



# ***INSTALLATION & OPERATION MANUAL***

## **VHMD SERIES**

**HumidiHeat™**

**HOLDING & TRANSPORT CABINETS**

**MODELS:**

<b>VHMD5</b>	<b>ML-138046</b>
<b>VHMD13</b>	<b>ML-138045</b>
<b>VHMD15</b>	<b>ML-138044</b>



For additional information on Vulcan-Hart or to locate an authorized parts and service provider in your area, visit our website at [www.vulcanhart.com](http://www.vulcanhart.com)

## **IMPORTANT FOR YOUR SAFETY**

**THIS MANUAL HAS BEEN PREPARED FOR PERSONNEL QUALIFIED TO INSTALL ELECTRICAL EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL.**

### **FOR YOUR SAFETY**

**DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**

### **WARNING**

**IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE, OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY, OR DEATH.**

**READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING EQUIPMENT.**

**IN THE EVENT OF A POWER FAILURE,**

**DO NOT ATTEMPT TO OPERATE THIS DEVICE**

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# GENERAL

## INTRODUCTION

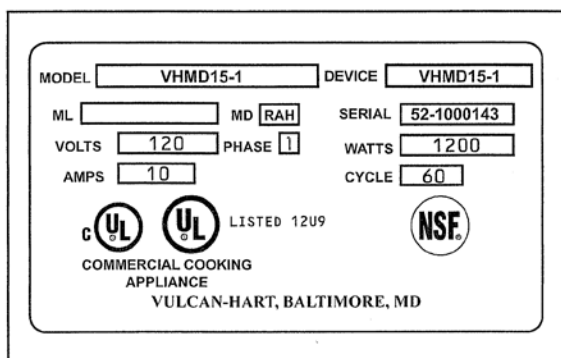
Vulcan-Hart HumidiHeat™ Holding & Transport Cabinets are produced with quality workmanship and material. Proper installation, usage, and maintenance of your cabinet will result in many years of satisfactory performance.

It is suggested that you thoroughly read this entire manual and carefully follow all of the instructions provided.

The VHMD Series Holding & Transport Cabinets provide an efficient means of transporting and holding bulk prepared foods at proper serving temperatures.

## INSTALLATION

Before installing, verify that the electrical service agrees with the specifications on the rating plate located on the lower back corner of the cabinet. If the supply and equipment requirements do not agree, do not proceed with unpacking and installation. Contact your Vulcan-Hart Customer Service Department immediately. (Fig. 1)



(Fig. 1)

### UNPACKING:

The Cabinet was inspected before leaving the factory. The transportation company assumes full responsibility for safe delivery upon acceptance of the shipment. Immediately after unpacking, check for possible shipping damage to the cabinet.

***If the cabinet is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.***

Carefully unpack and place in a work accessible area as near the installation position as possible.

1. Open the door and carefully remove any packaging materials and the retaining straps that hold the tray slides and tray slide upright side supports.
2. Peel off vinyl protection film.
3. Remove cardboard element cover protector from cabinet bottom.
4. Remove adjustable tray slides from box.
5. Remove the tray slide supports and install them in the cabinet.
6. Hook the openings in the flat flange of the support over two vertical carriage bolts on the interior of the cabinet.
7. Make sure all flanges on the four supports face the door opening.

8. Install tray slides in the cabinet.
9. Ensure that the hook on the end of the tray slide is up.

**CLEANING:**

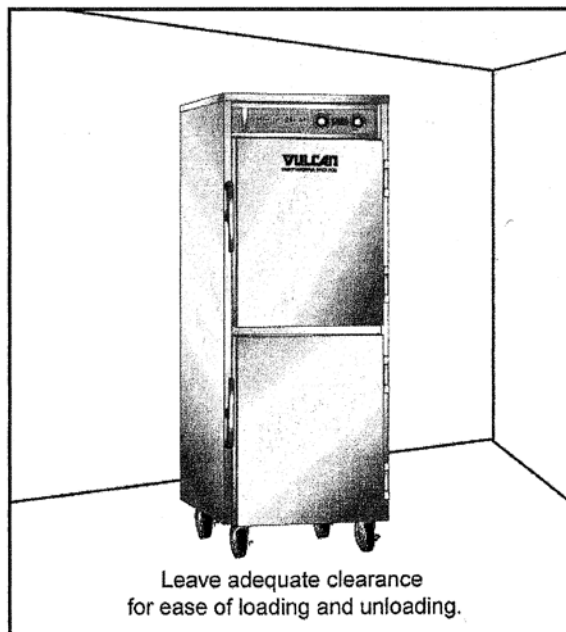
**The cabinet should be thoroughly cleaned prior to putting into service.**

Use a mild soap and water solution to clean the interior of the unit. Never use harsh chemicals or abrasive pads to clean the unit.

**LOCATION:**

For efficient cabinet operation, choose a location that will provide easy loading and unloading without interfering with the final assembly of food orders.

The installation location must allow adequate clearances for servicing and proper operation. (Fig. 2)



(Fig. 2)

**ELECTRICAL REQUIREMENTS**

**ELECTRICAL CODES & STANDARDS:**

The cabinet must be installed in accordance with:

**In the United States of America:**

1. State and Local Codes.
2. National Electrical Code, ANSI/NFPA-70 (latest edition.) Copies may be obtained from: The National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269. 1-617-770-3000 [www.nfpa.org](http://www.nfpa.org)

**In Canada:**

1. Local Codes.
2. Canadian Electrical Code, CSA C22.1 (latest edition.) Copies may be obtained from: The Canadian Standard Association. [www.csa.ca](http://www.csa.ca)

**ELECTRICAL CONNECTIONS:**

The cabinet is factory wired for either 110/120 volt or 208/240 volt, single phase operation. All 110/120 volt cabinets are equipped with a 8 foot cord and NEMA 5-15 plug as standard equipment. All 208/240 volt cabinets are equipped with a 8 foot cord and NEMA 6-15 plug. Refer to wiring diagrams in the back of this manual.

The cord and plug supplied is a suitable durable cord with a molded three-prong plug, and is provided with a proper strain relief.

**⚠ WARNING**

**All cabinets are equipped with a three-prong plug. It is imperative that this plug must be connected into a properly grounded three-prong receptacle. If the**

receptacle is not the proper grounding type, contact an electrician. **DO NOT REMOVE THE GROUNDING PRONG FROM THIS PLUG.**

**⚠ WARNING** Verify that the power source matches the Serial Data Plate located on the lower back corner of the cabinet and the plug configuration before the connection is made. (Fig.1)

**⚠ WARNING** Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. (Fig.3)



(Fig. 3)

**PLEASE NOTE:**  
*It is recommended that prior to placing the cabinet in operation that it be preheated at the highest temperature setting for a period of 30 to 45 minutes.*

**LOCKOUT / TAGOUT PROCEDURE**



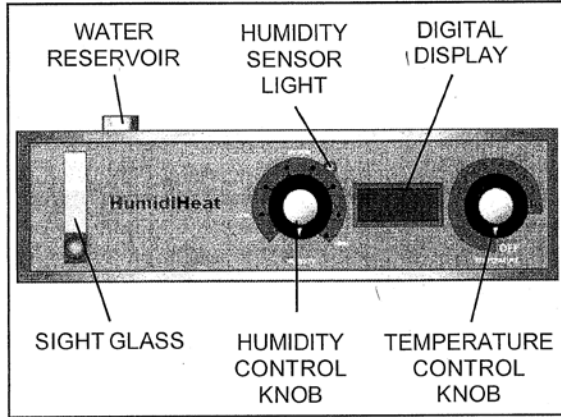
**⚠ WARNING** Always perform the LOCKOUT / TAGOUT PROCEDURE before removing any sheet metal panels or attempting to service this equipment. **FAILURE TO COMPLY WITH THIS PROCEDURE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.**

The Lockout / Tagout Procedure is used to protect personnel working on an electrical appliance. Before performing any type of maintenance or service on an electrically operated appliance, follow these steps:

1. In electrical box, place unit's circuit breaker into OFF position.
2. Place a lock or other device on electrical box cover to prevent someone from placing circuit breaker ON.
3. Place a tag on electrical box cover to indicate that unit has been disconnected for service and power should not be restored until tag is removed by maintenance personnel.
4. Disconnect unit power cord from electrical outlet.
5. Place a tag on cord to indicate that unit has been disconnected for service and power should not be restored until tag is removed by maintenance personnel.

# OPERATION

## CONTROLS



(Fig. 4)

### WATER RESERVOIR

Located on top of cabinet.

### HUMIDITY SENSOR LIGHT

The Humidity Sensor Light will be lit RED until desired humidity has been reached. It will change to GREEN when desired humidity has been reached.

### DIGITAL DISPLAY

Displays selected temperature, internal cabinet temperature,

### SIGHT GLASS

Visual display of the amount of water in the Water Reservoir.

### HUMIDITY CONTROL KNOB

Monitors and controls the amount of humidity inside the cabinet.

### TEMPERATURE CONTROL KNOB

The Temperature Control Knob is a full-range thermostat. It turns power on to the heating elements. The thermostat setting is from 1 to 10. The greater the thermostat setting number, the higher

the temperature. Holding temperature range is from 80°F. to 200°F.

## OPERATING INSTRUCTIONS

1. **Connect to proper electrical supply** as indicated on data plate.
2. **Fill water into Water Reservoir.** (Reservoir holds approx. 1 gallon or 3.78 liters of water.) The water level can be observed through the sight glass.

*To avoid lime build-up, it is recommended that you use only distilled or softened water.*

3. **Turn the Temperature Control Knob to the desired setting, 1 to 10.** The higher the number that is selected, the higher the internal temperature will be.

***The LED Digital Display will display the selected temperature for 3 seconds.***

The Display will then change to display the actual internal cabinet temperature.

The unit will continue heating until the selected temperature has been reached. It will then cycle off and on to maintain the selected temperature. The LED Digital Display will display the fluctuating temperatures.

4. **Turn the Humidity Control Knob to the desired humidity setting.**

*As humidity is increasing to the desired setting, the Humidity Control Sensor Light will be lit RED. When the desired humidity has been reached, the light will change to GREEN.*

**NOTE:**

*The temperature in any heated cabinet will fluctuate as the heating element(s) cycles on and off. The thermostat setting will provide an average temperature in the cabinet. However, the operator should always monitor the food product to insure that it remains at a proper temperature.*

5. Monitor the water level by observing the Sight Glass. **The LED Digital Display will also display H2O when the water is low.**

**SHUT DOWN**

1. Turn the Temperature Control Knob counterclockwise to the OFF position.
2. Turn the Humidity Control Knob counterclockwise to the OFF position.
3. Unplug unit from the electrical power supply.

**⚠ WARNING** *The cabinet and its parts are HOT. Allow the unit to cool before cleaning or servicing.*

**CLEANING**

**⚠ WARNING** Always **UNPLUG ELECTRICAL POWER SUPPLY** before cleaning.

**DAILY:**

1. Unplug electrical power supply.
2. Allow warmer to cool before cleaning.
3. Clean the interior of the cabinet with a mild soap and water. *Never use harsh chemicals or abrasive pads to clean the cabinet.*
4. Rinse and dry with a soft dry cloth.
5. Clean the exterior of the cabinet with a clean damp cloth.

**LIME BUILD-UP:**

To remove lime build-up, unscrew the spray nozzle located at the bottom of the cabinet and soak it in white vinegar until clean. Rinse nozzle with fresh water and reattach. (Fig. 4)



(Fig. 4)  
SPRAY NOZZLE (UNSCREW HERE)

A pliers or 9/16" wrench can be used to unscrew and reattach the spray nozzle. Make sure the spray nozzle does not leak after reattachment.

**Do not over tighten.**



**HEAVY-DUTY CLEANING:**

For heavy-duty cleaning, use warm water, a degreaser, and a plastic, stainless steel, or Scotch-Brite pad. Never rub in a circular motion -- rub gently in the direction of the steel grain. Always rinse thoroughly.

## STAINLESS STEEL CARE

**CLEANING:**

Stainless Steel contains 70 – 80% iron, which will rust if not properly maintained. Stainless Steel also contains 12 – 30% chromium, which forms an invisible passive, protective film that shields against corrosion.

If the protective film remains intact, the stainless steel will remain intact. However, if the film is damaged, the stainless steel can break down and rust.

**PREVENTIVE CARE:**

To prevent stainless steel breakdown, follow these steps:

1. **Never use any metal tools, scrapers, files, wire brushes, or scouring pads** (*except for stainless steel scouring pads,*) which will mar the surface.
2. **Never use steel wool** – which will leave behind particles that will rust.
3. **Never use acid-based or chloride containing cleaning solutions** – which will break down the protective film.

4. **Never rub in a circular motion.** Always rub gently in the direction of the steel grain.
5. **Never leave any food products or salt on the surface.** Many foods are acidic. Salt contains chloride.

**PRESERVING & RESTORING:**

Special stainless steel polishing cleaners can preserve and restore the protective film.

Preserve the life of stainless steel with a regular application of a high-quality stainless steel polishing cleaner, as a final step to daily cleaning.

If signs of breakdown appear, restore the stainless steel surface. First, thoroughly clean, rinse, and dry the surface. Then, on a daily basis, apply a high-quality stainless steel polish according to manufacturer's instructions.

**HEAT TINT:**

Darkened areas, called "heat tint," may appear on stainless steel exposed to excessive heat. Excessive heat causes the protective film to thicken. This is unsightly, but is not a sign of permanent damage.

To remove heat tint, follow the routine cleaning procedure. Stubborn heat tint will require heavy-duty cleaning.

To reduce heat tint, limit the exposure of equipment to excessive heat.

## TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES	REMEDY
Cabinet not operating	Cabinet not connected to power source.	Connect Cabinet to power source.
	No power.	Check circuit breaker
		Check GFCI
GFCI or Ground Fault Circuit Indicator tripped.	Damaged element, wire, power cord, etc.	Contact Authorized Service Provider.
Cabinet is connected to power source, circuit breaker is ON, GFCI is ON, but cabinet is not heating.	Damaged element, wire, power cord, etc.	Contact Authorized Service Provider.
Cabinet does not heat properly or temperature is incorrect.	Door(s) not shut properly or needs adjustment.	Check door is properly shut. Check door gasket. Contact Authorized Service Provider.
Door leaks moisture.	Damaged door gasket or door requires adjustment.	Contact Authorized Service Provider.
Humidity incorrect.	Door not properly shut.	Shut door.
	Door gasket damaged.	Contact Authorized Service Provider.
	Heating elements are off.	Turn Temperature Control Knob to desired temperature.
	Water reservoir is low or empty.	Check water level through Sight Glass. Fill water in water reservoir.

### SERVICE & PARTS INFORMATION

To obtain Service and Parts information concerning this model, contact Vulcan-Hart Service Department at the address listed on the front cover of this manual or refer to our website: [www.vulcanhart.com](http://www.vulcanhart.com) for a complete listing of Authorized Service and Parts depots.

**Customer Service 1-800-814-2028**  
**Technical Service 1-800-814-2028**  
**Service Parts 1-800-814-2028**

**When calling for service, have the model number and serial number available.**

**SPECIFICATIONS**

<b>MODEL No.</b>	<b>HEIGHT IN (mm)</b>	<b>DEPTH IN (mm)</b>	<b>WIDTH IN (mm)</b>	<b>SHIPPING WT. Lb. (kg)</b>	<b>VOLTS</b>	<b>WATTS</b>	<b>AMPS</b>
<b>VHMD5</b>	32.375"	34.25"	25.125	170# (77kg)	120	1200	10
<b>VHMD13</b>	59.375" (1700mm)	34.25" (857mm)	25.125" (724mm)	340# (154kg)	120	1200	10
<b>VHMD15</b>	65" (1702 mm)	34.25" (857mm)	25" (724mm)	370# (167kg)	120	1200	10

**NOTES:**

# WIRING DIAGRAM

