

MFCF100

Energy Efficient Constant Flow

7 Speed Mixed Flow Fan with EC Motor

Installation and Operating Instructions



- SAP PCDB Listed
- 7 speed constant flow
- 6 models:
 - standard
 - delay-on timer
 - humidity control
 - SELV - low voltage
- with data logger
- for all domestic wet rooms
- for walls, ceilings or windows



IPX4
IPX7 (SELV)

MFCF100 - MIXED FLOW CONSTANT FLOW FANS WITH EC MOTOR

INSTALLATION and OPERATING INSTRUCTIONS

THIS LEAFLET MUST BE AVAILABLE TO THE USER

The product you have purchased is an extractor fan for exhausting directly outside or through longer lengths of ducting and is suitable for wall, ceiling or window (with optional kit) installation. To ensure optimum operation and guarantee a long life, please read this manual carefully. It explains how to install correctly, use and maintain the product properly. Following these instructions will ensure the reliability of the product and extend its working life.

The manufacturer will not be held responsible and will not accept any responsibility for damage caused to persons or things due to improper use with reference to the precautions outlined in this leaflet.

The product, constructed using state of the art technology, complies with current standards regarding electrical equipment. It conforms with the EMC European Directive in force regarding radio interference suppression and electro-magnetic compatibility.



WARNING: Serious injury or death could result if these instructions are not carefully followed

- Do not use this product for any purpose other than that for which it was designed.
- Remove the product from its packaging and make sure that it has not been damaged. If in doubt, contact the supplier, authorised dealer, service centre or manufacturer to check that the product will still operate correctly. Do not attempt to use or repair the product before doing this.

- Do not leave packing material within the reach of children or incompetent people. Refer to current recycling rules when disposing of the packaging, and the appliance at the end of its useful life.
- The use of any electrical product requires compliance with some basic rules which are listed below:
 - do not touch it with wet or damp parts of the body (e.g hands, feet).
 - this product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they are supervised or have been given instruction concerning the use of the product by a person responsible for their safety. The fan should be sited where it is inaccessible to such people.
 - children should be supervised to ensure they do not play with the product.
- The means of disconnection from the supply mains must have a contact separation in all poles and must provide full disconnection under overvoltage category III conditions.
- If the product is sited in a room containing a fuel burning appliance which is not of the balanced flue type, the installer must ensure that air replacement is adequate both for the fan and the fuel burning appliance.
- To avoid the risk of fire the product should not be used where there are inflammable substances and vapours, such as alcohol, insecticides, petrol, etc.

- The product should be connected to the mains electricity supply or electrical outlet only if:
 - the electrical voltage and frequency correspond to those shown on the rating label.
 - the capacity of the electricity supply is sufficient to operate the product at its maximum power.
 - suitable electrical protection is provided for the product to be installed.
- The electrical supply to which the fan is connected must comply with all existing regulations. All installations must comply with current IEE wiring regulations.
- If a fault, malfunction or anomaly of any type occurs, the fan should be isolated (switching it off and disconnecting it from the mains electricity supply) and advice sought from qualified personnel. Use original spare parts only for repair.
- The product must **not** be used as an activator for water heaters, stoves, etc.
- If the electrical supply board (or switching device) is located some distance from the fan a means of local isolation must be provided.
- The product must **not** exhaust into ducts designed to evacuate fumes from combustion in stoves or other combustion-powered devices
- Before maintenance or cleaning is carried out, the product must be switched off and disconnected from the mains electricity supply.
- Always request original spare parts for repairs
- If the product needs to be removed, turn off the mains supply and then disconnect the fan.

- The fan **MUST BE** installed as detailed in this leaflet



WARNING: Damage could be caused to the product if the installation instructions are not followed.

- **The product must be installed by professionally qualified personnel. Incorrect installation can cause damage to people, animals or property, for which the manufacturer cannot be held liable.**
- The product should **not** be used in an ambient temperature higher than 40°C (104°F).
- The product should **not** be exposed to atmospheric agents (rain, sun, snow, etc.).
- The product or its parts should **not** be placed in water or other liquids.
- Routine maintenance as described below should be carried out to check the condition of the fan.
- The air or fumes being extracted must be clean and free from greasy particles, soot, chemical and corrosive agents, flammable or explosive mixtures.
- To ensure optimum operation, do not block the air intake and exit vents.
- Any ducting used must be free of blockages, and should be insulated if in an unheated area.
- The room where the product is operating must have adequate air replacement to ensure maximum effectiveness.



CONSTANT FLOW RANGE

Trickle Speed 1 - 5 l/sec

Trickle Speed 2 - 8 l/sec

Trickle Speed 3 - 11 l/sec

Trickle Speed 4 - 13 l/sec

Trickle Speed 5 - 16 l/sec

Trickle Speed 6 - 20 l/sec

Boost Speed - 27.8 l/sec

For optimum operation we recommend fans should be installed at a minimum height of 2.3m from the floor

MFCF100

This fan combines the latest technology with energy saving and efficiency. It is a quiet running, 7 speed fan designed to run continuously at a pre-selectable choice of 6 trickle speeds (fixed at installation). User can boost the FAN SPEED to its maximum performance when required by means of the cord, or remove the cord and use a remote switch, light switch, PIR sensor or humidistat.

If the fan is to be ceiling mounted, the pull-cord switch should be put in the "off" position and the cord removed. A remote switch will be necessary for changing the FAN SPEED. See wiring diagrams.

The MFCF100 is SAP PCDB Listed

MFCF100LV - SELV 12V version of MFCF100

MFCF100DT

7 speed, constant flow, continuous running fan with delay-on timer and pull cord. The delay-on timer version will run at low speed until the boost speed is activated by means of the cord or, if the cord is removed, by means of a remote switch, light switch, PIR sensor or humidistat. There is a

2 minute delay before the fan starts to run at its high speed - if the boost speed is deactivated before that time lapse, the fan will continue to run at low speed. If the boost speed is activated, the fan will operate at high speed until the boost switch is turned off. After this, the fan will continue at high speed for the length of time set on the timer overrun adjustment, between 0 and 30 minutes (see Trimmer Adjustment diagram). After the overrun time has elapsed, the fan will return to the slower speed.

MCF100DTLV - SELV, 12V version of MCF100DT

MFCF100HDT

7 speed, constant flow, continuous running fan. The fan runs continuously at the pre-selected lower speed, and will start to operate automatically at the next speed when the relative humidity (adjustable between 40% and 90% +/-5% tolerance) reaches the pre-set level and will continue to operate at this speed until the humidity has been dispersed and the adjustable overrun timer (adjustable from 0 to 30 minutes) has completed its cycle. The boost speed can be activated as described for model MFCF100DT.

MFCF100HDTLV - SELV, 12V version of MFCF100HDT

All models are constant flow. They recognise changes in system pressure and will ensure the airflow is maintained at pre-set rate.

All models have an integral data logging facility. For operation and monitoring of the Data Logger, please refer to separate Data Logger instructions.

(Contact Vectaire Ltd for any further clarification.)

INSTALLATION

1. Check there is nothing missing in box and remove front cover.
2. Drill hole in wall - **allow extra width if using ducting - it is the installer's responsibility to use the appropriate core cutter to obtain the correct hole diameter.**
3. Remove circuit board cover.
4. Use fan assembly as template to mark drill holes.
5. Drill 4 x 6mm dia holes.
6. Fit wall plugs.

Decide whether to have cable access from:

7. Rear [recessed] of fan - correctly fit the rubber ring (included) (see dia 7).
8. Top [surface] of fan - ensure that the included grommet is properly fixed. (See dia 8).
9. Screw fan to wall.
10. Connect cable using cable clamp.

SEE WIRING DIAGRAMS FOR SPECIFIC MODELS

NB this fan is double insulated and does not need to be earthed

11. **Before replacing circuit board cover choose speed of fan and set delay-on timer (if applicable)**

SEE DIP SWITCH SETTINGS (page 10) AND TRIMMER ADJUSTMENT (page 11)

12. Replace front cover.
13. Screw front cover on firmly.

N.B This fan is **NOT** suitable for use with a Gravity Grille. It should be installed using either a Cowl or Fixed Grille.

IMPORTANT

If the fan is installed in a ceiling with a vertical duct passing through an unheated space, a condensation trap **MUST** be fitted. Any ducting in an unheated space should also be insulated according to the latest Building Regulations recommendations in the Domestic Ventilation Compliance Guide.

Failure to do this could result in condensation affecting the operation of the fan and cause damage to the ceiling.

If the fan is to be ceiling mounted, the pull-cord switch should be put in the "off" position and the cord removed. A remote switch will be necessary for changing the FAN SPEED. See wiring diagrams pages 8 and 9.

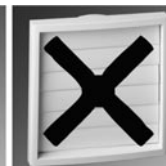


THIS VENTILATION UNIT IS FITTED WITH AN AUTOMATIC SAFETY CUT-OUT WHICH WILL STOP THE MOTOR RUNNING IF THE FAN BLADE IS OBSTRUCTED IN ANY WAY.

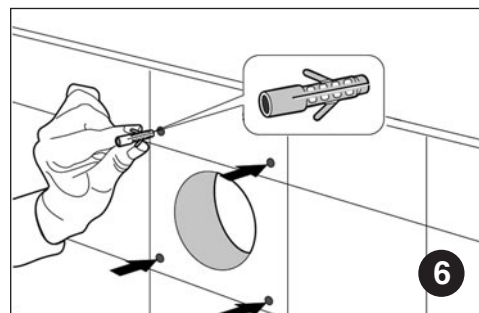
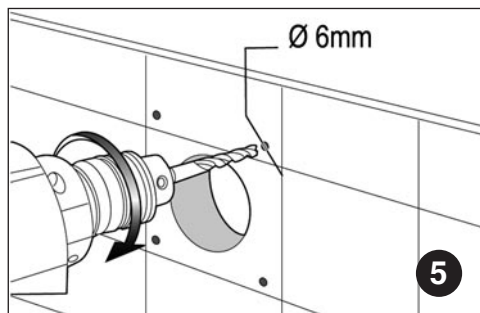
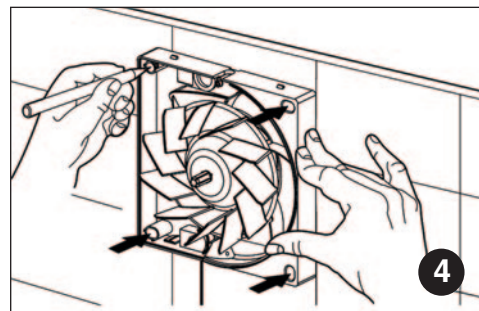
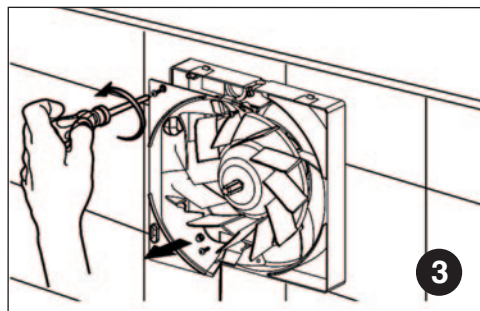
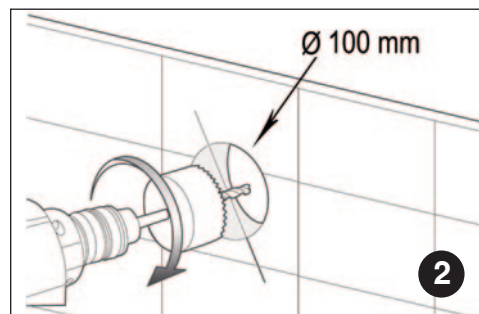
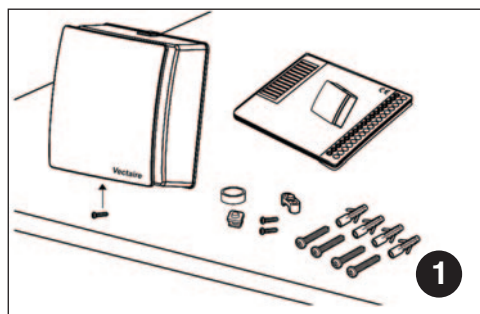
TO RE-START THE MOTOR, THE FOLLOWING SHOULD BE CARRIED OUT BY QUALIFIED PERSONNEL.

- DISCONNECT THE UNIT FROM THE MAINS POWER SUPPLY
- REMOVE THE OBSTRUCTION
- RECONNECT THE POWER SUPPLY

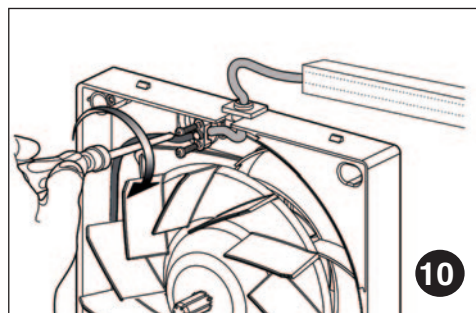
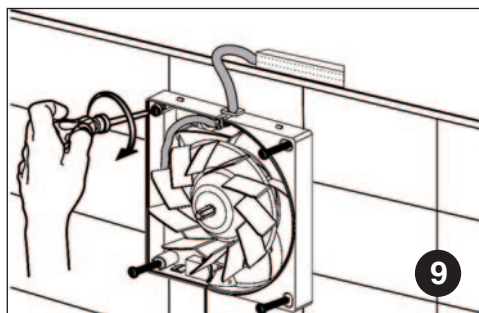
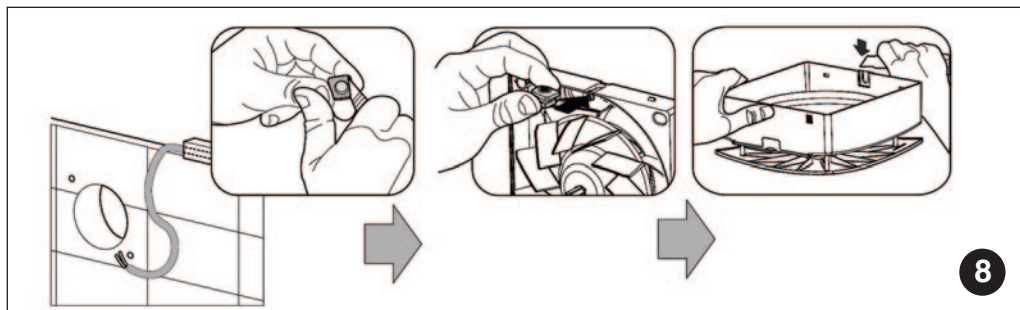
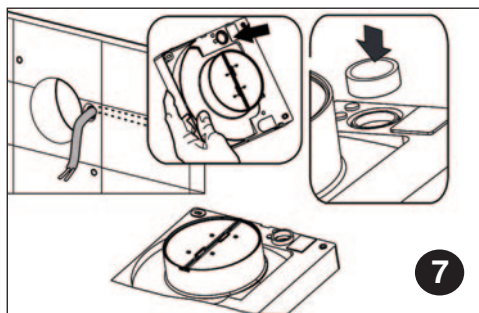
THE UNIT SHOULD THEN OPERATE NORMALLY, BUT IF THE PROBLEM PERSISTS, CONTACT YOUR SUPPLIER FOR FURTHER ASSISTANCE.



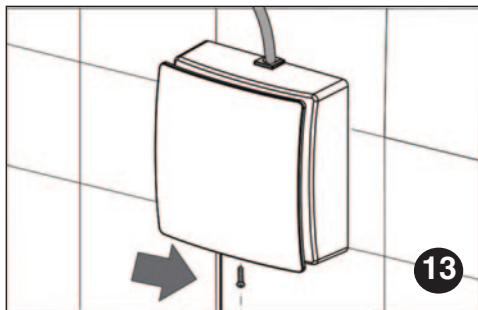
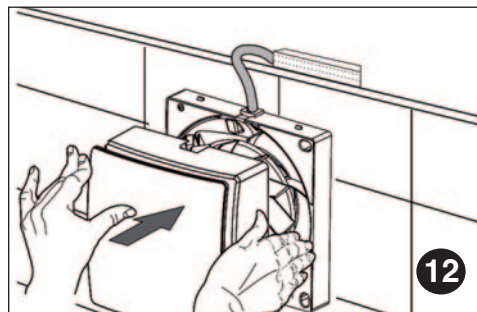
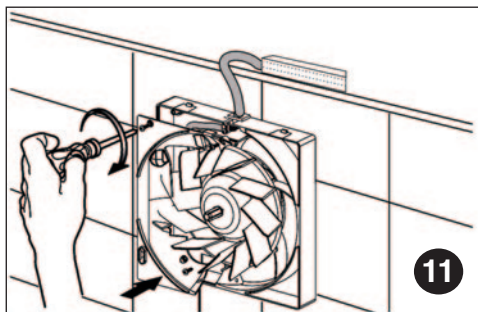
INSTALLATION



INSTALLATION



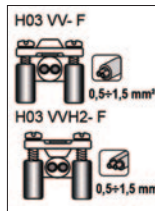
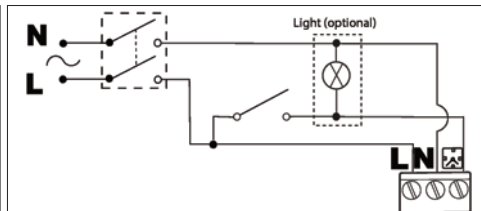
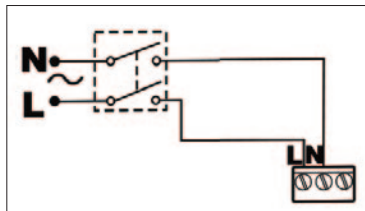
INSTALLATION



WIRING DIAGRAMS - 230V models

MFCFs - 230V - 7 Speed with Cord

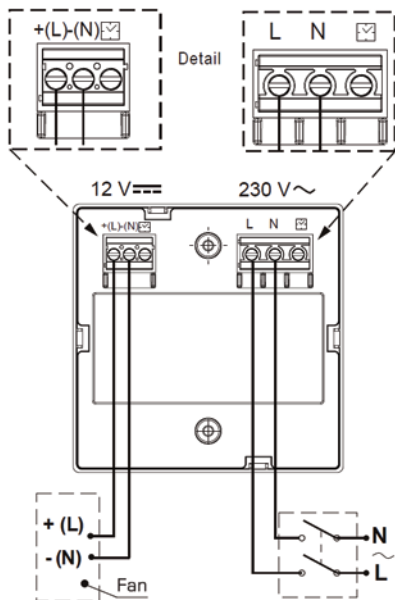
MFCFs - 230V - 7 Speed via remote switch



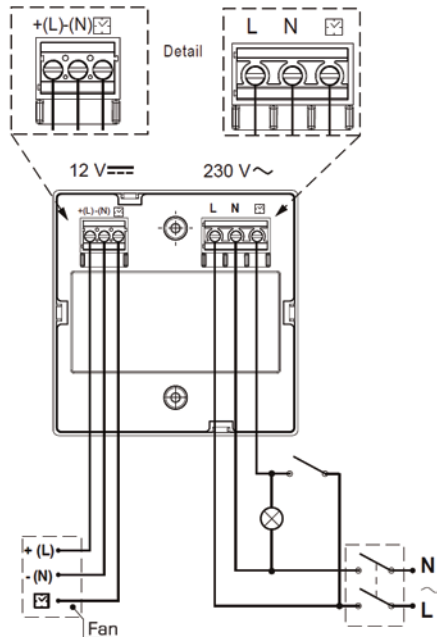
N.B When installing fans via a remote switch, pullcord switch must be put in the "off" position and the cord removed.

WIRING DIAGRAMS - SELV models

MFCFs - SELV - 7 Speed with Cord



MFCFs - SELV - 7 Speed via remote switch



N.B When installing fans via a remote switch, pullcord switch must be put in the "off" position and the cord removed.

SELV

All SELV (safety extra low voltage) products must be installed to conform to IEC 60364.

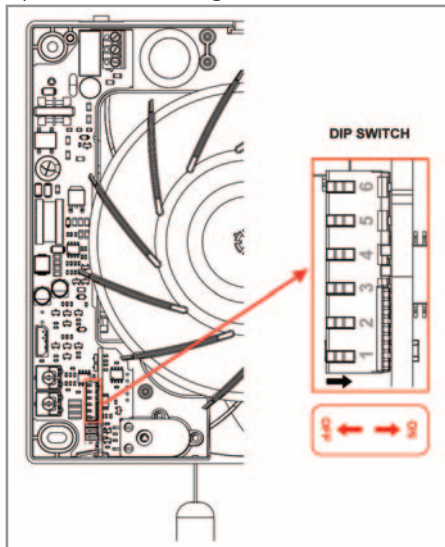
- Connection between the fan and the mains supply must be by means of a safety isolating transformer of the appropriate power rating [supplied].
- The means of disconnection from the supply mains must have a contact separation in all

poles and must provide full disconnection under overvoltage category III conditions.

- The transformer will operate only **one** fan.
- The transformer must not be installed in Zones 1 or 2, but should be installed as close as possible to the fan within Zone 3.
- The cable used to connect the transformer to the fan must have a section area of at least 1.5mm² and a maximum length of 10m.

DIP SWITCH - ALL Versions

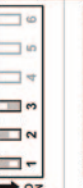
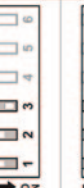
These fans are designed to run continuously at one of six trickle speeds fixed at installation using the dip switch. The configurations for the various models are as below. :



WHITE indicates position of switch

SPEED SELECTION:

- set dip switches 1 to 3 as shown

Speed 1 (5 l/s)	Speed 2 (8 l/s)	Speed 3 (11 l/s)	Speed 4 (13 l/s)	Speed 5 (16 l/s)	Speed 6 (20 l/s)
					

WALL or IN-ROOM INSTALLATION:

- set dip switch 4 as shown

Through wall	In room
	

CONSTANT FLOW or FIXED SPEED:

- set dip switch 5 as shown

Constant flow	Fixed speed
	

DELAY ON TIMER MODELS:

- set dip switch 6 as shown

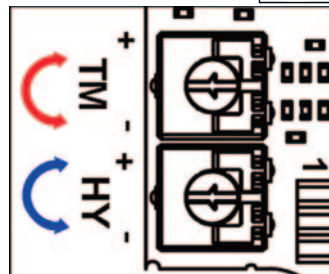
ON delay deactivated	ON delay activated
	

TRIMMER ADJUSTMENT

To adjust the humidistat and timer trimmers, remove the front cover and circuit board cover of the fan to access the trimmers.

The humidistat (HY) can be adjusted between 40% and 90% relative humidity. Turn clockwise to decrease sensitivity and set at a higher level of relative humidity.

The timer (TM) is adjustable between 0 and 30 minutes. Turn the trimmer clockwise to increase the overrun time, or anti-clockwise to decrease it.

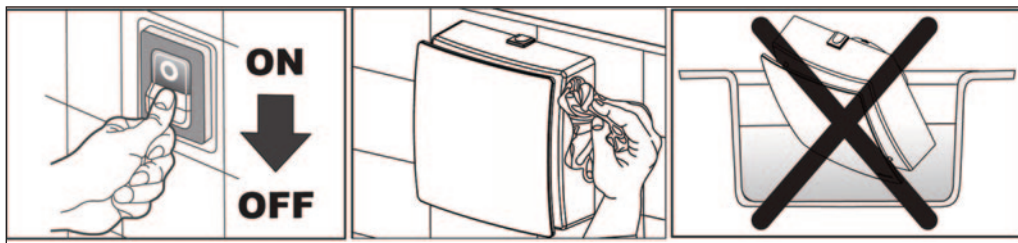


CLEANING and MAINTENANCE

Before any cleaning or maintenance operation, switch off the fan and disconnect it from the main power supply. The front cover can be cleaned by the user with a dry cloth or soft brush. If any maintenance is required, this should be done by a professional technician. The user should never dismantle the fan for any reason.

The fan must not come into contact with any kind of liquid or solvent. If this should occur, contact a qualified technician before re-assembling the fan.

NOTE: The motor does not require lubrication as it is maintenance free "sealed for life" type.



DISMANTLING & RECYCLING

THIS PRODUCT HAS BEEN DESIGNED AND CONSTRUCTED USING HIGH QUALITY MATERIALS AND COMPONENTS THAT CAN BE RECYCLED OR RE-USED.

MFCF100

**Energy Efficient
Constant Flow
7 Speed Mixed Flow Fan
with EC Motor
Installation and
Operating
Instructions**



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