

# USER'S MANUAL

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## TwinFresh Comfo

RA1-25

RA1-25-2

SA-35

SA-35-2

SA1-35

SA1-35-2

RA-35

RA-35-2

RA1-35

RA1-35-2

RA-50

RA-50-2

RA1-50

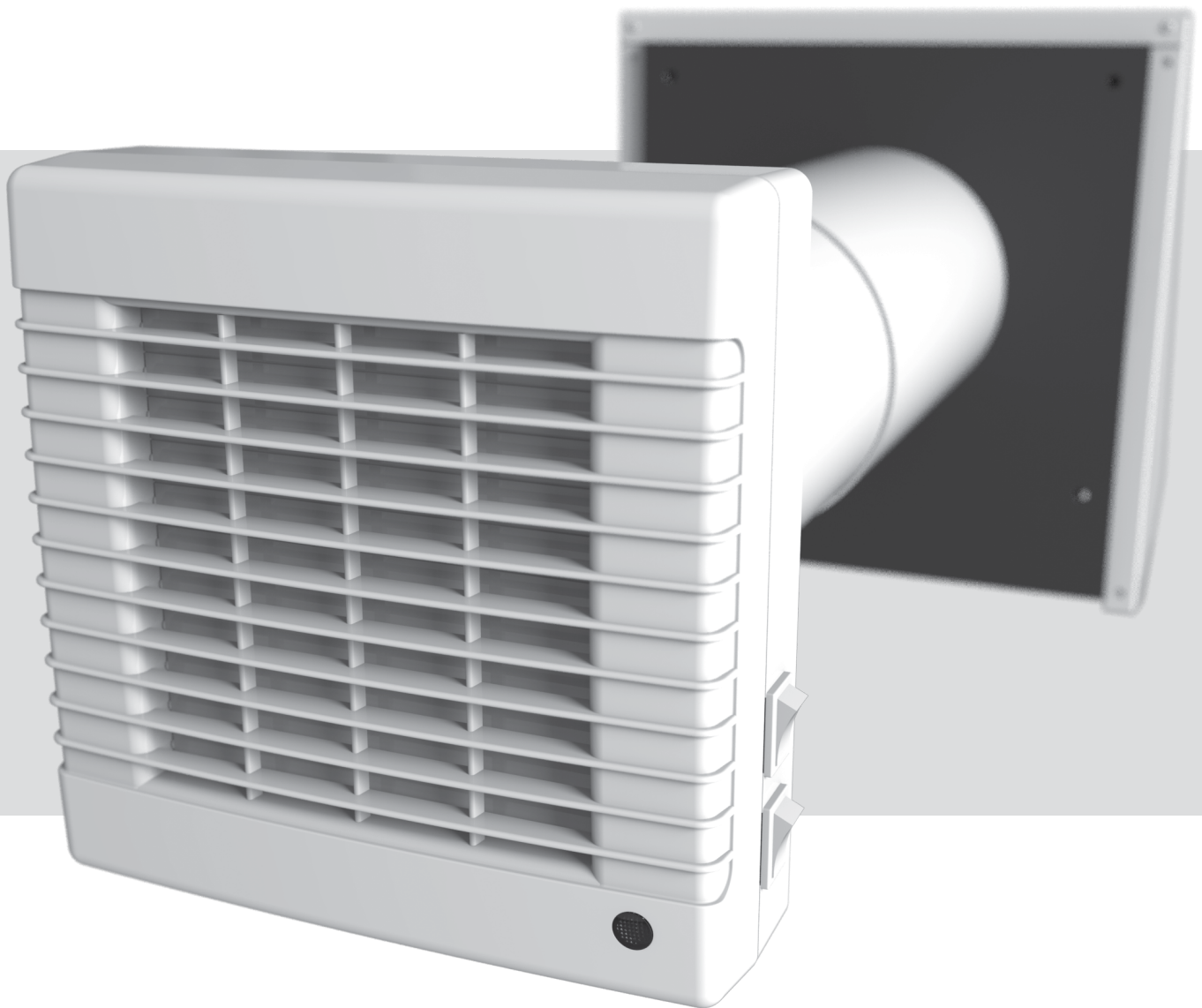
RA1-50-2

RA-85

RA-85-2

RA1-85

RA1-85-2



Single-room reversible energy  
recovery ventilator

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The user's manual consisting of the technical details, operating instructions and technical specification applies to the installation and mounting of the single-room energy regeneration reversible ventilator TwinFresh Comfo (hereinafter referred to as «ventilator» or «unit» as mentioned in the «Safety Requirements» and «Manufacturer's Warranty» sections as well as in warnings and information blocks).

## SAFETY REQUIREMENTS

- Read the user's manual carefully prior to installing and operating the unit.
- Fulfil the user's manual requirements as well as the provisions of all the applicable local and national construction, electrical and technical norms and standards.
- The warnings contained in the user's manual must be considered most seriously since they contain vital personal safety information.
- Failure to follow the rules and safety precautions noted in this user's manual may result in an injury or unit damage.
- After a careful reading of the manual, keep it for the entire service life of the unit.
- While transferring the unit control the user's manual must be turned over to the receiving operator.

Symbol legend:

	<b>WARNING!</b>
	<b>DO NOT!</b>

## UNIT MOUNTING AND OPERATION SAFETY PRECAUTIONS



- Disconnect the unit from power mains prior to any installation operations.



- Unpack the unit with care.



- Do not lay the power cable of the unit in close proximity to heating equipment.



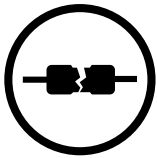
- While installing the unit follow the safety regulations specific to the use of electric tools.



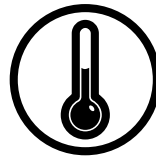
- Do not change the power cable length at your own discretion.
- Do not bend the power cable.
- Avoid damaging the power cable.
- Do not put any foreign objects on the power cable.



- The unit must be grounded!



- Do not use damaged equipment or cables when connecting the unit to power mains.



- Do not operate the unit outside the temperature range stated in the user's manual.
- Do not operate the unit in aggressive or explosive environments.



- Do not touch the unit controls with wet hands.
- Do not carry out the installation and maintenance operations with wet hands.

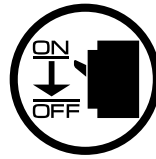


- Do not wash the unit with water.
- Protect the electric parts of the unit against ingress of water.

### UNIT MOUNTING AND OPERATION SAFETY PRECAUTIONS



- Do not allow children to operate the unit.



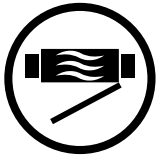
- Disconnect the unit from power mains prior to any technical maintenance.



- Do not store any explosive or highly flammable substances in close proximity to the unit.



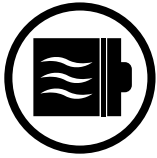
- When the unit generates unusual sounds, odour or emits smoke disconnect it from power supply and contact the Seller.



- Do not open the unit during operation.



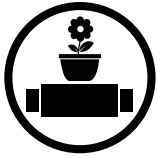
- Do not direct the air flow produced by the unit towards open flame or ignition sources.



- Do not block the air duct when the unit is switched on.



- In case of continuous operation of the unit periodically check the security of mounting.



- Do not sit on the unit and avoid placing foreign objects on it.



- Use the unit only for its intended purpose.



**THE PRODUCT MUST BE COLLECTED SEPARATELY AT THE END OF SERVICE LIFE.  
DO NOT DISPOSE OF AS UNSORTED MUNICIPAL WASTE.**

## PURPOSE

The ventilator is designed to ensure continuous mechanical air exchange in flats, cottages, hotels, cafes and other domestic and public premises.

The ventilator is equipped with a ceramic regenerator that enables supply of fresh filtered air heated by means of extract air heat energy regeneration.

The ventilator is designed for wall flush mounting.

The telescopic air duct design enables its installation in the walls with various thickness, see the table below:

Wall thickness	Ventilator model
300 mm - 570 mm (11 13/16" - 22 7/16")	RA1-25
120 mm - 500 mm (4 3/4" - 19 11/16")	RA1-25-2
250 mm - 470 mm (9 13/16" - 18 1/2")	SA-35
	SA1-35
	RA-35
	RA1-35
	RA-50
	RA1-50
120 mm - 430 mm (4 3/4" - 16 15/5")	RA-85
	RA1-85
	SA-35-2
120 mm - 470 mm (4 3/4" - 18 1/2")	SA1-35-2
	RA-35-2
	RA1-35-2
	RA-50-2
	RA1-50-2
	RA-85-2
	RA1-85-2

The unit is rated for continuous operation.

Transported air must not contain any flammable or explosive mixtures, evaporation of chemicals, sticky substances, fibrous materials, coarse dust, soot and oil particles or environments favourable for the formation of hazardous substances (toxic substances, dust, pathogenic germs).



**THE UNIT MAY NOT BE OPERATED BY CHILDREN OR PERSONS WITH REDUCED PHYSICAL, MENTAL OR SENSORY CAPACITIES, OR LACKING THE APPROPRIATE TRAINING.**

**THE UNIT MUST BE INSTALLED AND CONNECTED ONLY BY PROPERLY QUALIFIED PERSONNEL AFTER THE APPROPRIATE BRIEFING.**

**THE CHOICE OF UNIT INSTALLATION LOCATION MUST PREVENT UNAUTHORIZED ACCESS BY UNATTENDED CHILDREN.**

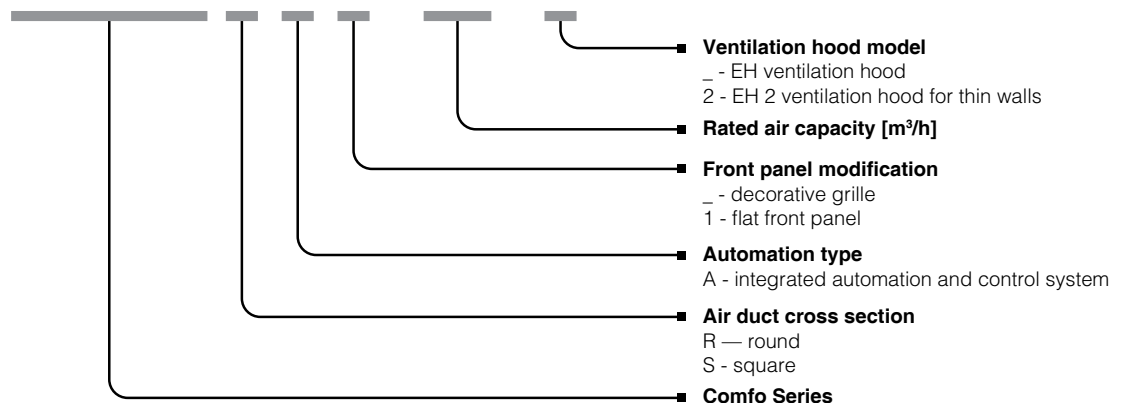
## DELIVERY SET

Name	Number
Ventilator	1 item
Remote control	1 item
Fastening set	2 packs
User's manual	1 item
Mounting hood installation instruction	1 item
Packing box	1 item



**DESIGNATION KEY**

# TwinFresh Comfo R A 1 - 25 - 2


**TECHNICAL DATA**

The ventilator is rated for indoor application with the ambient temperature ranging from -20 °C (-4 °F) up to +50 °C (+122 °F) and relative humidity up to 80 %.

The ventilator is rated as a class I electric appliance.

Hazardous parts access and water ingress protection rating IP24.

The unit design is constantly improved, so some models may slightly differ from the ones depicted herein.

**VENTILATOR TECHNICAL DATA**
**TwinFresh Comfo RA1-25, TwinFresh Comfo RA1-25-2**

Speed	I	II	III
Unit voltage [V /50 (60) Hz]	1~100-240		
Air capacity [m³/h] (CFM)	7 (4)	15 (9)	24 (14)
Power [W]	3.50	3.95	5.32
Current [A]	0.023	0.026	0.036
RPM	1190	1330	2420
Noise level, 1 m [dB(A)] (Sones)	31 (0.9)	35 (1.3)	43 (2.5)
Noise Level, 3 m [dB(A)] (Sones)	22 (0.4)	25 (0.5)	33 (1.1)
Outdoor noise attenuation [dB(A)] (Sones)	16 (0.4)		
Heat recovery efficiency	up to 85 %		

**TwinFresh Comfo RA-35, TwinFresh Comfo RA1-35, TwinFresh Comfo RA-35-2, TwinFresh Comfo RA1-35-2**

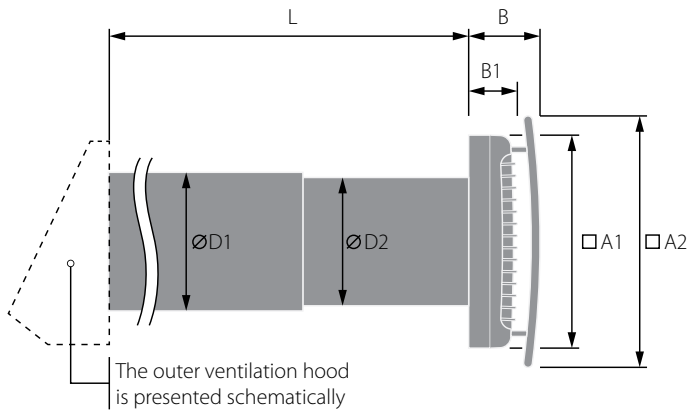
Speed	I	II	III
Unit voltage [V/50 (60) Hz]	1~100-240		
Air capacity [m³/h] (CFM)	10 (6)	20 (12)	30 (18)
Power [W]	3.93	4.39	5.10
Current [A]	0.023	0.026	0.032
RPM	745	1075	1670
Noise level, 1 m [dB(A)] (Sones)	27 (0.6)	32 (1.0)	38 (2.0)
Noise Level, 3 m [dB(A)] (Sones)	18 (0.4)	23 (0.5)	28 (0.7)
Outdoor noise attenuation [dB(A)] (Sones)	17 (0.4)		
Heat recovery efficiency	up to 90 %		

**VENTILATOR TECHNICAL DATA**

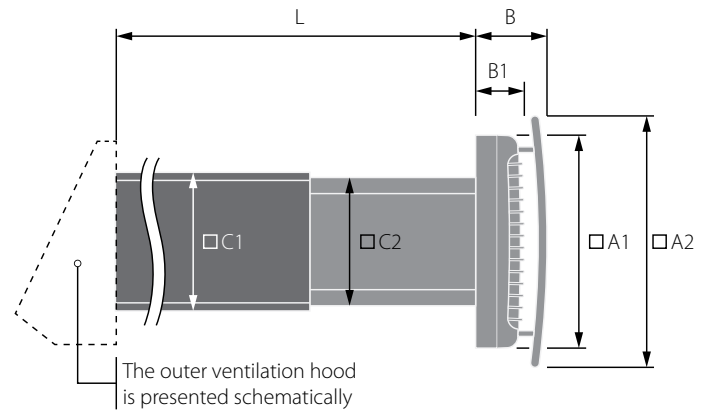
<b>TwinFresh Comfo RA-50, TwinFresh Comfo RA1-50, TwinFresh Comfo RA-50-2, TwinFresh Comfo RA1-50-2</b>			
Speed	I	II	III
Unit voltage [V/50 (60) Hz]	1~100-240		
Air capacity [m <sup>3</sup> /h] (CFM)	14 (8)	28 (16)	54 (32)
Power [W]	3.80	3.96	5.61
Current [A]	0.024	0.026	0.039
RPM	610	800	1450
Noise level, 1 m [dB(A)] (Sones)	22 (0.4)	29 (0.7)	32 (1.0)
Noise Level, 3 m [dB(A)] (Sones)	13 (0.2)	20 (0.4)	23 (0.5)
Outdoor noise attenuation [dB(A)] (Sones)	18 (0.4)		
Heat recovery efficiency	up to 90 %		
<b>TwinFresh Comfo RA-85, TwinFresh Comfo RA-1-85, TwinFresh Comfo RA-85-2, TwinFresh Comfo RA1-85-2</b>			
Speed	I	II	III
Unit voltage [V /50 (60) Hz]	1~100-240		
Air capacity [m <sup>3</sup> /h] (CFM)	36 (21)	59 (35)	85 (50)
Power [W]	4.74	6.56	9.65
Current [A]	0.034	0.050	0.071
RPM	1000	1500	2045
Noise level, 1 m [dB(A)] (Sones)	29 (0.8)	35 (1.5)	44 (3.5)
Noise Level, 3 m [dB(A)] (Sones)	19 (0.4)	25 (0.7)	34 (1.4)
Outdoor noise attenuation [dB(A)] (Sones)	18 (0.4)		
Heat recovery efficiency	up to 90 %		
<b>TwinFresh Comfo SA-35, TwinFresh Comfo SA1-35, TwinFresh Comfo SA-35-2, TwinFresh Comfo SA1-35-2</b>			
Speed	I	II	III
Unit voltage [V/50 (60) Hz]	1~100-240		
Air capacity [m <sup>3</sup> /h] (CFM)	12 (7)	25 (15)	37 (22)
Power [W]	4.54	5.18	6.10
Current [A]	0.026	0.031	0.037
RPM	851	1330	1715
Noise level, 1 m [dB(A)] (Sones)	28 (0.7)	33 (1.1)	39 (2.0)
Noise Level, 3 m [dB(A)] (Sones)	19 (0.4)	24 (0.5)	29 (0.7)
Outdoor noise attenuation [dB(A)] (Sones)	18 (0.4)		
Heat recovery efficiency	up to 88 %		

### OVERALL DIMENSIONS OF VENTILATORS

Drawing for ventilators with round air duct cross section



Drawing for ventilators with square air duct cross section



Model	Overall dimensions [mm] (inches)								
	A1	A2	B	B1	L	D1	D2	C1	C2
TwinFresh Comfo RA1-25	-	205 (8 1/16")	50 (1 15/16")	-	300-570 (11 13/16" - 22 7/16")	107 (4 3/16")	103 (4 1/16")	-	-
TwinFresh Comfo RA1-25-2	-	205 (8 1/16")	50 (1 15/16")	-	120-500 (4 3/4" - 19 11/16")	107 (4 3/16")	103 (4 1/16")	-	-
TwinFresh Comfo RA-35	213 (8 3/8")	-	-	57 (2 1/4")	250-470 (9 13/16" - 18 1/2")	132 (5 3/16")	128 (5 1/16")	-	-
TwinFresh Comfo RA-35-2	213 (8 3/8")	-	-	57 (2 1/4")	120-470 (4 3/4" - 18 1/2")	132 (5 3/16")	128 (5 1/16")	-	-
TwinFresh Comfo RA1-35	-	240 (9 7/16")	80 (3 1/8")	-	250-470 (9 13/16" - 18 1/2")	132 (5 3/16")	128 (5 1/16")	-	-
TwinFresh Comfo RA1-35-2	-	240 (9 7/16")	80 (3 1/8")	-	120-470 (4 3/4" - 18 1/2")	132 (5 3/16")	128 (5 1/16")	-	-
TwinFresh Comfo RA-50	213 (8 3/8")	-	-	65 (2 9/16")	250-470 (9 13/16" - 18 1/2")	157 (6 3/16")	153 (6")	-	-
TwinFresh Comfo RA-85	213 (8 3/8")	-	-	65 (2 9/16")	120-470 (4 3/4" - 18 1/2")	157 (6 3/16")	153 (6")	-	-
TwinFresh Comfo RA-50-2	213 (8 3/8")	-	-	65 (2 9/16")	250-470 (9 13/16" - 18 1/2")	157 (6 3/16")	153 (6")	-	-
TwinFresh Comfo RA-85-2	213 (8 3/8")	-	-	65 (2 9/16")	120-470 (4 3/4" - 18 1/2")	157 (6 3/16")	153 (6")	-	-
TwinFresh Comfo RA1-50	-	240 (9 7/16")	86 (3 3/8")	-	250-470 (9 13/16" - 18 1/2")	157 (6 3/16")	153 (6")	-	-
TwinFresh Comfo RA1-85	-	240 (9 7/16")	86 (3 3/8")	-	120-470 (4 3/4" - 18 1/2")	157 (6 3/16")	153 (6")	-	-
TwinFresh Comfo RA1-50-2	-	240 (9 7/16")	86 (3 3/8")	-	250-470 (9 13/16" - 18 1/2")	157 (6 3/16")	153 (6")	-	-
TwinFresh Comfo RA1-85-2	-	240 (9 7/16")	86 (3 3/8")	-	120-470 (4 3/4" - 18 1/2")	157 (6 3/16")	153 (6")	-	-
TwinFresh Comfo SA-35	213 (8 3/8")	-	-	65 (2 9/16")	250-470 (9 13/16" - 18 1/2")	-	-	150 (5 7/8")	135 (5 5/16")
TwinFresh Comfo SA-35-2	213 (8 3/8")	-	-	65 (2 9/16")	120-430 (4 3/4" - 16 15/16")	-	-	150 (5 7/8")	135 (5 5/16")
TwinFresh Comfo SA1-35	-	240 (9 7/16")	86 (3 3/8")	-	250-470 (9 13/16" - 18 1/2")	-	-	150 (5 7/8")	135 (5 5/16")
TwinFresh Comfo SA1-35-2	-	240 (9 7/16")	86 (3 3/8")	-	120-430 (4 3/4" - 16 15/16")	-	-	150 (5 7/8")	135 (5 5/16")

## DESIGN AND OPERATING PRINCIPLE

The ventilator consists of a telescopic air duct, a ventilation unit and an outer ventilation hood.

Two filters and a ceramic regenerator are located inside the inner duct of the telescope.

The air filters are designed to purify supply air and prevent ingress of dust and foreign objects into the regenerator and the fan.

The ceramic regenerator utilises extract air heat energy to warm up supply air flow.

The cord laid inside the regenerator is designed to pull the regenerator from the ventilator.

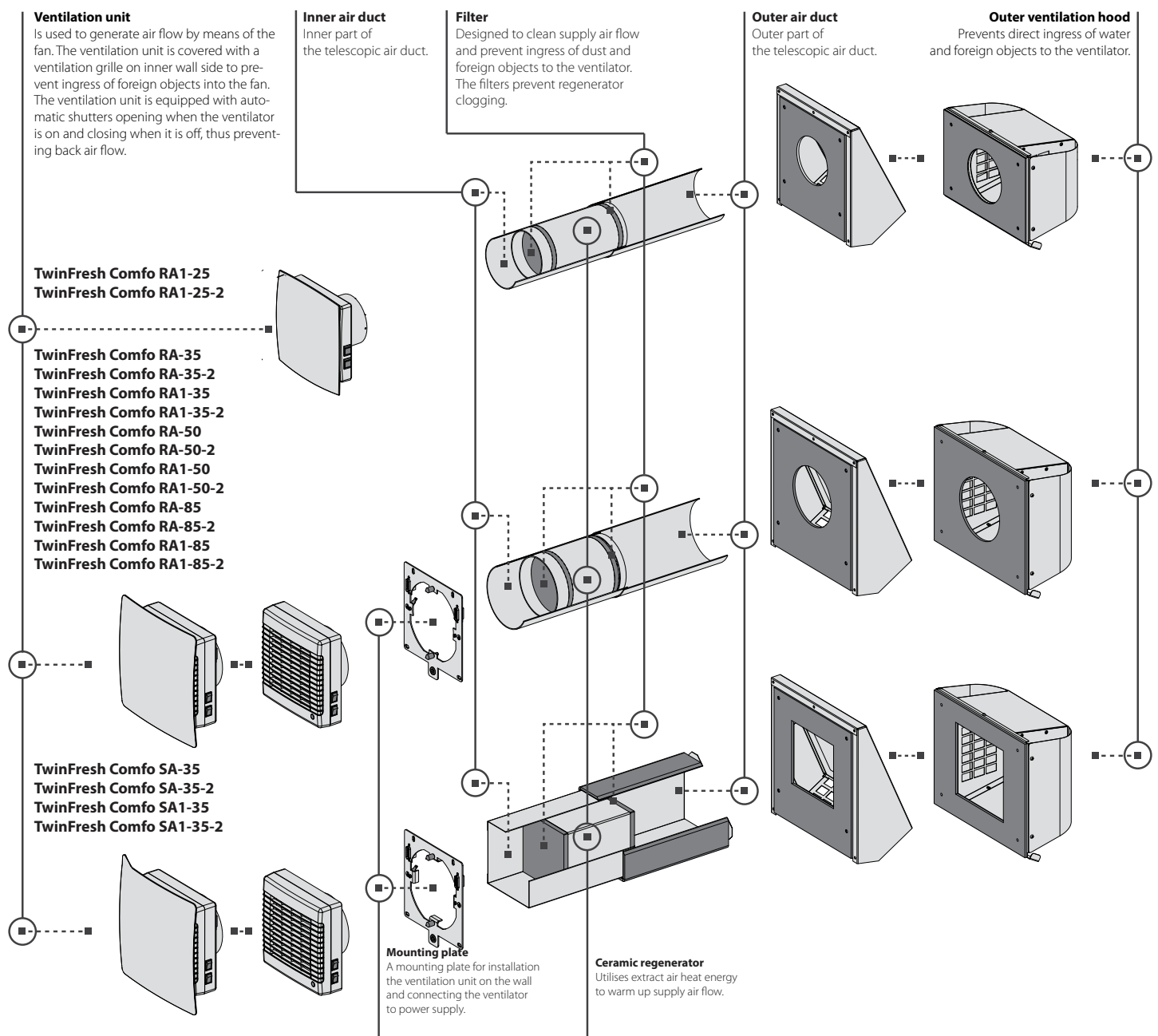
The regenerator is heat insulated with a specially designed insulating material.

The ventilation unit must be installed on inner side of the wall.

The ventilation unit is equipped with automatic shutters that shut the air duct off during the ventilator standby and prevent air back draft.

The ventilation hood must be installed on the outer wall side. It is used for directed air discharge and prevention of ingress of water and other objects to the ventilator.

### VENTILATOR DESIGN



### AUTOMATIC SHUTTERS OPERATION

Ventilator is off (the shutters are closed)



Ventilator is on (the shutters are opened)



### VENTILATOR OPERATION MODES

Ventilator operation modes:

**Natural air supply** — the automatic shutters are opened, the fan does not run.

**Air Supply** — the ventilator supplies fresh air to the premise.

**Ventilation** — the ventilator operates in permanent supply or extract mode at set speed depending on the CN7 jumper position.

**Regeneration** — the ventilator operates in reversible mode with heat and humidity recovery.

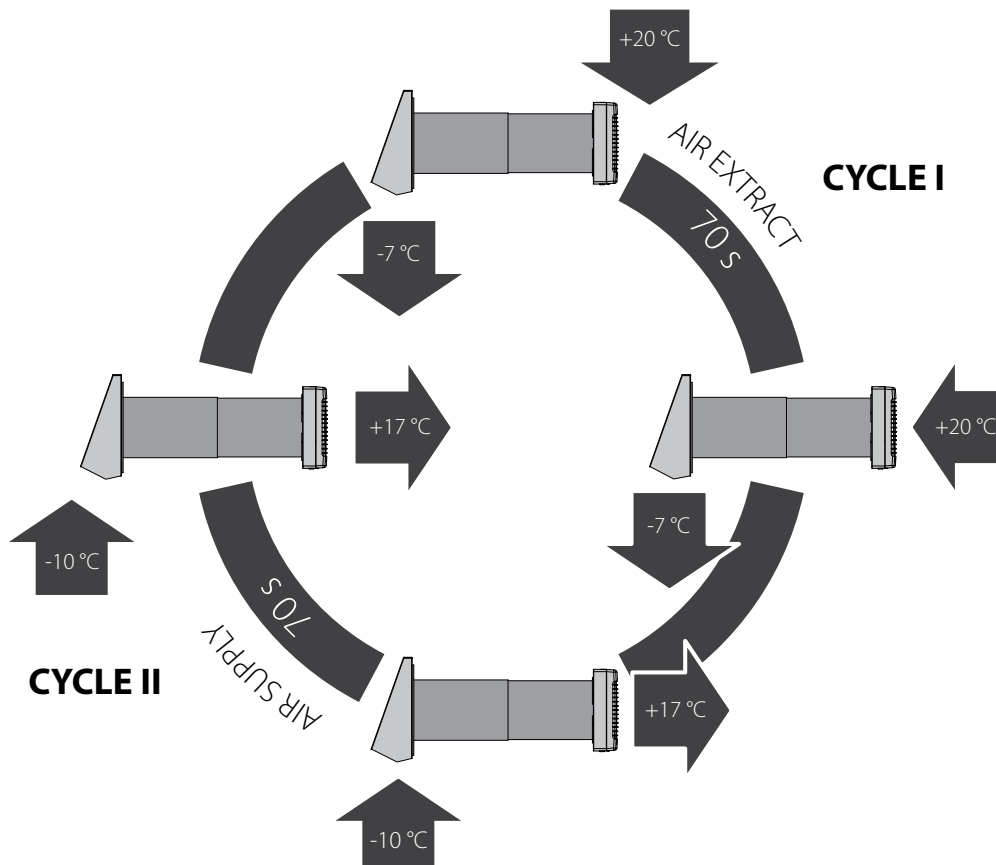
In Regeneration mode the ventilator operates in two cycles, 70 seconds each.

#### Cycle I.

Warm stale air is extracted from the room. As it flows through the regenerator, it heats and moisturizes the regenerator, transferring up to 90 % heat energy. In 70 seconds as the ceramic regenerator gets warmed the ventilator is switched to supply mode.

#### Cycle II.

Fresh intake air from outside flows through the ceramic regenerator, absorbs accumulated moisture and is heated up to the room temperature. In 70 seconds after the regenerator gets cooled down, the ventilator is switched to air extract mode and the cycle is renewed.



**MOUNTING AND SET-UP**


**READ THIS USER'S MANUAL CAREFULLY PRIOR TO THE UNIT INSTALLATION.**

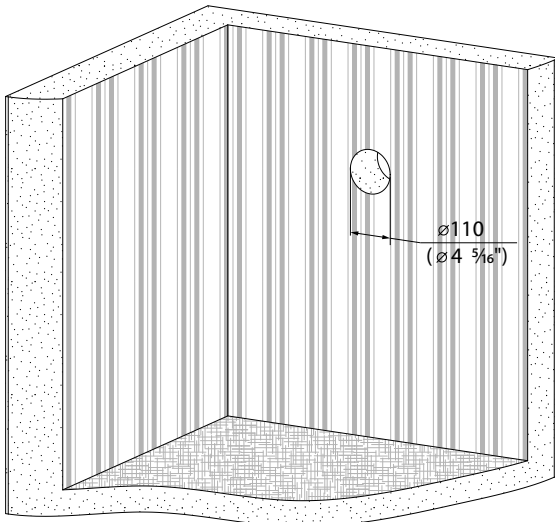


**DO NOT BLOCK THE AIR DUCT OF THE INSTALLED UNIT WITH DUST ACCUMULATING MATERIALS, SUCH AS CURTAINS, CLOTH SHUTTERS, ETC. AS IT PREVENTS AIR CIRCULATION IN THE ROOM.**

**TWINFRESH COMFO RA1-25 VENTILATOR MOUNTING**

1. Prepare a through hole in the outer wall. The hole size and profile is shown in the figure below.

2. Insert the air duct in the wall. On the outer wall the telescopic air duct must protrude for the distance that enables installation of the outer ventilation hood. The distance **A** is stated in the mounting instruction for the outer ventilation hood. While mounting the telescopic air duct be sure to provide the minimum slope 3 mm downwards from outside.

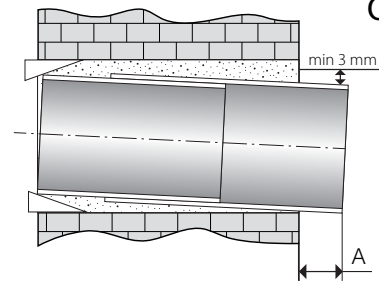


While preparing the hole provide a recess for the cable layout to enable connection of several ventilators in series.

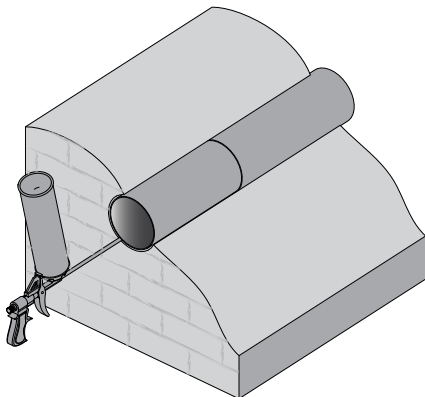
3. Fill the gaps between the wall and the telescopic air duct with a mounting foam.

Room

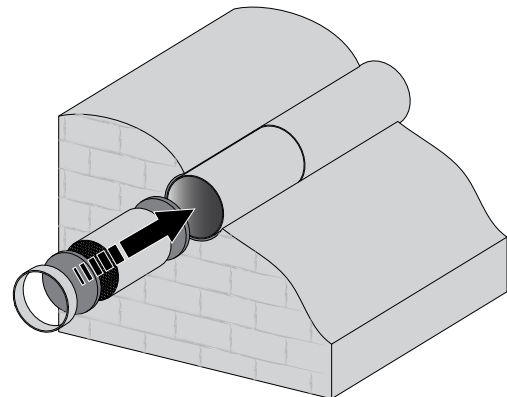
Outdoors



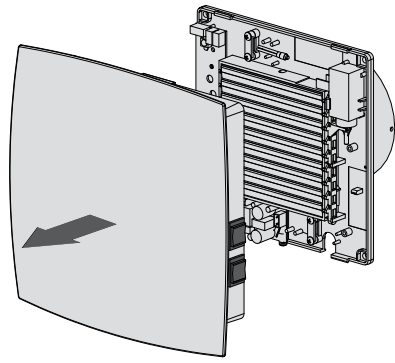
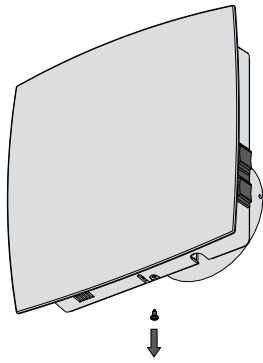
4. Install the filter, the ceramic regenerator, another filter and the air flow rectifier in the consecutive order inside the telescopic air duct.



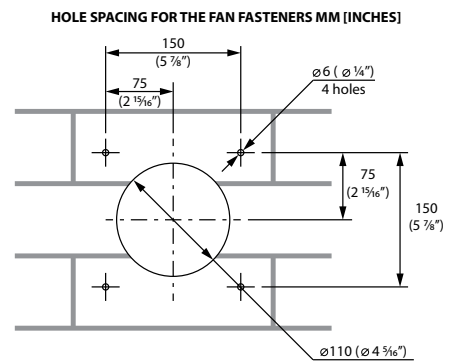
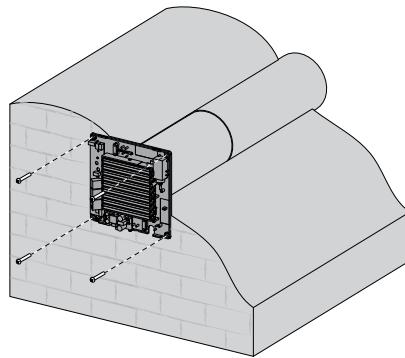
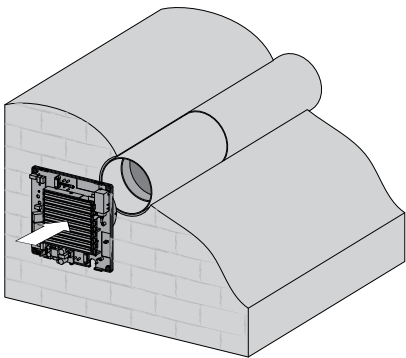
5. Remove the screw in the bottom part of the ventilator.



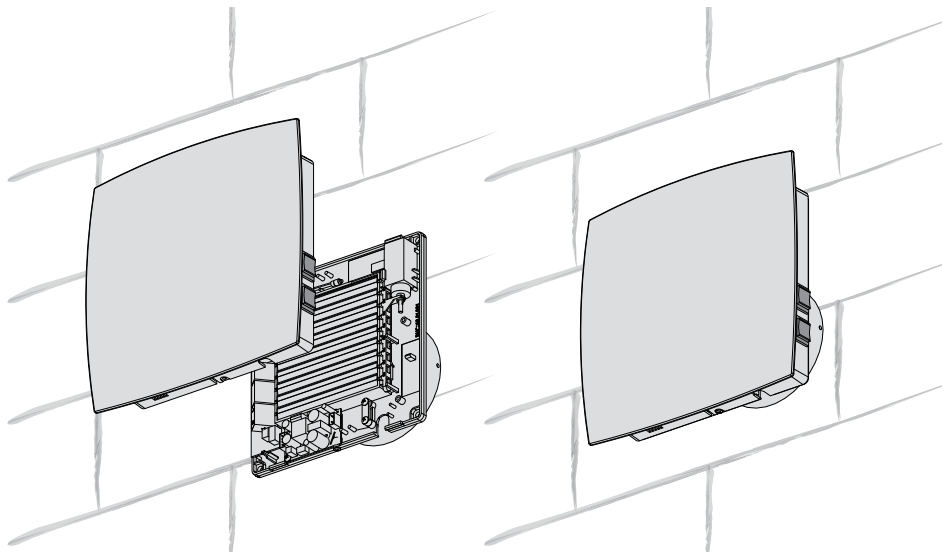
6. Remove the front panel of the ventilation unit.



7. Drill four fastening holes and fix the back cover of the ventilation unit on the wall with four 4x40 screws and 6x60 dowels from the delivery set. Prior to starting fixation of the back cover of the ventilation unit make arrangements for the power cable layout in accordance to the selected method, see the Connection to Power Mains section, page 20.



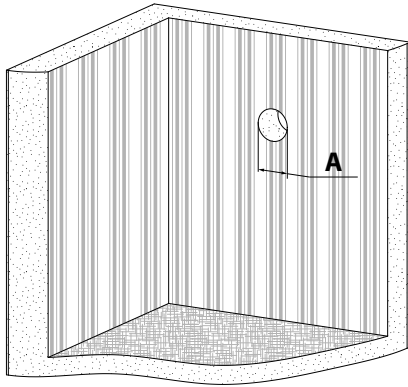
8. Connect the contact socket of the switches to the circuit board and install the front panel of the ventilation unit.



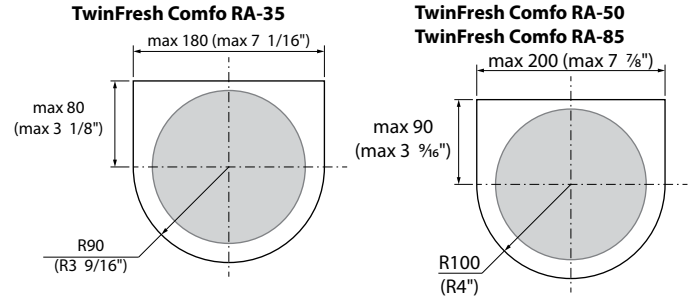
**TWINFRESH COMFO RA-35, RA-50 AND RA-85 VENTILATOR MOUNTING**

1. Prepare a through hole in the outer wall. The hole size and profile is shown in the figure below.
2. After preparing a through hole in the wall cut out a 25 mm (1") deep recess for laying of the cables and the contact sockets connected to the mounting plate.

The recommended recess form is shown in the drawing below.

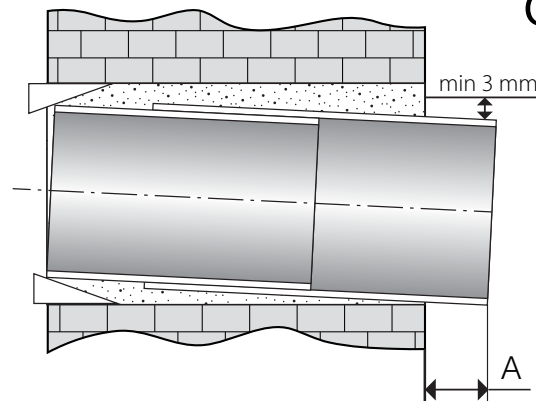


Model	A, mm	A [inches]
TwinFresh Comfo RA-35	Ø 140	Ø 5 1/2"
TwinFresh Comfo RA-50	Ø 160	Ø 6 1/4"



While mounting several ventilators connected in series provide a cavity for the cable layout during the recess preparation to enable series connection of several ventilators.

3. Insert the air duct in the wall. On the outer wall the telescopic air duct must protrude for the distance that enables installation of the outer ventilation hood. The distance **A** is stated in the mounting instruction for the outer ventilation hood. While mounting the telescopic air duct be sure to provide the minimum slope 3 mm downwards from outside.

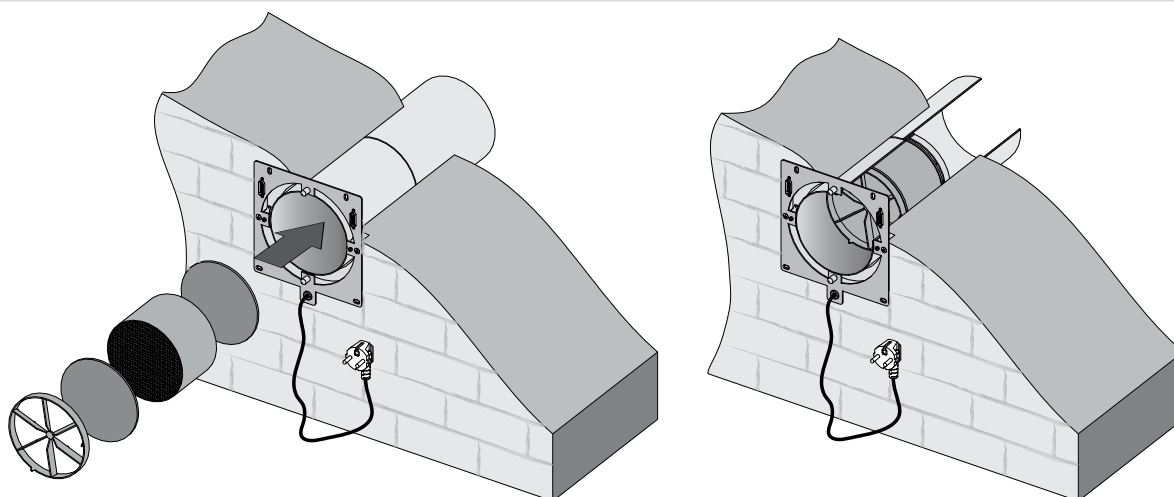
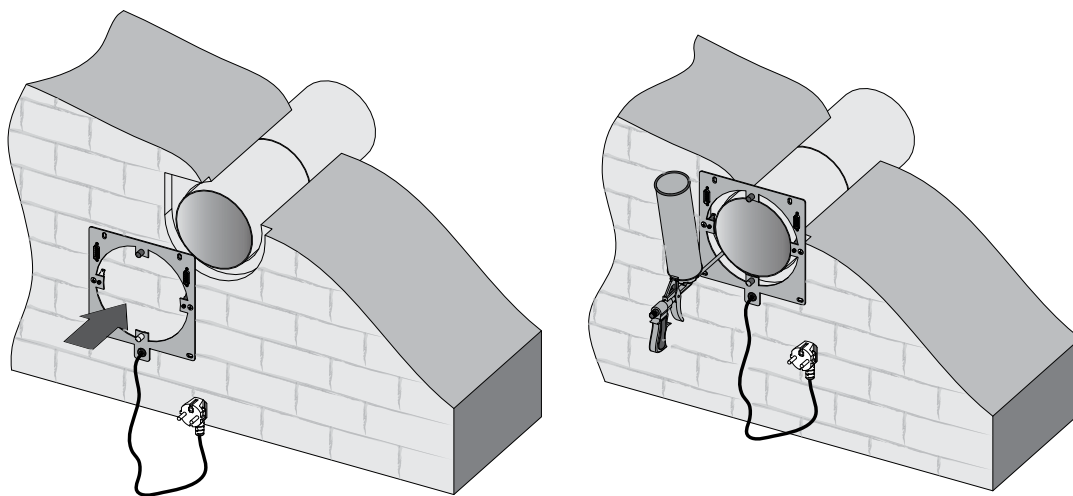




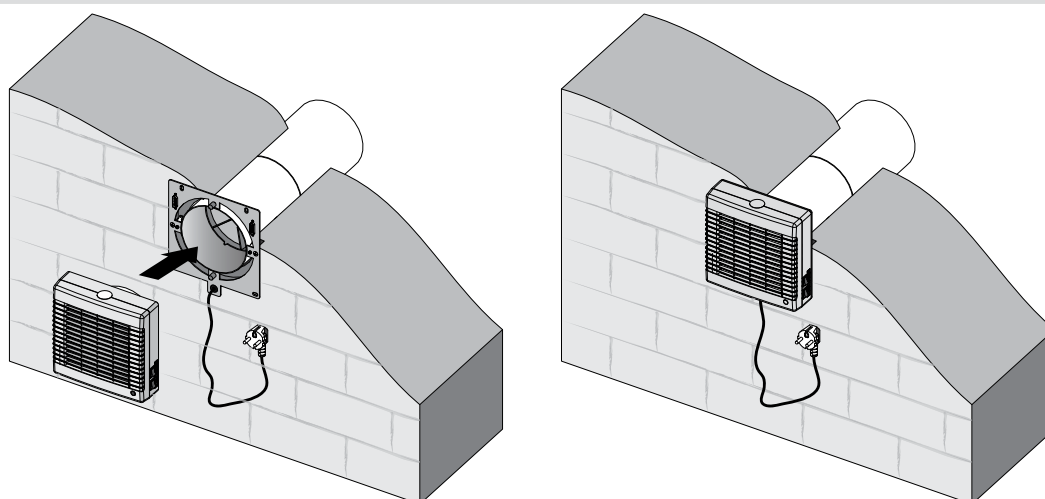
4. Connect the mounting plate following the Wiring Diagram section, page 20.

Drill four fastening holes and fix the mounting plate on the wall with four 4x40 screws and 6x60 dowels from the delivery set.

Align the telescopic air duct with respect to the mounting plate and fill the gaps between the wall and the telescopic air duct with a mounting foam. The telescopic air duct must not protrude from the mounting plate surface.



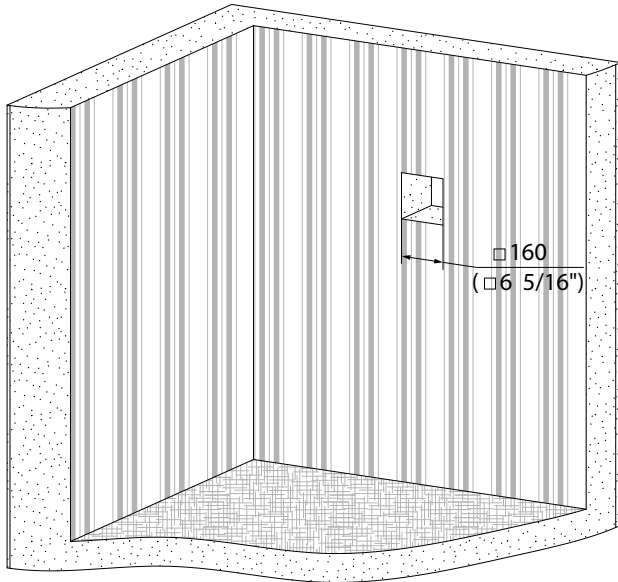
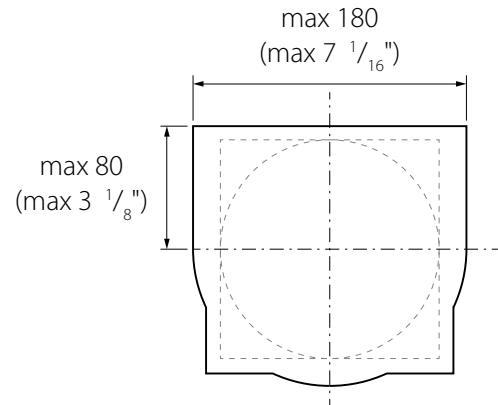
5. Install the ventilation unit on the mounting plate. The ventilation unit is fixed with magnets.



**TWINFRESH COMFO SA-35 VENTILATOR MOUNTING**

1. Prepare a through hole in the outer wall. The hole size and profile is shown in the figure below.
2. After preparing a through hole in the wall cut out a 25 mm (1") deep recess for laying of the cables and the contact sockets connected to the mounting plate.

The recommended recess form is shown in the drawing below.

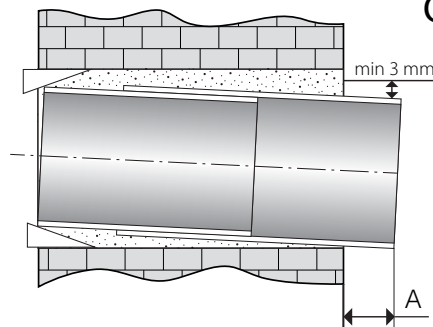

**TwinFresh Comfo SA-35**


While mounting several ventilators connected in series provide a cavity for the cable layout during the recess preparation to enable series connection of several ventilators.

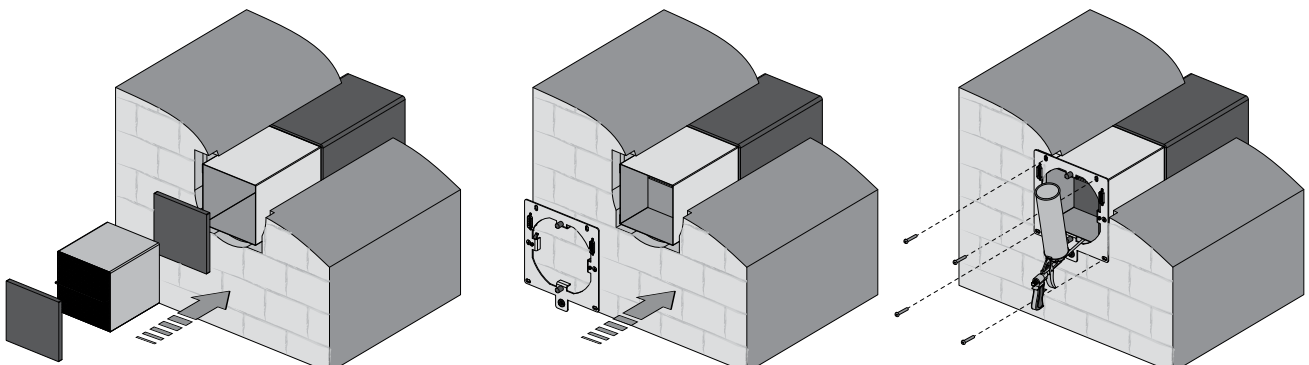
3. Insert the air duct in the wall. On the outer wall the telescopic air duct must protrude for the distance that enables installation of the outer ventilation hood. The distance **A** is stated in the mounting instruction for the outer ventilation hood. While mounting the telescopic air duct be sure to provide the minimum slope 3 mm downwards from outside.

Room

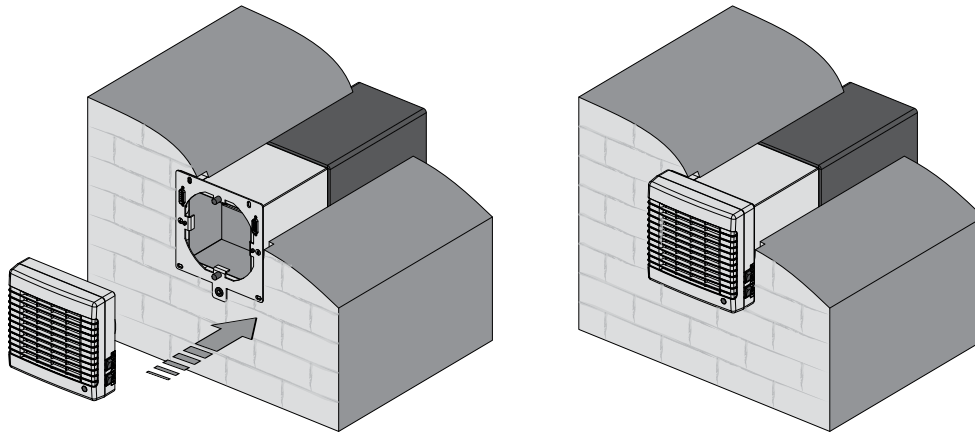
Outdoors



4. Install the filter, the ceramic regenerator, another filter and the air flow rectifier in the consecutive order inside the telescopic air duct. Connect the mounting plate following the Wiring Diagram section, page 20. Drill four fastening holes and fix the mounting plate on the wall with four 4x40 screws and 6x60 dowels from the delivery set. Align the telescopic air duct with respect to the mounting plate and fill the gaps between the wall and the telescopic air duct with a mounting foam. The telescopic air duct must not protrude from the mounting plate surface.



5. Install the ventilation unit on the mounting plate. The ventilation unit is fixed with magnets.



## CONNECTION TO POWER MAINS



**DISCONNECT THE UNIT FROM POWER SUPPLY PRIOR TO ANY OPERATIONS WITH THE UNIT.**

**INSTALLATION SHALL ONLY BE PERFORMED BY A PROFESSIONAL ELECTRICIAN QUALIFIED FOR UNASSISTED OPERATIONS WITH ELECTRICAL INSTALLATIONS UP TO 1000 V AFTER CAREFUL STUDY OF THE PRESENT USER'S MANUAL.**

**THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE GIVEN ON THE MANUFACTURER'S LABEL. ANY INTERNAL CONNECTION MODIFICATIONS ARE NOT ALLOWED AND RESULT IN WARRANTY LOSS.**

The ventilator is rated for connection to a single-phase AC 1~100-240 V/50 (60) Hz.

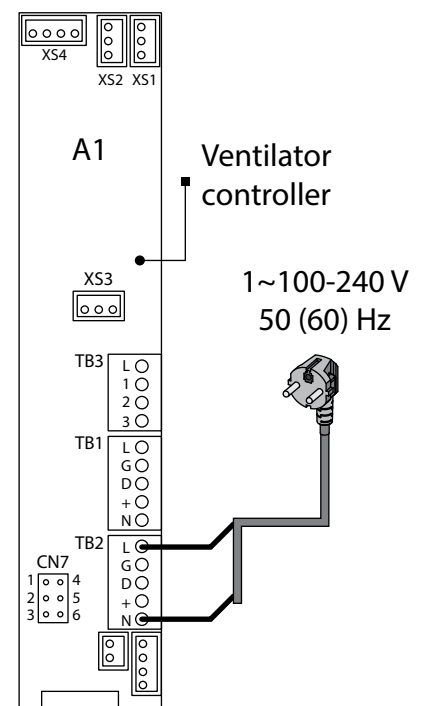
For this purpose the power cable with a plug is connected by the Manufacturer.

Connect the ventilator to power mains through the external automatic circuit breaker with a magnetic trip integrated into the fixed wiring system.

### VENTILATOR WIRING DIAGRAM TWINFRESH COMFO RA1-25 TWINFRESH COMFO RA1-25-2

The jumper between the contacts 1 and 2 or 2 and 3 of the CN7 socket connector determines air flow direction in **Ventilation mode**.

- If the jumper connects the contacts 1 and 2, air is extracted from the room in the **Ventilation mode** (factory setting).
- If the jumper connects the contacts 2 and 3, air is supplied in the **Ventilation mode**.



**CONNECTION OF SEVERAL VENTILATORS IN SERIES**

**TWINFRESH COMFO SA-35**  
**TWINFRESH COMFO SA-35-2**  
**TWINFRESH COMFO SA1-35**  
**TWINFRESH COMFO SA1-35-2**

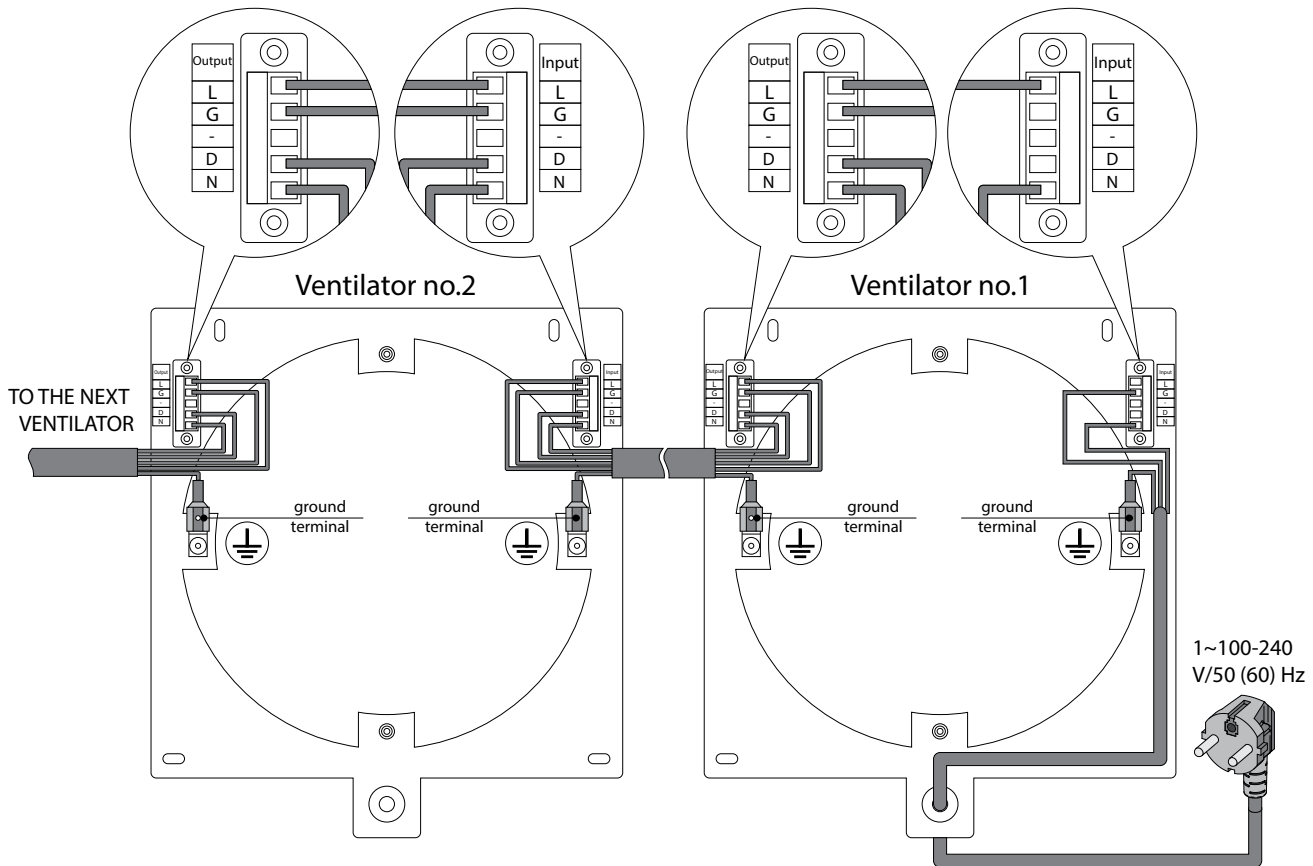
**TWINFRESH COMFO RA-35**  
**TWINFRESH COMFO RA-35-2**  
**TWINFRESH COMFO RA1-35**  
**TWINFRESH COMFO RA1-35-2**

**TWINFRESH COMFO RA-50**  
**TWINFRESH COMFO RA-50-2**  
**TWINFRESH COMFO RA1-50**  
**TWINFRESH COMFO RA1-50-2**

**TWINFRESH COMFO RA-85**  
**TWINFRESH COMFO RA-85-2**  
**TWINFRESH COMFO RA1-85**  
**TWINFRESH COMFO RA1-85-2**

Connection of the ventilators in series enables controlling all the connected ventilators by the first ventilator and the common remote control. To connect the ventilators in series connect the Output contact socket of the first ventilator mounting plate with the Input contact socket of the second ventilator mounting plate. Connect the second ventilator with the third ventilator in the same way, etc. Maximum 10 ventilators may be connected in series. For easy electric installation use a five-wire cable (not included into the delivery set) with the cable cross section not below 0.5 mm<sup>2</sup>. The cable must be rated for operation in an alternating current power supply with the country-specific mains voltage.

Disconnect the power cable while connecting the second, third, etc. ventilator in series.

**CONNECTION OF SEVERAL VENTILATORS IN SERIES (BACKSIDE VIEW)**


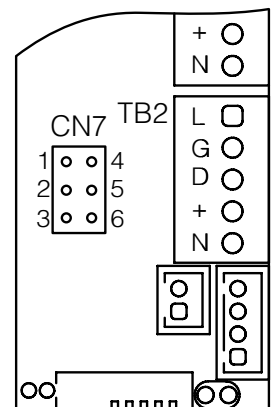
The first ventilator controls all the connected ventilators.

The jumper between the contacts 1 and 2 or 2 and 3 of the CN7 socket connector determines a flow direction in Ventilation mode.

- If the jumper connects the contacts 1 and 2, air is extracted from the room in the **Ventilation mode** (factory setting).
- If the jumper connects the contacts 2 and 3, air is supplied in the **Ventilation mode**.

The jumper position at each ventilator connected in series determines a rotation direction in **Ventilation mode** and an operating phase in **Regeneration mode**.

I.e. if the jumper at the first ventilator connects the contacts 2 and 3 and the jumper at the second ventilator connects the contacts 1 and 2, the ventilators operate in opposite directions in **Regeneration mode**.

**Ventilator controller**


### CONNECTION OF MORE THAN 10 VENTILATORS IN SERIES

In case of connection of more than 10 ventilators the ventilator 11 is energized not through the previous ventilator but from power mains (L and N terminals).

The control signals G and D from the 10th ventilator are transferred through the cable 2 x 0.5 mm<sup>2</sup>.

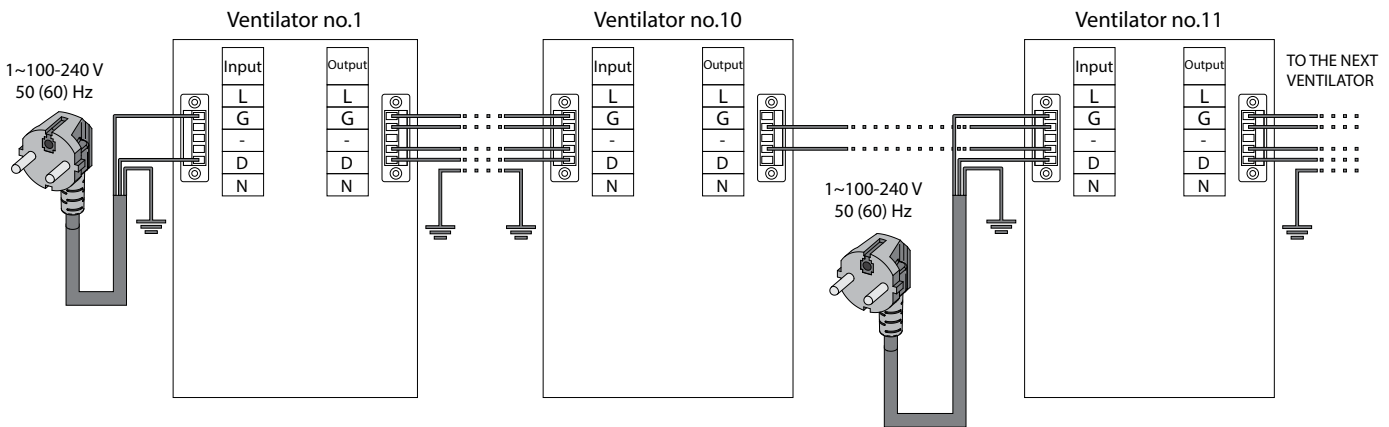
Connect the ventilators no. 12...20 to the ventilator no. 11 in the same way as the ventilators no. 1...10.

All the connected ventilators are controlled with the ventilator no. 1.



ALL THE CONNECTED IN SERIES VENTILATORS MUST BE

**GROUNDED!**



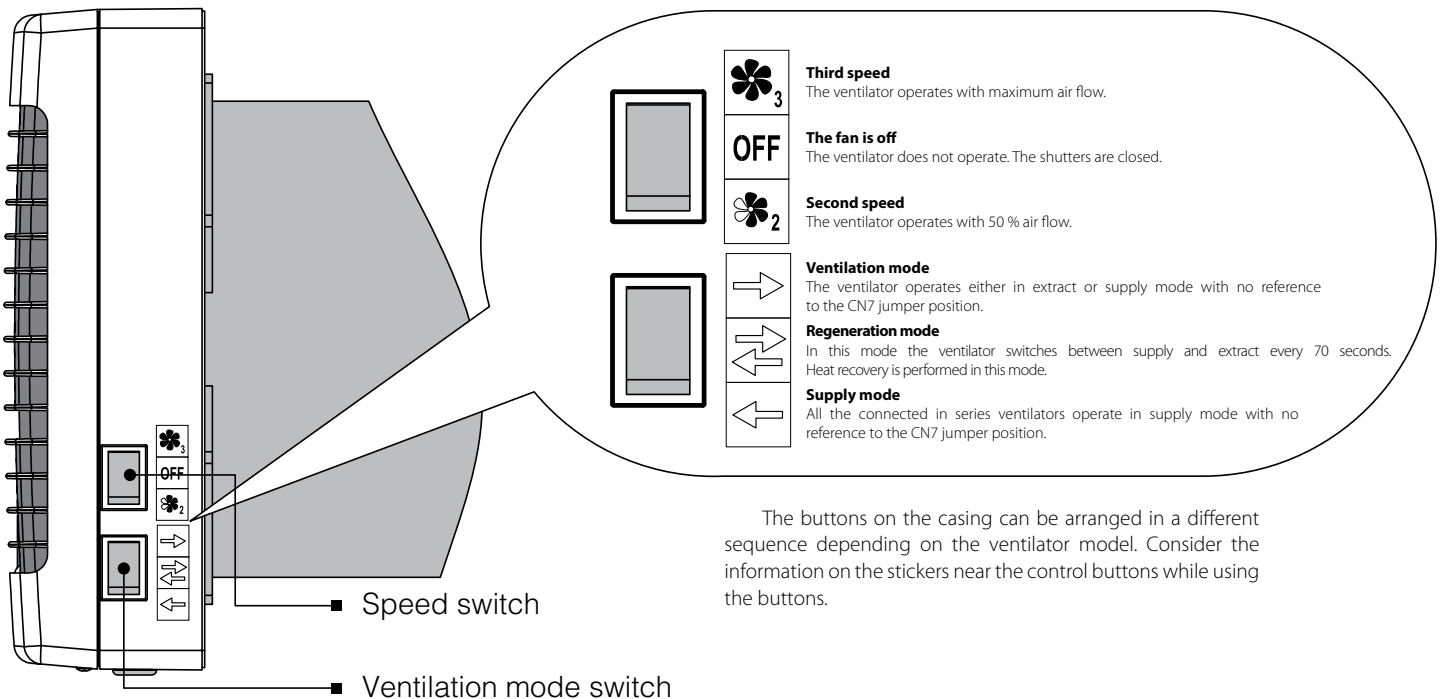
### VENTILATOR CONTROL

The ventilator is operated with a remote control or the buttons on the ventilator casing, see the figure below.

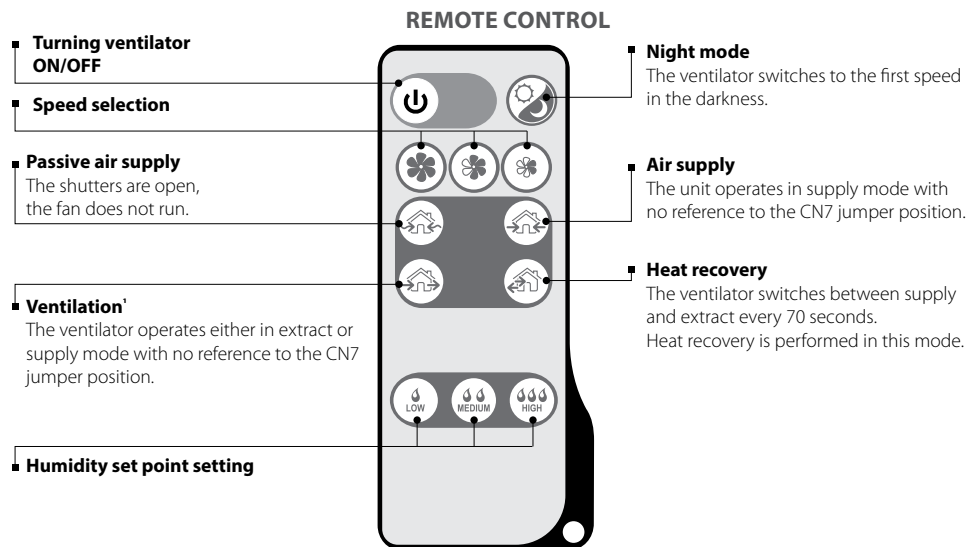
The operation buttons on the ventilator casing have limited functionality: only the second and the third speed can be activated. Three of the four modes of ventilation may be set.

The remote control has wider control capabilities.

### CONTROL BUTTONS ON THE VENTILATOR CASING



The buttons on the casing can be arranged in a different sequence depending on the ventilator model. Consider the information on the stickers near the control buttons while using the buttons.



<sup>1</sup>— operation of all the ventilators connected in series is determined by the CN7 jumper position.

**REMOTE CONTROL**

Set the speed switch to **OFF** position and the ventilation mode switch to position to enable remote control of the ventilation unit.

1. Turning the ventilator ON/OFF

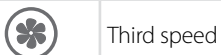


2. Night mode

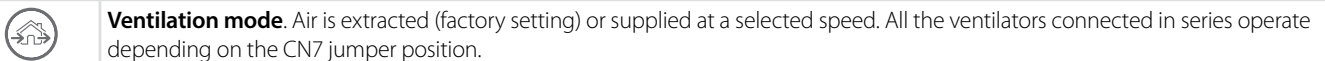
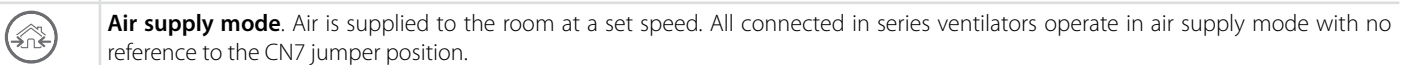
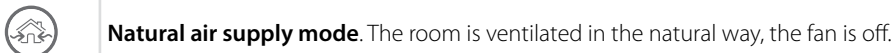


If the **Night mode** is activated, the ventilator switches to the first speed in the dark time of the day when the light is turned off. Activation of the night mode is confirmed by a long sound signal. Exiting the night mode is confirmed by a short sound signal.

3. Speed changeover

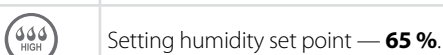


4. Operation mode



5. Humidity Control mode.

The humidity control may be activated in the **Regeneration mode** only by pressing one of the humidity control buttons. In the **Humidity Control mode** the ventilator measures the humidity of the extract air. If the humidity exceeds the selected set point the ventilator switches to a higher speed. After reaching the required level of the ventilator switches to a lower speed. Press one of the speed selection buttons to deactivate the **Humidity Control mode**.



**HUMIDITY CONTROL FUNCTION MAY BE ACTIVATED WITH THE REMOTE CONTROL ONLY!**



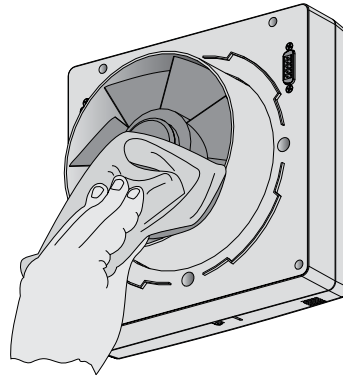
**DISCONNECT THE VENTILATOR FROM POWER SUPPLY PRIOR TO ANY MAINTENANCE OPERATIONS.**

Maintenance of the ventilator means regular cleaning of the ventilator surfaces of dust and cleaning or replacement of the filters.

### MAINTENANCE

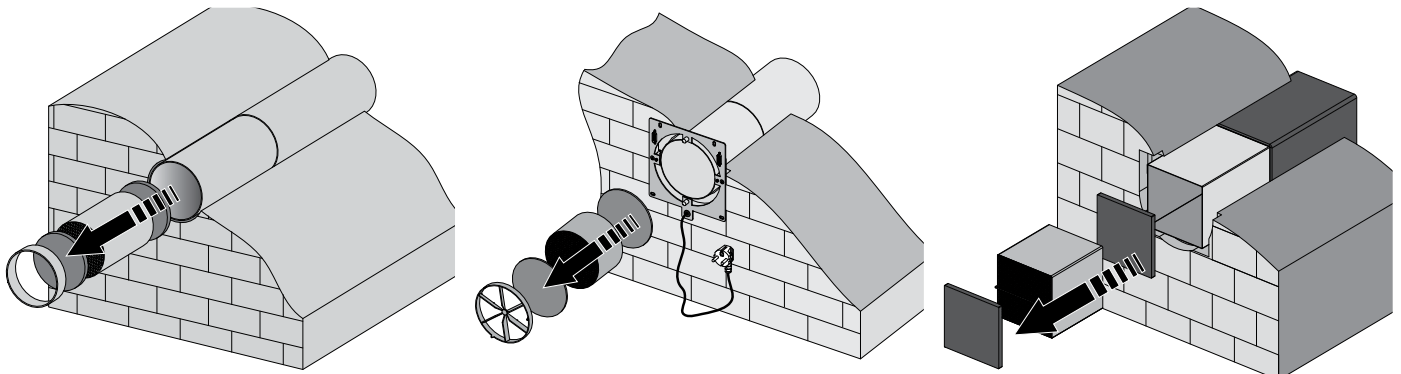
#### 1. Fan inspection (once per year).

Take off the ventilation unit and clean the fan blades. To remove dust use a soft brush, cloth or a vacuum cleaner. Do not use water, abrasive detergents, solvents, sharp objects for cleaning. Clean the impeller blades once a year.



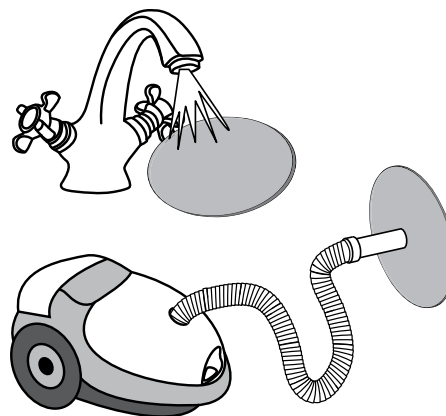
#### 2. Regenerator and filter maintenance (3-4 times per year).

1. Remove the air flow rectifier.
2. Remove the filter upstream of the regenerator.
3. Pull the specially designed cord to remove the regenerator from the air duct.
4. Be careful while pulling the regenerator to avoid its damage.
5. Remove the filter downstream of the regenerator.



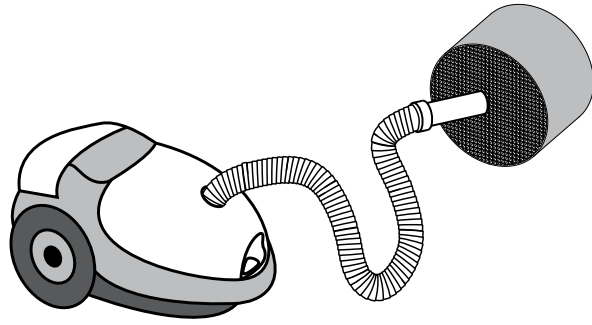
Clean the filters as often as required, but at least 3 times a year.


- After the expiry of time to filter cleaning (90 days) the ventilator generates periodically a sound signal as a reminder of the need to replace or clean the filters.
- Wash the filters and let them get dry. Install dry filters in the air duct.
- Vacuum cleaning is allowed.
- The filter rated service life is 3 years.
- For new filters contact the Seller.



Even regular technical maintenance may not completely prevent dirt accumulation on the regenerator assemblies.

- Subject the regenerator to regular cleaning to ensure high heat recovery efficiency.
- Vacuum clean the regenerator not less than once a year.



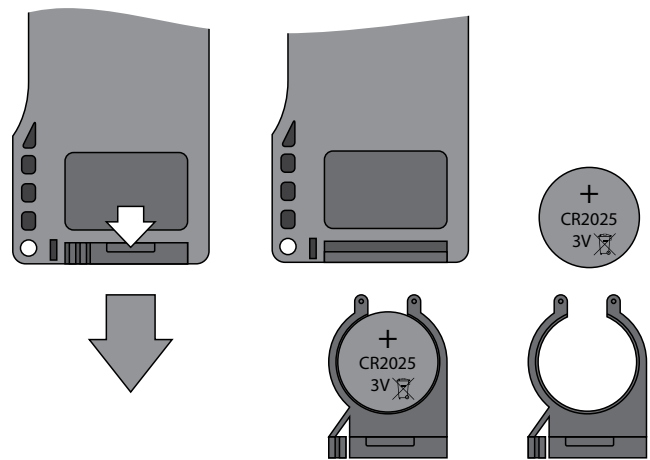
To reset the hour meter install the filters and the regenerator into the ventilator and then press and hold the  button for 10 sec. until you hear a long sound signal.

### 3. Replacement of the remote control battery (if necessary).

Replace the battery of the remote control after prolonged use. No response of the unit for pressing the remote control buttons indicates the need to replace the battery.

Battery type: CR2025.

To replace the battery of the remote control remove the battery holder with a battery. Replace the battery and install the holder with a new battery back to the remote control.





## TROUBLESHOOTING

### POSSIBLE REASONS AND TROUBLESHOOTING

Problem	Possible reasons	Troubleshooting
When switching on the ventilator the fan does not start.	No power supply.	Make sure the power supply line is connected correctly, otherwise troubleshoot the connection error.
	The motor is jammed, the impeller blades are clogged.	Turn the ventilator off. Troubleshoot the motor jam and the impeller clogging. Clean the blades. Restart the ventilator.
Circuit breaker tripping during the ventilator start-up.	Overcurrent as a result of short circuit in the electric circuit.	Turn the ventilator off. Contact the Seller for further information.
Low air flow.	Low set fan speed.	Set higher speed.
	The filters, the fan or the regenerator are clogged.	Clean or replace the filters. Clean the fan and the regenerator.
The ventilator generates sound signals.	The filter timer is actuated.	Refer to the Technical maintenance section, clause 2.
Noise, vibration.	The impeller is clogged.	Clean the impeller.
	Loose screw connection of the ventilator casing or the ventilation hood.	Tighten the screws of the ventilator or the outer ventilation hood.

## STORAGE AND TRANSPORTATION REGULATIONS

Store the unit in the manufacturer's original packing box in a dry closed ventilated premise with temperature range from +5 °C (+ 41 °F) to + 40 °C (104 °F).

Storage environment must not contain aggressive vapours and chemical mixtures provoking corrosion, insulation and sealing deformation.

Use suitable hoist machinery for handling and storage operations to prevent possible damage to the unit.

Follow the handling requirements applicable for the particular type of cargo.

The unit can be carried in the original packing by any mode of transport provided proper protection against precipitation and mechanical damage.

Avoid sharp blows, scratches or rough handling during loading and unloading.

## MANUFACTURER'S WARRANTY

The manufacturer hereby warrants normal operation of the unit for 24 months after the retail sale date provided the user's observance of the transportation, storage, mounting and operation regulations.

Should any malfunctions occur in the course of the unit operation through the Manufacturer's fault during the guaranteed period of operation the user is entitled to elimination of faults by the manufacturer by means of warranty repair at the factory free of charge.

The warranty repair shall include work specific to elimination of faults in the unit operation to ensure its intended use by the user within the guaranteed period of operation.

The faults are eliminated by means of replacement or repair of the unit components or a specific part of such unit component.

### **The warranty repair does not include:**

- routine technical maintenance
- unit installation/dismantling
- unit setup

To benefit from warranty repair the user must provide the unit, the user's manual with the purchase date stamp and the payment document certifying the purchase.

The unit model must comply with the one stated in the user's manual.

### **Contact the Seller for warranty service.**

### **The manufacturer's warranty does not apply to the following cases:**

- User's failure to submit the unit with the entire delivery package as stated in the user's manual including submission with missing component parts previously dismantled by the user.
- Mismatch of the unit model and the brand name with the information stated on the unit packing and in the user's manual.
- User's failure to ensure timely technical maintenance of the unit.
- External damage to the unit casing (excluding external modifications as required for installation) and internal components caused by the user.
- Redesign or engineering changes to the unit.
- Replacement and use of any assemblies, parts and components not approved by the manufacturer.
- Unit misuse.
- User's violation of the unit installation regulations.
- User's violation of the unit control regulations.
- Unit connection to the power mains with a voltage different from the one stated in the user's manual.
- Unit breakdown due to voltage surges in the power mains.
- Discretionary repair of the unit by the user.
- Unit repair by any persons without the manufacturer's authorization.
- Expiration of the unit warranty period.
- User's violation of the unit transportation regulations.
- User's violation of the unit storage regulations.
- Wrongful actions against the unit committed by third parties.
- Unit breakdown due to circumstances of insuperable force (fire, flood, earthquake, war, hostilities of any kind, blockades).
- Missing seals if provided by the user's manual.
- Failure to submit the user's manual with the unit purchase date stamp.
- Missing payment document certifying the unit purchase.



**FOLLOWING THE REGULATIONS STIPULATED HEREIN WILL ENSURE  
A LONG AND TROUBLE-FREE OPERATION OF THE UNIT.**



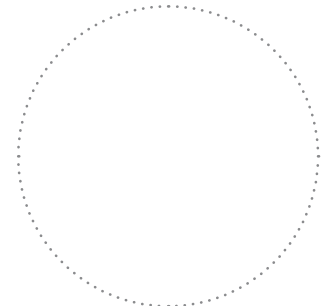
**USERS' WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE  
UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.**

## ACCEPTANCE CERTIFICATE

<b>Unit Type</b>	Single-room reversible energy recovery ventilator
<b>Model</b>	TwinFresh Comfo _____
<b>Serial Number</b>	
<b>Manufacture Date</b>	
<p>Is compliant with the technical specifications and is recognized as serviceable. We hereby declare that the product complies with the essential protection requirements of Electromagnetic Council Directive 2004/108/EC, 89/336/EEC and Low Voltage Directive 2006/95/EC, 73/23/EEC and CE-marking Directive 93/68/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. This certificate is issued following test carried out on samples of the product referred to above.</p>	
<b>Quality Inspector's Stamp</b>	

## SELLER INFORMATION

<b>Seller</b>	
<b>Address</b>	
<b>Phone Number</b>	
<b>E-mail</b>	
<b>Purchase Date</b>	



Seller's Stamp

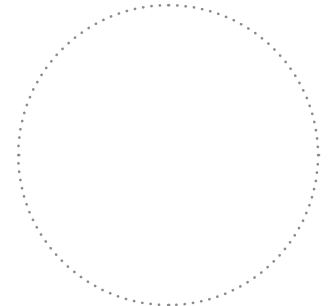
This is to certify acceptance of the complete ventilator delivery with the user's manual. The warranty terms are acknowledged and accepted.

<b>Customer's Signature</b>	
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## INSTALLATION CERTIFICATE

The single-room reversible energy regeneration ventilator TwinFresh Comfo \_\_\_\_\_ has been connected to power mains pursuant to the requirements stated in the present user's manual.

<b>Company Name</b>	
<b>Address</b>	
<b>Phone Number</b>	
<b>Installation Technician's Full Name</b>	
<b>Installation Date:</b>	<b>Signature:</b>



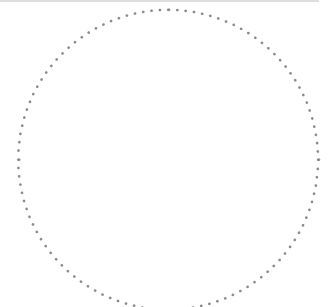
Installation Company Stamp

The ventilator has been installed in accordance with the provisions of all the applicable local and national construction, electrical and technical codes and standards. The ventilator operates normally as intended by the manufacturer.

<b>Signature:</b>	
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## WARRANTY CARD

<b>Unit Type</b>	Single-room reversible energy recovery ventilator
<b>Model</b>	TwinFresh Comfo _____
<b>Serial Number</b>	
<b>Manufacture Date</b>	
<b>Purchase Date</b>	
<b>Warranty Period</b>	
<b>Seller</b>	



Seller's Stamp

