

Fan 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

180mm Through-Wall Fan for Kitchen Extraction

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.

Before installing the fan, it is important to understand the way this fan functions.

The fan is designed to be continuously powered.

When first powered on, the fan will stay off for about 5 seconds while the sensors initialise. After this, the fan will run at a trickle speed for 2 minutes, during which the sensors are heating up and the air quality indexing is first initialised.

Once the sensors are all ready to start sensing, the fan starts to monitor both the VOC (Volatile Organic Compounds), the temperature, and the humidity levels in the kitchen. If the fan detects either the presence of steam or a small increase in VOC levels, it will increase its speed accordingly (up to about 50% speed). If both steam and low-level VOCs - i.e. cooking is in progress - or a high level of VOCs are detected (various possible causes), the fan will speed up further (up to 100%).

Once the kitchen environment has recovered, the fan will slow down gradually until it reaches trickle speed again, or until further steam or VOCs are detected.

This fan is not the same as, or a direct replacement for, a rangehood. The fan inlet should be placed at least 1m away from the stove, not placed directly above it.

We recommend to always install a rangehood where possible.

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 within 1m of the stove (see image 2) as the fan could be damaged by direct heat and/or steam from the stove. As the fan is powered by mains voltage there may also be risk of electrocution, and in the case of fire there is risk of the fire spreading to the outside of the house through the extraction fan.

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.

Once the fan is mounted, place the grille over the fan and screw in place, making sure the grille is positioned correctly and no wires are cinched beneath the grille or face plate.

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

Once the fan is installed, place a short length of 150mm aluminium ducting over the fan spigot from outside, then install a cowl or louvre grille on the other side as required.

Please note:

Excessive ducting and sharp bends lower the fan's performance. If installing as a through-ceiling fan ensure the ducting is long enough, with gradual bends, before cutting the ducting.

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.

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 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 and in accordance with New Zealand electrical standards.

Please note that this model of fan is not fitted with a power plug and must therefore be wired with a fixed permanent connection.

In case of damage to the power 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 clear of any element that could be sucked up by the fan. 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 installing the fan, make sure the mains supply is disconnected, even if the fan is switched off.

If the fan is installed in a duct, the duct must be used for the extraction system only.

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 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;
- If the fan has been mounted in a duct, 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

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.

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.

FAN WIRING (IMG 1)

This fan includes only one set of wires 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



Yellow/Green = Earth -> This product is double-insulated and not earthed, earth wire does not need to be connected

KITCHEN ZONES (IMG 2)

The kitchen extraction inlet grille must be placed at least 1m away from the stove. DO NOT install the fan within 1m of the stove or directly above the stove (image below) as there is risk of fire being transferred to the extraction ducting. The fan may also be damaged if it is placed too close to the stove.

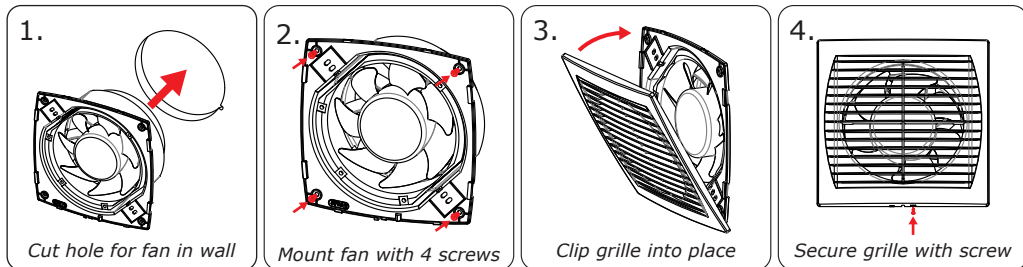
While the extraction ducting may contain fire retardant, to minimise risk of cooking fires being spread to the rest and/or outside of the house through the extraction ducting system, the inlet grille or diffuser must be installed at least 1m away from the stove and 1m away from the area directly above the stove.

If installing an EVOAQ grease grille with the system the inlet can be placed a minimum of 600mm instead of 1m away from the stove.

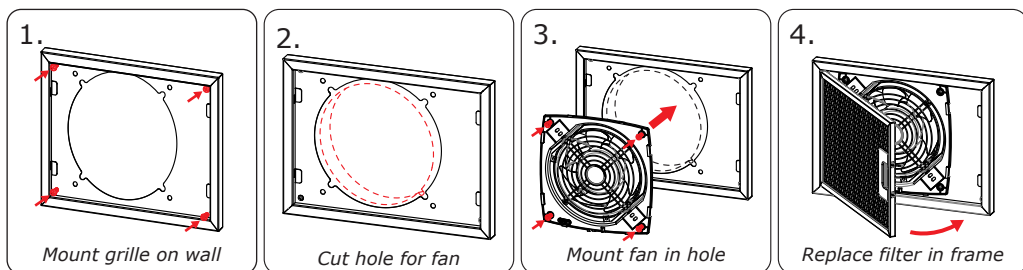
This kitchen extraction system can be used in conjunction with a separate rangehood.



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



KITCHEN FAN WITH GREASE GRILLE INSTALLATION (IMG 7-10)



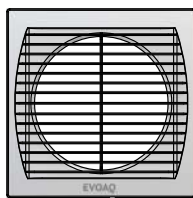
THRU-WALL KITCHEN KIT ASSEMBLY (IMG 11-13)

Through-wall Kit Layout

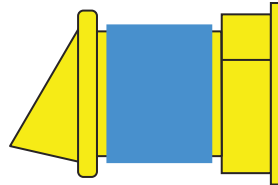


Extraction
Fan

+



Fan Grille or
Grease Filter

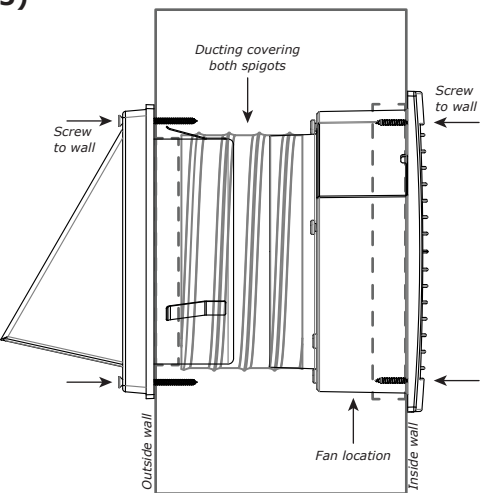
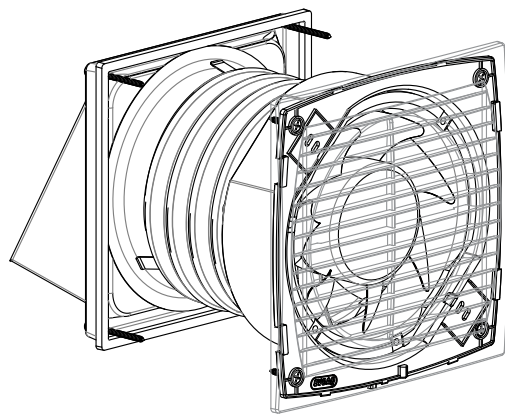


External
Cowl

Nude
Ducting

Internal
Fan

THRU-WALL KIT ASSEMBLY (IMG 14-15)



VOC-TW180KF Thru-Wall Fan Specifications

Fan Part Number	VOC-TW180KF
Fan Spigot Size	150mm
Voltage (V/Hz)	230 / 50
Power (W)	2.5 - 17
Air Flow (L/s)	16 ~ 110
Static Pressure (Pa)	240
Noise Level (dB)	31
Speed (RPM)	500 ~ 3300
Specific Fan Power (SFP)	0.151 W/Ls ⁻¹

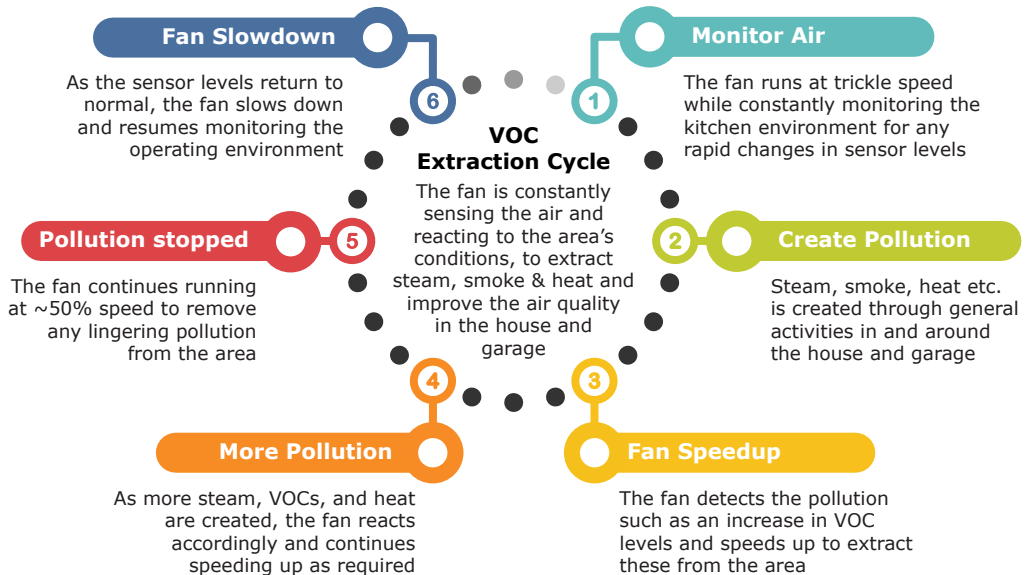
For all our manuals, fan specifications, system details and more information visit www.evoaq.co.nz/downloads



For further information, please contact EvolutionFX NZ Limited
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Automatic VOC Extraction Fans

EVOAQ VOC Extraction fans work by running at a low trickle speed and constantly monitoring the VOC, temperature and moisture levels within the operating environment. In-built controls and sensors in the fan control the fan speed to extract steam and VOCs caused by activities such as cooking from inside and around your house and garage.



Sensor Warm-up

For the first few minutes after being powered on, the fan runs on trickle speed only while the sensors warm up and initialise - this is to prevent any erratic behaviour caused by incorrect sensor readings during sensor warm-up.

Boost Switch - optional

A remote low-voltage switch may be wired into selected fan models as a 'boost switch'. If the switch is on, the fan runs at high speed. When the switch is turned off again, the fan slowly slows down and resumes its VOC Extraction Cycle

**Fully Automatic
VOC Extraction.
Just Plug and Play.**



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