



Visit www.clevelandrange.com to locate a service or sales representative in your area.



Gemini

Dual Gas Steam Generator & Convection Steamer

Operation, Installation & Maintenance Manual

This manual is updated as new information and models are released. Visit our website for the latest manual.

MODELS:

- 24CGA6.2S
- 24CGA6.2SES
- 24CGA10.2
- 24CGA10.2ES

For your future reference.

Model # _____

Serial # _____



Read the manual thoroughly.
Improper installation, operation or maintenance can cause property damage, injury or death.



STATEMENT OF RESPONSIBILITIES / DÉCLARATION DES RESPONSABILITÉS / DECLARACIÓN DE RESPONSABILIDADES

This document is for use by experienced and trained Qualified Cleveland Range, LLC Authorized Service Representatives who are familiar with both the safety procedures, and equipment they service. Cleveland Range, LLC assumes no liability for any death, injury, equipment damage, or property damage resulting from use of, improper use of, or failure to use the information contained in this document. Cleveland Range, LLC has made every effort to provide accurate information in this document, but cannot guarantee that this document does not contain unintentional errors and omissions.

The information in this document may be subject to technical and technological changes, revisions, or updates. Cleveland Range, LLC assumes no liability or responsibility regarding errata, changes, revisions, or updates.

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to follow industry standard safety procedures, including, but not limited to, OSHA regulations, and disconnect / lock out / tag out procedures for all utilities including steam, and disconnect / lock out / tag out procedures for gas, electric, and steam powered equipment and / or appliances.

All utilities (gas, electric, water and steam) should be turned OFF to the equipment and locked out of operation according to OSHA approved practices during any servicing of Cleveland Range equipment

Qualified Cleveland Range, LLC Authorized Service Representatives are obligated to maintain up-to-date knowledge, skills, materials and equipment.

Ce document est destiné à l'usage des Représentants de Service qualifiés et autorisés de Cleveland Range, LLC qui possèdent l'expérience et la formation ainsi que la bonne connaissance des mesures de sécurité et du matériel qu'ils entretiennent.

Cleveland Range, LLC décline toute responsabilité pour tout cas de décès, blessure, dommage matériel ou dommage aux biens résultant de l'utilisation, de la mauvaise utilisation ou du manquement d'utilisation des renseignements contenus dans ce document.

Cleveland Range, LLC s'est efforcé à fournir des renseignements précis dans ce document mais ne peut garantir que ce document soit exempt d'erreurs et d'omissions non intentionnelles.

Les renseignements contenus dans ce document peuvent être assujettis à des changements techniques et technologiques, des révisions ou des mises à jour.

Cleveland Range, LLC décline toute obligation ou responsabilité concernant les errata, modifications, révisions ou mises à jour.

Les Représentants de Service qualifiés et autorisés de Cleveland Range, LLC sont tenus de se conformer aux mesures de sécurité normalisées de l'industrie, y compris, mais sans s'y limiter, les réglementations de l'OSHA, les procédures de débranchement / verrouillage / étiquetage relatives à tous les services publics, dont l'approvisionnement en vapeur, et les procédures de débranchement / verrouillage / étiquetage relatives aux équipements et/ou appareils fonctionnant au gaz, à l'électricité et à la vapeur.

Au cours de tout entretien d'un appareil Cleveland Range, tous les services publics (gaz, électricité, eau et vapeur) doivent être FERMÉS au niveau de l'appareil et le dispositif de fonctionnement doit être verrouillé suivant les pratiques approuvées de l'OSHA.

Les Représentants de Service qualifiés et autorisés de Cleveland Range, LLC sont tenus d'actualiser en permanence leurs connaissances, compétences, matériel et équipement.

Este documento está destinado para el uso de los Representantes de Servicio calificados y autorizados de Cleveland Range, LLC quienes cuentan con la experiencia y la capacitación así como el buen conocimiento de las medidas de seguridad y de los equipos que mantienen.

Cleveland Range, LLC, declina toda responsabilidad en caso de cualquier fallecimiento, lesiones, daños al equipo o daños a la propiedad resultantes de la utilización, del uso indebido o de la falta de utilización de la información provista en este documento.

Cleveland Range, LLC se ha esforzado en suministrar información precisa en este documento, pero no puede garantizar que este documento esté exento de errores y de omisiones no intencionales.

La información contenida en este documento podría estar sujeta a cambios técnicos o tecnológicos, revisiones o actualizaciones. Cleveland Range, LLC declina toda obligación o responsabilidad con respecto a erratas, modificaciones, revisiones o actualizaciones.

Los Representantes de Servicio calificados y autorizados de Cleveland Range, LLC tienen la obligación de seguir los procedimientos estándar de seguridad de la industria; los cuales incluyen pero no se limitan a los reglamentos de la OSHA (La Administración de la Seguridad y Salud Ocupacionales), los procedimientos de desconexión, cierre y etiquetado relativos a todos los servicios públicos incluyendo el suministro de vapor y los procedimientos de desconexión, cierre y etiquetado para los equipos y/o aparatos que funcionan a base de gas, electricidad o vapor.

Cuando se esté dando servicio o mantenimiento a un aparato de Cleveland Range, todos los servicios públicos (gas, electricidad, agua y vapor) deben estar APAGADOS para el equipo en cuestión y se debe seguir el procedimiento de cierre de operaciones de acuerdo con las prácticas aprobadas por la OSHA.

Los Representantes de Servicio calificados y autorizados de Cleveland Range, LLC tienen la obligación de actualizar constantemente sus conocimientos, destrezas, materiales y equipamiento.

FOR YOUR SAFETY / POUR VOTRE SÉCURITÉ / PARA SU SEGURIDAD

FOR YOUR SAFETY

Do not store or use gasoline or any other flammable liquids and vapours in the vicinity of this or any other appliance.

POUR VOTRE SÉCURITÉ

Ne pas entreposer ou utiliser d'essence ou d'autres liquides ou vapeurs inflammables à proximité de cet appareil ou de tout autre appareil.

PARA SU SEGURIDAD

No guarde ni use gasolina o cualesquiera otros líquidos o vapores inflamables en las cercanías de éste o cualquier otro aparato.

WARNING: Improper installation, operation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation and operating instructions thoroughly before installing, operating or servicing this equipment.

AVERTISSEMENT : Toute mauvaise pratique en matière d'installation, de fonctionnement, de réglage, de modification, d'entretien ou de maintenance peut causer des dommages matériels, des blessures ou la mort. Lisez la totalité des instructions d'installation et d'utilisation avant d'installer, d'utiliser ou d'entretenir cet équipement.

ADVERTENCIA: La indebida instalación, operación, ajuste, modificación, servicio o mantenimiento puede ocasionar daños a la propiedad, lesiones o muerte. Lea detenidamente las instrucciones de instalación y de operación antes de instalar, poner a funcionar o dar servicio a este equipo.

Do not spray aerosols in the vicinity of this appliance while it is in operation.

This appliance is not to be used by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

This appliance is not for use by children and they must be supervised not to play with it.

Retain this manual for your reference. The boiler base Tabletop is NOT a supporting surface. Death, Injury or Equipment Damage will result from mounting or placing anything on the Tabletop.

When the ON/OFF lever is turned to the OFF position, Steamer will remain HOT for some time. Avoid contact with hot surfaces and steam.

Death, Injury or Equipment Damage can result from touching any component inside this appliance when the power is connected.

Ne pas pulvériser des aérosols dans le voisinage de cet appareil alors qu'il est en fonctionnement.

Cet appareil ne doit pas être utilisé par des personnes dont les capacités physiques, sensorielles ou mentales sont réduites, ou des personnes dénuées d'expérience ou de connaissance, sauf si elles ont pu bénéficier, par l'intermédiaire d'une personne responsable de leur sécurité, d'une surveillance ou d'instructions préalables concernant l'utilisation de l'appareil.

Cet appareil n'est pas destiné à être utilisé par des enfants et ils doivent être surveillés pour s'assurer qu'ils ne jouent pas avec l'appareil.

Conservez ce manuel pour votre référence.

No pulverice aerosoles en las proximidades de este aparato mientras está en funcionamiento.

Este aparato no debe ser utilizado por personas con capacidades físicas, sensoriales o mentales reducidas, o que no tengan la experiencia y los conocimientos adecuados, a menos que estas personas hayan recibido supervisión e instrucciones en cuanto al uso del aparato por la persona responsable de la seguridad de ellas.

Guarde este manual para su referencia.



WARNING / AVERTISSEMENT / ADVERTENCIA



Improper installation, operation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation and operating instructions thoroughly before installing, operating or servicing this equipment. / Toute mauvaise pratique en matière d'installation, de fonctionnement, de réglage, de

modification, d'entretien ou de maintenance peut causer des dommages matériels, des blessures ou la mort. Lisez la totalité des instructions d'installation et d'utilisation avant d'installer, d'utiliser ou d'entretenir cet équipement. / La indebida instalación, operación, ajuste, modificación, servicio o mantenimiento puede ocasionar daños a la propiedad, lesiones o muerte. Lea detenidamente las instrucciones de instalación y de operación antes de instalar, poner a funcionar o dar servicio a este equipo.



Do not lean on or place objects on the equipment. / Ne vous penchez pas sur ou ne placez pas des objets sur la levre. / No se apoye ni coloque objetos en el labio.



Hot product and surfaces. / Produit et surfaces chaudes. / Producto y superficies calientes.

Do not touch. / Ne pas toucher. / No la toque



Stand clear of product discharge path when discharging hot product. / Écartez-vous du chemin de décharge d'un produit chaud. / Permanezca alejado de la ruta de descarga del producto al vaciar producto caliente.



Keep hands away from moving parts and pinch points. / Gardez les mains loin des pièces mobiles et des points de pincement. / Mantenga las manos lejos de piezas móviles y puntos de presión muy localizada.



Inspect unit daily for proper operation. / Inspectez l'unité tous les jours pour son bon fonctionnement. / Inspeccione diariamente el funcionamiento correcto de la unidad.



Pressurized device. / Appareil sous pression. / Dispositivo de presión.

Keep clear of pressure relief discharge. / Restez à l'écart de la soupape de sureté. / Permanezca alejado de la descarga de presión.



Do not climb, sit or stand on equipment. / Il ne faut pas monter, s'asseoir ni se tenir debout sur l'équipement. / No subirse, ni sentarse ni pararse sobre el equipo.



Surfaces and product may be hot! Wear protective equipment. / Les surfaces et le produit peuvent être chauds! Portez un équipement de protection. / ¡Las superficies y el producto pueden estar calientes! Utilice equipo protector.



Heavy / Lourd / Pesado

Team or mechanical lift. / Équipe ou remontée mécanique. / Equipo o elevador mecánico.



Floor may become slippery from product spillage. / Déversement de produit peut causer de plancher à être glissant. / Derrame de producto puede causar piso a ser resbaladizo.



Unit must be anchored as per manual. / Unité doit être ancrée selon les directives du manuel. / Unidad debe estar fijado según el manual.



Do not fill kettle above recommended level marked on outside of kettle. / Ne remplissez pas la chaudière en excès du niveau recommandé marqué sur la chaudière. / No llene la marmita arriba del nivel recomendado marcado fuera de la marmita.

SERVICING / ENTRETIEN / SERVICIO



Have a qualified service technician maintain your equipment. / Demandez à un technicien en entretien et en réparation qualifié d'effectuer l'entretien de votre équipement. / Haga que un técnico de servicio calificado mantenga su equipo



Ensure kettle is at room temperature and pressure gauge is showing zero or less prior to removing any fittings. / Assurez-vous que la chaudière est à température ambiante et que le manomètre est à zéro ou moins avant de retirer des accessoires. / Asegúrese de que la marmita esté a temperatura ambiente y el manómetro esté mostrando cero o menos antes de retirar cualquier accesorio.



Remove electrical power prior to servicing. / Coupez l'alimentation électrique avant l'entretien. / Desconecte la energía eléctrica antes de darle servicio.

Risk of electric shock. / Risque de choc électrique. / Riesgo de choque eléctrico.

Operation, Installation & Maintenance Manual
Gemini Dual Gas Steam Generator and Convection Steamer

Table of Contents

Chapter	Page
CHAPTER 1 INTRODUCTION _____	6
A. GAS LEAK INSTRUCTIONS _____	6
B. OPERATIONAL SAFETY _____	6
CHAPTER 2 GENERAL OPERATION _____	9
A. MAIN EXTERNAL POWER SWITCH _____	8
B. DOOR INTERLOCK SWITCH _____	8
C. POWER ON (AUTOMATIC FILL) _____	8
D. LIGHTING AND SHUTDOWN INSTRUCTIONS _____	8
E. INSPECTING THE COOKING COMPARTMENT _____	8
F. PREHEATING THE STEAMER _____	10
G. ENERGY CONSERVATION FEATURE _____	10
CHAPTER 3 CONTROL PANELS _____	10
A. DIAL TIMER CONTROL PANEL _____	10
B. KEYPAD TIMER CONTROL PANEL _____	12
CHAPTER 4 COOKING WITH THE STEAMER _____	14
A. OPERATING AND COOKING PROCEDURE – TIMED MODE _____	14
B. OPERATING AND COOKING PROCEDURE – MANUAL MODE _____	15
CHAPTER 5 SHUTDOWN AND CLEANING PROCEDURES _____	16
A. STEAM GENERATOR BLOWDOWN _____	16
B. SHUTDOWN AND CLEANING _____	17
CHAPTER 6 PRODUCT IDENTIFICATION _____	18
A. MODEL NUMBER _____	19
B. SERIAL NUMBER _____	19
C. PRODUCT INFORMATION PLATE _____	19
D. GENERATOR VENT _____	19
CHAPTER 7 INSTALLATION INSTRUCTIONS _____	19
A. GENERAL _____	19
B. INSTALLATION OF THE STEAMER _____	20
C. STARTUP AND CHECKOUT _____	29
CHAPTER 8 PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING _____	34
A. MAINTENANCE _____	34
B. OPERATIONAL CHARACTERISTICS BY MODEL _____	37
C. TROUBLESHOOTING GUIDE _____	38

CHAPTER 1 INTRODUCTION

To use a Gemini gas steamer safely and effectively, each operator must read and understand this Chapter completely before starting operation. The owner(s) and operator(s) of the steamer should retain these instructions in an easily accessible location for future reference and training.

The owner(s) and operator(s) of the steamer must be aware that steam can cause serious injuries and equipment damage. Pay attention to the Operational Safety section of this chapter, and the WARNINGS and CAUTIONS displayed in this manual and on the equipment.

WARNING

DO NOT ATTEMPT TO START OR OPERATE a Gemini steamer during a power outage.

Before starting a recently installed or repaired steamer, be sure it has been installed by qualified personnel according to the instructions found in the installation section.

A. GAS LEAK INSTRUCTIONS

If the operator smells gas, or suspects there is a gas leak, he should immediately refer to the posted gas leak instructions. The posted instructions are provided by the local gas supplier and supersede any other instructions. Until the leak is stopped, 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.

B. OPERATIONAL SAFETY

The safe and effective operation of any steamer depends upon proper installation, use, maintenance, and repair. Operational safety must encompass all of these factors. This Operational Safety section outlines the minimum safety policies that should be considered when using one or more Gemini steamers. It is assumed that any operational safety program must be tailored to the specific site and use of the equipment.

Burn hazards are present in any professional food service operation. When using the steamer, observe the following precautions.

- Always Remember that steam can cause severe burns.
- When checking inside the steamer always open the door slowly and stand to the side and back away from the steamer. 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.
- Open the door slightly to allow steam to vent before looking or reaching into cooking compartment.
- Do not reach into the cooking compartment until the steam has cleared.
- Do not reach into steamer or handle hot items without wearing heatproof gloves. Wet or damp gloves conduct heat and may cause burns when touching hot items.
- Do not use anything but your hands to operate the ON/OFF levers/switches or any other control on the steamer.
- Do not block the vents on the side or rear of the unit or obstruct the flow of combustion and

ventilation air to the steamer. Do not store articles on top and underneath the steamer. The steamer requires a minimum of service if properly operated and maintained by trained personnel. The following steps will help keep the steamer in a safe, efficient operating condition.

1. Do not store or leave combustible materials near the steamer. Keep the area around and under the steamer free of combustible materials.
2. Non-slip draining mats should be on the floor in front of the steamer to prevent slipping accidents from spilled water.
3. Train all personnel who will use the steamer. Make sure personnel know how to operate the steamer, clean the interior and exterior, drain the unit, and descale the steam generator.
4. If the steamer is equipped with a three-prong (grounding) plug for your protection against shock hazard, it should be plugged directly into a properly grounded three-prong receptacle. Do not cut off or remove the grounding prong from the plug of a steamer equipped with an electrical cord.
5. Periodically inspect the flue of the steam generator for signs of sooting or blockage. Contact a Cleveland Range authorized service representatives to service the steamer if any improper operation of the burner system is suspected.
6. Operating personnel must be able to recognize problems and report them so that corrective actions can be taken by trained personnel as outlined in the troubleshooting charts found in the back of this manual and in the installation section.
7. Conduct regular steamer inspections. Check for water line leaks, door seal and drain leaks, clogged drain, steam generator scale buildup, and steamer control malfunctions.
8. Follow the instructions for steamer maintenance found in this manual and in the Installation and Maintenance section.
9. Before each use of the steamer, inspect both compartments for drain and screen blockage. Inspect both door gasket assemblies, and all slide racks for proper installation and cleanliness.
10. Allow only Cleveland Range authorized service representatives to service the steamer.
11. Use only factory authorized repair parts.
12. Maintain written records of steamer maintenance and service. Each record should include at least:
 - The date of the service or maintenance.
 - A description of the service, maintenance or repair performed. Include part numbers if applicable.
 - Copies of purchase order(s) and invoice(s) for repair parts and service.
 - The name and signature of the person performing the maintenance or service.

CHAPTER 2 GENERAL OPERATION

A. MAIN EXTERNAL POWER SWITCH

Usually the steamers main external power switch is left ON. If the main external power switch was left in the OFF position, turn it ON as follows.

1. Check that the water supply valves are open.
2. Turn the ON/OFF levers/switches to the OFF position.
3. The TIMED/MANUAL switch and timer settings are not important in this procedure. The control panel circuits are not powered while the ON/OFF levers/switch is set to OFF.
4. Refer to the main external power switch in Figure 2-1 and turn on electric power to the steamer. The steam generators will immediately start blowdown cycles. The blowdown cycle lasts 3 minutes (Refer Ch.5 "Shutdown and Cleaning procedure" for blowdown cycle).

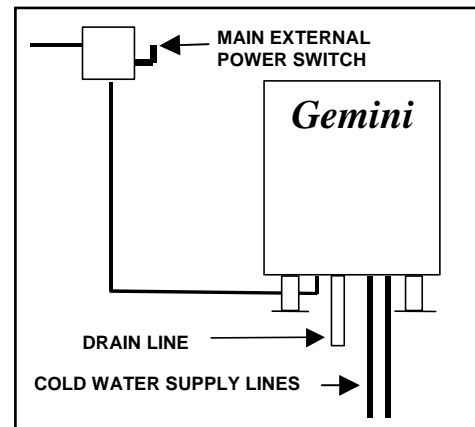


Figure 2-1 Main External Power Switch

B. DOOR INTERLOCK SWITCH

The steamer compartments of the Gemini Steamer are equipped with automatic steam cutoff switches, which turn OFF the production of steam to a cooking compartment whenever the door to that compartment is opened. **NOTE:** Even though the continued production of steam ends as soon as a door is opened, it may take up to a minute for residual steam in the system to clear from the steam lines and the cooking compartment. To avoid possible injury always wait until this residual steam has cleared before reaching into the cooking compartment.

C. POWER ON (AUTOMATIC FILL)

When each steamer compartment is turned ON, it automatically fills its steam generator with water. Use this procedure at the beginning of a shift to prepare the steamer for operation without starting steam generation. When ready to start steam cooking, begin either the Timed or Manual Operating Procedure.

1. Press the TIMED (top) end of the TIMED/MANUAL switch (for ON/OFF models set the selector switch to OFF).
2. Turn the ON/OFF lever/switch to the ON position to energize the steamer control panel. The red indicator light on the control panel lights, the combustion blower turns ON to purge the generator and water fills the steam generator.

NOTE: The ON/OFF lever/switch must be turned fully to the ON position to START the steamer.

3. When the generator is full, the steamer automatically stops water flow.
4. Once the water has reached the minimum operating level, the blower turns OFF and the pilot/standby burner lights to heat the water to the standby temperature.

D. LIGHTING AND SHUTDOWN INSTRUCTIONS

DO NOT TRY TO LIGHT THE BURNERS OR PILOT WITH A FLAME. THE PILOT AND BURNERS ARE SELF IGNITING.

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

WARNING

DEATH, INJURY OR EQUIPMENT DAMAGE may result from an improperly adjusted gas control and ignition system. Do not alter any adjustments on this electronic control or gas valve.

If adjustment is required, contact an authorized service center. Cleveland Range is in no way responsible for the operation or safety of this equipment if the controller, valve, or igniter probe are adjusted by anyone other than a Cleveland Range authorized service representative.

The following START-UP SUMMARY is for quick reference ONLY. For safe operation and use of this equipment, the operators should comply with all safety and operating instructions in this manual.

Lighting Instructions

1. Turn the ON/OFF lever/switch to the ON position.
 - Blower will start, and boiler will fill with water (about 3 minutes).
 - Pilot will attempt to light for 90 seconds.
 - If no ignition occurs the system will automatically reset in 6-7 minutes.
2. System may be reset manually by turning the ON/OFF lever/switch to the OFF position for 5 minutes and then back to ON.
3. Turn ON a cooking compartment.
4. Blower will start, and main burner will light.
5. Each compartment has its own control system and must be started independently.

Shutdown Instructions

Turn the ON/OFF lever/switch to the OFF position. The burners and pilots will immediately be extinguished, and the unit will begin the automatic 3-minute blowdown cycle and drain. NOTE: Each compartment has its own control system and must be shut off independently.

E. INSPECTING THE COOKING COMPARTMENT

At the back of the cooking compartment, a drain screen covers the drain (Refer to Figure 2-2). The screen prevents large food particles from entering and blocking the drain line. Any blockage of the drain line or screen can reduce drainage from the cooking compartment resulting in reduced cooking performance, equipment damage, and a hazard to the operator. A blocked or slow drain may cause:

- Hot water to collect in the compartment and spill out when the compartment door opens.
- Pressure fluctuations in the compartment, resulting in steam leaks around the door gasket, or compartment implosion.
- Reduced convection in the compartment, reducing cooking performance.

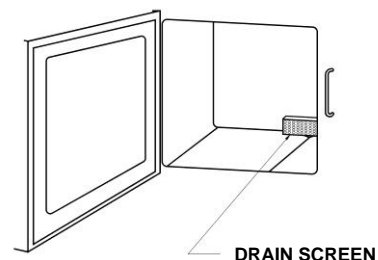


Figure 2-2 Compartment Drain Screen

⚠ CAUTION

Steam leaks around the door, cooking compartment flooding, reduced cooking performance, and compartment implosion can be caused by a blocked drain or drain screen. Inspect and clean the drain and drain screen before each use.

Before every steaming operation, inspect the cooking compartment and remove any food scraps or debris from the racks, walls, and floor of the compartment. Pay attention to the drain and drain screen.

1. DO NOT USE the steamer if water stands in the drain opening. Arrangements must be made immediately to clean the drain in accordance with the instructions found in the Preventative Maintenance and Troubleshooting section of this manual.
2. Remove any food or debris that is blocking the drain or screen.
3. Be sure the screen covers the drain. The screen prevents large pieces of food from entering and blocking the drain.

F. PREHEATING THE STEAMER

Preheating the steamers can help insure that the best productivity and consistent cooking is obtained. To preheat each steamer, run a cooking cycle of approximately 15 minutes with no food in the cooking compartments.

NOTE: If using a steamer with a timer, set only a 1-minute cooking time for preheating, since the timer will only begin to countdown once the steamer has reached a cooking temperature.

- **BEFORE PREHEATING**, inspect and clean the compartment. After preheating, the compartment will be too hot to inspect and clean safely.

G. ENERGY CONSERVATION FEATURE, HIGH EFFICIENCY UNITS - “ES” MODELS

The STEAMSAVER™ model 24CGA6.2SES and the STEAMSAVER™ model 24CGA10.2ES are steamers designed for high efficiency operation. These models incorporate the exclusive energy and water saving design of the STEAMSAVER™ Technology (SST). The energy saver models provide steam in a similar manner to our high capacity models except that the flow of steam is regulated by cycling the burners off once the desired cooking temperatures is reached. When the temperature drops to a set point below the desired cooking temperature the burners will turn back on to bring the cooking compartment back up to temperature. The burners will continue to cycle on and off as necessary to maintain temperature until the cooking operation is complete.

CHAPTER 3 CONTROL PANELS

The standard dial timer control panel (illustrated in Figure 3-1) has a mechanical timer. An optional electronic keypad timer, illustrated in Figure 3-2, and an ON/OFF control panel (not illustrated) are also available. The Electronic and mechanical timers use a temperature compensation circuit (SURECOOK Circuit), which allows the timer to count down only while the cooking compartment is at cooking temperature.

A. DIAL TIMER CONTROL PANEL

1. Cooking Operations – Dial Timer Control Panel

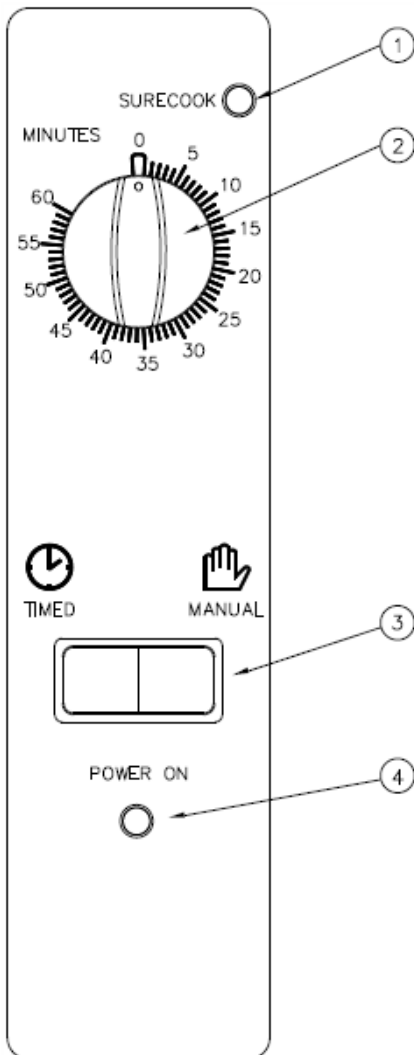
For safe, efficient operation of the steamer, the operator must, at a minimum, comply with all cautions, warnings and instructions in the detailed operating procedures and be familiar with the control panel shown in Figure 3-1. The operator must be familiar with all the operating features explained in this manual before attempting to operate the steamer.

2. Manual and Timed Modes

The steamer has two operating modes: manual and timed. The TIMED/MANUAL rocker switch (3) selects the operating mode. Pressing the MANUAL end of the switch selects the manual operating mode. Pressing the TIMED end of the switch selects the timed operating mode. Cooking procedures are slightly different for each mode.

a. Manual Mode

The manual mode provides continuous cooking. The operator starts and stops steaming operations manually. See the Operating and Cooking Procedure – Manual mode in Chapter 4, Part B for more information. A thermostat-controlled pause light (SURECOOK Indicator light) located on each control indicates that the cooking compartment has not yet reached cooking temperature.



1). SURECOOK™ Indicator Light

This light is lit whenever the cooking compartment has not yet reached cooking temperature. Note: when in the timed mode the timer will not count down as long as this light is ON.

2). TIMER

This dial timer sets the operating time from 0 to 60 minutes. Turn the dial clockwise until it points to the required number of minutes. When it reaches 0, a buzzer sounds for 3 seconds.

3). TIMED/MANUAL Switch

The TIMED/MANUAL switch selects the manual or timed operating mode.

- Pressing the MANUAL end of the switch selects the manual mode. (See also the Note at the top of this page)
- Pressing the TIMED end of the switch selects the timed mode.

4). Power on Indicator Light

When the Red indicator light is on, power is on to the control panel.

FIGURE 3-1, DIAL TIMER CONTROL PANEL

b. Timed Mode

- The timer provides timed control of steaming operations. The timer starts and stops steaming operations.

- The mechanical timer control uses a temperature compensation circuit (SURECOOK circuit) that affects only the timer. When operating, the timer ONLY COUNTS DOWN WHILE THE COOKING COMPARTMENT IS AT COOKING TEMPERATURE. This provides totally automatic control of the steaming operation and assures uniform cooking as the timer automatically compensates for food product defrosting and/or compartment heat up time. Whenever the steamer is not at cooking temperature, the timer pauses, and the PAUSE light is illuminated.
- To use the timer, simply set the timer to the desired time. The steamer will begin cooking as soon as the timer is set. When the timer reaches zero the steaming functions will automatically end, and a buzzer will sound for 3 seconds to alert the operator that cooking is complete.
- Note the mechanical timer will not function when the Timed/Manual switch is set to Manual, although the SURECOOK™ light will still illuminate to indicate that the cooking compartment is not yet at cooking temperature.

B. KEYPAD TIMER CONTROL PANEL

1. Cooking Operations – Keypad Timer Control Panel

For safe, efficient operation of the steamer, the operator must, at a minimum, comply with all cautions, warnings and instructions in the detailed operating procedures and be familiar with the control panel shown in Figure 3-2. The operator must be familiar with all the operating features explained in this manual before attempting to operate the steamer.

2. Manual and Timed Modes

The steamer has two operating modes: manual and timed. The TIMED/MANUAL rocker switch selects the operating mode. Pressing the MANUAL end of the switch selects the manual-operating mode. Pressing the TIMED end of the switch selects the timed (automatic) operating mode.

a. Manual Mode

The manual mode provides continuous steaming. The operator starts and stops steaming operations manually. See the Operating and Cooking Procedure – Manual Mode in Chapter 4, Part B for more information.

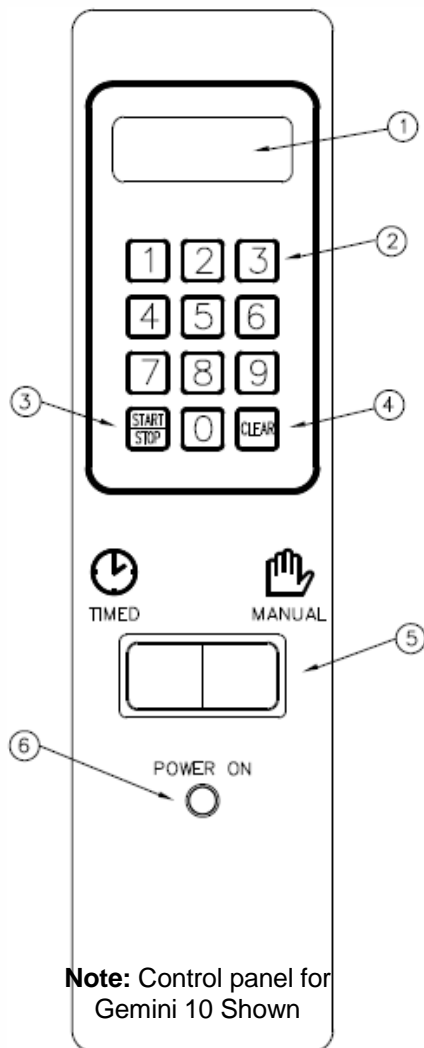
b. Timed Mode and Use of the Timer

1). Timer Use and Temperature Compensation

- The keypad timer control starts and stops steaming operation, and monitors cooking time and compartment temperature for accurate, efficient, uniform steam cooking.
- The keypad control uses a temperature compensation circuit that effects only the timer. When operating, the timer ONLY COUNTS DOWN WHILE THE COOKING COMPARTMENT IS AT COOKING TEMPERATURE. This provides totally automatic control of the steaming operation and assures uniform cooking as the timer automatically compensates for food product defrosting and/or compartment heat up time. Whenever the steamer is not at cooking temperature, the timer pauses, and the display shows “PAUS”. Once temperature is reached, a digital display of the remaining time is displayed. When the timer counts down to zero a buzzer will sound, to indicate that cooking is complete, and the steam generator will shut down.
- The timer will operate similarly when the steamer is being operated in the manual mode including counting down only when the steamer is at cooking temperature, except that the timer does not start or stop the steaming cycle.

CAUTION

Press keypad with fingertips only. Do not use kitchen utensils or anything sharp to operate the keypad.



1). TIMER Display

This four-digit display indicates the minutes and seconds remaining in the count down. The display reads from zero (00:00) to 99 minutes and 99 seconds (99:99). It reads pause (PAUS) when the countdown is halted either by the START/STOP key or by the temperature compensating circuit.

2). Number Pad Keys

These keys set the number of minutes and seconds in the timer count down. Pressing the number keys 1 2 3 4 in this sequence, sets the timer for 12 minutes and 34 seconds (12:34).

3). START/STOP Key

This key starts and stops the timer. In TIMED mode the steaming functions are linked to the timer. In MANUAL mode, the steaming functions are independent of the timer.

4). CLEAR Key

This key resets the timer to zero (00:00) after it has been stopped. The timer must be zeroed by pressing this key before a new time can be set.

5). TIMED/MANUAL Switch

The TIMED/MANUAL switch selects the manual or timed operating mode.

- Pressing the MANUAL end of the switch selects the manual mode, and lights the red indicator built into the manual end of the switch. (See also the Note at the bottom of this page)
- Pressing the TIMED end of the switch selects the timed mode.

6). Power on Indicator Light

When the Red indicator light is ON, power is ON to the control panel.

FIGURE 3-2, KEYPAD TIMER CONTROL PANEL

Timer Operation

a) Setting the Timer

To set the cooking time, the timer must first be zeroed by pressing the clear key. The timer can be set only when the cooking time display is clear (00:00). The cooking time display contains four digits. The left two digits are minutes, and the right two digits are seconds. The display 12:34 is set for 12 minutes and 34 seconds. To set the cooking time:

- (1) Change the required cooking time to minutes and seconds.
- (2) Press the number keys for minutes, and then, for the seconds.
- (3) If the cooking time is 99 seconds or less, only press the number keys for seconds.

b) Starting/Stopping the Timer

Press the START/STOP key to start or stop the timer. When the START/STOP key is pressed, the steam generator begins heating the water to steam. Shortly, steam fills the cooking compartment.

- (1) The timer display reads “PAUS” until the cooking compartment reaches proper cooking temperature, or when the timer cycle is paused by pressing the START/STOP key again after the timer has started.
- (2) When the cooking compartment reaches proper cooking temperature, the timer display shows the count down.

NOTE: A timer setting of 10 minutes may in fact take 11 or 12 minutes for the timer to count down and the alarm to sound. This is normal. Heating the compartment and food to cooking temperature uses the additional time.

c) Shutting Off Buzzer AFTER Timer has Reached Zero

When the timer counts down to zero, the buzzer sounds continuously, the generator stops steaming, and steam flow to the cooking compartment gradually stops.

Press the START/STOP key to silence the buzzer. The cooking time display returns to the last time set. Either run this same setting again or clear and reset the timer.

CHAPTER 4 COOKING WITH THE STEAMER

WARNING

When checking inside the steamer always open the door slowly and stand to the side and back away from the steamer. 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.

OPERATING AND COOKING PROCEDURE – TIMED MODE

WARNING

Even though the production of steam ends as soon as a door is opened, it may take up to a minute for residual steam in the system to clear from the steam lines and the cooking compartment. To avoid possible injury always wait until this residual steam has cleared before reaching into the cooking compartment.

In timed mode, the timer starts and stops the steaming operation.

1. Inspect and clean the drain and cooking compartment as required. Refer to INSPECT THE COOKING COMPARTMENT IN Chapter 2, Part E.
2. If necessary, preheat the cooking compartment. Refer to PREHEATING THE STEAMER, in Chapter 2, Part F.
3. Slide the pans of food into the slide racks inside the steamer. Do not place pans or anything else on the bottom of the compartment.

CAUTION

Some foods drip juices. Use a solid catch pan under perforated pans when steaming food that will drip juices. Failure to use a catch pan can cause a clogged drain.

- For best cooking results, use shallow, 2-1/2-inch-deep, perforated pans without covers. These give the best heat transfer and shortest cooking time.
4. Close the steamer door.
 5. Check the control settings. At this point the settings should be:
 - The ON/OFF lever/switch is in the ON position.
 - The TIMED/MANUAL switch is in the TIMED position.
 6. Set the required cooking time. For KEYPAD MODELS press the START/STOP key to start the cooking cycle. Shortly after the door is closed, steam fills the cooking compartment.
 7. When the timer reaches zero, a buzzer will sound, the steam generator stops steaming, and steam flow to the cooking compartment gradually stops. The cooking cycle is complete.
 - For DIAL timers the buzzer will stop after 3 seconds.
 - For KEYPAD timers, press the START/STOP key to silence the alarm.

WARNING

SEVERE BURNS may result from exposure to steam.

Do not open the steamer door before steam flow stops. Stand back when opening the compartment door. Open the door slightly to allow steam to vent before looking or reaching into cooking compartment. Do not reach into cooking compartment until the steam has cleared.

Do not reach into steamer or handle hot items without wearing heatproof gloves. Wet or damp gloves conduct heat and may cause burns when touching hot items.

8. Carefully open cooking compartment door and remove the pans from slide racks.
 - If the steamer will be used again in a few minutes shut the door to maintain the cooking compartment temperature.
 - If another use is not planned for more than half an hour, leave the cooking compartment door slightly open to reduce internal pressure while the steam condenses and the compartment cools.
 - If the steamer is not being used again during this shift, perform the Power OFF and Shut Down and Cleaning Procedures, found in Chapter 5.

A. OPERATING AND COOKING PROCEDURE – MANUAL MODE

Manual mode allows the operator to personally control the cooking functions. The operator starts and stops the steaming operations and sets the cooking time including time for steam generator, compartment and food heat-up time. Use the manual-cooking mode for:

- A continuous supply of steam (24CGA6.2S & 24CGA10.2 only).
- Cooking times longer than the timer can measure. See Part 2, “Longer Cooking Times in Manual Mode” below, for more information on extended cooking with a Gemini Steamer.
- Maintaining the compartment temperature between cooking batches.

1. Using the Timer in Manual Mode

The KEYPAD timer may be used when the steamer is operating in the manual mode, but it will not start or stop the steaming cycle.

2. Manual Cooking Procedure

Follow this procedure when cooking with the steamer in manual mode.

- 1) Inspect and clean the drain and cooking compartment as required. Refer to INSPECT THE COOKING COMPARTMENT in Chapter 2, Part E.
- 2) In manual mode, the operator can bring the compartment to cooking temperature by either preheating or increasing the cooking time. If the operator chooses to preheat the cooking compartment manually, refer to Chapter 2, Part F, PREHEATING THE STEAMER.
- 3) Slide the pans of food into the slide racks inside the steamer. Do not place pans or anything else on the bottom of the compartment.
 - For best cooking results, use shallow, 2-1/2-inch-deep, perforated pans without covers. These give the best heat transfer and shortest cooking time.
- 4) Close the steamer door. Select the manual mode by pressing the MANUAL end of the TIMED/MANUAL rocker switch. The steaming cycle starts as soon as the switch is pressed. Shortly after the door is closed, steam fills the cooking compartment.
- 5) If the KEYPAD timer is used to monitor cooking.
 - a) Set and start the timer. (Remember that when the KEYPAD timer is used in this way it will only count down time when the steamer is at cooking temperature.)
 - b) When the timer reaches zero, the buzzer will sound, and cooking is done. Remember, in manual mode, the timer does not stop the steaming functions.
- 6) To stop manual mode steaming, press the TIMED end of the TIMED/MANUAL rocker switch and verify that the timer is OFF (timer electronic models) or at zero (Dial timers). The generator stops steaming, and steam flow to the cooking compartment gradually stops.
- 7) Carefully open the cooking compartment door and remove the pans from the slide racks.
 - If the steamer will be used again in a few minutes shut the door to maintain the cooking compartment temperature.
 - If another use is not planned for more than half an hour, leave the cooking compartment door slightly open to reduce internal pressure while the steam is condensing and cooling.
 - If the steamer is not being used again during this shift, perform the Power OFF and Shut Down and Cleaning Procedures, found in Chapter 5

CHAPTER 5 SHUTDOWN AND CLEANING PROCEDURES

A. STEAM GENERATOR BLOWDOWN

1. Power Off (Automatic Blowdown)

Blowdown occurs automatically when each steamer compartment is turned OFF at its ON/OFF lever/switch. During blowdown, the steam generator drain valve is rinsed with fresh water, and the boiler is drained. Blowdown at frequent intervals helps decrease mineral buildup in the steam generators and reduces the frequency of descaling and other maintenance.

2. Blowdown Frequency

The supply water quality determines how often blowdown must be performed. The more the steamer is used and the higher the content of total dissolved solids and particulates in the feed water, the more frequently blowdown must be performed. A determination should be made at the time of installation whether additional blowdown frequency will be required as part of the daily maintenance based on the water quality analysis done as part of the installation. This information should be noted in the daily maintenance program developed for the equipment. After it has been determined whether the local water supply meets the minimum supply water quality standards, observe the following guidelines to establish proper blowdown scheduling.

- When using a supply water system that does not meet the minimum supply water quality standards, blowdown must be performed after every 4 hours of operation and at the end of each shift.

- For units using water that meets the minimum supply water quality standard, whether naturally or by using a water treatment system, blowdown must be performed at the end of each shift.

3. Blowdown Procedure

When each steamer is turned OFF, its blowdown cycle starts and runs automatically. The complete cycle takes approximately 3 minutes.

- (1) Turn the ON/OFF lever/switch to the OFF position to turn OFF the steamer. The red indicator light turns OFF and the drain valve is opened. Do not turn power OFF at the main external power switch during blowdown.
- (2) The drain valve begins to draw water from the steam generator.
- (3) The fill valve operates for 3 minutes to help flush any debris through the drain valve as the generator drains.
- (4) At the end of the 3-minute blowdown cycle, the fill valve closes.
- (5) When blowdown is complete, the steamer can be restarted, or the shutdown procedure completed.
 - To restart the unit, refer to POWER ON (AUTOMATIC FILL) in Chapter 2, Part C.
 - To shut down the unit, refer to SHUT DOWN AND CLEANING, below.

NOTE: The ON/OFF lever/switch must be turned fully to the OFF position to properly START the automatic blowdown of the steamer.

B. SHUT DOWN AND CLEANING

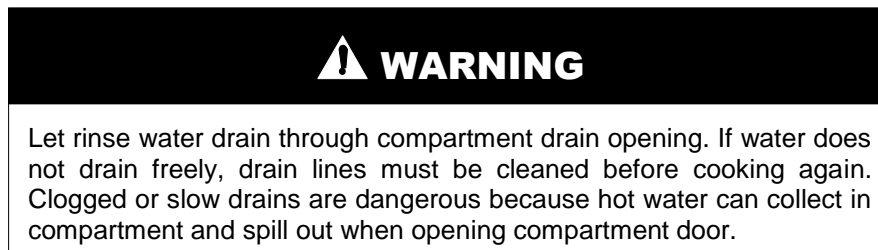
This procedure should be performed at the end of each day or shift.



1. Refer to Power OFF (Automatic Blowdown) and turn off the steamer compartment. Allow 3 minutes for the complete blowdown cycle.
2. Open the steamer door and allow steamer to cool.



3. Remove the slide racks. Wash and rinse racks separately or clean them in a dishwasher according to health requirements. Do not remove the drain screen.
4. Remove any spilled food from inside compartment and clear any residue from the drain screen. Clean the interior of the compartment thoroughly. Use a soft bristle brush to remove stubborn food particles. Do not use abrasive cleaning compounds or steel wool. Rinse inside of steamer compartment with clean water.



5. Clean the door assembly.
 - Remove the door gasket assembly (see Figure 5-1).
 - Note the keyhole slots on the door and the retaining pins on the gasket assembly. Grasp the gasket assembly at the sides and lift up and towards you to remove the assembly.
 - Clean all surfaces of the gasket assembly, as well as the inside of the door, by wiping with a damp cloth.
 - Rotate the gasket assembly 180° and replace it by sliding the retaining pins into the keyhole slots. Either long edge of the gasket assembly can be positioned at the top. Periodic rotating of the door assembly will increase the door gasket life.
6. Replace the cleaned slide racks.
7. Wipe the exterior with a damp cloth only. NEVER HOSE DOWN THE STEAMER. Electrical components inside the unit will not function correctly if wet or damp.
8. After cleaning, leave the steamer door open until the next steamer operation. This prevents compartment odor buildup and increases gasket life.

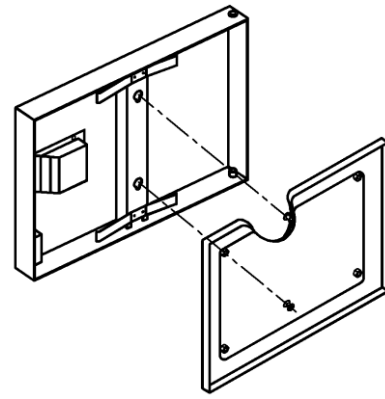


Figure 5-1 Door Gasket Assembly

CHAPTER 6 PRODUCT IDENTIFICATION

Cleveland Range, Inc. assigns two product identification numbers to each steamer: a model number and a serial number. The model number identifies the product characteristics. The serial number identifies the individual unit.

A. MODEL NUMBER

This manual covers the Gemini Model No. 24CGA6.2S, STEAMSAVER™ 24CGA6.2SES, 24CGA10.2, and STEAMSAVER™ 24CGA10.2ES Dual Steam Generator and Convection Steamer.

Each character of this model number identifies a characteristic of the steamer. The Gemini Model No. STEAMSAVER™ 24CGA10.2ES is 24 inches wide, a **C**onvection steamer, **G**as powered, and an **A**tmospheric steam generator with a capacity for **10** cooking pans, this model has the extra suffix “.2” to differentiate it from our standard 10 pan model that does not have two separate generators and **E**nergy **S**aver for models designed for high efficiency operation. This manual covers all standard features and options available on Gemini gas steamers.

Model 24CGA6.2S and 24CGA10.2 are steamers designed for high capacity operation. The burners that supply steam and the condenser spray to the compartments are on continuously while the unit is in timed cooking mode or in the manual cooking mode. The burners and condenser spray stay on until the cooking operation is complete.

Model STEAMSAVER™ 24CGA6.2SES and STEAMSAVER™ 24CGA10.2ES are steamers designed for high efficiency operation. These models incorporate the exclusive energy and water saving design of the STEAMSAVER™ Technology (SST). The energy saver models provide steam in a similar manner to our high capacity models except that the flow of steam is regulated by cycling the burners off once the desired cooking temperatures is reached. When the temperature drops to a set point below the desired cooking temperature the burners will turn back on to bring the cooking compartment back up to temperature. The burners will continue to cycle on and off as necessary to maintain temperature until the cooking operation is complete. The condenser spray is activated periodically to cool the condensate water to the drain automatically through the use of a thermostat control.

NOTE TO INSTALLER: There are some significant differences in the installation procedures between the 24CGA6.2S, 24CCG10.2 and the STEAMSAVER™ 24CGA6.2SES, STEAMSAVER™ 24CGA10.2ES units. Pay close attention to section headings for specific installation instructions for each model listed.

B. SERIAL NUMBER

During manufacture, Gemini Steamers are assigned individual serial numbers. Whenever any inquiry is made with Cleveland Range regarding a steamer the serial number should be referenced.

C. PRODUCT INFORMATION PLATE

The Product Information Plate on the left side of the unit lists the model and serial number of the steamer. Figure 1-1 illustrates a typical Gemini Product Information Plate. The rating plate also lists power and wiring requirements.


		CLEVELAND RANGE, LLC	
		CLEVELAND, OHIO	
MODEL NO	24CGA10.2		
SERIAL NO	W/C - 21711-02B-01		
MANIFOLD PRESSURE	3.5 in.	W.C.	
STEAM GENERATOR(S)	2	AT	72,000 BTU PER HR EACH
ANSI Z83.11	<input type="checkbox"/>	NATURAL GAS	
CGA 1.8	2002	1,000	BTU PER CU FT
FOOD SERVICE EQUIPMENT	FOR USE ON COMBUSTIBLE FLOORS		
	COMBUSTIBLE CONSTRUCTION	NONCOMBUSTIBLE CONSTRUCTION	
BACK	3 IN	MINIMUM CLEARANCE	3 IN
SIDE	3 IN		3 IN
VOLTS	115	PHASE	1 HZ 60 AMPS 3.0
CAUTION: FOR SUPPLY CONNECTION USE ONLY COPPER WIRE SUITABLE FOR AT LEAST 60°C			
INTENDED FOR OTHER THAN HOUSEHOLD USE			

Figure 1-1 Gemini Product Information Plates

D. GENERATOR VENT – IMPORTANT

When installing this steamer, under no circumstances should the Steam Vent (See Figure 1-2), be removed, capped or attached to piping of any kind.

This fitting is an auxiliary safety intended to prevent any pressure from building up in the generator in the unlikely event the steam outlets of the steamer should become plugged or restricted.

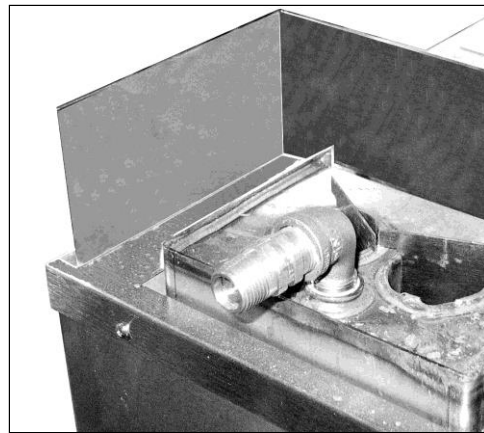


Figure 1-2 Generator Vent

CHAPTER 7 INSTALLATION INSTRUCTIONS

A. GENERAL

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

- The steamer is to be installed to comply will the applicable Federal, State or Local Plumbing Codes, with the National Fuel Gas Code, ANSI Z223.1-(latest edition) or the Natural Gas Installation Code CAN/CGA-B149.1 or the Propane Installation Code CAN/CGA-B149.2 as applicable, The National Electrical Code, ANSI/NFPA No. 70-(latest edition) or the Canadian Electrical Code, CSA C22.2 as applicable, the Food Service Sanitation Manual of the Food and Drug Administration (FDA) and all applicable state and local codes and regulations.

- The installation instructions must be read in their entirety before starting the installation of this steamer.

 **WARNING**

DO NOT INSTALL a Gemini steamer that has been damaged. Install the Gemini steamer according to the policies and procedures outlined in this manual.

- To install this steamer, the following requirements must be considered when selecting a location.
 - a. A suitable drain must be available within 12 ft. of the steamer. Do NOT install the appliance directly over a drain. Steam rising out of the drain will adversely affect operation, hamper cooling air circulation, and damage electrical and electronic components. NOTE: The drain MUST NOT be located beneath the steamer itself.
 - b. An electrical supply matching the power requirements found on the rating plate must be available, which is not of the GFCI (Ground Fault Interrupter Circuit) type.
 - c. A gas supply matching the fuel requirements found on the rating plate must be available.
 - d. The location must have sufficient space to meet the clearance requirements of the steamer as outlined in Chapter 2, Section B, Part 1, "Locating the Steamer".
 - e. A water supply meeting the requirements outlined in Chapter 2, Section B, Part 6 "Water Supply Requirements and Installation" must be available.

B. INSTALLATION OF THE STEAMER

After selecting the steamer's operating location, the steamer can be positioned, and installed.

 **CAUTION**

Malfunctions and equipment damage may result from improper mounting. Malfunctions and/or damage resulting from improper mounting are not covered by the equipment warranty. The steamer **MUST BE LEVEL BOTH FRONT TO BACK AND SIDE TO SIDE** in all mounting arrangements. Catastrophic damage will result from shifting the steamer more than 10° out of level with power supplied to the unit.

1. Locating the Steamer

a. Location and Clearance Requirements of the Steamer

For safe and efficient operation, observe the following criteria when selecting an operating location for the Gemini steamer.

- 1) The unit should be installed in an area that is free and clear of combustible materials.
- 2) Do NOT install the appliance 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.
- 3) A proper air supply for combustion and ventilation is critical to safe, efficient operation of Gemini gas steamers.
- 4) Do not install any heat producing equipment near the air vents of the equipment. Do not block the air vents of the unit. Do not store articles on top of the unit.

 **WARNING**

All clearance requirements above, below, and around the unit are the same for non-combustible locations as for combustible

- 5) Please refer to spec sheet for Steamer dimensions and clearances. Maintain the following minimum dimensions around the unit for safe and efficient operation, maintenance and service.
 - Maintain a 3-inch operating clearance at the sides of the unit, and at least a 3-inch clearance at the back.
 - A 12 in clearance is recommended on the right side for servicing the steamer.
 - Approximately 24 inches of clearance is recommended in front of the unit for opening the door and standard pan clearance.
- 6) The steamer must be level both front to back and side to side. Select an operating surface that is level enough to allow leveling the unit without extreme adjustment of the legs.
- 7) The location selected must be capable of supporting 650 lbs. for a Gemini steamer. This includes the weight of the water and the food.

b. Exhaust Hood Requirements

The Gemini gas steamer **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 steamer without the operation of the ventilation hood.

The exhaust hood must extend over the gas flue opening on top of the steamer and meet the following requirements:

- 1). The Gemini gas steamer must be vented in accordance with all local, state and national codes for venting gas fired appliances.
- 2). The exhaust hood must be sized for the cumulative ventilation requirements of all the gas-fired appliances in the area including the Gemini. Spec sheet contains the dimensions, gas flow, and BTU per hour data required to calculate the minimum required hood dimensions and minimum ventilation capacity (c.f.m.) for the Gemini 6 and 10 pan steamers.
- 3). Do not connect the exhaust hood directly to the flue outlet of the steamer.
- 4). If an existing hood cannot be used, a new one should be constructed over the steamer.

c. Positioning and Leveling the Steamer

NOTE: If there is not enough room to work on the drain, electrical, gas and water lines with the unit in place, postpone positioning and leveling the unit until all site preparation is completed. After the lines are prepared, position and level the steamer then connect the utility lines.

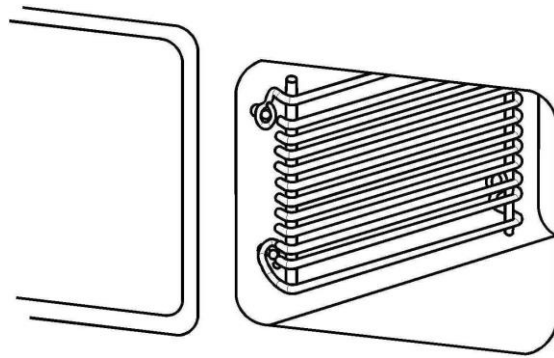
WARNING

INJURY AND EQUIPMENT DAMAGE could result from improper lifting. A Gemini Steamer weighs approximately 545 pounds. Use enough workers with experience lifting heavy equipment to place the steamer on the supporting surface

Move the steamer into position. Using a level, adjust the adjustable legs until the unit is level.

2. Install Slide Racks

- a. Refer to Figure 2-5. Each 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 cavity wall, as shown in the figure.
- b. Slide one rack into the compartment with loops toward one side.
- c. Hook the loops over the top and bottom pins.
- d. Repeat steps a. through c. for the other racks.



**Figure 2- 5 Slide
Rack Installation**

3. Install the Free Air Vented Drain Lines

NOTE TO INSTALLER: There are significant differences in the installation procedures between the 24CGA6.2S, 24CCG10.2 and the STEAMSAVER™ 24CGA6.2SES, STEAMSAVER™ 24CGA10.2ES units. Pay close attention to section headings for specific installation instructions on each model listed.

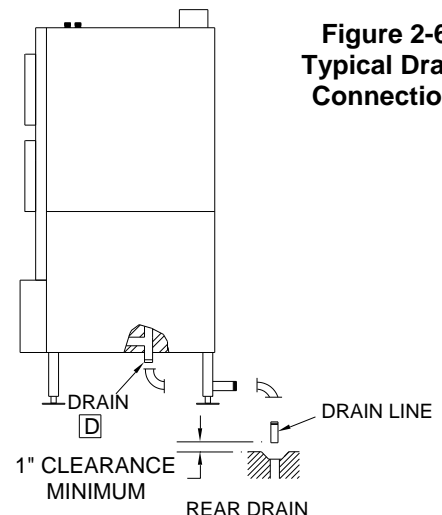
a) Drain Installation for Models 24CGA6.2 & 24CGA10.2 (high capacity) Only

Furnishing and installing the drain line is the responsibility of the owner and/or installer. Figure 2-6 illustrates a drain layout recommended by Cleveland Range.

⚠ WARNING

Do not connect the drain line into PVC or any drain material that cannot sustain 180° F.
Do not connect drains from any other equipment to the drain line of the Gemini Steamer.
Do not connect the drain outlet extension line directly to a floor drain or sewer line.
The drain line must be free air vented, have gravity flow from the steamer, and terminate outside the perimeter of the unit.

1. The drain lines must be installed in compliance with the Food Service Sanitation Manual of the Food and Drug Administration (FDA) and WITH THE applicable Federal State, or Local plumbing codes.
2. Do not install the steamer directly over a drain. Steam rising out of the drain will adversely affect operation, cooling air ventilation and may damage electrical components.
3. 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.
 - If the drain outlet extension requires 6 feet or less of pipe, and no more than two elbows are required, 1- ½ inch ID pipe and fittings are acceptable.
 - If the drain outlet extension requires 6 to 12 feet of pipe, or requires three or more elbows, 2-inch ID pipe and fittings are required.



**Figure 2-6
Typical Drain
Connection**

4. The drain line must have a gravity flow from the steamer drain outlet to the floor drain. Do not install a trap in the drain line.
5. Free air venting requires a minimum of 1 inch of clearance between the end of the drain line and the top of the floor drain.
6. Do not connect the steamer drain directly to drains or plumbing of any other equipment. Connect the drain to the steamer as described below:
 - The steamer is supplied with a 1-½ -inch pipe connection at the bottom of the unit (Figure 2-6).
 - When assembling the pipes and fittings of the drain outlet extension, apply a hardening type pipe sealant to the threads, and thread them together FINGER TIGHT ONLY. DO NOT USE A WRENCH.

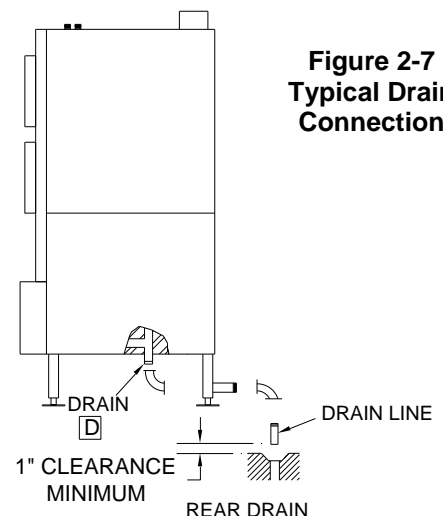
b) Drain Installation for Models STEAMSAVER™ 24CGA6.2SES & STEAMSAVER™ 24CGA10.2ES (high efficiency) Only

Furnishing and installing the drain line is the responsibility of the owner and/or installer. Figure 2-7 illustrates a drain layout recommended by Cleveland Range.

⚠ WARNING

Do not connect the drain line into any drain material that cannot sustain 140° F.
 Do not connect drains from any other equipment to the drain line of the Gemini Steamer.
 Do not connect the drain outlet extension line directly to a floor drain or sewer line.
 The drain line must be free air vented, have gravity flow from the steamer, and terminate outside the perimeter of the unit.

1. The drain lines must be installed in compliance with the Food Service Sanitation Manual of the Food and Drug Administration (FDA) and WITH THE applicable Federal State, or Local plumbing codes.
2. Do not install the steamer directly over a drain. Steam rising up out of the drain will adversely affect operation, cooling air ventilation and may damage electrical components.
3. 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.
 - If the drain outlet extension requires 6 feet or less of pipe, and no more than two elbows are required, 1- ½ inch ID pipe and fittings are acceptable.
 - If the drain outlet extension requires 6 to 12 feet of pipe, or requires three or more elbows, 2-inch ID pipe and fittings are required.
4. The drain line must have a gravity flow from the steamer drain outlet to the floor drain. Do not install a trap in the drain line.
5. Free air venting requires a minimum of 1 inch of clearance between the end of the drain line and the top of the floor drain.
6. Do not connect the steamer drain directly to drains or plumbing of any other equipment.
7. Connect the drain to the steamer as described below:



**Figure 2-7
Typical Drain
Connection**

- The steamer is supplied with a 2 in tube connection at the bottom of the unit and a no-hub connector, included (Figure 2-7).
- When assembling the pipes and fittings of the drain outlet extension, apply a hardening type pipe sealant to the threads, and thread them together FINGER TIGHT ONLY. DO NOT USE A WRENCH.

4. Install Gas Supply Lines

a. Gas Supply Requirements

- 1) Make sure the gas supply type matches the type of gas shown on the rating plate.
- 2) Make sure that the gas supply pressure does not exceed 14" water column, and falls within the acceptable gas pressure range shown below:
 - Natural gas pressure must be between 4½" – 14" water column.
 - Propane gas pressure must be between 11" – 14" water column.

b. Install Gas Supply lines

The installer/owner is responsible for furnishing and installing the gas supply lines, valves, regulators, and accessories. When installing the gas supply lines and accessories, observe the following:

- 1). The installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 (latest edition) or the Natural Gas Installation Code, CAN/CGA-B149.1 or the Propane Installation Code, CAN/CGA-B149.2 as applicable.
- 2). THE GAS SUPPLY PRESSURE TO THE STEAMER MUST NEVER EXCEED 14" WATER COLUMN (½ psi). If the gas supply pressure exceeds 14" water column; a pressure regulator must be installed in the gas supply plumbing to reduce the pressure to the steamer.
- 3). Refer to Figure 2-8 for the recommended layout of the gas supply lines. Refer to spec sheet depending on which model you have, Detail **A** for the location of the ¾ inch gas inlet of the steamer.
- 4). Install a manual shut off valve between the gas supply and the steamer. See Figure 2-8. From now on this valve will be referred to as the Main Manual gas valve.
- 5). It is recommended that a sediment trap (drip leg) be installed in the gas supply line. See Figure 2-8.
- 6). Use a pipe sealant compound, which is resistant to LP gas.

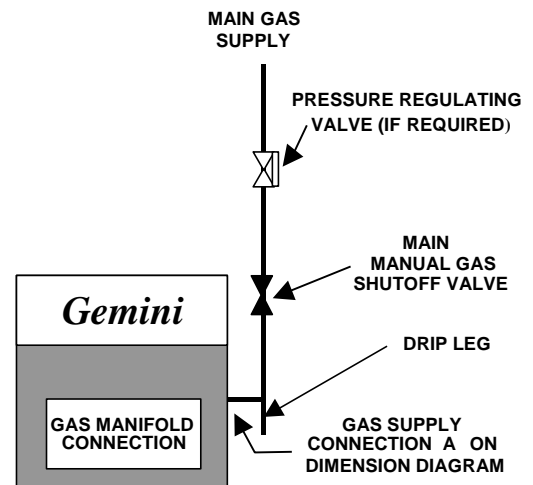


Figure 2-8 Recommended Gas Supply Line Layout

c. Testing Gas Supply Lines

1). Leak Testing the appliance

Before permanently turning on gas to the steamer or after any service to the gas supply, test all pipe joints for leaks with a soap and water solution. All leaks must be corrected before attempting to operate the steamer.

2). Pressure Testing the Gas Supply Lines

The steamer must be isolated from the gas supply 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 ($\frac{1}{2}$ psi or 3.45 kPa). Be sure to leak test all fittings with a soap and water solution after reconnecting the gas supply.
- 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 ($\frac{1}{2}$ psi or 3.45 kPa).

5. Install Electric Power Lines

The electrical supply must match the power requirements specified on the steamers rating plate and be made in accordance with the following requirements.

- a. The steamer must be grounded and have the electrical power lines installed in accordance with local codes and/or the National Electric Code, ANSI/NFPA No. 70-LATEST EDITION (USA) or the Canadian Electrical Code, CSA C22.2, as applicable. The wiring diagram is located on the back of the lower front panel.
- b. Power connection
 - This unit is not suitable for connection to a GFCI (Ground fault Circuit Interrupter).
 - Cleveland Range recommends that the unit be connected to the electrical system, using a flexible conduit system compliant with the applicable codes.
- c. A main disconnect switch and a separate fuse or breaker should be installed near the unit as shown in Figure 2-9. See spec sheet for the steamers power requirements. Throughout the remainder of this manual the fused disconnect switch is referred to as the main external power switch.
- d. Refer to the connection diagrams in Figure 2-10 and connect the wires to the terminal block and ground connector accordingly.

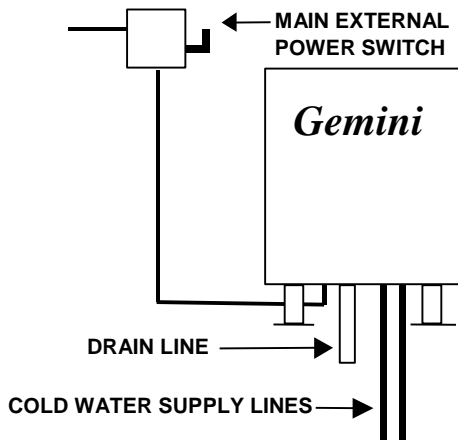


Figure 2-9, Recommended Electrical Layout

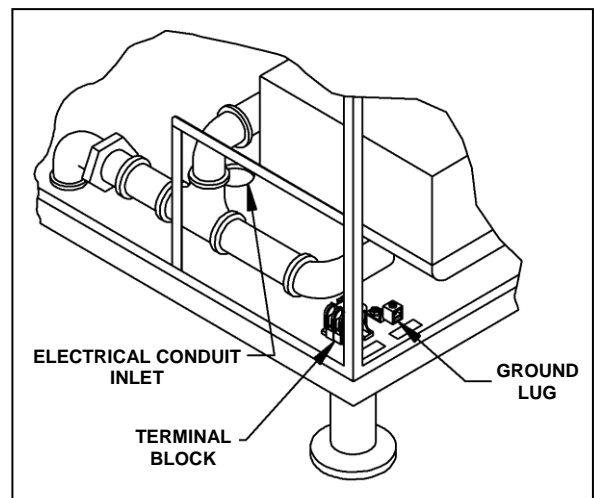



Figure 2-10, Electrical Connections

6. Water Supply Requirements and Installation
a. Water Supply Requirements

 CAUTION
Using water not within the limits specified in this manual could void or reduce Cleveland Range's warranty coverage of the steamer.

1). Water Quality

As with any steam generating equipment, poor water quality degrades the performance of the steamer.

Check the quality of supply water as described below before starting construction of the water supply lines. If a water treatment system must be installed to achieve acceptable water quality, install it before connecting the water supply lines to the Gemini Steamer.

If softened or chlorinated water is used in a Gemini steam generator, a carbon type filter must be used for the water before it enters the steamer to remove Chlorine or other salts. If the water supply is treated or softened either by the Water Company or on the premises, it may contain chlorine or various salts. These additives are damaging to the steam generator. Salts and chlorine used to soften or treat water cause rapid scale buildup, and/or increased corrosion if allowed to flow into the steamer.

Contact a local water treatment specialist for an on-the-premises water analysis. The recommended minimum feed water quality requirements for the steamer are listed in Table 2-1.

Table 2-1. Minimum Water Quality Requirements

Scale Forming Factors	
Total Dissolved Solids	less than 60 parts per million
Silica	less than 13 parts per million
Alkalinity	less than 20 parts per million
Corrosion-Causing Factors:	
Free Chlorine	less than 0.5 parts per million
Chloride	less than 30 parts per million
PH factor	greater than 7.5

2). Water Supply System

Provide a water supply system that fulfills the requirements of the limits listed in Table 2-1. The supply must provide a minimum dynamic pressure of 35 psi (2.4 kg/cm²) and a maximum static pressure of 60 psi (4.1 kg/cm²).

- If analysis shows that the supply water is NOT within the required limits, 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 (Chapter 3).

b. Install Water Supply Lines

The installer/owner is responsible for the correct water connection of the unit. When connecting the water supply lines observe the following instructions and all national and local codes and regulations:

- 1). Never connect the unit to HOT WATER. The condenser system of the steamer will not work properly if it is connected to HOT or WARM water.

- 2). The water supply should have a minimum flow pressure of 35-psi (2.4 kg/cm²) and a maximum static pressure of 60-psi (4.1 kg/cm²). If the static pressure is above 60 psi, a pressure regulator must be used set at approximately 50 psi. Pressure above 60 psi can damage the solenoid valves.
- 3). The Gemini Steamers are supplied with two connection points for incoming water, one feeds the condensers and the second supplies feed water to the generators. If the local water supply is of poor quality (see Chapter 2, Section 6, Part a.1 for details of water quality), it is recommended that treated or otherwise filtered or conditioned water be used to supply the feed water to the generators. In the case of using a separate water supply, use the layout shown in Figure 2-14.
- 4). Pay attention to the following requirements and recommendations when connecting the steamer to the water supply:
 - a) Cleveland Range recommends the plumbing layout illustrated in either Figure 2-13, for installations using a single water supply or Figure 2-14 if a separate conditioned water supply is being used for boiler feed. Note: If using a single water feed to the system the supply piping to the tee fitting should be of at least the next largest size of pipe to the connection provided at the steamer.
 - b) The steamer has IPS fittings for the water connections to the generator and to the condenser. These fittings are detailed as **D** and **E** in spec sheet, depending on model.
 - c) Install a manual water valve between the main cold-water supply line(s) and the steamer supply lines.
 - d) This steamer must be installed with adequate backflow prevention in all supply lines, to comply with federal, state or local codes having jurisdiction.
 - e) The water supply line(s) should be designed so that the unit can be moved for service.

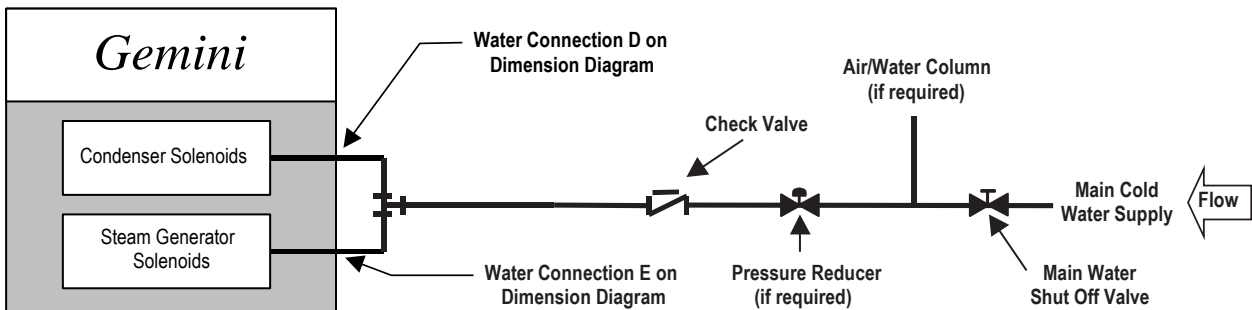


Figure 2-13 Cleveland Range Single Water Supply Arrangement
 [* Installed internal on all Gemini models]

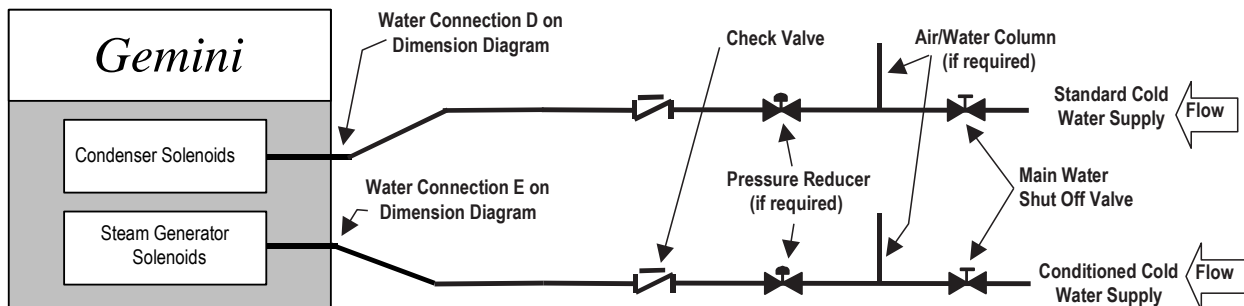


Figure 2-14 Cleveland Range Single Water Supply Arrangement when Using Separate Conditioned Feed Water Supply

- f) Two 40 or 50-mesh water strainer (dirt filter) of one of the types and construction illustrated in Figure 2-15, Cleveland Range part number 106684 or 19870 has already been installed as part of the internal water piping.

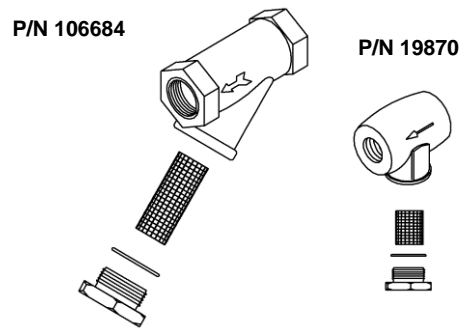


Figure 2-15 Water Strainer Assembly

- g) Construct all supply lines up to the point of installing the strainer. Flush the water supply lines before connecting the strainer.
- h) Apply pipe dope or Teflon tape to any threaded connection.

c. Testing Water Supply Lines

- 1). Check all connections for proper tightness. Remove the side panel to inspect water connections inside the steamer.
- 2). Open the water supply valves.
- 3). Check all lines and connections for leakage, both inside and outside the steamer.
- 4). If Startup and Checkout will be performed next, leave the right-side panel off; otherwise, replace the side panel and secure it to the unit.

C. STARTUP AND CHECKOUT

The Startup and Checkout procedure prepares a recently installed or repaired steamer for operation. The procedures check proper electrical, gas, water, and drain connections to the steamer, and verify basic steamer operation.

1. Installation Checkout

Use the Installation Checklist Table 2-3, to check the overall installation.

Table 2-3. Installation Check List

TASK	REFERENCE Chapter	COMPLETED
Preparation		
Verify Electric Power Requirements	Rating Plate	_____
Verify Gas Supply Requirements	Rating Plate & Spec Sheet	_____
Verify Exhaust Hood Requirement	Ch.7 & Spec Sheet	_____
Test supply water quality	Ch.7	_____
Check operating location clearances	Ch.7 & Spec Sheet	_____
Installation		
Verify steamer is level	Ch.7	_____
Check drain line connection	Ch.7	_____
Check Exhaust Hood	Ch.7	_____

Check electrical line connection	Ch.7	_____
Check water supply connection	Ch.7	_____
Test water supply lines	Ch.7	_____
Check Gas Supply Connection	Ch.7	_____
Leak Test Gas Supply Connection	Ch.7	_____
Check Burner Ignition Test	Ch.7	_____
Perform Startup and checkout	Ch.7	_____

Notes on installation:

Burner Ignition Test (Lighting and Shutdown Instructions)

It is recommended that this test be performed before beginning the Startup Test Procedure. This will insure that the basic heating system is operating normally before reviewing the overall operation of the steamer, since much of the operation is dependent on the operation of the burner control system.

a. Lighting Instructions

This is a functional test of the intermittent pilot ignition system. Pilot/burner ignition is completely automatic.

NOTE: Each compartment has its own steam generator and control system and must be started independently.

- 1). If not already done during prior installation or testing:
 - Test the water supply lines.
 - Leak test the gas supply lines.
 - Turn the Main Manual gas valve to the open position.
- 2). The controls should be set as follows:
 - The main power switch should be in the OFF position.
 - The steamer's ON/OFF levers/switches should be set to the OFF position.
 - The MANUAL/TIMED switches should be set to the TIMED position.
- 3). Turn ON the electrical power to the steamer at the main power switch.

NOTE: When initial power is supplied to the steamer with the ON/OFF lever/switch in the OFF position, a 3-minute blowdown cycle starts. This blowdown cycle stops when the 3 minutes have elapsed, or the ON/OFF lever/switch is changed to the ON position.

- 4). Turn ON the electrical power to the steamer at the ON/OFF levers/switches.
 - a) The red indicators on the control panels light and water begins filling the steam generator. The pilot/burners do not light until water reaches the safety level in the probe assembly.
 - b) After 2 to 3 minutes, water reaches the middle probe (safety level).
 - c) Turn on a cooking compartment and the burners will light with a distinctive sound.

NOTE: Cooking compartment doors must be closed first.

- ◆ If the burners light within 5 minutes of turning the unit ON, the ignition controls are functioning normally. End this test procedure here.

- ◆ If the burners do not light within 7 minutes, there may be air in the gas supply lines proceed to step 5.
- 5). Turn off electrical power to the Steamer, at both the ON/OFF levers/switches and the main power switch.

NOTE: When the burners fail to ignite, a safety circuit in the igniter control de-energizes the system and closes the automatic gas valve. The safety circuit resets when the steamer's power is turned OFF and then back ON.

- 6). Wait 5 minutes and then repeat steps 2 through 6. If this is a brand-new installation, or an excessive amount of air in the lines is suspected for any other reason, it may be necessary to bleed the excess air from the lines. This should be done at a union or connection as close as possible to the inlet of the automatic gas valve.
- 7). If the burner does not light after the third attempt, call a Cleveland Range authorized service representative to adjust the burner controls.
- 8). Go to Shutdown Instructions.

b. Shutdown Instructions

- 1). Turn off electrical power to the steamer, at both the ON/OFF levers/switches and the main power switch.
- 2). Turn off gas supply at the main manual gas valve.

2. Startup Test Procedure Gas Gemini

There are a few operating differences between steamers with the dial timer controls and steamers with the keypad controls.

The differences in cooking operation of the two types of timer controls are fully explained in the O After performing the startup procedure, perform the test procedure as appropriate to the control panel on the steamer being tested. Ignore any steps, which do not apply to the steamer being tested.


This procedure is appropriate for steamers with keypad control panels, dial timer control panels, or manual control panels. Read through all steps of this procedure before starting. Complete the startup procedure before starting the actual operating tests. **This procedure should be performed only by a service technician or installer.**

NOTE: Each compartment has its own steam generator and control system and must be started independently.

a. Startup Procedure

1. Check that the water supply line valves are open.
2. Check that the main manual gas valve is open.
3. Open the steamer door. Check for proper installation of the drain screen, slide racks, and door gasket assembly. Be sure the drain is not blocked. Shut the steamer door.
4. Refer to electrical layout, Figure 2-9, and spec sheet. Be sure the main power switch is in the OFF position. Verify installation of the proper size fuses or circuit breakers.

5. Set the control panels as follows:
 - a) Set the ON/OFF levers/switches to the OFF position.
 - b) Press the TIMED (top) end of the TIMED/MANUAL switch for both compartments.
 - c) The timer setting is not important while the ON/OFF lever/switch is in the OFF position.
 - The keypad timer display is blank without power.
 - Even if the timer is not zeroed, the timing circuits are not powered.
6. Remove the right-side access covers.


WARNING

Death, severe electrical shock or equipment damage can result from touching any component inside unit when main power switch is in the ON position. Use extreme caution during testing with the access cover removed.

b. Blowdown Inspection (continue from Startup Procedure)

1. Turn ON electric power to the steamer at the main external power switch. The steamer will immediately start a 3-minute blowdown cycle. During blowdown, the fill and drain valves are fully open while the steam generator drains are flushed with fresh water.
2. Stop the blowdown cycle before it is complete by setting the ON/OFF levers/switches to the ON position. This energizes the operating control circuits, the red indicators on the control panels light, blowdown stops, and the steam generator fills with water.
3. After automatic filling, Restart the blowdown cycle by setting the ON/OFF switches to the OFF position. During the automatic blowdown cycle, make the following checks.
 - Check for plumbing leaks.
 - Look at the one-inch vent gap between the steamer drainpipe and the floor drain. A steady stream of water should be draining from the steamer.
 - **NOTE:** The ON/OFF lever must be turned fully to the OFF position to START the proper blowdown sequence.
 - After about 3 minutes, the cycle is complete. Check the gap at the steam drain; there should be no more water flow at this point.

c. Operating Tests and Final Checkout Procedure (Continue from Blowdown Inspection) (Sequence of Operation)

- 1). At the start of this test the controls should be set as follows:
 - The main external power switch is ON.
 - The ON/OFF levers/switches are OFF (The red indicators on the control panels are not lit).
 - 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)
 - The timer display will be blank while the ON/OFF lever/switch is set to OFF. [key pad models]
- 2). Set both the upper and lower compartment timers to zero.
 - a). **KEYPAD MODELS**
If the timer is not zeroed (00:00) when power is turned on in step 3, press and hold the CLEAR key on the key pad control panel to zero the timer.

b). DIAL TIMER MODELS

If the Timer is not zeroed, turn the dial counter clockwise until it points to the 0 mark.

- 3). Set the ON/OFF lever/switch to the ON position. As the steam generator fills with water, check the following functions.
 - a). The red ON/OFF indicator light turns ON. The fill valve opens, and water begins to fill the steam generator. The combustion blower turns on to purge the combustion chamber.
 - b). After a few minutes, water appears in the bottom of the probe cylinder. As the water level in the steam generator rises;
 - ◆ Check that no water flows from the drain opening.
 - ◆ Check for plumbing leaks.
- 4). When the water in the steam generator reaches a safe operating level (which is the level of the middle probe), the combustion blower shuts off and the pilot ignition cycle starts. The steam generator begins to heat the water to stand-by temperature by lighting the pilot/standby burner.
 - a) Water continues to fill the generator and the water level in the probe cylinder continues to rise.
 - b) The water in the probe cylinder stops rising, when water reaches the upper probe.
- 5). If the water level continues to rise above the tip of the higher probe, have a qualified service representative check the probe circuit. Set the TIMED/MANUAL switches of both compartments to MANUAL (or for ON/OFF Models set the compartment selector switches to ON), the steaming cycle starts. Check the following functions.
 - If the water level in the steam generator is above the lower probe, the heating components turn ON and begin to heat the water to steam. (For mechanical timer models only, the SURECOOK™ light comes ON)
 - After a few minutes steam begins to enter the compartment from the nozzles. A small quantity of water may drip from the nozzles until steam clears the lines.
 - After a few more minutes the compartment will reach cooking temperature. When the compartment reaches cooking temperature:
 - a. 24CGA6.2S & 24CGA10.2 (high capacity) units - the thermostat will close (the SURECOOK™ light will go OFF for mechanical timer units) the condenser solenoid clicks open and condenser flow starts. A small stream of water flows from the drainpipe. . If no drain water flows, check that the water supply valves are open, and the lines are connected properly.
 - b. STEAMSAVER™ 24CGA6.2SES & STEAMSAVER™ 24CGA10.2ES (high efficiency) units – the SURECOOK™ thermostat will close (the SURECOOK™ light will go OFF for mechanical timer units). The burners will soon begin to cycle on the compartment operating temperature thermostat. The condenser solenoid clicks when the condenser box has reached maximum drain temperature. A small stream of water flows from the drainpipe. The water stops when the drain water has cooled to the proper temperature.
 - With the unit in manual cooking mode the unit should steam continuously or cycle on compartment temperature, depending on model, until turned OFF, set to the timed cooking mode, or when the energy saver timer is activated (See Note below). After several minutes of steaming, check for steam leaks around the door gasket.
- 6). As the unit continues to steam in Manual Cooking Mode, test the no-water/low water safety circuit.

- a) Close the steamers manual water supply valve. Observe the steam generator probe cylinders while steaming continues.
 - b) As water steams out of the generator, the water level drops below the low water safety cutoff point. The steamer should automatically shut off.
 - c) Re-open the manual water supply valve. The steamer's controls automatically refill the steam generators with water to the safety level and resumes steaming.
- 7). When the TIMED/MANUAL switch is set to TIMED (and the timer is zeroed), the steam generating cycle stops. Press the TIMED end of the TIMED/MANUAL switch for both compartments.
- The main burners turn OFF, and the condenser flow stops* (*models 24CGA6.2S & 24CGA10.2 only), On **DIAL timer models** only, the buzzer will sound for 3 seconds.
 - Steam stops entering the cooking compartment.
- 8). Open the cooking compartment door to vent the steam and allow the compartment to cool slightly. After 2 or 3 minutes, close the door and continue testing.
- 9). With the TIMED/MANUAL switches set to TIMED, set the timers of both compartments for 10 minutes.
- 10). When the START/STOP key is pressed [**Keypad Timer Models**] or as soon as the dial is set [**Dial Timer Models**], the steam generating cycle starts. This is the same sequence observed in steps 5 and 7, except:
- The timer controls the cycle.
 - The elapsed time to produce steam is shorter because the water in the steam generator and the cooking compartment were preheated during step 5.
 - The timer automatically starts the step 7 functions after counting down to zero.
- 11). After the timed operation has been started, observe the following steam generating functions.
- a) **KEYPAD CONTROL**
The timer display changes to PAUS until the cooking compartment reaches cooking temperature. When it does, the timer begins counting down to zero.
- DIAL TIMER CONTROL**
- The SURECOOK™ light comes ON until the cooking compartment reaches cooking temperature. When it does, the timer begins counting down to zero, and the SURECOOK™ light turns OFF.
- b) When the unit reaches temperature:
 - 24CGA6.2S & 24CGA10.2 (high capacity) units - the condenser solenoid clicks open and condenser flow starts. A small stream of water flows from the drainpipe.
 - STEAMSAVER™ 24CGA6.2SES & STEAMSAVER™ 24CGA10.2ES (high efficiency) units – the burners will begin to cycle on compartment temperature, the condenser solenoid clicks when the condenser box has reached maximum drain temperature. A small stream of water flows from the drainpipe. The water stops when the drain water has cooled to the proper temperature.
 - c) If the probe cylinder water level drops below the upper probe, 15 to 20 seconds later the water fill valve opens and fills the generator. When the probe cylinder water level is above the middle probe, the burners turn ON. A dull roaring sound indicates the burners are firing and the unit is generating steam.

- d) As the unit generates steam, the water level fluctuates and a clicking sound is heard as the solenoid opens and closes the fill valve. The level in the cylinder rises and falls between the upper and lower fill limit as the fill valve operates.
 - e) Check for steam leaks around the door.
 - f) **KEYPAD CONTROL**
When the timer counts down to zero (00:00), the burners turn OFF, the condenser flow stops* (*models 24CGA6.2S & 24CGA10.2 only), and the buzzer sounds continuously. Press the START/STOP key to silence the buzzer.
 - DIAL TIMER CONTROL**
When the timer counts down to zero, the burners turn OFF, the condenser flow stops* (*models 24CGA6.2S & 24CGA10.2 only), and the buzzer sounds for 3 seconds.
 - g) After about 30 seconds steam stops entering the cooking compartment.
- 12). Turn the steamer OFF by turning the ON/OFF lever/switch counterclockwise to the OFF (top) position. The red indicator light turns OFF immediately, and the automatic blowdown cycle starts. DO NOT turn OFF the power at the main power switch until blowdown is complete. The cycle takes about 3 minutes.
 - 13). When blowdown is complete, turn the steamer OFF at the main power switch.
 - 14). Install the side panels and secure them in place with the screws. After completing the Startup and Blowdown Inspection procedure, and the Operating Test procedure; the steamer is ready for service. Refer to the OPERATORS section for complete operating instructions.

CHAPTER 8 PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING

A. MAINTENANCE

Maintenance on the steamer must be performed on a regular basis to keep the unit running properly. By following the maintenance instructions in this chapter and referring to installation section, problems with the steamer will be kept to a minimum. As with any preventative maintenance schedule, the frequency of steamer maintenance may need to be increased, depending on equipment usage and water quality. If problems do occur, refer to the Troubleshooting Guide in this chapter. For more information on products and services, contact your sales representative.

1. Maintenance Records

Make a file solely for maintenance records. Keep a written record of daily, weekly, monthly, and yearly maintenance. These records will protect warranty coverage, help personnel to know when to perform various maintenance procedures, and assist service personnel.

2. Daily Maintenance

a. Blowdown Steam Generator

Blowdown each steam generator according to the steam generator blowdown instructions in Chapter 5.

b. Clean the Steamer

Clean interior and exterior of the steamer according to the shutdown instructions in Chapter 5.

3. Weekly Maintenance

Clean Drain

CAUTION

Steam leaks, pressure buildup in the cooking compartment and poor steaming performance can be caused by a blocked drain line or screen. Blocked or slow drains are dangerous because hot water can collect in the compartment and spill out when opening the compartment door.

This steamer is equipped with a drain screen in the back of each cooking compartment. Never operate the steamer without the screens in place. The screen prevents large food particles from entering and blocking the drain line. Any blockage of the drain line can cause a pressure buildup in the compartment, resulting in steam leaks around the door gasket. Drain line blockage also adversely affects convection action of the steam in the compartment, which is necessary for optimum performance.

- a. Inspect the drain screen and drain line for blockage. Rotate the drain screen 90 degrees to inspect the drain opening. Clean the opening and restore the screen to its operating position.
- b. Clean drain with a USDA approved drain cleaner, once a week. Follow the instructions of the manufacturer of the cleaner.
- c. Flush drain with clean water.

4. Monthly Maintenance

Descale Steam Generator

Steam generators should be descaled at least once a month, depending on scale buildup. If you have serious steam generator scale buildup, a water treatment system should be installed for the steamer or if this is not possible the frequency of descaling should be increased.

Cleveland Range, recommends the use of ***DISSOLVE***[®] **Descaler Solution, Cleveland Range Part No. 106174**. No other system of steamer descaling should be used.

NOTE: Part No. 106174 is the Part No. for a case (6 1-gallon containers) of *DISSOLVE*[®] descaler. It is also available in 5-gallon containers as Part No. 1061741.

THESE INSTRUCTIONS ARE FOR USE WITH *DISSOLVE*[®] DESCALER SOLUTION Cleveland Range Part Nos. 106174 or 1061741 ONLY.

- **Health Hazard Data, Effects of Overexposure** – This product may cause a burning sensation to eyes or skin.
- **Emergency and First Aid Procedures** - In case of eye contact, immediately flush eyes with plenty of water. If irritation persists, seek medical attention. In case of skin contact, wash with soap and water. If inhaled, remove to fresh air and if burning persists, call a physician. If swallowed, drink 1 or 2 glasses of water and call a physician.
- **Spill or Leak Procedures** – Rinse with plenty of water to dilute. Sodium carbonate or calcium carbonate may be used to soak up liquid. Considered non-hazardous, spent material may be disposed of in a sewer system with water flush.

WARNING

The liquid solution in Cleveland Range Descaler Solution Part No. 106174 or 1061741 can be harmful if not handled properly. Follow these basic safety rules for handling and using this product.

Wear protective clothing when mixing or applying chemical cleaners.

Wear rubber gloves, and OSHA approved eye protection when descaling to avoid personal injury.

Avoid breathing fumes. If liquid comes in contact with skin, wash with soap and water.

If chemical contacts eyes, flush with water. If irritation persists, seek medical attention

If chemical is swallowed or ingested, drink 1 or 2 glasses of water and call a physician.

⚠ CAUTION

Do not use any other product or method of descaling other than the *DISSOLVE*[®] Descaler method using Part Nos. 106174 or 1061741.

a. MODEL 24CGA6.2S, The STEAMSAVER™ 24CGA6.2SES, 24CGA10.2 ,and the STEAMSAVER™ 24CGA10.2ES, ATMOSPHERIC STEAM GENERATOR DESCALING PROCEDURE (For *DISSOLVE*[®] Descaler Solution Part No. 106174 or 1061741) Monthly Intervals

1. This procedure will take approximately 1 hour and 30 minutes to complete.

⚠ WARNING

This procedure is slightly different depending on the model being descaled. This entire procedure should be read and fully understand as it applies to the model being descaled, before beginning the actual descaling operation.

2. Set both timers to zero or for manual only models, set both compartment ON/OFF selector switches to OFF.
3. Open both doors to the cooking compartments.
4. Set the TIMED/MANUAL switches to TIMED.
5. Set both ON/OFF levers/switches to the OFF position. (The unit will undergo a normal blowdown cycle, which should take approximately 3 minutes to complete).
6. Remove both caps from the descale ports located at the top of the unit (See Figure 6-1),
7. When the unit has completed draining, set both ON/OFF levers/switches to ON, this will refill the generators. Do not start the timer and leave the cooking compartment doors open.

NOTE: DO NOT HEAT THE UNIT DURING DESCALING.

8. While the unit is filling with water add 1 gallon of *DISSOLVE*[®] descaler solution into each descaling port.
 - While adding liquid to the unit through the descaler inlets, pour it in slowly to avoid overflow.
9. After the automatic fill cycle has ended, turn OFF power at the external main power switch. See Figure 6-2. DO NOT change the position of the ON/OFF levers.

(FOR THE MODELS 24CGA10.2 and The STEAMSAVER™ 24CGA10.2ES ONLY add cold tap water through one descale port until water enters the cooking compartment through the steam nozzles or until the descaling port overflows (water required varies between 1 to 2 gallons depending on the Model). Repeat with the second descale port.)

10. At the end of 1 hour, set the ON/OFF levers/switches to the OFF position, which will drain the generators (takes about 3 minutes).



Figure 6-1 Descaling Port

11. Restore power to the unit by turning the power back ON at the external main power switch.
12. Set both ON/OFF levers to ON to refill generator. When full, add ½ to 1 gallon (1 to 1½ Gallons for the Model 24CGA10.2) of water through each descale port (to remove foam from the water level controls)
13. Set both ON/OFF levers to OFF to drain the generators.
14. After the unit has drained completely, close the steamer doors and set the ON/OFF levers/switches to the ON position. The unit will fill with water.
15. Set the timers for 20-30 minutes and turn them on (KEYPAD MODELS). The unit will come up to normal operating temperature.
16. At the end of 20-30 minutes of cooking, turn OFF the alarm (if necessary) and set the ON/OFF levers/switches to the OFF position to drain the generators. Wait at least 5 minutes to ensure complete draining.
17. This is the final blowdown to rinse the unit. The steamer is now ready for normal operation.

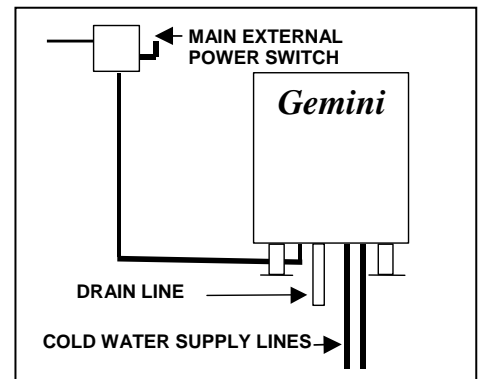


Figure 6-2 Main External Power Switch

5. Yearly Maintenance

Clean Water Line Strainer

Clean the water line strainer at least once a year as follows:

NOTE: When the steamer is first installed, check the strainer more frequently to find out how often it must be cleaned.

1. Close the valve(s) in the steamer water supply line(s).
2. Unscrew the filter cap from the bottom of the strainer. Refer to Figure 3-1, which shows the various strainers supplied with the different steamers.
3. On some models the strainers are built into the steamer and are accessible from underneath the steamer (See Figure 3-2), otherwise the strainers should be installed upstream of the steamer in the water supply(s).
4. Remove the filter screen and wash it with clean water.
5. Check the O-ring for wear and replace it if necessary.
6. Put screen back into cap and replace the cap in the strainer.
7. Open water supply valve(s) and check for water leaks.

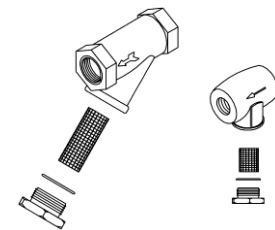


Fig. 3-1 Water Strainer Assembly

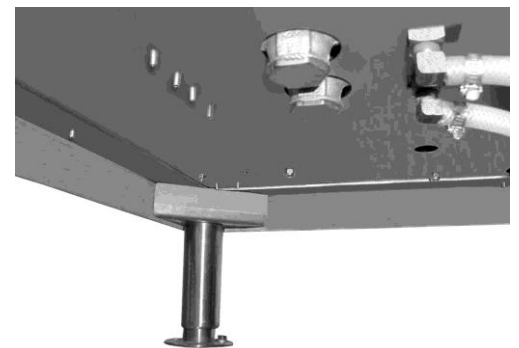


Fig. 3-2 Pre-installed Water Strainer Assembly

B. OPERATIONAL CHARACTERISTICS BY MODEL

Model 24CGA6.2S and 24CGA10.2 are steamers designed for high capacity operation. The burners that supply steam and the condenser spray to the compartments are on continuously while the unit is in timed cooking mode or in the manual cooking mode. The burners and condenser spray stay on until the cooking operation is complete, or until the idle timer automatically shuts OFF the steamer after the unit has remained ON and idle for 60 minutes.

Model The STEAMSAVER™ 24CGA6.2SES and The STEAMSAVER™ model 24CGA10.2ES are steamers designed for high efficiency operation. These models incorporate the exclusive energy and water saving

design of the STEAMSAVER™ Technology (SST). The energy saver models provide steam in a similar manner to our high capacity models except that the flow of steam is regulated by cycling the burners off once the desired cooking temperatures is reached. When the temperature drops to a set point below the desired cooking temperature the burners will turn back on to bring the cooking compartment back up to temperature. The burners will continue to cycle on and off as necessary to maintain temperature until the cooking operation is complete. The condenser spray is activated to cool the condensate water to the drain automatically through the use of a thermostat control.

C. TROUBLESHOOTING GUIDE

The Troubleshooting Guide is a list of symptoms of problems that may occur during routine operation.

- “Problem” (left column) lists common operating problems.
- “Possible Cause” (center column) lists causes of problems in the order they should be checked.
- “Remedy / Reference” (right column) lists fixes for problems from easiest to hardest.
- “Notes” in “Remedy / Reference column are at end of the Troubleshooting Guide.

**ATTEMPTING TO REPAIR OR CORRECT PROBLEMS REQUIRING A QUALIFIED
CLEVELAND RANGE AUTHORIZED SERVICE REPRESENTATIVE VOIDS THE WARRANTY**

Table 6-1 Troubleshooting Guide

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
Power indicator light does not turn ON when ON/OFF lever/switch is in the ON position.	Power turned OFF at main external power switch or breaker	Turn ON power at main external power switch or breaker
	ON/OFF lever/switch not fully turned to the ON position.	Turn lever/switch to the full-ON position.
	Inoperative controls or failed light.	See note #1
Power ON and steam generator does not fill.	Water supply to steamer shut OFF.	Open water supply valves.
	Water line strainer and/or external filter system is clogged	Clean water supply strainer and/or filter system.
	Inoperative Solenoids or controls.	See note # 1.
Control panel POWER indicator light ON and steamer does not make any steam in MANUAL or TIMED mode.	Water supply to steamer shut OFF.	Open water supply valves.
	Gas Supply turned OFF	Turn ON gas supply
	Door interlock switch not engaged or has failed.	Close door completely. If problem persists, see note #1.
	Water line strainer and/or external filter system is clogged	Clean water supply strainer and/or filter system.
	Hi-limit switch has tripped.	See note #1.
	Inoperative controls or solenoid.	See note #1.
Abnormal amount of steam coming from drain.	Water supply to condenser turned OFF.	Open water supply valve.
	Hot water instead of cold water connected to condenser fitting.	See note #2.
	Condenser water line strainer is clogged.	Clean out condenser water supply strainer. See note #1.
	Condenser is clogged.	See note #1
	Water supply line to the condenser blocked, broken, or leaking.	Repair or replace water supply line. See note #3.
	Inoperative controls or solenoids.	Turn OFF electricity at main external power switch. See note #1.
Abnormal amount of steam coming from drain during blowdown cycle.	ON/OFF lever/switch is not turned fully to the OFF position.	Turn ON/OFF lever/switch to the full OFF position to start the proper blowdown operation.
Reduced steam flow into cooking compartment.	Steam generator scale buildup	Descale steam generator with Cleveland Range approved descaler.
	Inoperative or improperly adjusted controls	See note #1.

(Continued on next page)

Table 6-1 Trouble Shooting Guide (Continued)

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
Steam and/or water draining around compartment door. See Warning under note #7.	It is common for a small amount of water to condense around the door	This is normal operation of the unit. No action is necessary.
	Compartment drain clogged or covered.	Clean drain with NSF approved drain cleaner. If condition persists, see note #1
	External drain not properly installed, should be free-air vented and pitched down.	See notes #2 and #3.
	External drain is blocked or restricted	Clean external drain. See note #3
	Door gasket or door parts worn.	See note # 1.
	Steamer not level.	See note # 2.
	Condenser not operative.	See note #1.
Power light is ON, but timer does not light. (Electronic Timer Models only)	Timer transformer has failed	See note #1
	Inoperative controls	See note #1
Steam flow does not stop when TIMER stops.	Operating in manual mode.	Switch to timed mode for timer to control steam flow.
	Inoperative controls inside cabinet.	Turn OFF power to that compartment at ON/OFF lever/switch. See note #1.
Water leaking from bottom of cabinet.	Broken or loose plumbing inside steamer cabinet.	Turn off electricity at main external power switch and close water supply valve(s). See note #1.
Food takes too long to cook. To verify the steamers proper operation see note #6	Pans too close to the bottom of cabinet.	Put pans in racks near top of cabinet.
	Compartment overloaded with too much food.	Put less food into pan. Use fewer pans.
	Hot water connected to condenser line.	Make proper connections. See note #3.
	Steam generator scale buildup.	Descale steam generator with Cleveland Range approved descaler.
	Food is frozen	Increase cooking times for frozen food
	Food is being cooked in covered solid pans.	Remove covering. Steam must have direct access to the food for cooking to take place.
	Suggested cooking times are usually listed for cooking at sea level.	Extend cooking times for altitudes above 2500 feet.
	Condenser water is turned OFF	Turn ON Water to condenser
	Condenser water line strainer is clogged	Clean out condenser water supply strainer.
	Inoperative or improperly adjusted controls.	See note #1.
Compartment bottom dirty with food drippings.	Juices and/or food leaking from pans.	Put a solid pan under perforated pans to catch drippings or put less food in pan.
Water leaking from water or drain lines.	Plumbing needs repair.	See note #3.
Water coming from drain even when not cooking.	Condenser valve isn't closing properly.	See note #1.

(Continued on next page)
Table 6-1 Trouble Shooting Guide (Continued)

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
ON/OFF Indicator on but steamer does not make steam in timed mode	Timer fuse has blown (electronic timer models only)	See note #1
	Inoperative timer control or damaged wiring	See note #1
Water is flowing out of the steam ports into the cooking compartment	Water level probes are dirty and are not sensing properly	Turn OFF the water supply to the steamer and descale the unit manually with Cleveland Range approved descaler by filling the unit with descaler and water through the descaling port. If condition persists, see note #1.
	Inoperative timer control or damaged wiring	See note #1
Water comes out of descale port	Descal cap is missing	Install the descale cap. Descal port must be closed tightly for the steamer to operate properly. If missing, see note #8
	Descal cap is loose	Tighten the descale cap. The descale port must be closed tightly for the steamer to operate properly.
	Descal cap and/or gasket is damaged.	See note #8.
Steam and/or water issuing from small valve at the top of each steam generator	Steam generator scale buildup.	Descal steam generator with Cleveland Range approved descaler. If condition persists, see note #1.
	Inoperative control	See note #1

TROUBLESHOOTING NOTES

1. If problem is inside the steamer, call an authorized service representative. Cleveland Range will not pay for warranty repairs by unauthorized repair centers.
2. Proper installation of the steamer is the responsibility of the owner or installer. A qualified installer or technician should be contacted to correct the installation. Refer to Cleveland Range Warranty.
3. Repairs to external plumbing should be done by a Licensed Plumber.
4. Repairs to external wiring should be done by a Licensed Electrician.
5. For more information on products and services, contact your nearest Authorized Sales Representative. Call factory for a preventative maintenance program, descaling kits, descaling information, and water treatment systems: USA: (800) 338-2204, Canada: (800) 427-6668.
6. To evaluate whether a Gemini steamer is producing normal cooking performance, conduct the Egg Test as follows (NOTE: this test is not valid for pressure steamers). A properly operating steamer will produce cooked eggs as follows.

Turn on the steamer and set the selector switch to the manual mode (or for ON/OFF models set the selector to the ON position) so that steam is being produced. When wisps of steam have begun to exit the steam vent, preheat the steamer by leaving it ON for ten minutes. After the compartment is preheated follow the instructions as listed below.

(Continued on next page)

TROUBLESHOOTING NOTES (Continued)

- Place a fresh egg on a perforated steam table pan in the middle of the cavity.
- Close the door and set the timer as directed by the size chart below

Egg Size	Time
Medium	12 minutes
Large	14 minutes
Extra Large	14 minutes

- When time is complete, carefully remove the egg and place in a container with cold water running over it.
 - Let cool under cold running water for 5 minutes.
 - After cooling, crack eggshell and peel.
The result will be a perfectly hard-boiled egg.
7. Whenever opening door, especially when water or steam is leaking around gasket heed the warning below.

 **WARNING**

When checking inside the steamer always open the door slowly and stand to the side and back away from the steamer. 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.

8. Replacement descale caps and gaskets can be ordered from a Cleveland Range authorized maintenance and repair center.

Every new piece of Welbilt Foodservice equipment comes with KitchenCare® and you choose the level of service that meets your operational needs from one restaurant to multiple locations

StarCare – Warranty & lifetime service, certified OEM parts, global parts inventory, performance audited

ExtraCare — CareCode, 24/7 Support, online/mobile product information

LifeCare – Install & equipment orientation, planned maintenance, KitchenConnect™, MenuConnect®

Talk with KitchenCare® • 1-844-724-CARE • www.mtwkitchencare.com



To learn how Welbilt Foodservice and its leading brands can equip you, visit our global web site at www.welbilt.com, then discover the regional or local resources available to you.