

HV Hanging Belt Drive Fan

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 fan 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.

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1. General

- 1.1 A range of HV Belt Drive units
 - HV800
 - HV1000
 - HV1250 (1.1kW)
 - HV1500
 - HV2000
- 1.2 Incorporating efficient IE2 and IE3 motors/impellers, galvanised body with stainless steel blades.
- 1.3 Service items include:
 - Replacement belt
 - Replacement motor pulley
- 1.4 Details of the HV Belt Drive supplied are given on the nameplate attached to the side of the unit; if 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 HV Belt Drive.
- 2.5 The HV Belt Drive 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 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 HV Belt Drive units are tested and inspected prior to despatch and leave the factory in good condition. Upon receipt, it should be examined for visible damage, ensure that the impeller is free to rotate and that all parts listed on the delivery note are present.
- 3.2 Any damage or shortages should be notified to the carrier immediately.
- 3.3 Hydor cannot accept any responsibility for damage sustained whilst unloading from the carrier, or subsequent damage on Site.
- 3.4 If there are any queries concerning the fan unit, Hydor should be contacted prior to installation.

4. Installation

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

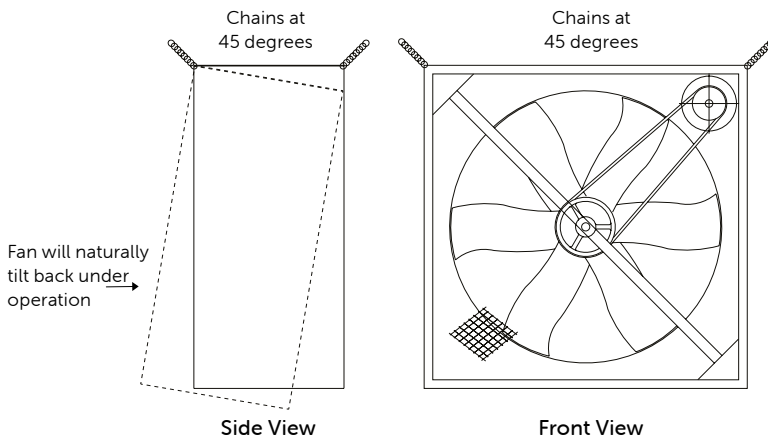
4.1 Position and access

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.


 **WARNING: A minimum air space in front and behind the fan of 2 metres is required.**

Hanging Your HV Belt Drive


- 4.2 Eyebolts are provided for units which are to be suspended. Suitably rated gauge chain and D shackles should be used to suspend the unit in its final location (not supplied).
- 4.3 The chains should be installed at approximately 45 degrees to the unit as shown in the drawings below. This ensures that the units will not swing about under operation.



- 4.4 If very long chains are used to suspend the unit, it may cause a pendulum effect when the unit is suspended. In this instance additional chains should be attached to the bottom rear corners to prevent this.

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

- 4.5 The HV Belt Drive is supplied with a length of flex to be terminated into the customer supplied local Isolator. The circuit should feature suitable protection to protect the motor in the event of an overload.
- 4.6 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.


 **IMPORTANT: Fuses/circuit breakers are used to provide short circuit protection only. A starter panel with overload protection must be fitted to protect the motor**


Speed Control

- 4.7 If the fan is being used through a speed control device, either electrically or electronically, refer to the relevant control device instructions before commencing installation. The unit should not be operated below 60% as this will stress and damage the motor. This will void the warranty.

Break In Period

- 4.8 The unit uses a belt to drive the fan from the motor. The belt tension should be checked after the first 2-3 days use (48-72 hours usage) because it will naturally stretch to its final length during this time. See maintenance section below for details on how to adjust the belt tension.

 **IMPORTANT: Failure to adjust the belt tension after break in will lead to a reduced life of your fan through pulley wear, motor wear and premature failure of the belt. This is not covered under warranty.**

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

Final Checks

- 4.9 Following Installation of the unit a thorough inspection should be carried out. This should include the removal of debris and any tools which may have been left inside the HV Belt Drive casing on installation. Before power is supplied to the unit check that the wiring is correct to the fan motor(s) and that correct motor overloads have been fitted.

5. Troubleshooting

- 5.1 If the fan is under-performing check the following:-
Fan rotates in correct direction
Fan and motor speeds are correct
Belt tightness (see section 6)
- 5.2 If the fan is making unwanted noises check the following:-
Belt tightness (see section 6)
That the unit is square (see section 4)
- 5.3 If the belt continues to slip after tightening, it is possible the motor pulley has become damaged. In this instance please contact your distributor for a replacement pulley.



IMPORTANT: Most problems with the unit can be avoided by maintaining the belt tension.

6. Maintenance

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.

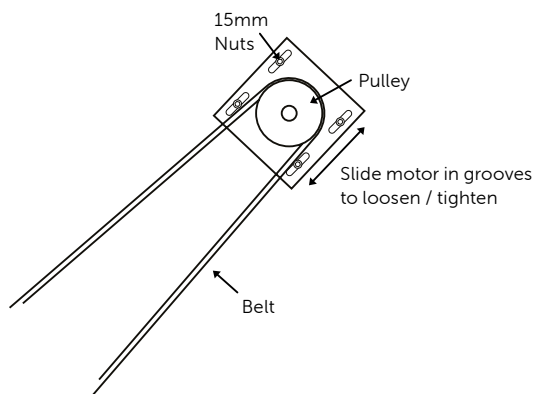


Internal Access

- 6.1 To access the internals of the fan, an 8mm hex head socket should be used to remove the fixings around the wire guard. Removing the wire guard is expected for maintenance and will not void your warranty.
- 6.2 Inspection of the fan at least once every 6 months is recommended to ensure that the motor, fan blades, and supporting guards, are clean. Any build-up of dust and deposits on the blades, motor or guards should be removed using a non-abrasive cleaner. Failure to keep the unit clean can lead to overheating and damage which is not covered by the warranty.
- 6.3 All fastenings should be checked for tightness. In addition, all rotating items should be checked.
- 6.4 Bearings are of the "sealed for life" variety and will not need a detail inspection.

Belt Tension

- 6.5 Belt tension should be checked after the first 2-3 days use (48-72 hours usage) and then periodically depending on use.
- 6.6 To check the tension, squeeze the belt with your hand, there should be between 15-20mm movement. If more or less, the tension needs adjusting.
Please note over tensioning will dramatically affect the longevity of the unit.
- 6.7 To tension the belt, loosen but not remove the four 15mm hex head nuts holding the motor in place, slide the motor until the required tension is found and then re tighten.



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 1 year from the date of dispatch from their works, repair or, at its option, replace any goods, which are proven to have defects as a result of defective materials or workmanship.

The goods MUST be returned to Hydor, carriage paid, for examination. A Hydor Engineer or appointed person should attend to carry out any work, unless otherwise agreed. Hydor will not accept accounts for workmanship by others.

Please see the Hydor warranty booklet for full details on submitting a warranty claim.

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.

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