

Installation Manual

Please take the time to read these instructions in full before commencing your installation.

Careful planning prior to starting work will guarantee the fastest and best results regarding the installation.



Working in the ceiling space can be a hazard, and all safety precautions should be used to ensure the safety of yourself and any others.



Installation Manual

EVOAQ MiniVent Systems

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/NZ60335 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.

The fan included with this ventilation system is designed as simply plug in and go without requiring user intervention.

The fan is designed to be continuously powered. The smart in-built electronics are constantly monitoring the incoming air quality. The fan will vary its speed between very low and very high rates (10 - 100%) depending on the quality of the air to maintain a comfortable and moisture-free indoor environment.

This system is capable of ventilating at very low rates while still bringing in enough fresh air into the house in situations where other systems would simply switch off. Maintaining correct ventilation of the house is important in order to prevent heat and energy losses and to allow you to enjoy a healthier indoor environment.

The fan included with this system may have the option of adding a remote wall switch - refer to fan wiring on page 4 for details.

INSTALLATION OVERVIEW

Before commencing installation, select a suitable place for the fan to be installed in the ceiling cavity. It is recommended to place the fan near the manhole for easy access when carrying out maintenance to the system. Suspend the fan from the ceiling framing with the chain and cable ties provided in order to minimise the sound levels resonating through the ceiling framing.

If the system will be taking air from outside or the fan or air inlet is installed in external walls, care must be taken to avoid the backflow of gases into the system from gas califonts, open gas flues, or other open-fire appliances.

Attach the inlet side of the fan to one end of the flexible duct using the duct tape provided. Feed the other end of the duct through exterior intake grille hole and cut to length. Tape to the spigot of the grille and install the grille in the wall/soffit. Connect the remaining duct to the outlet side of the fan and run the ducting to the internal grille(s), using Y-branches and adapters as required.

Spending time planning the layout of the ducting system is important. See the inside page of this instruction manual for further details and example layouts.

Some simple rules to apply to ensure the best possible results:

- Place fan near the manhole for easy access;
- Lay the ducting so there is a similar length of ducting to each diffuser where possible;
- Ensure the shortest length of ducting to the outlets is no shorter than 3 metres;
- Avoid tight bends in the ducting;

- Ensure the ducting is stretched out fully. Cut the ducting where needed;
- Avoid installing the ducting where it may be crushed or damaged by you or other tradespeople;
- **Avoid installing the diffusers near doors/hallways and directly above beds or couches.**

Please note:

The inlet of the fan unit is on the side of the fan blades, the side that is not obstructed by the fan frame. There are also arrows on the unit and rating label showing airflow direction. Please be aware that the system is designed for air to flow from the external grille, through the fan, and into the house. Ensure the fan is oriented correctly for this during installation.

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 apparatus must not be used in explosive or corrosive atmospheres.

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.

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.

ELECTRICAL CONNECTION

The ventilation 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 and in accordance with New Zealand electrical standards.

If the fan model you have purchased is fitted with a power plug then please note removing this plug will void the warranty of the fan.

In case of damage to the power plug, cord, or device itself, switch off the device and do not tamper with it. Damaged product must only be repaired or replaced exclusively by the manufacturer or by an appointed representative. Failure to comply with the above may endanger the safety of people and cause possible damage to the whole system.

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 clean of any element

that could be sucked up by the fan. When installing the fan, 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 installing the fan, make sure the mains supply is disconnected, even if the system is switched off.

FAN INSTALLATION

Some things to consider when installing the fan:

- Mount the fan so it sits above any ceiling material (~200mm above the ceiling);
- Hang up the fan with the chain and cable ties provided (e.g. see below image);
- Keep the ducting straight and level with the fan for optimal airflows;
- Place the fan away from bedrooms to minimise noise issues.



Suspend the fan with chain



EVOAQ extraction fan - outlet side

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. Before carrying out any maintenance, make sure the mains supply is disconnected, even if the machine is switched off. Never insert your hands into the inlet side of the fan without first unplugging the fan.

Before starting up the fan, ensure that:

- The fan 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;
- The duct 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 AND REPAIR

Before servicing the fan, make sure it is disconnected from the mains supply - *even if it has previously been switched off*. Avoid the risk of anyone else plugging it in while you're working on it.

The fan must be regularly inspected. These inspections should consider the fan's working conditions, ensuring no dirt or dust builds up on the propeller, turbine, motor or grilles. This could be dangerous and perceptibly shorten the fan's lifespan. While cleaning, take extra care not to damage the propeller. The filters should be checked at least every 12 months, and replaced at least every 2 years, or earlier if necessary. Any and all maintenance work should be carried out in strict compliance with New Zealand safety regulations.

All our products contain repairable or replaceable parts. Repair or replacement of these parts should only be handled by the manufacturer. In the case of damage or malfunction of the fan, please contact the manufacturer or installer to arrange for repair. Please note that a small fee may apply for repair services not covered under warranty.

SYSTEM WIRING

The fan should be permanently powered. The ventilation fan is fitted with a power plug; if there is no power point available for the fan one should be installed by a registered electrician.

The fan includes two sets of cables/wires: the power lead and the external switch. Please refer to the images below to ensure the fan is wired correctly to prevent damaging the fan.

Power lead - Fan is fitted with plug; do not cut off plug unless necessary:

Blue = Neutral

Brown = Phase

Yellow/Green = Earth -> This product is earthed, please ensure earth is connected correctly



External switch (optional) - Dry contact:

Grey = Switch Signal (5V)

Black = Common (GND)



Switch functionality:

While the switch is active, the fan will be limited both in terms of operating mode (overall speed range) and maximum speed. This "low mode" is suitable for when the fan is installed in a small space or where noise is of consideration.

As the switch state does not generally need to be changed (i.e. it either needs to be on or off and does not require changing during operation), for ease of installation it can be shorted out (where needed) with a wire link on the fan instead of being wired to a wall switch.

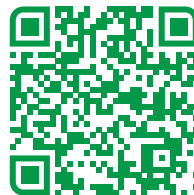
AQ100-2 EXAMPLE LAYOUT



EVOAQ MiniVent Fan Specifications

Fan Part Number	VNT-AX150SF
Fan Spigot Size	150mm
Voltage (V/Hz)	230 / 50
Power (W)	1.7 - 17
Air Flow (L/s)	16 ~ 110
Static Pressure (Pa)	240
Noise Level (dB)	31
Speed (RPM)	500 ~ 3200
Specific Fan Power (SFP)	0.096 W/Ls ⁻¹

For all our manuals, fan specifications, system details and more information visit www.evoaq.co.nz/downloads



For further information, please contact EvolutionFX NZ Limited
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Ventilation Outlet

Place ventilation outlets in central locations within the house, like hallways and service areas. Do not place the outlets directly above beds, chairs, couches, etc.

Remove the black connector from the white grille insert for easier taping during install.

Recommended Holesaw Size: 152mm

Flexible Ducting

Avoid any sharp bends or corners when placing ducting - choose the shortest route.

Use plenty of tape to secure ducting onto fan, external inlet grille and outlet grilles.

Recommended Ducting Lengths

- Up to 4m between inlet and fan (max. 6m)
- At least 2m between fan and outlet grille

EVOAQ Ventilation Fan

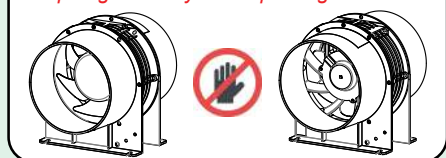
Use chain to suspend fan from rafters - do not screw the fan directly to the timber!

Keep ducting straight and level with the fan.

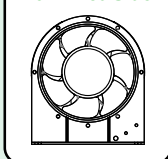
Plug fan into power point using the power cord provided. If no powerpoint is available, one should be installed by a registered electrician.

Disconnect power before handling the fan to prevent damage or injuries

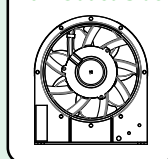
Keep fingers away from spinning fan blades



Fan Inlet Side



Fan Outlet Side



← Airflow on label

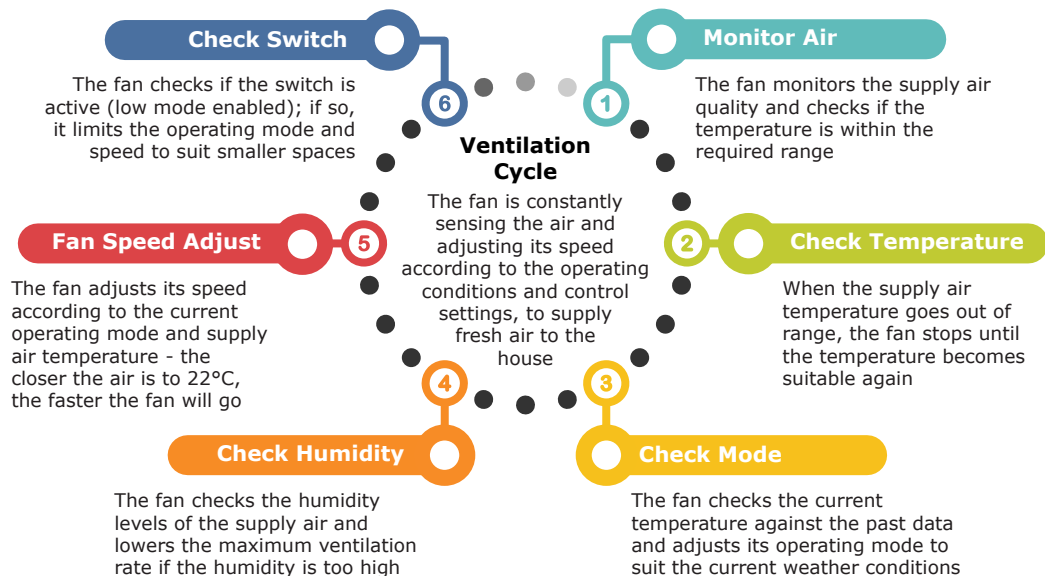


Automatic Ventilation Supply Fans

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.



Start-up Boost

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 may be wired into selected fan models to allow the fan to run at a lower rate, for when standard operation may not be suitable, both in terms of noise and airflow (e.g. when the fan is installed inside a single bedroom or studio unit).

**Fully Automatic
Home Ventilation.
Just Plug and Play.**



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