



ECO-VENTILATION

Single-room energy recovery ventilators



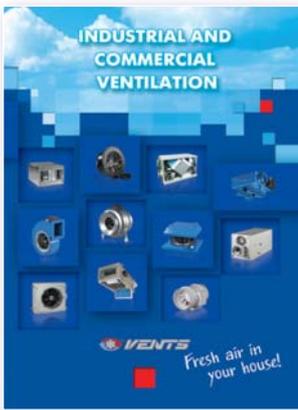
Fresh air
Energy saving
Compact size



Silent operation
Easy mounting
Multi-purpose functioning

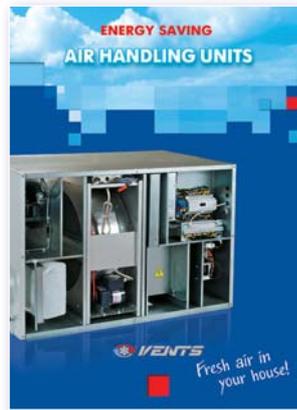
*Fresh air
in your house!*





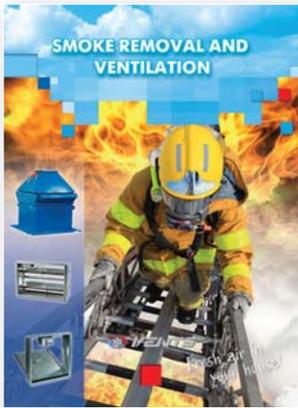
Industrial and commercial ventilation
(Catalogue no. 1)

Industrial and commercial ventilation components - fans for round and rectangular ducts, sound-insulated, axial and roof fans, air handling units with heat recovery, air heating units, accessories.



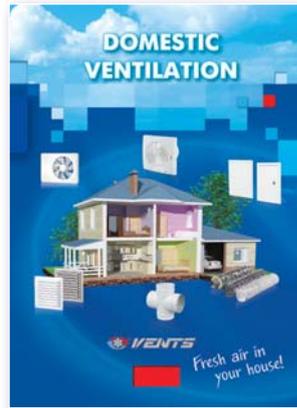
Energy saving ventilation
Air handling units
(Catalogue no. 2)

Energy saving supply and exhaust units and air handling units with heat recovery with air capacity up to 6500 m³/h.



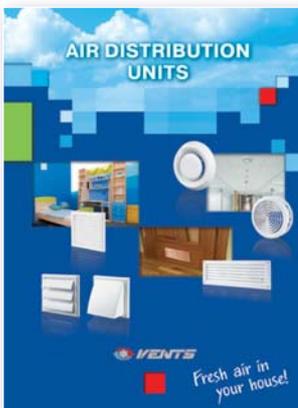
Smoke removal and ventilation
(Catalogue no. 5)

Smoke protection systems of buildings and premises.



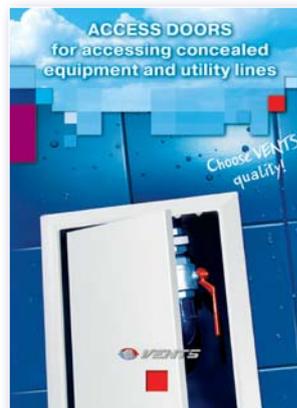
Domestic ventilation
(Catalogue no. 6)

Domestic ventilation: fans, mono-pipe exhaust kitchen and bathroom fans, air distribution units, air ducts and fittings, access doors, ventilation kits.



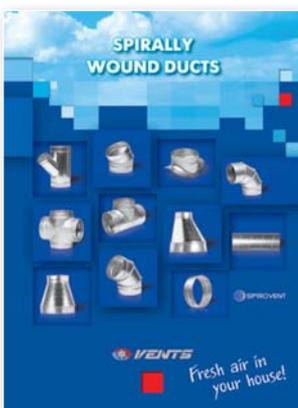
Air distribution units
(Catalogue no. 9)

Plastic and metal air distribution products (grilles, disk valves, diffusers, etc.) for ventilation, air conditioning and heating.



Access doors
(Catalogue no. 10)

Plastic and metal access doors for accessing concealed equipment and utility lines. Special offers for ceramic tiles.



Spiral seam air ducts
(Catalogue no. 13)

SPIROVENT spiral seam vent ducts and fittings of 100 to 1600 mm diameter.



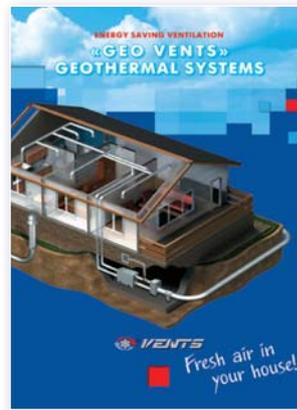
Flexible ducts and fittings for ventilation, air conditioning and heating
(Catalogue no. 14)

Flexible and semi-flexible air ducts made of polymeric materials, aluminium, galvanized or stainless steel, metal fittings for ventilation, air conditioning, heating, gas handling and abrasive particles aspiration.



**Air handling units
AIRVENTS
(Catalogue no. 3)**

Energy saving air handling units with air capacity up to 40 000 m³/h, for use in large residential, industrial and commercial objects.



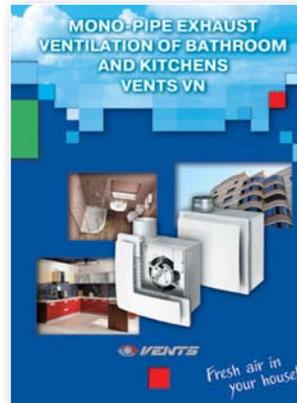
**Energy saving ventilation
Geothermal systems
GEO VENTS
(Catalogue no. 4)**

Energy saving system GEO VENTS with use of the earth's surface layers heat. High ventilation system energy efficiency and low operating costs.



**Domestic fans
(Catalogue no. 7)**

Domestic fans with air capacity up to 365 m³/h with extra functions: timer, humidity sensor, motion sensor, etc. Applied for premises up to 30 m².



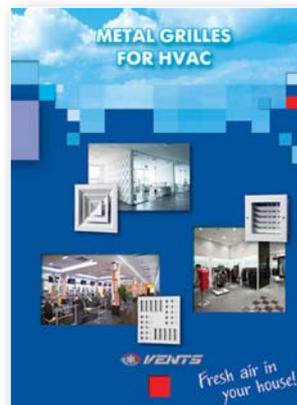
**VENTS VN
Mono-pipe exhaust
ventilation
(Catalogue no. 8)**

Exhaust ventilation in houses with mono-pipe ventilation system based on VENTS VN fans.



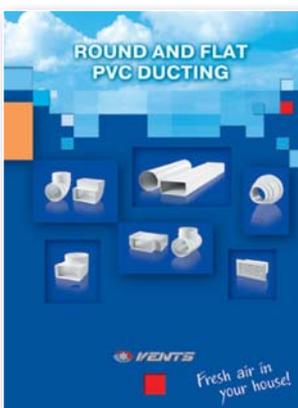
**Plastic grilles for ventilation
and air conditioning
(Catalogue no. 11)**

PROFIPLAST extruded plastic grilles for ventilation and air conditioning.



**Metal grilles for ventilation,
air conditioning and heating
(Catalogue no. 12)**

Metal grilles made of extruded metal profile for ventilation and air conditioning.



**Flat and round PVC
air ducts
(Catalogue no. 15)**

Flat and round PVC ducts PLASTIVENT for ventilation of residential, office and commercial premises and connection of exhaust ventilation equipment (kitchen extractors, hoods, exhaust boxes, etc). Wide product range of fittings.



**Energy saving ventilation.
Single room energy
recovery ventilators.
(Catalogue no. 16)**

Single room reverse ventilators with energy regeneration for efficient ventilation and lowest investments in ready-built and brand new premises.

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WELCOME TO THE VENTS WORLD!



VENTS company was founded in the nineties of the XXth century.

Dynamic development of the enterprise and ongoing study of the consumer demand enabled rapid international leadership of the company in the ventilation industry.

VENTS is a powerful research and development enterprise with 2500 professionals working as a single team to ensure a full production cycle from idea to end product. The production base of the company is located at more than 60 000 m² area. It includes 16 workshops equipped under the latest international standards and each of them is comparable to a separate plant.

Modern equipment, active implementation of advanced technologies and highly automated production are the characteristic features of VENTS company. The company undergoes rapid dynamic development; fundamental researches and effective designs in climatic equipment industry are in the focus of the company's business strategy.

The joint cooperation of the corporate design department, test laboratories and production workshops let us introduce high quality products to the market.

Special attention is paid to the manufacturing of the goods during all manufacturing stages including monitoring of the technological conditions. Technical characteristics of supplied raw materials are thoroughly checked.

Quality control system which meets international standard requirements ISO 9001:2000 was implemented at the enterprise.

Environmental protection is one of the basic components of the corporate. The technological process at the enterprise is arranged in such a way as to exclude any negative impact to the environment. To solve the global energy saving problem we develop a special climatic equipment that provides comfortable conditions for people and reduces the energy demand significantly.

Perfect quality, competitive prices, high production potential, technical capabilities and the wide product range stimulate long-term partnership and product promotion all over the world.

The VENTS ventilation products are exported to more than 90 countries and are sold through the distribution network of 120 companies worldwide. The global share of the VENTS products is above 10%.

VENTS is a member of high-rank international organizations, the leading HVAC experts.

Since 2008 VENTS has been a fully-featured member of HARDI Association (Heating, Air-conditioning and Refrigeration Distributors International, USA).

Since 2010 VENTS has been a participant of AMCA Association (the Air Movement and Control Association (AMCA) International, Inc.). In 2011 VENTS successfully passed tests for compliance with AMCA standards and the VENTS products were certified for the USA market.

In 2011 VENTS joined HVI (Home Ventilation Institute, USA) Association.





Metal processing workshop



Spiral air ducts workshop



Flexible air ducts workshop



Aluminium grilles and diffusers workshop



Powder coating workshop



Wet coating workshop



Extrusion workshop



Injection moulding workshop



Residential fans workshop



Ventilation grilles workshop



Electric motors workshop



Industrial fans workshop



Air handling units workshop



AirVents air handling unit workshop



Electrical accessories workshop



Extruded grilles workshop

Powerful production facilities, high automation level, active implementation of innovative technologies in the production process made VENTS a worldwide ventilation leader.

We manufacture our products with respect to unique geographical, climatic, technical features of each country and do our best to fulfil the client's wishes anywhere anytime.



Get benefit from cooperation with VENTS™ and enjoy the maximum range of products of the top quality from one manufacturer.

VENTILATION ON OUR LIFE

HOW MUCH FRESH IS THE AIR WE BREATHE IN?

In everyday life, we do not think a lot about how much time we spend in closed spaces – houses, offices, office buildings, hospitals, etc. All this time we share limited volume of air of doubtful purity and freshness with our people in the same rooms.

Unwellness, weariness, headache and other unpleasant symptoms are the first indicators of negative impact of polluted stale air on human health. Still, we rarely associate these conditions with poor air quality.

For human organism, the surrounding air quality has vital importance because metabolism is possible only due to oxidation, i.e. connection of

chemical substances with oxygen contained in blood. In case of no oxygen supply, the oxidation process interrupts, and the life of the organism stops. Therefore it is vital for us to take ongoing care of purity and freshness of the air we breathe.

The air that fills the apartment and rooms contains a large number of bacteria and dust particles, all kinds of vapours, gases and other municipal waste particles of big city and human organisms that results in high pollution concentration. No need to say, breathing such air in, we rather bring harm to our health than consume vitally important oxygen.



IN CAPTIVITY OF OUR OWN HOUSES ...

Air in any residential premise is always filled with micro particles and various polluting components thus creating a certain air pollution degree inside. Well arranged ventilation and permanent air exchange bring indoor concentration of harmful substances within permissible limits that is not dangerous for human health. But the situation changes drastically when some inhabitants driven by their desire to insulate their houses as much as possible thoughtlessly isolate all possible sources of natural air exchange by glazing balconies, insulating facades, sealing the window frames, doorways, blocking all the cracks and ventilation ducts. As a result, the modern houses made of brick and concrete, fitted with double-glazed windows, metal doors, additional outer

insulation, etc., are practically hermetic structures.

A striving to minimize heat losses and energy costs has resulted in almost ultimate insulation of buildings which blocked any natural air motion and air exchange. Under such circumstances, the natural ventilation does not provide sufficient air supply, consequently, a tightly closed house just „does not breathe“.

The rooms or premises that are thermally well insulated and sealed in plastic windows cannot avoid excessive moisture which provokes formation of various bad smells, including foul smell, feeling of stale air, various pollutants, even mould. Microclimate in this house becomes harmful for its inhabitants and for the house structure, too.

THE AIR IN YOUR HOUSE – A CLOSER LOOK UNDER THE MICROSCOPE

There are at least two sources of air pollution in any building. The first one includes the construction materials used for the building construction which produce more than 50% of overall pollution. People and their life activity form the second source of pollution.

Various suspended solid particles and microorganisms which are brought into a house by people, animals or penetrate through improperly maintained vents and ducts are always present in the indoor air. In poorly ventilated areas, these microorganisms can cause unpleasant smell, sense of discomfort, lung ailments displayed by sneezing attacks and even give rise to a variety of bacterial infections.

Emissions of various chemical substances used in cosmetics and detergents as well as dust, vapours, tobacco smoke, formaldehyde that are exhausted into atmosphere from synthetic carpets, polyurethane insulation, finishing materials, furniture, harmful chemicals emitted from household electric devices, concentrated carbon dioxide and radon are only few pollutants.

As a result, we feel stuffy air in a house with closed windows, air becomes stale, temperature and humidity rise up and finally that causes general feeling of weakness, weariness, bad sleep and other symptoms.

Poor air quality is detrimental not only for people in the house but for the house itself due to the condensate generation on the glass and mirrors, build-up of fungus and mould in the bathroom or kitchen, unpleasant smell of moisture.



OPEN WINDOW IS NOT A SOLUTION

Partially the polluted air problem can be solved by creating natural ventilation through window opening. But even that solution has some drawbacks. Ventilation through open windows brings to uncontrolled excessive air flow and creates unsafe draughts. By opening windows you fill the room not with clean air but with a mixture of pollens, poplar stuff, dust and exhaust fumes. Moreover, thermal losses rise together with high energy costs.

Furthermore, noise penetrating from outside may be a catastrophe. That refers in particular to inhabitants of the houses located near main city highways and entertainment places, intersection of basic routes and transfer transport points. Thus, we hardly make such ventilation useful but we let extra irritants and pollutants enter our rooms. Even worse, we do not solve the problem of polluted stale air removal.

THERE IS A SOLUTION!

In order to eliminate the problems associated with health risks, the wet, polluted air must be regularly removed outside and replaced with fresh air. Supply air must always penetrate into all rooms of the house or apartment to ensure full and effective ventilation. Therefore, arrangement of the effective forced supply and exhaust ventilation in the rooms or premises is the only correct and rational solution of this problem.

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 m². 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 Ø 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 Ø 100, 125 or 150 mm air duct, automatic shutters and a mounting plate



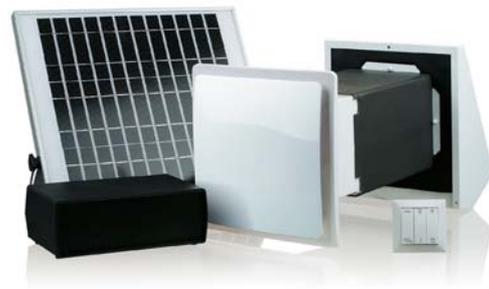
TwinFresh Comfo S
with a square 150x150 mm air duct, automatic shutters and a mounting plate

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



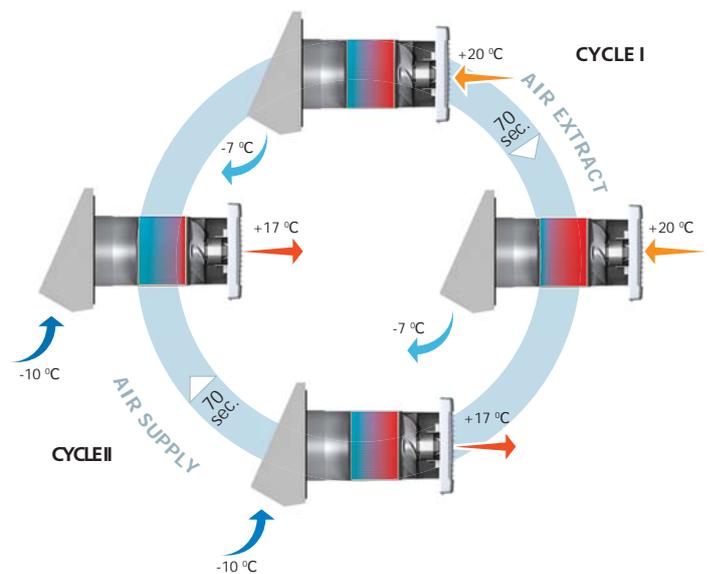
TwinFresh Solar SA-60 Pro
with a square 164x164 mm air duct and a battery

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.

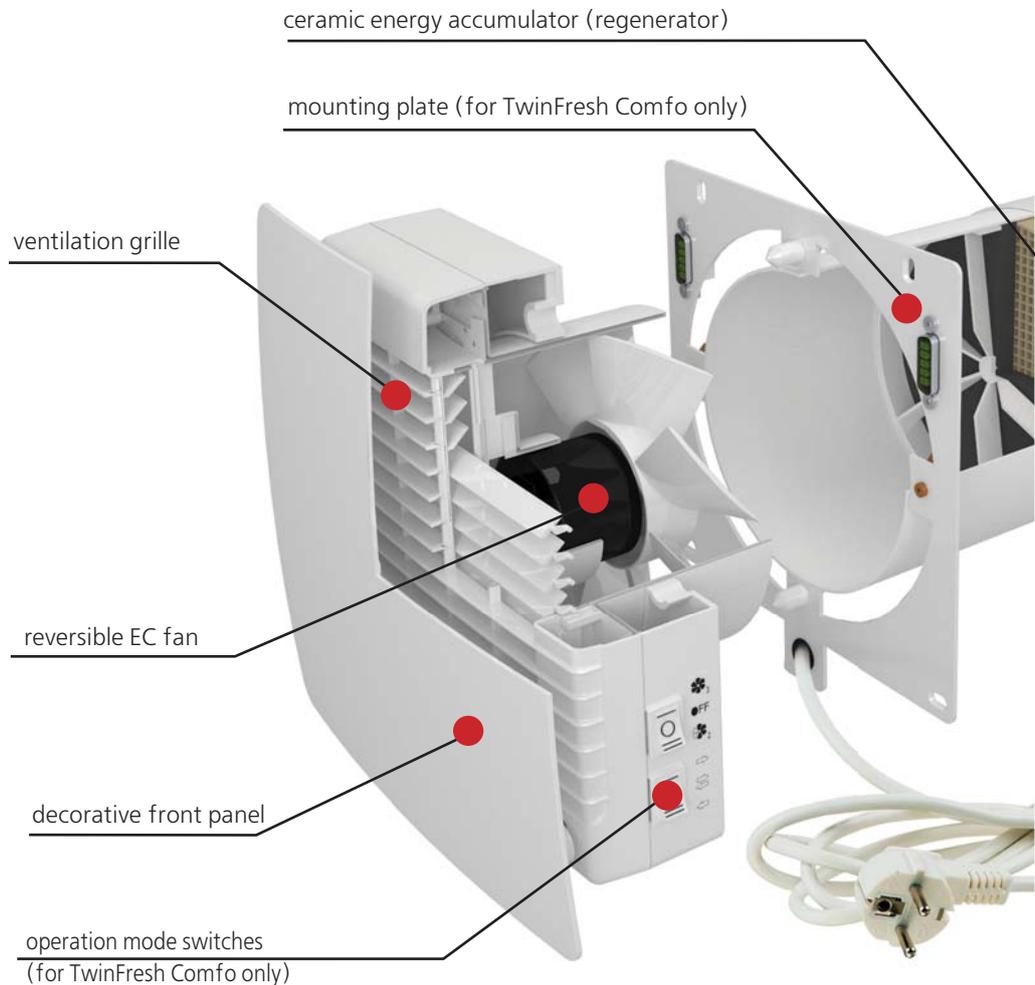
The inner part of the telescope comprises two filters and a ceramic energy accumulator (regenerator).



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

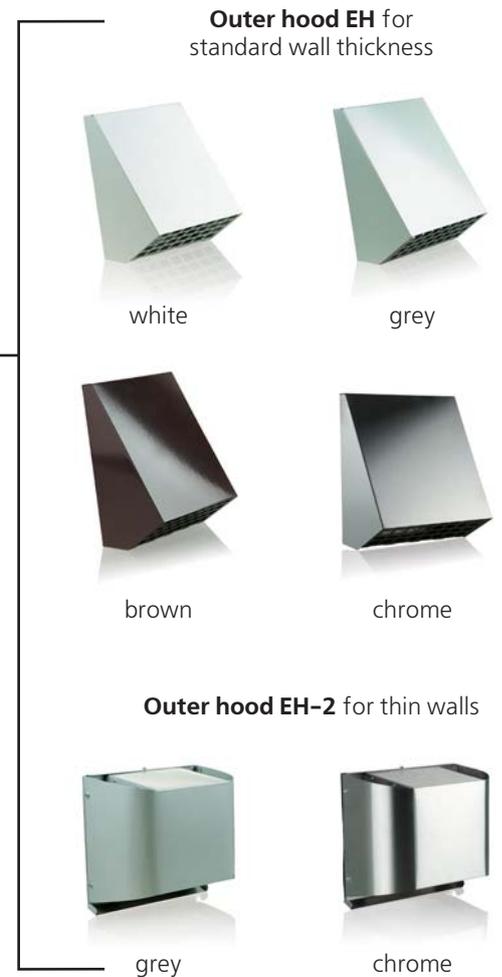
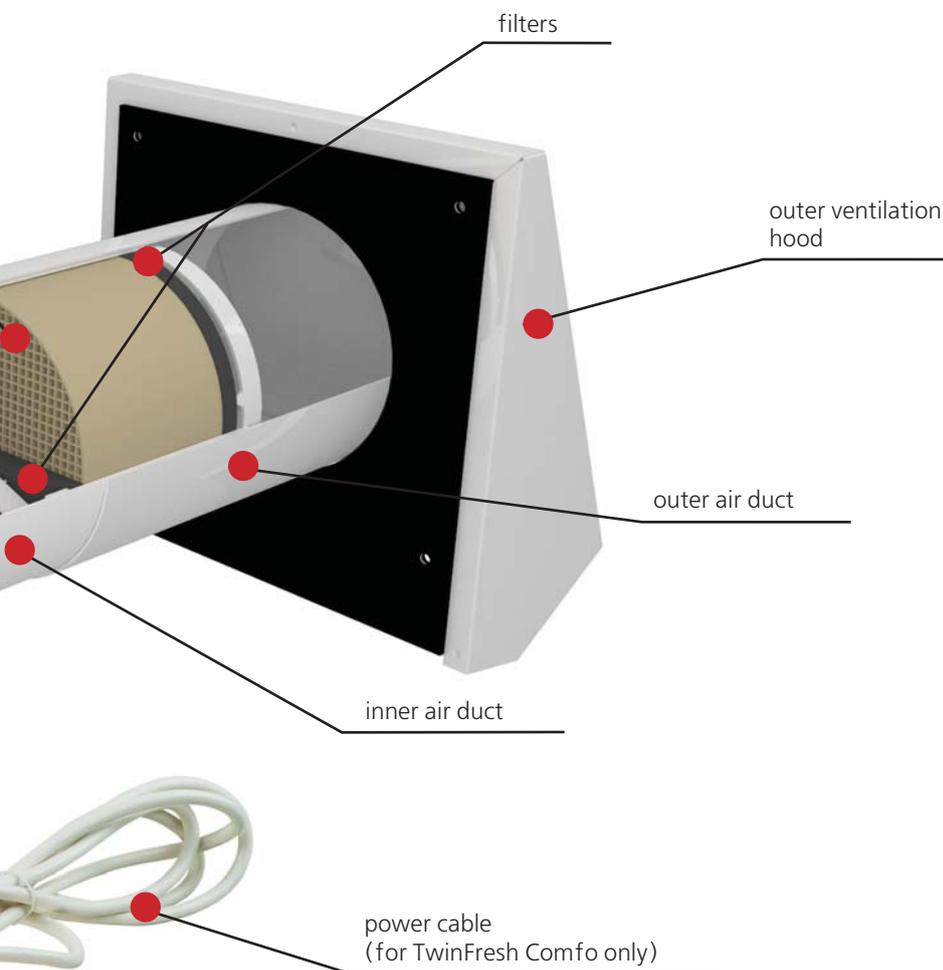
The square telescopic air ducts in the TwinFresh ventilators are made of polymer coated metal lined with insulating material and round air ducts are made of PVC plastic. The telescope length is adjustable to the wall thickness which makes mounting quick and easy.

✓ 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.

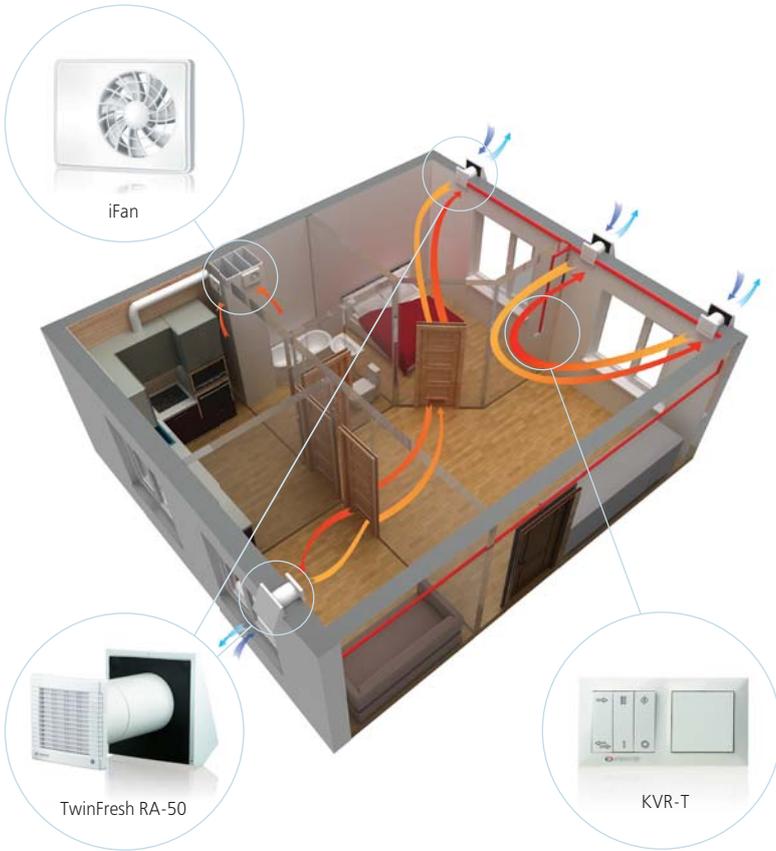
The outer hood EH is made of polymer coated aluminium.

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.

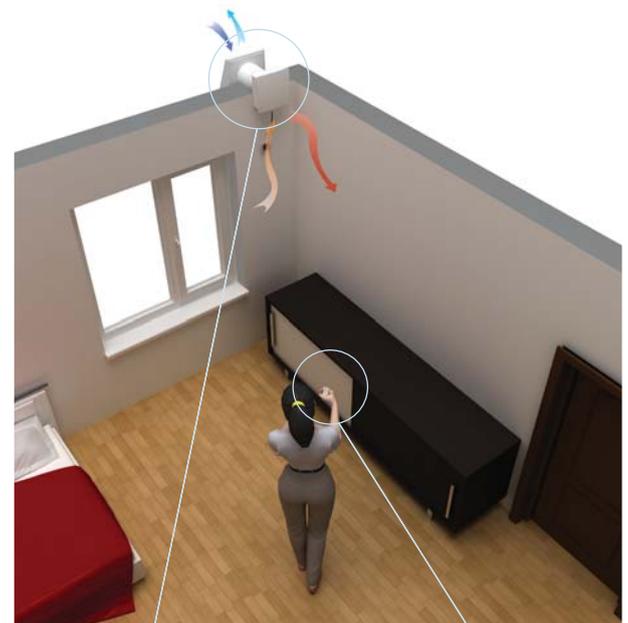
To arrange a ventilation system based on TwinFresh ventilators install one ventilator in each room. For larger premises, install two or more ventilators.

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.

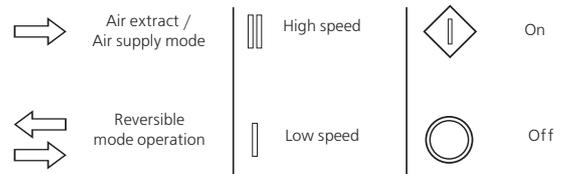
The 12 W power transformer TRF 220/12-12 is capable to power up to 4 ventilators.

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

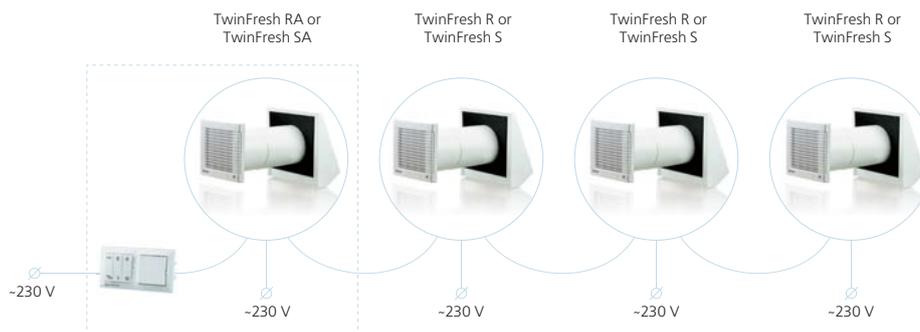


KVR-T 12 (220/12), KVS-T 12 (220/12)
control and power unit

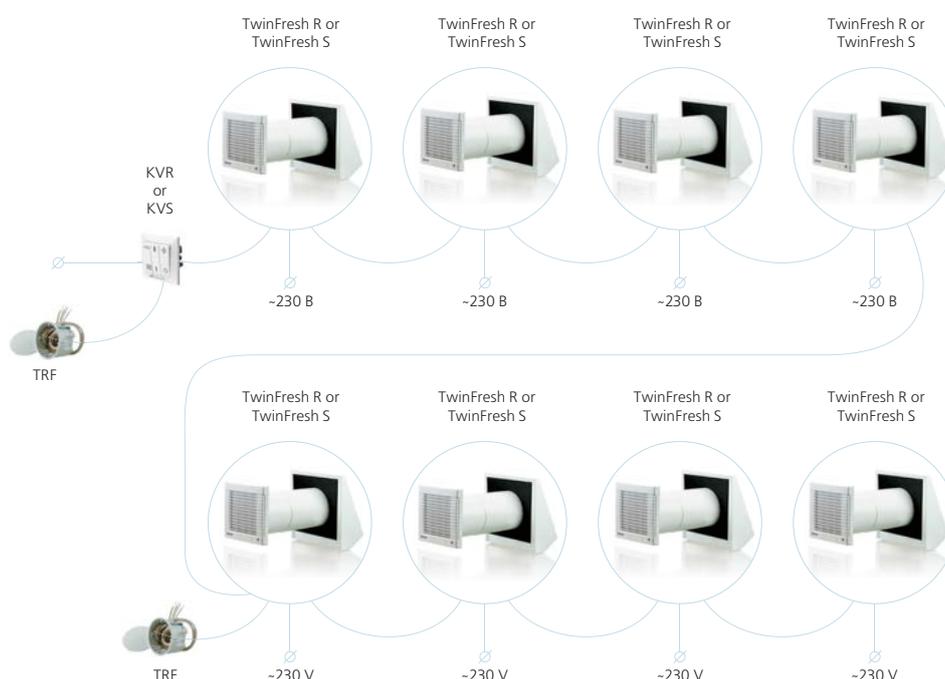
KVR, KVS
control panel



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.



SINGLE-ROOM ENERGY SAVING VENTILATION

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



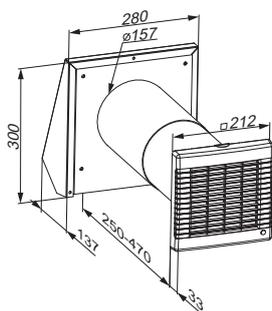
Angular mounting using NP 60x204-0021 kit (TwinFresh RA-50-5 model)

TwinFresh Standard technical data

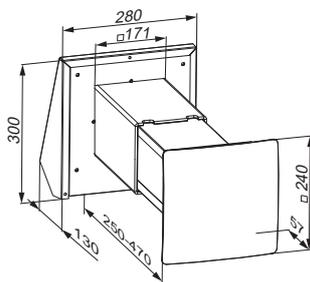
	TwinFresh R-50 TwinFresh RA-50		TwinFresh S1-50 TwinFresh SA1-50		TwinFresh S-60 TwinFresh SA-60	
Speed	1	2	1	2	1	2
Supply voltage, 50 Hz [V]	230					
Power [W]	3.5	4.6	3.5	4.6	2.8	4.8
Max. current consumption [A]	0.02	0.025	0.02	0.025	0.018	0.028
Max. air capacity [m ³ /h]	25	50	25	50	35	58
RPM [min ⁻¹]	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.

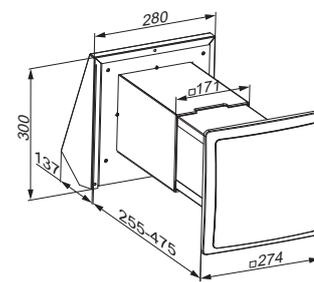
TwinFresh Standard ventilator overall dimensions [mm]



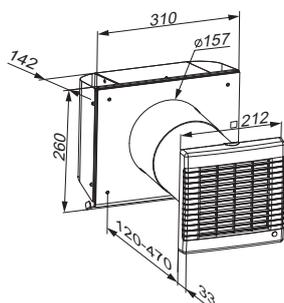
TwinFresh R-50 / RA-50



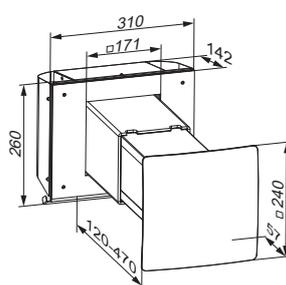
TwinFresh S1-50 / SA1-50



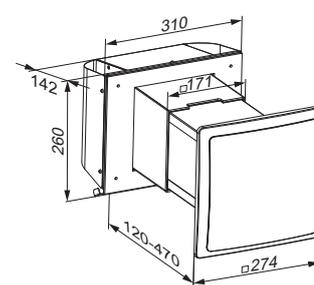
TwinFresh S-60 / SA-60



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 (red)
- Speed switching**: Fan speed selection buttons (Low, Medium, High)
- 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**: Top speed switch
- Off**: Middle speed switch
- Medium speed**: Bottom speed switch
- Ventilation**: Switch with fan icon
- Heat recovery ventilation**: Switch with house and fan icon
- Air supply**: Switch with house and fan icon

TwinFresh Comfo technical data

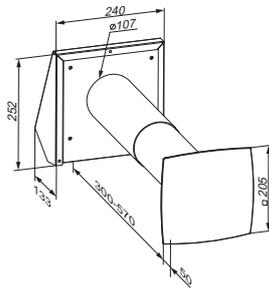
	TwinFresh Comfo RA1-25			TwinFresh Comfo RA -35 TwinFresh Comfo RA 1-35			TwinFresh Comfo RA-50 TwinFresh Comfo RA1-50		
	1	2	3	1	2	3	1	2	3
Speed									
Supply voltage, 50/60 Hz [V]	1-100-230								
Power [W]	3.5	3.95	5.32	3.93	4.39	5.10	3.8	3.96	5.61
Max. current consumption [A]	0.023	0.026	0.036	0.023	0.026	0.032	0.024	0.026	0.039
Max. air capacity [m ³ /h]	7	15	24	10	20	30	14	28	54
RPM [min ⁻¹]	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.

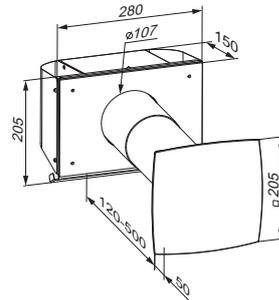
	TwinFresh Comfo SA-35 TwinFresh Comfo SA1-35		
	1	2	3
Speed			
Supply voltage, 50/60 Hz [V]	1-100-230		
Power [W]	4.54	5.18	6.1
Max. current consumption [A]	0.026	0.031	0.037
Max. air capacity [m ³ /h]	12	25	37
RPM [min ⁻¹]	851	1330	1715
Sound pressure level at 1 m distance [dB(A)]	28	33	39
Sound pressure 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.

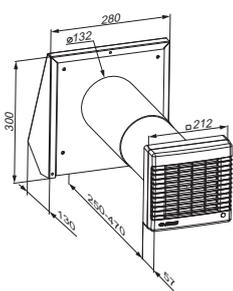
TwinFresh Comfo ventilator overall dimensions [mm]



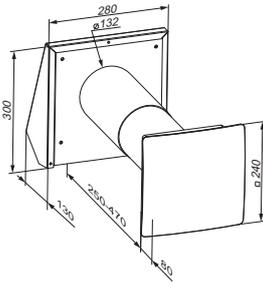
TwinFresh Comfo RA1-25



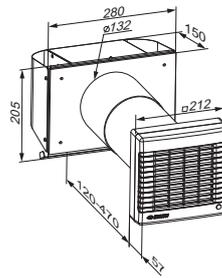
TwinFresh Comfo RA1-25-2



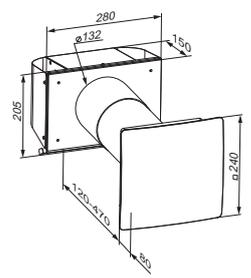
TwinFresh Comfo RA-35



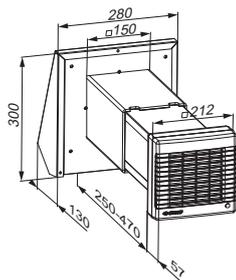
TwinFresh Comfo RA1-35



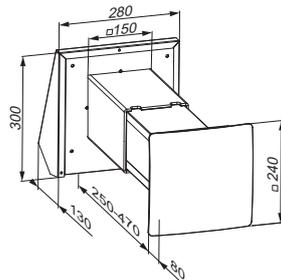
TwinFresh Comfo RA-35-2



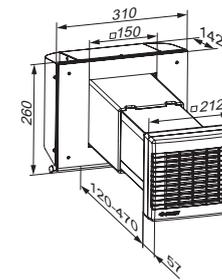
TwinFresh Comfo RA1-35-2



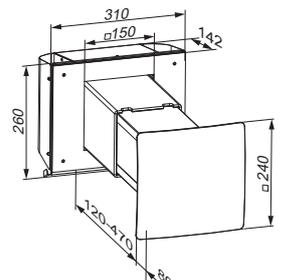
TwinFresh Comfo SA-35



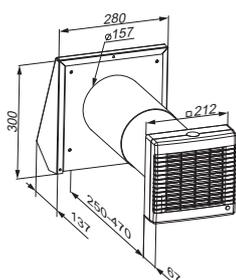
TwinFresh Comfo SA1-35



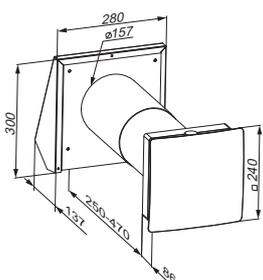
TwinFresh Comfo SA-35-2



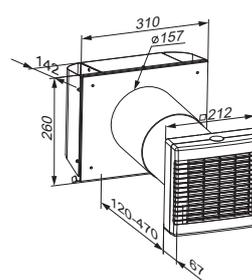
TwinFresh Comfo SA1-35-2



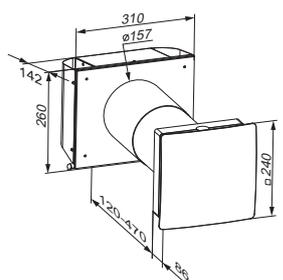
TwinFresh Comfo RA-50



TwinFresh Comfo RA1-50

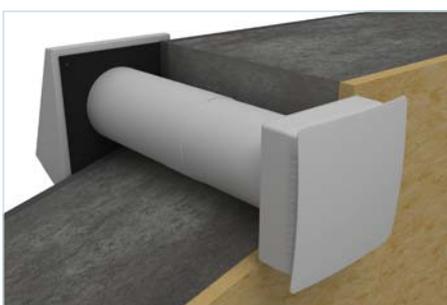


TwinFresh Comfo RA-50-2



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:

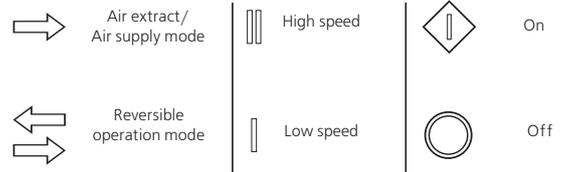
1. Ventilation mode (extract or supply) at low speed
2. Ventilation mode (extract or supply) at high speed
3. Reversible mode (regeneration) at low speed
4. Reversible mode (regeneration) at high speed

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

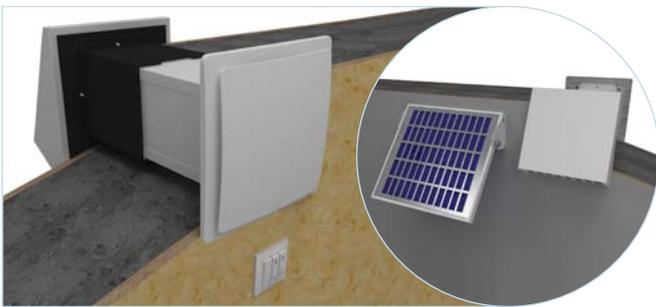
The delivery set of the TwinFresh Solar SA-60 Pro includes a battery. During the day time the solar panel supplies power to the ventilator and charges the battery. In the night time the ventilator is powered by the battery.



KVS control panel



TwinFresh Solar mounting example



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



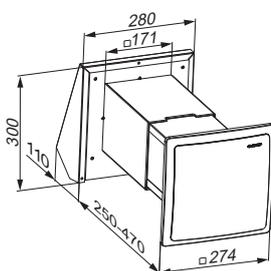
Mounting into a thin wall using EH-2 outer hood

TwinFresh Solar technical data

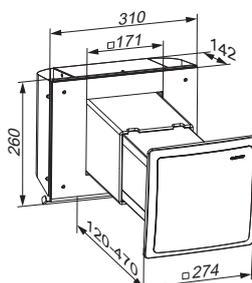
	TwinFresh Solar SA-60 TwinFresh Solar SA-60 Pro	
Speed	1	2
Supply voltage [V]	12	
Power [W]	2.8	4.8
Max. current consumption [A]	0.018	0.028
Max. air capacity [m ³ /h]	35	58
RPM [min ⁻¹]	1150	2100
Sound pressure level at 1 m distance [dB(A)]	34	41
Sound pressure level at 3 m distance [dB(A)]	24	29
Outdoor 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.

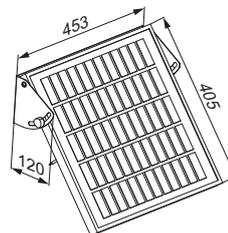
TwinFresh Solar ventilator overall dimensions [mm]



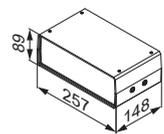
TwinFresh Solar SA-60



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

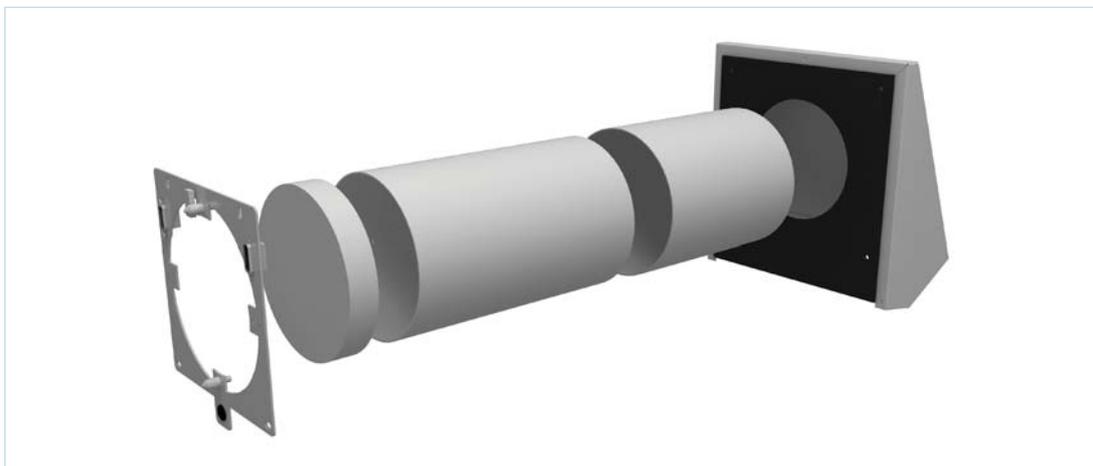
and connection of the mounting plate in case of TwinFresh Comfo.

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

- - Compatible
- - Non compatible

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

● – Compatible
○ – Non compatible

TwinFresh Comfo accessories

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

● – Compatible
○ – Non compatible

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

● - Compatible
○ - Non compatible

TwinFresh Comfo accessories

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

● - Compatible
○ - Non compatible

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

TWINFRESH VENTILATOR ACCESSORIES

TwinFresh Solar accessories

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

TwinFresh Standard order codes

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

TWINFRESH VENTILATORS ORDER CODES

TwinFresh Standard order codes

Item	Delivery scope
 TwinFresh R-50 pre-installation kit	1. Ø150 mm round telescopic duct, 250-470 mm long. 2. Outer hood. 3. Plastic foam plug.
 TwinFresh R-50 completion kit	1. Ceramic energy accumulator (regenerator). 2. TwinFresh R-50 ventilation unit. 3. Two filters with total G3 filter class.
 TwinFresh S1-50 pre-installation kit	1. 164x164 mm square telescopic duct, 255-475 mm long. 2. Outer hood. 3. Plastic foam plug.
 TwinFresh S1-50 completion kit	1. Ceramic energy accumulator (regenerator). 2. TwinFresh S1-50 ventilation unit. 3. Filter with total G3 filter class.
 TwinFresh S-60 pre-installation kit	1. 164x164 mm square telescopic duct, 255-475 mm long. 2. Outer hood. 3. Plastic foam plug.
 TwinFresh S-60 completion kit	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
 TwinFresh Comfo RA-50	 <ol style="list-style-type: none"> 1. Ø150 mm round telescopic duct, 250-470 mm long. 2. Mounting plate. 3. White polymer coated aluminium outer hood. 4. Ceramic energy accumulator (regenerator). 5. White ABS plastic decorative front grille. 6. Integrated automatic shutters with a thermal actuator. 7. Two filters with total G3 filter class. 8. Reversible axial fan with EC motor. 9. Integrated automation. 10. Remote controller.
 TwinFresh Comfo RA1-50	 <ol style="list-style-type: none"> 1. Ø150 mm round telescopic duct, 250-470 mm long. 2. Mounting plate. 3. White polymer coated aluminium outer hood. 4. Ceramic energy accumulator (regenerator). 5. White ABS plastic flat front decorative panel. 6. Integrated automatic shutters with a thermal actuator. 7. Two filters with total G3 filter class. 8. Reversible axial fan with EC motor. 9. Integrated automation. 10. Remote controller.
 TwinFresh Comfo SA-35	 <ol style="list-style-type: none"> 1. 150x150 mm square telescopic duct, 250-470 mm long. 2. Mounting plate. 3. White polymer coated aluminium outer hood. 4. Ceramic energy accumulator (regenerator). 5. White ABS plastic decorative front grille. 6. Two filters with total G3 filter class. 7. Reversible axial fan with EC motor. 8. Integrated automation. 9. Remote controller.
 TwinFresh Comfo SA1-35	 <ol style="list-style-type: none"> 1. 150x150 mm square telescopic duct, 250-470 mm long. 2. Mounting plate. 3. White polymer coated aluminium outer hood. 4. Ceramic energy accumulator (regenerator). 5. Flat decorative front panel. 6. Two filters with total G3 filter class. 7. Reversible axial fan with EC motor. 8. Integrated automation. 9. Remote controller.
 TwinFresh Comfo RA-35	 <ol style="list-style-type: none"> 1. Ø125 mm round telescopic duct, 250-470 mm long. 2. Mounting plate. 3. White polymer coated aluminium outer hood. 4. Ceramic energy accumulator (regenerator). 5. White ABS plastic decorative front grille. 6. Integrated automatic shutters with a thermal actuator. 7. Two filters with total G3 filter class. 8. Reversible axial fan with EC motor. 9. Integrated automation. 10. Remote controller.
 TwinFresh Comfo RA1-35	 <ol style="list-style-type: none"> 1. Ø125 mm round telescopic duct, 250-470 mm long. 2. Mounting plate. 3. White polymer coated aluminium outer hood. 4. Ceramic energy accumulator (regenerator). 5. White ABS plastic flat decorative front panel. 6. Integrated automatic shutters with a thermal actuator. 7. Two filters with total G3 filter class. 8. Reversible axial fan with EC motor. 9. Integrated automation. 10. Remote controller.

TwinFresh Comfo order codes

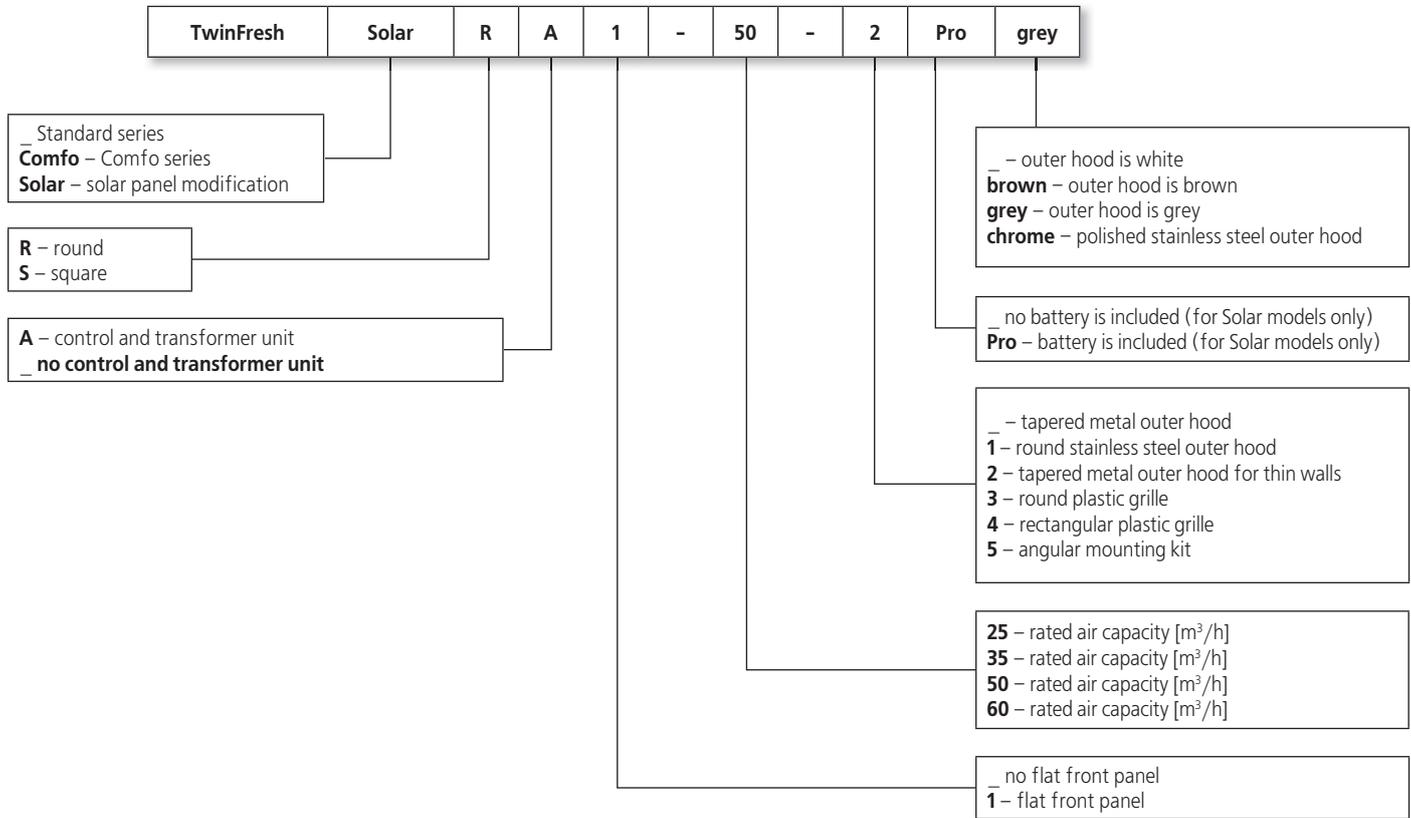
Item	Delivery scope
<p> TwinFresh Comfo RA1-25</p>	<ol style="list-style-type: none"> 1. Ø100 mm round telescopic duct, 300-570 mm long. 2. White polymer coated aluminium outer hood. 3. Ceramic energy accumulator (regenerator). 4. White ABS plastic decorative front grille. 5. Integrated automatic shutters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

TwinFresh Solar order code

Item	Delivery scope
 <p data-bbox="97 472 296 533">  TwinFresh Solar SA-60 </p>	<ol data-bbox="826 383 1310 593" style="list-style-type: none"> 1. 164x164 mm square telescopic duct, 255-475 mm long. 2. White polymer coated aluminium outer hood. 3. Ceramic energy accumulator (regenerator). 4. White ABS plastic decorative front grille. 5. Two filters with total G3 filter class. 6. Reversible axial fan with EC motor. 7. Integrated automation. 8. Solar panel. 9. KVS control unit.
 <p data-bbox="97 790 339 851">  TwinFresh Solar SA-60 Pro </p>	<ol data-bbox="826 696 1310 911" style="list-style-type: none"> 1. 164x164 mm square telescopic duct, 255-475 mm long. 2. White polymer coated aluminium outer hood. 3. Ceramic energy accumulator (regenerator). 4. White ABS plastic decorative front grille. 5. Two filters with total G3 filter class. 6. Reversible axial fan with EC motor. 7. Integrated automation. 8. Solar panel. 9. Battery,

TWINFRESH VENTILATOR DESIGNATION KEY

Designation key example _____





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