INSTALLATION SAFETY

WARNING

Qualified installation personnel, working to all applicable local and national codes must accomplish installation of this equipment. Improper installation of this product could cause or damage.
Do not store or use gasoline or other flammable Vapors and liquids in the vicinity of this or any other appliance.
The flooring that will be directly under the boiler must **also** be made of a noncombustible material.

Cleveland Range equipment is designed and built to comply with applicable standards for manufacturers. Included among those certification agencies which have approved the safety of the equipment design and construction:
UL, A.G.A., NSF ASME, CSA, CGA, and others.

Cleveland Range *equipment is* designed *and certified for* safe operation only when permanently installed in accordance with local and I or national codes. Many local codes exist and it is the responsibility of the owner and installer to comply with these codes

In no event shall Cleveland Range assume any liability for consequential damage or injury resulting from installations which is not in strict compliance with our installation instructions. Specifically, Cleveland Range will not assume any liability for damage resulting from improper installation of equipment including, but not limited to, temporary or mobile installations

INSTALLATION INSTRUCTIONS

1. These instructions must be retained by the owner/user for future reference. Gas-fired boilers are only to be installed in noncombustible areas that have provisions for adequate air supply. The term "boiler's will be used synonymously with "steam generator".

2. Position: For proper operation and drainage, the equipment must be level. It should be placed next to an open floor drain. DO NOT POSITION THE UNIT DIRECTLY ABOVE WE FLOOR DRAIN. Observe all clearance requirements to provide air supply for proper operation, as *well* as sufficient clearance for servicing. The surrounding area must be free and clear of combustibles. Dimensions and clearance specifications are shown on the specification sheet.

3. Install in accordance with local codes and/or the National Electric Code ANSI/NFPA No.70-1987. Installation in Canada must be in accordance with Canadian Electrical Code CSA Standard C22.1. The installer A wiring diagram is provided inside the base cabinet must ground equipment that is connected to electricity.

WARNING

INJURY TO PERSONNEL AND EQUIPMENT DAMAGE
May result from an improper drain connection. No connection lines are to be under the unit

4. Drain Line. The drain line outlet discharges exhaust steam and hot condensate. Connect 1-1/2-inch IPS piping (or larger) to extend the drain line to a nearby open floor drain. Up to two elbows and six feet of 1-1/2-inch IFS (or larger) extension pipe should be connected to the drain termination. No more than two pieces of Cleveland Range Equipment should be connected to one common drain line. The extension piping must have a gravity flow and vent freely to the air. This drain outlet must be free-vented to avoid the creation of backpressure in the steamer cooking compartments. To ensure a vented drain line, DO NOT UNDER ANY CIRCUMSTANCES, CONNECT THE DRAIN OUTLET DIRECTLY TO THE FLOOR DRAIN OR SEWER LINE. Do not run the drain line discharge into PVC drain piping or any other drain piping material not capable of sustaining 180' F operation.

5. Water Supply. Connect COLD water plumbing to the line strainer (Never conned hot water to the condensate water fill line strainer) Constant flow pressure must be maintained between 35 and 60 psi, and not experience a pressure drop below 35 psi when other appliances are used. If the water pressure exceeds 60 psi, a pressure-reducing valve must be installed in the water supply plumbing to reduce the water pressure to less than 60 psi. Locations and pressure data are shown on the specification sheet. 3/S-inch IPS plumbing is sufficient for water supply lines up to 20 feet in length, but *water supply* lines longer *than* 20 feet should be at least 1/2-inch IPS. Flush water supply lines thoroughly before connecting them to the unit. Use water, which is low in total dissolved solids content and low in gas content to prevent internal scaling, pitting and corrosion of the steam generator, and carry-over of minerals into the steam. Water, which is fit to drink, can still contain highly detrimental impurities.

NOTE: If equipped with a kettle and kettle water fill swing spout, 3/8-inch (10 mm) hot and/or cold-water connection(s) will be required at the swing spout valve.

6. Turn on *the cold water* supply to the unit Ensure *that* the manual water valve, inside the base cabinet is open.

7. Fuel Supply. Connect the primary fuel supply in accordance with the following instructions. Location and other data are shown on the specification sheet.

For Gas-Fired Steam Generators: Post in a prominent location, instructions to be followed in the event the user smells gas. This information shall be obtained by the consulting the local gas supplier.
Install a sediment trap (drip leg) in the gas supply line, and then connect gas supply piping to the boiler gas valve piping. GAS-FIRED EQUIPMENT IS DESIGNED FOR INSTALLATION ONLY IN NONCOMBUSJJBLE LOCATIONS. THIS INCLUDES THE FLOOR-INC THAT WILL BE DIRECTLY UNDER THE EQUIPMENT Location, plumbing size, and pressure data are shown on the specification sheet. Boilers rated at less than 225,000 Btu require 3/4-inch 'PS gas supply piping, and boilers rated at 225,000 Btu or more require 1-inch II'S gas supply piping. Natural gas pressure must be between 4" -14" water column and LP gas supply pressure must be between 12" - 14" water column. NEVER EXCEED 14" WATER COLUMN (1/2 psi) GAS PRESSURE. If the gas supply pressure exceeds 14" water column, a pressure-regulating valve must be installed in the gas plumbing to reduce the gas pressure to less than 14" water column. Installation must be in accordance with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1-1984. Installation in Canada must be in accordance with Installation codes for Gas Burning Appliances and Equipment B149.1 and B149.2. Use a gas pipe joint compound, which is resistant to LP gas. Turn the gas valve control knob to ON (the word "on" the knob will be opposite the index on the valve's body). Test all pipe joints for leaks with soap and water solutions. Never obstruct the flow of combustion and ventilation air Observe all clearance requirements to provide adequate air openings into the combustion chamber. The appliance and it's individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 14" water column (1/2 psi or 3.45 k}'a). The appliance must be isolated from the gas supply piping system at test pressures equal to or less than 14" water column (1/2 psi or 3.45 kpa). A permanent 115-volt electrical connection is required at the junction box. The junction box location is shown on the specification sheet. The installer must electrically ground the unit.

For Electric-Powered Steam Generators: Connect electric power: location and data are shown on the specification sheet. Provide connection as required by the unit, either directly to the single contactor, or to the terminal block (when equipped with multiple contactors). Electric supply must match power requirements specified on the data plate inside the base cabinet. The copper wiring size must be adequate to carry the required current at the rated voltage. A separate fused disconnect switch must be supplied and installed. The installer must electrically ground the unit

For Steam Coil Steam Generators: Connect steam supply piping to the input side of the steam coil. Location and pressure data are shown on the specification sheet. Incoming steam pressure must be regulated between 35 and 45 psi. A 3 /4inch strainer, equipped with a 20 mesh stainless steel screen, must be supplied and installed at the incoming steam connection point. Flush the steam line thoroughly before connecting it to the boiler. To ensure an adequate volume of steam, the branch steam supply line must be 3/~inch 'PS minimum. Connect the inverted bucket trap to the outlet end of the steam coil. Pill the trap with water before installing it. A permanent 115-volt electrical connection is required at the junction box. The junction box location is shown on the specification sheet. The installer must electrically ground the unit.

For Direct-Steam Connected Steamers and Kettles: Connect steam supply piping to the input side of the line strainer. Location and pressure data are shown on the specification sheet. Flush the steam line thoroughly before connecting it to the steamer. To ensure an adequate volume of steam, the branch steam supply line must be 3/4 inch 'PSI 'minimum. Direct-steam-connected kettles require 1 /2-inch 'PS pipe if the kettle total capacity is 20 gallons or less, and 3/4-inch 'PS pipe if the total capacity exceeds 20 gallons.) A permanent 115 volt electrical connection is required at the junction box. The junction box location is shown on the specification sheet. The installer must electrically ground the unit

INSTALLATION CHECKS

Proper operation of the Cleveland Convection Steamer is dependent upon proper installation. After the steamer has been installed, a few quick checks could save unnecessary service calls.

1. The unit must be level.
2. The Convection Steamer requires a cold water connection for proper efficient operation. DO NOT USE HOT WATER. The cold water must be connected to the line strainer, located at the front lower right of the steamer base.
3. Check that the manual water supply valve is open.
4. Check all water supply lines and valves for leaks.
5. Check that the water supply pressure and water quality meets the requirements of installation paragraphs.
6. On electrical units, verify that the supply voltage meets the voltage requirements on the rating plate inside the base cabinet and the voltage shown on the packing slip. Verify that the unit is protected with a separate fused disconnect and is properly grounded in accordance with the National Electric Code.

7. On all gas, steam-coil, and direct steam connected units, verify that there is a 115-Volt connection at the handy-box located on the left side of the base.

8. On all steamcoil units, the incoming steam pressure must be 35-50 psi. Less than 35 will not effectively operate the unit. Pressure in excess of 50 psi must be reduced (with a pressure-reducing valve) to 35-50 psi.

9. Check that the drain lines meet installation requirements specified in installation paragraph 4

WARNING

INJURY TP PERSONNEL AND EQUIPMENT DAMAGE may result from an improper installation.

10. After completing checks 1 through 9, correct any deficiencies refer to the Start-Up and Pre heat instructions in the Operation section. Verify that the unit operates properly, make checks 11 and 12.

11. Check to ensure that the water in the boiler sight gauge glass automatically stays about 1/3 full when boiler is started up and operated.

12. Check to ensure that *the* steam pressure gauge registers 10 psi. The steam pressure is factory-adjusted to 10 psi

Factory setting may shift due to shaking in transit and resetting will be required after installation. Proper adjustments and maintenance procedures am detailed on a separate data sheet entitled "Steam Pressure Adjustments." Adjustments should be made only by qualified service personnel- the factory pressure settings shown in the accompanying chart should never be exceeded.

GAUGE PRESSURE READING WITH NO STEAM FLOW* (STATIC PRESSURE)

Self-Contained Steam Generator; Gas or Electric

Operating Pressure Switch	10 psi
High Limit Safety Pressure Switch	15 psi

Self-Contained Steam Coil Generator

Operating Pressure Switch	10 psi
High Limit Safety Pressure Switch	15 psi
Steam Supply Pressure Range	35-45 psi

Direct-Connect (to House Steam Supply)

Steamer Pressure Reducing Valve	10 psi
Steam Supply Pressure Range	15-45 psi

** With or without kettle

OPERATION

Operation of the Cleveland Range Convection Steamer is very easy. Each operator should read and understand the following procedures to effectively start, operate, and shut down the steamer each day. The owner(s) and operator(s) of this equipment should be aware that live steam could cause serious injuries, pay particular attention to the WARNINGS in this text. These instructions are to be retained by the owner(s)) and operator(s) for future reference.

CONTROLS AND CONTROL PANELS

There are two steam generator control arrangements and two steamer compartment control panels available for Cleveland Range Convection Steamers. The steam generator controls are illustrated in Figure 2. The steamer compartment control panels are illustrated in Figures 3 and 4. Compare these figures with the equipment supplied, and identify which control panel combinations applies.

Steam Generator Controls

The steam generator controls are located on the front face of the steamer base unit. The switches are to the left of the pressure gage, as illustrated in Figure 2 Most Cleveland Range Convection Steamers have a steam generator built into the base unit which supplies steam to the cooking compartments. However, an external steam supply may also be used. Units with a built-in boiler have both the POWER rocker switch and the STEAM momentary switch next to the pressure gage. Units with no internal generator have the POWER rocker switch only. They do not have the STEAM momentary switch.

Installation, Use and Care Instructions Convection Steamer

Convection

Steamer Compartment Control Panels

Figure 3 illustrates the standard electronic controls: the Key Pad Control Panel. This panel has a rocker switch, a keypad, and a digital timer Figure 4 illustrates the optional electromechanical controls: the Dial Timer Control Panel. This panel has a rocker switch and dial timer. Steamer functions are the same for both the standard and optional panel configurations. Operating details are slightly different especially when setting the automatic operating time. For clarity two sets of instructions are provided for cooking operations.

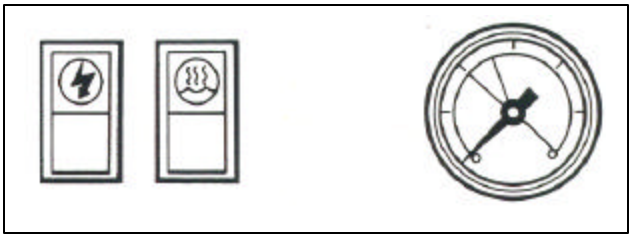

Figure 2. Steam Generator Controls

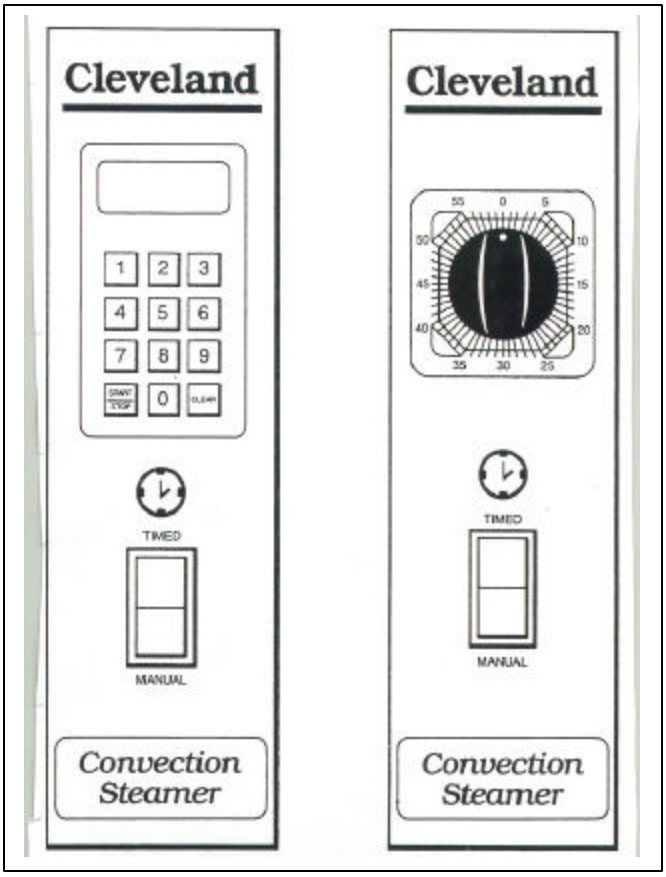

Figure 3. Key Pad Control Panel

Figure 4. Dial Timer Control Panel

START-UP AND PREHEAT

WARNING

Do not attempt to start or operate the Convection Steamers during a power failure. Critical safety Circuits are not energized, and serious injury to personnel or damage to equipment may result.

1. Stan the steam supplies. The steam is either an integral steam generator boiler) built into the base unit, or an external steam supply.

- For units without a built-in boiler, refer to the start-up procedures for the external steam supply and be sure it is running properly. As soon as the pressure gauge