

Tube Ventilation System

Installation and Maintenance Instructions.

THESE INSTRUCTIONS MUST BE READ FULLY BEFORE COMMENCING INSTALLATION.

Owner / installer: The life of this apparatus and its efficiency will be increased if its use and maintenance is carried out in accordance with these instructions and current statutory requirements. The installation and initial adjustments should be carried out by a qualified and competent technician. Hydor Limited should be consulted before substituting or fitting parts from another manufacturer. It is the responsibility of the installer to verify that the installation is in accordance with all current statutory requirements and the owner is given the current User's Manual.

Any modifications to the system or its installation, even the smallest modification, change or elimination of security components or pieces that influence the efficiency or loss of ventilation, will result in the CE Certification and Hydor's warranty being cancelled.

Please take note of the following symbols used within this document:



Warning: Hazards associated with electric current and high voltages



Important: Important information

Hydor's policy is one of continual improvement and the right to change a specification at any time without notice is reserved. Whilst every care has been taken to ensure that the contents of this document are correct at time of publication, Hydor shall be under no liability whatsoever in respect of such contents.

Hydor cannot guarantee the operation of any equipment unless all documented instructions are complied with, without variation.

Hydor is a registered trademark of Hydor Ltd and is a member of Elta Group. All other trademarks, trade names or company names referenced herein are the property of their respective owners.

1. General

- 1.1 A range of two Tube Ventilation System units encompassing 450mm and 630mm models.
- 1.2 Optional HP58 temperature controller.
- 1.3 Incorporating efficient IE3 and EC motors/impellers, Epoxy coated plate fan body with high quality GRP blades.
- 1.4 Service items include:
Replacement tube
- 1.5 Details of the Tube Ventilation System supplied are given on the nameplate attached to the side of the unit; in the event that assistance is required please quote the model and serial number.

2. Health and Safety

- 2.1 These instructions cover only the Hydor product and do not include the supply or installation of any safety equipment that may be required e.g. adequate guarding or protection from rotating parts and proper electrical isolation.
- 2.2 Any declarations made by Hydor about product installation and safety are dependent on the equipment being used within installations which themselves meet the requirements of the Standards and Directives of your region.
- 2.3 This product is not intended to be operated by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the product safely. Young children should be supervised to ensure that they do not play with the appliance.
- 2.4 Adequate site plant and lifting equipment should be made available to lift and position the Tube Ventilation System
- 2.5 The TUBE VENTILATION SYSTEM is intended only for the transportation of CLEAN air mixtures. Use in potentially hazardous or explosive areas or for transportation of gas, mist, vapours or their mixtures are NOT permissible. The transportation of solid materials or similar materials in a transport media is NOT permissible.
- 2.6 Misuse can lead to physical injury or damage to the fan, tube or installation.
- 2.7 Mounting, electrical connection and commissioning may only be carried out by trained specialized personnel who observe the relevant regulations!



All electrical installations must be carried out by suitably qualified and competent personnel in accordance with local regulations.

3. Delivery

- 3.1 All Tube Ventilation System's are tested and inspected prior to despatch and leave the factory in good condition. Upon receipt, it should be examined for visible damage and that all parts listed on the delivery note are present.
- 3.2 Any damage or shortages should be notified to the carrier and Hydor immediately.
- 3.3 Hydor cannot accept any responsibility for damage sustained whilst unloading from the carrier, or subsequent damage on Site.

4. Installation



WARNING: The fan motor and all other electrical connections must be isolated from the power supply during installation and maintenance.

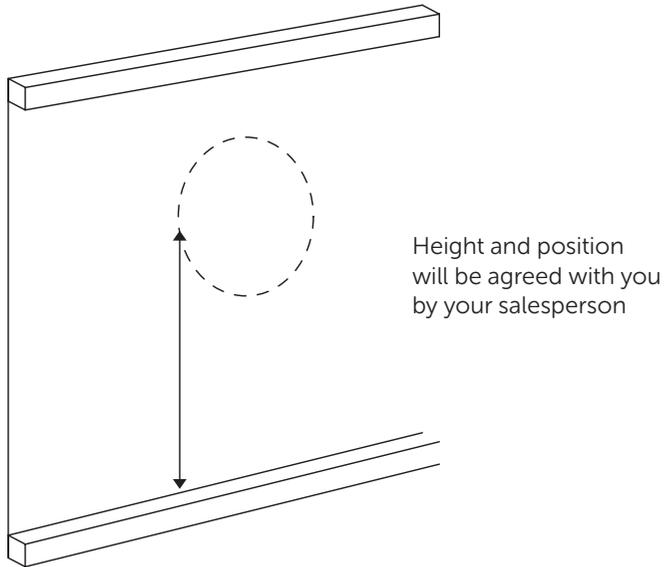
4.1 Position and access

First identify the proposed location for the unit. Ensure that the unit will be easily accessible and that account is taken of any subsequent work that may affect access.

- 4.2 A Hydor salesperson will have advised on their initial visit the correct location of the Tube Ventilation System and included a drawing with the quote. If you purchased your system through a distributor, please follow their recommendations. Failure to install the unit in the advised position for which it was designed could hinder the performance of the unit.

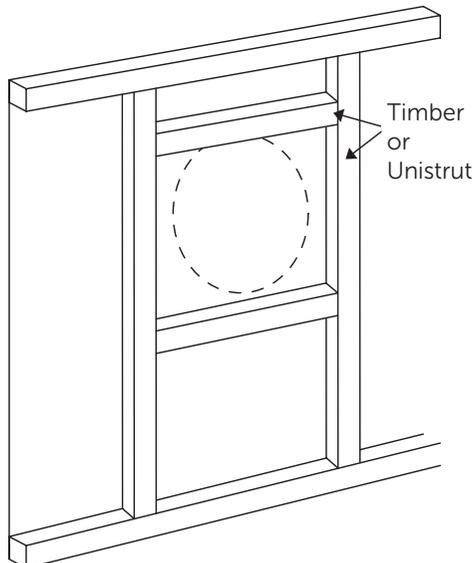
5. Installing the fan

5.1 Mark and cut the hole



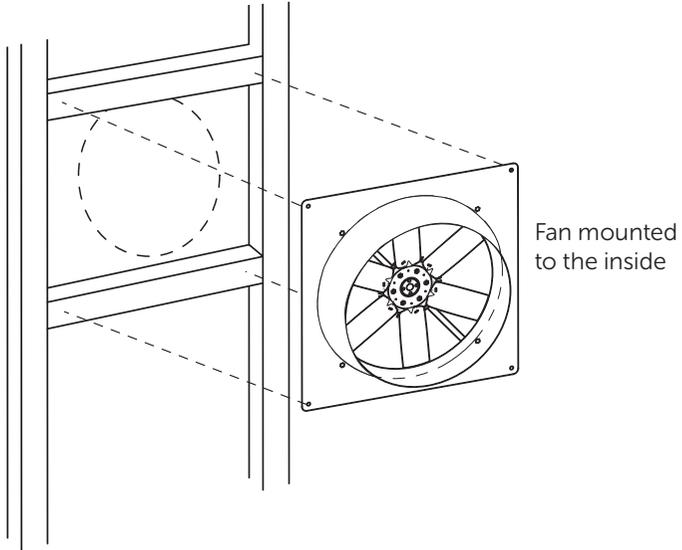
5.2 Reinforce the hole

If your structure's wall is clad, Yorkshire boarding or made of another light weight material, it is advisable to reinforce the hole with timber or Unistrut to support the weight of the unit and the tension of the wire that supports the tube.



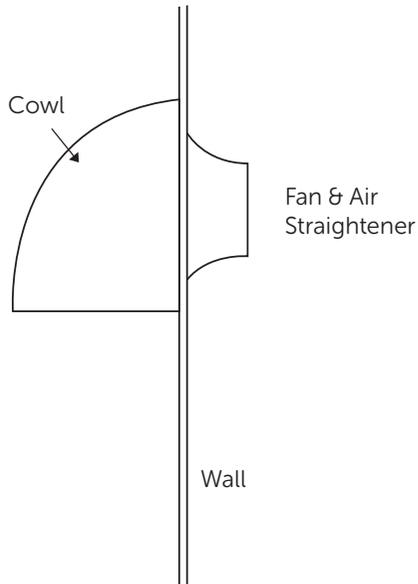
5.3 Mount the fan

Mount the fan to the wood frame with the air straightener facing inwards.



5.4 Mount the cowl

Mount the cowl, to the outside wall with suitable fixings to provide guarding against ingress of water/foreign objects. We recommend the use of a silicon sealant

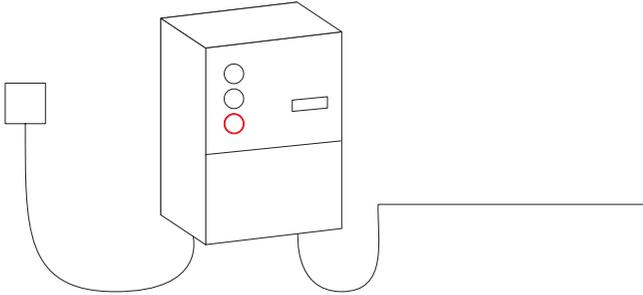


5.5 Mount the controller

5.5.1. Mount the inverter controller or if you have purchased the optional HP58 temperature controller, mount the complete base plate.

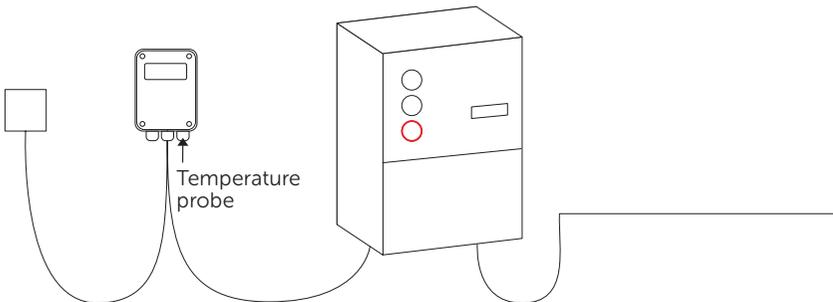
It is advisable to mount the controller in a sheltered location out of direct sunlight so that it is safe from being struck. The unit is supplied with a 3 pin plug which should be connected to a suitably rated, protected single phase electrical supply. Do not install in close proximity to a heat source or in areas of high humidity. The maximum ambient temperature for the controller must not exceed 40°C (104°F).

Inverter



Optional HP58 controller with Inverter

If you have the optional HP58 temperature controller, the temperature probe for the system is located in the bottom, please bear this in mind when positioning the controller.



5.5.2. Test the fan and controller;

Inverter only (manually controlled version)

Plug in the unit and switch on the mains supply to the controller. Switch ON the fan by turning on the isolation switch, selecting forward and adjust the fan speed required by means of the speed control knob.

HP58 controlled inverter (temperature controlled automatic version)

Plug in the unit and switch on the mains supply to the controller. This will provide power to the HP58 Controller and inverter. Switch ON the fan by turning on the isolation switch on the inverter.

- The HP58 controller will automatically control the speed of the fan through the inverter, adjusting the airflow to bring the temperature down to meet the temperature set point. The unit can not increase air temperature.
- The HP58 comes preset with a target temperature of 25°C
- To adjust the target temperature set point, do the following;
 - o Press **SET** (fig.1), the key indicator will flash and the display will show **T.SET** (fig.2)
 - o Press **+** or **-** to change the desired temperature.
 - o Press the **SET** key again to save the new value and return home.



(fig.1)



Example with $t.SET = 25.0^{\circ}$ (fig.2)

5.5.3. The fan is switched OFF by turning the isolation switch on the inverter.

5.5.4. The additional controls on the inverter are used for programming and do not need to be adjusted.

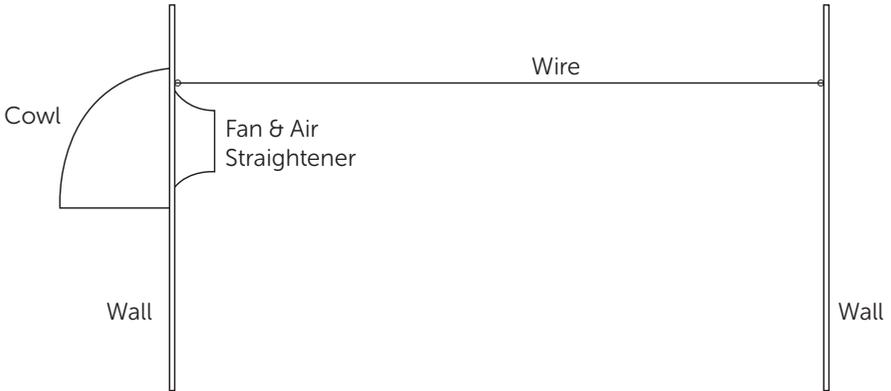
On optional HP58 models, all controls on the inverter are not available except the fan isolator, as the HP58 controls the fan speed.

5.6 Installing the tube

5.6.1. Fix one fixing hook above the fan ring into the wall/wooden frame and the other eye to the opposite wall so that the wire is horizontal and at a right angle to the fan.

! Ensure the wire is straight as this effects the tube performance.

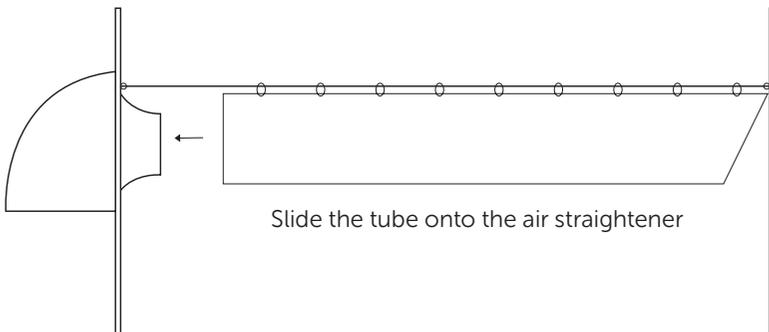
5.6.2. Using the barrel tensioners and the four wire clamps, fix the straining wire to the fixing hooks and tighten the tensioners. Ensure that the wire is as tight as possible.



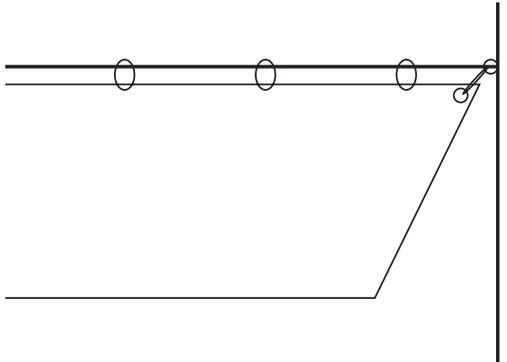
5.6.3. Using plastic cable ties suspend the polythene tube on the wire through the eyes provided. The cable ties should only be zipped slightly and not tight to the wire, this ensures that the tube can move freely on the wire. This is how the zip ties should stay, never tightened.

5.6.4. Pull the tube along until it is fully extended in position on the wire, it is now ready to slide onto the air straightener.

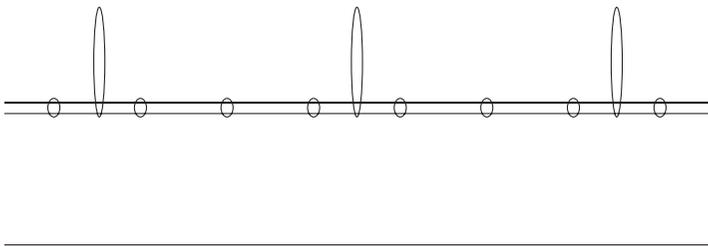
- When attaching the tube to the air straightener, it is very important to ensure that time is taken to attach the tube squarely onto the straightener, in small steps. Rushing this can damage the tube.



- Once the tube is on the straightener, several rings of tape should be wound around to attach it. (On prolonged tests we found it to be far superior over a clamp for the service life of the unit).
- If the tube is still in position along the wire, the fan can be started to ensure the tube is fully inflated and in its final position.
- Attach the end of the tube to the same hook that the main wire is attached to, or if the tube is not the size of the entire length of wire (which is the case for some orders/scenarios), it needs to be attached to the wire with a wire grip. This ensures that when it's windy, the tube isn't allowed to wrap itself around the wire by being pulled back towards the fan.



Attach additional wire supports every 20ft minimum along the tubes length to ensure it doesn't sag and this ensures long term durability.



IMPORTANT: The unit is heavy. Use correct fixing hardware to secure the unit. Observe recommended lifting practices to guard against injury.

6. Electrical Connection:

6.1 The Tube Ventilation System is supplied with a 1m length of flex terminated into a UK 3 pin plug and protected by a 3 amp fuse.

On models with the optional HP58 controller; The HP58 is protected by an additional 50mA fuse which can be accessed in the side of the HP58 housing.

Electrical wiring should only be undertaken by technically trained competent personnel in accordance with good industry practice and should conform to all local governing and statutory bodies i.e. IEE, CIBSE etc. Check the details on the rating plate to ensure that the correct power supply (voltage, frequency and phase) is available. An incorrect power supply could lead to permanent damage to the fan motor etc. Ensure that all earth connections are made. Means of electrical disconnection must be incorporated in the wiring installation in accordance with the relevant wiring and electrical regulations.



WARNING: The fan(s) must be isolated from the power supply during installation and maintenance.

7. Weather

Wind - Because of the nature of the system and its design, the tube itself is stronger when the fan is operated and it is full of air. Therefore in windy conditions it is advised to keep the system energised.

Snow – When it is snowing it is advised to de energise the system as it will suck snow crystals into the system. This snow can collect in the tube resulting in extra weight the system is not designed to carry and will result in damage. Failure to do this will result in your warranty being void.

8. Troubleshooting

Should the inverter trip out, check the motor current or connections as an overload condition has occurred, indicating misconnection, faulty motor or a jammed impeller.

9. Maintenance

Over time the system will naturally collect dirt and debris through its operation. Once every year the tube should be taken down and cleaned to ensure a trouble free long life of service.



WARNING: The fan(s) must be isolated from the power supply during installation and maintenance. Only a suitably qualified and competent person may carry out maintenance after the electrical supply has been isolated. Particular care must be taken when automatic switching controls are used.

Technical Support

Contact your distributor for technical support on this product. Do not call the Hydor technical support department unless your distributor has first given their advice and attempted to rectify the issue.

Guarantee

Hydor or its agents will, within a period of one year from the date of dispatch from their works, at its option, replace any goods, which are proven to have defects as a result of defective materials or workmanship. The goods must be inspected by a Hydor official and if necessary returned, with a Returns Note Number, carriage paid, for further examination.

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