



INSTALLATION – OPERATION – MAINTENANCE USER MANUAL

WALL MOUNTED EXPROOF AXIAL FANS



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1. INTRODUCTION

Before operating VENCO branded VD-EX Wall Mounted Axial Type Exproof Fans, please examine carefully the instruction manual and keep it. Do not use devices as a workbench or a storage area. VENCO VD-EX Wall Mounted Axial Type Exproof Fans can only be operated in conditions of intended design and technical specifications.



DEVICES TO BE USED IN DANGEROUS ENVIRONMENTS ARE DESIGNED SPECIFICALLY FOR THE ENVIRONMENT TO BE SUITABLE FOR THE OFFICIAL REGULATIONS. FALSE USE, INCOMPATIBLE CONNECTION OR OTHER SMALL CHANGES MAY HAZARD PRODUCT RISK.



BEFORE OPERATING READ THIS MANUAL and KEEP IT IN REACH OF A SERVICE PERSONNEL.



THIS FAN CAN ONLY BE OPERATED IN CONDITIONS OF INTENDED DESIGN AND TECHNICAL SPECIFICATIONS. OTHERWISE THE RESPONSIBILITY BELONGS TO INSTALLER.



DO NOT USE THIS DEVICE IN A CORROSIVE ENVIRONMENT.



RESPONSIBILITY OF THE DEFECTS WHICH CAN BE OCCURED AS A RESULT OF UNAUTHORIZED PERSONNEL INTERVENTION TO FAN or TO BE USED NON-ORIGINAL SPARE PARTS BELONGS TO THE INSTALLER.

2. GENERAL IDENTIFICATION OF DEVICE TYPE and MODEL

VENCO VAX-EX type Exproof Axial fans are the preferred fans for ventilation projects, where there is a risk of explosion, flammability and ignition. It is designed according to EN 14986:2017, EN ISO 80079-36:2016, EN 60079-0:2013 standard. It is suitable for industrial and commercial applications. The motor is found combined with blades on the indoor of the wall to be mounted and the air intake is carried out in the direction of the motor . The fan cannot be installed outside without water precaution.

Device Group: II

Device Classification: Zone 1, Zone 2, Zone 21 and Zone 22

Zone 1 - Zone 1 area is classified as a place in which an explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapour or mist is likely to occur in normal operation occasionally.

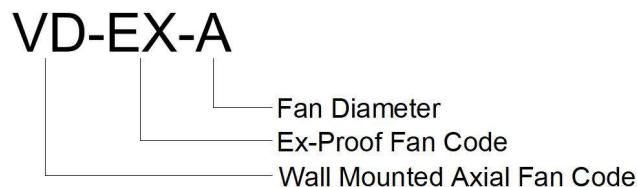
Zone 2 - Zone 2 area is classified as an atmosphere where a mixture of air and flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation, but if it does occur, will persist for a short period only.

Group: II C and III C

Temperature Class: T4 - Maximum Surface Temperature 125 °C

3. TECHNICAL DATA

The type key can be seen on the name plate. For Wall Mounted Exproof Axial fans, it contains the following data



4. TECHNICAL SPECIFICATIONS

VENCO VAX-EX Type Wall Mounted Exproof Axial Fans;

Certificate Number :

Ex Code:

- Full size from \varnothing 315 mm to \varnothing 710 mm diameter
- 1000 m³/h – 22000 m³/h air flow
- Hot deep galvanized sheet metal casing
- Cast aluminum adjustable blade angle impellers
- Aerodynamic profile impellers allow high efficiency and low noise
- Die cast aluminum alloy fan hubs
- Optimum capacity obtained hub combinations besides adjustable blade combination
- Electrical motors with IP 66 and Ex d IIC T4 class
- 380 V, 3 phase, 50 Hz
- Operating temperature between -20°C and 50°C

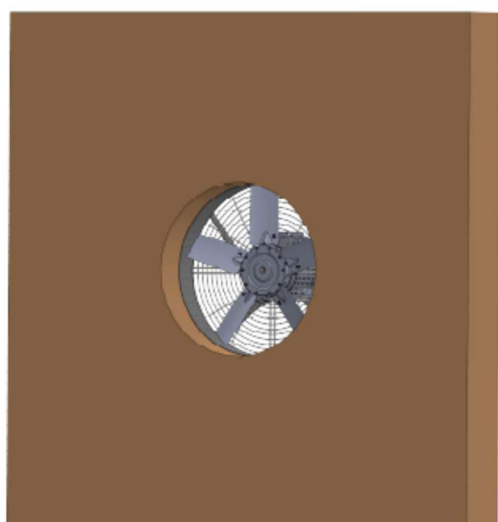
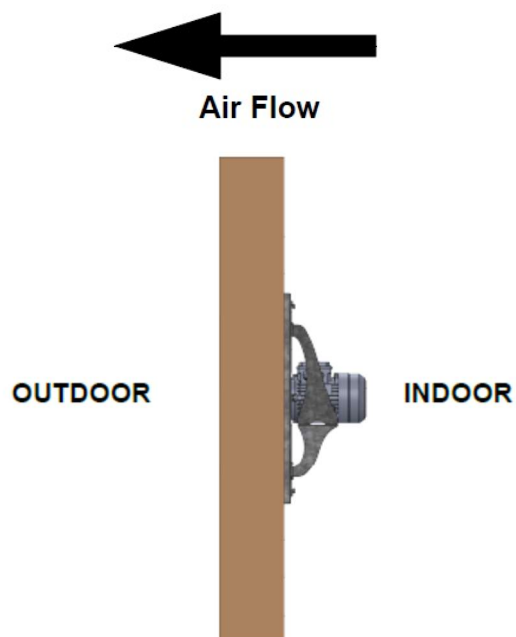
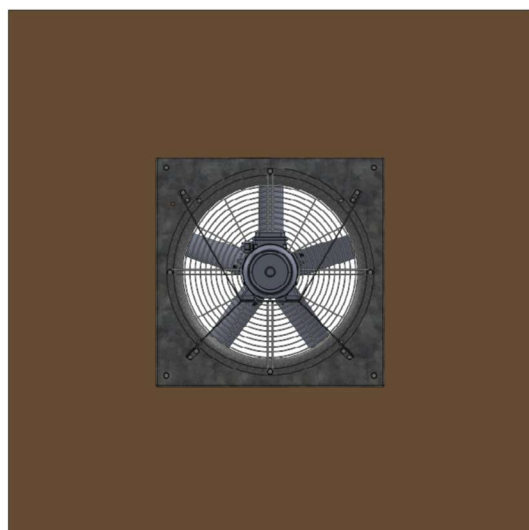
5. INSTALLATION

The fan must be installed according to the air direction label on the fan. Before the start of assembly, examine manually whether the fan wheel runs freely. Before installation, check the minimum air gap between the blade tip and the housing according to the following table. The fan can be mounted parallel to the wall without any accessories. For mounting, it is recommended to use the bolt holes in the housing. During assembly, secure the assembly area. Take precautions for any access by unauthorized persons. The fan should be installed in a way that makes service and maintenance easy. The ground connection must be made correctly.

The electrical connection will be made by the customer and D type cable gland must be used. Electrical cables should be selected according to EN 60079-14: 2014 standards and the contact person must be trained in accordance with ATEX regulations and relevant standards.

Note: If there is no cable gland on the motor, ATEX certified type D cable gland should be used when making electrical wiring.

Sample pictures of the assembled device;



Fan Diameter	VD-EX	
	Min. (mm)	Max. (mm)
315	0,6	1,6
355	0,8	1,8
400	1	2
450	1,25	2,25
500	1,4	2,4
560	1,4	2,4
630	1,58	2,58
710	2,6	3,6



ALL ELECTRICAL CONNECTIONS SHALL BE DONE ACCORDING TO EN 60204-1 BY TRAINED AND AUTHORIZED PERSONNEL.



SWITCH THE ENERGY SUPPLY OFF BEFORE YOU BRING ABOUT THE ELECTRICAL CONNECTION OF THE FAN. MAKE SURE THAT THE ENERGY SUPPLY CANNOT BE SWITCHED ON AGAIN PREMATURELY. THE ELECTRICAL CONNECTION MAY ONLY BE CARRIED OUT BY TRAINED PERSONNEL.



THE ELECTRICAL CONNECTION IS TO BE DONE ACCORDING TO VALID DIRECTIVES AND ONLY BY A QUALIFIED FITTER WITH MATCHING SAFETY DEVICES FOR THE PROTECTION OF THE MOTOR.



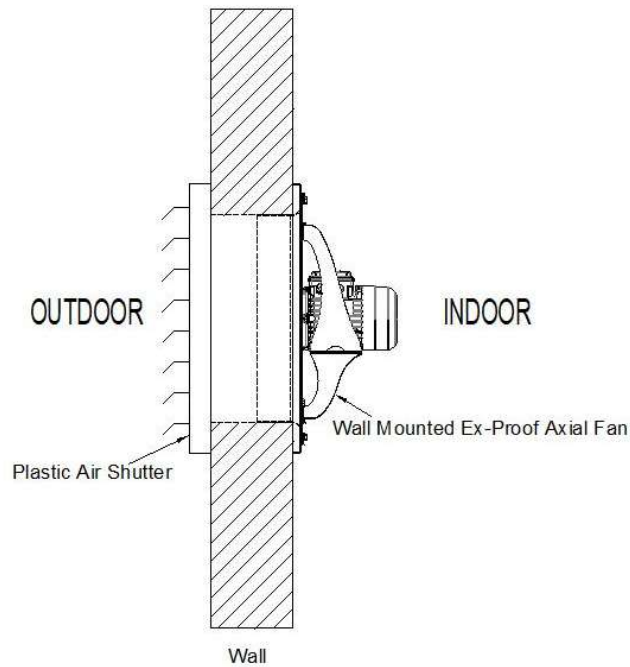
THE DEVICE MUST BE EARTHED. DEVICE GROUND CONNECTION; SHOULD BE MADE OF EARTHING BOLT ON BODY.



PAINT IS NOT USED IN THE DEVICE AND BODY. IF PAINTING ON EQUIPMENT AND BODY IS USED, THE PAINT MUST BE ANTISTATIC.

6. OPERATION

Before starting, check the followings; Be sure that foreign objects are removed from fan area, check connection to the electrical installation, minimum air gap between the tip of the blade and the housing and no noise appears when starting the fan. If the air gap is correct, switch the device on and off briefly, in order to check the direction of rotation of the fan. The rotation direction of the fan must match up with the direction of the arrow on the housing of the fan. If the direction of rotation is wrong, interchange two phases in order to set the correct direction of rotation. If the wall to be installed is the outer wall and the fan has direct contact with the outside air, a plastic damper must be used on the outer side of the outer wall to stop this contact for lightning protection.



ALWAYS WEAR APPROPRIATE PROTECTIVE CLOTHING (INCLUDING HARD HATS, EYE PROTECTORS AND EAR DEFENDERS) WHEN WORKING IN THE VICINITY OF THE FAN ASSEMBLY

7. HANDLING & STORAGE

Fans are delivered in packages in their boxes according to their models. Transport the fan to the place of assembly in its original packaging. During motor and wire connections mustn't be damaged. Load and unload the fan carefully, in order to avoid possible damage. Use suitable lifting equipment. The fan should be stored in a safe, clean, dry, vibration free, location. A regular monthly rapid spin of the impeller is recommended to prevent grease hardening and possible brinelling of the bearings; the impeller should not be in the same angular position after rotation.

When dismantling the crate to gain access to the fan assembly care should be taken to avoid injury from sharp edges, nails, staples, splinters, etc.

8. MAINTENANCE

Periodically check the screw connections, coil resistance, function of the safety components and control elements. Only clean the fan manually, with a vacuum cleaner or with compressed air. Before service, maintenance or repairing, disconnect the electrical connections and the impeller is stopped. The fan must be cleaned when needed, at least once per year to maintain the capacity. The fan bearings are maintenance-free and should be renewed only when necessary. Cleaning should be done without dislodging or damaging the impeller. Make sure that there is no unexpected noise from the fan.

In addition to routine maintenance motor bearings will in the longer term require attention. If the motor bearings are greased through extended lubricators, a quality of grease should be periodically applied in accordance with the information on the fan or motor nameplate and/or instructions provided.



MAINTENANCE, REPAIR AND REPLACEMENT OF PARTS MUST BE CARRIED OUT BY ATEX TRAINED PERSONNEL.

9. FAULT DETECTION

It is necessary to turn off the fan before checking the fan and the system. During maintenance, device electrical connections should be cut entirely. All switches and circuit breakers should be locked by brought to the OFF position. Also "DO NOT START" sign should be placed on the control panel that will consistently stand.

Check that the electrical connections to the unit are secure. Check that the voltage applied at the fan terminals is as specified on the motor nameplate, and is balanced. Measure the current on each phase (one phase in the case of single-phase motors) of the motor in turn and check that the current consumption is within the full load current specified on the motor nameplate.

Rotate the motor shaft by hand. Investigate any sound of grinding noises, internal chaffing, rubbing or stiffness. Any observed defect may indicate that the bearings require lubrication or replacement. Ensure that all fixings are secure. Make sure that the fan blade is not blocked by an object, if fan is still not working, contact your supplier.

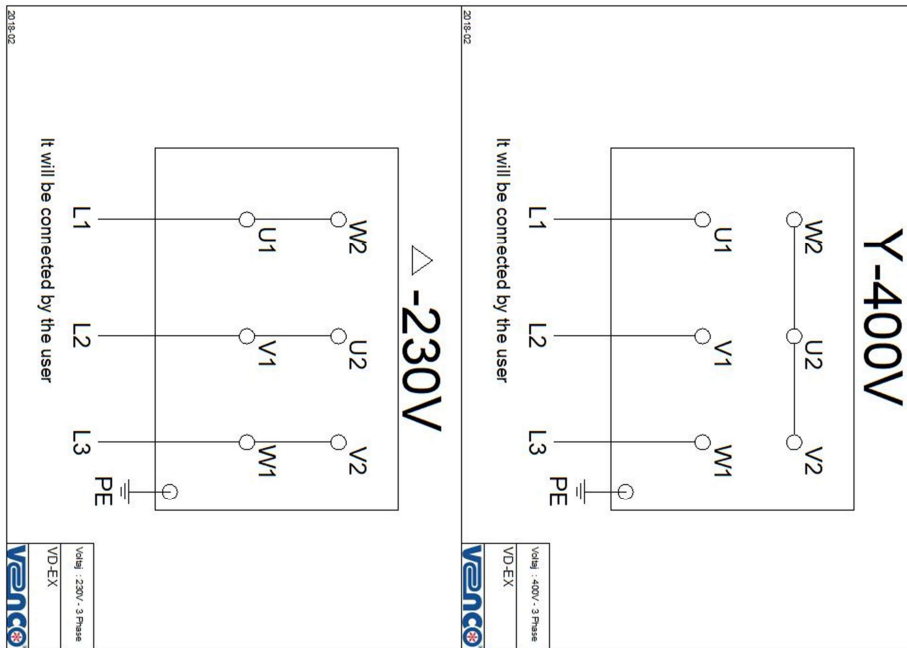
10. WARRANTY

- The warranty period starts from the date of delivery and it is for 2 years.
- Including all parts of the entire fan is under warranty of our company.
- The maximum repairing period is 30 business days. This period starts from the date of notification to us.
- Fan's warranty does not include electrical connection errors, failures that may arise due to voltage and user errors.
- The warranty is only valid under condition that the fan is assembled, operated and periodic maintenance to be made according to this manual.
- For Atex-certified products, ATEX certification will be voided without repair written permission of the manufacturer and in cases of repair replaced with non-original parts.

ANNEX

11.1 Annex-1: Electrical Wiring Diagrams

Motor connection without termic:



Motor connection with termic:

