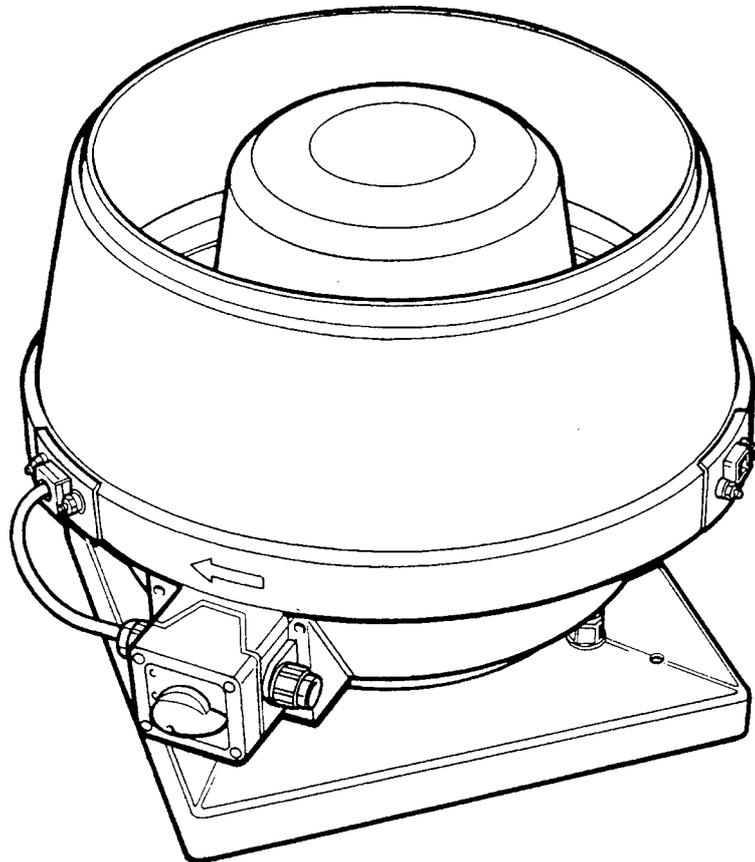


Vent-Axia[®]

VERTICAL DISCHARGE MIXED FLOW ROOF FAN

Installation & Wiring Instructions



CE

PLEASE LEAVE THESE INSTRUCTIONS WITH THE END USER

IMPORTANT

PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE COMMENCING INSTALLATION

On receipt of your fan, check the following:

1. The type and size of fan is correct for the application.
2. The details on the rating plate are appropriate for the application, including: Voltage, Frequency (Hz), Speed, Phase (1 or 3 phase), Insulation Class, I.P. Rating.

SAFETY INSTRUCTIONS FOR AIR MOVING EQUIPMENT

- Air moving equipment may present mechanical, electrical or noise hazards. To minimise risks associated with these potential hazards, it is essential that safety, installation, operation and maintenance instructions are followed. Implementation of these instructions should always be undertaken by technically competent personnel.
- Potential mechanical hazards must be eliminated by guarding against access to the rotating parts while the air moving equipment is operating. A range of guards are available for this purpose from Vent-Axia.
- Installation work, both mechanical and electrical, must be undertaken in accordance with the safety and installation instructions before switching on the unit.
- Maintenance work should not be attempted before first switching off and isolating the fan and its control from the electrical supply and ensuring that it cannot be accidentally turned back on again. It is essential to ensure that rotating parts have come completely to rest before maintenance work commences.
- Air moving equipment may generate unacceptable noise levels when in operation. Actual sound levels are indicated in the Vent-Axia industrial catalogue for each product and it may be necessary to take appropriate action to reduce sound levels. A range of products are available for this purpose from Vent-Axia.

Description

The RMV fan is a vertical exhausting roof ventilator with an aluminium centrifugal impeller and backward inclined blades. The housing is manufactured from high quality fibre-glass reinforced polyester. The fan is intended for extracting air, which is exhausted vertically. The unit is not suitable for the supply of fresh air. The fan is designed for continuous operation and must not be switched on and off at intervals of less than 5 minutes. The fan is capable of handling air duct temperatures up to 100°C continuously. (See important note under Electrical Connections).

Transport and Handling

The fan should be transported horizontally and may only be lifted by the lower casing or the base.

Mounting

Each fan is supplied and assembled ready for installation. for easy and quick mounting the following points are of importance.

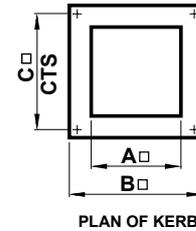
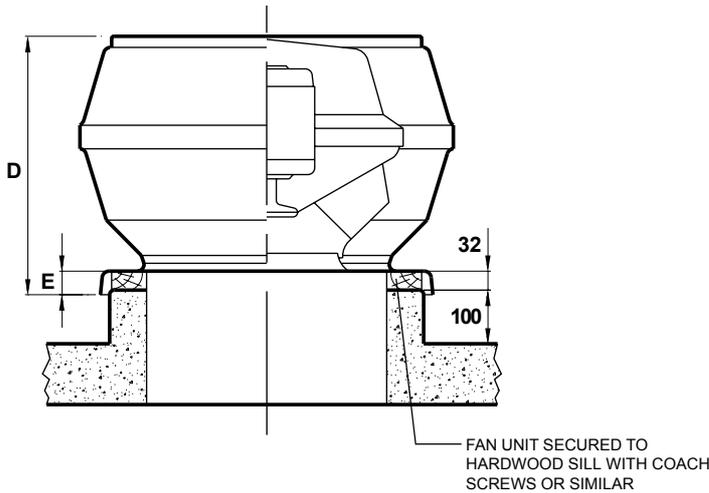
1. The fan should be installed with its base plate mounted securely to the roof Kerb. When fixing to a Kerb made of concrete, bricks or wood, make absolutely sure that the surface, on which the fan is to be mounted, is perfectly clean and level. In order to obtain an airtight fit, use a seal of non-porous soft material between Kerb surface and fan base.
2. Fans should be mounted with the cowl in a vertical position to avoid any problem from rain and wind.
3. Connect the electrical supply cable, if it comes from inside the building, through the inlet gland in the base of the unit, then make sure that the gland opening is sealed against leakage of air and water.
4. Put the fan on the Kerb and fasten it by means of 4 screws or bolts. Use plastic washers under the bolt or screwheads.
5. Tighten bolts/screws evenly and not too hard in order to prevent deformation of the base and check by hand that the impeller runs smoothly and without fouling.

Inspection/Maintenance

The unit should, from time to time, be checked in order to ensure that it is functioning correctly. The extent and frequency of these checks depend on each installation. Before carrying out any inspection/maintenance activities, isolate the fan from the mains and ensure that it cannot be accidentally turned back on. The motor used in the unit does not require any maintenance or re-lubrication. It is located out of the airstream and is accessible by removing the central weather cover held in place by three spring clamps. Check that the impeller, motor and base are not damaged or dirty. Clean the components if necessary. Avoid damaging the protective coating. Do not spray with water.

Re-assemble the unit, ensuring that all the guards and covers are correctly fitted. Switch on and check correct rotation.

Details for Kerb Mounting



FAN SIZE	A	B	C	D	E
RMV 200	300	400	330	400	40
RMV 250	400	525	450	438	40
RMV 280	400	525	450	487	40
RMV 355	400	600	535	563	40
RMV 450	500	660	590	642	50
RMV 500	650	850	750	709	50
RMV 560	650	850	750	801	50

ALL DIMENSIONS IN MILLIMETRES

Electrical Connections

Important:

This equipment must be earthed/grounded.

Mains supply must be isolated before making connection.

Connection to mains supply must be in accordance with BS7671, current I.E.E. wiring regulations, local building and factory regulations or appropriate standards in your country.

Ensure safety regulations and practices are adhered to when installing and using this equipment.

To give full protection against fault conditions, a current sensing overload protection switch (e.g. D.O.L. starter) MUST be fitted or the guarantee will be invalidated and Vent-Axia Ltd. accept no liability for any resulting damage.

If the fan is used to handle air above 40°C, a temperature sensor must be fitted in the air stream near the fan inlet. This sensor should be wired to switch the fan on automatically when the air temperature is above 40°C in order to prevent damage to the motor.

Wiring Instructions

Warning:

Isolate mains supply before making connection.

Ensure switch is in the 'OFF' position.

Remove lid of isolator and connect unit in accordance with wiring diagrams.

Ensure that the earth connection has been made.

After making wiring connections, check that they are all correct and secure, replace lid ensuring that all screws, nuts and glands are adequately tightened to prevent the ingress of dirt and moisture.

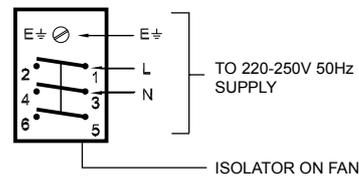
When wiring in conjunction with a speed controller, see instructions supplied with controller.

Notes on Running

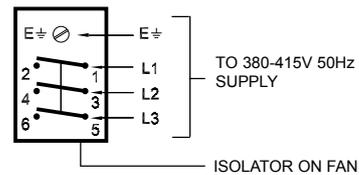
Before switching on CHECK:

- Control unit and motor/fan are secure.
- All relevant guards and covers are fitted.
- Check the free rotation of the impeller.
- Earth connections have been made and are secure.
- Check the direction of rotation of the impeller (see arrow on the fan body). Incorrect rotation may result in the motor burning out. If incorrect, interchange any two phases of the 3-phase supply.

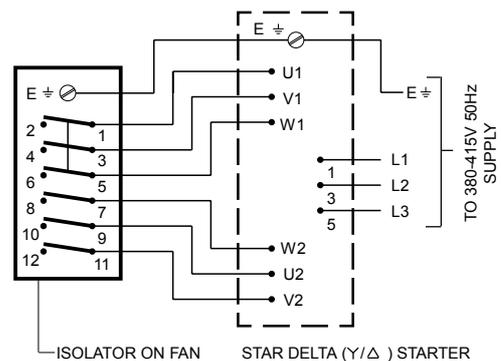
SINGLE PHASE



THREE PHASE



FOR FAN TYPES RMV 500-34 & RMV 560-34 ONLY



NOTE

Star/Delta (Y/Δ) starter Ref. No. 103 15 415 with overload relay Ref. No. 103 12 070 must be used on fan types RMV 500-34 and RMV 560-34.

Important

This fan will extract air even when the direction of rotation is wrong, but will then take a higher current consumption which may cause a burnt out motor winding. A trial connection should be made to check that the direction of rotation is correct. If incorrect, interchange any two phases of the three phase supply.

