

# **VULCAN**

## *INSTALLATION & OPERATION MANUAL*

### *MODEL CMR34 GAS CHEESEMELTER*

*ML-52198*



## **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 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, 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.**

# Installation, Operation and Care of MODEL CMR34 GAS CHEESEMELTER

## KEEP THIS MANUAL FOR FUTURE REFERENCE

### GENERAL

Your Vulcan-Hart Gas Cheesemelter is suitable for use in restaurant, commercial or institutional kitchens. The cheesemelter is produced with quality workmanship and material. Proper installation, usage and maintenance of your cheesemelter will result in many years of satisfactory performance.

Vulcan-Hart Company suggests that you thoroughly read this entire manual and carefully follow all of the instructions provided.

CMR34 Cheesemelter Broilers are available in two styles:

1. Elevated Model — mounts over Heavy Duty Gas Range or Gas Restaurant Range (34" width minimum).
2. Free Standing Model — mounts on a non-combustible countertop with a 4" base stand.

### INSTALLATION

Before installing, verify that the type of gas (natural or propane) agrees with the data plate on the body top of the cheesemelter.

### UNPACKING

The cheesemelter was carefully 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 cheesemelter is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

## LOCATION

Do not obstruct the air flow into and around the cheesemelter. This air flow is necessary for proper combustion of gases and for ventilation of the cheesemelter.

Do not obstruct the flow of flue gases from the flue duct of the cheesemelter. It is recommended that the flue gases be ventilated to the outside of the building through a ventilation system installed by qualified personnel.

If mounted over a range equipped with casters, the minimum width of the range is 60 inches and the following restrictions apply:

1. The installation shall be made with a connector that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 (latest edition), and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41 (latest edition).
2. Provide a restraining device for the gas line to limit the movement of the range without depending on the connector and the quick-disconnect device or its associated piping to limit the range movement. Attach the strain relief to the rear of the range (Fig. 1).

If disconnection of the strain relief is necessary, turn off the gas supply before disconnection. Reconnect this restraint before turning the gas supply on and returning the range to its installation position.

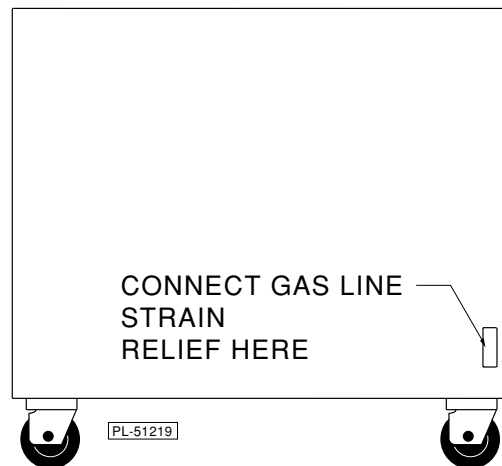


Fig. 1

Maintain a minimum 6" clearance at the sides and rear next to combustible and non-combustible construction. Maintain an 18" clearance from the end of the cheesemelter flue vent to the filters of the hood venting system.

Keep the area free and clear of all combustible substances.

The installation location must allow adequate clearances for servicing and proper operation. A minimum front clearance of 18" is required.

Make sure there are no cross currents within the kitchen (such as wall-type fans, open windows next to the cheesemelter, or fans blowing directly on the cheesemelter).

## INSTALLATION CODES AND STANDARDS

The cheesemelter must be installed in accordance with:

1. State and local codes.
2. In USA . . . National Fuel Gas Code, ANSI Z223.1 (latest edition) available from the American Gas Association, Inc., 1515 Wilson Blvd., Arlington, VA 22209.  
  
In Canada . . . Canadian Standard CAN/CGA-B149.1 Installation for Natural Gas Burning Appliances and Equipment (latest edition), and CAN/CGA-B149.2 Installation for Propane Burning Appliances and Equipment (latest edition), available from The Canadian Gas Association, 55 Scarsdale Road, Don Mills, Ontario, Canada M3B2R3.
3. NFPA 96, Vapor Removal from Cooking Equipment (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

### ASSEMBLY — Free Standing Models

Assemble 4" leg base to bottom of cheesemelter.

### ASSEMBLY — Over Heavy Duty Gas Range

If the cheesemelter is to be mounted over a Vulcan Heavy Duty Gas Range, a back riser is required. This is furnished when ordered as an elevated cheesemelter.

1. With the back down, place the riser on the floor in front of the range. Remove the backsplash panel from the back riser and two mounting bolts at top.
2. Remove the top castings, the back top and the shipping brackets from the range.
3. Carefully lift the back riser over the range, guiding the riser supports (or bayonets) into the channels provided at the rear of the range (Fig. 2). Depending on range width, there may be two or three riser supports.

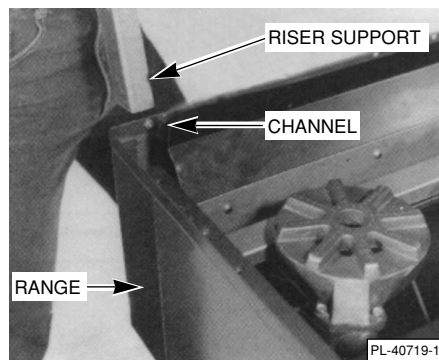


Fig. 2

4. Replace back top(s) and top castings on range.
5. After unpacking, remove the rack, drip pan and drip pan insert from the cheesemelter.
6. **Make sure the mounting brackets are firmly attached to the top of the cheesemelter.** Carefully lift the cheesemelter so that the cheesemelter support brackets are approximately one inch above the flue outlet of the back riser. Carefully guide the mounting brackets attached to the cheesemelter over the mounting brackets on the top of the back riser. Lower the cheesemelter so that all four brackets, two on top and two at the bottom, are supporting the cheesemelter.
7. Reinstall the two mounting bolts at top of the back riser (Fig's. 3 and 4).

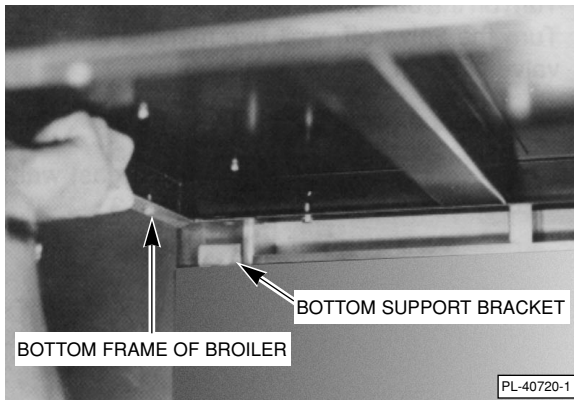


Fig. 3

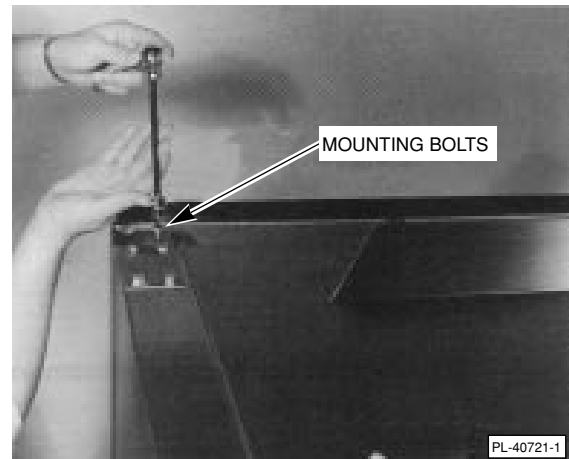


Fig. 4

8. Attach the backsplash panel to the back riser. Attach shelf to back riser if included.

### ASSEMBLY — Over Gas Restaurant Range

If the cheesemelter is to be mounted over a Vulcan Gas Restaurant Range, a back riser is required (furnished when ordered as an elevated cheesemelter).

1. Mount back riser onto Gas Restaurant Range so riser supports slide into the channels on the back of the range (similar to Heavy Duty Range, Fig. 2). Attach screws to channels on rear of range. Mounting brackets for cheesemelter and support beam are assembled onto the back riser at the factory. Remove the two mounting bolts from top of support brackets on back riser.
2. Assemble two support brackets to the top rear corners of the cheesemelter. Remove four bolts on each corner; install brackets under bolts (Fig. 5).
3. Remove bottom cover of cheesemelter (8 screws).
4. Carefully lift the cheesemelter so brackets fit over the rail (beam support) on top of the backsplash and so the bottom of the cheesemelter is supported by the two bottom support brackets (Fig. 6).

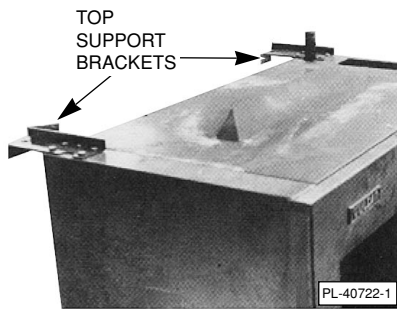


Fig. 5

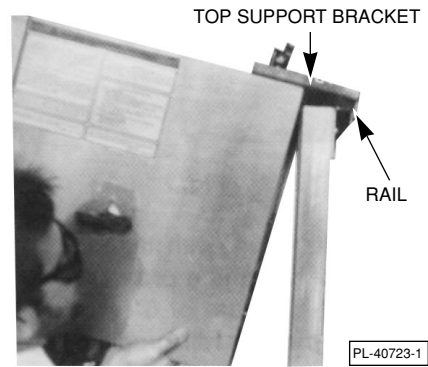


Fig. 6

5. Line up holes on top brackets. Attach self-tapping screw to each top bracket, and attach  $\frac{3}{8}$ -16 bolt to each top bracket. Bolt thread through weld-nut on rail (beam support).
6. Reassemble bottom cover on cheesemelter (8 screws).
7. Attach shelf to back riser if included.

## GAS CONNECTIONS

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

Codes require that a gas shutoff valve be installed in the gas line ahead of the cheesemelter.

Install the pressure regulator to the top gas connection. The arrow on the regulator indicates the direction of the gas flow (Fig. 7).

The regulator must be installed within the tower in an upright position. If it is mounted in any other position, the pressure must be reset (Fig. 8).

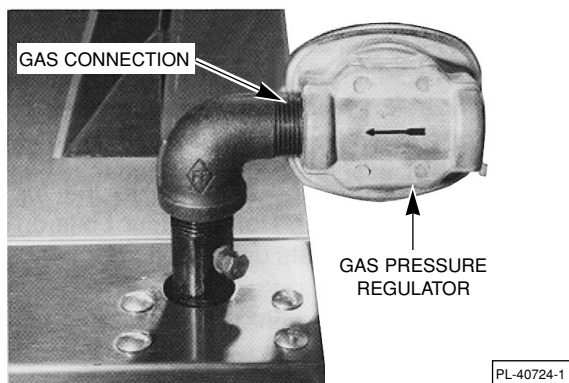


Fig. 7

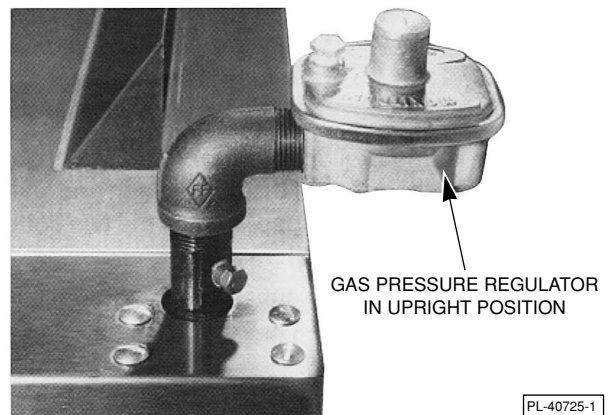


Fig. 8

Standard cheesemelters for use with natural gas are equipped with fixed orifices and a pressure regulator with a preset outlet pressure of 6" W.C. (water column).

Standard cheesemelters for use with propane gas are equipped with fixed orifices and a pressure regulator with a preset outlet pressure of 10" W.C.

Once the regulator is installed, connect to a  $\frac{3}{4}$ " gas line.

**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.

After 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  $\frac{1}{2}$  psig (3.45 kPa), the cheesemelter and its individual shutoff valve must be disconnected from the gas supply piping system.

When testing pressures are  $\frac{1}{2}$  psig (3.45 kPa) or less, the cheesemelter must be isolated from the gas supply system by closing its individual manual shutoff valve.



# OPERATION

**WARNING:** THE CHEESEMELTER AND ITS PARTS ARE HOT. BE CAREFUL WHEN OPERATING, CLEANING OR SERVICING THE CHEESEMELTER.

## CONTROLS — (Fig. 9)

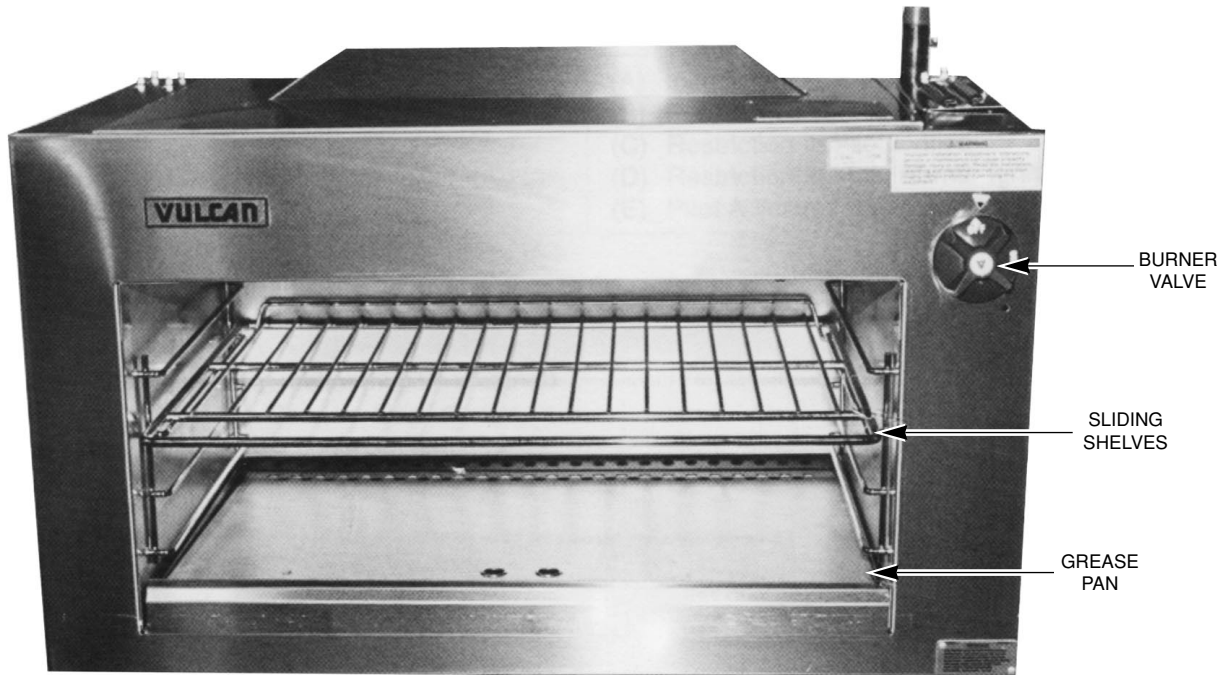


Fig. 9

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- Burner Valve** — The burner valve regulates the flow of gas throughout the cheesemelter. Gas flow is increased by turning the valve counterclockwise. After preheating, the maximum output is not required. Turn the valve clockwise until the desired performance is achieved.
- Sliding Shelves (Rack)** — There are four rack positions. Place the shelf on the rack needed for "cheesemelting". For deeper, longer heat, use lower positions. For thinner foods, or faster cooking, use top shelves.
- Grease Pan (Drip Tray)** — The grease pan collects grease and waste. Do not allow the grease pan to overflow. Empty the grease pan when three-quarters full to reduce the possibility of spillage.

## LIGHTING THE PILOT LIGHT

1. Turn on the main gas supply.
2. Turn on the burner valve and purge air from the line. Turn the burner valve off, wait five minutes.
3. Using a taper, light the pilots (Fig. 10).
4. If the pilots fail to light, turn off the gas, wait five minutes and repeat Steps 1 through 3.
5. Turn burner valve on for ignition.

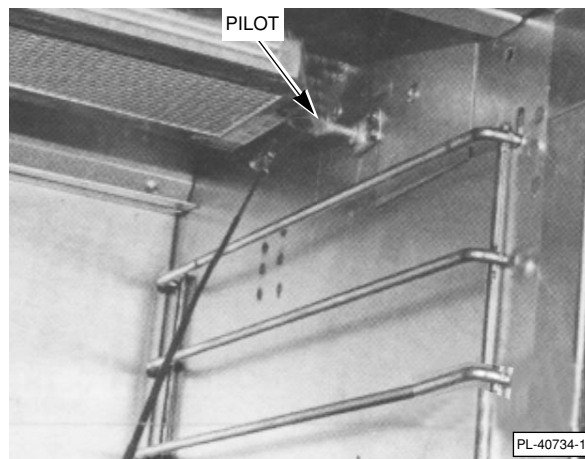


Fig. 10

## Nightly Shutdown

Turn off the burner valve. The pilot will remain lit.

## Seasonal Shutdown

1. Turn off the burner valve.
2. Turn off the pilots.
3. Turn off the main gas supply.

## PREHEATING

Place the rack in its highest position. Turn the burner valve knob completely counterclockwise and preheat for 15 minutes.

## RECIPE AND RACK ADJUSTMENT

Positioning the cheesemelter rack is an important factor in the desired product end results. Position the rack farther away from the burners for thick casseroles and for melting cheese or butter to avoid drying the product. Position the rack closer to the burners for bacon, toast and quick heating, but watch carefully to avoid burning.

## **LOADING AND UNLOADING**

Place the rack in the desired position. Pull the rack out for loading. Load as quickly as possible and avoid spillage. Push the rack into place and cook for the appropriate time. Lower and pull the rack out for unloading.

## **CLEANING**

PermaFinish surfaces can be cleaned using a cloth with detergent solution. An occasional application of silicone base auto polish will help maintain a "like new" appearance.

Stainless steel surfaces may be cleaned with a damp cloth. Stubborn soil can be removed with a detergent solution.

Clean the rack and drip tray every day at nightly shutdown. Allow the cheesemelter to cool before removing the rack and the drip tray for cleaning.

# **MAINTENANCE**

**WARNING:** THE CHEESEMELTER AND ITS PARTS ARE HOT. BE CAREFUL WHEN OPERATING, CLEANING OR SERVICING THE CHEESEMELTER.

## **VENT**

Annually, after the cheesemelter is cool, check the flue and clear any obstructions.

## **SERVICE AND PARTS INFORMATION**

To obtain service and parts information concerning the cheesemelters covered in this manual, contact the Vulcan-Hart Service Depot in your area (refer to listing supplied with the cheesemelter), or Vulcan-Hart Company Service Department at the address or phone number shown on the front cover of this manual.

# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES
Uneven heating Side burning	<ol style="list-style-type: none"> <li>1. Temperature too low</li> <li>2. Improper operation of cheesemelter</li> <li>3. Fluctuating gas pressure</li> </ol>
Too much top heat	<ol style="list-style-type: none"> <li>1. Temperature too high</li> <li>2. Faulty ventilation</li> <li>3. Excessive heat input</li> <li>4. Over-rated (pressure too high or orifice(s) too large)</li> </ol>
Uneven heat side-to-side	<ol style="list-style-type: none"> <li>1. Cheesemelter not level side-to-side</li> <li>2. Cheesemelter burner improperly installed</li> </ol>
Uneven heat front-to-back	Cheesemelter not level front-to-back
Dried out products	<ol style="list-style-type: none"> <li>1. Melting time too long, or product too close to burners</li> <li>2. Over-rated (pressure too high or orifice(s) too large)</li> </ol>
Pilot outage	<ol style="list-style-type: none"> <li>1. Pilot flame too low</li> <li>2. Restriction in pilot orifice</li> </ol>
Poor ignition	<ol style="list-style-type: none"> <li>1. Insufficient gas input</li> <li>2. Poor air-to-gas adjustment</li> <li>3. Restriction in pilot orifice</li> <li>4. Restriction in main burner ignition port</li> <li>5. Pilot adjustment is incorrect</li> </ol>

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