Installation Manual

Tiny Home Ventilation and Extraction Solution

Thank you for your purchase of our company's product. It has been manufactured following current technical safety regulations and is in compliance with AS/NZS 60335 standard.

Please read this instruction booklet carefully before installing or starting up the product.

It contains important information on personal and user safety measures to be followed while installing, using, and carrying out maintenance work on the equipment. Once the product has been installed, please hand this booklet to the end user.

Before installing the fans, it is important to understand the way they function.
Both fans are designed to be continuously powered.
The ventilation fan continuously supplies fresh air into the house at a low rate, and will speed up if the supply air is within an acceptable range. The bathroom fan continuously extracts air from the bathroom at a low rate and will speed up if it has detected the bathroom being in use (e.g. steam is generated by the shower).

The ventilation fan, when first powered on, will run at low speed (~20 l/s) for 30s to initialise the sensors. After this, it will slow down to trickle speed (~10 l/s) and monitor the supply air. While the air is within an acceptable range (0-45°C) the fan will automatically adjust its speed according to the supply air temperature - the closer the air is to 22°C, the faster the fan will go, up to a maximum of 30% speed. If the air is outside of the acceptable range the fan will stop, until the temperature gets back within range.

The bathroom fan, when first powered on, will also run at low speed for 30s to initialise the sensors. After this it will increase to about half speed. It will run at this speed for two minutes to purge the bathroom and learn the environment.
Over the next 10 minutes the fan will gradually slow down until it reaches trickle speed. The fan will now be monitoring the bathroom for a change in the environment (e.g. steam is generated).
On detecting such a change, the fan will respond and increase the speed accordingly. Once the environment has been restored, the fan will once again slow down to the trickle speed.

The ventilation fan includes the option of adding a remote wall switch - refer to page 4 for more details.

TRANSPORT AND MANIPULATION

The packaging used for this apparatus has been designed to support normal transporting conditions. The apparatus must always be transported in its original packaging as not doing so could deform or damage the product. Do not place heavy weights on the packed product and avoid knocking or dropping it.

The product should be stored in a dry place in its original packaging, protected from dust and dirt until it is installed in its final location. Do not accept delivery if the apparatus is not in its original packaging or shows clear signs of having been manipulated in any way.

Check that the apparatus is in perfect condition while unpacking. *Any fault or damage*

caused in origin is covered by our company guarantee. Please make sure that the apparatus coincides with the product you have ordered and that the details on the rating label fulfil your requirements.

Important information for the safety of installers and user:
Installation must only be carried out by qualified persons. Make sure that the installation complies with the applicable building and electrical regulations.

This appliance is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely. Young children should be supervised to ensure that they do not play with the appliance.

This apparatus must not be used in explosive or corrosive atmospheres. If a fan is going to be installed to extract air from premises where a boiler or other combustion apparatus are installed, make sure that the building has sufficient air intakes to assure adequate combustion. The extractor outlet must not be connected to a duct used to exhaust smoke or fumes from any appliance that uses gas or any other type of fuel.

INSTALLATION OVERVIEW

Before commencing installation, select a suitable place for the fan to be installed in the external wall. Locate and avoid wall studs when determining fan placement. The fan must not be placed inside zone 1 (see image 2) as the fan is powered by mains voltage and could pose an electrocution hazard.

Using the provided cutting template, drill a 185mm hole through the **internal** wall for the fan, either using a circular hole saw or other suitable means. Cut a 152mm round hole through the **external** wall for the cowl, ensuring the two holes are as aligned as possible.

Making sure that power is turned off, wire the fan power lead as per the wiring diagram (see image 1), then mount the fan and grille on the internal wall. Take care to ensure the power cable is not cinched or damaged as the fan case is placed into the wall. Place a short length of ducting over the fan's 150mm spigot from outside and tape into place.

Place the other end of the ducting over the cowl and tape into place. Position the cowl inside the 150mm hole. Mount the cowl onto the wall with the screws provided.
Check that both the fan case and cowl are level and flush with the wall, and that the fan can spin freely before turning on power to the fan.

Note: wiring mains power should only be carried out by a registered electrician.

ELECTRICAL CONNECTION

The extractor fan must be connected to a single-phase mains network, with the specific voltage and frequency according to the specifications on the fan rating label.

The electrical installation must include an isolating switch in accordance with New Zealand electrical standards. Earthing is not required for this fan as this is a double insulated product (Class II).

Please note that this model of fan must be wired with a fixed permanent connection.

SAFETY DURING INSTALLATION

Make sure there are no loose elements near the fan, as they could run the risk of being sucked up by it. If it is going to be installed in a duct, check that it is clear of any element that could be sucked up by the fan. Make sure that such a duct is used for the extraction system only.

When installing an apparatus, make sure that all the fittings are in place and that the structure which supports it is resistant enough to bear its weight at full functioning power.

Before manipulating the apparatus, make sure the mains supply is disconnected, even if the machine is switched off.

STARTING UP THE FAN

Fans may have delayed startup, or may operate under the control of the inbuilt controlling electronics included with the fan. Always take extreme care as the fan may start unexpectedly. Always disconnect the fan from power during maintenance.

Before starting up the fan, ensure that:
The apparatus is well secured and the electrical connections have been carried out correctly.
Any electrical safety devices are correctly connected, adequately adjusted and ready for use.
The wire and electrical connection inputs are correctly sealed and water-tight.
If the fan has been mounted in a duct, make sure it is clear of any loose material that could be sucked up by the fan.

When starting up the fan, ensure that:
The propeller turns in the correct direction.
There are no abnormal vibrations.
If the circuit protection device is tripping during operation, the apparatus must be quickly disconnected from the mains supply. The whole installation should be carefully checked before trying to start up the machine again.

MAINTENANCE

Before manipulating the fan, make sure it is disconnected from the mains supply - *even if it has previously been switched off.* Prevent the possibility of anyone else connecting it while it is being manipulated.

The apparatus must be regularly inspected. These inspections should be carried out while bearing in mind the machine's working conditions, taking care to avoid dirt or dust accumulating on the propeller, turbine, motor or grids. This could be dangerous and perceptibly shorten the working life of the fan unit. While cleaning, great care should be taken not to damage the propeller.

All maintenance and repair work should be carried out in strict compliance with each country's current safety regulations.

For further assistance and queries related to this product, please contact EvolutionFX NZ Limited

Email: info@evolutionfx.co.nz
Phone: +64 9 558 5590

FAN WIRING (IMG 1)

The ventilation fan includes two sets of leads; one for powering the fan, and one for connecting a remote wall-switch. The fan is designed to be permanently powered, but may be connected to a power switch to be turned off if so desired. Please refer to the image below to ensure the fan is wired correctly to prevent damaging the fan.

Power Lead:

Blue = Neutral
Brown = Phase

External Switch - Dry Contact ONLY, DO NOT connect to mains (230VAC):

Red = Switch Signal (5V max)
Black = Common (GND)

When the external switch wires are shorted together the ventilation fan will slowly speed up, effectively doubling the supply airflow and increasing ventilation levels. If an external switch is not required, leave the two wires disconnected.

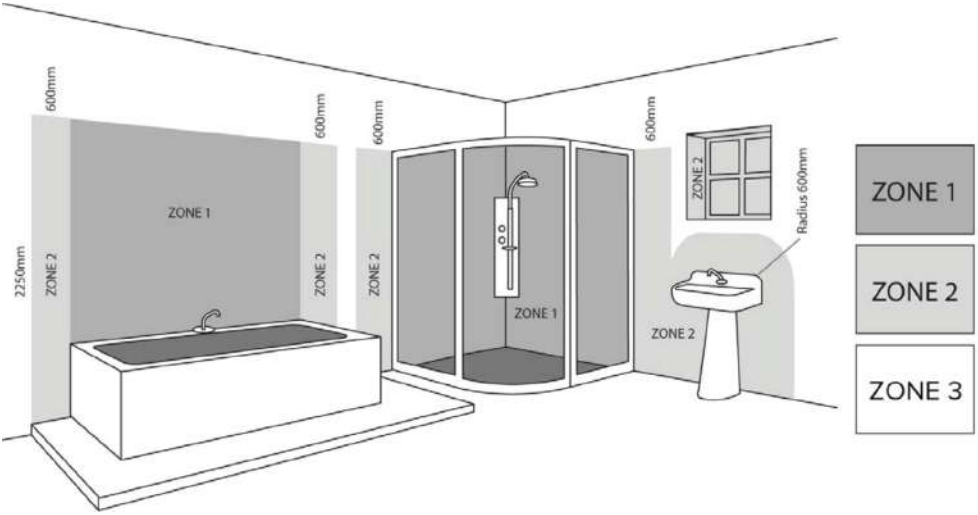
The bathroom fan includes only one lead for powering the fan. The fan is required to be permanently powered. Please refer to the image below to ensure the fan is wired correctly to prevent damaging the fan.

Power Lead:

Blue = Neutral
Brown = Phase

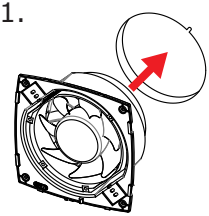
BATHROOM ZONES (IMG 2)

This through-wall fan model is suitable to be placed inside zone 2 and zone 3 only. **DO NOT install the fan inside zone 1 (image below).** Only low voltage equipment may be installed in zone 1. This means avoiding wet areas - directly above the shower or bath (up to 2250mm above floor level) and 150mm around the shower cubicle.



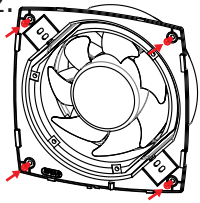
THRU-WALL BATHROOM FAN INSTALLATION (IMG 3-6)

1.



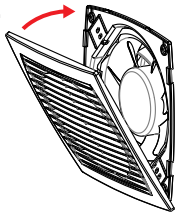
Cut hole for fan in wall

2.



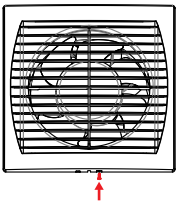
Mount fan with 4 screws

3.



Clip grille into place

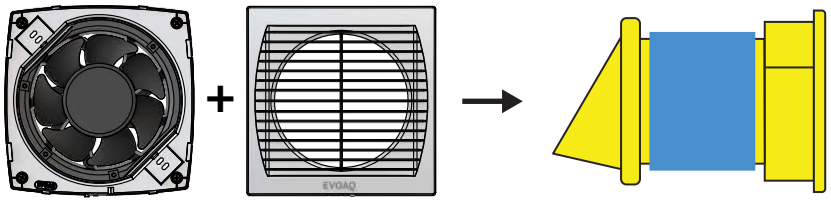
4.



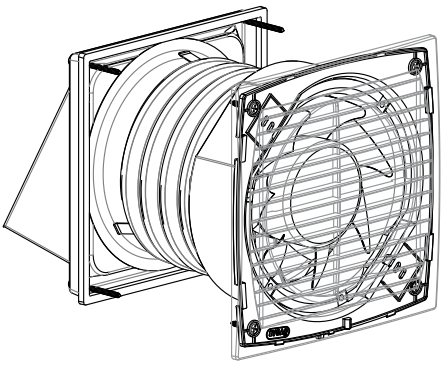
Secure grille with screw

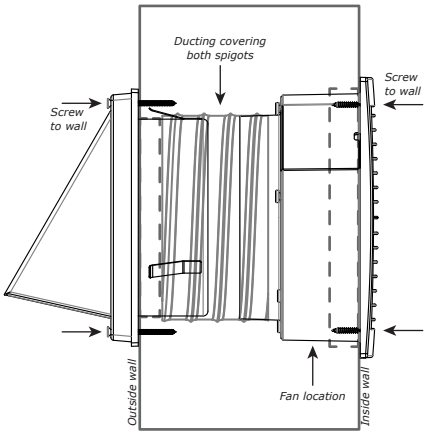
THRU-WALL BATHROOM KIT ASSEMBLY (IMG 7-9)

Through-wall Kit Layout

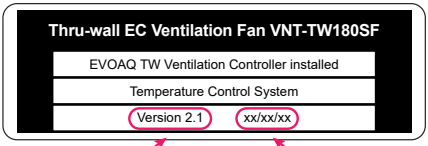


Extraction Fan | *Inlet Grille* | *External Cowl* | *Nude Ducting* | *Internal Fan*





To check which software version is installed or when your fan was manufactured, check the label along the edge of the fan case



Software version *Manufacturing date*

Automatic Ventilation Supply Fans

EVOAQ Ventilation fans work by constantly monitoring the air quality of the fresh outdoor air and supplying this air at a suitable rate.

In-built controls and sensors in the fan allow the fan to speed up when the supply air quality is good, and slow down or even stop when the air quality is not suitable anymore.

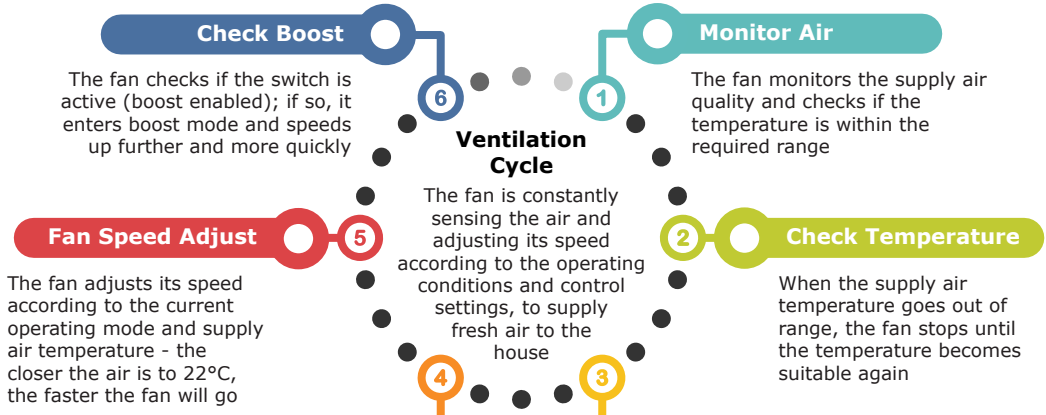
When working in conjunction with EVOAQ extraction fans, the system as a whole continuously aims to improve the air quality throughout the entire house.

Sensor Initialisation

When first powered up, the fan enters a 30 second sensor initialisation sequence during which the fan runs at a low rate to sample the air and calibrate itself to the environment, before the fan slows down and begins its Ventilation Cycle

Boost Switch - *optional*

A remote low-voltage switch can be wired into the fan as a 'boost switch'.
If the switch is on, the fan continues its Ventilation Cycle but runs at a higher speed than normal. When the switch is turned off again, the fan slowly slows down and resumes its Ventilation Cycle



Like **EVOAQ** *on Facebook*

Fully Automatic Ventilation.
Just Plug and Play.

Follow **evoaqnz** *on Instagram*

Automatic Bathroom Extraction Fans

EVOAQ Extraction fans work by running at a low trickle speed and constantly monitoring the moisture levels within the bathroom.

In-built controls and sensors in the fan control the fan speed to extract any excess moisture and protect your bathroom.

When working in conjunction with EVOAQ ventilation fans, the system as a whole continuously aims to improve the air quality throughout the entire house.

Sensor Initialisation

When first powered up, the fan enters a 30 second sensor initialisation sequence during which the fan runs at a low rate to sample the air and calibrate itself to the environment, after which the fan enters its Start-up Boost

Start-up Boost

30 seconds after being powered up, the fan enters a 2-minute startup boost on high speed, to ensure the existing stale air is removed from the bathroom, before the fan slowly slows down and begins its Bathroom Extraction Cycle

Bathroom Extraction Cycle

The fan is constantly sensing the air and reacting to the bathroom conditions, to extract excess moisture and improve the air quality in the bathroom

1 Monitor Air

The fan runs at trickle speed while constantly monitoring the humidity levels in the bathroom for any changes

2 Shower ON

As the shower is turned on, humidity levels in the bathroom start rising and condensation begins to form

3 Fan Speedup

The fan detects the steam and increase in humidity and speeds up to extract the excess moisture in the bathroom

4 Shower OFF

The shower is turned off and the humidity levels start to drop in the bathroom

5 Boost delay

The fan continues running at high speed to remove the remaining moisture from the bathroom

6 Fan Slowdown

As the bathroom humidity levels return to normal, the fan slowly starts to slow down and continues monitoring the air

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Fully Automatic Bathroom Extraction.
Just Plug and Play.

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EVOAQ

Air Quality Innovation

Warranty Certificate

Owner's Details

First Name: _____

Last Name: _____

Address: _____

City: _____ Postcode: _____

Email: _____

Product Details

Model Number: _____

Installer Name: _____

Installer Email: _____

Date Installed: _____

EvolutionFX Ltd warrants to the purchaser that this product is free from defects in the material and workmanship for a period of five years from the date of original purchase. The warranty only operates if proof of purchase in the form of a bill of sale, invoice or purchase receipt is presented at the time of request of service.

The customer shall ensure that the goods are fit and suitable for the purpose for which they are required. EvolutionFX Ltd is under no liability if they are not.

The warranty is in addition to all other conditions, warranties, guarantees, rights and remedies which may be applied by relevant legislation in New Zealand.

The warranty will not be applicable if the product has not been installed, operated and maintained in accordance with the manufacturer's instructions and recommendations contained in operating & installation instructions provided with the product, or if the product has been used in a manner other than for which it was originally designed, or if the damage, malfunction or failure has resulted from incorrect voltages, alterations, accidents, misuse, neglect, abuse, faulty or improper installation or mains supply problems, including lightning surges.

This warranty is limited to the product only (expressly excluding labour and transport costs) and is dependent on it being returned to point of purchase. EvolutionFX Ltd reserves the right to repair or replace any warranty item at its discretion.

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