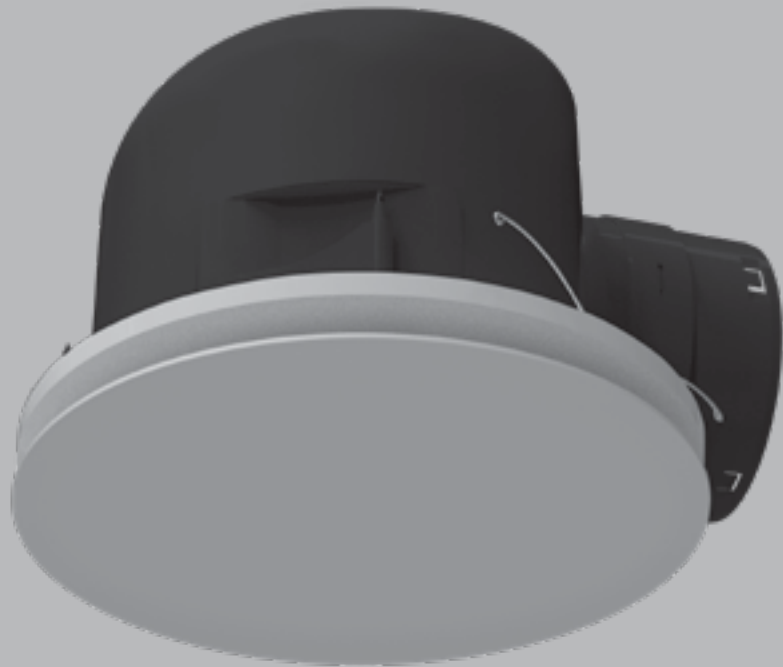


BEC 150HP – Centrifugal ceiling extract fan



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This user's manual is a main operating document intended for technical, maintenance, and operating staff.

The manual contains information about purpose, technical details, operating principle, design, and installation of the BEC 150HP unit and all its modifications.

Technical and maintenance staff must have theoretical and practical training in the field of ventilation systems and should be able to work in accordance with workplace safety rules as well as construction norms and standards applicable in the territory of the country.

Safety requirements

All user's manual requirements as well as the provisions of all the applicable local and national construction, electrical, and technical norms and standards must be observed when installing and operating the unit.

Disconnect the unit from the power supply prior to any connection, servicing, maintenance, and repair operations.

Only qualified electricians with a work permit for electrical units up to 1000V are allowed for installation and maintenance. The present user's manual should be carefully read before beginning works.

- Check the unit for any visible damage of the impeller, the casing, and the grille before starting installation. The casing internals must be free of any foreign objects that can damage the impeller blades.
- While mounting the unit, avoid compression of the casing! Deformation of the casing may result in motor jam and excessive noise.
- Misuse of the unit and any unauthorised modifications are not allowed.
- Do not expose the device to adverse atmospheric agents (rain, sun, etc.).
- Transported air must not contain any dust or other solid impurities, sticky substances, or fibrous materials.
- Do not use the unit in a hazardous or explosive environment containing spirits, gasoline, insecticides, etc.
- Do not close or block the intake or extract vents in order to ensure the efficient air flow.
- Do not sit on the unit and do not put objects on it.
- The information in this user's manual was correct at the time of the document's preparation.
- The Company reserves the right to modify the technical characteristics, design, or configuration of its products at any time in order to incorporate the latest technological developments.

WARNING! Similar to the use of any other household electrical appliances when operating this fan, the following basic rules must be followed:

- Never touch the unit with wet or damp hands.
- Never touch the unit when barefoot.

The connection to the supply mains must be made through a means of disconnection, which is incorporated in the fixed wiring in accordance with the wiring rules, and has a contact separation in all poles that allows for full disconnection under over voltage category III conditions.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a safety hazard.

CAUTION: In order to avoid a safety hazard due to inadvertent resetting of the thermal cut-out, this appliance must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by the utility.

Ensure that the appliance is switched off from the supply mains before removing the guard.

WARNING: If unusual oscillating movements is observed, immediately stop using the appliance and contact the manufacturer, its service agent or suitably qualified persons.

The replacement of parts of the safety suspension system device shall be performed by the manufacturer, its service agent or suitably qualified persons.

Fixing means for attachment to the ceiling such as hooks or other devices shall be fixed with a sufficient strength to withstand 4 times the weight of the appliance.

The mounting of the suspension system shall be performed by the manufacturer, its service agent or suitably qualified persons.

The appliance is to be installed so that the blades are more than 2.3m above the floor.

Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.



The product must be disposed separately at the end of its service life.
Do not dispose the unit as unsorted domestic waste.

Purpose

The centrifugal ceiling extract fan BEC 150HP is designed for extract ventilation of small to medium-sized premises. The unit is rated for continuous operation.



The unit should not be operated by children or persons with reduced Physical, mental, or sensory capacities, or those without 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 unauthorised Access by unattended children.



The unit must not be operated in kitchen premises.

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).

Delivery set

Name	BEC 150HP Round
Centrifugal ceiling extract fan	1 pc.
Decorative grille	1 pc.
User's manual	1 pc.
Packing box	1 pc.

Technical data

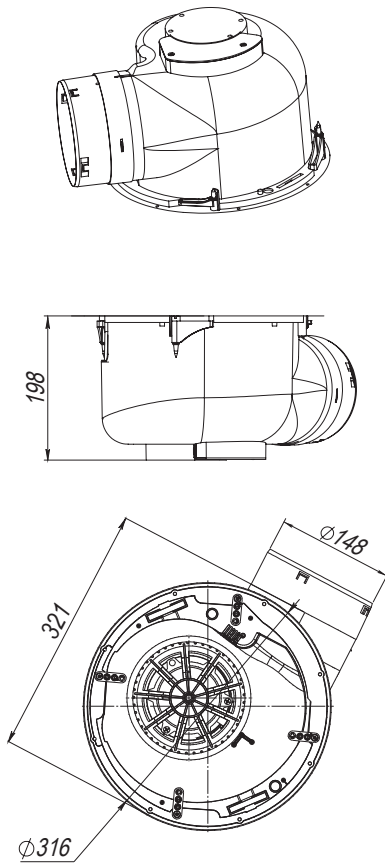
The centrifugal ceiling extract fan is designed for indoor application with the ambient temperature ranging from +1 °C up to +45 °C.

The unit is rated as a Class I electrical appliance.

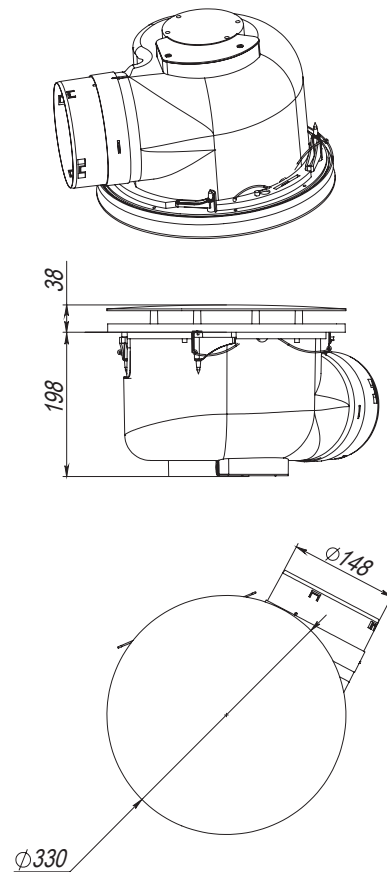
The unit design is constantly being improved, thus some models may be slightly different from those described in this manual.

Overall and connecting dimensions

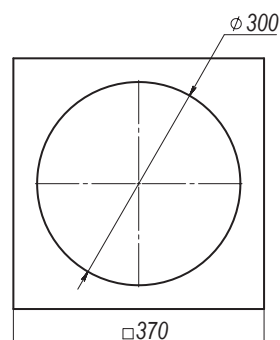
BEC 150HP



BEC 150HP Round



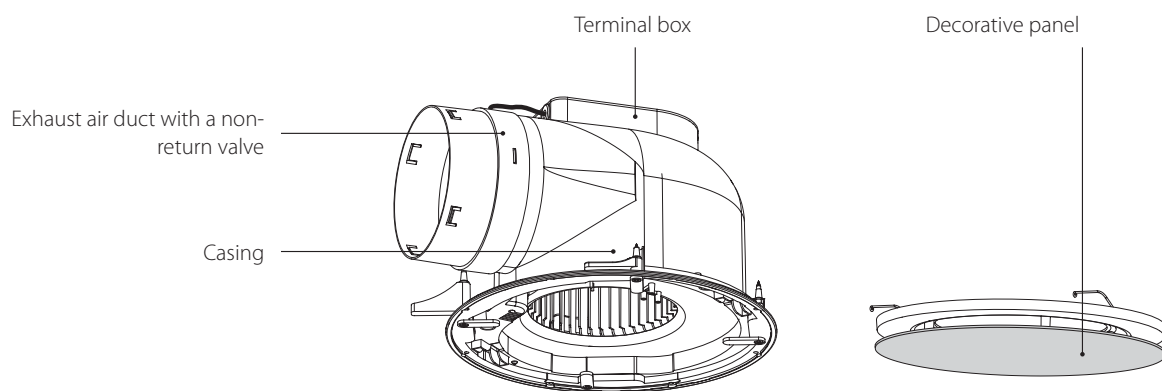
Template for marking the fan installation location



Technical data

Parameter	BEC 150HP
Frequency [Hz]	50
Voltage [V]	1 ~ 220-240
Rated fan power [W]	57
RPM [min ⁻¹]	1085
Current [A]	0.25
Max. air flow [m ³ /h]	482
Max. air flow [l/s]	134
Specific fan power (SFP) [W/l/s]	0.43
Sound pressure level at 3m distance [dBA]	39
Weight [kg]	4.13
IP	X4
SEC class	C

Design and functioning



The fan casing is made of plastic.

The extract spigot with a non-return valve is attached to the fan to prevent back air flow.

In the upper part of the casing there is a terminal box, which contains terminals for connecting the fan to power mains and to electronics board, if available.

A single-phase electric motor with a centrifugal impeller with forward curved blades is fastened inside of the casing.

Depending on the model, the fan is equipped with a timer and a humidity sensor.

Mounting and set-up



Read the user's manual before installing the unit.

The fan is a component part and is not designed for stand-alone operation.

The fan is designed for ceiling mounting and installation in the floor slab with fastening to the ceiling surface using removable rotary clamping brackets on the fan casing.

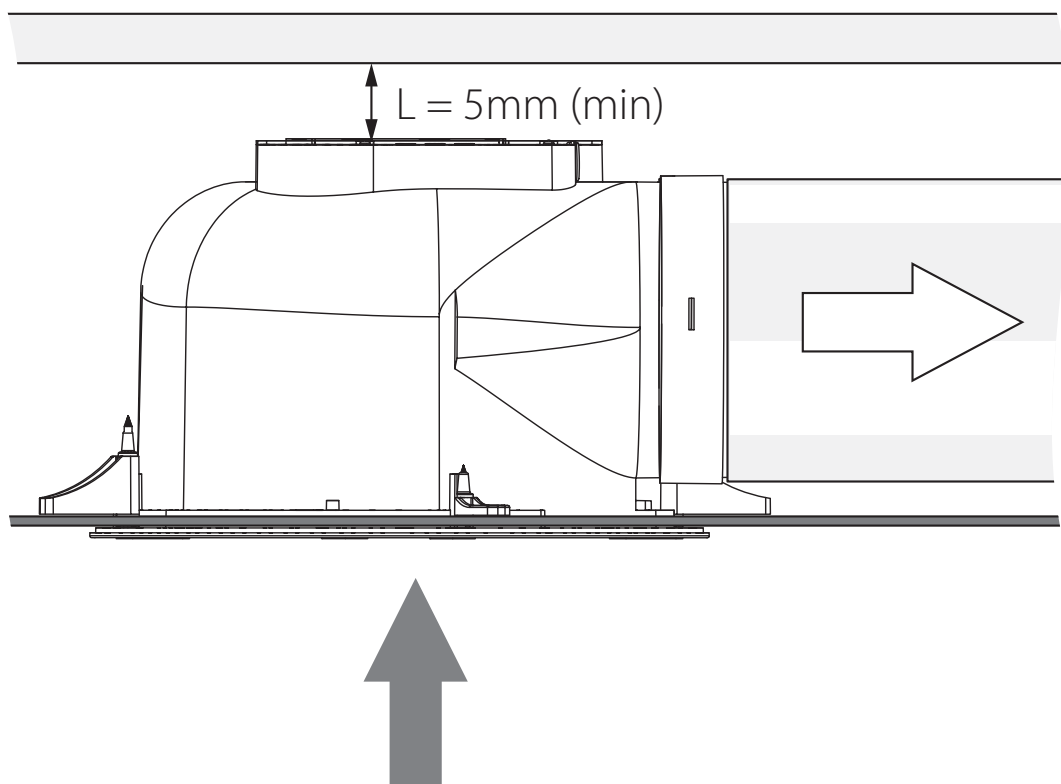
The fan installation location must comply with local building codes for this type of product.

Check the fan for mechanical damages prior to mounting.

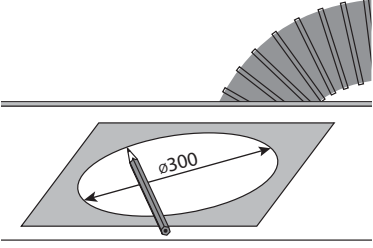
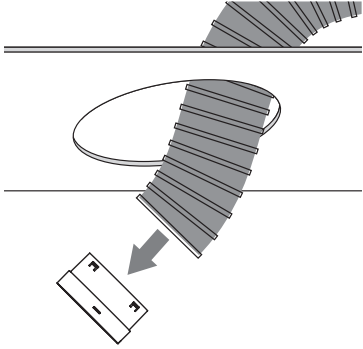
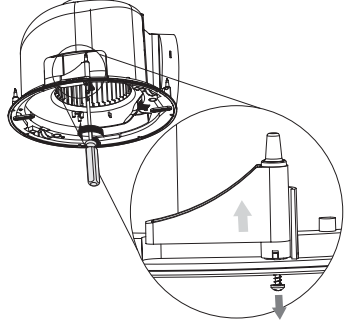
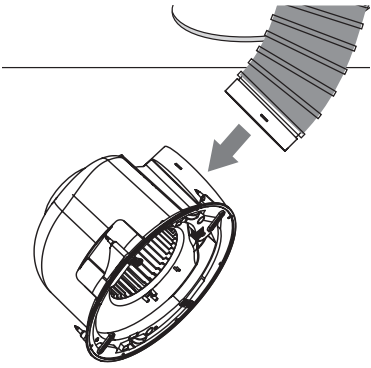
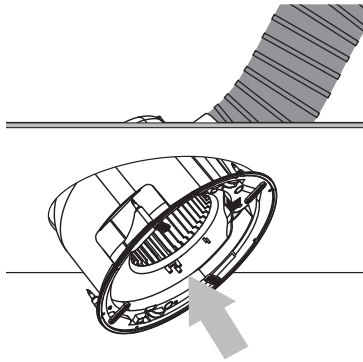
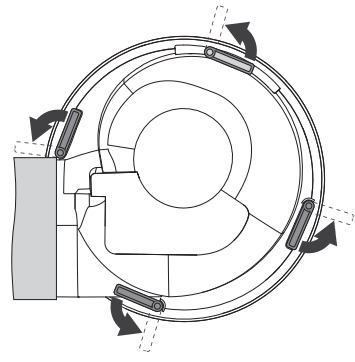
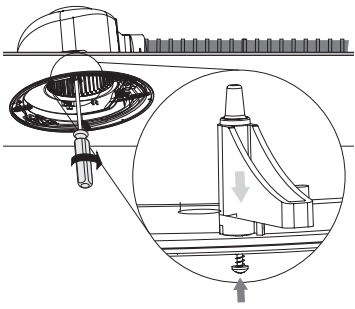
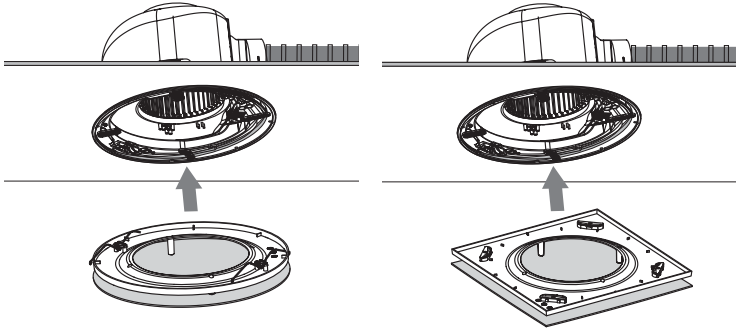
Before mounting make sure the casing does not contain any foreign objects (e.g. foil, paper).

While installing the unit ensure convenient access for subsequent maintenance and repair.

The minimum distance between the fan and the ceiling should be at least 5 mm.



Mounting sequence

<p>1. Use the template to mark the mounting location for the fan and make a hole in the ceiling \varnothing 300 mm.</p> 	<p>2. The flexible air duct is pushed through the hole from behind the ceiling, from above. The air duct is installed on a spigot with a non-return valve.</p> 	<p>3. Before installation, it is required to loosen the self-tapping screws on the rocking levers, thereby increasing the gap between the casing and the lever.</p> 
<p>4. The spigot and the air duct are installed on the fan.</p> 	<p>5. The fan assembly is inserted into the ceiling opening from the room side.</p> 	<p>6. Secure the fan by turning the levers.</p> 
<p>7. After installing the fan, it is necessary to clamp the self-tapping screws on the rocking levers to press the fan casing against the ceiling.</p> 	<p>8. Install the decorative panel (purchased separately for the BEC 150HP model) on the fan casing. The panel is mounted in accordance with the User's manual for the decorative panel.</p> 	

Connection to power mains



Power off the power supply prior to any operations with the unit.
The unit must be connected to power supply by a qualified electrician.
The rated electrical parameters of the unit are given on the Manufacturer's label.



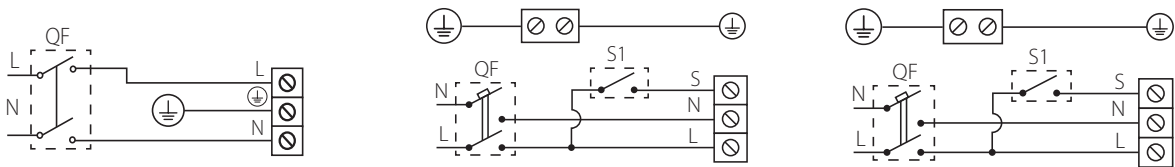
Any tampering with the internal connections is prohibited and will void the warranty

The fan is rated for connection to single-phase AC 220-240 V/50 (60) Hz.

The fan is connected to power mains with an electric plug through a QF circuit breaker with a magnetic trip integrated into the fixed wiring system.

The position of the automatic circuit breaker must ensure free access for quick power-off of the unit.

Wiring diagram of the fan



Terminal designations on the wiring diagram: L – phase; N – neutral; S1 – switch; QF – automatic circuit breaker.

Electronics operation algorithm

Timer (T)

After turning on an external switch, such as a light switch, the fan turns on.

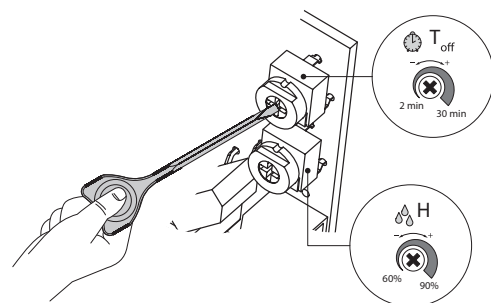
After the switch is turned off the fan keeps operating for a set turn-off delay time period, adjustable from 0 to 30 minutes.

Humidity sensor (TH)

If the set humidity level in the room is exceeded from 60 % to 90 %, the fan turns on.

As the indoor humidity level drops down the fan keeps operating for a set turn-off delay time period, adjustable from 0 to 30 minutes, and then turns off.

The fan delivery set includes a specially designed plastic screwdriver for fan settings adjustments. Use it to change the turn-on and turn-off delay time and the humidity set point.



T_{on} – To adjust the fan turn-on delay time, turn the control knob T_{on} clockwise to increase and counter-clockwise to decrease the turn-on delay time respectively, adjustable from 0 up to 2 minutes.

H – To adjust the humidity set point, turn the control knob H clockwise to increase and counter-clockwise to decrease the humidity sensor set point, adjustable from 60% up to 90%.



Do not use a metal screwdriver, knife, etc.
For adjustment operations not to damage the circuit board.

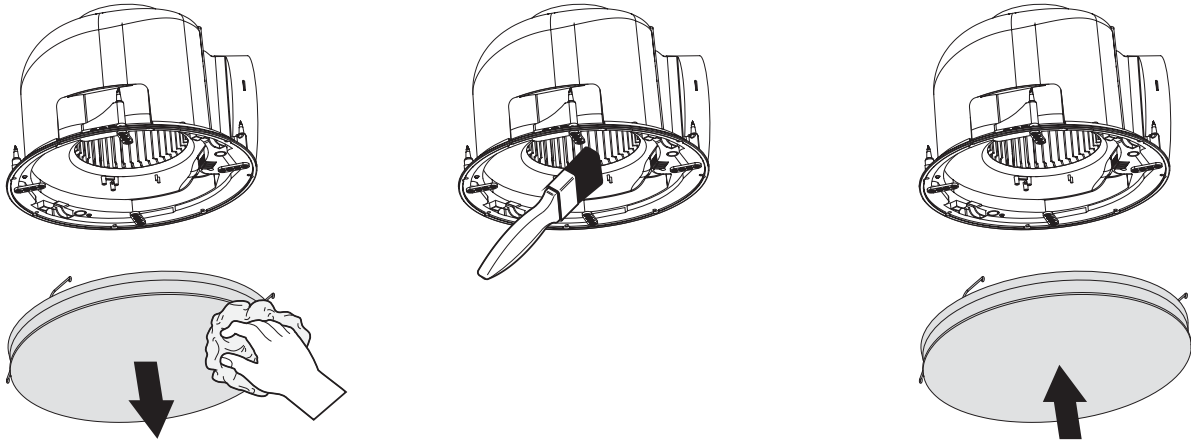
Technical maintenance



Disconnect the unit from power supply before any maintenance operations!
Ensure that the unit is switched off from the supply mains before removing the guard.

The fan maintenance includes regular cleaning of the surfaces of dust and dirt. Replace the filter as required, but at least every 6 months.

The impeller cleaning is shown below. Clean the impeller blades thoroughly every 6 months.



Troubles and troubleshooting

Trouble	Possible reasons	Troubleshooting
The fan does not get started.	No power supply.	Check the electric connections and the operation status of the circuit breaker.
	Motor jam.	Turn the fan off. Troubleshoot clogging of the impeller. Restart the fan.
Automatic circuit breaker tripping during the unit turning on.	Over current as a result of short circuit in the electric circuit leads to tripping of the circuit breaker.	Disconnect the fan from power supply and contact the product Seller. Do not turn the fan on again!
Low air flow.	Air ducts or other components of the ventilation system are clogged. The impeller is clogged. The air ducts are damaged. The air dampers are closed.	Clean the air ducts, the impeller and other components of the ventilation system. Make sure that the air ducts are not damaged. Make sure that the air dampers and louvre shutters are open.

Storage and transportation regulations

Store the unit in the manufacturer's original packaging box in a dry closed ventilated premise with temperature range from +5 °C to +40 °C and relative humidity up to 70 %.

- 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 packaging by any mode of transport provided proper protection against precipitation and mechanical damage. The unit must be transported only in the working position.
- Avoid sharp blows, scratches, or rough handling during loading and unloading.
- Prior to the initial power-up after transportation at low temperatures, allow the unit to warm up at operating temperature for at least 3-4 hours.

Manufacturer's warranty

Pacific Ventilation warrants that all goods manufactured or supplied will be free of defects in workmanship and materials for a period of 12 months from the date of invoice to the customer, provided that the goods are installed according to the requirements of AS/NZS3000:2007 Australian / New Zealand wiring rules and the installation instructions described herein. Pacific Ventilation accepts no responsibility for costs involved in the removal or replacement of defective parts. Pacific Ventilation may require the return of goods at the claimants expense to establish the validity of the claim. A full copy of our conditions of sale including warranty provisions is available at www.pacificventilation.com.

Note: with the purpose of performing warranty servicing you please produce User Manual or other relevant substituting document and the payment document as an evidence of the purchase with indication of the sale date.

The product model shall comply with that one specified in the User Manual or other relevant substituting document.

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 paperwork 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 dismounted by the user.
- Mismatch of the unit model and the brand name with the information stated on the unit packaging 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.
- Violation of the unit installation regulations by the user.
- Violation of the unit control regulations by the user.
- Unit connection to power mains with a voltage different from the one stated in the user’s manual.
- Unit breakdown due to voltage surges in 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.
- Violation of the unit transportation regulations by the user.
- Violation of the unit storage regulations by the user.
- 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 paperwork certifying the unit purchase.



Following the regulations stipulated herein will ensure a long and trouble-free operation of the unit.



User’s 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.



We are the safe choice.



Pacific Ventilation Pty Ltd

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