

# MANUAL CONTROL ECO-SPEED FANS

## INSTALLATION INSTRUCTIONS



### Electrical Connection

1. All fans have a terminal box on the fan case for power connection to 240V AC, 50Hz supply.
2. Fans should only be controlled by using the potentiometer control box supplied. To switch the fan on and off during normal use, only use the switch provided on the control box. Attempting to switch the fan on and off by the mains power can result in permanent damage to the fan motor. However if you wish to isolate the fan electrically then the fan must be switched off at the mains to ensure complete isolation.
3. Manual control fans have a potentiometer controller attached on a flying lead, if the lead is required to be extended then isolate the fan from the mains and allow at least 10 minutes for charged high voltages to dissipate. Cut the control cable approx 200mm from the fan case and extend the cable to the desired length using 1mm five core cable. Ensure all coloured cables are reconnected correctly to avoid damage to the motor.
4. **WARNING:** Incorrect connecting of control cables can result in permanent damage to the fan motor.

### Installation:

1. All fans are to be connected to 240V AC, 50Hz supply.
2. Install fans so access is available to the terminal box mounted on the fan case.
3. Manual control fans require the control box to be mounted on a stable surface and accessible for fan operation.
  - a. Potentiometer turned to min will run fan at low speed of approx 450RPM
  - b. Potentiometer turned to max will run fan at full speed of approx 1440RPM
  - c. On / off switch located on the control box will turn the fan on or off no matter what speed the potentiometer is set at.
4. Refer to general fan installation instructions below for more details.

### Protection

Eco-speed manual control fans are fitted with internal overload protection. To reset and restart electrically isolate the motor completely from the supply for a minimum of 10 minutes. Mains wiring should be protected against a short circuit by fuses at the switchboard.

### Safety Considerations:

1. **WARNING:** Power cables may still be live when the fan impeller is not rotating.

#### WARRANTY:

- Fantech Pty Ltd warrants products of its manufacture when not misused or neglected to be free of defects in workmanship and/or materials. Our obligation under this warranty is limited to repairing or exchanging F.O.B. factory, any part, assembly or portion found to be defective within one year from the date of commissioning but not to exceed eighteen (18) months from date of shipment from our factory.
- The Company assumes no responsibility for labour costs involved in the removal of defective parts, installation of new parts or related service charges.
- The Company shall have the option of requiring the return of the defective part (transportation prepaid by the Buyer) to establish the claim.
- Warranty will be void if installation is not carried out by qualified personnel in accordance with these instructions and good trade practice.
- Fully detailed warranty conditions are contained in Fantech's Standard Conditions of Trading.

## **General fan installation instructions**

### ***Important Notes:***

With all horizontally mounted axial fans it is preferable that the fan is installed with the motor mounted on top of the motor plate. ie. not suspended under the motor plate.

To obtain rated performance, the following recommendations should be followed:-

### **Duct Mounted Fans - General**

1. inlet and outlet ductwork should be free from obstructions.
2. duct transitions should be 60° inlet/15° outlet.
3. avoid sharp bends on inlet or outlet.
4. do not use ductwork smaller in area than the fan.
5. flexible duct connections should be taut.
6. ductwork connections should be well aligned.
7. inlet cones must be fitted to free inlet applications.
8. ensure that the fan orientation is correct for the required air flow direction.

Rotation

### **Off-loading**

During off-loading inspect fans for damage. If the casings, cowls or impellers are damaged, notify your local Fantech distributor immediately.

Fantech cannot be held responsible for any loss or damage incurred to goods during transport, off-loading or on site.

### **Site Storage**

The fans must be stored in a clean, dry, protected and vibration-free area. The fan impellers should be rotated daily to prevent bearing damage.

### **Maintenance**

Install fans and accessories to allow service access for maintenance and for the replacement of assemblies and component parts, without disturbance of other items of plant and building elements.

Most motors are fitted with sealed-for-life bearings which are maintenance-free. It is recommended that fans be inspected initially at 3-monthly intervals, to clean the blades and motor and to check for tightness of fastenings.

**Where fans are used for kitchen exhaust or other applications where the air contains high amounts of dust, residue and other contaminants, fans should be cleaned and maintained at more frequent intervals appropriate for the application.**

### **Electrical Supply**

Read the fan serial plate to determine the number of phases and amperage drawn by the unit. Check that the available supply is suitable.

### **Earthing**

All fans must be earthed in accordance with AS/NZS3000:2000 and local supply regulations.

### **Wiring**

Wiring must be in accordance with AS/NZS3000:2000 and local supply regulations. Wiring diagrams are provided on all fans.

### **Direction Of Rotation**

The correct rotation and direction of air flow is shown on each individual fan. All single-phase motors will rotate in the correct direction when correctly connected.

### **Starting Safety**

Rotating fan impellers can be a danger to personnel.

The following precautions must be taken:-

1. electrically isolate the fan motor prior to undertaking any work.
2. regularly check impeller fasteners for tightness.
3. where fans are accessible to personnel or directly exposed to habitable areas, it is the responsibility of the installers to ensure that fans will have guards which comply with the latest Australian Standard AS4024.1 safeguarding of machinery.
4. prior to fan start-up, ensure loose debris will not be sucked into the fan. All ductwork should be clean.