

# INSTALLATION & OPERATION MANUAL FOR *Achiever Charbroilers*

**ITW Food Equipment Group**

## VULCAN

<b>MODELS</b>	<b>MLS</b>
VACB20	ML-135285
VACB25	ML-710543
VACB36	ML-710544
VACB47	ML-710545
VACB60	ML-710546
VACB72	ML-135286

[www.vulcanhart.com](http://www.vulcanhart.com)



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ACB60	ML-710546
ACB72	ML-135286

[www.wolfrange.com](http://www.wolfrange.com)



**VACB47**

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Baltimore, MD 21222

**RETAIN THIS MANUAL FOR FUTURE USE**

**FORM F36950 (05-08)**

## **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 GAS COUNTERTOP CHARBROILERS

## GENERAL

Gas Countertop Charbroilers are designed for commercial use only and feature fast, efficient gas heat. Each burner is controlled by an adjustable gas valve. Cast radiants are located directly above each burner to maintain uniform temperature. Radiants are easily removed for cleaning when cool.

Heavy-duty, cast iron top grates are reversible to allow all or part of the cooking grid surface to be level or sloped. Grooves, cast in the top grates, permit fat runoff and reduce flaring when tilted towards the front. A grease drawer is provided to collect fat run-off; it opens to the front for inspection or drain-off.

Model	Number of Burners	BTU/hr Input Rating
ACB20 / VACB20	3	54,000
ACB25 / VACB25	4	72,000
ACB36 / VACB36	6	108,000
ACB47 / VACB47	8	144,000
ACB60 / VACB60	11	198,000
ACB72 / VACB72	13	234,000

## INSTALLATION

### UNPACKING

Immediately after unpacking, check for possible shipping damage. If the broiler is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Before installing, verify that the type of gas (natural or propane) and the clearance dimensions (see page 4) agree with the specifications on the rating plate which is located on the upper front corner on the right side.

### LOCATION

The installation location must be kept free and clear of combustibles. Do not obstruct the flow of combustion and ventilation air. DO NOT install the charbroiler adjacent to open burners or fryers.

Sufficient air should be allowed to enter the room to compensate for the amount of air removed by any ventilating system and for combustion of the gas burners. Do not obstruct the air flow into and around the appliance. Do not obstruct the flow of flue gases through and above the broiler's top grate. Position the broiler in its final location. Check that there are sufficient clearances to service the broiler and to make the required gas

supply connection(s). Provide 24" clearance at the front for cleaning, maintenance, service and proper operation.

Minimum clearances to combustible construction are 12" to the back and 9" to the sides. Minimum clearances to non-combustible walls are 0" to the rear and 0" to the sides.

### INSTALLATION CODES AND STANDARDS

**The Charbroiler must be installed in accordance with:**

In the United States of America:

1. State and local codes.
2. National Fuel Gas Code, ANSI-Z223.1/NFPA #54 (latest edition). This shall include but not be limited to: NFPA #54 Section 10.3.5.2 for Venting. Copies may be obtained from The American Gas Association Accredited Standards Committee Z223, @ 400 N. Capital St. NW, Washington, DC 20001 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. NFPA Standard # 96 *Vapor Removal from Cooking Equipment*, latest edition, available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

In Canada:

1. Local codes.
2. CAN/CSA-B149.1 Natural Gas Installation (latest edition)
3. CAN/CSA-B149.2 Propane Installation Code (latest edition), available from the Canadian Gas Association, 178 Rexdale Blvd., Etobicoke, Ontario, Canada M9W 1R3

### BURNERS, RADIANTS, AND TOP GRATES

The top grates are shipped flat (top-side down) from the factory for stock pot use. For broiling, the top grates can be left in the flat position or reversed so they slope forward for grease run-off. Remove the cast iron radiants (Fig. 1) and inspect and remove the shipping tape used during shipping to hold the burners in place. Reassemble the radiants and the top grates. Unpack the supercharger burner dividers and install between burners. The tabs on the superchargers should be inserted in the slots at the front of the fire box.

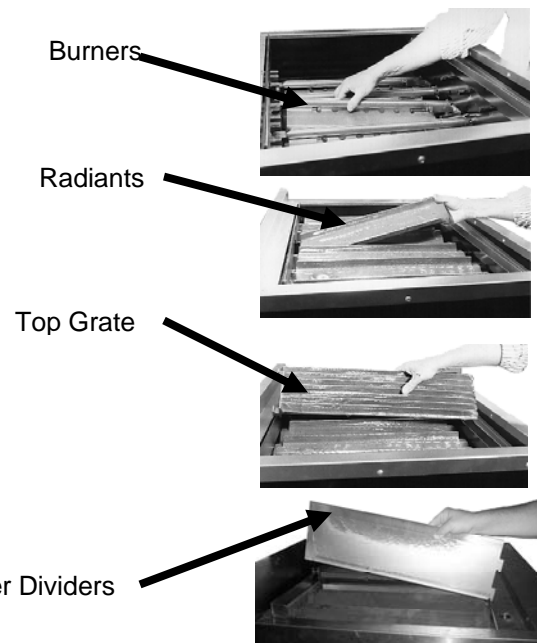


Fig. 1

## LEVELING

It is important that the charbroiler is level front to back and left to right. Areas of uneven heat distribution will occur on an unlevelled unit. The charbroiler is equipped with adjustable legs. Turn the feet at the bottom of the legs to adjust to level. The unit should be rechecked for level anytime it has been moved.

## VENTILATION HOOD

The broiler should be installed under a suitable ventilation hood. For safe operation and proper ventilation, keep the space between the charbroiler and vent hood free from any obstructions.

## GAS CONNECTION

The data plate on the lower right side of the charbroiler indicates the type of gas your unit is equipped to burn. DO NOT connect to any other gas type.

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

Purge the supply line to clean out any dust, dirt, or any foreign matter before connecting the line to the unit.

Codes require that a gas shut-off valve be installed in the gas line ahead of the charbroiler. The gas supply line must be at least the equivalent of ¾" iron pipe.

A pressure regulator is supplied and must be installed outside of the broiler when making the gas supply connection. Standard orifices are set for 5"WC (Water Column) for Natural Gas — 10"WC (Water Column) for Propane. Use the 1/8" pipe tap on the burner manifold for checking pressure. Make sure the gas piping is clean and free of obstructions, dirt, and piping compound.

An adequate gas supply is necessary. Undersized or low pressure lines will restrict the volume of gas required for satisfactory performance. A minimum supply pressure of 7" W.C. for natural gas and 11" W.C. for propane gas is recommended. With all units operating simultaneously, the manifold pressure on all units should not show any appreciable drop.

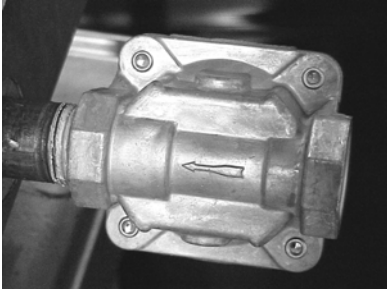
When testing the gas supply piping system, if test pressures exceed ½ psig (3.45 kPa), the charbroiler and its individual shutoff valve must be disconnected from the gas supply piping system. When test pressures are ½ psig (3.45 kPa) or less, the charbroiler must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the system.

**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.**

## GAS PRESSURE REGULATOR INSTALLATION

Gas regulator pressure is preset at 5" Water Column (W.C.) for natural gas, and 10" W.C. for propane gas. Minor adjustments may be required based on site specific gas pressure.

Install the regulator as close to the broiler on the gas supply line as possible. Make sure that the arrow on the underside of the regulator is oriented in the direction of gas flow to the broiler (Fig. 2) and the regulator is positioned with the vent plug and adjustment screw upright (Fig. 3).



**Fig. 2**



**Fig. 3**

The minimum supply pressure (upstream of the regulator) should be 7-9" W.C. for natural gas and 11-12" W.C. for propane gas. At no time should the charbroiler be connected to supply pressure greater than ½ psig (3.45 kPa) or 14" W.C.

## CASTER EQUIPPED CHARBROILERS

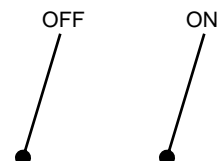
Charbroilers mounted on stands with casters must use a flexible connector (not supplied) that complies with the Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16 and a quick-disconnect device that complies with the Standard for Quick-Disconnect Devices for use With Gas Fuel,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

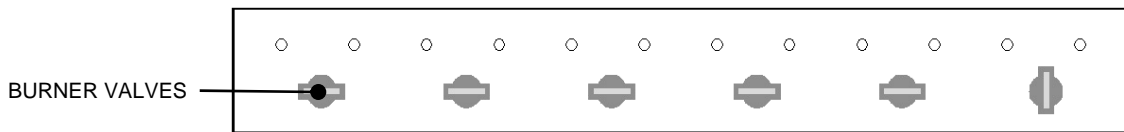
Note: If the Charbroiler is installed on casters and is moved for any reason, it is recommended that it be re-leveled (see LEVELING).

## OPERATION

**WARNING:** THE CHARBROILER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING, OR SERVICING THE CHARBROILER.

**CONTROLS** (Fig. 2)





**Fig. 2**

All orifices are of the fixed type and require no adjustment.

Standing pilots should be adjusted to provide a slight yellow tip on the flame. Pilots may be lighted by removing adjacent cast iron top grates and radiants.

Air shutters on the main burners must be individually adjusted to provide a blue flame. All traces of yellow should be adjusted out of the burner flame. While making adjustments, you may notice that some burners, especially to the far right and left, have a higher flame. This is part of the unit's design and is a normal effect.

When charbroiling, turn burner control valves to  $\frac{1}{3}$  or  $\frac{1}{2}$  to prevent overheating.

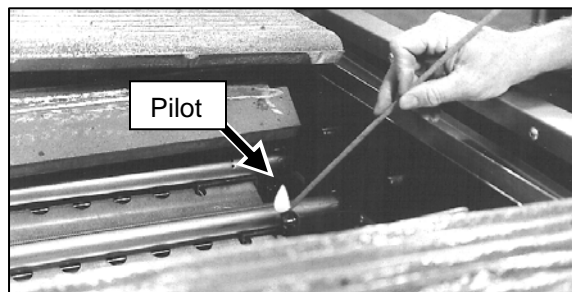
Scrape top grates during broiling with a wire brush to keep the grates clean. Do not allow debris to accumulate on the grates.

Turn flame to low setting during slack periods to conserve energy.

The charbroiler is a free vented appliance. All products of combustion and the heat generated by the burners pass through the grates. When meat is placed on the grates, this blocks the venting and causes a temperature build-up. The charbroiler operates most efficiently with valves turned down to  $\frac{1}{3}$  or  $\frac{1}{2}$ .

**LIGHTING THE GAS PILOT (Fig. 3)**

1. Turn the individual burner gas valves OFF and wait 5 minutes.
2. Remove the Top Grates. Turn the incoming main gas supply valve ON. Light pilots using a taper (Fig. 3).
3. To light the burners, turn the individual burner valves ON.



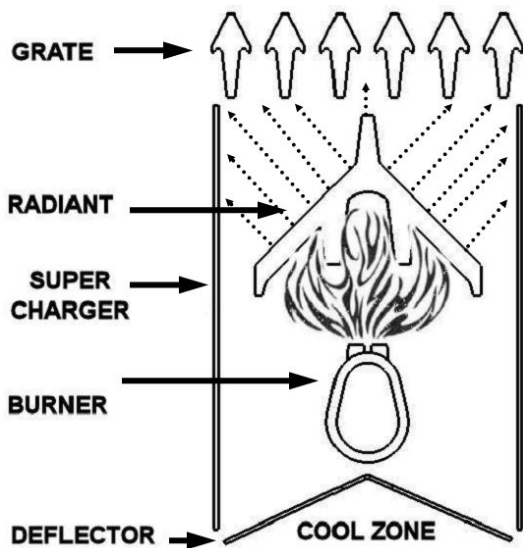
**Fig. 3**

**TO COMPLETELY SHUTDOWN THE BURNERS AND PILOT LIGHTS**

For complete shutdown: Turn the main gas supply valve OFF. (Make sure all individual burner valves are off before relighting.)

**PREHEATING THE CHARBROILER**

Allow the charbroiler to preheat for 30 minutes. Rub grates with cooking oil before using. Note that grease runs forward and drips into the trough in front of the charbroiler before draining into the grease drawer



### COMPONENT PARTS

The Achiever Charbroiler comes with several standard parts as illustrated. Each can be easily removed and installed easily by hand for cleaning and maintenance. Note that the Burner and Deflector are an assembly and are NOT designed to be disassembled.

You will find that the two of the Burner-Deflector assemblies on the extreme right and left of your charbroiler have Deflectors that are flat, and not bent as shown. For correct operation ensure that the flat Burner-Deflector assemblies remain on the right and left.

### CLEANING

Scrape top grates thoroughly so grease flows to trough and grease drawer uninhibited. This prevents flare ups.

Top grates may be immersed in strong commercial cleaning compound overnight. In the morning, rinse with hot water to remove any residues of cleaning compound.

Stainless steel surfaces may be cleaned using damp cloth with mild detergent and water solution.

Places where fat, grease, or food can accumulate must be cleaned regularly.

## MAINTENANCE

**WARNING:** THE CHARBROILER AND ITS PARTS ARE HOT. USE CARE WHEN OPERATING, CLEANING, OR SERVICING THE CHARBROILER.

### VENT SYSTEM

At least twice a year the exhaust hood (venting system) should be examined and cleaned.

### SERVICE

Contact your local Service Agency for any repairs or adjustments needed on this equipment.



# ACCESSORIES

## STANDS

The charbroiler has an optional 24" high by 30" deep by 24", 36", 48", 60" or 72" wide stainless steel stand with casters or flanged legs. The front casters lock, and flanged legs may be bolted to the floor. The stand includes a top shelf with marine edges style lip and a lower shelf. When mounted on a stand with standard legs and properly leveled, the cooking surface should be approximately 36" from the floor.

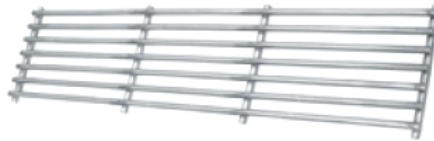
## GRATES

The charbroiler has a variety of optional grate accessories. Refer to your current catalog for pricing and availability.



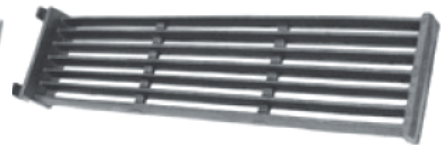
**S.S. DIAMOND GRATE**

- Steak
- Hamburgers
- Low fat products



**STEEL ROD GRATE**

- Chicken



**CAST DIAMOND GRATE**

- Thicker markings
- More caramelizing
- Low to moderate fat products

Refer to the installation instructions provided with the condiment rail kit.

