



## VULCAN V Series HDR Gas Ranges User Manual

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**VULCAN V Series HDR Gas Ranges**



## **NOTICE**

This manual is prepared for use by trained service technicians and should not be used by those not properly qualified. If you have attended a service school for this product, you may still be qualified to perform the procedures described in this manual. This manual is not intended to be all-encompassing. If you have not attended a service school for this product, you should read, in its entirety, the repair procedure you wish to perform to determine if you have the necessary tools, instruments, and skills required to perform the procedure. Procedures for which you do not have the necessary tools, instruments, and skills should be performed by a trained service technician.

For additional information on Vulcan- Hart or to locate an authorized part 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 GAS EQUIPMENT, WHO SHOULD PERFORM THE INITIAL FIELD START-UP AND ADJUSTMENTS OF THE EQUIPMENT COVERED BY THIS MANUAL. POST IN A PROMINENT LOCATION THE INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION CAN BE OBTAINED FROM THE LOCAL GAS SUPPLIER.

### **IMPORTANT**

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN UNITS AT THE MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.

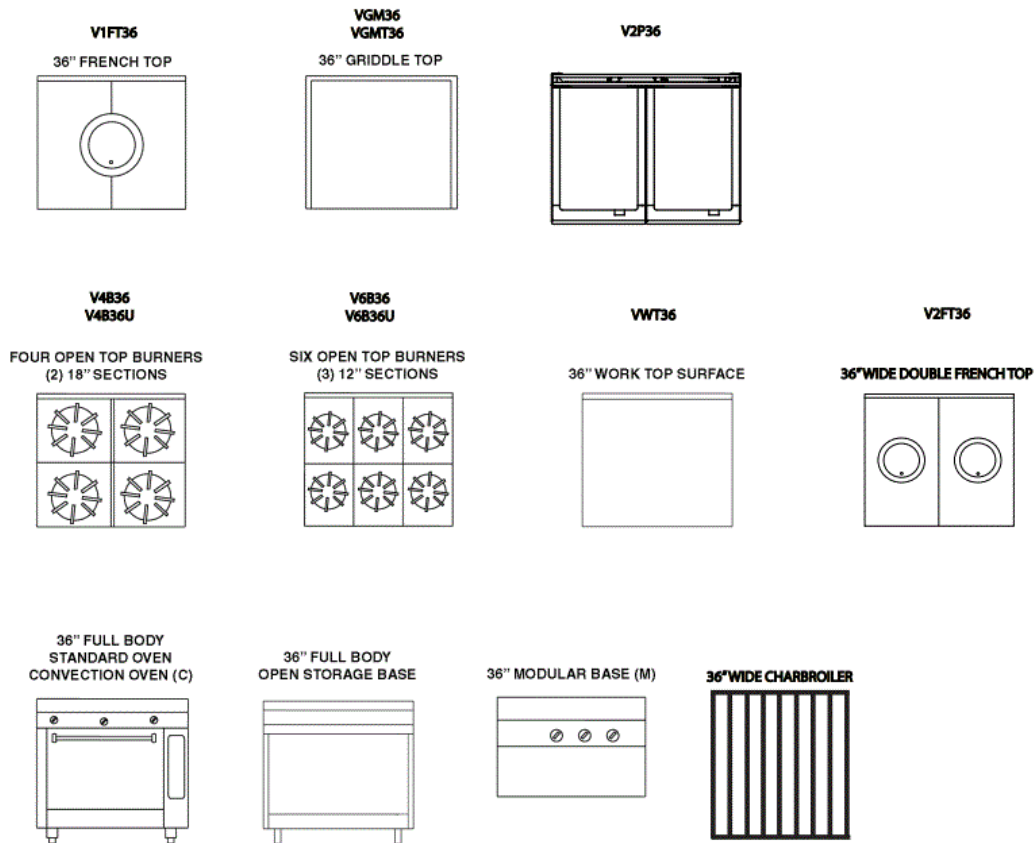
### **FOR YOUR SAFETY**

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

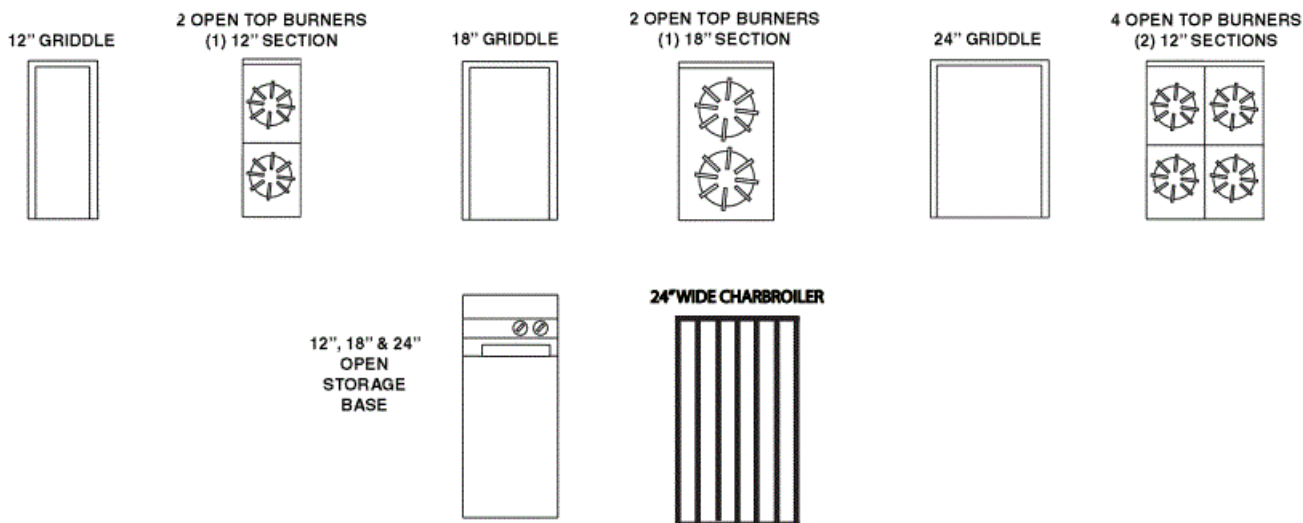
**Warning:** Improper installation, adjustment, alteration or modification, service, or maintenance can cause property damage, injury, or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

IN THE EVENT OF A POWER FAILURE, DO NOT ATTEMPT TO OPERATE THIS DEVICE.

## **CONFIGURATION OF HEAVY DUTY RANGES 36" WIDE RANGES**



## 12", 18" & 24" WIDE EXPANDO RANGES



## Installation, Operation, and Care

### HEAVY DUTY SECTIONAL GAS RANGES

PLEASE KEEP THIS MANUAL FOR FUTURE REFERENCE

#### GENERAL

Heavy-duty sectional ranges are produced with quality workmanship and material. Proper installation, usage, and maintenance of your range will result in many years of satisfactory performance. The manufacturer suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

### INSTALLATION

## UNPACKING

This range 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. If the range is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery. Carefully unpack range(s) and place them in the approximate installation position, whether as a battery or a single stand-alone range. Remove parts (packed in a cardboard box) from oven cavity, cabinet body, or on top of the modular range(s). Remove wire or nuts from the rear of each burner before installing the range. Before installing, check the electrical service (Convection Oven Models only) and type of gas supply (natural or propane) to make sure they agree with the specifications on the rating plate located on the inside of the burner box lower panel. The rating plate will show the voltage, phase, cycle, full load ampere, BTU, as well as type of gas. If the supply and equipment requirements do not agree, do not proceed with the installation. Contact your dealer or manufacturer.

## LOCATION

The equipment area must be kept free and clear of combustible substances.

## INSTALLATION CLEARANCES

- **Open Tops:** 6" at the rear to combustible construction and 0" to non-combustible. 10" at sides for combustible construction and 0" at sides for non-combustible constructions.
- **Hot Tops / Manual Griddles:** 6" at the rear to combustible construction and 0" to non-combustible. 4" at sides to combustible construction and 0" to sides for non-combustible constructions.
- **Thermo-Controlled Griddle/French Plate:** 6" at the rear to combustible construction and 0" to non-combustible. 2" at sides to combustible construction and 0" to sides for non-combustible constructions.
- **Work Top:** 0" at sides and rear to combustible and non-combustible construction.
- **Ovens:** Standard Oven – 3" at sides and rear for combustible and 0" for non-combustible construction.
- **Convection Oven** – 1" at sides and rear for combustible and 0" for non-combustible construction.

The ranges are suitable for installation on combustible floors when 6" (152 mm) adjustable legs are used. When legs are removed, use only on noncombustible floors, curb, or platform, with the front appliance projecting 3" (76 mm) beyond the curb or platform. Ranges with convection ovens should be installed on 6" (152 mm) legs or casters, allowing 6" (152 mm) clearance from the rear of the range. If ranges with convection ovens are installed directly on curbs, without legs, or in back-to-back installations, provisions must be made for adequate air circulation, and these provisions must be approved by the manufacturer's Service Department. Contact the Service Department at the address or phone number shown on the front cover of this manual. All modular ranges are to be installed only on non-combustible floors. The installation location must allow adequate clearances for servicing and proper operation. A minimum front clearance of 35" (889 mm) is required. The range(s) must be installed so that the flow of combustion and ventilation air will not be obstructed. Adequate clearance for air openings into the combustion chamber(s) must be provided. Make sure there is an adequate supply of air in the room to allow for combustion of the gas at the burners.

## INSTALLATION CODES AND STANDARDS

Your range(s) must be installed in accordance with:

### In the United States:

1. State and local codes.
2. National Fuel Gas Code, ANSI/Z223.1/NFPA #54 (latest edition). Copies may be obtained from The American Gas Association, Accredited Standards Committee Z223 @ 400 N. Capital St. NW, Washington, DC 2001 or the Secretary Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471.

**NOTE:** In the Commonwealth of Massachusetts, All gas appliances vented through a ventilation hood or exhaust system equipped with a damper or with a power means of exhaust shall comply with 248 CMR.

3. Vapor Removal From Cooking Equipment, NFPA #96 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy MA 02169-7471.
4. National Electrical Code, ANSI/NFPA-70 (latest edition). Copies may be obtained from The National Fire Protection Association, Batterymarch Park, Quincy, MA 02169-7471.

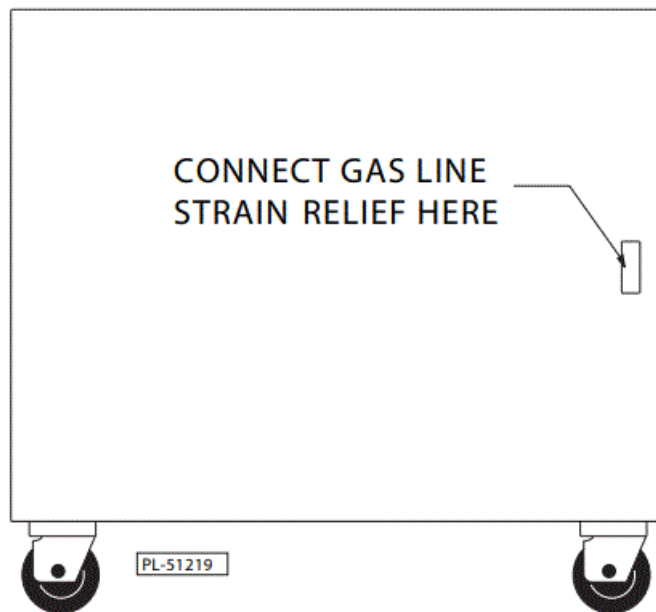
#### **In Canada:**

1. Local codes.
2. CSA B149.1 Natural Gas and Propane Installation Code.
3. CSA C22.1 Canadian Electrical Code (latest edition).

The above are available from The Canadian Standard Association, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.

## **RANGES MOUNTED ON CASTERS**

Ranges mounted on casters must use a flexible connector (not supplied by the manufacturer) that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16, and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI-Z21.41 • CSA 6.9. In addition, adequate means must be provided to limit the movement of the appliance without depending on the connector and the quick-disconnect device or its associated piping to limit appliance movement. Attach the restraining device at the rear of the range as shown in Fig. 1. If disconnection of the restraint is necessary, turn off the gas supply before disconnection. Reconnect this restraint prior to turning the gas supply on and returning the range to its installation position.



Separate instructions for installing casters to the range are included with the casters.

**Note:** If the range is installed on casters and is moved for any reason, it is recommended that the range be leveled front to back and side to side.

## **LEVELING**

### **Curb Installation**

Ranges must overhang curb 3" (76 mm) in front.

### **Convection Oven**

Remove the lower front kick plate. Remove two screws holding the electric gas valve and move the valve off to the

side. Pull oven burner out of compartment through the opening. Adjust four corner bolts to level range. Replace burner valve and kick plate.

### **Floor Installation on Legs**

The 6" (152 mm) adjustable legs must be tightened securely. Level each range by turning the foot portion of the adjustable legs.

### **Lining up Range Battery**

In batteries of ranges, it is recommended that the center range be installed and leveled first. Level each range, one at a time, to line up high shelf and roll front with adjacent range. Bolt the high shelves and roll fronts together.

## **CONNECTION OF MANIFOLDS IN BATTERY**

Two or more ranges can be coupled together at the manifold by removing the front control panel to make necessary connections. Be sure to cap open ends. To connect:

1. In a large battery of eight or more ranges, gas should be fed from both ends of the battery. "T" gas connections can be installed whenever necessary for increased gas supply. For further details, consult your gas company.
2. Align the front edge of the ranges and adjust the legs to bring the manifolds together in line for connection. Clamps may be used to pull the ranges together.
3. Connect the unions between the gas manifolds.
4. Use the battery clip at the back of the range base to hold the units together.
5. Before replacing the manifold covers, check all gas connections for leaks. (See GAS CONNECTIONS in this manual. )

If appliance has rear gas connection, carefully check for open gas lines. The gas pressure regulator must have proper outlet pressure capacity for this battery application.

## **GAS CONNECTIONS**

**Notice:** All gas supply connections and any pipe joint compound used must be resistant to the action of propane gases.

This appliance must be connected with a gas supply line as large or larger ID (net inside diameter) than the gas pipe inlet provided on the rear of the appliance. Connect gas supply to the range(s). Make sure the pipes are clean and free of obstructions, dirt, and piping compound. Codes require that a gas shutoff valve be installed in the gas line ahead of the range(s). An external gas pressure regulator must be installed on the unit at the time of installation. The regulator must be listed by a nationally recognized testing agency. These appliances are rated at the following pressure: Natural Gas – 6" W.C. (Water Column) (1.25 kPa); Propane Gas – 10" W.C. (2.49 kPa).

**Warning:** Prior to lighting, check all joints in the gas supply line for leaks. Use soap and water solution. Do not use an open flame.

- Check all joints prior to the gas valve (solenoid) before lighting the unit.
- Check all joints beyond the gas valve (solenoid) after the unit is lit.

After the piping has been checked for leaks, all piping receiving gas should be fully purged to remove air.

### **TESTING THE GAS SUPPLY SYSTEM**

When test pressures exceed 1/2 PSIG (3.45 kPa), the range and its individual shutoff valve must be disconnected from the gas supply piping system. When test pressures are 1/2 PSIG (3.45 kPa) or less, the range must be isolated from the gas supply system by closing its individual manual shutoff valve.

### **FLUE CONNECTIONS**

DO NOT obstruct the flow of flue gases from the flue duct located at the rear of the range. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel. A minimum of 18" (457 mm) must be maintained between the ventilation system and the cooking surface.

Information on the construction and installation of ventilating hoods may be obtained from the standard for “Vapor Removal from Cooking Equipment,” NFPA No. 96 (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02169-7471.

## **ELECTRICAL CONNECTIONS**

### **Warning:**

- Electrical and grounding connections must comply with the applicable portions of the national electrical code and/or other local electrical codes.
- Appliances equipped with a flexible electric supply cord are provided with a three-prong grounding plug. It is imperative that this plug be connected properly to 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.

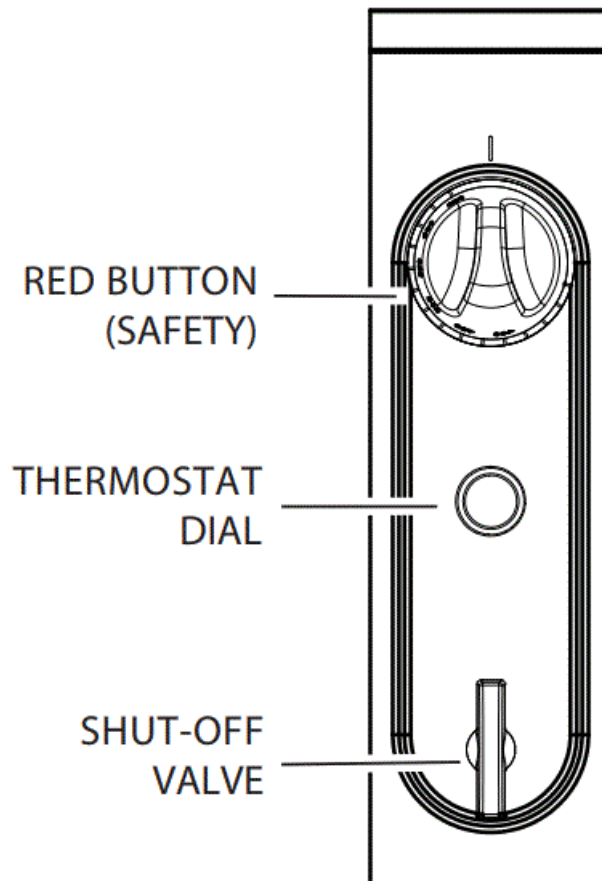
Do not connect the range to the electrical supply until after gas connections have been made.

## **LIGHTING AND SHUTTING DOWN PILOTS**

### **Open Top, Griddle Top, and Hot Top**

1. Turn the main gas supply ON.
2. Turn all top burner valves to ON to purge the gas line of air. (Length of time to purge air will vary.)
3. Turn top burner valve knobs to OFF.
4. Wait 30 seconds.
5. Using a taper, light the pilot(s).
6. If the pilot fails to light, wait 5 minutes and repeat Steps 1 through 5.
  - **Nightly Shutdown:** Turn the burner valve OFF; the pilot will remain lit.
  - **Complete Shutdown:** Turn the burner valve OFF; the pilot will remain lit. Turn the main gas valve OFF.

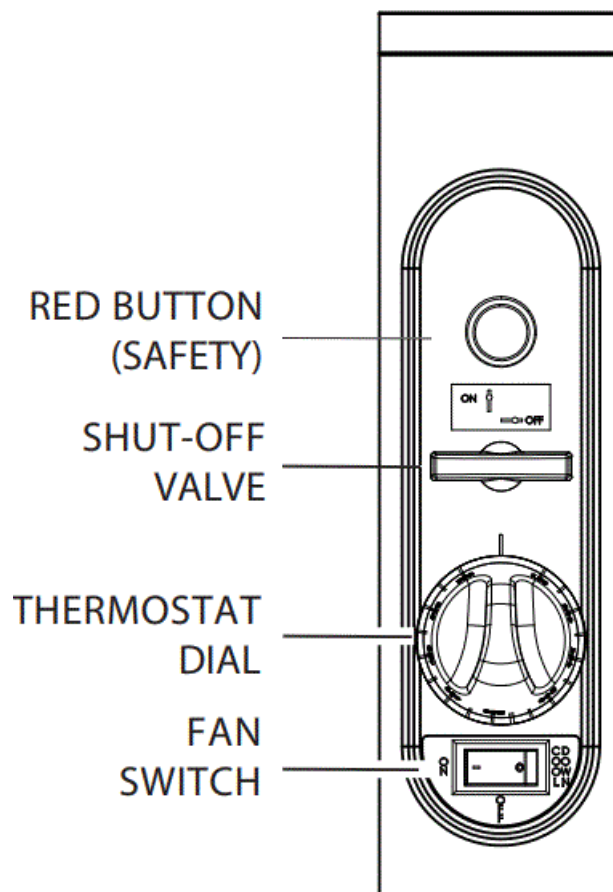
### **Standard Oven – “S” Model**



1. Turn Thermostat and Shut-Off Valve to the OFF position.
2. Wait 5 minutes.
3. Remove the lower panel to locate the pilot cutout.
4. Using a taper, light oven pilot by depressing the red ignition button located on the side control panel below the thermostat knob.
5. Continue to hold down Red Button for at least 30 seconds.
6. When Red Button is released, the Pilot should remain lit.
7. Turn Shut-Off Valve to the ON position and turn the Thermostat to the desired temperature.
8. Replace the lower panel.
9. If the pilot flame becomes extinguished or does not light, repeat Steps 1 through 6.
  - **Nightly Shutdown:** Turn Thermostat OFF; the pilot will remain lit.
  - **Complete Shutdown:** Turn Thermostat and Shut-Off Valve OFF. Turn the main gas valve OFF.

### Convection Oven – “C” Model





1. Connect range to main electrical supply.
2. Turn Thermostat and Shut-Off Valve to the OFF position.
3. Turn Fan Switch to OFF position.
4. Wait 5 minutes.
5. Remove lower panel to locate pilot cut out.
6. Using a taper, light oven pilot by depressing the red ignition button located on the side control panel above the Shut-Off Valve.
7. Continue to hold down the Red Button for at least 30 seconds.
8. When Red Button is released, the Pilot should remain lit.
9. Turn Shut-Off Valve to the ON position and turn the Thermostat to the desired setting.
10. Replace the lower panel.
11. If the pilot flame becomes extinguished or does not light, repeat Steps 1 through 8.
  - **Nightly Shutdown:** Turn Thermostat to OFF; the pilot will remain lit.
  - **Complete Shutdown:** Turn the Thermostat, Shut-Off Valve, and Fan Switch to OFF. Turn the main gas valve OFF.

## OPERATION

**Warning:** The range and its parts are hot. Use care when operating, cleaning, or servicing the range.

### BEFORE FIRST USE

**Griddle Tops:** Before using your griddle, the protective coating that was applied at the factory must be completely removed with a commercial degreaser. After a thorough cleaning, apply a high temperature, salt-free frying oil and you are ready to use the griddle. The griddle requires no "breaking-in" or "seasoning".

### OPERATING SUGGESTIONS

**Standard Oven:** If you have a standard oven, use your normal recipe times and temperatures.

**Convection Oven:** The convection oven does everything a regular oven can do, but with less energy consumption. The oven pre-heats faster, and baking time, temperature settings, and shrinkage are reduced. In general, reduce the temperature to 25°F (10°C) from conventional recipes. Check the product at half the time of the regular recipe. Level pans bake more evenly; warped pans will give uneven baking results.

## **CLEANING**

### **Warning**

- Turn off the gas supply to the machine.
- Disconnect the electrical power and follow lockout / Tagout procedures.

### **Open Top Burners**

**Daily:** Remove grates and clean under and around open burners.

1. Clean bottom drip pan. To remove the drip pan, reach under and lift the rear of the pan about 1" (25 mm), slide the pan to the rear about 1/2" (13 mm), and drop the front end of the pan free. Slide pan forward between the front legs. To replace the pan, reverse this procedure.

### **Weekly**

1. Clean each burner thoroughly. Clean stainless steel or chromed surfaces with a damp cloth and polish with a soft dry cloth. A detergent may be used for cleaning. To remove discolorations, use a non-abrasive cleaner, always rubbing with the grain of the metal.
2. Burner air shutter openings must be kept clean.
3. Main burner ports and throats must be thoroughly cleaned. Venturi must be free from grease and lint. To clean burners, run through a dishwasher. Stand on the air shutter end to air dry. DO NOT insert pick in burner port hole.

### **Griddle Top**

Empty grease daily. Clean griddle top regularly. KEEP THE GRIDDLE PLATE SURFACE CLEAN. To produce evenly cooked, browned products, keep the griddle free of carbonized grease. Carbonized grease on the surface hinders the transfer of heat from the griddle surface to food. This results in spotty browning and loss of cooking efficiency, and carbonized grease tends to stick to the griddled foods, giving them a highly unsatisfactory and unappetizing appearance.

To keep the griddle clean, follow these simple instructions:

#### **After Each Use**

Clean the griddle with a wire brush or flexible spatula.

#### **Daily**

1. Thoroughly clean backsplash, sides, and front. Remove the grease drawer, empty it and wash it out in the same manner as any ordinary cooking utensil.
2. Clean griddle surface thoroughly. Use a griddle stone, wire brush, or stainless steel wool on the surface. Rub with the grain of the metal while the griddle is still warm. A detergent may be used on the plate surface to help clean it, but you must ensure the detergent is thoroughly removed.
3. Clean stainless surfaces with a damp cloth and polish with a soft dry cloth. To remove discolorations, use a non-abrasive cleaner.

## **Exterior**

**Daily:** Clean exterior finish with a mild solution of soap or grease-dissolving cleaner.

## **Range Tops**

### **Daily**

1. Wipe the top while still warm with a soft cloth.
2. Clean drip pan under burners.

### **Weekly**

Boil open top grates and burners in a solution of washing soda and water.

## **Range Ovens**

**Daily:** Clean oven and door daily.

Do not use scouring powder on finishes. Scouring powder is extremely difficult to remove completely. It can build up accumulations that will damage the oven or remove corrosion-resistant finishes.

## **STAINLESS STEEL**

Here are a few simple cleaning procedures that have been found effective for keeping stainless steel equipment clean, sparkling and bright.

### **General Cleaning**

Use ordinary soap or detergent and water for routine cleaning of stainless steel. To prevent water spots and streaks, rinse thoroughly with warm water and wipe dry with a soft clean cloth. The addition of a rinsing agent will also help prevent spotting.

### **Fingerprints**

Fingerprints are sometimes a problem on highly polished surfaces of stainless steel. They can be minimized by applying a cleaner that will leave a thin oily or waxy film.

To use these cleaners, simply wipe on and remove excess with a soft dry cloth. After using, subsequent fingerprints will usually disappear when wiped lightly with a soft cloth or with a cloth containing a little of cleaner. If the surface is especially dirty to start, wash first with soap or detergent and water.

### **Burned-On Foods and Grease**

Soaking with hot soapy water will help greatly to remove burned-on foods and grease.

### **Precautions**

When scraping off heavy deposits of grease or oil from stainless steel equipment, never use ordinary steel scrapers. Particles of ordinary steel may become embedded in, or lodge on, the surface of the stainless steel. These will rust, causing unsightly stains and possible contamination of food. Where it is necessary to scrape, use stainless steel, wood, plastic or rubber tools.

## **MAINTENANCE**

### **Warning**

- Turn off the gas supply to the machine.
- Disconnect the electrical power and follow lockout / Tagout procedures.

## **LUBRICATION**

All moving parts must be checked for wear and lubricated. Contact your local Vulcan authorized servicer. All valves and controls should be lubricated by your local Vulcan authorized servicer, using a high-temperature grease. Motors in these convection ovens are permanently lubricated and require no additional maintenance.

## **FLUE**

Annually check the flue when it is cool to be sure it is free of obstructions.

## **SERVICE AND PARTS INFORMATION**

To obtain service and parts information concerning this model, contact the Authorized Service Agency in your area (refer to the manufacturer's website for a complete listing of Authorized Service and Parts depots) or contact 1-800-814-2028 for Technical service and parts assistance. When calling for service, the following information must be available: model number, serial number, manufacture date (MD), and voltage.

## TROUBLESHOOTING








### OVEN

P R O B L E M	PROBABLE CAUSES
Too Much Bottom Heat Uneven Bake Side Burning	Insufficient heat input. (Call Service) Overactive flue. (Call Service)  Too low temperature. Improper operation.  Improper bypass setting. (Call Service) Fluctuating gas pressure. (Call Service)
Too Much Top Heat	Too high temperature.  Faulty ventilation. (Call Service) Excessive heat input. (Call Service)  The thermostat needs calibration. (Call Service)
Uneven Bake – Side to Side	Range not level side to side.  Oven burner, bottom, or baffles improperly installed.
Pulling to Edge of Pan	Warped pans. Oven not level.
Uneven Bake – Front to Rear	Overactive flue. (Call Service) Range not level front to back. Door not closing properly.
Dried Out Products	Too low temperature. Too long baking time.  Thermostat calibration. (Call Service)
Pilot Outage	The gas supply is not sufficient. (Call Service) The pilot flame is too low. (Call Service) Restriction in the pilot orifice. (Call Service) Problem with safety valve. (Call Service)  <b>CONVECTION OVEN MODELS ONLY:</b>  Cavity leaking. (Call Service) Gasket problems. (Call Service) Convection oven tube blocked.  Blower running backward. (Call Service)
Excessive Meat Shrinkage	The roasting temperature is too high.

### TOP BURNER OPERATION

PROBLEM	PROBABLE CAUSES
Improper Burner Combustion Excessive Valve Handle Temperatures Sticking Top Burner Valves	Improper ventilation. (Call Service) Poor door fit. (Call Service) The oven door was left open.
Poor Ignition	Insufficient gas input. ( Call Service) Poor air-to-gas adjustment . (Call Service) Restriction in the pilot orifice. (Call Service) Restriction in main burner ignition port. (Call Service) Restriction in the control valve. (Call Service) Restriction in the gas orifice. (Call Service)

## Documents / Resources

	<p><a href="#">VULCAN V Series HDR Gas Ranges</a> [pdf] User Manual V Series, HDR Gas Ranges, V Series HDR Gas Ranges, Gas Ranges</p>
	<p><a href="#">VULCAN V Series HDR Gas Ranges</a> [pdf] User Manual V Series, HDR Gas Ranges, V Series HDR Gas Ranges, Gas Ranges</p>
	<p><a href="#">VULCAN V Series HDR Gas Ranges</a> [pdf] User Manual V Series, HDR Gas Ranges, V Series HDR Gas Ranges, Gas Ranges, Ranges, V1FT36, VGM 36, VGMT36</p>
	<p><a href="#">VULCAN V Series HDR Gas Ranges</a> [pdf] User Manual V Series, HDR Gas Ranges, V Series HDR Gas Ranges, Gas Ranges, Ranges, V1FT36, VGM 36, VGMT36, V2P36, V4B36, V4B36U, V6B36, V6B36U, VWT36, V2FT36</p>
	<p><a href="#">VULCAN V Series HDR Gas Ranges</a> [pdf] User Manual V Series, HDR Gas Ranges, V Series HDR Gas Ranges, Gas Ranges, Ranges, V1FT36, VGM 36, VGMT36, V2P36, V4B36, V4B36U, V6B36, V6B36U, VWT36, V2FT36</p>
	<p><a href="#">VULCAN V Series HDR Gas Ranges</a> [pdf] User Manual V Series HDR Gas Ranges, V Series Range, Range, Gas Range, HDR Gas Ranges</p>
	<p><a href="#">VULCAN V Series HDR Gas Ranges</a> [pdf] User Manual V Series HDR Gas Ranges, V Series, HDR Gas Ranges, Ranges</p>

## References

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[Vulcan Restaurant Equipment | Commercial Kitchen Supplier](#)