



# ***INSTALLATION & OPERATION MANUAL***

## **V SERIES FOOD HOLDING & TRANSPORTATION CABINETS AND BANQUET CARTS**

### **MODELS:**

VB90	ML-126548
VB96	ML-126550
VB150	ML-126552
VBP5I	ML-138030
VBP7I	ML-126358
VBP13I	ML-126359
VBP15I	ML-126360
VBP33	ML-138075
VBP77I	ML-126361
VBS15	ML-138033
VHA9	ML-138072
VHA18	ML-138073
VHDP5	ML-138035
VHFA9	ML-138070
VHFA18	ML-138071
VHP3	ML-126343
VHP7	ML-126344
VHP8	ML-126345
VHP15	ML-126346
VHP20	ML-126347



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 Holding & Transport Cabinets and Banquet Carts 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 V Series Holding & Transport Cabinets and Banquet Carts 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.

#### **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 wire plate racks (Banquet Carts) or the tray slides and tray slide upright side supports (Holding & Transport Cabinets).
2. Peel off vinyl protection film.
3. On Banquet Carts, lift the plate racks into position on the side brackets.
4. On Holding & Transport Cabinets, remove cardboard element cover protector from cabinet bottom. Remove adjustable tray slides from box. Remove the tray slide supports and install them in the cabinet.
  - a. Hook the openings in the flat flange of the support over two vertical carriage bolts on the interior of the cabinet.
  - b. Make sure all flanges on the four supports face the door opening.Install tray slides in the cabinet. Make sure 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. 1)



Fig. 1

**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:**

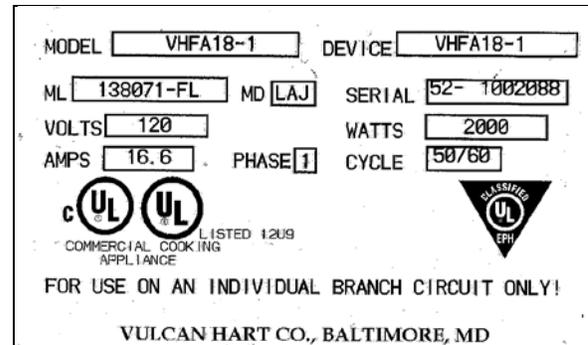
The cabinet is factory wired for either 110/120 volt or 208/240 volt, single phase operation. All 110/120 volt cabinets are equipped with a 8 foot cord and NEMA 5-15 plug as standard equipment. All 208/240 volt cabinets are equipped with a 8 foot cord and NEMA 6-15 plug. Refer to wiring diagrams in the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

**CAUTION:** 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.2)



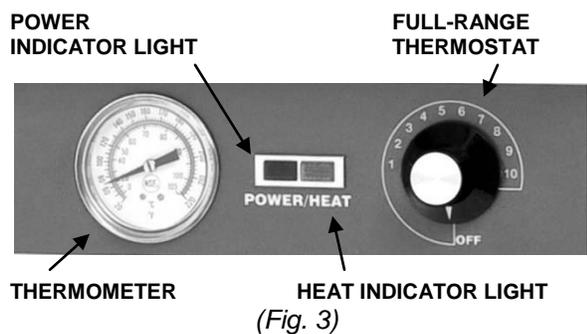
(Fig. 2)

**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.*

## OPERATION

### CONTROLS

**Models:** VB90, VB96, VB150, VBP5I, VBP7I, VBP13I, VBP15I, VBP33, VBP77I, VBS15, VHDP5, VHP3, VHP7, VHP8, VHP15, VHP20



(Fig. 3)

**Power Indicator Light:**

The Red Power Indicator Light indicates power is supplied to the cabinet. The red light will stay lit as long as the cabinet is plugged in.

**Heat Indicator Light:**

The Amber Heat Indicator Light indicates the heating element(s) are heating. The amber light will stay lit as long as the heating element(s) are engaged. Once the predetermined temperature is achieved, the heating element(s) will begin to cycle. During this period, the amber light will turn on and off.

**Thermometer:**

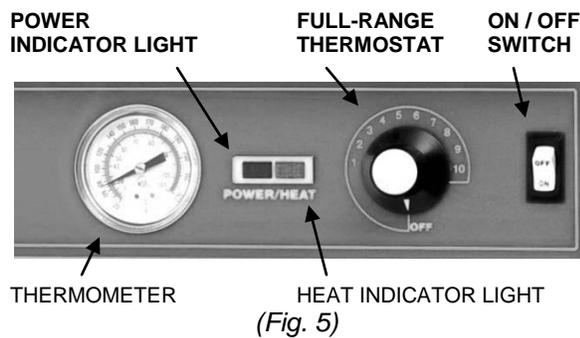
The Thermometer indicates the interior temperature of the cabinet.

**Thermostat:**

The Thermostat turns power on to the heating element(s). The thermostat setting is from 1 to 10. The greater the thermostat setting number, the higher the temperature. (Fig. 4)

Thermostat Setting	Approximate Temperature
1	100°F (37°C)
2	110°F (43°C)
3	120°F (49°C)
4	130°F (54°C)
5	140°F (60°C)
6	150°F (66°C)
7	160°F (71°C)
8	170°F (77°C)
9	180°F (82°C)
10	190°F (88°C)

(Fig. 4)

**Models: VHFA9, VHFA18****Power Indicator Light:**

The Red Power Indicator Light indicates the cabinet is plugged in and the ON / OFF Switch is in the ON position. The red light will stay lit until the ON / OFF switch is in the OFF position.

**Heat Indicator Light:**

The Amber Heat Indicator Light indicates the heating element(s) are heating. The amber light will stay lit as long as the heating element(s) are engaged. Once the predetermined temperature is achieved, the heating element(s) will begin to cycle. During this period, the amber light will turn on and off.

**ON / OFF Switch:**

The ON / OFF Switch supplies electrical power to the cabinet and turns on the fan. The cabinet will not have power unless the switch is in the ON position.

**Thermometer:**

The Thermometer indicates the interior temperature of the cabinet.

**Thermostat:**

The Thermostat turns power on to the heating element(s). The thermostat setting is from 1 to 10. The greater the thermostat setting number, the higher the temperature. (Fig. 4)

**OPERATING INSTRUCTIONS**

Once the cabinet has been connected to the appropriate power source, the cabinet is ready for operation. Begin by turning the thermostat dial to the number **5**. This will cause the heating element(s) to start heating. Once the red light is lit, the thermostat dial can be turned to the desired setting.

When cooking is completed, turn the thermostat dial to the OFF position. Models VHFA9 and VHFA18 turn the thermostat dial to the OFF position and switch the ON / OFF switch to the OFF position.

**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.***

## 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.

### **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 break-down, 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.

## **MAINTENANCE**

### **WARNING:**

**The Cabinet and its parts are *HOT*. Be very careful when Operating, Cleaning, or Servicing the cabinet.**

**ALWAYS: UNPLUG ELECTRICAL POWER SUPPLY BEFORE SERVICING THE CABINET.**

## **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.

## TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES	REMEDY
Cabinet not operating	Cabinet not connected to power source.	Connect cabinet to power source.
	ON/OFF switch not ON (VHFA series)	Turn ON/OFF switch ON
	No power.	Check circuit breaker Check GFCI
GFCI or Ground Fault Circuit Indicator tripped	Moisture problem.	Dry moisture problem.
	Shorted element	Contact Authorized Service Provider.
	Pinched/damaged wire.	Contact Authorized Service Provider.
	Damaged power cord.	Contact Authorized Service Provider.
Cabinet is connected to power source, switch is ON, circuit breaker is ON, but cabinet is not heating.	Defective: element, thermometer, thermostat, etc.	Contact Authorized Service Provider.
Power/Heat Indicator Light not lit.	Light faulty	Contact Authorized Service Provider.
Cabinet does not heat properly	Door not shut properly or needs adjustment	Check door seal and Contact Authorized Service Provider.
	Defective: element, thermometer, thermostat, thermostat requires adjustment	Contact Authorized Service Provider.
Fan not operating (VHFA series)	ON/OFF switch not ON (VHFA series)	Turn ON/OFF switch ON
	Defective fan.	Contact Authorized Service Provider.

### 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**

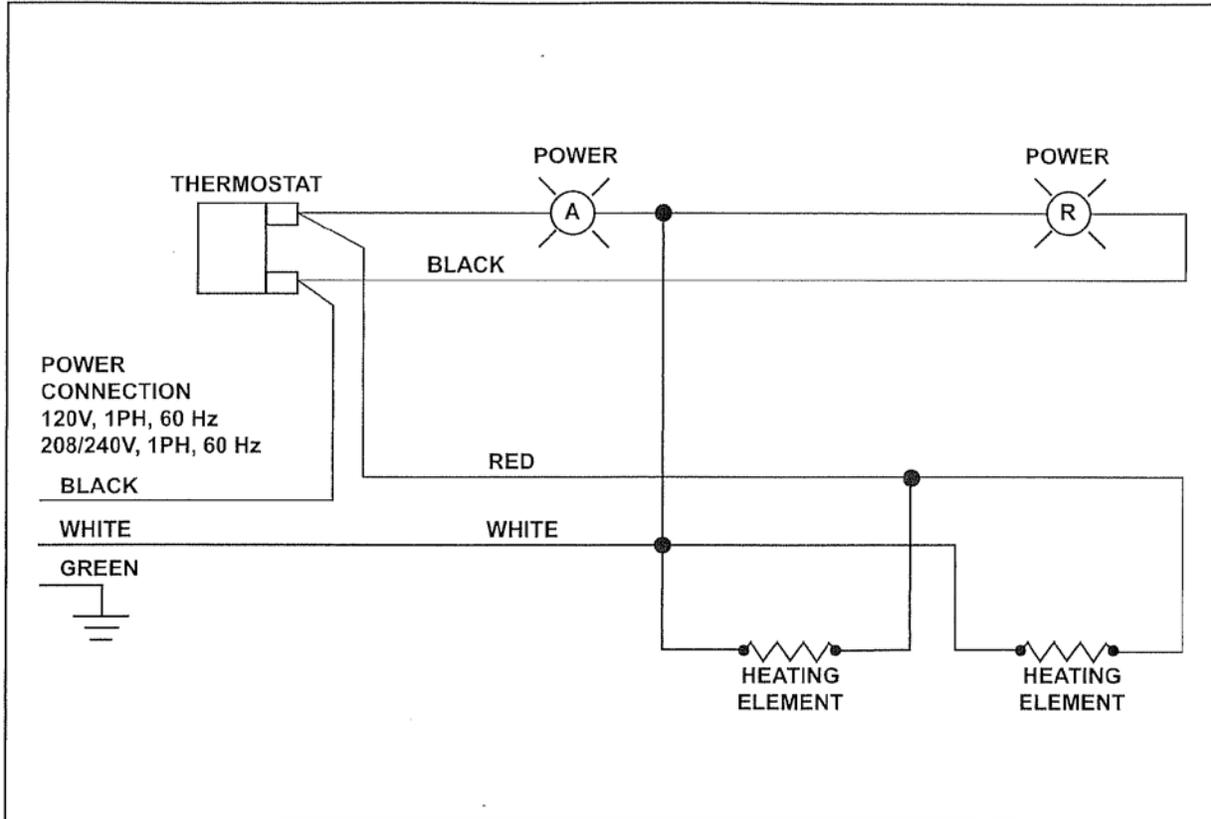
**Technical Service 1-800-814-2028**

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

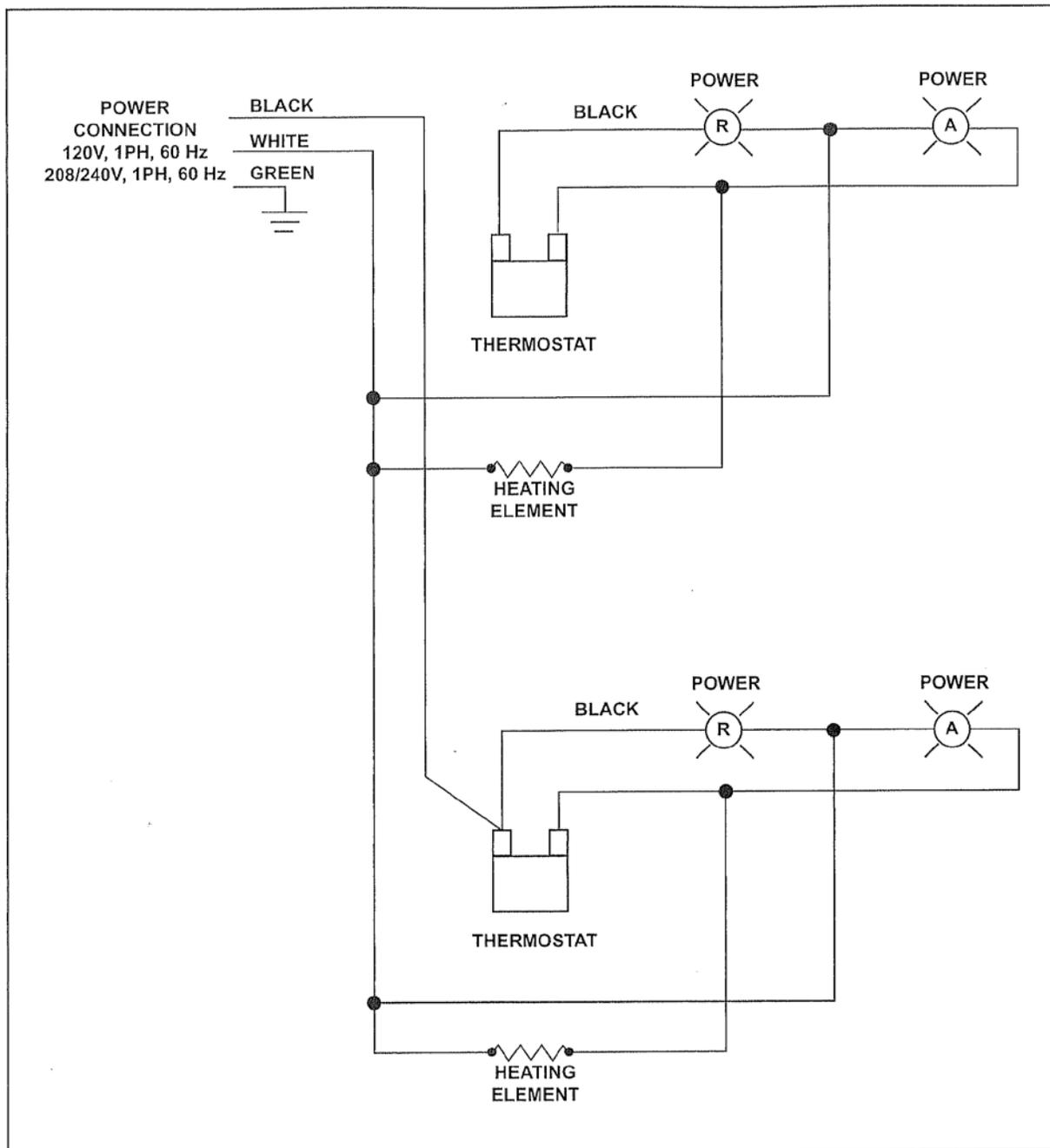
**When calling for service, have the model number and serial number available.**

<b>SPECIFICATIONS</b>							
<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>
VB90	71.75" (1822)	42.75" (1086)	31.75" (806)	242# (110 kg)	120	2000	16.6
VB96	62" (1575)	29" (737)	51.5" (1308)	435# (197 kg)	120	2000	16.6
VB150	73" (1854)	29" (737)	61.25" (1556)	590# (268 kg)	120	2000	16.6
VBP5I	31.5" (800)	33.75" (857)	28.25" (718)	170# (77 kg)	120	1200	10
VBP7I	37.75" (959)	33.75" (857)	28.25" (718)	230# (104 kg)	120	1200	10
VBP13I	57.25" (1454)	33.75" (857)	28.25" (718)	340# (154 kg)	120	1200	10
VBP15I	67" (1702)	33.75" (857)	28.25" (718)	360# (163 kg)	120	1200	10
VBP33	43.5" (1105)	30.75" (782)	25.25" (643)		120	1200	10
VBP77I	72.5" (1842)	31.75" (806)	24.5" (622)	400# (182 kg)	120	2400	20
VBS7	37.625" (956)	30.25" (781)	23.75" (584)	195# (90 kg)	120	1200	10
VBS15	66" (1676)	30.25" (781)	23.75" (584)	315# (144 kg)	120	1200	10
VHA9	43.5" (1105)	30.75" (782)	25.25" (643)		NA	NA	NA
VHA18	71" (1804)	30.75" (782)	25.25" (643)		NA	NA	NA
VHDP5	62.25" (1582)	38" (966)	24.75" (629)	370# (169 kg)	120	2000	16.7
VHFA9	43.5" (1105)	30.75" (782)	25.25" (643)	190# (87 kg)	120	1200	10
VHFA18	71" (1804)	30.75" (782)	25.25" (643)	225# (102 kg)	120	2000	16.7
VHP3	23.5" (597)	23.75" (604)	18" (457)	80# (36.6 kg)	120	600	5
VHP7	28.5" (724)	25" (635)	18.25" (464)	80# (36.3 kg)	120	600	5
VHP8	31.5" (800)	25" (635)	18.25" (464)	90# (40.9 kg)	120	600	5
VHP15	61.25" (1556)	26.75" (680)	21.25" (540)	196# (89 kg)	120	1200	10
VHP20	61" (1549)	29" (737)	39.5" (1003)	264# (120 kg)	120	1200	10

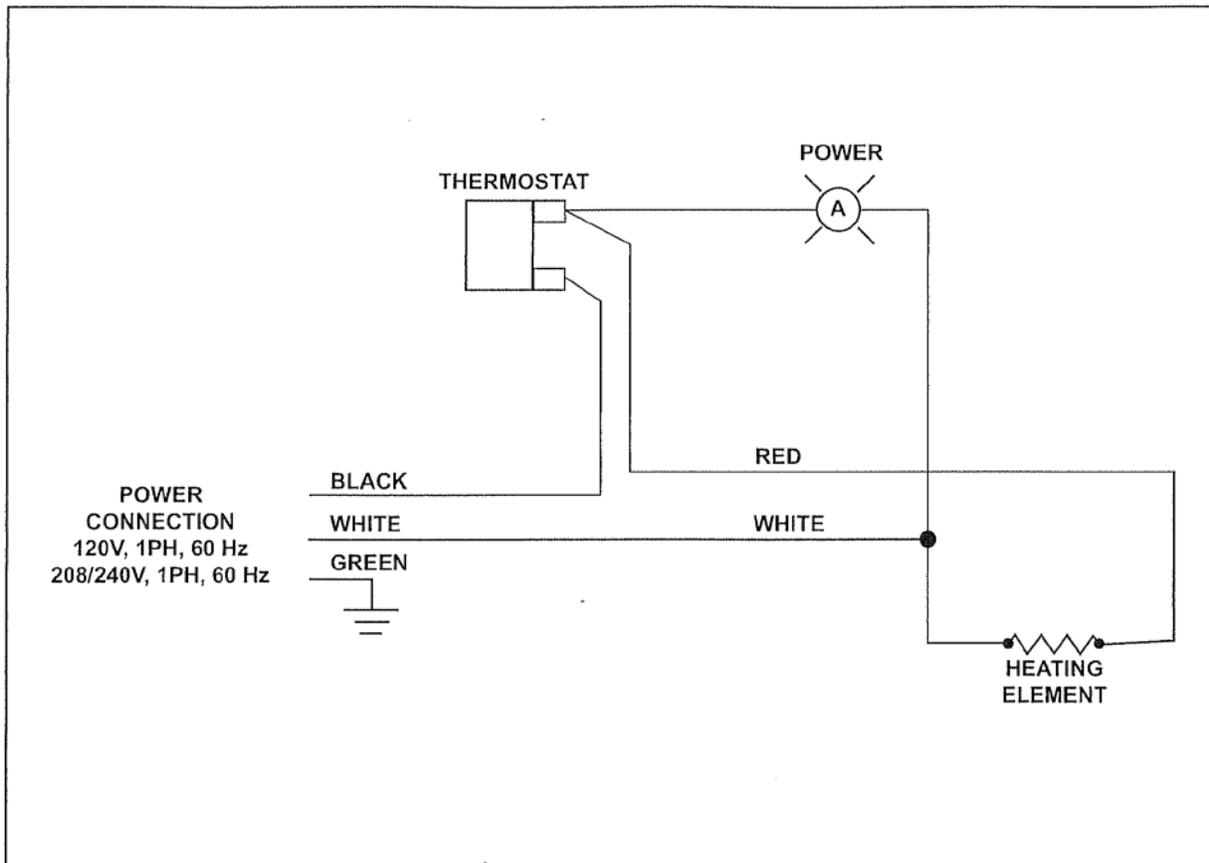
# WIRING DIAGRAMS



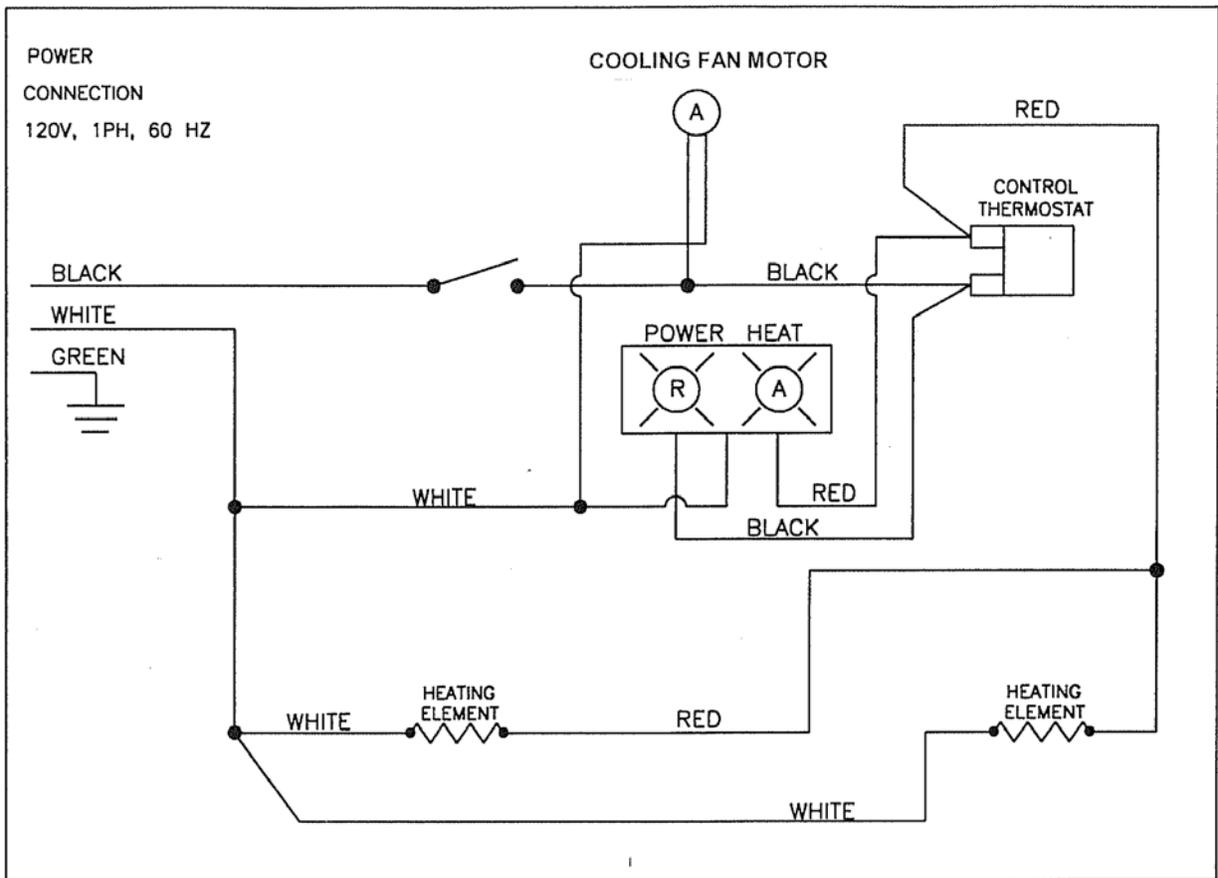
VB90, VB96, VB150, VBP5I, VBP7I, VBP13I, VBP15I, VHP15, VHP20, VBS7, VBS15  
VBP33  
Wiring Diagram



VBP771 Wiring Diagram



VHP3, VHP7, VHP8 Wiring Diagram



VHFA9, VHFA18 Wiring Diagram