

Installation Manual

Installation and Maintenance Instructions

Steam Cooker and Rethermalization Unit



Series: SteamChef™ Gas Models 22CGT3 and 22CGT6

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 Cleveland

Part No. 22CGT-INM REV.A 2/07

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.

NOTICE

Post instructions to be followed if the user smells gas.
Display the instructions in a prominent location.
All users of this equipment must understand the instructions.
Obtain the instructions from the local gas supplier.
Failure to follow the instructions if there is a gas leak can cause death, injury, and/or property damage.

⚠ DANGER

ELECTRIC SHOCK HAZARD

DEATH, INJURY, or EQUIPMENT DAMAGE can result from touching any component inside this appliance when the power is connected.

Whenever possible disconnect the power while installing, servicing, or testing.

When installation, service, or tests require power to be connected; use extreme caution and every possible precaution and safety measure while installing, servicing, or testing this appliance.

**ALL SERVICE MUST BE PERFORMED BY A QUALIFIED
CLEVELAND RANGE AUTHORIZED TECHNICIAN.**

⚠ WARNING

Do not connect the drain connection to any drain material that cannot sustain 180° Fahrenheit.

Using drain material that cannot withstand 180° Fahrenheit can result in injury, equipment damage, and property damage.

KEEP THIS MANUAL FOR REFERENCE

This manual may be subject to new technical developments, modifications, and unforeseen errors.

DO NOT OPERATE OR ATTEMPT TO OPERATE THIS APPLIANCE OR ANY ACCESSORIES WITHOUT READING COMPLETELY AND FULLY UNDERSTANDING THIS MANUAL

Cleveland Range SteamChef appliances are intended for other than household use.

Cleveland STATEMENT OF POLICIES

LIMITED WARRANTY

CLEVELAND RANGE products are warranted to the original purchaser to be free from defects in materials and workmanship under normal use and service for the standard warranty period of one year from date of installation or 18 months from date of shipment, whichever ever comes first.

CLEVELAND RANGE agrees to repair or replace, at its option, f.o.b. factory, any part which proves to be defective due to defects in material or workmanship during the warranty period, providing the equipment has been unaltered, and has been PROPERLY INSTALLED, MAINTAINED, AND OPERATED IN ACCORDANCE WITH THE CLEVELAND RANGE OWNER'S MANUAL.

CLEVELAND RANGE agrees to pay any FACTORY AUTHORIZED EQUIPMENT SERVICE AGENCY (within the continental United States, and Hawaii) for reasonable labor required to repair or replace, at our option, f.o.b. factory, any part which proves to be defective due to defects in material or workmanship, during the labor warranty period. This warranty includes travel time not to exceed two hours and mileage not to exceed 50 miles (100 miles round-trip), BUT DOES NOT INCLUDE POST START-UP, TIGHTENING LOOSE FITTINGS, MINOR ADJUSTMENTS, MAINTENANCE, CLEANING OR DESCALING.

The standard labor warranty allows factory payment of reasonable labor required to repair or replace such defective parts. Cleveland Range will not reimburse the expense of labor required for the repair or replacement of parts after the standard warranty period, unless an Extended Labor Warranty Contract has been purchased to cover the equipment for the balance of the warranty period from the date of equipment installation, start-up, or demonstration.

PROPER INSTALLATION IS THE RESPONSIBILITY OF THE DEALER, THE OWNER-USER, OR INSTALLING CONTRACTOR, AND IS NOT COVERED BY THIS WARRANTY. Many local codes exist, and it is the responsibility of the owner and installer to comply with these codes. Cleveland Range equipment is built to comply with applicable standards for manufacturers, including UL, ANSI, NSF, ASME/Ntl. Bd., CSA, and others.

BOILER (Steam Generator) MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER-USER AND IS NOT COVERED BY THIS WARRANTY. The use of good quality feed water is the responsibility of the Owner-User (see Water Quality Recommendations below). THE USE OF POOR QUALITY FEED WATER WILL VOID EQUIPMENT WARRANTIES. Boiler maintenance supplies, including boiler hand hole gaskets, are not warranted beyond the first 90 days after the date the equipment is placed into service. Preventive maintenance records must be available showing descaling per applicable Cleveland Operator Manual for Boiler Proration Program considerations.

WATER QUALITY RECOMMENDATIONS

TOTAL DISSOLVED SOLIDS	less than	60 parts per million
TOTAL ALKALINITY	less than	20 parts per million
SILICA	less than	13 parts per million
CHLORIDE	less than	30 parts per million
pH FACTOR	greater than	7.5

The foregoing shall constitute the sole and exclusive remedy of original purchaser and the full liability of Cleveland Range for any breach of warranty. THE FOREGOING IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER WRITTEN, ORAL, OR IMPLIED, INCLUDING ANY WARRANTY OF PERFORMANCE, MERCHANTABILITY, OR FITNESS FOR PURPOSE, AND SUPERSEDES AND EXCLUDES ANY ORAL WARRANTIES OR REPRESENTATIONS, OR WRITTEN WARRANTIES OR REPRESENTATIONS, NOT EXPRESSLY DESIGNATED IN WRITING AS A "WARRANTY" OR "GUARANTEE" OF CLEVELAND RANGE MADE OR IMPLIED IN ANY MANUAL, LITERATURE, ADVERTISING BROCHURE OR OTHER MATERIALS.

CLEVELAND RANGE'S liability on any claim of any kind, including negligence, with respect to the goods or services covered hereunder, shall in no case exceed the price of the goods or services, or part thereof, which gives rise to the claim. IN NO EVENT SHALL CLEVELAND RANGE BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES IN THE NATURE OF PENALTIES.

LIMITED EXTENDED WARRANTY COVERAGE

The purchase of a Limited Extended Warranty Contract extends the standard warranty coverage to the purchased period of time (one to two years) from the date of installation, start-up, or demonstration, whichever is sooner.

*An additional two years Parts and Labor Warranty can be purchased with each piece of Cleveland equipment for an additional 2% of the List Price per year. The 2% of list price charge will be the net invoice amount for each year of extended warranty purchased.

- Extended warranty must be purchased at the same time the equipment is purchased.
- Extended Warranty has the same exclusions as stated in our standard warranty.

Second year limited extended warranty coverage on Cleveland Steamers when purchased with a water filter applies to water related components only.

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CHAPTER 1

PRODUCT INFORMATION for 22CGT3 and 22CGT6 SteamChefs

A. Product Information

This manual covers the installation of SteamChef Steam Cookers (steamers), Cleveland Range models 22CGT6 and 22CGT3 and covers the standard features and options available on SteamChefs.

- Other than the selection of options and size (3 or 6 pan), there are presently no significant design, parts, or operating differences among SteamChefs with these model numbers.
- Figure 2-1 illustrates the major external features of SteamChefs.
- For further information, contact your Cleveland Range sales representative or Cleveland Range.

B. Product Information Plate

The Product Information Plate is on the side opposite the control panel. It lists the model, serial number, gas, electric, and wiring requirements of the SteamChef.

C. Lifting Points – Do **NOT** Lift from Sides

- Lift as shown from front or back.
- Place lift truck forks or lifting straps BETWEEN the 4" legs.
- Do **NOT** lift from the sides. Lifting from the sides will damage the SteamChef and void the Warranty.
- See Chapters 2 and 3 for lifting warnings and appliance weights.

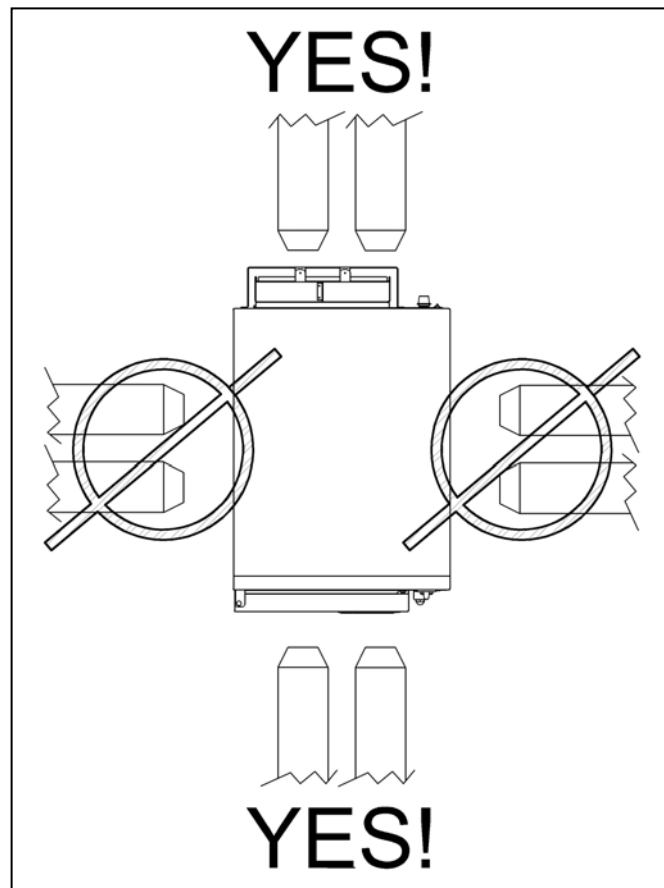


Figure 1-1
Do **NOT** Lift from Sides

CHAPTER 2

GENERAL INFORMATION and INSTALLATION INSTRUCTIONS

A. General Information and Installation Instructions

This equipment should be installed only by qualified, professional plumbers, pipe fitters, and electricians.

1. The installation of this appliance must conform with:
 - a. The National Fuel Gas Code, ANSI Z223.1 / NFPA 54 (latest edition), or the Natural Gas and Propane Installation Code CSA B1 49.1, as applicable.
 - b. The National Electrical Code, ANSI/NFPA 70 (latest edition), or the Canadian Electrical Code, CSA C22.2, as applicable.
 - When installed, the appliance must be electrically grounded in accordance with the above.
 - Note: This appliance is not GFI (GFCI) compatible.
 - c. The *Food Code* (latest edition) of the Food and Drug Administration (FDA).
2. This equipment is to be installed to comply with the applicable federal, state, or local plumbing codes.
3. Installation instructions must be read in their entirety before starting installation.
4. Install this appliance according to the policies and procedures outlined in this manual.
5. Installation must comply with all local fire and health codes.

DANGER

Improper installation, adjustment, alteration, service, or maintenance of this appliance, or installation of a damaged appliance, and installation and service by other than qualified Cleveland Range authorized personnel can result in DEATH, INJURY, EQUIPMENT DAMAGE, and void the Warranty.

NEVER install damaged appliances.

ALWAYS have qualified Cleveland Range authorized personnel install and service this appliance.

B. Inspect the Appliance for Shipping Damage

- If the appliance is damaged or damage is suspected:
 1. Submit a Damage Claim to the Shipper immediately.
 2. Inform your dealer at once.
 3. Inform Cleveland Range in writing within three (3) days.

DANGER

Operating this appliance out of level can cause DEATH, INJURY, and EQUIPMENT DAMAGE.
This appliance must be level both front-to-back and side-to-side in all installations.

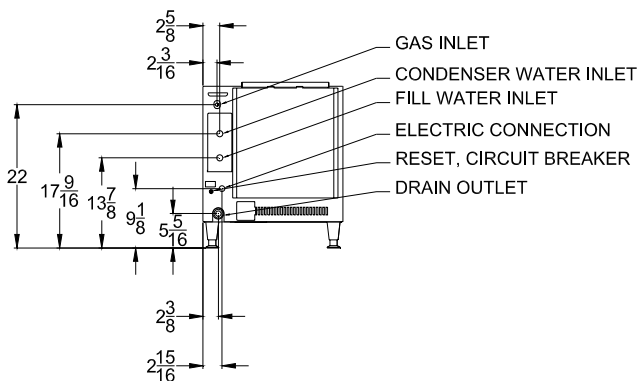
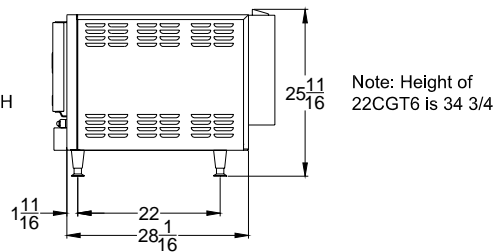
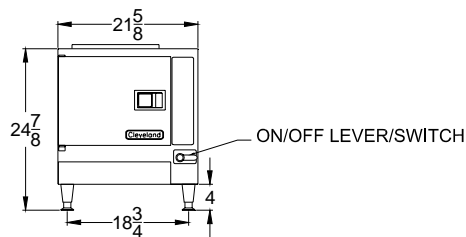
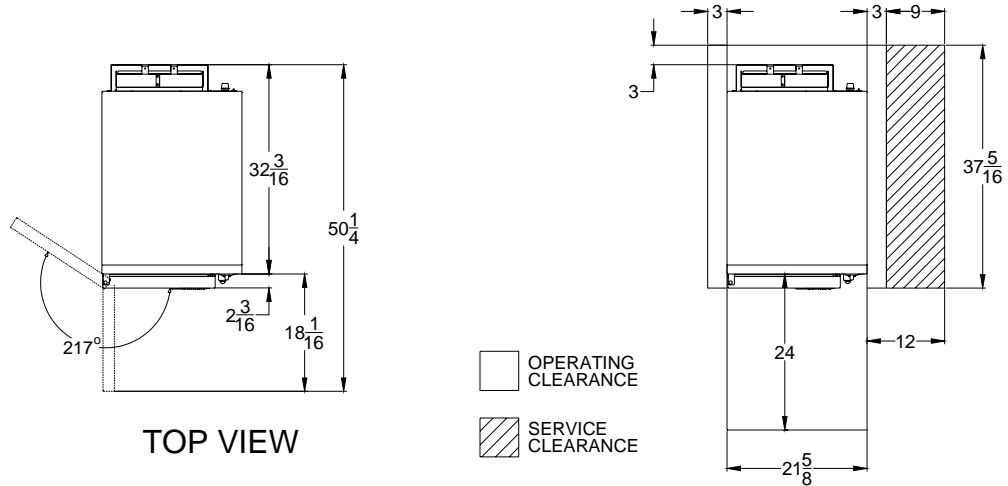
NEVER operate this appliance out of level.

If this appliance is suspected to be out of level, shut it down at once and call your qualified Cleveland Range authorized service agency at once.

Dimensions and Clearances

22CGT3&6

Figure 2-1



CHAPTER 3

INSTALLATION of the SteamChef

A. Selecting a Location for the SteamChef

1. For safe and efficient operation, observe the following criteria when selecting an operating location for this appliance:
 - a. Installation must comply with all local fire and health codes.
 - b. The location selected must be capable of supporting this appliance.
 - The operating weight of a 22CGT3 is 310 lbs.
 - The operating weight of a 22CGT6 is 360 lbs.
 - c. Position this appliance so it will not tip or slide.
 - d. The operating surface must be level enough to allow leveling this appliance with its adjustable legs. This appliance **MUST** be level both front to back and side to side before operation.
 - e. A suitable drain must be available within 12 feet of the appliance.
 - f. The location must include space for Operating and Service/Secondary Clearances and the Exhaust Hood. See Figure 2-1.
 - Maintain a 3-inch operating clearance on both sides of the appliance.
 - Cleveland Range recommends a 12-inch secondary clearance on the control side for service.
 - Maintain at least a 3-inch operating clearance at the rear of the appliance.
 - Maintain at least a 24-inch clearance in front of the appliance for door swing and standard pan clearance.

WARNING

All clearance requirements above, below, and around the SteamChef are the same for non-combustible locations as for combustible locations. Failure to maintain required clearances and additional distances as needed can result in **INJURY and EQUIPMENT DAMAGE.**

Consult manufacturers' literature, and sales and service agencies as needed.

- g. KEEP THE AREA FREE AND CLEAR OF COMBUSTIBLES.
- h. Proper air supply for ventilation and combustion is **REQUIRED** for and **CRITICAL** to safe, efficient operation of a SteamChef. Do **NOT** obstruct the flow of combustion and ventilation air to the SteamChef.
- i. Make sure the air vents of the SteamChef are not blocked with or by anything.
- j. Allow for sufficient extra distance if a "high heat source" (e.g. a broiler) is located next to the SteamChef. Contact Cleveland Range at 216-481-4900 or 1-800-338-2204 for recommendations.
- k. Do **NOT** install a SteamChef directly over a drain. Steam rising up out of the drain will adversely affect operation, hamper cooling air circulation, and damage electrical and electronic components.

B. Exhaust Hood Requirements

1. A gas fired SteamChef Oven must be installed under a suitable ventilation hood as required by the National Fuel Gas Code, ANSI Z223.1/NFPA 54. The venting hood system must also include an interlock to prevent the operation of this appliance without the operation of the ventilation hood.
2. The exhaust hood must extend over the gas flue opening and meet the following requirements:
 - a. The SteamChef must be vented in accordance with all local, state and national codes for venting gas fired appliances.
 - b. The exhaust hood must be sized for the cumulative ventilation requirements of all the gas-fired appliances in the area under the hood, including the SteamChef.

- The BTU/HR for a 22CGT3 is 45,000 and the BTU/HR for a 22CGT6 is 62,000.
- c. If an existing hood does not meet all specifications, a new one must be constructed over the SteamChef.
- d. When determining hood size, include operating clearances. See Figure 2-1.

C. Install the Legs

1. The legs on the SteamChef must be used for installing the appliance, unless it is installed with a Cleveland Range stand. See the instructions included with the stand.
2. In order to safely assemble the legs onto the appliance without damaging it, the following assembly procedure should be used.
 - a. Check that the feet are fully retracted into the legs. Do not over tighten. The feet should easily screw in and out using fingers only.
 - b. Remove the four foam packing blocks from the upper packing assembly, and position them on a flat surface (such as the floor) in the pattern shown in Figure 3-1.
 - c. Center the SteamChef™ on the blocks as shown in Figure 3-1 and 3-2.
 - d. Screw the four legs into the weld nut mounting holes. All four legs must be installed for proper installation of a SteamChef™.
 - e. The appliance is now ready to be moved to its final location. Lift the appliance off the blocks, and move it to its final location. See Figure 1-1. Discard the foam packing blocks.

⚠ DANGER

Improper lifting can result in DEATH, INJURY, AND EQUIPMENT DAMAGE.
Use enough workers with training and experience lifting heavy equipment to place SteamChefs on supporting surfaces, and to lift and to move SteamChefs and accessories.

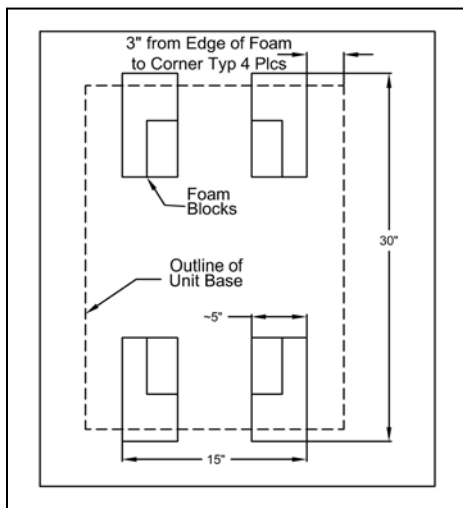


Figure 3-1
SteamChef on Foam Packing
Blocks, Top View

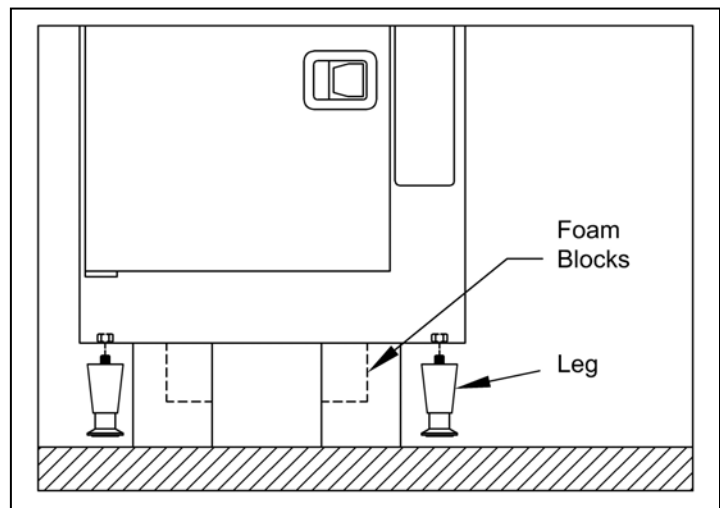


Figure 3-2
SteamChef on Foam Packing
Blocks, Front View

D. Position and Level the SteamChef

1. Move the SteamChef into position.
2. Place a level along the bottom edge of the SteamChef.
3. Use the adjustable legs of the SteamChef or the adjustable legs of the Cleveland Range stand to level the SteamChef front-to-back and side-to-side.

E. Gas Supply for the SteamChef

⚠ DANGER

**GAS LEAKS ARE FIRE AND EXPLOSION HAZARDS.
INJURY, DEATH, AND PROPERTY DAMAGE WILL RESULT.**
If the installer smells gas, or suspects there is a gas leak, immediately refer to the posted gas leak instructions. The posted instructions are provided by the local gas supplier and supersede any other instructions.

If a gas leak is suspected, observe the following precautions in addition to the posted instructions:

- Do NOT light or start any appliance.
- Do NOT touch any electrical switch.
- Do NOT use any phone in the building.
- Immediately call the gas supplier from a phone away from the building.
- Follow the gas supplier's instructions.
- If the gas supplier cannot be reached, call the fire department.

1. Gas Supply Requirements

- Gas supply type MUST match the type of gas shown on the rating plate.
- Gas supply pressure must NOT exceed 14" water column (1/2 psi), and fall within the acceptable pressure range shown below when using 3/4" NPT line and a 1/2" NPT connection
- Natural gas pressure at 1000 BTU/CF must be between 7" – 14" water column.
- If the gas supply pressure exceeds 14" water column, a pressure regulating valve (pressure regulator) must be installed in gas supply plumbing to reduce pressure to the SteamChef. See Figure 3-1.

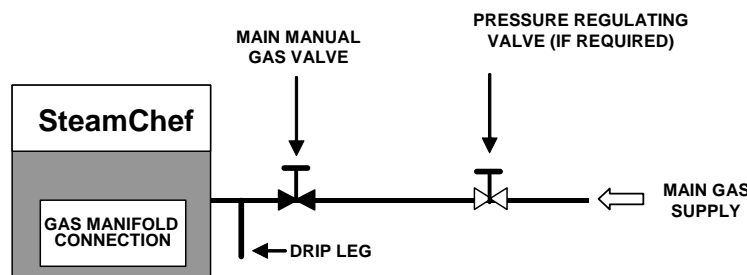
2. Installation of the Gas Supply Lines

The Installer / owner is responsible for furnishing and installing gas supply lines, valves, regulators, and accessories.

When installing gas supply lines and accessories, observe the following:

- a. Refer to Figure 3-1 for the recommended layout of the gas supply lines.
- b. Use a non-hardening pipe thread sealant resistant to LP gas.
- c. The 1/2" NPT gas inlet is on the back of the SteamChef. See Figure 1-2
- d. Install main manual shut off valve between gas supply and the SteamChef. See Figure 3-3. This main manual shut off valve is called the "Main Manual Gas Valve."
- e. Install a sediment trap (drip leg) in gas supply line. See Figure 3-3.

**Gas Supply Line Layout
Figure 3-3**



3. Testing Gas Supply Lines

- 1) Test all pipe joints for leaks with soap and water solution.
- 2) Check all connections for proper tightness.
- 3) Remove the control side panel to inspect gas connections inside the SteamChef.
- 4) Open the gas supply valves.
- 5) Check all lines and connections for leaks, both inside and outside the SteamChef.
- 6) All leaks must be corrected before attempting to operate the SteamChef.
- 7) Replace the side panel and secure it to the SteamChef before starting the SteamChef.

4. Pressure Testing Gas Supply Lines

If any pressure testing is required, the SteamChef must be disconnected or isolated from the gas supply piping system during any pressure testing as follows:

- The appliance and its main manual shut-off valve must be **disconnected** from the gas supply piping system during any pressure testing of the system at test pressures in excess of 14" water column (1/2 psi or 3.45 kPa).
- The appliance must be isolated from the gas supply piping system by closing its main manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 14" water column (1/2 psi or 3.45 kPa).

F. Water Connections for the SteamChef

1. Water Supply Quality Requirements

NOTICE
Using water outside the limits specified in the Warranty without appropriate adjustment in the maintenance schedule voids warranty coverage.

- a. Contact your Cleveland Range sales representative for details on how to provide water per Minimum Water Quality Requirements in the Warranty, or how to increase the frequency of maintenance, cleaning, and descaling.
- b. Poor water supply quality degrades SteamChef performance.
- c. Check the quality of supply water before designing the water supply by contacting a local water treatment specialist for on-premises water analysis.
- d. Softened or chlorinated water damages the steam generator by increasing corrosion. Carbon type filters are required before water enters the steam generator if supply water is softened or chlorinated.
- e. If a water treatment system must be installed to achieve acceptable water quality, install it **BEFORE** connecting the water supply lines to a SteamChef.
- f. If analysis shows that supply water is below Minimum Water Quality:
 - **EITHER** a water treatment system and/or carbon filter must be installed in the line feeding the steam generator,
 - **OR** the frequency of maintenance, cleaning, and descaling must be increased beyond that recommended in the maintenance schedule.

2. Connection of the Water Supply Lines

- The Installer/Owner is responsible for the correct water connection of the SteamChef.
 - When connecting water supply lines observe the following instructions, and any and all other applicable national, state, and local codes and regulations.
 - **NOTICE: Connect the SteamChef to COLD WATER!**
 - Never connect the SteamChef to HOT WATER! The Condenser system and the steam generator will not work properly if connected to HOT or WARM water.
- a. **The water supply must have a minimum dynamic (flow) pressure of 35 psi (2.4 kg/cm²) and a maximum static pressure of 60 psi (4.1 kg/cm²).**
 - b. **If the static pressure is above 60 psi, a pressure regulator must be used and set at approximately 50 psi. Pressure above 60 psi can damage solenoid valves.**
 - c. SteamChefs have two connection points for incoming water: condenser, and generator.
 - d. If the water supply meets requirements shown in the Warranty then the Single Water Supply Arrangement shown in Figure 3-5 may be used.
 - e. If the water supply fails to meet the requirements shown in the Warranty then use the Separate Water Supply Arrangement shown in Figure 3-6.
 - f. Installation Requirements:
 - 1) Apply non-hardening pipe sealant to all the threaded connections **except** the 3/4" GHT (Garden Hose Thread or National Hose Thread) connections at the Water Connection. GHT or NHT connections do not require pipe sealant.
 - 2) Install a manual water shut-off valve (not provided) between main cold water supply line(s) and SteamChef supply lines.
 - 3) The National Sanitation Foundation (NSF) requires installation of a check-valve (or other approved anti-backflow / anti-siphon device) (not provided) in all supply lines in accordance with and as required by local, state, and national health, sanitation, and plumbing codes.
 - 4) Check local codes to determine exactly what type of anti-backflow / anti-siphon device is necessary to meet local requirements.
 - 5) Cleveland Range recommends the plumbing layout in either Figure 3-5 for installations using a single water supply or Figure 3-6 if a separate conditioned water supply is used for the steam generator reservoir feed.
 - Use two (2) 3/8" supply lines for a separate conditioned water supply. See Figure
 - Use one (1) 1/2" supply line for a single water supply. Use the Single Point Water Connection Kit (cold water supply splitter) (P/N 111009).
 - 6) The SteamChef has two 3/4-inch NHT fittings (National Hose Thread or Garden Hose Thread) for the water connections to the water reservoir and to the condenser. **Note:** The hose connector used must be NSF or FDA rated for food grade service.
 - 7) Construct all supply lines up to the point of installing the filter washer.
 - 8) Flush the water supply lines before connecting them.
 - 9) A Filter Washer is supplied installed in each of the water inlets of this SteamChef (See Figure 3-4, Cleveland Range Part Number 110987.)
 - Remove the water supply shipping cap. The filter washer is under the shipping cap.
 - Make sure the filter washer is properly in place, and connect the water supply to the SteamChef.

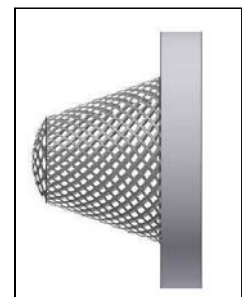


Figure 3-4
Filter Washer
(P/N 110987)

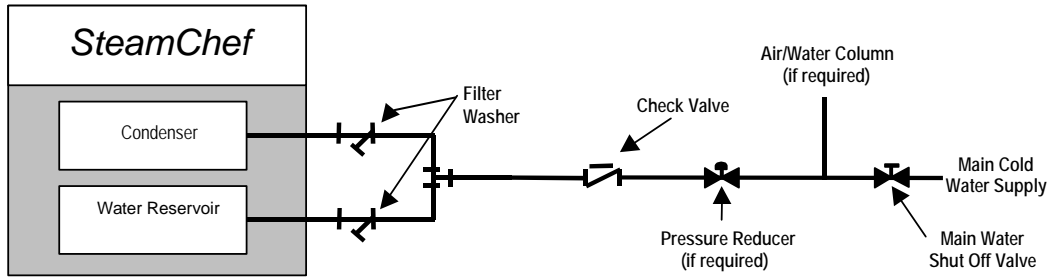


Figure 3-5 Cleveland Range Single Water Supply Arrangement

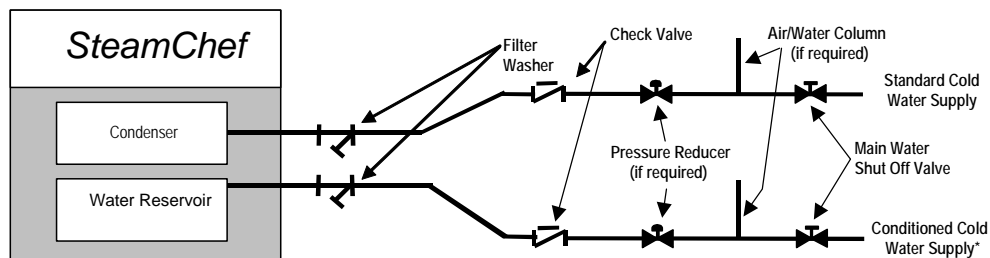


Figure 3-6 Cleveland Range Separate Water Supply Arrangement

“Conditioned” indicates water that has been filtered or treated by a Cleveland Range approved method to meet or exceed the water quality standards in the Warranty.

3. Test Water Supply Lines

- a. Make sure the Main External Power Switch is OFF.
- b. Check all connections for proper tightness.
- c. Remove the control side panel to inspect water connections inside the SteamChef.
- d. Open the water supply valves.
- e. Check all lines and connections for leaks, both inside and outside the SteamChef.
- f. Correct any leaks.
- g. Replace the side panel and secure it to the SteamChef before starting the SteamChef.

G. Electric Connections for the SteamChef

1. Check the rating plate to make sure the SteamChef is compatible with the local electric supply.
 - The rating plate is located on the side panel OPPOSITE the control side.
 - The electrical diagram and the spare parts list are on the side panel on the control side.
 - The main terminals are behind the control side panel in the service connection area.
2. The electrical supply must match all electrical and wiring requirements specified on the rating plate and the connection must be made in accordance with the following requirements:
 - a. The SteamChef must be properly grounded by the installer.
 - b. The electrical power lines must be installed in accordance with:
 - The National Electric Code, ANSI/NFPA No. 70 LATEST EDITION (USA).
 - Canadian Electrical Code, CSA C22.2.
 - Any other applicable national, state, or local laws, codes, and regulations.
3. A main external disconnect switch should be installed near the SteamChef as shown in Figure 3-7.
 - A separate fuse or breaker sized to meet the line amps required by the SteamChef should be installed either as part of the main external power switch or in a separate fuse box.

- The fuse or breaker and disconnect switch combination is called the “Main External Power Switch.” See Figure 3-7.
 - This appliance is not suitable for connection to a power cord. Do NOT use a power cord.
 - This appliance is not suitable for connection to a GFCI (GFI). Do NOT use a GFCI (GFI).
4. Remove the control side panel.
 5. Make the electrical connection using sufficient length of flexible conduit, per local code, so the SteamChef can be moved for service.
 6. Mechanically secure the flexible conduit to the SteamChef’s electrical access hole.
 7. Check all cable and wire connections for size, location, and tightness.
 8. Replace the control side panel and secure it to the SteamChef before starting the SteamChef.

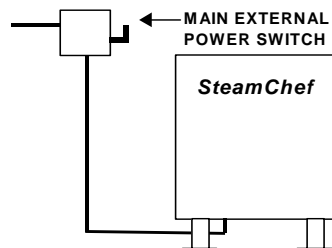


Figure 3-7
Main External Power Switch

H. Install the Free Air Vented Drain Line

⚠ DANGER

DEATH, INJURY, EQUIPMENT and PROPERTY DAMAGE will result from improper installation of drain outlet lines. Install free air vented drain lines as described in this manual.

NOTICE: Furnishing and installing drain lines and drainpipe is the responsibility of the Owner/Installer.

NOTICE: Improper installation of drain outlet lines voids the SteamChef Warranty.

The following restrictions and requirements are critical to the safety of personnel and equipment, and must not be violated under any circumstances:

1. The drain lines must be installed in compliance with the *Food Code* (latest edition) of the Food and Drug Administration (FDA), and any other applicable national, state, or local codes and regulations.
2. The drain line must be free air vented, have gravity flow from the SteamChef, and terminate outside the perimeter of the SteamChef.
3. Free air venting requires a minimum 1” clearance between the end of the drain line and the top of the floor drain. See Figure 3-8.
4. Do NOT install the SteamChef directly over a drain. Steam rising up out of the drain will adversely affect operation, hamper cooling air circulation, and damage electrical and electronic components.
5. Do NOT connect the SteamChef drain connection to any drain material that cannot sustain 180° F.
6. Do NOT connect drains from any other equipment to the drain line of the SteamChef.
7. Do NOT connect the drain outlet extension line directly into a floor drain or a sewer line.

8. Do NOT connect the SteamChef drain directly to drains or to the plumbing of any other equipment.
9. Do NOT install a trap or shutoff in the drain line.
10. The total length of pipe and number of bend fittings required to reach the open drain determines the pipe size used to extend the drain line to an open drain.
 - Do NOT make a drain outlet extension more than 12 feet long.
 - If the drain outlet extension requires 6 feet or less of pipe, and no more than two elbows are required, 1 ½-inch pipe and fittings are acceptable.
 - If the drain outlet extension requires 6 to 12 feet of pipe, or requires three elbows, then 2-inch pipe and fittings are required.
11. Refer to Figure 3-5: Connect the drain as described:

NOTICE: The appliance is supplied with 1 inch pipe connection at the back of the appliance, and a 1 X 1 ½-inch street elbow for connecting the 1 ½ -inch drain outlet extension. If a 2-inch drain outlet extension is required, the 1 X 2-inch fitting must be supplied by the Owner/Installer.

 - a. Apply non-hardening pipe thread sealant to the threads when assembling the pipes and fittings of the drain outlet extension.
 - b. Thread fittings together FINGER TIGHT ONLY! DO NOT USE A WRENCH!

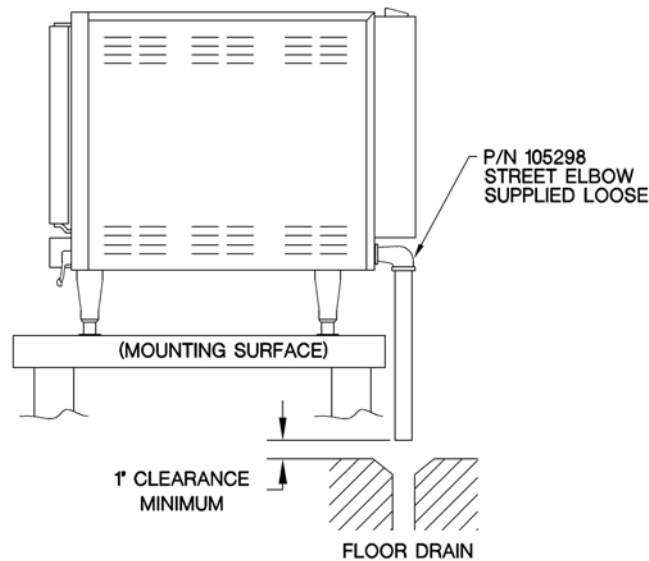


Figure 3-8
Typical Drain Layout

I. Install the Fan Guard and Air Diverter

Note: See Figure 3-9.

- a. To Install the fan guard and air diverter:
 - 1) Hold the fan guard so that the large ends of the keyholes are towards the bottom of the SteamChef.
 - 2) Place all four openings over the mounts located on the rear wall of the SteamChef.
 - 3) Pull it down so that the narrow ends of the slots are pulled tight over the mounts. See Figure 3-9.
 - 4) Place the air diverter over the fan guard. Press lightly towards the rear wall until the air diverter drops into its slots in the fan guard.

J. Install the KleanShield™

Note: See Figure 3-9.

Never operate a SteamChef without a properly installed KleanShield™.

1. Place the KleanShield™ into the SteamChef so the drain trough slips into the KleanShield™ drain at the rear of the cooking compartment.
2. Carefully lower the front of the KleanShield™ so the Water Level Sensor Guard is behind the probes and the front legs rest on the bottom of the cooking compartment.

⚠ WARNING

The fan guard helps protect the operator from injury caused by the rotating fan blades. Never operate a SteamChef without the fan guard properly installed. Operating a SteamChef without the fan guard properly installed can cause injury, equipment damage, and reduce performance.

K. Install the Slide Racks (Pan Racks)

Note: See Figure 3-9.

1. Each slide rack has four loops: two at the top and two at the bottom. Hold the slide rack so the ends of the hanger loops are towards the cooking compartment wall, as shown in Figure 3-9.
2. Slide one rack into the compartment with the hanger loops on the cooking compartment wall side.
3. Hook the loops over the top and bottom pins.
4. Repeat steps 1. through 3. for the other rack.

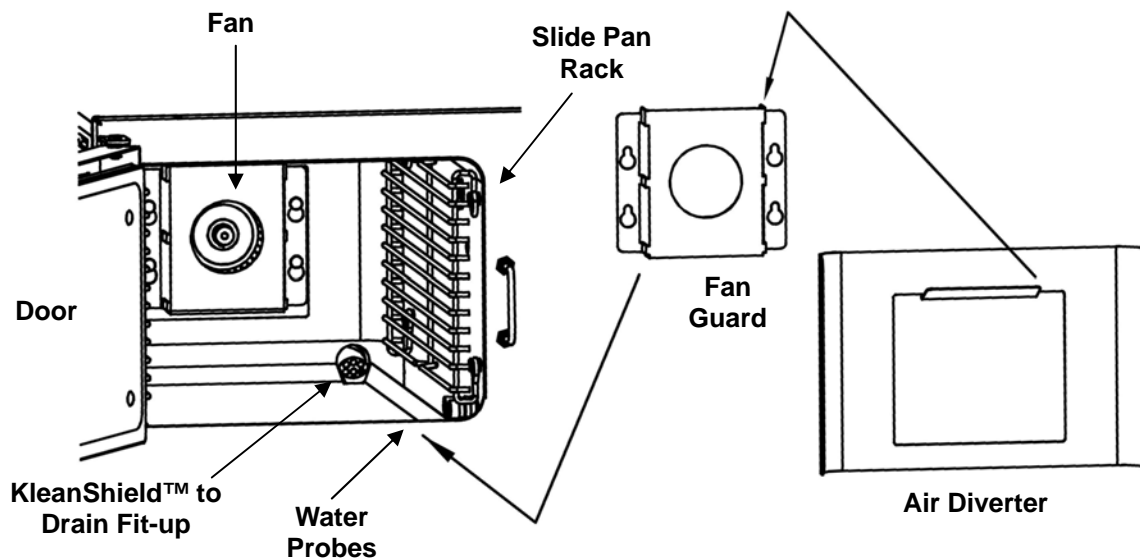


Figure 3-9
Cooking Compartment

L. Installation Check List

Table 2-4 Installation Check List

TASK	REFERENCE (Page Number)	COMPLETED
<u>Preparation</u>		
• Check Operating Location Clearances	3-4	_____
• Test Supply Water Quality	7	_____
• Verify Electric Power Requirements.	9	_____
• Verify Gas Supply Requirements	6	_____
• Verify Exhaust Hood Requirements	4	_____
<u>Installation</u>		
• Verify SteamChef is Level	5	_____
• Check Exhaust Hood Function	4	_____
• Check Electrical Supply Connection	9	_____
• Check Water Supply Connection	8	_____
• Leak Test Water Supply Lines	9	_____
• Check Gas Supply Connection	7	_____
• Leak Test Gas Supply Connection	7	_____
• Check Drain Line Connection	10	_____

Notes:

CHAPTER 3

STARTUP PROCEDURE

DANGER

DO NOT TRY TO LIGHT BURNERS WITH A FLAME.

The SteamChef has an electronic ignition system which automatically lights burners, senses the flame, and controls gas flow. This provides precise burner control, safe ignition, and safe shutdown.

Do NOT alter any factory settings of the gas control and ignition system. **DEATH, INJURY, AND EQUIPMENT DAMAGE** may result from an improperly adjusted gas control and ignition system.

If service is required, contact Cleveland Range. The Warranty is voided and Cleveland Range is in no way responsible for the operation or safety of this equipment if the controller, valve, igniter probe or any other gas system component is serviced by anyone other than a qualified Cleveland Range authorized service representative.

DANGER

Hot air, steam, and condensate can cause DEATH, INJURY, and EQUIPMENT DAMAGE.

Do NOT breathe hot air, steam, or condensate.

When checking inside the SteamChef: Stand to the hinge side and away from the SteamChef, and always open the door slowly.

WARNING

Water leaking from the door gasket can be a sign of a blocked drain. If the drain is blocked, hot water can accumulate inside the compartment and spill out when the door is opened causing **INJURY** and **EQUIPMENT DAMAGE**.
When checking inside the SteamChef: Stand to the hinge side and away from the SteamChef, and always open the door slowly.

A. In the Event of a Power Failure

DANGER

Do NOT attempt to operate a SteamChef during a power failure!
DEATH, INJURY, and EQUIPMENT DAMAGE can result.
Follow the Power Failure Shutdown Instructions.

- Do NOT attempt to operate a SteamChef during a power failure.

B. Lighting and Shutdown Instructions

- Refer to the Operator's Manual for complete operating and safety instructions.
- **This procedure should be performed only by a service technician or installer**
- Complete the Burner Ignition Test and Startup Procedure before starting the Operating Tests.
- Read and understand all steps of this procedure before starting.
- The following START-UP SUMMARY is for quick reference ONLY. For safe operation and use of this equipment, the operator must comply with all safety and operating instructions in this manual and the Operator's Manual.

LIGHTING INSTRUCTIONS

- 1) CLOSE THE COOKING COMPARTMENT DOOR.
- 2) TURN THE ON/OFF LEVER/SWITCH CLOCKWISE TO THE ON POSITION.
 - RESERVOIR WILL FILL WITH WATER (ABOUT 1 MINUTE).
 - SPARK WILL INITIATE AND MAIN GAS VALVE WILL OPEN FOR 4 SECONDS.
 - IF THE UNIT FAILS TO LIGHT IN 4 SECONDS GAS VALVE WILL CLOSE AND LOCKOUT.
- 3) SYSTEM MAY BE RESET MANUALLY BY TURNING THE ON/OFF LEVER/SWITCH OFF FOR 5 MINUTES AND BACK ON.

SHUTDOWN INSTRUCTIONS

- 1) TURN OFF THE ON/OFF LEVER/SWITCH.
- 2) WAIT FOR THE 3-MINUTE DRAIN RINSE CYCLE TO RUN.
- 3) TURN OFF THE MAIN EXTERNAL POWER SWITCH.
- 4) TURN OFF THE MAIN MANUAL GAS VALVE.

C. Burner Ignition Test

NOTICE: Perform this test before the Startup Procedure in Chapter 4, "Operating Tests and Final Checkout Procedure."

1. Lighting Instructions and Test of Direct Spark Ignition System

- 1) If not already done:
 - Leak test the water supply lines.
 - Leak test the gas supply lines.
 - Test the drain lines. Pour about a quart of water through the KleanShield™ drain and check that water flows out the drain and drainpipe
- 2) Turn the Main External Power Switch OFF.
- 3) Open the cooking compartment door.
- 4) Control Panel Settings:
 - ON/OFF Lever: OFF.
 - TIMED/MANUAL Switch: TIMED.
- 5) Turn ON the power to the SteamChef at the Main External Power Switch.
 - The 3-minute drain rinse cycle starts. Water flows from the drain and stops after 3 minutes.
- 6) Turn ON the power to the SteamChef at the ON/OFF lever.
 - a) The Timer display (Keypad control), OR the green light (Timer and On/Off control) lights.
 - b) The steam generator begins to fill with water.
 - c) The burner does NOT light.
 - d) Close the cooking compartment door.

- e) After the cooking compartment door is closed and the water reservoir is filled to the operating level, the igniter spark initiates and the automatic gas valve opens for 4 seconds.
- If the SteamChef burner does NOT light in 4 seconds: the safety circuit in the igniter control de-energizes the system, closes the automatic gas valve, and locks out the ignition module. Go to **f**).
 - If the burner lights: The cooking compartment temperature rises to the standby temperature. Go to **g**).
- f) If the burner does NOT light, reset the system:
- Note: For new installations, or when air in gas lines is suspected, it may be necessary to bleed excess air from lines. Bleed air as close as possible to the inlet of the automatic gas valve.
- (1) Wait 5 minutes
 - (2) Open and close the cooking compartment door
 - (3) Repeat up to 3 times (total of 4 attempts to light the burners).
 - If the burner lights in one to four attempts, go to **g**).
 - If the burner does NOT light after four attempts, go to **Step 7**).
- g) If the burner lights: Turn ON the cooking compartment by:
- EITHER Selecting Manual Mode
 - OR Setting the Timer for 10 minutes
 - OR Turning the ON/OFF selector to ON
- The cooking compartment temperature rises from standby to cooking temperature.
- h) **IF** the burner lights and the SteamChef heats properly within four attempts, end this test here. Skip 7) and go to Section C. "Operating Tests and Final Checkout Procedure."
OR If the SteamChef does NOT light or heat properly, go to **Step 7**).
- 7) If the burner does NOT light or the SteamChef does not heat properly after the fourth attempt:
- Follow the Shutdown Instructions (below).
 - Call a qualified Cleveland Range authorized service representative to adjust the burner controls.
2. Shutdown Instructions
- 1) Turn OFF the electrical power to the SteamChef at the ON/OFF lever.
 - 2) Wait for the 3-minute Drain Rinse Cycle to run.
 - 3) Turn OFF the Main External Power Switch.
 - 4) Turn OFF the Main Manual Gas Valve.

CHAPTER 4

OPERATING TESTS

This procedure evaluates the function of the major operating controls of a SteamChef.

- The SteamChef may be equipped with a Keypad Control Panel, Dial Timer Control Panel, or an ON/OFF Control Panel.
- The ON/OFF control model works like the manual operation of the Timer models **EXCEPT** that a selector switch is used to turn the cooking function from standby heat (OFF) to the Cooking Mode (ON).

A. Startup Procedure

1. Set the ON/OFF Lever to the OFF position and open the SteamChef door. There should be no water in the SteamChef.
2. Wait for the cooking compartment to cool from the Burner Ignition Test.
3. See Figure 3-9. Remove the slide racks and the KleanShield™ and check that neither the KleanShield™ nor the reservoir drains are blocked. Replace the KleanShield™ and pan racks and check for proper installation of the KleanShield™, fan guard, air diverter, slide racks, and door gasket assembly.
4. Be sure the Main External Power Switch is in the OFF position. See Figure 3-7.
5. Verify installation of the proper size fuses or breakers. See the Rating Plate for electrical data.
6. The front burner box cover is shipped loose. Wait until testing is done before installing it.
7. Remove the control side panel.
8. Check the internal wiring and make sure there are no loose or disconnected wires.
9. Verify that the supply wiring is of adequate size and that the SteamChef is properly grounded.
10. Correct any deficiencies.

B. Drain Rinse Inspection (Continued from Item 1, Startup Procedure)

1. Turn the ON/OFF lever to the OFF position.
2. Turn ON the gas supply to the SteamChef (if not already on).
3. Turn ON the water supply to the SteamChef (if not already on).
4. Turn ON the electric power to the SteamChef at the Main External Power Switch.
 - a. The SteamChef immediately starts a 3-minute drain rinse cycle.
 - b. During the drain rinse cycle, the fill and drain valves are all the way open while the steam drain lines are flushed with fresh water.
5. Stop the drain rinse cycle before it is complete by setting the ON/OFF lever the ON position. This energizes the operating control circuits, stops the drain rinse cycle, and the fills the reservoir with water.
6. Restart the drain rinse cycle by setting the ON/OFF lever to the OFF position. During the automatic drain rinse cycle, make the following checks.
 - a. The ON/OFF lever must be turned all the way to OFF to START the drain rinse cycle.
 - b. Look at the gap between the SteamChef drain and the floor drain. A steady stream of water flows from the SteamChef drain. If no water flows, make sure the water supply is turned on.
 - c. Check for plumbing leaks.
 - d. After about 3 minutes, the cycle is complete. Check the gap at the floor drain. No more water flows from the drain.

C. Operating Tests (Continued from Drain Rinse Inspection)

1. At the start of this test the cooking compartment door should be open and the controls should be set as follows:
 - a. The Main External Power Switch is ON.
 - b. The ON/OFF lever/switch is OFF (The green indicator on the control panel is NOT lit).
 - c. The TIMED/MANUAL switch is in the TIMED position, **OR** for ON/OFF models, the ON/OFF compartment selector switch is in the OFF position.
 - d. Set the compartment timer to zero, by using the dial counter or keypad.
2. Set the ON/OFF lever/switch to the ON position. As the water reservoir fills, check the following functions:
 - a. The green Power ON turns ON.
 - b. The fill valve opens and water begins to fill the compartment reservoir. Water appears in the bottom of the water reservoir.
 - c. Close the compartment door to close the door interlock circuit. As the water level in the water reservoir rises:
 - Check that no water flows from the drain opening.
 - Check for plumbing leaks in the control area.
3. When the water in the steam generator reaches the safe operating level (the level of the lower probe), the burner lights, the convection fan starts, and the SteamChef begins warming to the standby temperature.
4. Open the door: the burner and convection fan turn OFF.
 - a. Water continues to fill the generator and the water level in the reservoir continues to rise.
 - b. The water in the reservoir stops rising when water reaches the upper probe.
 - If the water level continues to rise above the tip of the higher probe, see the Operator's Troubleshooting Guide in the Operator's Manual.
 - If the problem persists, have a qualified Cleveland Range authorized service representative check the probe circuit.
5. Close the compartment door to close the door interlock circuit.
 - a. The burner and the convection fan restart and the SteamChef heats to the standby temperature.
 - b. When the standby temperature is reached, the convection fan and the burner turn OFF.
 - c. If the SteamChef is left in Timed Mode or OFF, the burner, and convection fan cycle ON and OFF as the SteamChef maintains the standby temperature in the cooking compartment.
6. Set the TIMED/MANUAL switch to MANUAL or the ON/OFF to ON.
 - a. The cooking cycle starts.
 - b. Check that:
 - 1) The burner lights.
 - 2) The condenser water flow starts.
 - 3) Steam production starts.
 - 4) After a few seconds, a stream of water flows from the drain.
 - 5) After a few minutes the compartment reaches maximum cooking temperature.
 - 6) The burner, condenser water, and convection fan remain ON as long as the SteamChef remains in Manual Mode for Timer models or ON for ON/OFF models.
 - 7) In Manual Mode, (or ON for ON/OFF models), the SteamChef continues to operate at the cooking temperature for 60 minutes.
 - 8) No steam leaks around the door gasket.

Note: After 60 minutes of uninterrupted operation of both the Timer model SteamChefs in Manual Mode, and ON/OFF model SteamChefs turned ON, the SteamChef automatically starts the Energy/Water Saver feature

- The cooking compartment returns to standby temperature and condenser water flow stops. This saves energy, water, and maximizes equipment life.
 - To return the SteamChef to cooking temperature: quickly open and close the compartment door, **OR** switch from Manual to Timed Mode and back to Manual Mode.
7. Test the no-water/low water safety circuit:
 - a. Leave the SteamChef in Manual Mode, or ON.
 - b. Close the manual water supply valves to the SteamChef.
 - Condenser flow stops on Single Water Supply installations.
 - c. When the water level drops below the low water safety level (lower probe):
 - The burner turns OFF.
 - The condenser flow stops on Separate Water Supply installations.
 - The convection fan stops.
 - The production of steam stops.
 - d. Open the manual water supply valve to the SteamChef.
 - The SteamChef automatically refills the reservoir with water to the safety level (upper probe).
 - The burner lights, the convection fan starts, and condenser flow starts.
 - The production of steam starts.
 8. Press the TIMED end of the TIMED/MANUAL switch. The production of steam stops.
 - a. The production of steam stops.
 - b. The burner turns OFF.
 - c. The condenser flow stops.
 - d. The buzzer sounds for 3 seconds.
 - e. The compartment returns to standby temperature.
 9. Open the cooking compartment door to vent the steam and allow the compartment to cool.
 10. After 3 minutes, close the door and continue testing.
 11. Set the TIMED/MANUAL switch to TIMED.
 12. Set the Timer for 10 minutes.
 13. As soon as the dial is set, the steam generating cycle starts. This is the same sequence observed in Step 5., **EXCEPT:**
 - The Timer controls the cycle.
 - The time to produce steam is shorter because the SteamChef was preheated by Step 5.
 - The Timer automatically returns the SteamChef to the standby temperature after counting down to zero. See Step 8.
 14. After timed operation starts, check that:
 - a. The burner lights and the convection fan turns on immediately.
 - b. When the cooking compartment reaches cooking temperature, the timer begins counting down to zero and the condenser turns ON.
 - c. A steady stream of water flows from the drainpipe.
 - d. As the SteamChef generates steam, the reservoir water level falls and the solenoid clicks as it opens and closes the water fill valve to refill the reservoir
 - e. Check for steam leaks around the door.
 - f. When the timer counts down to zero, the burner turns OFF, the condenser flow and convection fan turn OFF, and the buzzer sounds for 3 seconds.
 - g. After about 30 seconds, steam stops being produced.
 15. Go to Step D.

D. Shutdown of the SteamChef after Testing (Continued from Operating Tests) and Front Burner Cover Installation

1. Turn the SteamChef OFF by turning the ON/OFF lever to the OFF position.
 - The green Power ON indicator light turns OFF, **OR** the Keypad turns OFF.
 - The automatic drain rinse cycle starts.
 - Wait until the 3-minute drain rinse cycle is complete.
2. When the drain rinse is complete, turn the SteamChef OFF at the Main External Power Switch.
3. Replace the control side panel.
4. When the SteamChef is cool, install the Front Burner Cover and secure it with the provided screws. See Figure 4-1.
5. Restart and Shut Down the SteamChef.
 - If the SteamChef starts and shuts down normally with the Front Burner Cover installed, it is ready for use. Go to Step 6.
 - If there are any problems: STOP. Shut down the SteamChef and call Cleveland Range at 216-481-4900 or 1-800-338-2204.
6. After completing the Operating Test Procedures and installing the Front Burner Cover, the SteamChef is ready for use.
7. After the final shut down, leave the cooking compartment door open.

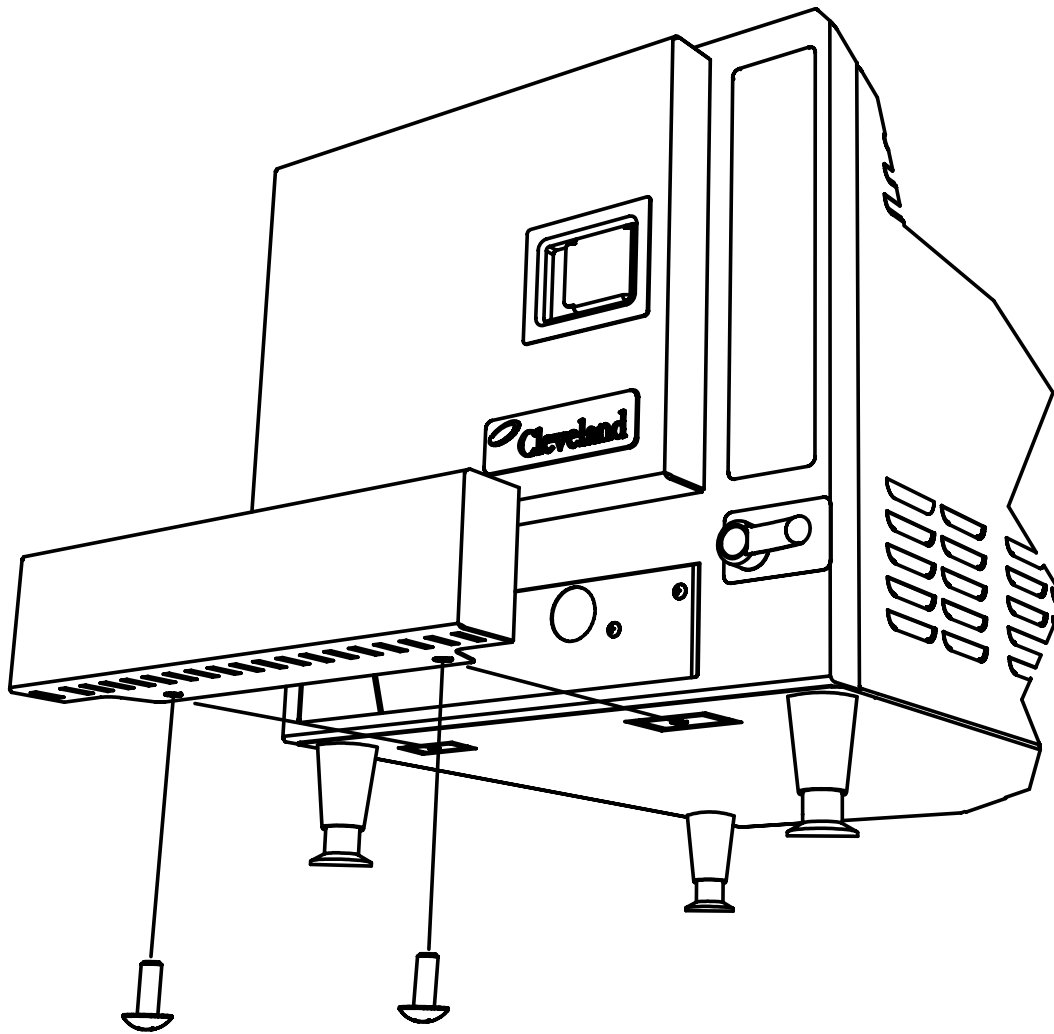


Figure 4-1
Front Burner Cover Installation

Note: The Front Burner Cover is shipped loose.

To Install the Front Burner Cover:

1. Remove the Front Burner Cover Retention Screws and flat washers from the bottom of the SteamChef. See Figure 4-1.
2. Discard the flat washers.
3. Put the Front Burner Cover in place as shown.
4. Attach the Front Burner Cover with the screws removed in Step 1. as shown.

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