

USER MANUAL

Installation, Operation and Maintenance Manual for

TEX-P Internal Units TEX-W External Units

This manual must be read in full before installation, operation and maintenance of the units supplied.

PLEASE ENSURE THAT THIS INSTRUCTION DOCUMENT IS
PASSED ON TO THE USER OF THE UNIT



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WEEE Directive

At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre. Do not dispose of with normal household waste. Do not burn

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INSPECTION ON RECEIPT OF GOODS

Immediately on receipt of any unit check carefully for possible damage in transit, paying particular attention to fan impeller, motor, and flexible connections. Please also check unit to ensure that ancillary items are included, these will normally be inside the packing box or taped inside the unit.

In the event of any damage having occurred or any item is found to be missing it is essential to inform VES Andover Ltd., WITHIN 7 DAYS of delivery, quoting S.O. No. and unit type from its nameplate. After this period we will be unable to accept any claim for damaged or missing goods.

SAFETY

When installing or using our products the following precautions must be taken.

Electrical Wiring - All electrical connections to any unit must be carried out in accordance with the current edition of the I.E.E. REGULATIONS and only competent electricians should be allowed to effect any electrical work to our units.

General:

1. Before attempting to carry out any maintenance work or repair work on our units, the unit **MUST BE COMPLETELY ISOLATED** from its electrical supply.
2. If it is necessary to carry out any assembly operations before installing the unit ensure that all fastenings are tightened securely.
3. The security of fastenings and the integrity of components should be checked regularly as part of the routine maintenance operation. Particular attention should be paid to the impeller fixing to the shaft.

4. If the unit is installed where there is a reasonable possibility of persons or objects coming into contact with the impeller a guard should be fitted.

It is the responsibility of the installer and the user to ensure that the installation complies with the legal regulations and the current HEALTH AND SAFETY AT WORK ACT.

5. Where a unit is installed so that a failure of components could result in injury to personnel, precautions should be taken to prevent such an injury.

INSTALLATION

VES twin fan extract units contain two centrifugal fans with either fan acting as standby fan to ensure continuous airflow in the event of a fan or motor failure. Each fan has a set of back draught shutters which prevents recirculation of the air through the standby fan. The shutters operate micro-switches which control the standby fan if the duty fan ceases to move air. The micro-switches are designed only to be used with a VES autochangeover panel.

The twin fan units are designated as follows:

TEX-P - Internal or Plant room locations.

TEX-W - Weatherproof or Roof Mounting.

Each unit is prewired to a terminal box and is designed to match VES controls:

Single phase direct driven fan units size 11 to 35 require AF300 or AF400

Single phase direct driven fan units size 36 & 37 require AF315 or AF415

Single and three phase belt driven units require AF300 or AF400 fan use as a control circuit only.

Switching contactors and overloads are fitted inside the fan unit.

Building management Control Systems - AF300/S and AF400/S are available with various combinations i.e., with volt free contacts to show fan failure, with contacts for remote control, with fitted run-on timers etc.

TEX-P UNITS

The TEX-P units are designed to fit directly to proprietary 25 mm Duct-Mate flanges. Silencers are supplied loose. Ensure that they are fitted to the correct end of the unit, and the right way round. Flexible Connections, AV mounts and mounting feet are not fitted to the unit but are easily assembled using the fastenings supplied.

The fans are mounted on individual side withdrawal sliding trays for easy maintenance.

Access - There should be sufficient space allowed to the access side of the unit for complete removal of the fans.

TEX-W UNITS

The weatherproof units are designed to fit either to a curb upstand or a flat base. Flexible connections and AV mounts can be used with the flat base type only.

BELT DRIVE UNITS

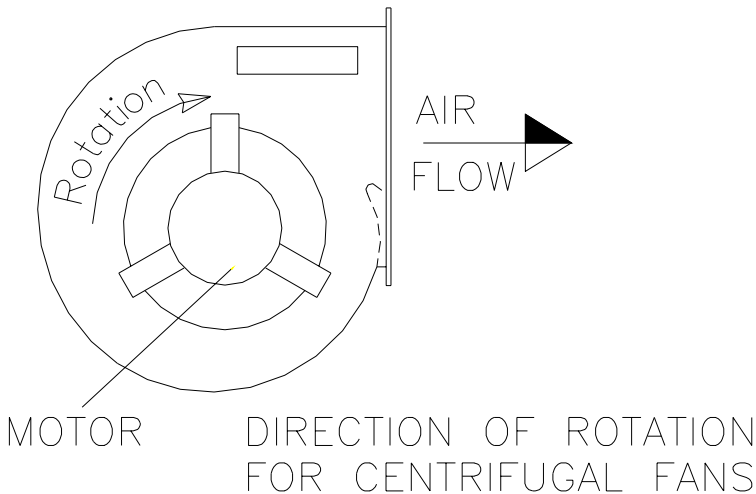
The fan and motor assemblies are fitted with anti-vibration mounts and flexible connections within the unit. No further isolation is necessary.

Mounting - All centrifugal fan units must be installed with the fan/motor shaft HORIZONTAL.

Inlet and Outlet Duct Connections - Ducting should always be independently supported to avoid distorting fan unit casing. Flexible connections should be used to reduce noise transmission in applications where quiet running conditions are required.

Before Running the Fan - Check that nothing is obstructing the free running of the fan impeller. Ensure that the fan is operating against the resistance specified on the order, as either too high or too low a resistance may cause damage to the fan motor.

Direction of Rotation - Proper performance will only occur if the fan is rotating in the correct direction. Refer to the wiring diagram for the appropriate fan to ensure correct wiring details, which should then result in the correct direction of rotation.



Ambient Temperature - The standard range of units must not be installed in any situation where the ambient temperature is higher than 40°C. Where temperatures are likely to exceed this value please contact our Sales Dept. before installing the unit.

Voltage - Do not connect any unit to an electrical supply voltage outside of that indicated on the motor or fan unit nameplate

MAINTENANCE

In general this series of units require very little maintenance. All fan and motor bearings are supplied fully greased and lubricated and are sealed for life. In the unlikely event of failure, then a new motor and impeller kit should be fitted. We would however advise the following periodic checks:

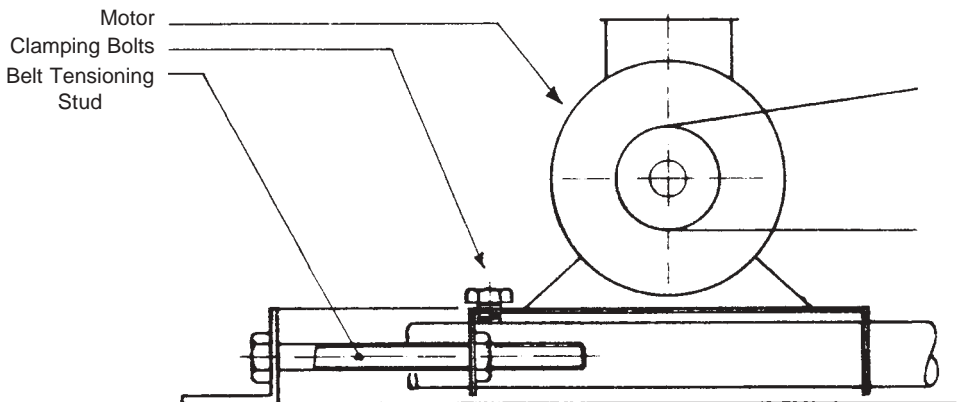
3 Monthly - Operational check of autochangeover system. Manually switch AF300 control to standby fan. Lights on panel will indicate change of status. Leave unit switched to second fan to ensure fans are both used.

6 Monthly - Impeller Cleaning - The fan plate should be withdrawn as far as possible from the TEX case and the impeller carefully cleaned with a vacuum cleaner and brush. Failure to clean the fan from time to time could result in loss of fan performance or cause it to become out of balance. Check free movement of micro-switch behind each set of back draught flaps.

Paint Finish - Every TWELVE MONTHS check all painted items to ensure that they have not deteriorated particularly where adverse environmental conditions prevail. Repaint if necessary to the required standard.

BELT DRIVE TWIN FAN UNITS

Vee Belt Drives - The belts should be inspected from time to time and any slackness taken up by moving the position of the motor on the slide by means of tension screws. Under average conditions the majority of stretch takes place in vee-belts during the first few days under load. Excessive wear on the sides of the vee-belts means misalignment of the pulleys and this should be rectified at once. New and used vee-belts should not be run together in the same set and vee-belts of different types and brands should not be mixed. Always fit ALL NEW matched belts in the same set. Refer to diagram for instructions of how to tension belts.



To tighten belt - Slacken off the 2 No clamping bolts on the slider bars, then turn the head of the Belt Tensioning Stud **CLOCKWISE** until the belt is to the required tension. Retighten the 2 No clamping bolts.

SPARES AND REPAIRS

All of this series of units have a long life expectancy. Spares, (or direct replacements using improved components) are normally “off the shelf” and will be held in stock for all fans within each of the series for a minimum period of 10 years.

We would however recommend that a spare Motor and Impeller Kit be held for those units which are installed in critical areas or for units that need to run on a continuous basis. To obtain a Motor and Impeller Kit please advise our Service Dept. of the Sales Order Number. and type of Fan Unit for which the kit is required. This can be obtained from the unit name plate.

Recommended Spares - A list of spares recommended to be held by the user of a specific unit is available if required. Please contact our Sales Dept. for such a list quoting Unit Type Sales Order Number. both of which are obtainable from the Data Plate on unit.

AFTER SALES SERVICE - The VES Customer Service Department can undertake a maintenance check on air handling units as follows:

REPLACE:

- Replace filters
- Replace or adjust drive belts
- Check flexible connections
- Check operation of A.V. mounts
- Replace missing fasteners

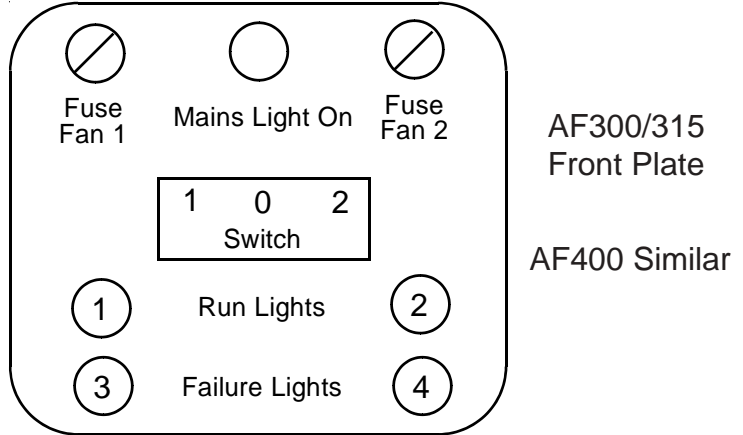
REPORT:

- Prepare a report on the condition of fan and motor bearings, cleanliness of coils, condition of A.H.U. case with special regard to leakage and corrosion

Please contact the VES Service Manager for the scale of charges.

FAULT FINDING - AF300/AF400

VES Twin Fan Units and controllers are factory run-tested prior to despatch. Because of this, faults occurring on site can be considered due to the following



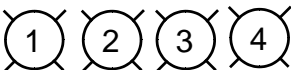
Select No.1 Fan to Run



remains on - flaps remain closed -
virtually no airflow, check flaps opening
- check resistance



Fan No.1 may have failed or ceased to
operate - check fan and connections



flashing - bend or restriction too close
to outlet - wired incorrectly

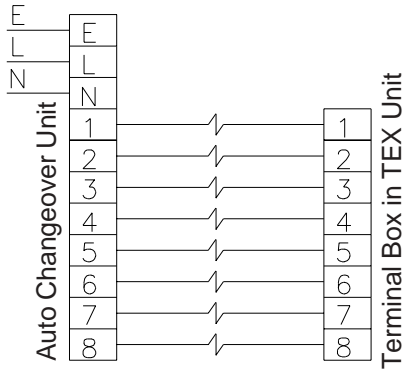


No.1 fuse has blown - check fan motor
and circuit before replacing fuse

No.2 Fan operates in a similar fashion

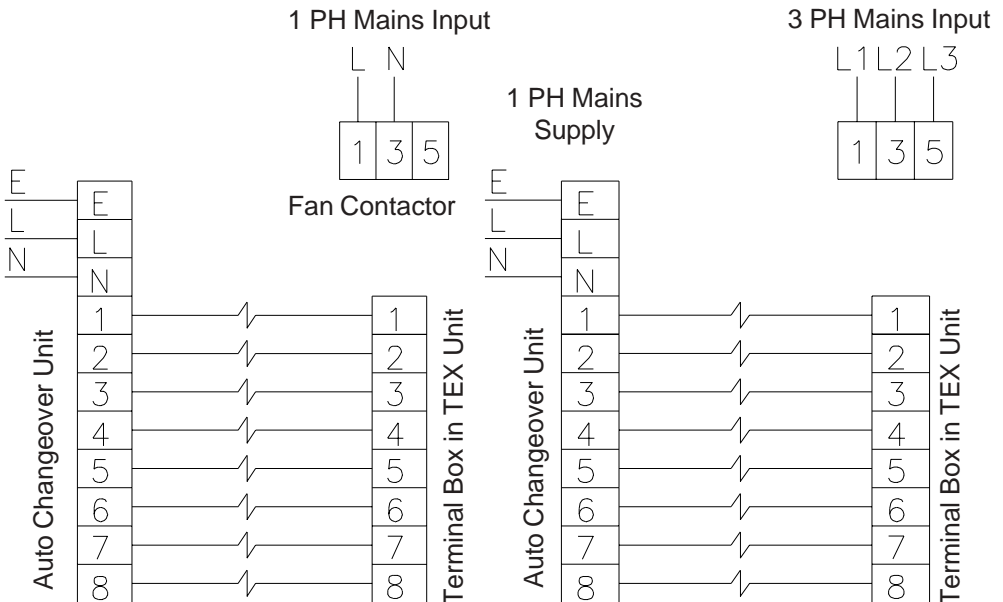
WIRING DIAGRAMS

TEX1-3 Direct Drive Single Phase Units



TEX4-5 Belt Drive Single Phase Units

TEX4-5 Belt Drive Three Phase Units



WARRANTY

Warranty

Extended Warranties

All VES Andover Products come with a one year guarantee from date of dispatch, which covers parts and labour.

You can now extend this with the following options:

Option 1. **FREE extended Warranty**

We can offer you a maintenance agreement that keeps this equipment in tip-top condition.

If you take out this agreement, we will extend the warranty **free of charge for up to 5 years**, providing the regular maintenance agreement remains in place.

Option 2. **12-24 Month Extended Warranty**

12-24 months from the date of dispatch. This can be covered at a cost of just 3% of order value. (minimum charge £50.00).

Option 3. **12-36 Month Extended Warranty**

12-36 months from date of dispatch. For this cover, the charge is 6% of order value (Minimum charge £80)

Please State which option you require when you place your order. A transferable certificate will then be issued to you.

Please note, this offer excludes condensing units. We would be happy to quote you for these separately.

Register for separate spares reminders and get a 10% discount

Register for this free service and we will automatically send you a regular reminder detailing the consumable spares for this unit, together with their current list prices.

You will then be entitled to a 10% discount off any spares.

To arrange any of these options.

or **Phone: 023 8046 1150**
Email: spares@ves.co.uk

Stating the sales order and reference number from the unit.