



# ***INSTALLATION & OPERATION MANUAL***

## **VRH SERIES OVENS**

**MODELS:**

**VRH8**      ML-152020

**VRH88**     ML-152021



For additional information on Vulcan-Hart or to locate an authorized parts and service provider in your area, visit our website at [www.vulcanequipment.com](http://www.vulcanequipment.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 Ovens are produced with quality workmanship and material. Proper installation, usage, and maintenance of your oven will result in many years of satisfactory performance.

The Vulcan Cook & Hold Oven is more than just an oven – it's a "System"; precisely controlled heat, regulated to retain ascorbic acid and maximize the nutritional value, taste and eye-appeal of food. In this environment, virtually any food product can be prepared to delicious perfection in just ONE oven! "System" food preparation eliminates the need for multiple ovens with duplicate features.

This manual is provided to assist persons responsible for the operation and maintenance of the oven with a simple, but comprehensive understanding of its proper use. We recommend that you thoroughly read this entire manual and carefully follow all of the instructions provided prior to placing the oven into operation.

As with any piece of food service equipment, this oven system requires a minimum of care and maintenance. Recommended procedures are contained in this manual and should become a regular part of the operation of the unit.

***The Vulcan Cook & Hold Oven is the right choice for low temperature food preparation.***

### PRINCIPLES OF COOK & HOLD OVENS

Vulcan Cook & Hold Ovens are designed and perfected for cooking at a lower temperature. The principles of Low Temperature Cooking and Holding can be summarized into several objectives: ***increased product yields, increased profits from increased yields, increased moisture retention, increased tenderization, and consistency of doneness.***

When the Vulcan Cook & Hold Oven finishes the cooking cycle, it automatically switches to the hold cycle. Throughout this manual we recommend holding temperatures such as 140°F (60°C). This temperature refers to the oven's hold temperature setting and not to the internal temperature of the food being roasted. The internal product temperature will run below the hold temperature. (For example: roast beef held at 140°F will be about 130°F internally or medium rare.)

**All meat products contain enzymes. These enzymes perform the important function of tenderizing the meat when they reach temperatures of 100°F (38°C) to 140°F (60°C).** As these enzymes are heated, they break down the connective tissue that is inherent in all red meat products.

The hold cycle allows this natural tenderization process to proceed in an orderly manner. As long as the internal

temperature of the meat does not exceed 140°F, the process will continue. Once the temperature reaches 140°F the process will stop, because the enzymes will be deactivated.

This tenderization process makes the meat more flavorful. It is similar to aging meat before it is sold. The longer the hold, the higher degree of tenderization. ***Each hour of holding is equal to one day of aging.***

### BENEFITS OF COOK & HOLD OVENS

**Superior Results:** Low temperature roasting has been recognized as the best method for preparing meat and poultry because of increased tenderness, more even roasting, and a juicier product.

**Increased Sales:** You will attract more customers and have more repeat business because you are now producing a superior product in your market area. All of your products will be unique, from prime rib and chicken to BBQ ribs, pork roasts, and even bakery items!

**Reduced Energy Costs:** It costs significantly less to run a Vulcan Cook & hold Oven instead of a conventional oven. Also, in most areas, no exhaust hood is needed.

**Reduced Shrinkage of Product:** You can cut your percent of shrinkage from 25 to 30% down to 5 to 10%. This means more servings to sell to your customers! The Vulcan Cook & Hold Oven can pay for itself in just months, depending on your volume.

**Reduced Labor Cost:** Your cooks do not have to come in early to put roasts in or stay late to take them out of the oven. Holding banquet foods in a Vulcan Cook & Hold Oven reduces that last minute party prep to almost nothing.

### COMPARISON OF COOK & HOLD OVENS

**“The Comparison Stops Here” – more than a catchy slogan, it’s a fact.**

*Convection ovens, unlike Vulcan Cook & Hold Ovens, blast high temperature dry air over the product. The end result with convection oven cooking is excessive and unnecessary shrinkage.*

#### **Vulcan Cook & Hold Oven Systems:**

1. Offer a **lifetime heating element warranty.**
2. Provide a **natural roasted brown, caramelized product without coloring agents.** *“You can taste the difference.”*
3. **Do not require a ventilation hood.** (See pg. 5)
4. Are **accurate**, plus or minus 5°F.
5. Are **easy to clean.**
6. Have **stainless steel construction** inside and out.

## INSTALLATION

**Before installing, verify that the electrical service agrees with the specifications on the rating plate located on the lower back corner of the oven. (Fig. 4)** If the supply and equipment requirements do not agree, do not proceed with unpacking and installation. Contact your Vulcan Customer Service Department immediately.

### **UNPACKING:**

The oven 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 oven.

***If the oven 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 oven door(s) and remove packing material.
2. Check under oven or separate package for racks, pans, etc.
3. Peel off vinyl protection film from oven.

### **CLEANING:**

The oven should be thoroughly cleaned prior to putting into service. Refer to cleaning instructions in this manual.

### **LOCATION:**

For efficient oven 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.

### **VRH88**

The VRH88 oven is simply two (2) VRH8 ovens stacked on top of each other. One (1) oven will come with a caster kit and a stacking assembly on top. The oven without casters is placed inside the stacking assembly.

## VENTILATION HOOD REQUIREMENTS

Some local State Codes require the use of a ventilation hood for equipment operating in excess of 250°F. Many will allow operation of Rethermalization Ovens at lower temperatures. Please contact a Service Agency to modify this parameter, if needed to meet local State Codes.

## ELECTRICAL REQUIREMENTS

### ELECTRICAL CODES & STANDARDS:

The oven must be installed in accordance with:

#### **In the United States of America:**

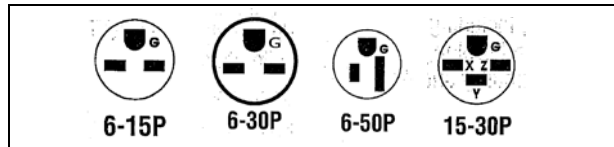
1. State and Local Codes.
2. National Electrical Code, ANSI/NFPA-70 (latest edition.) Copies may be obtained from: The National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269.  
1-617-770-3000 [www.nfpa.org](http://www.nfpa.org)

#### **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 oven is factory wired for single phase 208/240 volt or three phase operation. All ovens are equipped with a 6 foot cord and NEMA 6-15, 6-30, 6-50, or a 15-30 plug as standard equipment. (Fig. 3)

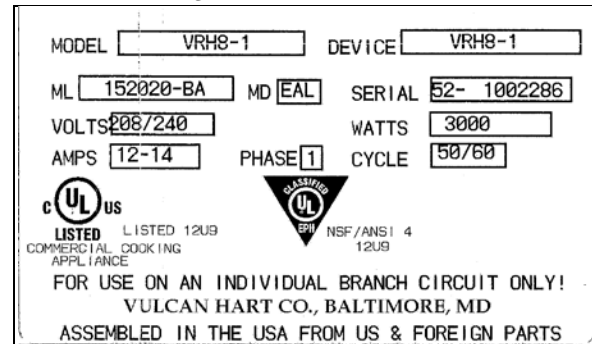


(Fig.3)

Refer to wiring diagrams and Specification Chart in the back of this manual.

The cord and plug supplied is a suitable durable cord with a proper strain relief.

#### SERIAL DATA PLATE



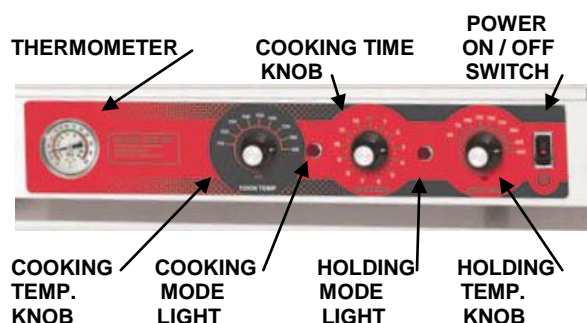
(Fig. 4)

## OPERATION

### CONTROLS

**⚠ WARNING** The Oven and its parts are hot. Be very careful when operating, cleaning, or servicing the oven.

All operating controls are located on the front Control Panel(s). The oven is supplied with individual operating controls for each oven cavity.



**Thermometer:** Indicates the interior temperature of the oven.

**Cooking Time Knob:** Sets the desired cooking time from ½ hour to 12 hours.

**Power ON/OFF Switch:** Turns the oven On or Off.

**Cooking Temperature Knob:** Sets the desired cooking temperature.

**Cooking Mode Light:** Indicates oven is in Cooking Mode.

**Holding Mode Light:** Indicates oven is in Holding Mode.

**Holding Temperature Knob:** Sets the desired holding temperature.

### BEFORE FIRST USE

**⚠ WARNING** The Oven and its parts are hot. Be very careful when operating, cleaning, or servicing the oven.

1. **Thoroughly clean the oven before initial use.** Please refer to cleaning instructions in this manual.
2. **Test the oven** to verify that the oven operates normally. Please refer to “Testing The Oven” procedure in this manual.

### TESTING THE OVEN

**⚠ WARNING** The Oven and its parts are hot. Be very careful when operating, cleaning, or servicing the oven.

Before using the oven for the first time, verify that the oven operates normally.

1. Check that the oven is connected to the correct power source.
2. Set the **COOKING TIME** knob to **0**.
3. Turn the **HOLDING TEMPERATURE** knob to **140° F**.
4. Set Power **ON/OFF Switch** to **ON** position.
5. Check that the Oven Circulating Fan(s) are running.



6. Check that the Holding Temperature Indicator Light is illuminated.

*Each Oven is equipped with cooling fans. The cooling fans may not operate when the oven is first turned on. The cooling fans operate only when the thermostat, to which they are connected, requires it.*

7. Set the **COOKING TIME** knob to **2 hours**. The Holding Temperature Indicator Light will go out and the Cooking Temperature Indicator Light will illuminate.
8. Turn the **COOKING TEMPERATURE** knob to **250° F**. Check the interior rear of the oven cavity to determine that the oven is heating.
9. Turn the **COOKING TIME** KNOB to **0** and set the **HOLDING TEMPERATURE** knob at **250° F**.
10. Check that the Cooking Temperature Indicator Light has gone out and the Holding Temperature Indicator Light has illuminated.
11. Check the interior rear of the oven to ensure that the oven is heating. If all the functions perform satisfactorily, the oven is ready for operation.

## OPERATING INSTRUCTIONS

**▲ WARNING** The Oven and its parts are hot. Be very careful when operating, cleaning, or servicing the oven.

1. Turn **Cooking temperature** knob to desired Cooking temperature.
2. Set **Cooking timer** knob(s) to desired cooking time to **include 30 to 60 minute preheat time**.
3. Turn **Holding Temperature** knob to desired holding temperature.
4. Turn **On/Off Switch** to **ON** position. *On/Off indicator Light and Holding Temperature Light will illuminate.*

When the oven reaches the desired cooking temperature it is ready for use. Keep the oven door closed during the preheating cycle.

## SHUTDOWN

**⚠ WARNING** The Oven and its parts are hot. Be very careful when operating, cleaning, or servicing the oven.

1. Turn **Holding Temperature** knob and **Cooking Temperature** knob **counter-clockwise** until they stop at the Off position..
2. **Open door slightly** to allow ventilation and cool down period.  
*This is to allow oven to properly cool down so components are not damaged.*

**Wait 15 minutes before turning On/Off Switch to OFF** because the cooling fans need to operate during the cool-down period.

3. Turn **On/Off Switch** to **OFF** position.

*The cooling fans will automatically turn off when the proper cool-down temperature is reached.*

## EXTENDED SHUTDOWN

**⚠ WARNING** The Oven and its parts are hot. Be very careful when operating, cleaning, or servicing the oven.

Perform the following procedure to shut down the oven for an extended period of time.

1. Perform the **SHUTDOWN procedure**.
2. **Unplug the oven.**
3. Thoroughly **clean the oven** according to the cleaning procedures in this manual.
4. **Leave the door(s) slightly open** to allow ventilation and preservation of the gasket(s).

## MAINTENANCE

### CLEANING

**⚠ WARNING** The Oven and its parts are hot. Be very careful when operating, cleaning, or servicing the oven.

**⚠ WARNING** *Always unplug electrical power supply before cleaning.*

*Avoid splashing water into upper areas of the oven to prevent damage to electrical components or connections.*

*Never spray the unit with a hose.*

*Never use harsh chemicals or abrasive pads to clean the oven.*

#### **DAILY:**

1. Unplug electrical power supply.
2. Allow oven to go through cool-down period before cleaning.
3. Remove the Interior Side Racks
4. Take the Interior Side Racks to a sink or dishwasher for a thorough cleaning. Use a mild soap and water solution to clean these items.
5. If necessary, clean the interior of the oven with a damp cloth. Wipe dry with a soft dry cloth.
6. Reassemble oven.
7. Clean the exterior of the oven 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. Always rub gently in the direction of the steel grain. Rinse thoroughly and wipe dry with a soft cloth.

### 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.

### **DOOR GASKET CARE**

#### **DOOR GASKET:**

At least once a week, thoroughly check the door gasket for damage/wear. A damaged gasket can cause inefficient and unsatisfactory operation of the oven.

If the gasket requires cleaning:

1. Gently wash gasket using a moist cloth, a mild detergent solution, and warm water.
2. Rinse with a fresh cloth moistened in warm water to remove all traces of detergent.
3. Gently wipe dry with a clean dry cloth.

Never apply food oils, or petroleum lubricants directly to the gasket(s). Petroleum based solvents and lubricants will reduce the gasket's life.

## COOKING

### INTRODUCTION

This cooking guide has been produced for your Vulcan Cook & Hold Oven System. It should be used as a handy reference when using your oven. The guide has been developed to help answer questions which you may have relating to product preparation as well as making you familiar with the operation of your Cook & Hold Oven.

When using your oven, experiment with your own house specialties. The degree of doneness varies based upon individual preferences. These preferences can be easily accomplished by varying the recommended time guidelines in this manual. The guidelines which are presented in this manual are suggested and have been tested to insure product preparation as indicated.

The concept of “Low Temperature Cooking” is not a science, it is an art. Chefs from around the world vary in terms of the doneness and appearance in the products which they prefer. Therefore, we suggest first understanding what your Oven System will do for the multitude of applications available to you.

### COOKING RACK

Depending upon the size of the Cook & Hold Oven, each unit is supplied with a specially designed cooking rack(s). The cooking rack must be used when cooking food products to insure absolute product quality and integrity.

The cooking rack is simply placed inside a standard 18” x 26” sheet tray (2/1 Gastronome) and the product which is to be cooked and held is placed on top of the cooking rack. When more than one product is being prepared, the food products should not be cramped together onto one cooking rack. Sufficient room should separate the products on a single cooking rack to insure proper circulation of air around the product.

When loading the oven, an additional 18” x 26” sheet tray, in an inverted position, (*Fig. 5*) should be placed directly above the food product being prepared. This creates the necessary air flow pattern to produce highly desirable caramelization and uniform roasting of the product.

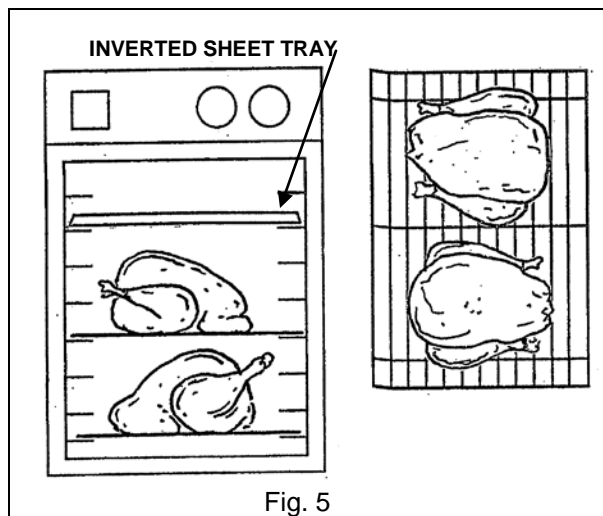


Fig. 5

A helpful hint when loading your food product on the cooking rack is to either line your 18” x 26” sheet tray with foil, or spray with a quality vegetable oil. This helps with easy clean up after use.

## COOKING AND HOLDING GUIDE

Please note that as products vary, as well as other elements such as altitude, so shall actual cooking times and temperatures. These should be adjusted as needed based upon your actual experience. Finished product temperatures should be verified manually, prior to serving, in order to insure food safety.

PRODUCT	(DETAILS) WEIGHT	COOK TIME	COOK TEMP.	HOLD TIME	HOLD TEMP.	MAX. INTERNAL TEMP.	LOADING GUIDELINES
<b>Prime Rib</b>	(USDA #109) 20 lbs.	5 hrs.	225° F	4 hrs. min.	140° F	135° F	2 per shelf
<b>Boneless Rib eye</b>	(USDA #112A) 12 lbs.	3 hrs	225° F	4 hrs. min.	140° F	135° F	3 per shelf
<b>Top Round</b>	(USDA #168) 18-20 lbs.	4½-5 hrs.	225° F	4 hrs. min.	140° F	130° F	2 per shelf
<b>Steamship Round</b>	(USDA #160) 60 lbs.	10 hrs.	225° F	4 hrs. min.	140° F	130° F	1 per shelf
<b>Bottom Round</b>	(USDA #170) 20 lbs.	5 hrs.	225° F	8 hrs. min.	140° F	130° F	2 per shelf
<b>Boneless Strip Loin</b>	(USDA #180) 12 lbs.	3 hrs.	225° F	4 hrs. min.	140° F	130° F	3 per shelf
<b>Whole Tenderloin</b>	(USDA #190) 10 lbs.	2½ hrs.	225° F	2 hrs. min.	140° F	130° F	4 per shelf
<b>Top Sirloin Butt</b>	(USDA #184) 12-14 lbs.	3 hrs.	225° F	4 hrs. min.	140° F	135° F	3 per shelf
<b>Beef Short Ribs</b>	10 lbs.	4 hrs.	225° F	4 hrs. min.	155° F	165° F	1 per shelf
<b>Cubed Steaks</b>	10 lbs.	4 hrs.	225° F	3 hrs. min.	160° F	160° F	1 tray per shelf
<b>Beef Back Ribs</b>	30 lbs.	6 hrs.	225° F	4 hrs.	160° F	160° F	4 per shelf
<b>Beef Stew</b>	(Stew Meat) 10 lbs.	4 hrs.	225° F	6 hrs. min.	150° F	175° F	1 tray per shelf
<b>Corned Beef</b>	12 lbs.	4 hrs.	250° F	4 hrs. min.	150° F	165° F	2 per shelf
<b>Frozen Burgers</b>	7-8 lbs.	45 min.	225° F	4 hrs. max	150° F	165° F	24 per shelf
<b>Fresh Ham</b>	12 lbs.	6 hrs.	250° F	4 hrs.	160° F	165° F	2 per shelf
<b>Cooked Cured Ham</b>	12 lbs.	4 hrs.	250° F	4 hrs.	160° F	135° F	2 per shelf
<b>Pork Back Ribs</b>	(USDA #422) 10 lbs.	4 hrs.	250° F	3 hrs. max.	160° F	175° F	6 slabs per shelf
<b>Pork Spare Ribs</b>	30 lbs.	4 hrs.	250° F	4 hrs.	160° F	175° F	5 slabs per shelf
<b>Fresh Sausages</b>	10 lbs.	2 hrs.	225° F	5 hrs. max	160° F	175° F	10 lbs. per shelf
<b>Pre-Cooked Sausage</b>	10 lbs.	1¼ hr.	250° F	5 hrs. max	160° F	160° F	10 lbs. per shelf
<b>Roast Suckling Pig</b>	30 lbs.	6 hrs.	250° F	3 hrs. min.	160° F	170° F	1 per shelf

PRODUCT	(DETAILS) WEIGHT	COOK TIME	COOK TEMP.	HOLD TIME	HOLD TEMP.	MAX. INTERNAL TEMP.	LOADING GUIDELINES
<b>Chicken Pieces</b>	10 lbs.	2¼ hrs.	250° F	1 hr. max.	150° F	170° F	10 lbs. per shelf
<b>Whole Chickens</b>	20 lbs.	2½ hrs.	250° F	5 hrs. max	150° F	170° F	6 per shelf
<b>Whole Turkeys</b>	20 lbs.	4½ hrs.	250° F	5 hrs. max.	170° F	170° F	2 per shelf
<b>Turkey Breast,</b>	10 lbs.	4 hrs.	250° F	1 hr.	160° F	160° F	3 per shelf
<b>Rack of Lamb</b>	18 lbs.	3½ hrs.	250° F	3 hrs. max	140° F	140° F	15 racks per shelf
<b>Braised Lamb Shanks</b>	10-12 lbs.	4 hrs.	250° F	4 hrs. min.	160° F	180° F	1 tray per shelf
<b>Fish Filets</b>	10 lbs.	40 min.	225° F	4 hrs. max	160° F	160° F	10 lbs. per shelf
<b>Clear Soups</b>	12" x 20" pans	3 hrs.	250° F	Overnight	160° F	175° F	1 pan per shelf
<b>Rice</b>	1 Quart Dry	2 hrs.	250° F	18 hrs. max	150° F	160° F	1 pan per shelf
<b>Frozen Entrees</b>	1 Quart Dry	3 hrs.	250° F	Overnight	160° F	165° F	2 pans per shelf

## RE THERMALIZATION GUIDE

ENTRÉE	OVEN TEMP.	REHEAT TIME	HOLD TEMP.	MIN. HOLD TIME
Baked Rotini	225°F	60 min.	160°F	20 min.
Beef & Noodles	225°F	54 min.	160°F	20 min.
Breaded Chicken Pattie on Bun	225°F	60 min.	165°F	20 min.
Burrito	250°F	48 min.	160°F	20 min.
Cheesy Bread/Italian Dunker Sauce	200°F	54 min.	155°F	15 min.
Cheesy Chili	225°F	54 min.	160°F	15 min.
Chicken & Noodles	225°F	54 min.	160°F	20 min.
Chicken & Rice	225°F	54 min.	160°F	20 min.
Chicken Dippers	225°F	54 min.	160°F	20 min.
Chicken Fryz	225°F	48 min.	160°F	20 min.
Chicken Leg	225°F	60 min.	155°F	20 min.
Chicken Nuggets	225°F	60 min.	160°F	20 min.
Chik'n O's, Zesty	225°F	54 min.	160°F	20 min.
French Toast/Sausage Links	225°F	42 min.	160°F	15 min.
Grilled Cheese Sandwich	200°F	42 min.	155°F	15 min.
Grilled Chicken on Bun	225°F	60 min.	165°F	20 min.
Ham & Cheese English Muffin	200°F	54 min.	160°F	20 min.
Hamburger on Bun	250°F	60 min.	165°F	20 min.
Hot Dog on Bun	225°F	54 min.	160°F	20 min.
Italian Spaghetti	250°F	54 min.	160°F	20 min.
Macaroni & Cheese	225°F	48 min.	155°F	20 min.
Mexican Cheese Sauce	200°F	42 min.	155°F	20 min.
Mini Corndogs	225°F	54 min.	160°F	15 min.
Pancakes/Sausage Links	225°F	42 min.	160°F	15 min.
Pizza Dippers	225°F	54 min.	160°F	20 min.
Pizza, Cheese	200°F	42 min.	160°F	20 min.
Pizza, Pepperoni	200°F	54 min.	160°F	20 min.
Pizza, Sausage	200°F	54 min.	160°F	20 min.
Ravioli	250°F	60 min.	165°F	20 min.
Sausage Mini Bites	225°F	54 min.	160°F	15 min.
Steak Nuggets	225°F	60 min.	160°F	20 min.
Taco Boat	225°F	42 min.	160°F	20 min.
Tacos	225°F	42 min.	160°F	20 min.
Turkey & Noodles	225°F	54 min.	160°F	20 min.
Turkey Manhattan	225°F	54 min.	165°F	20 min.



### GRAMS - LBS/OZ CONVERSIONS

g. lbs. + oz.		g. lbs. + oz.		g. lbs. + oz.		g. lb. + oz.		g. lbs. + oz.	
25	0.9	1025	2 4.2	2025	4 7.4	3025	6 10.7	4025	8 14.0
50	1.8	1050	2 5.0	2050	4 8.3	3050	6 11.6	4050	8 14.9
075	2.7	1075	2 5.9	2075	4 9.2	3075	6 12.5	4075	8 15.7
100	3.5	1100	2 6.9	2100	4 10.1	3100	6 13.3	4100	9 0.6
125	4.4	1125	2 7.7	2125	4 11.0	3125	6 14.2	4125	9 1.5
150	5.3	1150	2 8.6	2150	4 11.8	3150	6 15.1	4150	9 2.4
175	6.2	1175	2 9.4	2175	4 12.7	3175	7 0	4175	9 3.3
200	7.1	1200	2 10.3	2200	4 13.6	3200	7 0.9	4200	9 4.2
225	7.9	1225	2 11.2	2225	4 14.5	3225	7 1.8	4225	9 5.0
250	8.8	1250	2 12.1	2250	4 15.4	3250	7 2.6	4250	9 5.9
275	9.7	1275	2 13.0	2275	5 0.2	3275	7 3.5	4275	9 6.8
300	10.6	1300	2 13.9	2300	5 1.1	3300	7 4.4	4300	9 7.7
325	11.5	1325	2 14.7	2325	5 2.0	3325	7 5.3	4325	9 8.6
350	12.3	1350	2 15.6	2350	5 2.9	3350	7 6.2	4350	9 9.4
375	13.2	1375	3 0.5	2375	5 3.8	3375	7 7.0	4375	9 10.3
400	14.1	1400	3 1.4	2400	5 4.7	3400	7 7.9	4400	9 11.2
425	15.0	1425	3 2.3	2425	5 5.5	3425	7 8.8	4425	9 12.1
450	15.9	1450	3 3.1	2450	5 6.4	3450	7 9.7	4450	9 13.0
475	1 0.8	1475	3 4.0	2475	5 7.3	3475	7 10.6	4475	9 13.9
500	1 1.6	1500	3 4.9	2500	5 8.2	3500	7 11.5	* 4500	9 14.7
525	1 2.5	1525	3 5.8	2525	5 9.1	3525	7 12.3	4525	9 15.6
550	1 3.4	1550	3 6.7	2550	5 10.0	3550	7 13.2	4550	10 0.5
575	1 4.3	1575	3 7.6	2575	5 10.8	3575	7 14.1	4575	10 1.4
600	1 5.2	1600	3 8.4	2600	5 11.7	3600	7 15.0	4600	10 2.3
625	1 6.0	1625	3 9.3	2625	5 12.6	3625	7 15.9	4625	10 3.1
650	1 6.9	1650	3 10.2	2650	5 13.5	3650	8 0.8	4650	10 4.0
675	1 7.8	1675	3 11.1	2675	5 14.4	3675	8 1.6	4675	10 4.9
700	1 8.7	1700	3 12.0	2700	5 15.2	3700	8 2.5	4700	10 5.8
725	1 9.6	1725	3 12.8	2725	6 0.1	3725	8 3.4	4725	10 6.7
750	1 10.5	1750	3 13.7	2750	6 1.0	3750	8 4.3	4750	10 7.6
775	1 11.3	1775	3 14.6	2775	6 1.9	3775	8 5.2	4775	10 8.4
800	1 12.2	1800	3 15.5	2800	6 2.8	3800	8 6.0	4800	10 9.3
825	1 13.1	1825	4 0.4	2825	6 3.6	3825	8 6.9	4825	10 10.2
850	1 14.0	1850	4 1.3	2850	6 4.5	3850	8 7.8	4850	10 11.1
875	1 14.9	1875	4 2.1	2875	6 5.4	3875	8 8.7	4875	10 12.0
900	1 15.7	1900	4 3.0	2900	6 6.3	3900	8 9.6	4900	10 12.8
925	2 0.6	1925	4 3.9	2925	6 7.2	3925	8 10.5	4925	10 13.7
950	2 1.5	1950	4 4.8	2950	6 8.1	3950	8 11.3	4950	10 14.6
975	2 2.4	1975	4 5.7	2975	6 8.9	3975	8 12.2	4975	10 15.5
1000	2 3.3	2000	4 6.5	3000	6 9.8	4000	8 13.1	5000	11 0.4

—1,000 Grams = 1 Kilogram  
 —1 Kilogram = 2.2 Lbs  
 —To Convert Kilograms To Lbs.....

**Formula:** 2.2 Lbs  
 X Kilograms  
 = U.S. Pounds

\* Example From Above: 4.5 Kilograms = **9.9 Lbs**  
 Count Three Decimal Points

<b>TEMPERATURES</b>															
Degrees Fahrenheit to Degrees Centigrade								Degrees Centigrade to Degrees Fahrenheit							
F	C	F	C	F	C	F	C	C	F	C	F	C	F	C	F
-40	-40.00	+30	-1.11	+80	+26.67	+250	+121.11	-40	-40.0	+5	+41.0	+40	+104.0	+175	+347
-38	-38.89	31	-0.56	81	27.22	255	123.89	-38	-36.4	6	42.8	41	105.8	180	356
-36	-37.78	32	-0.00	82	27.78	260	126.67	-36	-32.8	7	44.6	42	107.6	185	365
-34	-36.67	33	+0.56	83	28.33	265	129.44	-34	-29.2	8	46.4	43	109.4	190	374
-32	-35.56	34	1.11	84	28.89	270	132.22	-32	-25.6	9	48.2	44	111.2	195	383
-30	-34.44	35	1.67	85	29.44	275	135.00	-30	-22.0	10	50.0	45	113.0	200	392
-28	-33.33	36	2.22	86	30.00	280	137.78	-28	-18.4	11	51.8	46	114.8	205	401
-26	-32.22	37	2.78	87	30.56	285	140.55	-26	-14.8	12	53.6	47	116.6	210	410
-24	-31.11	38	3.33	88	31.11	290	143.33	-24	-11.2	13	55.4	48	118.4	215	419
-22	-30.00	39	3.89	89	31.67	295	146.11	-22	-7.6	14	57.2	49	120.2	220	428
-20	-28.89	40	4.44	90	32.22	300	148.89	-20	-4.0	15	59.0	50	122.0	225	437
-18	-27.78	41	5.00	91	32.78	305	151.67	-19	-2.2	16	60.8	55	131.0	230	446
-16	-26.67	42	5.56	92	33.33	310	154.44	-18	-0.4	17	62.6	60	140.0	235	455
-14	-25.56	43	6.11	93	33.89	315	157.22	-17	+1.4	18	64.4	65	149.0	240	464
-12	-24.44	44	6.67	94	34.44	320	160.00	-16	3.2	19	66.2	70	158.0	245	473
-10	-23.33	45	7.22	95	35.00	325	162.78	-15	5.0	20	68.0	75	167.0	250	482
-8	-22.22	46	7.78	96	35.56	330	165.56	-14	6.8	21	69.8	80	176.0	255	491
-6	-21.11	47	8.33	97	36.11	335	168.33	-13	8.6	22	71.6	85	185.0	260	500
-4	-20.00	48	8.89	98	36.67	340	171.11	-12	10.4	23	73.4	90	194.0	265	509
-2	-18.89	49	9.44	99	37.22	345	173.89	-11	12.2	24	75.2	95	203.0	270	518
0	-17.78	50	10.00	100	37.78	350	176.67	-10	14.0	25	77.0	100	212.0	275	527
+1	-17.22	51	10.56	105	40.55	355	179.44	-9	15.8	26	78.8	105	221.0	280	536
2	-16.67	52	11.11	110	43.33	360	182.22	-8	17.6	27	80.6	110	230.0	285	545
3	-16.11	53	11.67	115	46.11	365	185.00	-7	19.4	28	82.4	115	239.0	290	554
4	-15.56	54	12.22	120	48.89	370	187.78	-6	21.2	29	84.2	120	248.0	295	563
5	-15.00	55	12.78	125	51.67	375	190.55	-5	23.0	30	86.0	125	257.0	300	572
6	-14.44	56	13.33	130	54.44	380	193.33	-4	24.8	31	87.8	130	266.0	305	581
7	-13.89	57	13.89	135	57.22	385	196.11	-3	26.6	32	89.6	135	275.0	310	590
8	-13.33	58	14.44	140	60.00	390	198.89	-2	28.4	33	91.4	140	284.0	315	599
9	-12.78	59	15.00	145	62.78	395	201.67	-1	30.2	34	93.2	145	293.0	320	608
10	-12.22	60	15.56	150	65.56	400	204.44	0	32.2	35	95.0	150	302.0	325	617
11	-11.67	61	16.11	155	68.33	405	207.22	+1	33.8	36	96.8	155	311.0	330	626
12	-11.11	62	16.67	160	71.11	410	210.00	2	35.6	37	98.6	160	320.0	335	635
13	-10.56	63	17.22	165	73.89	415	212.78	3	37.4	38	100.4	165	329.0	340	644
14	-10.00	64	17.78	170	76.67	420	215.56	4	39.2	39	102.2	170	338.0	345	653
15	-9.44	65	18.33	175	79.44	425	218.33								
16	-8.89	66	18.89	180	82.22	430	221.11								
17	-8.33	67	19.44	185	85.00	435	223.89								
18	-7.78	68	20.00	190	87.78	440	226.67								
19	-7.22	69	20.56	195	90.55	445	229.44								
20	-6.67	70	21.11	200	93.33	450	232.22								
21	-6.11	71	21.67	205	96.11	455	235.00								
22	-5.56	72	22.22	210	98.89	460	237.78								
23	-5.00	73	22.78	215	101.67	465	240.55								
24	-4.44	74	23.33	220	104.44	470	243.33								
25	-3.89	75	23.89	225	107.22	475	246.11								
26	-3.33	76	24.44	230	110.00	480	248.89								
27	-2.78	77	25.00	235	112.78	485	251.67								
28	-2.22	78	25.56	240	115.56	490	254.44								
29	-1.67	79	26.11	245	118.33	495	257.22								

## LOCKOUT / TAGOUT PROCEDURE



**⚠ WARNING** Always perform the Lockout / Tagout Procedure before removing any sheet metal panels or attempting to service this equipment.

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.

## SERVICE & PARTS INFORMATION

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

<b>Customer Service</b>	<b>1-800-814-2028</b>
<b>Technical Service</b>	<b>1-800-814-2028</b>
<b>Service Parts</b>	<b>1-800-814-2028</b>

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

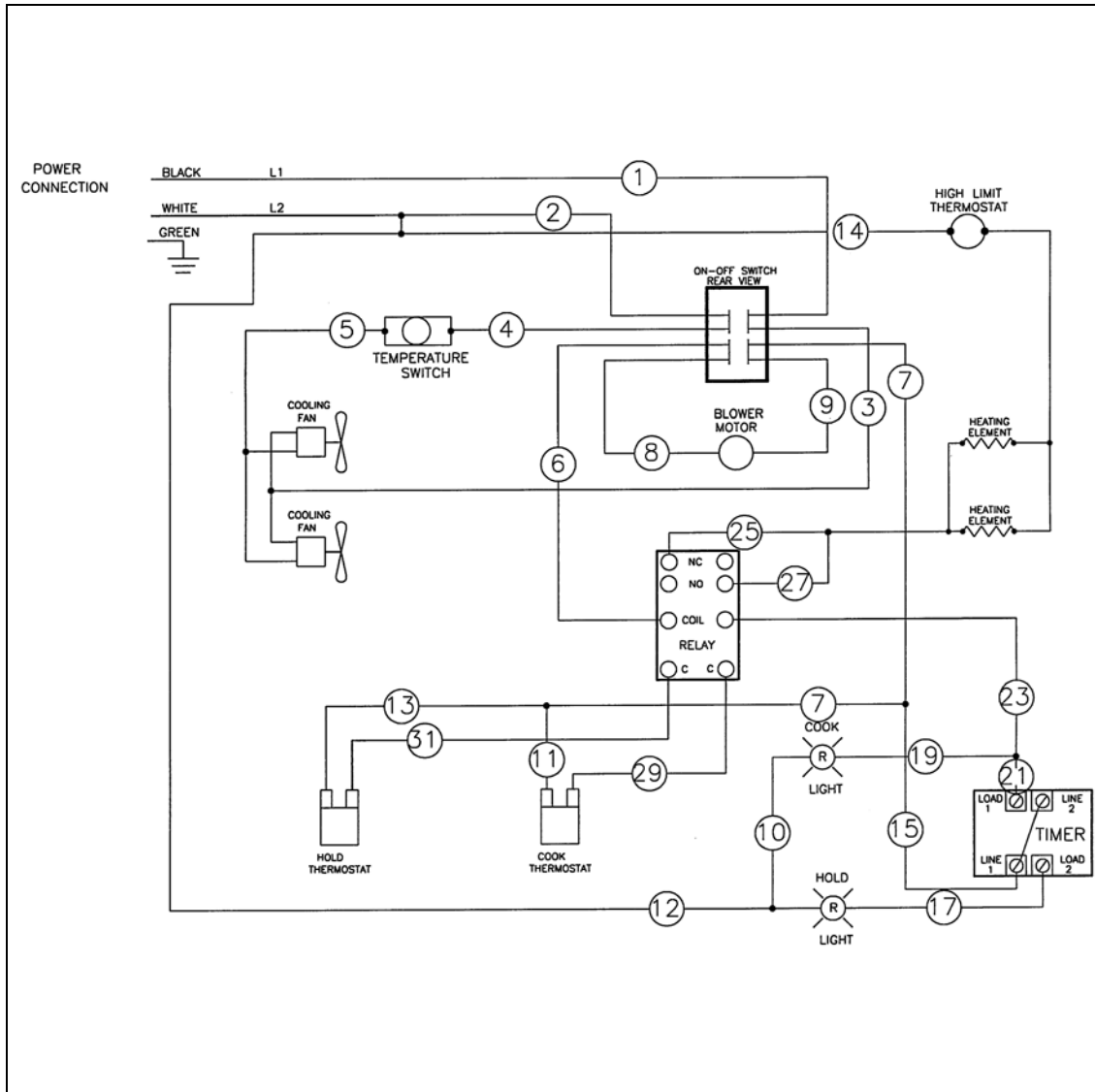
## TROUBLESHOOTING

SYMPTOMS	POSSIBLE CAUSES	REMEDY
Oven not operating	Oven not connected to power source	Connect oven to power source
	ON/OFF switch not ON	Press Power ON/OFF switch to ON
	No power	Check circuit breaker
Indicator Lights are lit but Cooling Fan(s) are NOT operating	Oven is below 150°F.	This is normal when unit is cold. If unit is above 150°F., Contact Authorized Service Provider.
	Defective: connection, wiring, fan, thermostat	Contact Authorized Service Provider
Oven compartment IS heating and Blower Motor IS NOT operating with Power Switch ON	Defective connection or wiring to motor	Contact Authorized Service Provider
Oven compartment IS NOT heating and Blower Motor IS operating with Power Switch ON	Defective Cooking Temperature Thermostat	Set Cooking Thermostat to 250°F., wait several minutes and check the rear of the oven for heating. Both the Power Switch and Cooking Temperature Indicator Lights will be lit. If oven cavity does not heat, Contact Authorized Service Provider
	Defective Holding Temperature Thermostat	Turn Holding Temperature knob to 250°F. and check for heat at rear of oven cavity. Both the Power Switch and Cooking Temperature Indicator Lights will be lit. If the oven cavity does not heat, Contact Authorized Service Provider.
	Defective High-Limit Thermostat or Heating Element.	Contact Authorized Service Provider
Incorrect oven temperature	Thermostat(s) require calibration	Contact Authorized Service Provider

## SPECIFICATIONS

MODEL NO.	PAN QTY.	PAN SIZE	HEIGHT	WIDTH	DEPTH	SHIP WEIGHT	VOLTS	WATTS	AMPS
VRH8	8 ea.	18" x 26"	42.5" 1080 mm	25.5" 650 mm	33" 839 mm	170# 78 kg.	208	2253	10.8
	16 ea.	12"x20"x2½"					240	3000	12.5
VRH88	16 ea.	18" x 26"	79.5" 2020 mm	25.5" 650 mm	33" 839 mm	340 # 156 kg.	208	2253	10.8
	32 ea.	12"x20"x2½"					240	3000	12.5

# WIRING DIAGRAM



VRH8, VRH88



**LIMITED ORIGINAL COMMERCIAL EQUIPMENT WARRANTY**

Vulcan (Vulcan) warrants its new product(s) to be free from defects in material and workmanship for a period of one (1) year from the date of original installation.

Wolf Range is affiliated with Vulcan and thus Wolf products carry the same warranty as Vulcan products.

This Warranty is subject to the following conditions and limitations:

1. This warranty is limited to product(s) sold by Vulcan to the original user in the continental United States and Canada.
2. Original installation must occur within 3 years of date of manufacture, and proof of the installation date must be provided to Vulcan. Equipment must be located at the original installation location regardless if same owner.
3. The liability of Vulcan is limited to the repair or replacement of any part found to be defective.
4. Vulcan will bear normal labor charges incurred in the repair or replacement of a warranted piece of equipment within 50 miles (80 kilometers) of an authorized service agency. Time and travel charges in excess of 50 miles (80 kilometers) will be the responsibility of the person or firm requesting the service.
5. This warranty does not apply to any product(s) which have not been installed in accordance with the directions published in the appropriate installation and operation manuals.
6. Vulcan will bear no responsibility or liability for any product(s) which have been mishandled, abused, misapplied, misused, subjected to harsh chemical action or poor water quality, field modified by unauthorized personnel, damaged by flood, fire or other acts of nature, or which have altered or missing serial numbers.
7. Vulcan does not recommend or authorize the use of any product(s) in a non-commercial application, including but not limited to residential use. The use or installation of product(s) in non-commercial applications renders all warranties, express or implied, including the warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, null and void, including any responsibility for damage, costs and legal actions resulting from the use or installation of product(s) in any non-commercial setting.
8. Adjustments such as calibrations, leveling, tightening of fasteners or utility connections normally associated with original installation are the responsibility of the installer and not that of Vulcan.
9. Exceptions to the one year part warranty period are as listed:
10. Fryer equipment is supplied with limited fry tank warranty based on model. (see separate warranty statement) Refrigeration appliance compressors - 5 years limited. Steam equipment supplied with ScaleBlocker® water filtration system. (see separate warranty statement) Pressure steam boilers - 5 years prorated. (boilers not properly maintained will not be considered for prorated warranty) Rubber seals, light bulbs and gaskets - 90 days from installation. Heating elements on drawer warmers, cook & hold ovens, and holding & transport cabinets have a lifetime warranty. Drawer slides in drawer warmers have a lifetime warranty. Labor, travel and mileage will be covered during the first year only.
11. Original purchased replacement parts manufactured by Vulcan will be warranted for 90 days from the parts invoice date. Exceptions are stainless steel fry tanks, refrigeration appliance compressors and pressure steam boilers which will be warranted as stated in item 9. This warranty is for parts cost only, and does not include freight or labor charges.
12. This states the exclusive remedy against Vulcan relating to the product(s), whether in contract or in tort or under any other legal theory, and whether arising out of warranties, representations, instructions, installations or defects from any cause. Vulcan shall not be liable, under any legal theory, for loss of use, revenue or profit, or for substitute use or performance, or for incidental, indirect, or special or consequential damages or for any other loss of cost of similar type.
13. THIS WARRANTY AND THE LIABILITIES SET FORTH HEREIN ARE EXCLUSIVE AND IN LIEU OF ALL OF THEIR LIABILITIES AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE AND CONSTITUTES THE ONLY WARRANTY OF VULCAN WITH RESPECT TO THE PRODUCT(S).

**TERMS:** Vulcan payment terms are 1% 10 days, net 30 days from date of INVOICE. A cash discount will not apply to shipping charges, C.O.D. payment or sight draft billing. All orders are subject to approval by Vulcan.

**PRICES:** All prices in: EASTERN ZONE – F.O.B. Baltimore, MD, Covington, KY, Kansas City, MO

WESTERN ZONE – F.O.B. Albuquerque, NM, Salt Lake City, UT  
(Call Vulcan for geographic boundaries.)

Prices do not include any municipal, state or sales tax. Options in this list are available only at time of shipment. Accessory items can be ordered at any time from current published equipment price lists, or from any Vulcan Parts Depot. Accessory exceptions are flue risers and convection oven stands. Order as you would standard equipment.

**CHECK THAT ORDERS ARE COMPLETE – DO THEY INCLUDE:**

1. Type of gas and/or specific electric characteristics (voltage, phase and hertz).
2. Name and address of end-user installation (if known).

3. Position of units that are to be battered together (left to right facing equipment). A sketch is preferable.

4. Optional equipment and/or accessories.

5. Type of finish.

6. Specify shipping date (month, day & year).

**SHIPMENTS:** Upon acceptance of the merchandise by the carrier, title passes to the purchaser and the Vulcan equipment travels at the risk of the purchaser.

**RETURN POLICY:** Vulcan products cannot be returned without prior written factory authorization. The restocking charge is 20% plus any costs to recondition the equipment. No returns accepted after 90 days from date of invoice. Returns for credit must be freight prepaid. Orders cancelled or changed after production has started are subject to a charge of up to 20%. Any special merchandise built to a buyer's specifications will be subject to a 50% minimum cancellation charge.

**PRICES SUBJECT TO CHANGE WITHOUT NOTICE.**

