



# INSTALLATION AND OPERATION INSTRUCTIONS FOR "RANGER" SERIES RANGES AND OVENS

**FOR YOUR SAFETY**  
DO NOT STORE OR USE GASOLINE OR OTHER  
FLAMMABLE VAPORS AND 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, OPERATION AND  
MAINTENANCE INSTRUCTIONS THOROUGHLY  
BEFORE INSTALLING OR SERVICING THIS  
EQUIPMENT.

PLEASE READ ALL SECTIONS OF THIS MANUAL.

THIS PRODUCT HAS BEEN CERTIFIED AS COMMERCIAL COOKING EQUIPMENT AND MUST BE  
INSTALLED BY PROFESSIONAL PERSONNEL AS SPECIFIED.

WE SUGGEST INSTALLATION, MAINTENANCE AND REPAIRS SHOULD BE PERFORMED BY YOUR LOCAL  
MAINTENANCE AND REPAIR CENTER, LISTED IN YOUR INFORMATION MANUAL PAMPHLET.

**FOR YOUR SAFETY:** Post in a prominent location, instructions to be followed in the  
event the user smells gas. This information shall be obtained by  
consulting your local gas supplier.



Continuous product improvement is a U.S. Range policy, therefore design and  
specifications are subject to change without notice.

In the event you have questions about the installation, use, care or service of this product,  
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The U.S. Range "Ranger" Series of ranges and ovens are free standing, cooking appliances available in widths of three and five feet. A number of range top arrangements can be assembled over one or two ovens. Installation is the same for any range top (other than pilot and pilot/burner adjustment), likewise, installation is the same for all ovens regardless of the top arrangement.

All U.S. Range "Ranger" ranges and ovens are shipped assembled. All units are adjusted, tested and inspected at the factory prior to crating for shipment.

**NOTE**

After uncrating, immediately check the equipment for visible signs of shipping damage. If such damage has occurred, do not refuse shipment, but contact the shipper and file the appropriate freight claims.

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## GENERAL INSTALLATION

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Installation of equipment should be made by a licensed plumber or gas installation technician.

and gas pressure regulator in the gas stream for safety and for ease of future service.

2. A manual gas shutoff valve must be installed to the gas supply (service) line ahead of the appliance

3. A gas pressure regulator must be installed to the appliance prior to connecting the equipment to the gas supply line.

### IMPORTANT

Safe and satisfactory operation of your equipment depends to a great extent on its proper installation. Installation must conform to local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1-1988 (or latest edition).

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## RATING PLATE

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The rating plate is attached to the inside of the lower kick plate on the right side. Information on this plate includes the model and serial numbers. This data is essential for proper identification when communicating with the factory about a unit or requesting special parts or information. Other information on this plate is the BTU/hr input to the burners, manifold gas pressure in inches WC, and

whether orificed for natural or propane gas. Pilot lighting instructions (ovens only) are also on a label affixed to the kick plate.

**WARNING:** "Ranger" ranges and ovens must be connected only to the type of gas specified on the rating plate.

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## CLEARANCES

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The appliance area must be kept free and clear of all combustibles. Adequate clearance must be provided for air openings into the combustion chamber and for proper air supply. This unit is design-certified for the following installations:

1. For installation on combustible floors when equipped with six inch legs or casters.
  2. If legs or casters are not used, the unit must hang 2" over a noncombustible curb or platform.
  3. No clearance is required from noncombustible sides or rear
  4. Minimum clearance from combustible material is 2" from sides and 6" from rear.
- Do not** push against the edges of the unit in an attempt to adjust its position. Lift it slightly and place it where it is to be installed. Although all metal parts are deburred during manufacture, accidents could occur if the unit should move suddenly while being pushed into position by hand.

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## ASSEMBLY OF OPTIONAL HIGH SHELF

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1. Standard stub must be removed.
  2. Mount the high shelf riser to the range with 6 sheet metal screws (pointed tips) in the back.
  3. Mount the high shelf top to the riser with 4 machine screws (flat tips) on each end.
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### LEVELING

A carpenter's spirit level should be placed on the oven's center baking rack and/or across the range top and the unit leveled both front-to-back and side-to-side. If it is not level, cakes, casseroles, and any other liquid or semi-liquid batter will not bake evenly, burner combustion may be erratic, and the unit will not function efficiently.

If the floor is level and smooth, level unit with the adjustment in the foot of the leg. Adjust to the high corner and measure to the level. If the floor is uneven or has a decided slope, level the unit with metal shims. If the adjustment required exceeds the 1-1/4" adjustment available. Units with casters must be leveled with shims. A unit will probably not return exactly to the same position after being moved, requiring re-leveling after each move.

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### STANDARDS

Installation must be planned in accordance with all applicable state and local codes, taking into account the following standards (or latest edition):

GREASE EXTRACTOR	ANSI/NFPA 96-1984
VENTILATING HOOD	ANSI/NFPA 96-1 984
FILTER UNIT	ANSI/NFPA 96-1984
FIRE DETECTION THERMOSTATS	ANSI/NFPA 728-1979
FIRE EXTINGUISHER (CO <sub>2</sub> )	ANSI/NFPA 12-1985

This selection is not intended to be complete and other nationally recognized standards maybe appropriate.

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## TIPS ON USE

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- For less browning, lower the temperature. For more browning increase the temperature.
2. Level pans will bake more evenly than warped pans.
  3. When using frozen entrees, refrigerate or thaw for best results, and cover during heating.
  4. Roast meats at low temperatures (250-275°F) to maximize yield and minimum shrinkage.
  5. Load and unload food quickly.
  6. Close oven doors promptly.
  7. Load to capacity when possible.
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## CLEANING AND MAINTENANCE

Any piece of equipment works better and lasts longer when maintained properly and kept clean. Cooking equipment is no exception. Your "Ranger" must be kept clean during the working day and thoroughly cleaned at the end of each day.

### Open Burners

1. Lift off the open burner grates
2. Lift off the burner heads and Venturi tubes by raising the head slightly, sliding to the rear, then removing.
3. Wash all the above items in hot, soapy water, then reassemble.

### Griddles

1. Scrape with a nylon griddle screen to remove cooked-on spills. Use a fine grained stone only when absolutely necessary, and then with unsalted shortening or liquid frying compound and with extreme caution.
2. Wipe away any griddle stone dust and food particles with burlap.
3. Wash with hot, soapy water, then rinse with vinegar and water.
4. Rinse again with clear water.
5. Re-oil with shortening or liquid frying compound.

6. DO NOT FLOOD A HOT GRIDDLE WITH COLD WATER! This promotes griddle warping and can cause a griddle plate to crack if continued over a period of time.

### Ovens

1. Remove the baking racks. Wash in hot soapy water, and replace after the rest of the oven is clean.
2. Remove the standard oven bottom by lifting and sliding it out the front.
3. Scrape off any food spills with a nylon griddle screen. Be very careful about scratching, as the oven's interior panels are porcelainized.
4. Wash all the above items in hot, soapy water, then reassemble.
5. Baked-on spills may be loosened and stubborn stains removed with ordinary household ammonia and scrubbing with a nylon pad.

6. Do not allow spray type oven cleaners to come in contact with the temperature probe in the oven.
7. After cleaning the oven, rinse well with a 1/3 cup vinegar to 1 quart water solution to neutralize any caustic residue of cleaning compound. Wipe dry.

### CAUTION

Never use ammonia in an oven that is warmer than room temperature and always have direct ventilation.

### Stainless Steel

1. During the day, all stainless steel body parts should be wiped regularly with hot, soapy water. At the end of each day, a liquid cleaner designed for this material should be used.
2. Do not use steel wool, abrasive cloths, cleansers, or powders. If it is necessary to scrape stainless

- steel to remove encrusted material, soak the area with hot cloths to loosen the material, then use a wood or nylon scraper.
3. Do not use a metal knife, spatula, or any other metal tool to scrape stainless steel! Scratches are almost impossible to remove.

## VENTILATION AND AIR SUPPLY

The area around the appliance must be kept clear to avoid any obstruction to the flow of combustion and ventilation air as well as for ease of maintenance, service, and proper appliance operation. Keep proper clearances for adequate air supply. Adequate clearances must be maintained at all times in front and at the sides of the appliance for servicing and proper operation.

Means must be provided for any commercial cooking appliance to exhaust combustion waste products to the outside of the building. Usual practice is to place the unit under an exhaust hood; the minimum should be an exhaust fan mounted above the unit. Filters and

drip troughs should be part of any industrial hood, but consult local codes before beginning construction and installation.

Air movement should be checked during installation. Strong exhaust fans in the hood or in the overall air conditioning system can produce a slight vacuum in the room and/or cause air drafts. These can interfere with pilot or burner performance and can be hard to diagnose. If pilot or burner outage problems persist, make-up air openings or baffles may have to be provided in the room.

## GAS CONNECTION

### NOTE:

The gas supply (service) line must be the same size or greater than the inlet line of the appliance. "Ranger" ranges and ovens use a 3/4" NPT inlet. Sealant on all pipe joints must be resistive to LP gas. To convert to propane or natural gas, contact a certified service agency.

The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2" psig (3.45KPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2" psig (3.45KPa).

An installer supplied valve must be installed in the gas service line ahead of the appliance and regulator in the gas stream and also in a position where it can be reached quickly in the event of an emergency.

All commercial cooking equipment must have a pressure regulator on the incoming service line for safe and efficient operation. The pressure regulator installed must be listed by a nationally recognized agency. Line service pressure may fluctuate with local demand.

**All "Ranger" ranges must be installed with a gas pressure regulator.**

Regulators for the "Ranger" units producing less than 250,000 BTU/hr are U.S. Range parts #228052-1 (natural gas) and #228052-2 (LP gas). These regulators have 3/4" inlet/outlet openings and are

adjusted at the factory for 5" WC (natural gas) or 10" WC (LP gas) depending on the customer's ordering instructions.

Regulators can withstand a maximum pressure of 1/2 psig (14 "WC). Prior to connecting the regulator, check the incoming line pressure. If the line pressure is beyond this limit, a step down regulator will be required. Double check the arrow forged into the bottom of the regulator body which shows gas flow direction. It should point downstream towards the appliance. The red air vent cap is also part of the regulator and should not be removed.

Regulators can be adjusted in the field, but it is recommended that they not be tampered with unless the part is known to be out of adjustment or serious pressure fluctuations are found to exist and can be solved no other way. Any adjustments to regulators must be made only by qualified service personnel with the proper test equipment.

If a vent line from the gas appliance pressure regulator is used, it should be installed to the outdoors in accordance with local codes or code ANSI Z223.1-1988.

### Rigid Connections

Double check any installer supplied intake pipes visually to clear any dirt particles, threading chips, or other foreign matter before installing in a service line. These particles will clog orifices when gas pressure is applied.

### Flexible Couplings, Connectors, (and Casters)

If the unit is to be installed with flexible couplings and/or quick disconnect fittings, the installer must use an AGA design-certified commercial flexible connector or at least 3/4" NPT (with suitable strain relief's) in compliance with the Standard for Connectors for Movable Gas Appliances, ANSI 221.89-1987 and Addenda 221.69a-1989 (or latest edition). Quick disconnect devices must comply with the Standard for Quick Disconnect Devices for use

with Gas Fuel, ANSI 221.41-1989 (or latest edition). Domestic connectors are not suitable!

When the unit is equipped with casters and is installed on a non-combustible surface, means must be provided to limit the movement of the unit on this surface. An addendum is added to the instructions indicating the location(s) where the restraining means may be attached to meet the above standards.

If the unit is to be installed with casters, flexible connectors must be used and the same ANSI standard applies. Locking front casters are provided to limit the movement of the appliance without depending on the connectors or associated piping. A 1/4-20 threaded fitting is provided above the gas inlet piping for attaching the restraining device.

#### WARNING

All joint connections must be sealed with a joint compound suitable for LP gas, and all connections must be tested with a soapy solution before lighting any pilots.

### Lighting the Pilots

All U.S. Range appliances are adjusted and tested before leaving the factory, effectively matching them to sea level conditions. Adjustments and calibrations to assure proper operation may be necessary on installation to meet local conditions, low gas pressure, differences in altitude, variations in gas characteristics. To correct possible problems caused by rough handling or vibration during shipment, adjustments must be performed only by qualified service personnel. These are the responsibility of the customer and/or dealer and are not covered by U.S. Range warranty.

Check all gas connections for leaks using a soapy solution before lighting any pilots. **DO NOT USE AN OPEN FLAME TO CHECK FOR LEAKS.** Putting an open flame besides a new connection is not only dangerous, but will often miss small leaks that a soapy solution would find.

Before lighting any pilots, make sure that burner valves and thermostats are turned "OFF".

### Oven Pilot(s)

1. Turn the thermostat knob to "OFF" and wait 5 minutes.
2. Open the oven's lower kick plate by lifting it up from the bottom and pulling the top forward. This

**NOTE:** It may be necessary to re-light the pilot several times until the gas supply lines are purged of trapped air and a constant flow of gas is established.

### Top Burner Pilots

Top section burners are equipped with constant burning pilots. These are to be manually lit immediately after the gas is turned on and the system is checked for leaks. Open burner pilots are centered on each burner and can be reached down through the

#### WARNING

Keep appliances free and clear from combustibles at all times. When lighting pilots and checking for burner performance, do not keep your face close to the burners. The burner may light with a "pop" and could flash back and cause facial burns.

top grate. Adjustments can be made with a screwdriver to the pilot valve accessible through the valve cover.

### Griddles

Griddle pilots can be ignited through the front of the valve panel using a long match. The pilot flame adjustment valve can be accessed through the front valve panel and adjusted using a flat tipped screwdriver.

## BEFORE FIRST USE

### Top Section

New units are wiped clean with solvents at the factory to remove any visible signs of dirt, oil, grease, bacteria, remaining from the manufacturing process. Griddle plates are coated with a thin film of nontoxic st protectant. They should be washed thoroughly with hot, soapy water to remove film residues and any installation dust or debris before being used for food preparation. The top grates should be removed and washed before use. Once removed, it is possible to untie the cords holding the burners in place.

### Griddle Seasoning

The first burn of a new griddle should be controlled and should include a gradual seasoning.

1. Clean the griddle surface thoroughly with hot water and detergent to remove the protective oil coating applied at the factory.
2. Rinse with a mixture of 1 ¼ cup vinegar to one quart of water.
3. Spread unsalted solid shortening or liquid frying compound evenly over the entire griddle surface.

4. Turn all burners to "Medium" or thermostats to 350 degrees and wait until the shortening just begins to smoke, then turn the burners "OFF."

5. Rub the now melted shortening into the griddle surface with burlap, moving in the direction of the surface's polish marks and covering the entire surface.

6. Let the griddle cool, then repeat steps c, d, and a.

7. When the griddle is cool, after the second seasoning, wipe it once again with a thin film of shortening or cooking oil.

### Ovens

On initial installation, turn the oven to 250 degrees and operate for about an hour, then reset the thermostat to its maximum and operate for another hour. This will drive off any solvents remaining on the unit. At the end of this second hour, turn the thermostat "OFF," open door and let the oven cool. When cool, use a cloth or nylon pad and wash the oven interior with hot, soapy water, and rinse.