

VRDXL00000

High Capacity
Ventilated Steam Distributor

CAREL



(ENG) Installation and Maintenance Manual

➡ READ AND SAVE
THESE INSTRUCTIONS ⬅

Integrated Control Solutions & Energy Savings



GENERAL WARNINGS

The CAREL Industries humidifiers are advanced products, whose operation is specified in the technical documentation supplied with the product or can be downloaded, even prior to purchase, from the website www.carel.com. Each CAREL Industries product, in relation to its advanced level of technology, requires setup/configuration/programming/commissioning to be able to operate in the best possible way for the specific application. The failure to complete such operations, which are required/indicated in the user manual, may cause the final product to malfunction; CAREL Industries accepts no liability in such cases. The customer (manufacturer, developer or installer of the final equipment) accepts all liability and risk relating to the configuration of the product in order to reach the expected results in relation to the specific final installation and/or equipment. CAREL Industries may, based on specific agreements, act as a consultant for the installation/commissioning/use of the unit, however in no case does it accept liability for the correct operation of the humidifier and the final installation if the warnings or suggestions provided in this manual or in other product technical documents are not heeded. In addition to observing the above warnings and suggestions, the following warnings must be followed for the correct use of the product:

DANGER OF ELECTRIC SHOCK:

The humidifier contains live electrical components. Disconnect the power supply before accessing inside parts or during maintenance and installation.

DANGER OF WATER LEAKS:

The humidifier automatically and constantly fills/drains certain quantities of water. Malfunctions in the connections or in the humidifier may cause leaks.

DANGER OF BURNS:

The humidifier contains high temperature components and delivers steam at 100°C/ 212°F.



IMPORTANT

- The installation of the product must include an earth connection, using the special yellow-green terminal available in the humidifier.
- The environmental and power supply conditions must conform to the values specified on the product rating labels.
- The product is designed exclusively to humidify rooms either directly or through distribution systems (ducts).
- Only qualified personnel who are aware of the necessary precautions and able to perform the required operations correctly may install, operate or carry out technical service on the product.
- Only water with the characteristics indicated in this manual must be used for steam production.
- All operations on the product must be carried out according to the instructions provided in this manual and on the labels applied to the product. Any uses or modifications that are not authorized by the manufacturer are considered improper. CAREL Industries declines all liability for any such unauthorized use.
- Do not attempt to open the humidifier in ways other than those specified in the manual.

- Observe the standards in force in the place where the humidifier is installed.
- Keep the humidifier out of the reach of children and animals.
- Do not install and use the product near objects that may be damaged when in contact with water (or condensate). CAREL Industries declines all liability for direct or indirect damage following water leaks from the humidifier.
- Do not use corrosive chemicals, solvents or aggressive detergents to clean the inside and outside parts of the humidifier, unless specifically indicated in the user manual.
- Do not drop, hit or shake the humidifier, as the inside parts and the linings may be irreparably damaged.

CAREL Industries adopts a policy of continual development. Consequently, CAREL reserves the right to make changes and improvements to any product described in this document without prior warning. The technical specifications shown in the manual may be changed without prior warning. The liability of CAREL Industries in relation to its products is specified in the CAREL Industries general contract conditions, available on the website www.carel.com and/or by specific agreements with customers; specifically, to the extent where allowed by applicable legislation, in no case will CAREL Industries, its employees or subsidiaries be liable for any lost earnings or sales, losses of data and information, costs of replacement goods or services, damage to things or people, downtime or any direct, indirect, incidental, actual, punitive, exemplary, special or consequential damage of any kind whatsoever, whether contractual, extra-contractual or due to negligence, or any other liabilities deriving from the installation, use or impossibility to use the product, even if CAREL Industries or its subsidiaries are warned of the possibility of such damage.



DISPOSAL:

The humidifier is made up of metal parts and plastic parts. In reference to European Union directive 2002/96/EC issued on 27 January 2003 and the related national legislation, please note that:

1. WEEE cannot be disposed of as municipal waste and such waste must be collected and disposed of separately;
2. the public or private waste collection systems defined by local legislation must be used. In addition, the equipment can be returned to the distributor at the end of its working life when buying new equipment;
3. the equipment may contain hazardous substances: the improper use or incorrect disposal of such may have negative effects on human health and on the environment;
4. the symbol (crossed-out wheeled bin) shown on the product or on the packaging and on the instruction sheet indicates that the equipment has been introduced onto the market after 13 August 2005 and that it must be disposed of separately;
5. in the event of illegal disposal of electrical and electronic waste, the penalties are specified by local waste disposal legislation.

Warranty on the materials: 2 years (from the date of production, excluding consumables).

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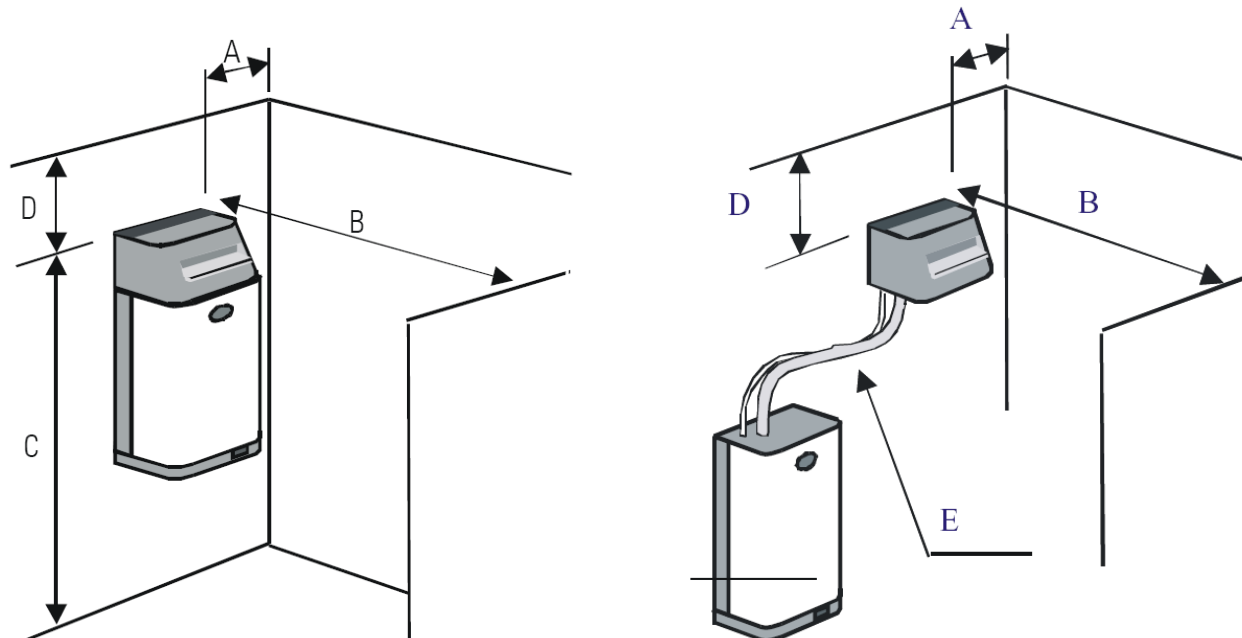
1. MOUNTING

The VRDXL is designed to be mounted securely to a wall or frame suitable to support its weight. Mounting brackets are provided with the unit for that purpose.

1.1. SELECT LOCATION

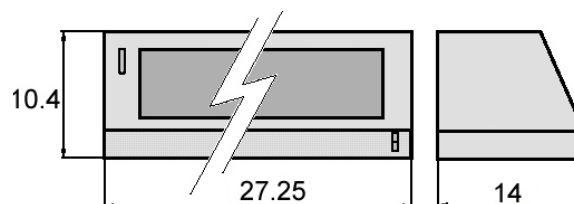
The VRDXL may be mounted to the wall directly above the CAREL humidifier or remotely by using additional lengths of steam and condensate hose.

It is important to mount the VRDXL unit so that the steam discharge will avoid personnel and obstructions. Anything that the visible steam contacts may get wet. There are also limits from the ceiling to allow for the normal tendency of steam to rise.



A (applies to both sides)	36" min. (600 mm)
B	120" min. (3000 mm)
C	72" min. (1800 mm)
D	60" min. (1500 mm)
E	13.1 ft max. (6 m)

VRDXL Dimensions and Weight



VRDXL

Weight = 57 lbs.

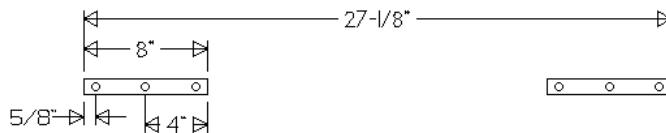
1.2. SECURE MOUNTING BRACKET TO THE WALL

There are 2 mounting brackets supplied with the VRDXL unit. They are attached to the back of the unit with 2 sheet metal screws.

Remove these brackets using a Phillips head screwdriver and secure them to the wall where the VRDXL is to be located.



Bracket placement template:



Holes are 1/4" diameter.

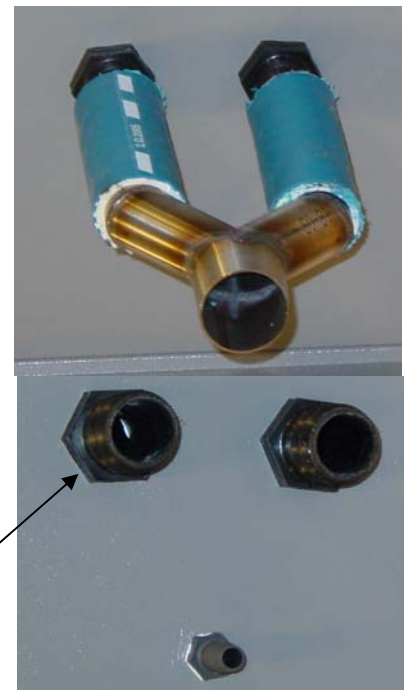
1.3. MOUNT VRDXL TO THE MOUNTING BRACKET AND WALL

Hang the VRDXL unit on the mounting brackets and secure with a capture screws through the bottom back flange of the VRDXL into the wall.

2. PLUMBING

2.1. STEAM HOSE CONNECTIONS

There are 2 barbed steam inlets on the bottom of the VRDXL which are designed to accept the CAREL 30 mm steam hose (Part No. SHOSE00030). The CAREL humidifier units above 30 lbs/hr have 40 mm steam outlets, which use CAREL 40 mm steam hose (Part No. SHOSE00040). An adapter (USTEAMY) is provided which has 1-40 mm inlet and 2-30 mm outlets. The USTEAMY is connected to the bottom steam inlets of the VRDXL and then connected to the 40 mm hose coming from the CAREL humidifier unit. Hose camps are to be used on all steam hose connections.



2.2. MICROPROCESSOR CONTROL SYSTEM

A single barbed condensate connection is located on the bottom of the VRDXL to accept CAREL 5/16" condensate hose (Part No. CHOSE00516). This is to drain the distributor in the VRDXL and return the condensate to drain. Since the condensate is not reused, but is wasted, it may be returned either to the humidifier unit drain pan, or to any open drain. DO NOT run the condensate back into the humidifier unit fill cup as this will cause an erroneous reading of the conductivity.

Steam Hose Connections

Condensate Hose Connection

3. WIRING



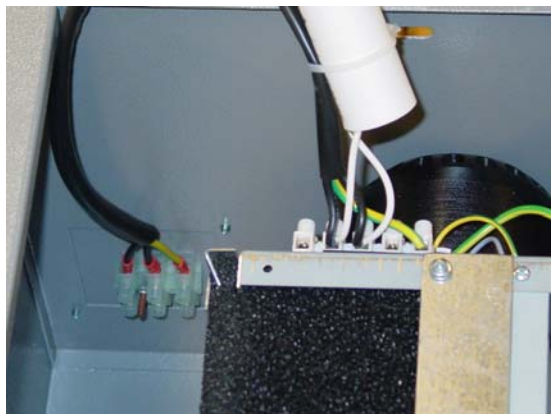
WARNING

All electrical connections must be installed by trained personnel and must meet all local electrical codes.

The VRDXL is continuously powered by 208-230 VAC, 1 Phase, 50/60 Hz.

Power is connected to the VRDXL inside the cover, on the side wall terminals. They may be labeled X1 & X2.

Use a dedicated power supply circuit for the VRDXL unit. Do not power the unit in parallel with the humidifier. Be careful not to apply power to the ground wire.



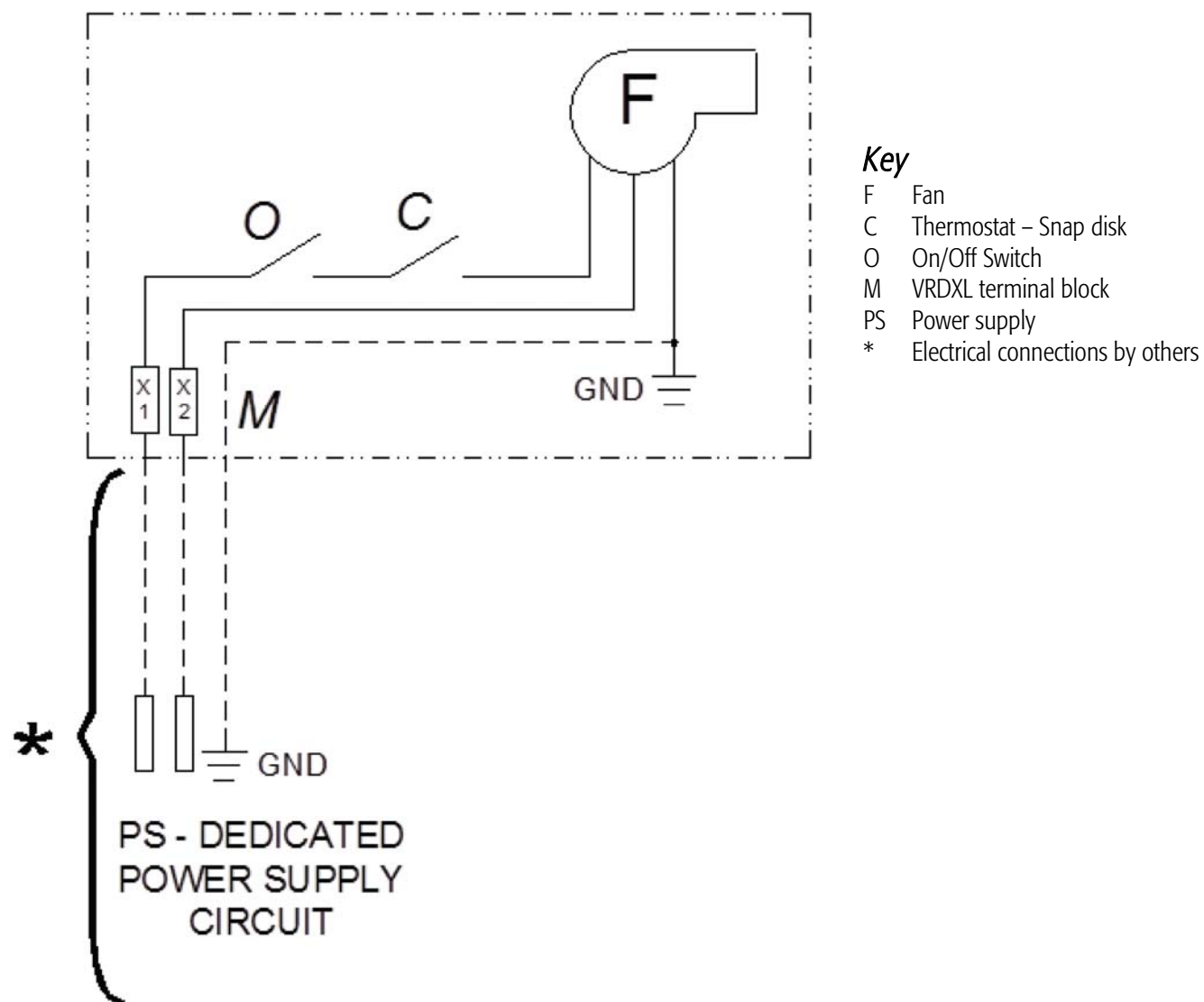
On the side of the VRDXL is an On/Off switch and fuse (500 mA).

On/Off switch must be in the ON position for VRDXL to operate.

All electrical connections must be installed by trained personnel and must meet all local electrical codes.



3.1. VRDXL CONNECTION BY DEDICATED POWER SUPPLY CIRCUIT

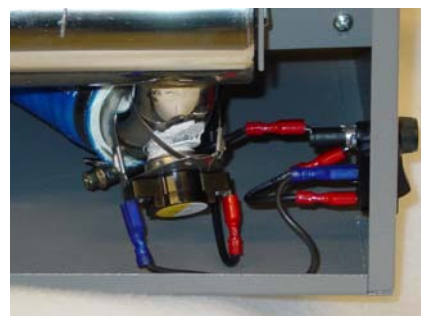


4. OPERATION

An internal klaxon switch is used to sense the steam heat and start the operation of the VRDXL fan automatically. Operation will continue until the temperature at the klaxon switch cools. This is to prevent excessive steam from rising out of the unit and wetting the ceiling.

IMPORTANT: The VRDXL is wired to always have power in most cases, so it is very important to disconnect all external power and check for voltage before servicing the unit.

If the VRDXL is installed on a wall, the rear duct adapter ring should be removed.

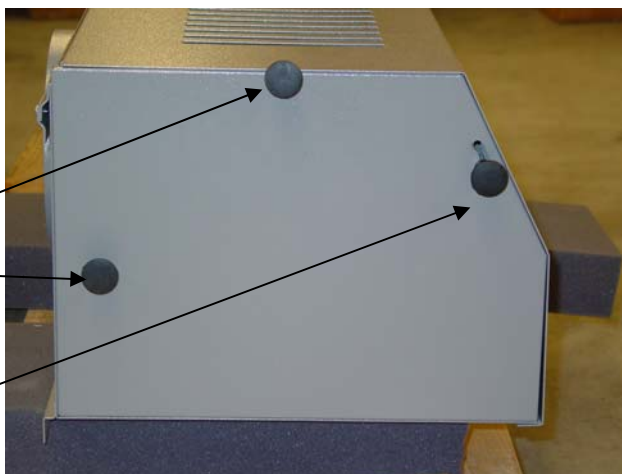


On the left side of the VRDXL are three knobs that are used to open or close the top vent, rear vent, and to adjust the angle of the air flow discharge.

Top Vent Knob

Rear Vent Knob

Air Flow Director Knob



5. MAINTENANCE

The only maintenance to be performed on the VRDXL is to periodically clean or replace the internal air filter as it becomes dirty.

6. REPLACEMENT PARTS

Part No.	Description
1312555AXX	Motor fan for VRDXL
13C289A002	Air filter for VRDXL
1312638AXX	Fan motor
VRDXLK001U	Klaxon Kit
5627980axx	Motor capacitor
SHOSE0003	30 mm rubber steam hose

7. TROUBLE-SHOOTING

Problems	Checks	Solutions
The VRDXL does not start, even though steam is coming out of the manifold.	There is no power to the VRDXL. The klixon temperature sensor is not in contact with the steam manifold, or is defective. Capacitor may be bad and does not start motor. Motor may be defective.	Check incoming power supply and fuses, external as well as in unit. Adjust position or replace klixon switch. Replace capacitor. Replace blower motor.
The VRDXL gurgles or spits during operation.	The steam hose is not properly sloped and is allowing condensate to build up. 90° elbows are used just below the steam lines on the VRDXL. The condensate hose is blocked or kinked and cannot drain. The VRDXL is not mounted level.	Correct or support the steam hose for proper draining. Replace the 90° elbows with 45° elbows. Correct the condensate hose and insure it can drain. Level the VRDXL.
The VRDXL never shuts down, even when no steam is present in the manifold.	The klixon temperature sensor is defective.	Replace the klixon temperature sensor.
The VRDXL hums but does not blow any air.	Capacitor may be bad and does not start motor. Motor may be defective.	Replace capacitor. Replace blower motor.
Humidity cannot be maintained in the space.	Humidifier undersized. VRDXL introducing outside air from the rear intake vent	Check load calculations and resize humidifier. Close rear air intake vents on VRDXL.
VRDXL is noisy or overheats.	Filter is dirty and restricting air flow. VRDXL air intake vents are closed. Construction dirt or paint has gotten into the fan bearings. Bearings may be failing.	Clean or replace filter. Open VRDXL air intake vents. Clean or replace fan motor.

8. TECHNICAL SPECIFICATIONS

Dimensions:	27.25" wide x 10.4" high x 14" deep
Weight:	57 lbs.
Volts/Phase/Hz:	208-230 Vac, 1 Phase, 50-60Hz
Power Input:	35 Watts
Air Volume:	380 CFM
Noise Level:	40 dBA
Construction:	16 gauge powder-coated steel
Ambient Conditions:	34 to 104 °F, 0 to 80%RH non-condensing
Max. Steam Capacity:	100 lbs/hr (45 Kg/hr)

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