



# QUICK START GUIDE

HEAT PUMP HEAT RECOVERY UNITS VHR MODELS



DOWNLOAD INSTALLATION – OPERATION & MAINTENANCE INSTRUCTION  
FROM [www.venco.com.tr](http://www.venco.com.tr) AND READ BEFORE START-UP THE UNIT  
AND KEEP IT WITHIN EASY REACH OF SERVICE TECHNICIAN.

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1. INSTALLATION

VENCO rules should be implemented during the final assembly. Before the installing of heat recovery units, customers should control whether weight and dimensions of the stations are suitable for the places from where stations will pass through and assembly will be carried out. The unit has to be install horizontally ,any angle installation will cause a problem. There should be sufficient amount of place around the unit to be able to give service and for piping connections. Heat recovery units should be assembled onto a hard and flat base.

Damages due to wrong transportation-storage-installation are not covered under warranty.

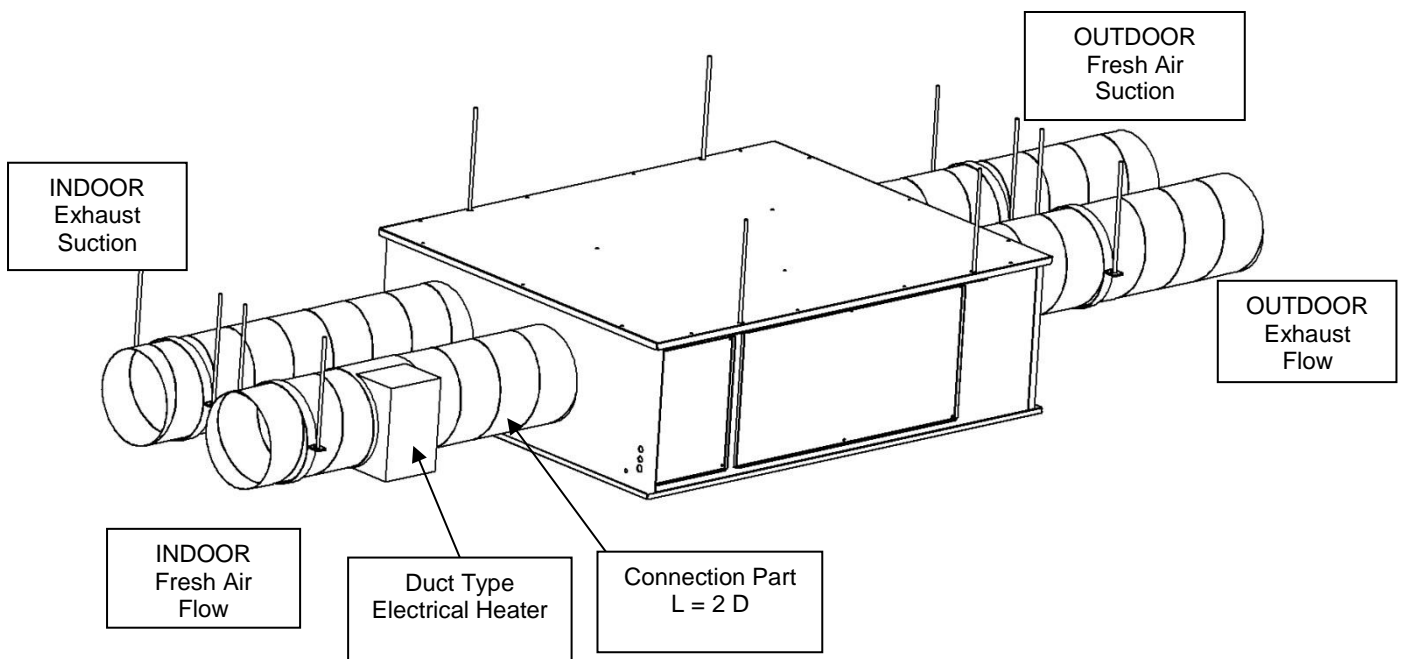


Figure 1.1. Connection Schema

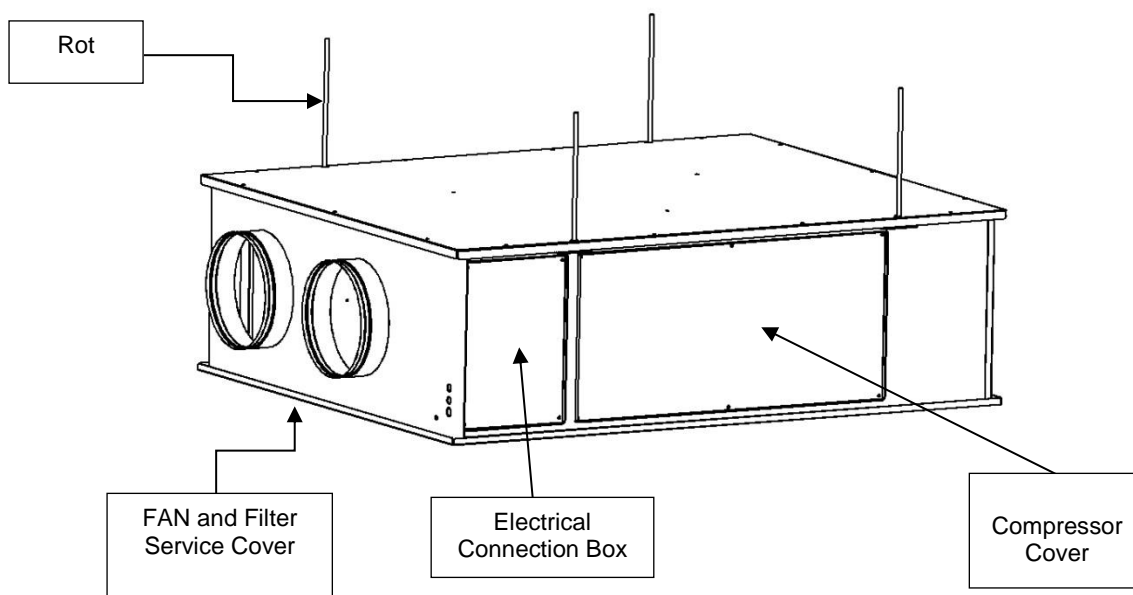


Figure 1.2. Installation Schema

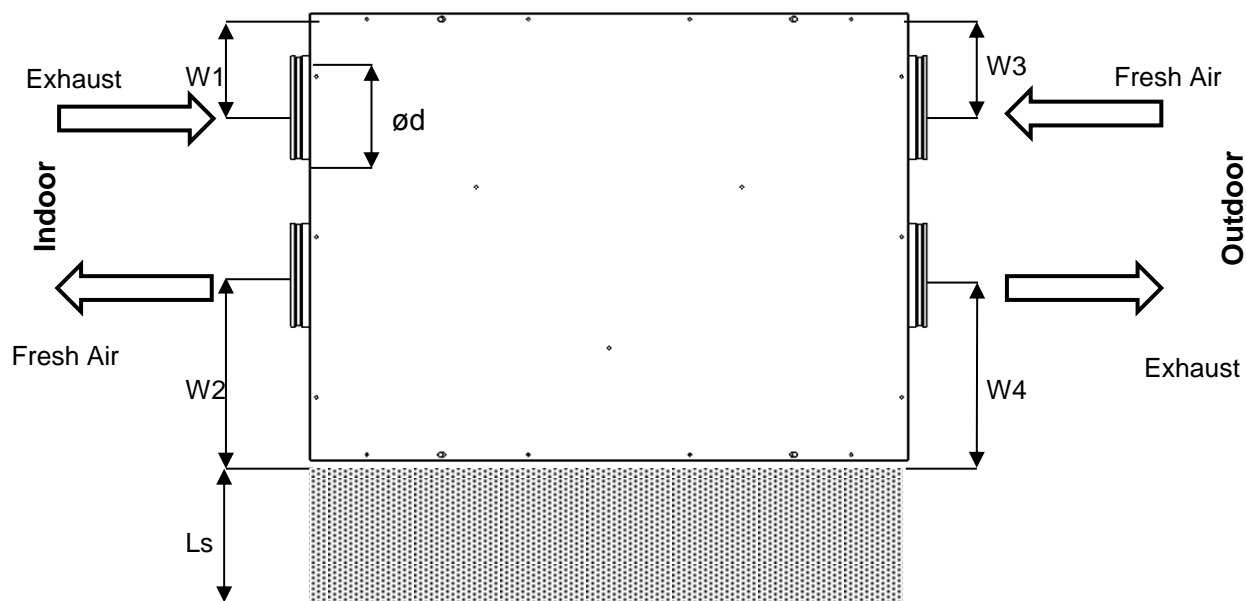


Figure 1.3. Connection Schema

VENCO MODEL		VHR DX 05	VHR DX 07	VHR DX 10	VHR DX 15	VHR DX 20	VHR DX 21	VHR DX 30	VHR DX 40
Service Clearance [mm]	$L_s$	700	700	700	800	900	900	1000	1000

2. CONNECTIONS

2.1. Duct Connections

Return air, fresh air, exhaust air and supply air ducts should be fixed (connected) to the unit with flexible connection. Required leak-proofing should be obtained in order to ensure desirable air flow. Having improper (bad) unit – duct connections and wrong dimension, shape and duct fragments inside of the connection may cause turbulence.

Free Flowing Status; Centrifugal fan which is outgoing directly, is a poor efficient exhausting system That turbulence can disappear with an additional duct or with an additional expansion part. It is more important when the applications for orifice and distributor which use laminar method for pressure calculation. Turbulence causes increasing the pressure loses. ( Figure 6.1.1).

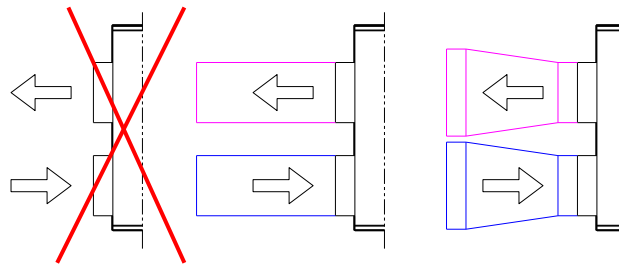


Figure 6.1.1 In.Free Outlet

It is very important to make the connection between flowing the unit connection and flexible connection carefully to prevent noise and vibration Fan input and duct axis have to be proper and flexible connection should not be an accordion. Air passage has to be smooth. (Figure 5.4.2).

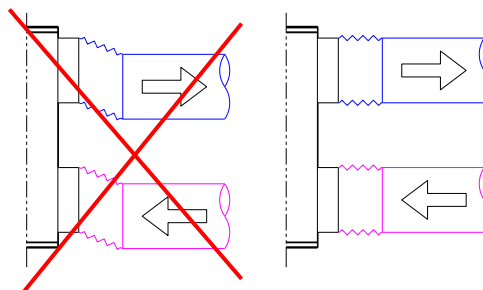


Figure 6.1.2. Ducted Outlet

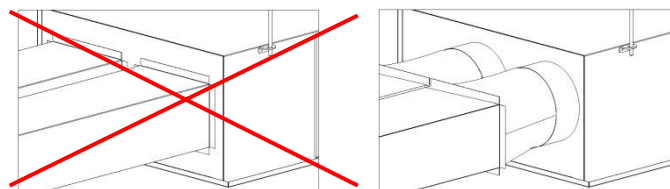


Figure 6.1.3. Unit Duct Connection

When air flow direction is changed at fan blowing outlet, excessive losses may occur. If this is compulsory, connections should be done as Figure 5.4.4. The length of duct, before the elbow or electrical heater, should be double of the outlet-diameter

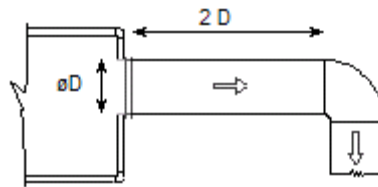


Figure 6.1.4. Unit Outlets when the air flow direction change

## 2.2. Drain Connections



The diameter of drain pipe should be equal the diameter of drain pipe on the unit. Drainage pipe and drain pan connections should be made by ripple and flange to be able to dismantle pipe connections easily in order to clean up the residue occurred on drain pan and pipes.

The pipe coming out of the drain pan should be connected to a U or P shaped flusher pipe and should be filled with water in order to not to cause air suction as described left side.

## 2.3. Electrical Connections



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



**ALL HEAT RECOVERY UNITS HAVE ENERGY CABLE ON THEM. PLUG ,PLUG FUSE AND CABLE CROSS SECTION HAVE TO BE CHOSEN PROPERLY.**



**THE GROUND CONNECTION HAS TO BE DONE. UNIT GROUND CONNECTION HAS TO BE DONE ON ENERGY CABLE AND IT HAS TO BE DONE FROM GROUND CAPSCREW ON THE BODY.**

The electrical materials, cables and all relevant control and remote control equipment should be chosen and designed suitable to unit requirements. All the cables belong to equipment's has to set properly not to give any damage to the product. Puncture of product can cause water leakage or air leakage. Repairment of the inside insulation has to be done immediately if any damage occurs. The particles have to be removed if there is any inside the unit. These kind of products cause corrosion especially in the high humidity conditions. For unit electrical connections, put the safety fuse to the main supply board.(for capacity list , go to document "Installation – Operation and Maintenance Instructions" APPENDIX-4 )