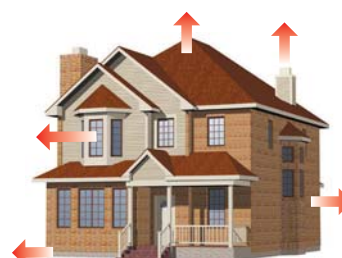
The TwinFresh single room ventilators are the ready-to-use ventilation units that provide fresh air supply to the premise, its filtration and extract of polluted air outside. Forget about extra ventilation equipment or its components to create efficient ventilation system. Installation of two TwinFresh ventilators provides an efficient full-fledged ventilation system in your premise!

### Energy saving

The great advantage of the TwinFresh ventilators is their ability to regenerate heat and humidity in the premises due to a special ceramic thermal accumulator (energy regenerator). The energy regeneration principle is based on utilization of heat and humidity contained in the extract air to warm up and moisturize fresh air from outside. In view of permanent heat losses in the room heat utilization is the most useful technology for cost and energy saving.

### High efficient

The heat and energy regeneration rate of the TwinFresh single room ventilators is very high and reaches 90%. A single TwinFresh unit provides permanent balanced air exchange and air filtration for the area up to 50 m<sup>2</sup>. To attain the best result, we recommend to install two TwinFresh units for the most comfortable microclimate.



- Basic heat losses sources:
- Basement – up to 15%
  - Outer walls – up to 15%
  - Windows, doors – up to 17%
  - Ventilation system – up to 50%
  - Roof – up to 10%



## SUPPLY OF FRESH HEATED AIR COMBINED WITH MINIMUM NOISE AND ENERGY DEMAND ARE THE MAIN ADVANTAGES OF THE TWINFRESH VENTILATORS.

### Versatile

The TwinFresh single room ventilators are applicable at any project stage and suitable for any room, starting from design of a ventilation system during construction of a new object, including reconstruction of existing buildings and premises, ordinary scheduled repair and finishing with ready-made premises, where installation of centralized ventilation is unfeasible.

The ventilators have user-friendly design depending on application area, e.g. the TwinFresh S model with a square telescopic duct is normally used for facilities under construction whereas the TwinFresh R modes with a round telescopic duct is used for ready-built or refurbished buildings.

### Simple and easy to use

The TwinFresh compact ventilators do not require any extra components or air ducts. They are ready for use. The ventilators are designed for through-the-wall installation to the outer wall of the buildings. The only thing you need is a through opening in a wall, which is closed with a decorative ventilation grille matching any interior design. An outer hood is installed from outside to prevent direct penetration of water and foreign particles into the ventilator.

## EFFICIENT, RELIABLE, ENERGY-SAVING AND COST-EFFICIENT TWINFRESH VENTILATORS WORK ROUND THE CLOCK TO:

- ▶ SUPPLY CLEAN FRESH AIR TO THE PREMISES
- ▶ REMOVE STALE EXTRACT AIR FROM THE PREMISE
- ▶ CLEAN THE AIR OF DUST, INSECTS
- ▶ PREVENT PENETRATION OF EXCESSIVE HUMIDITY AND APPEARANCE OF MOULD
- ▶ PROTECT AGAINST OUTDOOR NOISE
- ▶ REGENERATE HEAT AND PROVIDE HUMIDITY BALANCE INSIDE
- ▶ REDUCE THE HEATING COSTS IN WINTER AND AIR CONDITIONING COSTS IN SUMMER
- ▶ LOW ENERGY DEMAND



The single-room ventilator **TwinFresh** is an easy and effective solution for arranging of decentralized energy saving ventilation in separate rooms, cottages, public and commercial premises. Depending on the control and mounting type the TwinFresh series products are available in Standard, Comfo and Solar modifications.

## TwinFresh ventilators features

- ✓ Efficient supply and exhaust single room ventilation
- ✓ High-tech ceramic energy accumulator with regenerating efficiency up to 90%
- ✓ Reversible EC ventilator with low energy demand from 2.8 up to 6.1 W and safe voltage 12 V
- ✓ Integrated automation
- ✓ Silent operation (13-33 dBA)
- ✓ Easy mounting and servicing
- ✓ Filters with total filter class G3 ensure air cleaning
- ✓ Rated for continuous operation
- ✓ No condensate generation during operation

## TwinFresh Standard Series

TwinFresh Standard series includes three models:

- ✓ TwinFresh R-50 with automatic shutters and a round air duct for installation in premises under refurbishment;
- ✓ TwinFresh S1-50 with automatic air shutters and TwinFresh S-60 without air shutters and a square air duct for installation in premises under construction.

Integrated automation system enables speed control and operation mode setting. The control panel is rated for controlling unlimited number of connected ventilators thus enabling integration of numerous ventilators into a central controlled ventilation system.



**TwinFresh R-50**  
with a round  $\varnothing$  150 mm air duct and automatic shutters



**TwinFresh S1-50**  
with a square 164x164 mm air duct and automatic shutters



**TwinFresh S-60**  
with a square 164x164 mm air duct

## TwinFresh Comfo series

The TwinFresh Comfo single-room ventilators with energy regeneration are featured with a simple mounting and servicing due to a special mounting plate.

The TwinFresh Comfo models have updated controls that excels with extended functions, wireless control and operation mode switches on the ventilator housing.



**TwinFresh Comfo R**  
with a round  $\varnothing$  100, 125 or 150 mm air duct, automatic shutters and a mounting plate



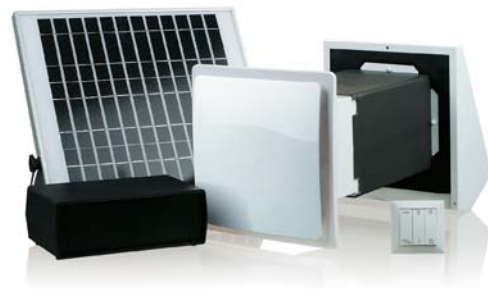
**TwinFresh Comfo S**  
with a square 150x150 mm air duct, automatic shutters and a mounting plate

## TwinFresh Solar series

The single-room TwinFresh Solar ventilators are the self-contained heat recovery ventilation units. The TwinFresh Solar units are driven by the solar energy generated by the solar panel and require no extra power supply.



**TwinFresh Solar SA-60**  
with a square 164x164 mm air duct



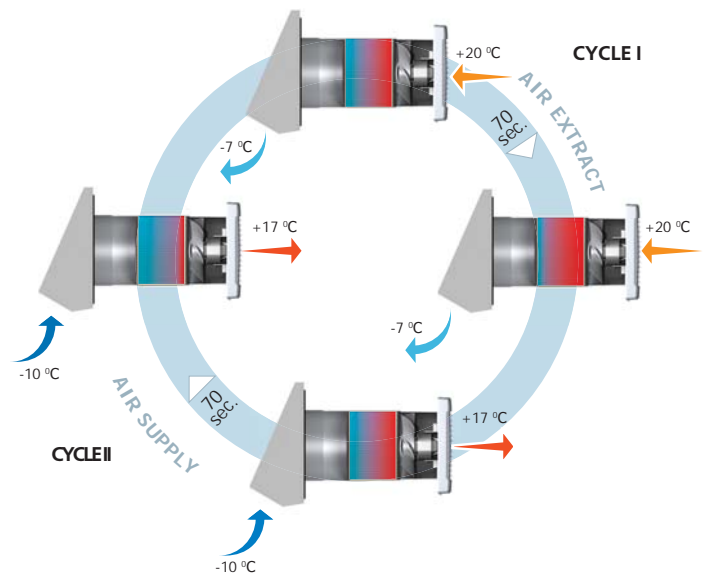
**TwinFresh Solar SA-60 Pro**  
with a square 164x164 mm air duct and a battery

### TwinFresh ventilator operating logic

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

► **CYCLE I.** Warm stale air is extracted from the room, then it passes through the ceramic energy accumulator and while flowing through it, heats and moistens the ceramic accumulator and transfers up to 90% of the contained thermal energy. As the ceramic accumulator gets heated, the ventilator switches to supply mode automatically.

► **CYCLE II.** Clean fresh air from outside passes through the ceramic energy accumulator, absorbs moisture and is heated up to the room temperature due to the accumulated heat. As temperature of the accumulator drops down, the fan switches to extract mode and the cycle is renewed. The ventilator changes its operation mode between supply and extract ventilation every 70 seconds.



## TwinFresh ventilator design

The ventilator consists of a telescopic air duct with adjustable length, a ventilation unit, a mounting plate and an outer ventilation hood.

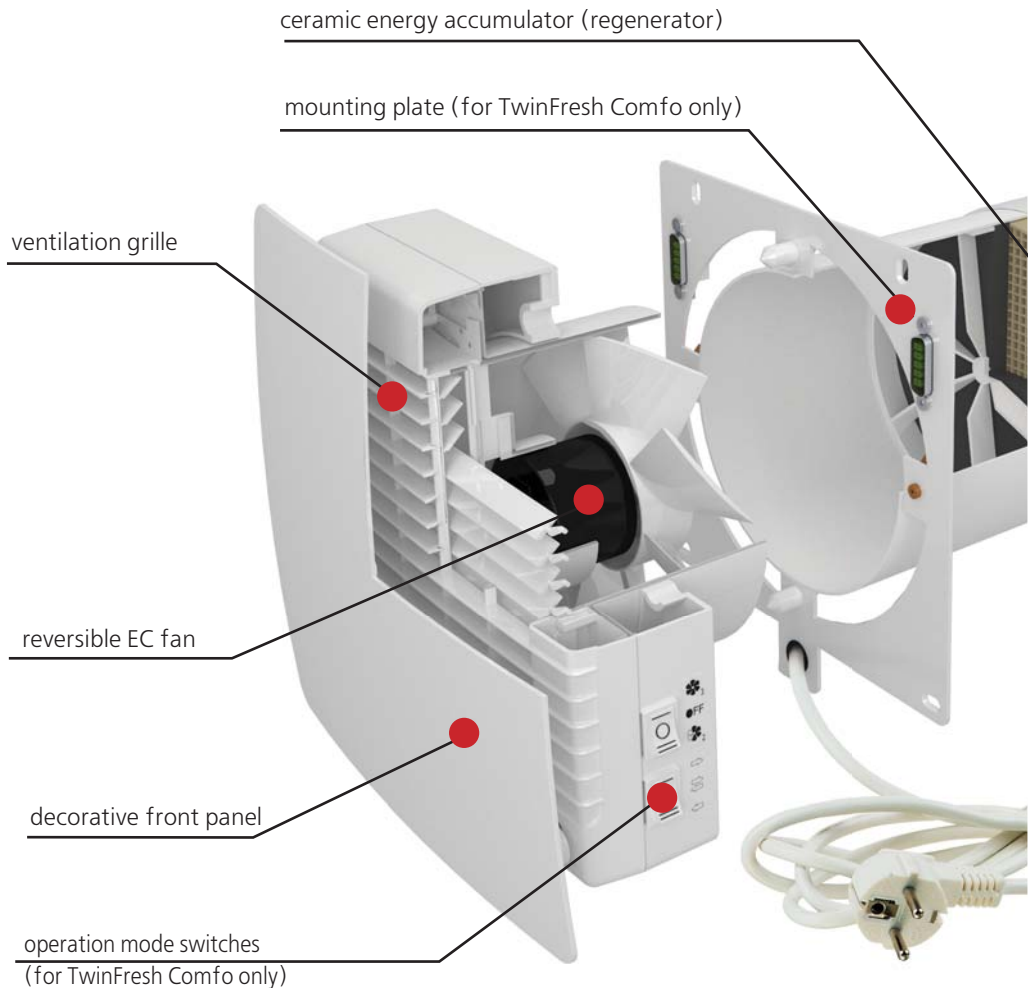
The inner part of the telescope comprises two filters and a ceramic energy accumulator (regenerator).



Fan is OFF  
(the automatic shutters are closed)



Fan is ON  
(the lower shutters are opened)



### ✓ Ventilation grille

The modern ventilation grille design let it match well with any interior. All the TwinFresh and TwinFresh Comfo ventilators are equipped with automatic shutters, except for TwinFresh S-60 and SA-60. The models TwinFresh S1, SA1 and SA as well as TwinFresh Comfo RA1-50, SA1-35, RA1-35 and RA1-25 are equipped with a decorative front panel internally lined up with an insulation layer for extra sound attenuation.

### ✓ Ceramic energy accumulator (regenerator)

The high-tech ceramic energy accumulator with regeneration efficiency up to 90% is used for extract air heat energy recovery and supply air heating. Due to its cellular structure, the unique energy accumulator has larger air contact area and excellent heat conducting and accumulating properties.

The ceramic energy accumulator has a special anti-bacterial treatment to prevent bacteria generation inside of the regenerator. The antibacterial treatment is rated for 10 years operation. The inner side of the regenerator is lined up with a heat insulating material used a sealer as well.

### ✓ Telescopic air duct

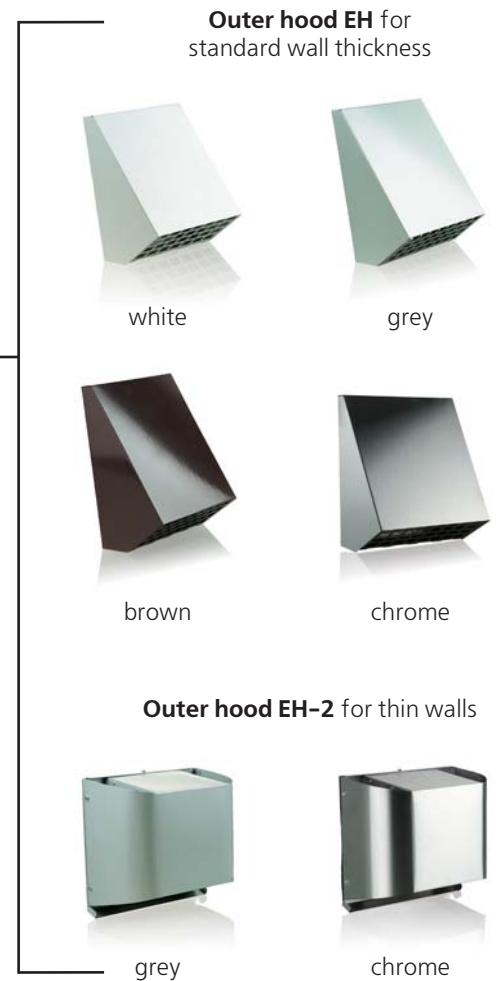
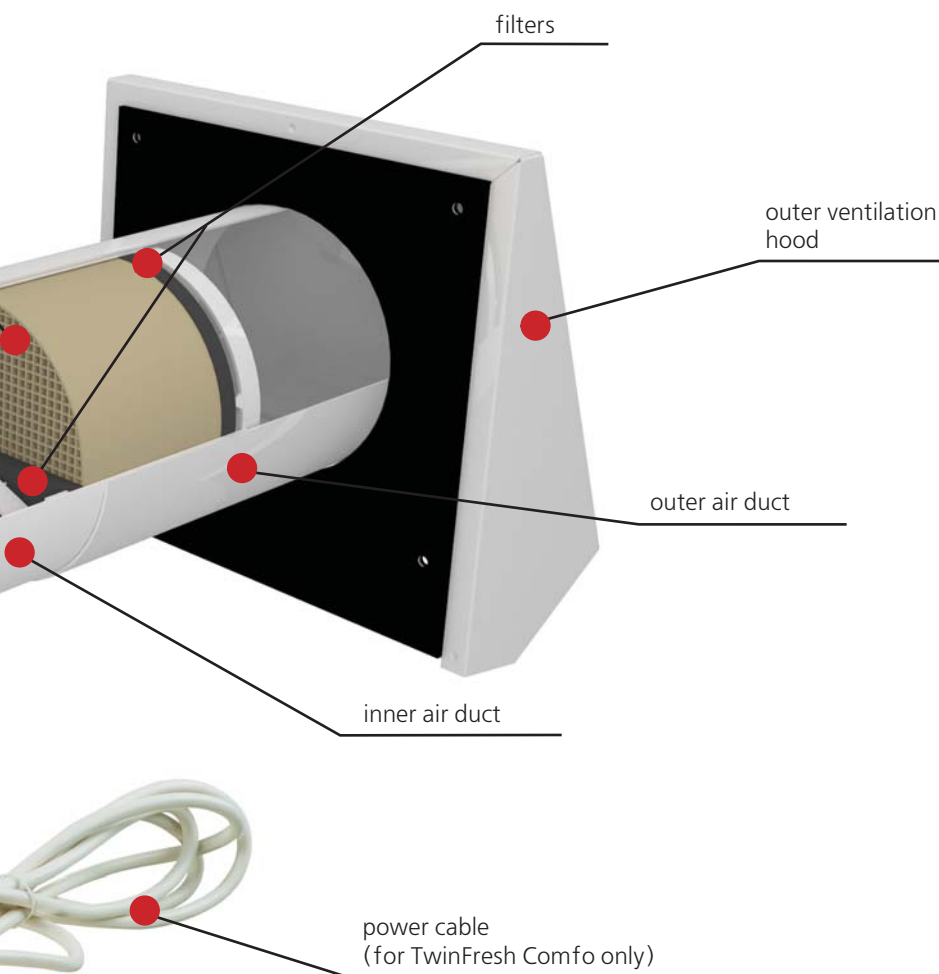
The square telescopic air ducts in the TwinFresh ventilators are made of polymer coated metal lined with insulating material and round air ducts are made of PVC plastic. The telescope length is adjustable to the wall thickness which makes mounting quick and easy.

### ✓ Air filters

Two built-in filters with total filter class G3 are used to clean supply and extract air flows. The filters ensure fresh air cleaning of dust and insects and prevent the ventilator parts from soiling. 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.

### ✓ Reversible EC fan

Air is supplied or extracted by a reversible axial fan with EC motor. Due to EC technology the fan is distinguished with 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.



✓ **Mounting plate**

The TwinFresh Comfo series models are equipped with a mounting plate which facilitates servicing of the fans, filters and the regenerator. The ventilation unit is fixed to the mounting plate with special magnets and contact sockets.

The ventilator inner parts are accessible by pulling the ventilation unit by hand. The contacts sockets on the ventilator mounting plate serve to integrate numerous ventilators into a single ventilation network and enable their synchronous operation. The model TwinFresh Comfo RA1-25 has no mounting plate and is not suitable for integration of several ventilators into a single network.

✓ **Outer ventilation hood**

The specially designed outer hood enables removal of extract air flow and condensate that is generated inside of the outer hood from the building wall. Besides, the outer hood prevents ingress of water and foreign objects in the ventilator. The outer hood is internally covered with insulating material that

absorbs street noise penetration into the room through the ventilator and prevents condensate generation in the outer hood.

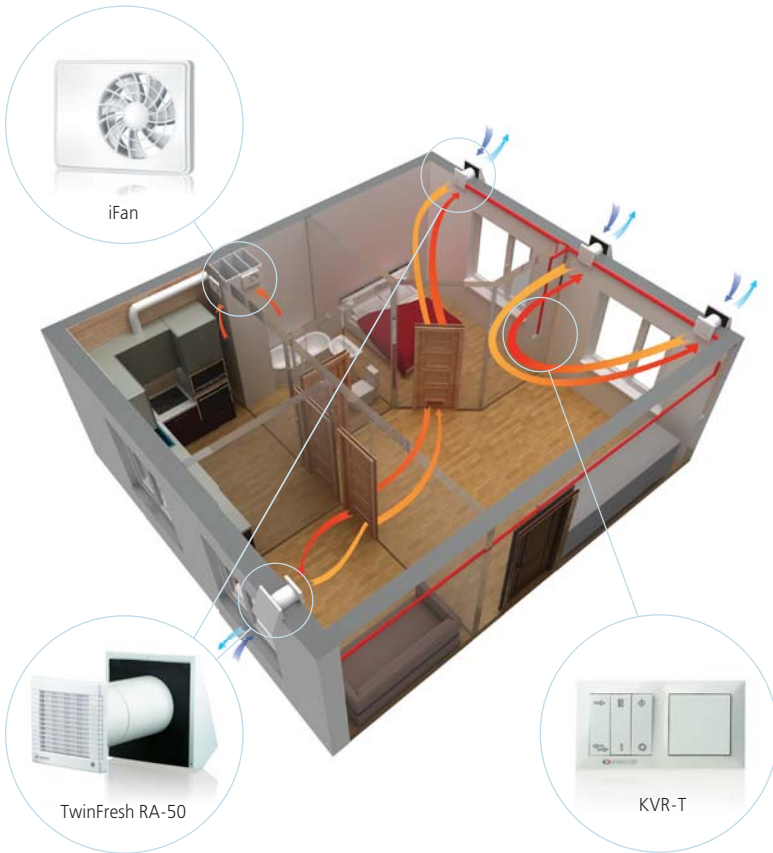
The outer hood EH is made of polymer coated aluminium.

The outer hood EH-2 for thin walls is made of polymer coated stainless steel. Due to its labyrinth structure of the outer hood air flow changes its direction several times and the ventilator is protected against direct wind impact.

✓ **Power cable**

The TwinFresh Comfo series is equipped with a pre-wired power cable. The ventilator is ready for operation and requires no extra electrical connections. Just insert the power cable plug into a power outlet and enjoy fresh air. If the cables must be flush mounted or several ventilators must be integrated into the single network just disconnect the power cable from the ventilator.

## Ventilation system arrangement example based on TwinFresh ventilators



Air flows from one room to another through door grilles, openings or halls and provides that way required circulation in a premise.

An energy regeneration ventilation system based on the TwinFresh ventilators is designed to save operating costs for heating and air conditioning.

To arrange the most energy efficient ventilation in a kitchen or in a bathroom we recommend to install in the kitchen or in the bathroom the intelligent VENTS iFans that extracts air on a signal from the activated motion or humidity sensor.

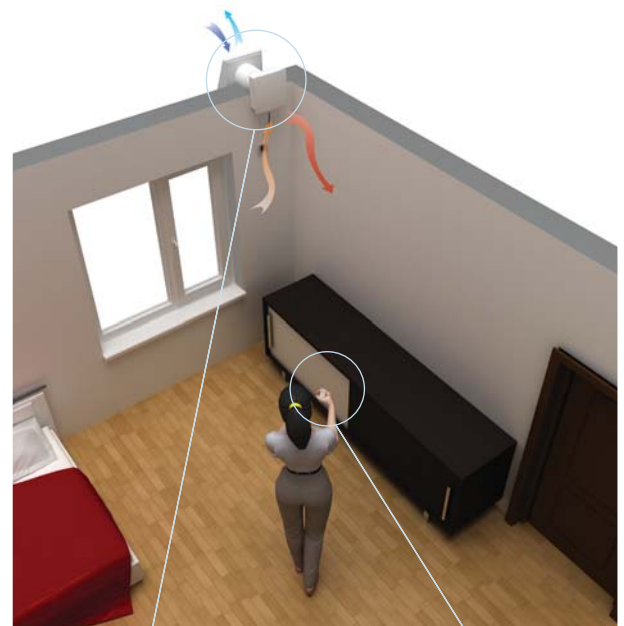
To arrange a ventilation system based on TwinFresh ventilators install one ventilator in each room. For larger premises, install two or more ventilators.

TwinFresh ventilators are suitable for use as single units or for integration into a ventilation network.

Operation mode of each ventilator installed in a separate room is individually adjustable. To start operating the TwinFresh Comfo ventilator you only have to connect it to a power outlet. For the TwinFresh Standard model you have to connect the control and power unit first.

While integrating many ventilators into a single network one part of them must be set into air supply mode and the other part must be set into air extract mode. It is advisable to use paired units to ensure balanced ventilation.

In reversible mode operation with heat and moisture energy regeneration the ventilators TwinFresh change their operation mode each 70 seconds and transfer the heat and moisture energy from extract air to supply air and thus save heat in winter and coolness in summer.



## TwinFresh Standard control and operation modes

The ventilator automation system enables operation in four modes:

1. Ventilation mode (extract or supply) at low speed
2. Ventilation mode (extract or supply) at high speed
3. Reversible mode (regeneration) at low speed
4. Reversible mode (regeneration) at high speed

The units are operated either with the control panel (KVR or KVS) or the control and power unit (KVR-T 2 (220/12) or KVS-T 12 (220/12)).

The 12 W control and power units KVR-T 12 (220/12) and KVS-T 12 (220/12) are included into delivery sets of the TwinFresh RA-50, SA1-50 and SA-60 ventilators and comprise the KVR or KVS control panel as well as the TRF 220/12-12 in one casing.

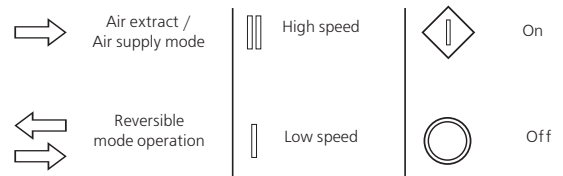
The 12 W power transformer TRF 220/12-12 is capable to power up to 4 ventilators.

The 40 W power transformer TRF 220/12-40 is capable to power up to 11 ventilators.

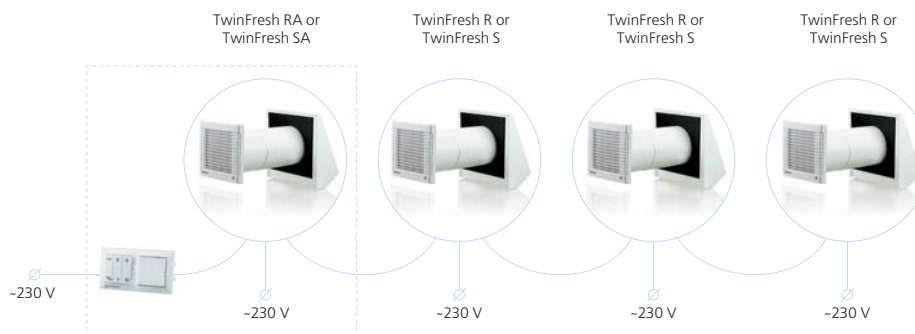


KVR-T 12 (220/12), KVS-T 12 (220/12)  
control and power unit

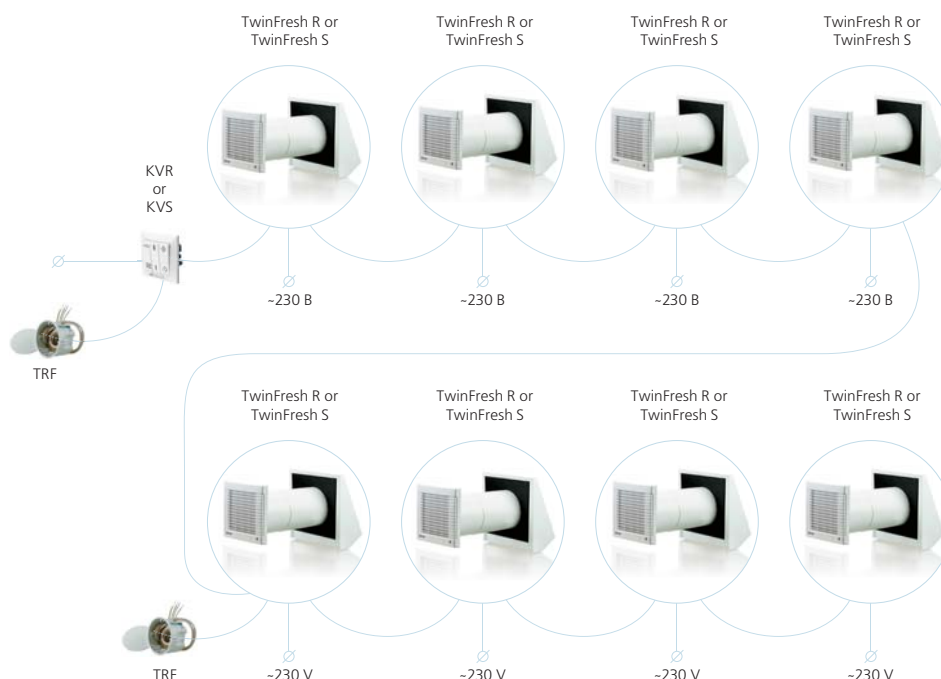
KVR, KVS  
control panel



One ventilator equipped with a control and power unit, i.e. TwinFresh RA, is capable to connect three TwinFresh R ventilators with no extra accessories.



One KVR or KVS control panel and several transformers are used for integration of several ventilators into a single ventilation network.





## TwinFresh Standard mounting example



Mounting into a wall with a standard thickness using EH outer hood



Mounting into a thin wall using EH-2 outer hood



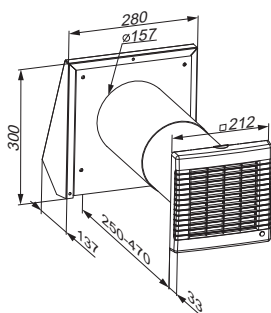
Angular mounting using NP 60x204-0021 kit (TwinFresh RA-50-5 model)

## TwinFresh Standard technical data

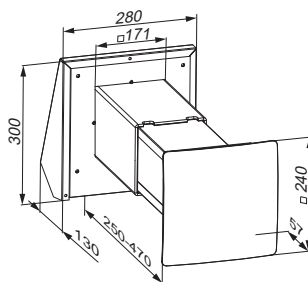
	TwinFresh R-50 TwinFresh RA-50		TwinFresh S1-50 TwinFresh SA1-50		TwinFresh S-60 TwinFresh SA-60	
Speed	1	2	1	2	1	2
Supply voltage, 50 Hz [V]	230					
Power [W]	3.5	4.6	3.5	4.6	2.8	4.8
Max. current consumption [A]	0.02	0.025	0.02	0.025	0.018	0.028
Max. air capacity [m <sup>3</sup> /h]	25	50	25	50	35	58
RPM [min <sup>-1</sup> ]	570	1100	570	1100	1150	2100
Sound pressure level at 1 m distance [dB(A)]	24	34	24	34	34	41
Sound pressure level at 3 m distance [dB(A)]	14	24	14	24	24	29
Outdoor sound pressure attenuation [dB(A)]*	18		19		19	
Max. transported air temperature [°C]	from -20 up to + 50					
Regenerating efficiency	≤90 %				≤88 %	
Regenerator type	Ceramic					
Air duct size [mm]	Ø150		164x164		164x164	
Ingress Protection	IP 24					

\* The outdoor sound pressure attenuation was measured by comparing the indoor sound pressure level in an open air duct inside the wall and the indoor sound level with the ventilator built inside the wall.

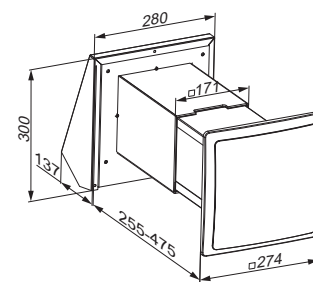
## TwinFresh Standard ventilator overall dimensions [mm]



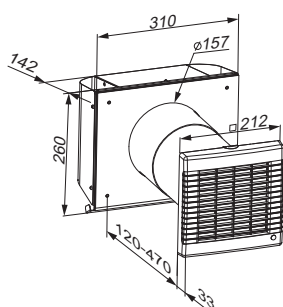
TwinFresh R-50 / RA-50



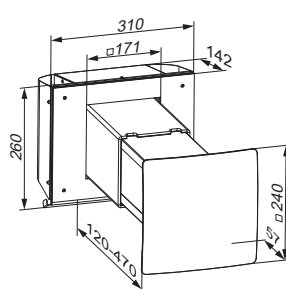
TwinFresh S1-50 / SA1-50



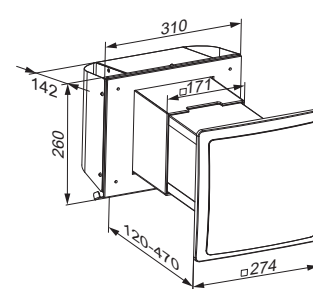
TwinFresh S-60 / SA-60



TwinFresh R-50-2 / RA-50-2



TwinFresh S1-50-2 / SA1-50-2



TwinFresh S-60-2 / SA-60-2

## TwinFresh Comfo control and operation modes

The TwinFresh Comfo series ventilators are equipped with a remote controller. If several ventilators are integrated into a central remote controlled ventilation network the signal from the remote controller is received by the first ventilator only.

- Ventilator on/off**  
 (Power button)
- Speed switching**  
 (Fan speed buttons)
- Passive air supply:**  
 The automatic shutters are opened but the fans are OFF
- Ventilation:**  
 All the ventilators in the network operate in permanent air extract or air supply mode. To ensure balanced ventilation it is advisable to set one half of the ventilators into air supply mode and the other part of the ventilators into air extract mode.
- Selection of humidity control mode:**  
 The humidity set point is adjustable for 45, 55 or 65%. The ventilator speed control up or down keeps the comfortable indoor humidity.
- Night mode:**  
 The integrated photo sensor sends a signal to turn the ventilator into low speed mode.
- Air supply:**  
 All the ventilators operate in air supply mode no matter of the adjustment to deliver fresh air to the premises.
- Heat recovery ventilation:**  
 The ventilators switch between air supply and air extract each 70 seconds. To attain the best result we recommend to set the ventilators into opposite phase operation modes.

The manual switches for basic operation modes on the ventilator housing make the TwinFresh Comfo control still more convenient and practical. Set the operation mode switches to medium position to enable remote control of the ventilator.

- High speed**
- Off**
- Medium speed**
- Ventilation**
- Heat recovery ventilation**
- Air supply**

## TwinFresh Comfo technical data

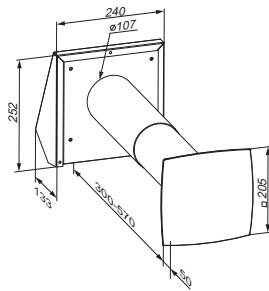
	TwinFresh Comfo RA1-25			TwinFresh Comfo RA -35 TwinFresh Comfo RA 1-35			TwinFresh Comfo RA-50 TwinFresh Comfo RA1-50		
	1	2	3	1	2	3	1	2	3
Speed									
Supply voltage, 50/60 Hz [V]	1-100-230								
Power [W]	3.5	3.95	5.32	3.93	4.39	5.10	3.8	3.96	5.61
Max. current consumption [A]	0.023	0.026	0.036	0.023	0.026	0.032	0.024	0.026	0.039
Max. air capacity [m <sup>3</sup> /h]	7	15	24	10	20	30	14	28	54
RPM [min <sup>-1</sup> ]	1190	1330	2420	745	1075	1670	610	800	1450
Sound pressure level at 1 m distance [dB(A)]	31	35	43	27	32	38	22	29	32
Sound pressure level at 3 m distance [dB(A)]	22	25	33	18	23	28	13	20	23
Outdoor sound pressure attenuation [dB(A)]*	16			17			18		
Max. transported air temperature [°C]	from -20 up to + 50								
Regenerating efficiency	≤85 %			≤90 %			≤90 %		
Regenerator type	Ceramic								
Air duct size [mm]	Ø100			Ø125			Ø150		
Ingress Protection	IP 24								

\* The outdoor sound pressure attenuation was measured by comparing the indoor sound pressure level in an open air duct inside the wall and the indoor sound level with the ventilator built inside the wall.

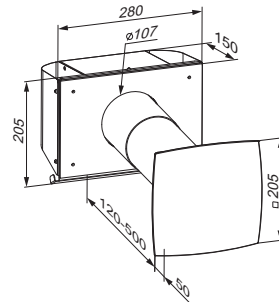
	TwinFresh Comfo SA-35 TwinFresh Comfo SA1-35		
	1	2	3
Speed			
Supply voltage, 50/60 Hz [V]	1-100-230		
Power [W]	4.54	5.18	6.1
Max. current consumption [A]	0.026	0.031	0.037
Max. air capacity [m <sup>3</sup> /h]	12	25	37
RPM [min <sup>-1</sup> ]	851	1330	1715
Sound pressure level at 1 m distance [dB(A)]	28	33	39
Sound pressure level at 3 m distance [dB(A)]	19	24	29
Outdoor sound pressure attenuation [dB(A)]*	18		
Max. transported air temperature [°C]	from -20 up to + 50		
Regenerating efficiency	≤88 %		
Regenerator type	Ceramic		
Air duct size [mm]	150x150		
Ingress Protection	IP24		

\* The outdoor sound pressure attenuation was measured by comparing the indoor sound pressure level in an open air duct inside the wall and the indoor sound level with the ventilator built inside the wall.

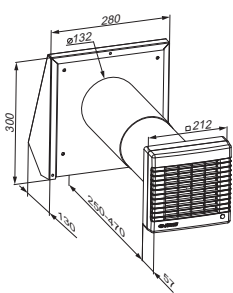
### TwinFresh Comfo ventilator overall dimensions [mm]



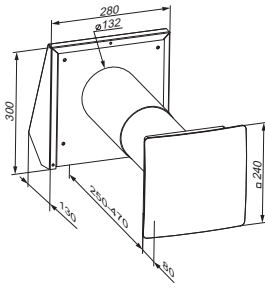
TwinFresh Comfo RA1-25



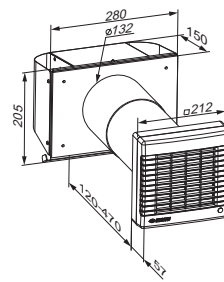
TwinFresh Comfo RA1-25-2



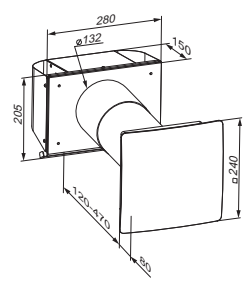
TwinFresh Comfo RA-35



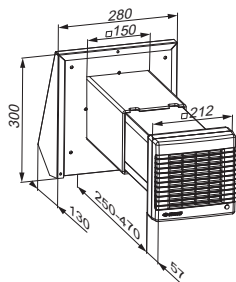
TwinFresh Comfo RA1-35



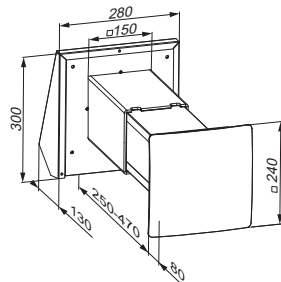
TwinFresh Comfo RA-35-2



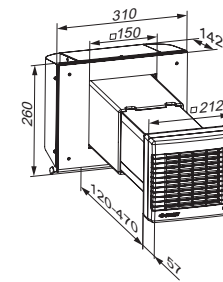
TwinFresh Comfo RA1-35-2



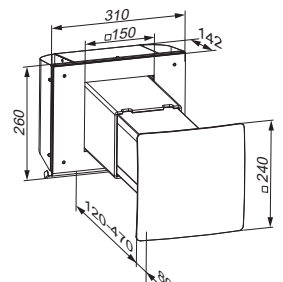
TwinFresh Comfo SA-35



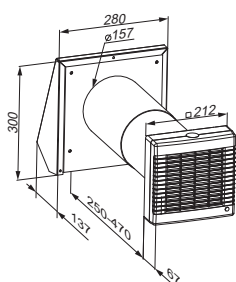
TwinFresh Comfo SA1-35



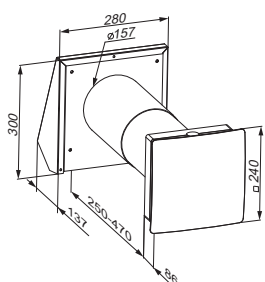
TwinFresh Comfo SA-35-2



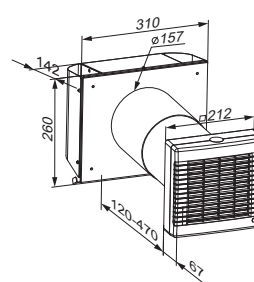
TwinFresh Comfo SA1-35-2



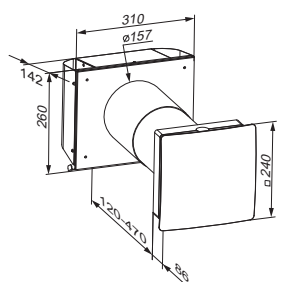
TwinFresh Comfo RA-50



TwinFresh Comfo RA1-50

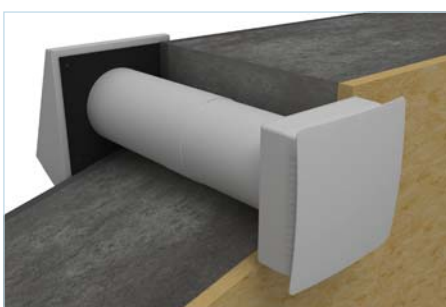


TwinFresh Comfo RA-50-2



TwinFresh Comfo RA1-50-2

### TwinFresh Comfo mounting example



Mounting into a wall with a standard thickness using EH outer hood



Mounting into a thin wall using EH-2 outer hood



Angular mounting with the NP 60x204-0021 mounting kit

# SINGLE-ROOM ENERGY SAVING VENTILATION

## TwinFresh Solar control and operation modes

The ventilator automation system enables operation in four modes:

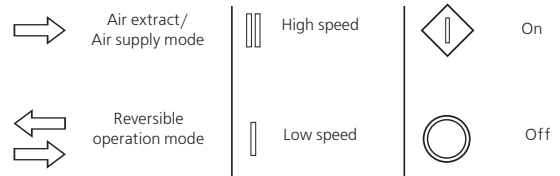
1. Ventilation mode (extract or supply) at low speed
2. Ventilation mode (extract or supply) at high speed
3. Reversible mode (regeneration) at low speed
4. Reversible mode (regeneration) at high speed

The TwinFresh Solar SA-60 is controlled with the KVS control panel and is powered by the solar panel.

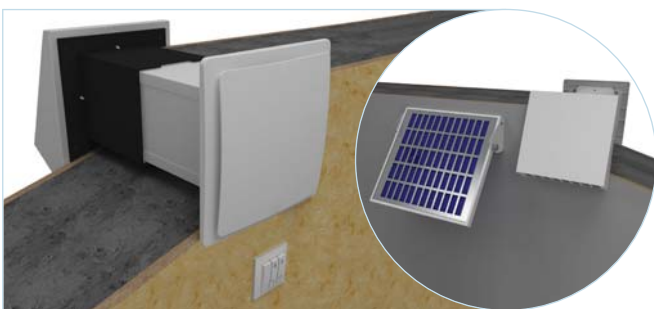
The delivery set of the TwinFresh Solar SA-60 Pro includes a battery. During the day time the solar panel supplies power to the ventilator and charges the battery. In the night time the ventilator is powered by the battery.



KVS control panel



## TwinFresh Solar mounting example



Mounting into a wall with a standard thickness using EH outer hood



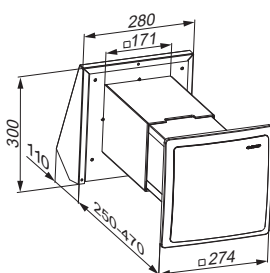
Mounting into a thin wall using EH-2 outer hood

## TwinFresh Solar technical data

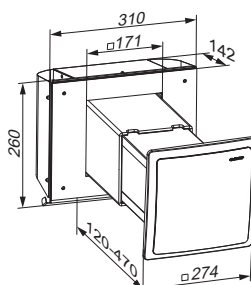
	TwinFresh Solar SA-60 TwinFresh Solar SA-60 Pro	
Speed	1	2
Supply voltage [V]	12	
Power [W]	2.8	4.8
Max. current consumption [A]	0.018	0.028
Max. air capacity [m <sup>3</sup> /h]	35	58
RPM [min <sup>-1</sup> ]	1150	2100
Sound pressure level at 1 m distance [dB(A)]	34	41
Sound pressure level at 3 m distance [dB(A)]	24	29
Outdoor sound pressure attenuation [dB(A)]*	19	
Max. transported air temperature [°C]	from -20 up to + 50	
Regenerating efficiency	≤88 %	
Regenerator type	Ceramic	
Air duct size [mm]	164 x 164	
Ingress Protection	IP 24	

\* The outdoor sound pressure attenuation was measured by comparing the indoor sound pressure level in an open air duct inside the wall and the indoor sound level with the ventilator built inside the wall.

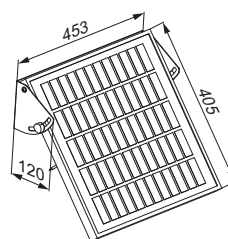
## TwinFresh Solar ventilator overall dimensions [mm]



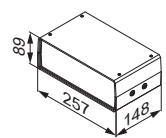
TwinFresh Solar SA-60



TwinFresh Solar SA-60-2



Solar panel



Battery

## ■ TwinFresh pre-installation and completion kit

In case of a new brand construction the ventilators are mounted in two stages using a pre-installation and a completion kit.

The first mounting stage is performed during inner and outer wall finishing and includes cable layout, telescopic duct mounting, outer ventilation hood installation

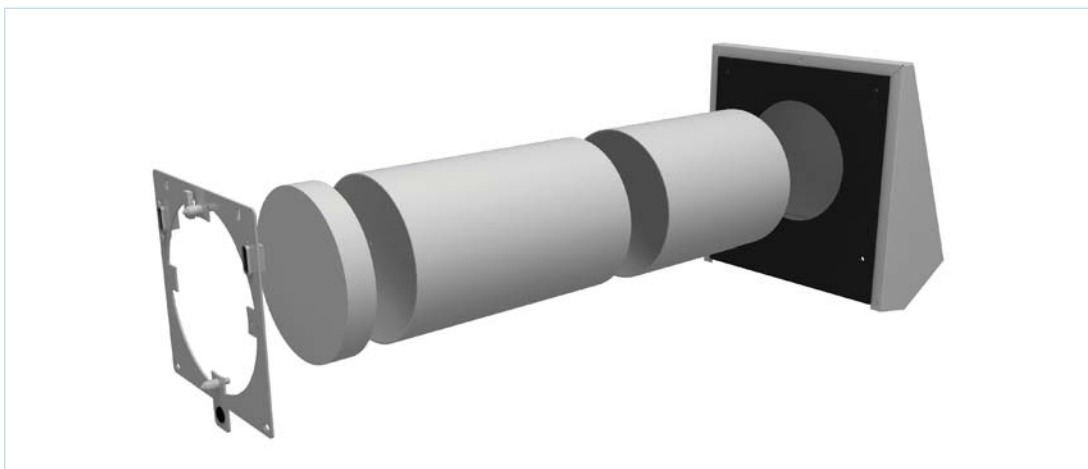
and connection of the mounting plate in case of TwinFresh Comfo.

The second mounting stage takes place before commissioning of the house and includes installation of the regenerator, filters, ventilation unit and automation connection.

The TwinFresh **pre-installation kit** includes:

- ✓ Telescopic air duct
- ✓ Outer hood

- ✓ Plastic foam plug
- ✓ Mounting plate (for TwinFresh Comfo only)



TwinFresh Comfo RA-50 pre-installation kit example



TwinFresh **completion kit** includes:

- ✓ Ceramic energy accumulator
- ✓ Ventilation unit
- ✓ Filters



TwinFresh Comfo RA-50 completion kit example

## TwinFresh standard accessories

Accessory image	Accessory name	TwinFresh R-50	TwinFresh RA-50
	White painted aluminium outer hood <b>EH white 150</b>	 TwinFresh R-50	 TwinFresh RA-50
	Brown painted aluminium outer hood <b>EH brown 150</b>	TwinFresh R-50 brown	TwinFresh RA-50 brown
	Grey painted aluminium outer hood <b>EH grey 150</b>	TwinFresh R-50 grey	TwinFresh RA-50 grey
	Polished stainless steel outer hood <b>EH chrome 150</b>	TwinFresh R-50 chrome	TwinFresh RA-50 chrome
	Round stainless steel outer hood <b>MVM 152 bVs N</b>	TwinFresh R-50-1	TwinFresh RA-50-1
	Grey painted stainless steel outer hood for thin walls <b>EH-2 grey 150</b>	TwinFresh R-50-2 grey	TwinFresh RA-50-2 grey
	Polished stainless steel outer hood for thin walls <b>EH-2 chrome 150</b>	TwinFresh R-50-2 chrome	TwinFresh RA-50-2 chrome
	Round plastic grille <b>MV 150 bVs</b>	TwinFresh R-50-3	TwinFresh RA-50-3
	Plastic rectangular grille <b>MV 125 VDs</b>	TwinFresh R-50-4	TwinFresh RA-50-4
	Angular mounting kit <b>NP 60x204-0021</b>	TwinFresh R-50-5	TwinFresh RA-50-5
	Control and power unit <b>KVR-T 12 (220/12)</b>	●	TwinFresh RA-50
	Power transformer 12 W <b>TRF 220/12-12</b>	●	●
	Power transformer 40 W <b>TRF 220/12-40</b>	●	●
	Control panel <b>KVR</b>	●	●

- - Compatible
- - Non compatible

Accessory image	Accessory name	TwinFresh S1-50	TwinFresh SA1-50	TwinFresh S-60	TwinFresh SA-60
	White painted aluminium outer hood <b>EH white 164x164</b>	TwinFresh S1-50	TwinFresh SA1-50	TwinFresh S-60	TwinFresh S-60
	Brown painted aluminium outer hood <b>EH brown 164x164</b>	TwinFresh S1-50 brown	TwinFresh SA1-50 brown	TwinFresh S-60 brown	TwinFresh S-60 brown
	Grey painted aluminium outer hood <b>EH grey 164x164</b>	TwinFresh S1-50 grey	TwinFresh SA1-50 grey	TwinFresh S-60 grey	TwinFresh S-60 grey
	Polished stainless steel outer hood <b>EH chrome 164x164</b>	TwinFresh S1-50 chrome	TwinFresh SA1-50 chrome	TwinFresh S-60 chrome	TwinFresh S-60 chrome
	Grey painted stainless steel outer hood for thin walls <b>EH-2 grey 164x164</b>	TwinFresh S1-50-2 grey	TwinFresh SA1-50-2 grey	TwinFresh S-60-2 grey	TwinFresh S-60-2 grey
	Polished stainless steel outer hood for thin walls <b>EH-2 chrome 164x164</b>	TwinFresh S1-50-2 chrome	TwinFresh SA1-50-2 chrome	TwinFresh S-60-2 chrome	TwinFresh S-60-2 chrome
	Control and power unit <b>KVS-T 12 (220/12)</b>	○	○	●	TwinFresh SA-60
	Control and power unit <b>KVR-T 12 (220/12)</b>	●	TwinFresh SA1-50	○	○
	Power transformer 12 W <b>TRF 220/12-12</b>	●	●	●	●
	Power transformer 40 W <b>TRF 220/12-40</b>	●	●	●	●
	Control panel <b>KVS</b>	○	○	●	●
	Control panel <b>KVR</b>	●	●	○	○

● – Compatible  
○ – Non compatible



## TwinFresh Comfo accessories

Accessory image	Accessory name	TwinFresh Comfo RA-50	TwinFresh Comfo RA1-50
	White painted aluminium outer hood <b>EH white 150</b>	 TwinFresh Comfo RA-50	 TwinFresh Comfo RA1-50
	Brown painted aluminium outer hood <b>EH brown 150</b>	TwinFresh Comfo RA-50 brown	TwinFresh Comfo RA1-50 brown
	Grey painted aluminium outer hood <b>EH grey 150</b>	TwinFresh Comfo RA-50 grey	TwinFresh Comfo RA1-50 grey
	Polished stainless steel outer hood <b>EH chrome 150</b>	TwinFresh Comfo RA-50 chrome	TwinFresh Comfo RA1-50 chrome
	Round stainless steel outer hood <b>MVM 152 bVs N</b>	TwinFresh Comfo RA-50-1	TwinFresh Comfo RA1-50-1
	Grey painted stainless steel outer hood for thin walls <b>EH-2 grey 150</b>	TwinFresh Comfo RA-50-2 grey	TwinFresh Comfo RA1-50-2 grey
	Polished stainless steel outer hood for thin walls <b>EH-2 chrome 150</b>	TwinFresh Comfo RA-50-2 chrome	TwinFresh Comfo RA1-50-2 chrome
	Round plastic grille <b>MV 150 bVs</b>	TwinFresh Comfo RA-50-3	TwinFresh Comfo RA1-50-3
	Plastic rectangular grille <b>MV 125 VDs</b>	TwinFresh Comfo RA-50-4	TwinFresh Comfo RA1-50-4
	Angular mounting kit <b>NP 60x204-0021</b>	TwinFresh Comfo RA-50-5	TwinFresh Comfo RA1-50-5
	Decorative cover plate Mirror natural aluminium <b>RV TwinFresh S chrome</b>	○	●
	Decorative cover plate Grey metallic <b>RV TwinFresh S alumat</b>	○	●
	Decorative cover plate Natural polished aluminium <b>RV TwinFresh alu</b>	○	●
	Decorative cover plate Natural golden painted aluminium <b>RV TwinFresh S gold</b>	○	●

● – Compatible  
○ – Non compatible

Accessory image	Accessory name	TwinFresh Comfo SA-35	TwinFresh Comfo SA1-35
	White painted aluminium outer hood <b>EH white 150x150</b>		
	Brown painted aluminium outer hood <b>EH brown 150x150</b>	TwinFresh Comfo SA-35 brown	TwinFresh Comfo SA1-35 brown
	Grey painted aluminium outer hood <b>EH grey 150x150</b>	TwinFresh Comfo SA-35 grey	TwinFresh Comfo SA1-35 grey
	Polished stainless steel outer hood <b>EH chrome 150x150</b>	TwinFresh Comfo SA-35 chrome	TwinFresh Comfo SA1-35 chrome
	Grey painted stainless steel outer hood for thin walls <b>EH-2 grey 150x150</b>	TwinFresh Comfo SA-35-2 grey	TwinFresh Comfo SA1-35-2 grey
	Polished stainless steel outer hood for thin walls <b>EH-2 chrome 150x150</b>	TwinFresh Comfo SA-35-2 chrome	TwinFresh Comfo SA1-35-2 chrome
	Decorative cover plate Mirror natural aluminium <b>RV TwinFresh S chrome</b>	○	●
	Decorative cover plate Grey metallic <b>RV TwinFresh S alumat</b>	○	●
	Decorative cover plate Natural polished aluminium <b>RV TwinFresh alu</b>	○	●
	Decorative cover plate Natural golden painted aluminium <b>RV TwinFresh S gold</b>	○	●

● - Compatible  
○ - Non compatible

## TwinFresh Comfo accessories

Accessory image	Accessory name	TwinFresh Comfo RA-35	TwinFresh Comfo RA1-35
	White painted aluminium outer hood <b>EH white 125</b>	 TwinFresh Comfo RA-35	 TwinFresh Comfo RA1-35
	Brown painted aluminium outer hood <b>EH brown 125</b>	TwinFresh Comfo RA-35 brown	TwinFresh Comfo RA1-35 brown
	Grey painted aluminium outer hood <b>EH grey 125</b>	TwinFresh Comfo RA-35 grey	TwinFresh Comfo RA1-35 grey
	Polished stainless steel outer hood <b>EH chrome 125</b>	TwinFresh Comfo RA-35 chrome	TwinFresh Comfo RA1-35 chrome
	Round stainless steel outer hood <b>MVM 125 bVs N</b>	TwinFresh Comfo RA-35-1	TwinFresh Comfo RA1-35-1
	Grey painted stainless steel outer hood for thin walls <b>EH-2 grey 125</b>	TwinFresh Comfo RA-35-2 grey	TwinFresh Comfo RA1-35-2 grey
	Polished stainless steel outer hood for thin walls <b>EH-2 chrome 125</b>	TwinFresh Comfo RA-35-2 chrome	TwinFresh Comfo RA1-35-2 chrome
	Round plastic grille <b>MV 125 bVs</b>	TwinFresh Comfo RA-35-3	TwinFresh Comfo RA1-35-3
	Plastic rectangular grille <b>MV 125 VDs</b>	TwinFresh Comfo RA-35-4	TwinFresh Comfo RA1-35-4
	Angular mounting kit <b>NP 60x204-0062</b>	TwinFresh Comfo RA-35-5	TwinFresh Comfo RA1-35-5
	Decorative cover plate Mirror natural aluminium <b>RV TwinFresh S chrome</b>	○	●
	Decorative cover plate Grey metallic <b>RV TwinFresh S alumat</b>	○	●
	Decorative cover plate Natural polished aluminium <b>RV TwinFresh alu</b>	○	●
	Decorative cover plate Natural golden painted aluminium <b>RV TwinFresh S gold</b>	○	●

● - Compatible  
○ - Non compatible

Accessory image	Accessory name	TwinFresh Comfo RA1-25
	White painted aluminium outer hood <b>EH white 100</b>	TwinFresh Comfo RA1-25
	Brown painted aluminium outer hood <b>EH brown 100</b>	TwinFresh Comfo RA1-25 brown
	Grey painted aluminium outer hood <b>EH grey 100</b>	TwinFresh Comfo RA1-25 grey
	Polished stainless steel outer hood <b>EH chrome 100</b>	TwinFresh Comfo RA1-25 chrome
	Grey painted stainless steel outer hood for thin walls <b>EH-2 grey 100</b>	TwinFresh Comfo RA1-25 grey
	Polished stainless steel outer hood for thin walls <b>EH-2 chrome 100</b>	TwinFresh Comfo RA1-25-2 chrome
	Round plastic grille <b>MV 100 bVs</b>	TwinFresh Comfo RA1-25-3
	Plastic rectangular grille <b>MV 125 VDs</b>	TwinFresh Comfo RA1-25-4
	Angular mounting kit <b>NP 60x204-0063</b>	TwinFresh Comfo RA1-25-5

## TwinFresh Solar accessories







Accessory image	Accessory name	TwinFresh Solar SA -60	TwinFresh Solar SA-60 Pro
	White painted aluminium outer hood <b>EH white 164x164</b>	 TwinFresh Solar SA -60	 TwinFresh Solar SA-60 Pro
	Brown painted aluminium outer hood <b>EH brown 164x164</b>	TwinFresh Solar CA-60 brown	TwinFresh Solar SA-60 Pro brown
	Grey painted aluminium outer hood <b>EH grey 164x164</b>	TwinFresh Solar SA-60 grey	TwinFresh Solar SA-60 Pro grey
	Polished stainless steel outer hood <b>EH chrome 164x164</b>	TwinFresh Solar SA-60 chrome	TwinFresh Solar SA-60 Pro chrome
	Grey painted stainless steel outer hood for thin walls <b>EH-2 grey 164x164</b>	TwinFresh Solar SA-60-2 grey	TwinFresh Solar SA-60-2 Pro grey
	Polished stainless steel outer hood for thin walls <b>EH-2 chrome 164x164</b>	TwinFresh Solar SA-60-2 chrome	TwinFresh Solar SA-60-2 Pro chrome

## TwinFresh Standard order codes












Item	Delivery scope
 <b>TwinFresh R-50</b>	 <ol style="list-style-type: none"> <li>1. Ø150 mm round telescopic duct, 250-470 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Integrated automatic shutters with a thermal actuator.</li> <li>6. Two filters with total G3 filter class.</li> <li>7. Reversible axial fan with EC motor.</li> <li>8. Integrated automation.</li> </ol> <p>The ventilator is controlled with the KVR control unit (upon separate order) and the TRF power transformer (upon separate order) to enable required power supply connection.</p>
 <b>TwinFresh RA-50</b>	 <ol style="list-style-type: none"> <li>1. Ø150 mm round telescopic duct, 250-470 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Integrated automatic shutters with a thermal actuator.</li> <li>6. Two filters with total G3 filter class.</li> <li>7. Reversible axial fan with EC motor.</li> <li>8. Integrated automation.</li> <li>9. Control and power unit for connection to 220 V / 50 Hz power mains.</li> </ol>
 <b>TwinFresh S1-50</b>	 <ol style="list-style-type: none"> <li>1. 164x164 mm square telescopic duct, 250-470 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Filter with total G3 filter class.</li> <li>6. Reversible axial fan with EC motor.</li> <li>7. Integrated automation.</li> </ol> <p>The ventilator is controlled with the KVR control unit and the TRF power transformer to enable required power supply connection.</p>
 <b>TwinFresh SA1-50</b>	 <ol style="list-style-type: none"> <li>1. 164x164 mm square telescopic duct, 250-470 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Filter with total G3 filter class.</li> <li>6. Reversible axial fan with EC motor.</li> <li>7. Integrated automation.</li> <li>8. Control and power unit for connection to 220 V / 50 Hz power mains.</li> </ol>
 <b>TwinFresh S-60</b>	 <ol style="list-style-type: none"> <li>1. 164x164 mm square telescopic duct, 255-475 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Two filters with total G3 filter class.</li> <li>6. Reversible axial fan with EC motor.</li> <li>7. Integrated automation.</li> </ol> <p>The ventilator is controlled with the KVR control unit and the TRF power transformer to enable required power supply connection.</p>
 <b>TwinFresh SA-60</b>	 <ol style="list-style-type: none"> <li>1. 164x164 mm square telescopic duct, 255-475 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Two filters with total G3 filter class.</li> <li>6. Reversible axial fan with EC motor.</li> <li>7. Integrated automation.</li> <li>8. Control and power unit for connection to 220 V / 50 Hz power mains.</li> </ol>

# TWINFRESH VENTILATORS ORDER CODES

## TwinFresh Standard order codes

Item	Delivery scope
 <b>TwinFresh R-50 pre-installation kit</b>	1. Ø150 mm round telescopic duct, 250-470 mm long. 2. Outer hood. 3. Plastic foam plug.
 <b>TwinFresh R-50 completion kit</b>	1. Ceramic energy accumulator (regenerator). 2. TwinFresh R-50 ventilation unit. 3. Two filters with total G3 filter class.
 <b>TwinFresh S1-50 pre-installation kit</b>	1. 164x164 mm square telescopic duct, 255-475 mm long. 2. Outer hood. 3. Plastic foam plug.
 <b>TwinFresh S1-50 completion kit</b>	1. Ceramic energy accumulator (regenerator). 2. TwinFresh S1-50 ventilation unit. 3. Filter with total G3 filter class.
 <b>TwinFresh S-60 pre-installation kit</b>	1. 164x164 mm square telescopic duct, 255-475 mm long. 2. Outer hood. 3. Plastic foam plug.
 <b>TwinFresh S-60 completion kit</b>	1. Ceramic energy accumulator (regenerator). 2. TwinFresh S-60 ventilation unit. 3. Filter with total G3 filter class.

**TwinFresh Comfo order codes**

Item	Delivery scope
 <b>TwinFresh Comfo RA-50</b>	 <ol style="list-style-type: none"> <li>1. Ø150 mm round telescopic duct, 250-470 mm long.</li> <li>2. Mounting plate.</li> <li>3. White polymer coated aluminium outer hood.</li> <li>4. Ceramic energy accumulator (regenerator).</li> <li>5. White ABS plastic decorative front grille.</li> <li>6. Integrated automatic shutters with a thermal actuator.</li> <li>7. Two filters with total G3 filter class.</li> <li>8. Reversible axial fan with EC motor.</li> <li>9. Integrated automation.</li> <li>10. Remote controller.</li> </ol>
 <b>TwinFresh Comfo RA1-50</b>	 <ol style="list-style-type: none"> <li>1. Ø150 mm round telescopic duct, 250-470 mm long.</li> <li>2. Mounting plate.</li> <li>3. White polymer coated aluminium outer hood.</li> <li>4. Ceramic energy accumulator (regenerator).</li> <li>5. White ABS plastic flat front decorative panel.</li> <li>6. Integrated automatic shutters with a thermal actuator.</li> <li>7. Two filters with total G3 filter class.</li> <li>8. Reversible axial fan with EC motor.</li> <li>9. Integrated automation.</li> <li>10. Remote controller.</li> </ol>
 <b>TwinFresh Comfo SA-35</b>	 <ol style="list-style-type: none"> <li>1. 150x150 mm square telescopic duct, 250-470 mm long.</li> <li>2. Mounting plate.</li> <li>3. White polymer coated aluminium outer hood.</li> <li>4. Ceramic energy accumulator (regenerator).</li> <li>5. White ABS plastic decorative front grille.</li> <li>6. Two filters with total G3 filter class.</li> <li>7. Reversible axial fan with EC motor.</li> <li>8. Integrated automation.</li> <li>9. Remote controller.</li> </ol>
 <b>TwinFresh Comfo SA1-35</b>	 <ol style="list-style-type: none"> <li>1. 150x150 mm square telescopic duct, 250-470 mm long.</li> <li>2. Mounting plate.</li> <li>3. White polymer coated aluminium outer hood.</li> <li>4. Ceramic energy accumulator (regenerator).</li> <li>5. Flat decorative front panel.</li> <li>6. Two filters with total G3 filter class.</li> <li>7. Reversible axial fan with EC motor.</li> <li>8. Integrated automation.</li> <li>9. Remote controller.</li> </ol>
 <b>TwinFresh Comfo RA-35</b>	 <ol style="list-style-type: none"> <li>1. Ø125 mm round telescopic duct, 250-470 mm long.</li> <li>2. Mounting plate.</li> <li>3. White polymer coated aluminium outer hood.</li> <li>4. Ceramic energy accumulator (regenerator).</li> <li>5. White ABS plastic decorative front grille.</li> <li>6. Integrated automatic shutters with a thermal actuator.</li> <li>7. Two filters with total G3 filter class.</li> <li>8. Reversible axial fan with EC motor.</li> <li>9. Integrated automation.</li> <li>10. Remote controller.</li> </ol>
 <b>TwinFresh Comfo RA1-35</b>	 <ol style="list-style-type: none"> <li>1. Ø125 mm round telescopic duct, 250-470 mm long.</li> <li>2. Mounting plate.</li> <li>3. White polymer coated aluminium outer hood.</li> <li>4. Ceramic energy accumulator (regenerator).</li> <li>5. White ABS plastic flat decorative front panel.</li> <li>6. Integrated automatic shutters with a thermal actuator.</li> <li>7. Two filters with total G3 filter class.</li> <li>8. Reversible axial fan with EC motor.</li> <li>9. Integrated automation.</li> <li>10. Remote controller.</li> </ol>



## TwinFresh Comfo order codes

Item	Delivery scope
<p> <b>TwinFresh Comfo RA1-25</b></p> 	<ol style="list-style-type: none"> <li>1. Ø100 mm round telescopic duct, 300-570 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Integrated automatic shutters with a thermal actuator.</li> <li>6. Two filters with total G3 filter class.</li> <li>7. Reversible axial fan with EC motor.</li> <li>8. Integrated automation.</li> <li>9. Remote controller.</li> </ol>
<p> <b>TwinFresh Comfo SA-35 pre-installation kit</b> *Suitable also for TwinFresh Comfo SA1-35</p>	<ol style="list-style-type: none"> <li>1. 150x150 mm square telescopic duct, 250-470 mm long.</li> <li>2. Outer hood.</li> <li>3. Plastic foam plug.</li> <li>4. Mounting plate.</li> </ol>
<p> <b>TwinFresh Comfo SA-35 completion kit</b></p>	<ol style="list-style-type: none"> <li>1. Ceramic energy accumulator (regenerator).</li> <li>2. TwinFresh Comfo SA-35 ventilation unit.</li> <li>3. Two filters with total G3 filter class.</li> </ol>
<p> <b>TwinFresh Comfo SA1-35 completion kit</b></p>	<ol style="list-style-type: none"> <li>1. Ceramic energy accumulator (regenerator).</li> <li>2. TwinFresh Comfo SA1-35 ventilation unit.</li> <li>3. Two filters with total G3 filter class.</li> </ol>
<p> <b>TwinFresh Comfo RA-50 pre-installation kit</b> *Suitable also for TwinFresh Comfo RA1-50</p>	<ol style="list-style-type: none"> <li>1. Ø150 mm round telescopic duct, 250-470 mm long.</li> <li>2. Outer hood.</li> <li>3. Plastic foam plug.</li> <li>4. Mounting plate.</li> </ol>
<p> <b>TwinFresh Comfo RA-50 completion kit</b></p>	<ol style="list-style-type: none"> <li>1. Ceramic energy accumulator (regenerator).</li> <li>2. TwinFresh Comfo RA-50 ventilation unit.</li> <li>3. Two filters with total G3 filter class.</li> </ol>
<p> <b>TwinFresh Comfo RA1-50 completion kit</b></p>	<ol style="list-style-type: none"> <li>1. Ceramic energy accumulator (regenerator).</li> <li>2. TwinFresh Comfo RA1-50 ventilation unit.</li> <li>3. Two filters with total G3 filter class.</li> </ol>

**TwinFresh Solar order code**

Item	Delivery scope
 <b>TwinFresh Solar SA-60</b>	 <ol style="list-style-type: none"> <li>1. 164x164 mm square telescopic duct, 255-475 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Two filters with total G3 filter class.</li> <li>6. Reversible axial fan with EC motor.</li> <li>7. Integrated automation.</li> <li>8. Solar panel.</li> <li>9. KVS control unit.</li> </ol>
 <b>TwinFresh Solar SA-60 Pro</b>	 <ol style="list-style-type: none"> <li>1. 164x164 mm square telescopic duct, 255-475 mm long.</li> <li>2. White polymer coated aluminium outer hood.</li> <li>3. Ceramic energy accumulator (regenerator).</li> <li>4. White ABS plastic decorative front grille.</li> <li>5. Two filters with total G3 filter class.</li> <li>6. Reversible axial fan with EC motor.</li> <li>7. Integrated automation.</li> <li>8. Solar panel.</li> <li>9. Battery,</li> </ol>

# TWINFRESH VENTILATOR DESIGNATION KEY

## Designation key example \_\_\_\_\_

