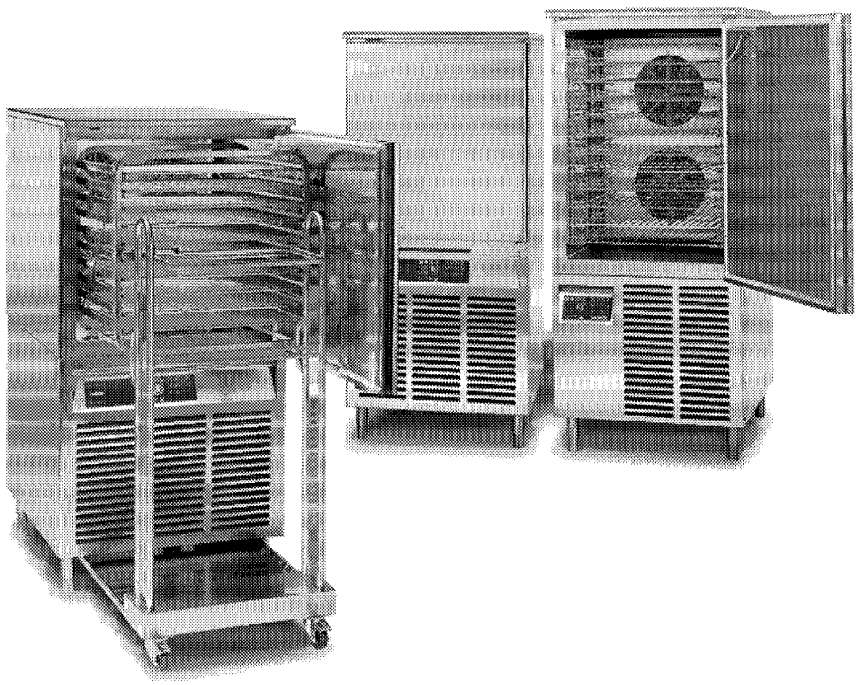
Cleveland

Operation Manual

COMBICRAFT™ OVEN/STEAMER

MODELS:

CCG-5
CCG-11
CCG-22
CCE-5
CCE-11
CCE-22



CCO-01
REV. 1/01

Cleveland WARRANTY AND LIMITED EXTENDED WARRANTY COVERAGE

LIMITED WARRANTY

Cleveland Range products are warranted to the original purchaser to be free from defects in material and workmanship under normal use and service for the standard warranty period.

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

CLEVELAND RANGE agrees to pay any FACTORY AUTHORIZED EQUIPMENT SERVICE AGENCY (within the continental United States, Hawaii, and Canada) for reasonable labor required to repair or replace, at our option, f.o.b. factory, any part which proves to be defective due to defects in material or workmanship, during the labor warranty period. This warranty includes travel time not to exceed two hours and mileage not to exceed 50 miles (100 miles round-trip), but does not include post start-up, tightening loose fittings, minor adjustments, maintenance, cleaning or descaling.

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

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

BOILER (Steam Generator) MAINTENANCE IS THE RESPONSIBILITY OF THE OWNER-USER, AND IS NOT COVERED BY THIS WARRANTY. The use of good quality feed water is the responsibility of the Owner-User *(see Water Quality Requirements below)*. THE USE OF POOR QUALITY FEED WATER *WILL VOID* EQUIPMENT WARRANTIES. Boiler maintenance supplies, including boiler hand gaskets, are not warranted beyond the first 90 days after the date the equipment is placed into service if no preventive maintenance records are available showing descaling every 90-120 days.

WATER QUALITY REQUIREMENTS

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

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

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

LIMITED EXTENDED WARRANTY COVERAGE

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

FOR YOUR SAFETY
Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

GAS LEAK INSTRUCTIONS
Post in a prominent location, instructions to be followed in the event the user smells gas. This information shall be obtained by consulting the local gas supplier.

For safe and efficient operation of this equipment, this manual must be retained by the owner/user for future reference.

PROTECTING WARRANTY COVERAGE

The warranty printed to the left specifies the owner/user's responsibility for proper installation, operation, and maintenance of the CombiCraft. If these responsibilities are not met, the Limited Warranty and/or Extended Limited Warranty coverage may be adversely affected. The following table is provided to assist the owner/user in meeting these responsibilities. In addition, the warranty advantages of installing a SteamerGard water treatment system are explained after the table.

The Warranty Protection Table lists installation, operation, and maintenance factors that have in the past adversely affected warranty coverage. The owner/user of a CombiCraft should pay particular attention to these factors to protect his warranty coverage. This table is not a comprehensive list of the owner/user's responsibilities. Cleveland Range steam products are intended for use only by professionally trained personnel. To meet his responsibilities, the owner/user must supplement this guide with any additional actions consistent with the operation of steam generating food preparation equipment by a trained professional.

Warranty Protection Table

SteamerGard Water Treatment System

A SteamerGard water treatment system protects the CombiCraft from impurities contained in regular tap water, especially Total Dissolved Solids (TDS) which cause lime and scale deposits in steamer equipment. The protection is so effective that Cleveland Range increases the warranty coverage on a CombiCraft installed in conjunction with a SteamerGard system to five years for parts and three years for labor on water related components, elements, valves, generators, piping, etc. However, even with a SteamerGard system installed, the owner/user should follow the guidance of the Warranty Protection Table.

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CHAPTER 1. PRODUCT IDENTIFICATION

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

MODEL NUMBER

This manual covers four models of the CombiCraft Oven/Steamer: two models with electric steam generators, and two models with gas-fired steam generators.

- Electric Models: CCE-5 and CCE-11
- Gas-Fired Models: CCG-5 and CCG-11

Each character of a model number identifies a characteristic of the oven/steamer. The CombiCraft model number begins with CC for CombiCraft, followed by an E or G for Electric or Gas, and a number for capacity in pans. This manual covers all standard features and options available on the CombiCraft Oven/Steamer models listed above.

Other than selection of options, there are presently no significant design, parts, or operating differences among oven/steamers with the same model number. Figures 1-2 through 1-5 illustrate the four CombiCraft models and identify the major components.

SERIAL NUMBER PLATE

During manufacture, CombiCrafts are assigned individual serial numbers. The serial number plate is located on the lower right side panel of the unit, as shown in Figures 1-2 through 1-5.

PRODUCT INFORMATION PLATE

Figure 1-1 illustrates typical CombiCraft Product Information Plates; one for an electric model and one for a gas model. The plate is located on the right side of each unit as illustrated in Figures 1-2 through 1-5. The Product Information Plate lists the model number, gas supply requirement, power requirements, and wiring requirements of each CombiCraft Oven/Steamer.

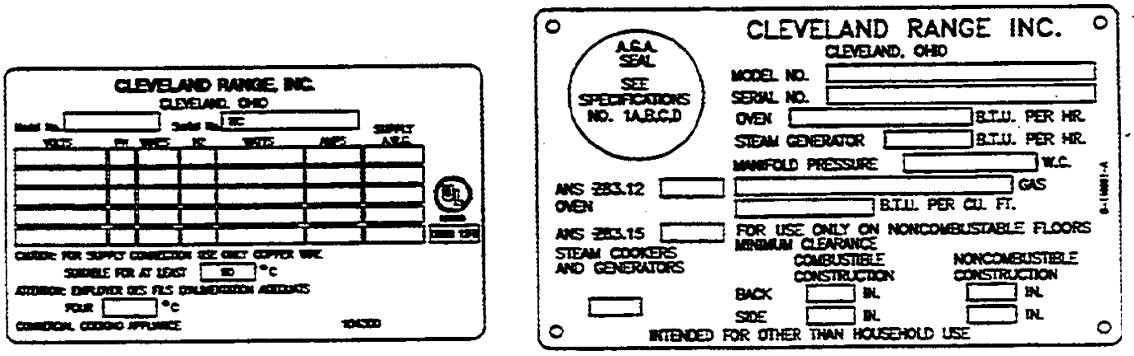


Figure 1-1. CombiCraft Product Information Plates

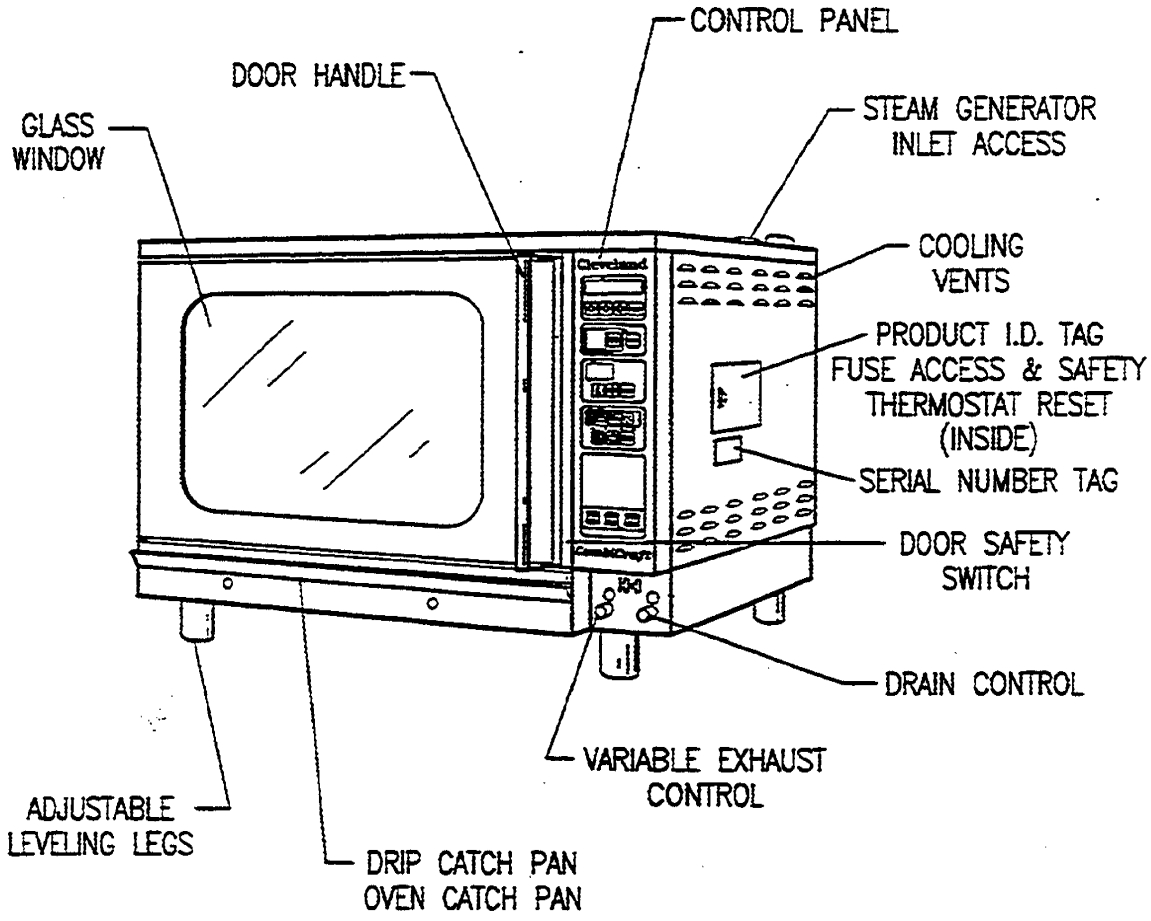


Figure 1-2. Model CCE-5
CombiCraft Oven/Steamer

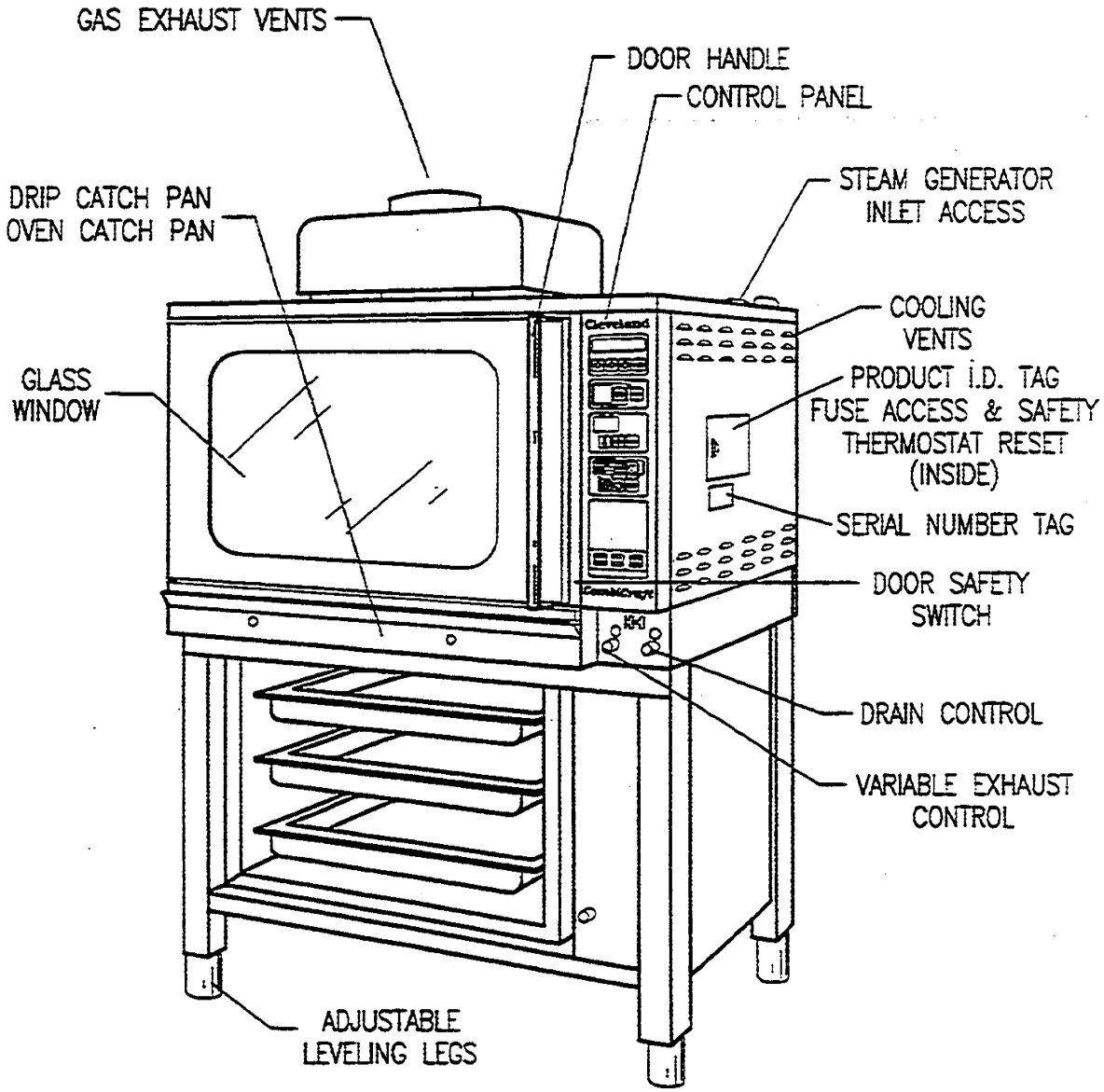


Figure 1-3. Model CCG-5
CombiCraft Oven/Steamer

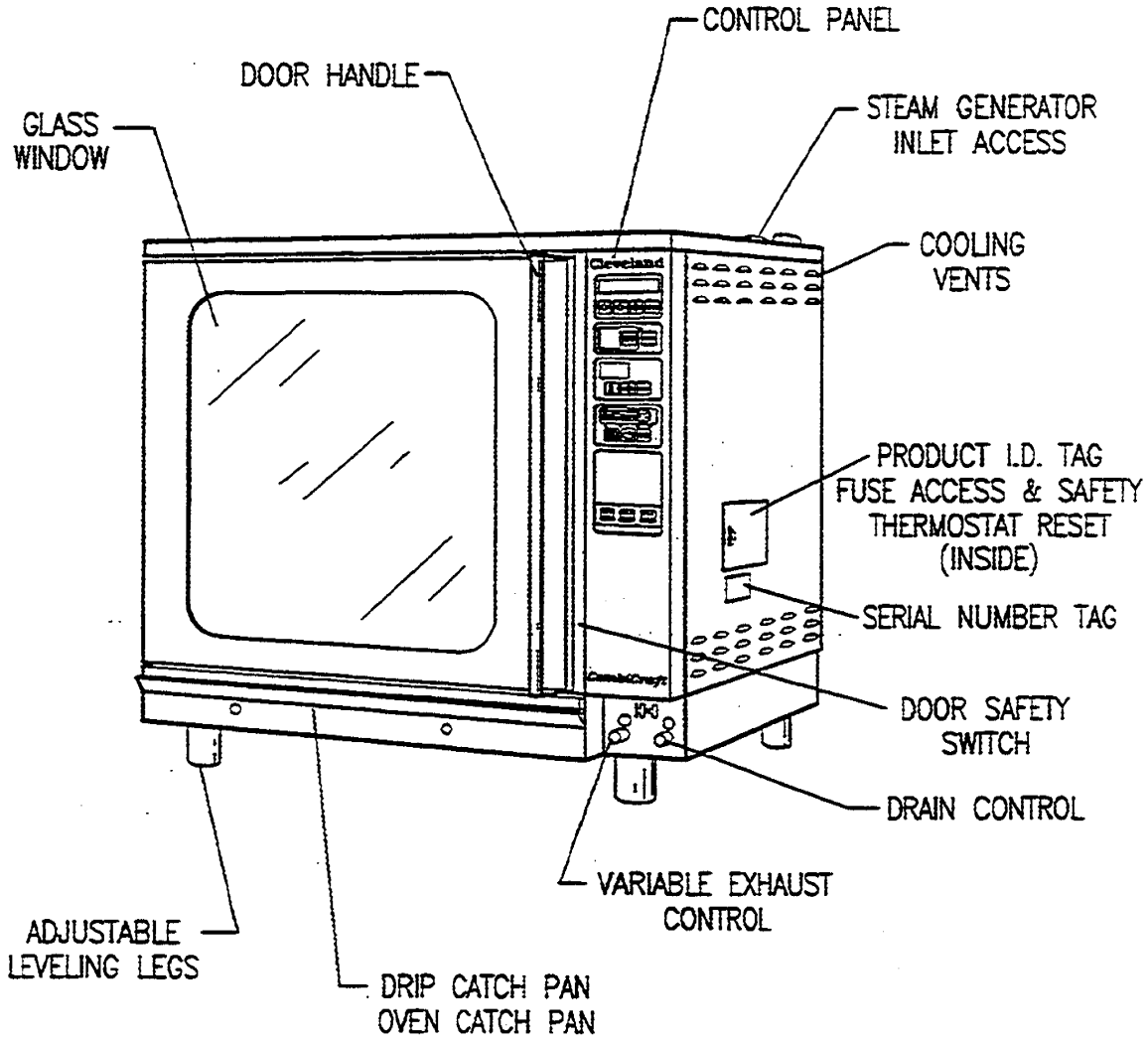


Figure 1-4. Model CCE-11
CombiCraft Oven/Steamer

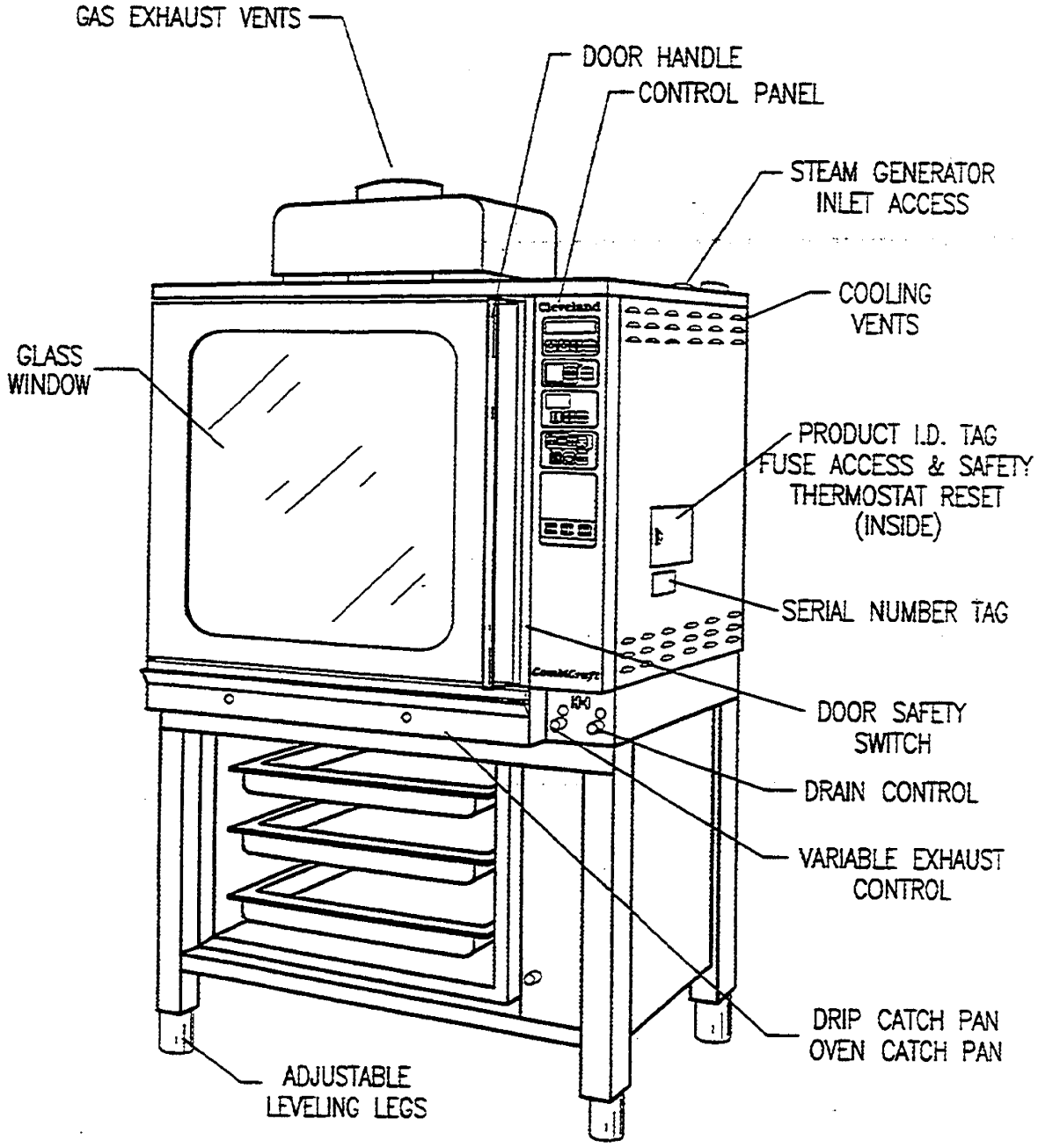


Figure 1-5. Model CCG-11
CombiCraft Oven/Steamer

CHAPTER 2. INSTALLATION INSTRUCTIONS

This manual and several components are packaged inside the CombiCraft during shipment. To access these packages, the shipping crate has been disassembled. Discard the shipping crate and protect the CombiCraft from dirt and damage during storage, site preparation, and installation as described in Protecting The CombiCraft, page 14.

WARNING

DEATH, INJURY, AND EQUIPMENT DAMAGE could result from improper installation of the CombiCraft Oven/Steamer, or from installation of a unit damaged during shipment or storage. Either of these conditions could also void the equipment warranty.

DO NOT INSTALL a CombiCraft Oven/Steamer suspected of damage.

Install the CombiCraft Oven/Steamer according to the policies and procedures outlined in this manual.

INTRODUCTION

This chapter is a guide for installation of the CombiCraft Oven/Steamer models identified in Chapter 1. This guide is for use by qualified professionals, and does not include all procedures and precautions in the common domain of licensed plumbers, pipe fitters, and electricians, or experienced food service equipment installers. This guide must be used in conjunction with professional experience and a thorough understanding of the local and national utility, construction and sanitation codes; the most prominent of which are listed in the Installation Policies section below.

Before starting installation, the owner and the installer should read through this chapter and thoroughly understand and agree upon:

- The installation policies of Cleveland Range, Inc. as stated in Installation Policies.
- An installation plan based on the Installation Overview and Installation Check List.
- Responsibility for feed water quality and its testing as described in Preparation For Installation, Water Quality Requirements.

INSTALLATION POLICIES

- The CombiCraft Oven/Steamer must be installed by qualified plumbing and electrical personnel, working to all applicable national and local codes. Equipment installation must comply with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. (BOCA), the National Fuel Gas Code, ANSI Z223.1-(latest edition), the National Electric Code, ANSI/NFPA No. 70-(latest edition), and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

- All models of the Cleveland Range CombiCraft Oven/Steamers comply with the applicable standards for manufacturers. Included among those certification agencies are: UL, A.G.A., ASME/N.Bd., NSF, CSA, CGA, ETL, and others.
- The CombiCraft Oven/Steamers are certified for safe operation only when permanently installed in accordance with local and/or national codes. Many local codes exist, and it is the responsibility of the owner and installer to comply with these codes.
- In no event shall Cleveland Range assume any liability for damage or injury resulting from installations which are not in strict compliance with the Installation Instructions and the codes cited above. Specifically, Cleveland Range will not assume any liability for damage or injury resulting from improper installation of equipment, including but not limited to, temporary or mobile installations.

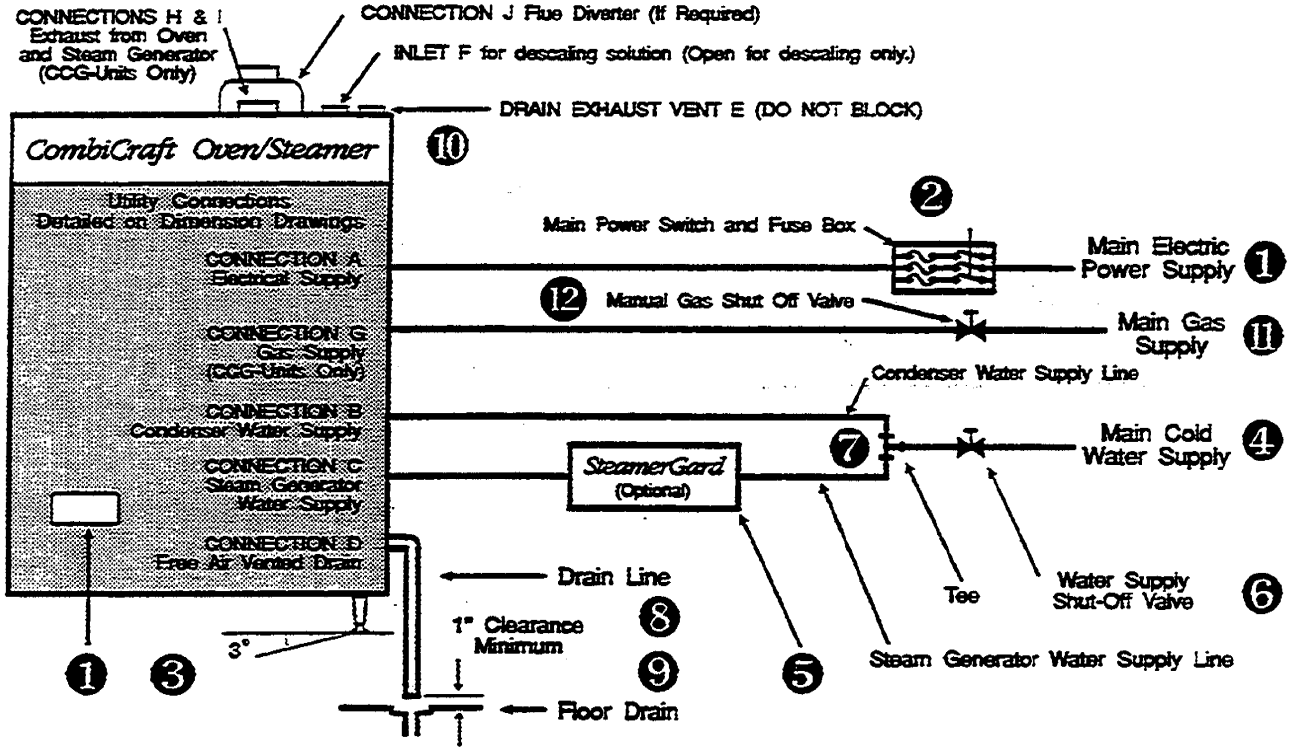
INSTALLATION OVERVIEW

Installation of the CombiCraft Oven/Steamer is presented in two parts: preparation and installation. The Installation Check List, Table 2-1, lists the major tasks to be performed in a recommended sequence. Each item references the instructions for starting the task. Complete the preparation tasks in sequence, and then the installation tasks. Installation requirements may vary from site to site; adapt the check list accordingly.

Schematic Installation Diagram, Figure 2-1, illustrates the utility lines and connections required to install the CombiCraft Oven/Steamer. The Dimension Drawings, Figure 2-2, show the required utility connection points, dimensions, and clearances for each CombiCraft model .

Table 2-1. Installation Check List

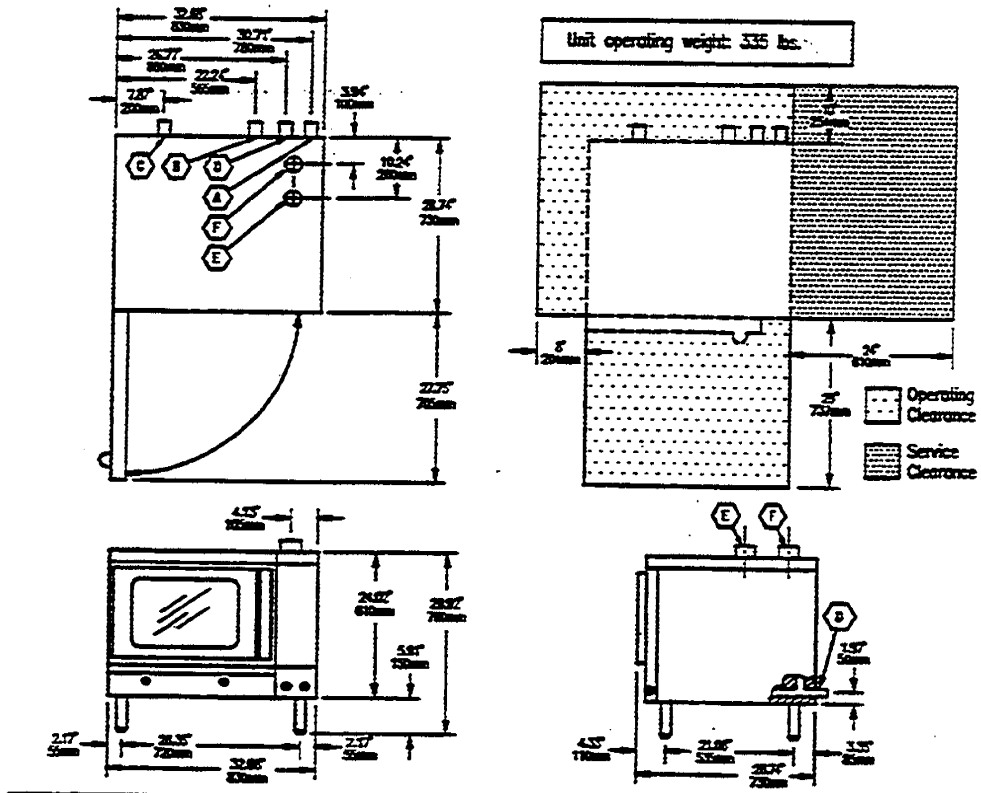
TASK	PAGE REFERENCE	COMPLETED
Preparation		
Unpack, inspect, and protect the unit.	14	____
Check electric power requirements.	15	____
Check gas power requirements.	15	____
Test supply water quality.	15	____
Select water treatment system.	16	____
Select operating location.	17	____
Installation		
Position and level steamer.	18	____
Assemble Packaged Components.	19	____
Install and connect drain line.	21	____
Connect exhaust flue diverter.	23	____
Install and connect electrical line.	23	____
Install and connect water supply lines.	25	____
Install water treatment system.	27	____
Install and connect gas supply lines.	28	____
Test water supply lines.	28	____
Test gas supply lines.	29	____
Perform start-up checks.	32	____



Installation Diagram Notes

1. The Product Identification Plate located on the right side service panel specifies the electric power and gas utility requirements.
2. For each unit, the installer must provide a ground connection and a separate fused disconnect switch.
3. Catastrophic damage will result from shifting the CombiCraft more than 3° out of level while power is turned on at the unit's main power switch.
4. The unit must have a cold water supply, NOT HOT. The water supply must meet the quality requirements of Table 2-2, and the pressure requirements on page 16.
5. A SteamerGard system is recommended when water quality does not meet the Table 2-2 requirements.
6. A manual shut off valve must be installed between the main water supply and the steamer supply lines. Refer to Figures 2-8 and 2-9 for recommended component arrangements.
7. Run a single water line between the main cold water supply and the tee. The separate steam generator and condenser supply lines are comparatively short.
8. The drain line must have a gravity flow away from the steamer, and must not be connected to the drain lines of any other equipment.
9. The drain line must be free air vented. If the line empties into a floor drain, there must be a one inch minimum clearance between the drain line and the floor drain openings.
10. Never block the drain exhaust vent (E) at the top of the CombiCraft.
11. Never exceed 14" water column (1/2 psi) gas pressure. If the gas supply pressure exceeds 14" water column, a pressure regulating valve must be installed in the gas supply plumbing to reduce the gas pressure to less than 14" water column.
12. A manual shut off valve must be installed between the main gas supply and the steamer supply lines. Refer to figure 2-11 for the recommended component arrangements.

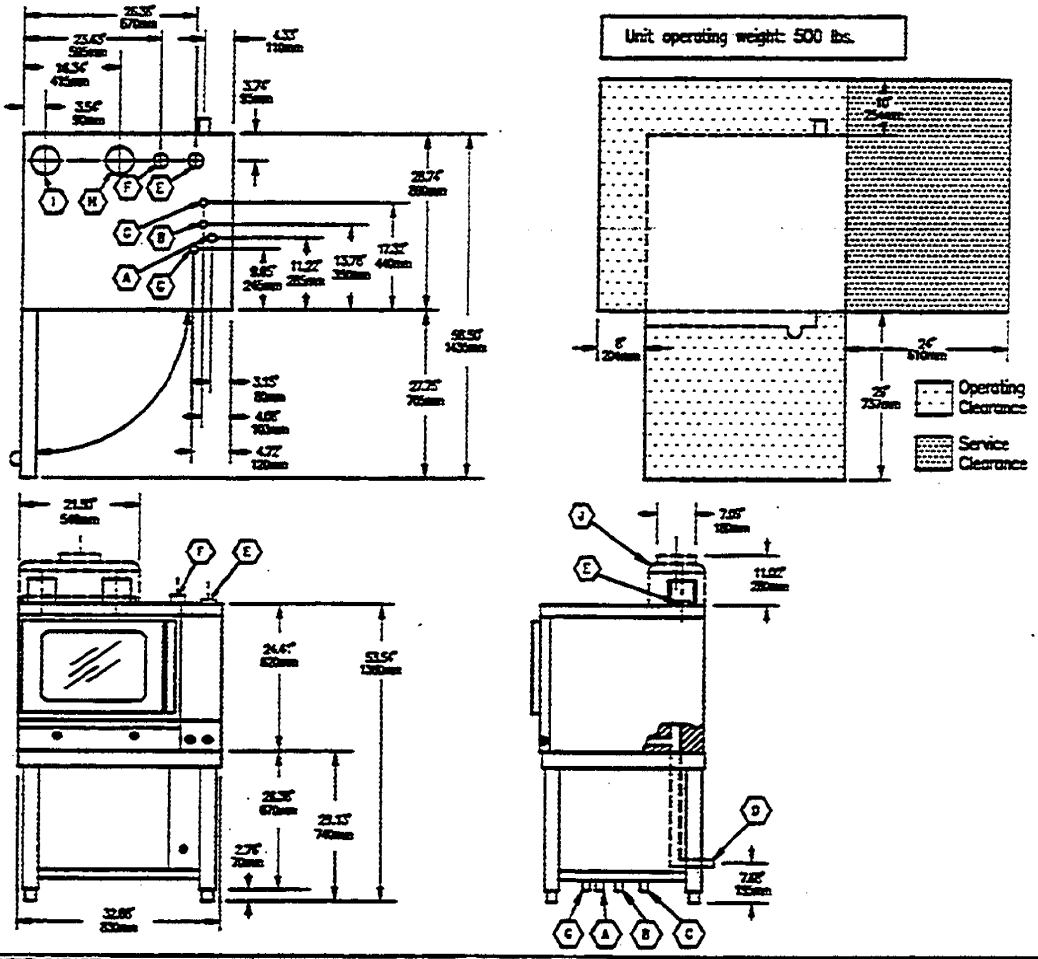
Figure 2-1. Schematic Installation Diagram



COMPARTMENT CAPACITY	UTILITY CONNECTIONS
a) Five, 12" x 20" Wire Shelves b) Five, 12" x 20" x 1" Cafeteria Pans or Three, 12" x 20" x 2 1/2" Cafeteria Pans	(A) Electrical Supply (B) Water Supply for Condenser. 1/2" Dia. IPS (C) Water Supply for SG and Water Injection. 3/4" Dia. IPS (soft water) (D) Drain: 1.50" (38mm) Dia. (E) Drain Exhaust Vent (F) Inlet for SG Descaling Solution

ELECTRIC	WATER	DRAINAGE	CLEARANCE
Three phase, 9.5 KW Fan 0.35 Hot Air 6 SG 6 Maximum Load 9.5	35 psi minimum 80 psi maximum (A) 3/4" Dia. IPS for SG (soft water) (B) 1/2" Dia. IPS for Condenser	1 1/2" Dia. Do not connect any other units to this drain. Drain line must be vented.	RIGHT = 24" (610mm) LEFT = 5" (204mm) REAR = 10" (254mm) FRONT = 25" (737mm) SG = Steam Generator

Figure 2-2. Dimension Diagram, Model CCE-5

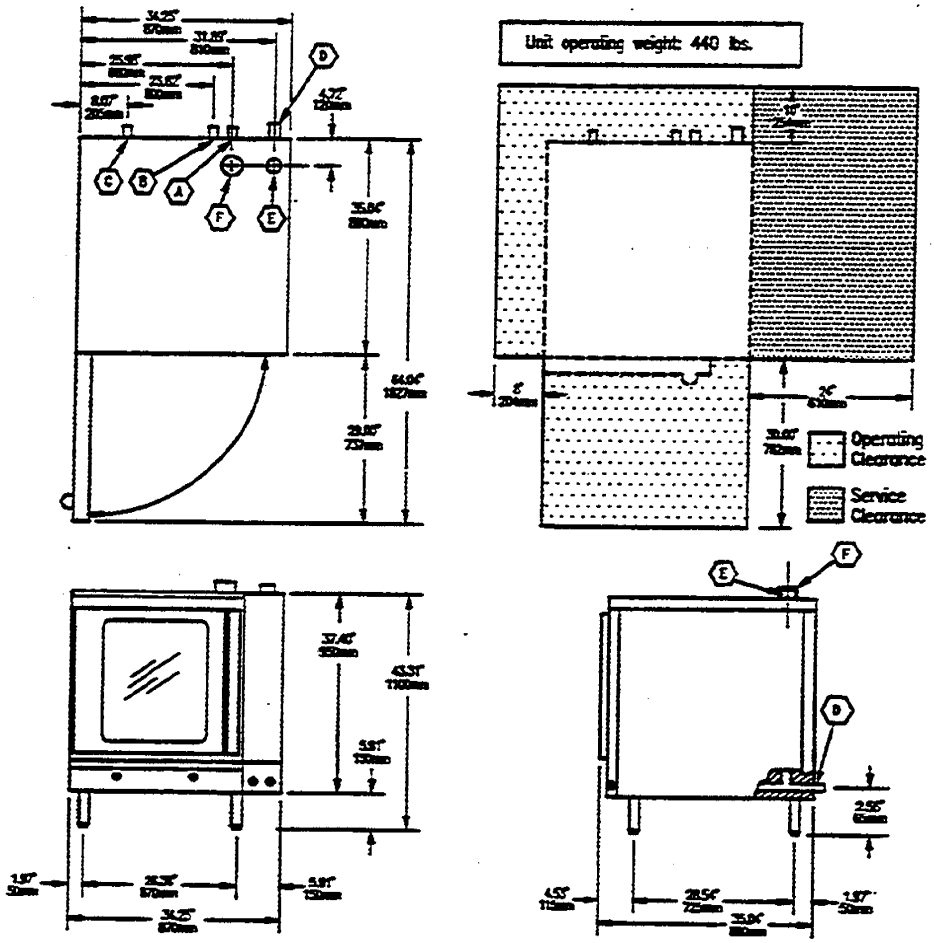


COMPARTMENT CAPACITY	UTILITY CONNECTIONS		
a) Five, 12" x 20" Wire Shelves b) Five, 12" x 20" x 1" Cafeteria Pans or Three, 12" x 20" x 2 1/2" Cafeteria Pans	(A) Electrical Supply (B) Water Supply for Condenser. 1/2" Dia. IPS (C) Water Supply for «SG and Water Injection. 3/4" Dia. IPS (soft water)	(D) Drain: 1.50" (38mm) Dia. (E) Drain Exhaust Vent (F) Inlet for «SG Descaling Solution	(G) Gas Supply: .75" (19mm) Dia. (H) Flue: Gas Exhaust from Oven (I) Flue Gas Exhaust from «SG (J) Flue Diverter (if required)

GAS	ELECTRIC	WATER	DRAINAGE	CLEARANCE
Hot Air 34,000 BTU; «SG 54,000 BTU; Maximum Load 88,000 BTU PIPING: 3/4" IPS for 220,000 BTU or less	115V – 1 Phase 0.35 KW for Fan	35 psi minimum 80 psi maximum 3/4" Dia. IPS for «SG (soft water) 1/2" Dia. IPS for Condenser	1 1/2" Dia. Do not connect any other units to this drain. Drain line must be vented.	RIGHT = 24" (610mm) LEFT = 8" (204mm) REAR = 10" (254mm) FRONT = 25" (737mm) «SG – Steam Generator

SUPPLY PRESSURE	
NATURAL	PROPANE
4.00" W.C. minimum 14.00" W.C. maximum	12.00" W.C. minimum 14.00" W.C. maximum

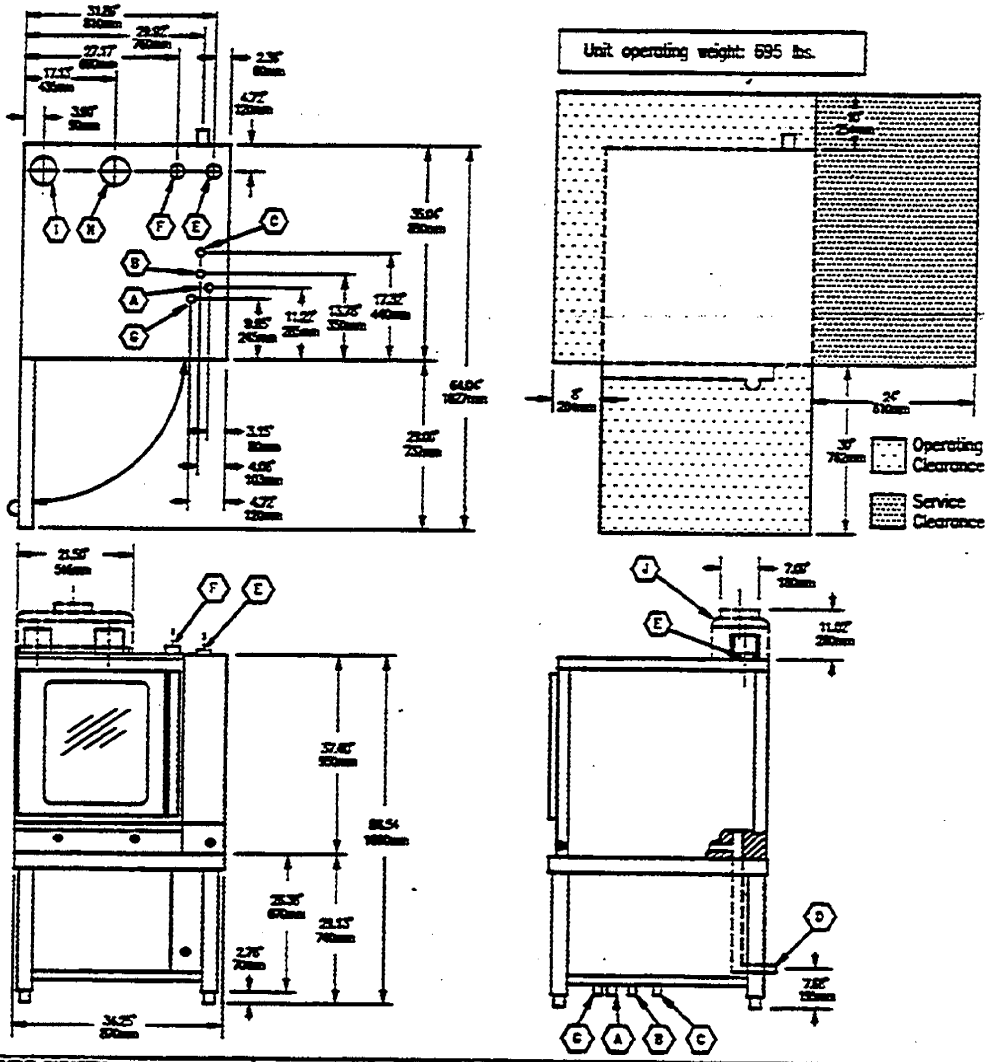
Figure 2-2. Dimension Diagram, Model CCG-5



COMPARTMENT CAPACITY	UTILITY CONNECTIONS
a) Eleven, 12" x 20" Wire Shelves b) Eleven, 12" x 20" x 1" Cafeteria Pans or Six, 12" x 20" x 2 1/2" Cafeteria Pans	A Electrical Supply B Water Supply for Condenser: 1/2" Dia. IPS C Water Supply for eSG and Water Injection: 3/4" Dia. IPS (soft water) D Drain: 1.50" (38mm) Dia. E Drain Exhaust Vent F Inlet for eSG Descaling Solution

ELECTRIC	WATER	DRAINAGE	CLEARANCE
Three phase, 21.7 KW Fan 0.55 Hot Air 15 eSG 12 Maximum Load 21.7	35 psi minimum 80 psi maximum 3/4" Dia. IPS for eSG (soft water) 1/2" Dia. IPS for Condenser	1 1/2" Dia. Do not connect any other units to this drain. Drain line must be vented.	RIGHT = 24" (610mm) LEFT = 8" (204mm) REAR = 10" (254mm) FRONT = 30" (762mm) eSG – Steam Generator

Figure 2-2. Dimension Diagram, Model CCE-11



COMPARTMENT CAPACITY	UTILITY CONNECTIONS		
a) Eleven, 12" x 20" Wire Shelves b) Eleven, 12" x 20" x 1" Cafeteria Pans or Six, 12" x 20" x 2 1/2" Cafeteria Pans	(A) Electrical Supply (B) Water Supply for Condenser. 1/2" Dia. IPS (C) Water Supply for «SG and Water Injection. 3/4" Dia. IPS (soft water)	(D) Drain: 1.50" (38mm) Dia. (E) Drain Exhaust Vent (F) Inlet for «SG Descaling Solution	(G) Gas Supply: .75" (19mm) Dia. (H) Flue: Gas Exhaust from Oven (I) Flue Gas Exhaust from «SG (J) Flue Diverter (if required)

GAS (A)	ELECTRIC (S)	WATER (A)	DRAINAGE (D)	CLEARANCE
Hot Air 65,000 BTU; «SG 54,000 BTU; Maximum Load 125,000 BTU PIPING: 3/4" IPS for 220,000 BTU or less SUPPLY PRESSURE NATURAL: 4.00" W.C. minimum, 14.00" W.C. maximum PROPANE: 4.00" W.C. minimum, 14.00" W.C. maximum	115V – 1 Phase 0.55 KW for Fan	35 psi minimum 80 psi maximum (A) 3/4" Dia. IPS for «SG (soft water) (A) 1/2" Dia. IPS for Condenser	1 1/2" Dia. Do not connect any other units to this drain. Drain line must be vented.	RIGHT = 24" (610mm) LEFT = 8" (204mm) REAR = 10" (254mm) FRONT = 30" (762mm) «SG = Steam Generator

Figure 2-2. Dimension Diagram, Model CCG-11

PREPARATION FOR INSTALLATION

Select and prepare the CombiCraft operating location before permanently positioning the unit. Protect the unit and packaged components during site preparation. Do not select the operating location or start installation before checking the electric power, gas, and water quality requirements to assure proper drainage, ventilation, and safety.

Unpacking and Inspection

The CombiCraft is packed in a wooden shipping crate. The fat filter is packed in a separate box. Additional components, not assembled at the factory are packaged inside the CombiCraft cooking compartment. These are:

Owner's Manual	Flue Diverter
Wire Shelves	Legs

After disassembling the shipping crate, visually inspect the CombiCraft for damage. Before unpacking the separate components, inspect their shipping cartons for damage. If the cartons are not damaged, unpack them and inspect the components for damage or loss.

- If the CombiCraft and its separate components are delivered in good condition, close and reseal all the component packages. Then proceed to Protecting The CombiCraft.
- If any shipping carton appears damaged, refer to the Shipping Damage Instructions below.
- If the CombiCraft or any of the components have suffered shipping damage or loss, refer to the Shipping Damage Instructions below.

Shipping Damage Instructions

If shipping damage or loss is discovered or suspected, observe the following guidelines in preparing a shipping damage claim.

- Write down a description of the damage or the reason for suspecting damage as soon as it is discovered. This will help in filling out the claim forms later.
- As soon as damage is discovered or suspected, notify the carrier that delivered the shipment.
- Arrange for a carrier representative to examine damage.
- Fill out all appropriate claim forms and have the examining carrier sign and date each form.

Protecting The CombiCraft

While running power and supply lines to the CombiCraft operating location, remove the CombiCraft and components from the immediate work area. To maintain them in good, clean condition, and prevent loss or damage:

1. Leave the packaged components inside the cooking compartment.

2. Keep the fat filter and CombiCraft together to prevent loss.
3. Keep the CombiCraft clean by covering it with a plastic tarp or drop cloth.
4. Do not store other items on top of the CombiCraft.

Electric Power Requirements

The characteristics of the electric power supply must match the power requirements specified on the CombiCraft product identification plate. The plate is secured to the outside of the right side access panel as illustrated in Figure 2-2.

Gas Supply Requirements

NEVER EXCEED 14" WATER COLUMN (1/2 psi) GAS PRESSURE. If the gas supply pressure exceeds 14" water column, a pressure regulating valve must be installed in the gas supply plumbing to reduce the gas pressure to less than 14" water column.

- Natural gas pressure must be between 4" - 14" water column.
- L.P. gas supply pressure must be between 12" - 14" water column.

Water Quality Requirements

CAUTION
Using water not within the limits specified in this manual could void or adversely affect the warranty coverage of the CombiCraft Oven/Steamer.

As with any steam generating equipment, poor water quality degrades CombiCraft Oven/Steamer performance. If feed water is low in Total Dissolved Solids (TDS) and free of particulate matter, the steam generator, heating element, and valves of the CombiCraft Oven/Steamer will give years of trouble-free service with a minimum of maintenance.

In some areas, even potable tap water contains a variety of impurities that can cause costly problems in steam generating equipment. Of primary concern are mineral salts and other impurities which remain behind as lime or scale deposits during the steam generating process. These deposits have caused many components to fail, including heating elements, probes, and solenoid valves. Of equal importance is the decrease in heat transfer efficiency caused by lime and scale deposits. Decreased heat transfer increases water and power consumption. Use of the CombiCraft in areas with poor water quality requires installation of a SteamerGard water treatment system or increased frequency of maintenance, cleaning, and descaling.

Check the quality of supply water before starting construction of the water supply lines. If a SteamerGard water treatment system must be installed to achieve acceptable water quality, install it before connecting the water supply lines to the CombiCraft Oven/Steamer.

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

Table 2-2. Minimum Supply Water Quality Requirements

Total Dissolved Solids	less than 60 parts per million
Silica	less than 13 parts per million
Alkalinity	less than 20 parts per million
Chloride	less than 30 parts per million
ph factor	greater than 7.5

Softened, Treated, or Filtered Water

Do not use softened or chlorinated water in the CombiCraft steam generator. 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 CombiCraft steam generator. Salts used to soften water cause rapid scale buildup, and increased corrosion.

Some water treatment plants kill bacteria in the water by adding chlorine. Chlorinated water is actually dilute hydrochloric acid. It is very damaging to the CombiCraft. When heated in the steam generator, chlorinated water rapidly dissolves generator walls and heater elements. In extreme cases, poisonous and highly corrosive chlorine gas is released in the steam generator.

Installing a high volume water filtering system such as the SteamerGard removes most of the salts used for water softening. Contact a local water treatment specialist or the local water company for assistance with chlorinated water.

Water Supply System

Select a water supply system that fulfills the requirements of the limits listed in Table 2-2. The main water supply must provide a minimum dynamic pressure of 35 psi (2.4 kg/cm^2) and a maximum static pressure of 60 psi (4.1 kg/cm^2). If the static pressure exceeds 60 psi, a pressure regulator must be installed in the supply lines. Refer to page 25 for detailed pressure and fitting requirements, and for the recommended plumbing layouts.

- If analysis shows that the supply water is within the required limits, a single line water system can be installed. A single water line system is illustrated in Figure 2-8 on page 26.
- If analysis shows that the supply water is NOT within the required limits, install a SteamerGard water treatment system. Figure 2-9 on page 27 illustrates a treated water supply arrangement.

- If analysis shows that the supply water is NOT within the required limits, and it is not possible to install a SteamerGard water treatment system; plan on increasing the frequency of maintenance, cleaning, and descaling beyond that recommended in the maintenance schedule (Chapter 4).
- Always connect a cold water supply to the CombiCraft water supply lines. DO NOT USE HOT WATER. The oven/steamer will not function properly or within design safety limits if hot or warm water is supplied to either the condenser connection (B) or the steam generator fill connection (C).

Selecting The Operating Location

For safe and efficient operation, observe the following criteria when selecting an operating location for the CombiCraft Oven/Steamer.

WARNING
The flooring directly under this unit must be made of non-combustible material.

1. Do not install these units in areas where combustibles are stored or may accumulate. The surrounding area must be clear of combustible including the space under the unit.
2. A proper air supply for combustion and ventilation air is critical to safe, efficient operation of CombiCraft Oven/Steamers. The area around the oven/steamer must have adequate ventilation for gas-fired appliances.
3. The vents for combustion and ventilation air are on the right side of the unit. Do not block these air vents. Do not install any heat producing equipment near the air vents of the unit.

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

4. The dimension drawings (Figure 2-2) specify all dimensions and clearances required for proper operation and service of each CombiCraft Oven/Steamer covered in this manual. Maintain at least an 8-inch operating clearance on all sides, and at least a 10-inch clearance at the back of the unit. Do not store articles on top of the unit.
5. The service access panel is on the right side of the unit. Select an operating location that allows access to the right side of the unit for service. A minimum 20-inch clearance should be available for servicing the unit.

6. CCG- model CombiCrafts have gas-fired steam generators. These units have two exhaust ports (H & I on the dimension drawings). A chimney, flue plenum, or exhaust hood should be close enough to extend an exhaust duct to these ports.
7. The location selected must be capable of supporting the operational weight of the CombiCraft, including the weight of water and food. The CombiCraft Oven/Steamer operating weights are listed on the dimension drawings.

INSTALLATION INSTRUCTIONS

After selecting and preparing the CombiCraft Oven/Steamer operating location, the oven/steamer can be positioned and installed. When installation is complete, perform all start-up checks to verify proper installation and operation.

Position and Level the Oven/Steamer

The electric powered CombiCraft Oven/Steamers, Models CCE-5 and CCE-11, are typically counter top mounted on four adjustable legs. To compensate for height limitations, these oven/steamers can be surface mounted directly to the counter top. If a suitable counter top is not available, the CombiCraft can be ordered with a stand.

The gas fired CombiCraft Oven/Steamers, Models CCG-5 and CCG-11, are always provided on stands. The following instructions cover stand, counter top, and flush mounting methods.

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 CombiCraft MUST BE LEVEL BOTH FRONT TO BACK AND SIDE TO SIDE in all mounting arrangements.

Equipment damage may result from shifting the CombiCraft Oven/Steamer more than 3° out of level while power is turned on.

Leg Mounting and Leveling

The supporting legs of the CombiCraft Oven/Steamer are 2-3/4-inches long when the adjustable feet are fully retracted. The adjustable feet can be extended approximately 2 inches. This extension provides the 4- inch space below the unit required by NSF sanitary standards, and a means of leveling the oven/steamer.

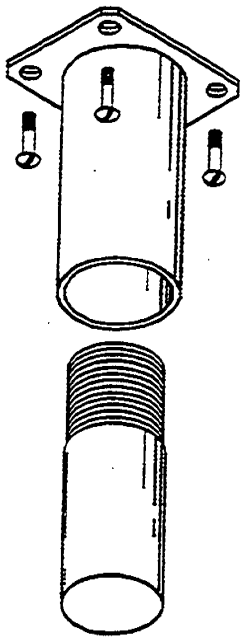


Figure 2-3. CombiCraft Leg Bolts

Assembly

1. Check that the feet are fully retracted into the legs. Do not overtighten. The feet should easily screw in and out using fingers only.

WARNING
INJURY AND EQUIPMENT DAMAGE could result from improper lifting. Refer to the appropriate dimension and check the weight of the unit being installed. Use enough workers with experience lifting heavy equipment to place the CombiCraft on the supporting surface.

2. Be sure electric power is turned off at the main power switch. Place the CombiCraft on its left side.
3. Refer to Figure 2-3 and bolt the legs to the CombiCraft frame. All four legs must be installed for proper mounting of the CombiCraft.
4. Place the oven/steamer upright on its four legs.

Positioning and Leveling

1. Check that all Unpacking and Inspection tasks are complete.
2. Thoroughly clean the counter top area that will support the steamer.
3. Using a level, determine and mark the highest corner of the supporting surface.

WARNING
INJURY AND EQUIPMENT DAMAGE could result from improper lifting. Refer to the appropriate dimension and check the weight of the unit being installed. Use enough workers with experience lifting heavy equipment to place the CombiCraft on the supporting surface.

4. Lift the CombiCraft into position on the supporting surface.
5. Extend the adjusting foot of the leg in the highest corner (marked in step 3), until that corner of the unit is four inches above the supporting surface.
6. Using a level, adjust the other three legs until the CombiCraft is level both front to back and side to side.

Surface Mounting and Leveling

NOTE
Surface mounting does not apply to CombiCraft Models CCE-5, CCG-5, CCE-11 and CCG-11.

When a CombiCraft is surface mounted (without legs), NSF standards require a sanitary counter top seal between the counter surface and the bottom of the unit. This seal closes any gap between the unit and counter top. A sanitary seal closing a gap greater than 1/4 inch may not meet NSF

sanitation standards. Therefore, do not surface mount the CombiCraft to a surface out of level more then 1/4 inch over the length or width of the unit. Shimming the unit level may leave a gap too large to seal within NSF standards.

1. Thoroughly clean the bottom perimeter of the oven/steamer and the counter top area that will support the oven/steamer.
2. Using a level, determine and mark the highest corner of the counter top area that will support the oven/steamer. At each of the other three corners, measure and note the shim thickness required to level the CombiCraft both front to back and side to side.
3. Refer to the dimension drawing sheet for the model being installed (Figure 2-2), and note the required clearances (shaded area) around the unit. Leaving the required clearances, determine the exact front, back, and side lines of the CombiCraft on the counter top. From these lines, locate and drill four mounting holes in the counter, as shown in the clearance diagram.

WARNING
INJURY AND EQUIPMENT DAMAGE could result from improper lifting. The CombiCraft weighs approximately 135 pounds. Use enough workers with experience lifting heavy equipment to place the CombiCraft on the counter.

4. Lift the CombiCraft into position on the counter and align the counter mounting holes with the oven/steamer mounting holes. The oven/steamer mounting holes are the holes usually used to mount the adjustable legs.

NOTE: If there is not enough clearance behind the oven/steamer to install the drain, electrical, and water lines; skip the remainder of this procedure and go to page 21, Install the Free Air Vented Drain Lines. After installing all necessary drain, electrical, and water lines, proceed with step 5 of these instructions and mount the oven/steamer to the counter top.

5. Install mounting screws, nuts, and washers as shown in Figure 2-4. The screws should be long enough to pass through the washer, counter, shims, and nut without projecting more than 1/2 inch above the weldnut. Thread the screws only a few turns into the nuts, leaving enough play for leveling the unit and sealing the mounting holes.
6. Do not shim at the highest corner (marked in step 2). Shim the other three corners until the unit is level both front to back and side to side.
7. Inject enough silicone sealant into each mounting hole in the counter to seal the hole as the hardware is tightened.
8. Tighten the mounting hardware enough to secure the unit in place but not change the level. After hardware is tightened, verify that the CombiCraft is level front to back and side to side.

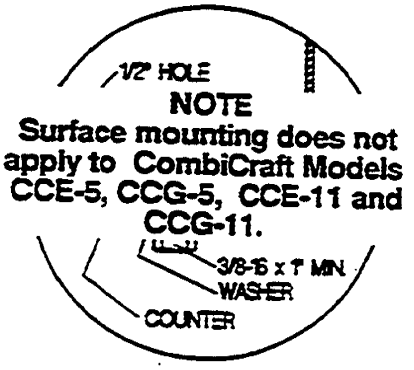


Figure 2-4. Counter Top Mounting Hardware

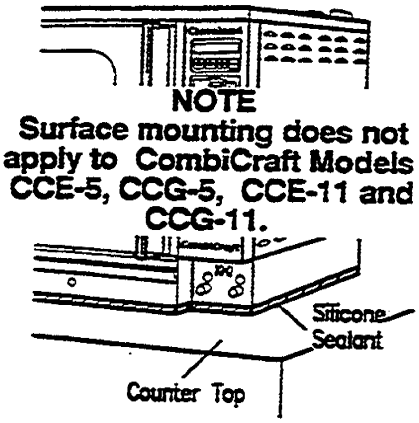


Figure 2-5. Silicone Seal

9. Seal the gap between the CombiCraft and the counter top. Lay a generous bead of silicone sealant under the entire perimeter of the oven/steamer bottom. See Figure 2-5.
10. Smooth the silicone seal into the crevice with finger or tool to provide a cove seal.
11. After the CombiCraft has been positioned and leveled, install the wire shelves and fat filter.

Stand Mounting and Leveling

On all gas units and when an electric unit is ordered with a stand, the stand and CombiCraft are assembled at the factory.

NOTE: If there is not enough clearance behind the stand and oven/steamer to install the drain, electrical, and water lines; skip the remainder of this procedure and proceed below with Install and Connect the Free Air Vented Drain Lines. After installing all necessary drain, electrical, and water lines, proceed with step 2 of these instructions and install the equipment stand.

1. Thoroughly clean the floor area that will support the equipment stand.
2. Using a level, determine and mark the highest corner of the floor are that will support the equipment stand.
3. Move the stand into position and level it. Do not adjust the retractable foot of the leg in the highest corner (marked in step 2). Using a level, adjust the feet on the other three legs until the unit is level both front to back and side to side.
4. After the CombiCraft has been positioned and leveled, install the wire shelves, and fat filter.

Install and Connect the Free Air Vented Drain Lines

The drain outlet must be free air vented to equalize the pressure in the CombiCraft Oven/Steamer with the atmosphere. Generating steam causes pressure to increase in the unit; cold water flow into the condenser creates a vacuum (low pressure) in the condenser. Without a free air vent, either high or low pressure in the compartment will cause malfunction or damage.

- Pressure build up in the steamer will cause steam and hot water leakage around the door.
- A vacuum will implode the steamer and cause permanent physical damage.

Refer to Figure 2-6, and the dimension drawings (Figure 2-2). The drain outlet (D) discharges exhaust steam and hot condensate from the oven/steamer. The drain exhaust vent (E) and a 1-inch minimum clearance between the drain opening and floor drain provide the Combi Craft Oven/Steamer with free air venting.

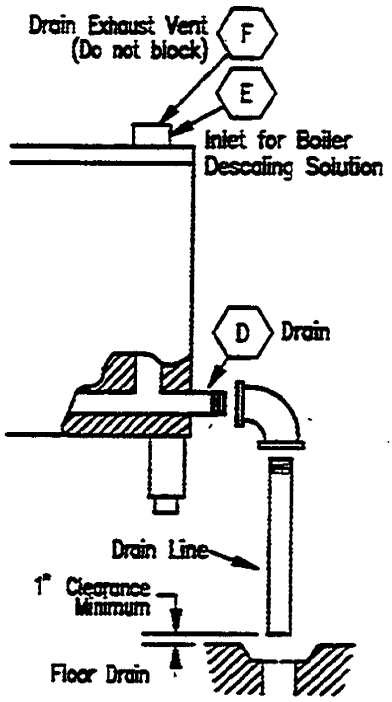


Figure 2-6. Recommended Drain Layout

Furnishing and installing the drain lines and fittings is the responsibility of the owner and/or installer. Figure 2-6 illustrates a drain layout recommended by Cleveland Range. Observe the following instructions to determine the pipe size, the number of fittings required, and the layout of the drain line.

WARNING

DEATH, INJURY, AND EQUIPMENT DAMAGE could result from improper installation of the drain outlet lines.

Improper installation of these lines could void the CombiCraft Oven/Steamer warranty. The following restrictions are critical to the safety of personnel and equipment, and must not be violated under any circumstances.

Do not connect the drain line into PVC pipe, or any other drain material that cannot sustain 180° F.

Do not connect drains from any other equipment to the CombiCraft Oven/Steamer drain line.

Do not connect the drain outlet extension line directly to a floor drain or sewer line.

Do not block drain vent at the top of the unit.

1. The drain lines must be installed in compliance with the Basic Plumbing Code of the Building Officials and Code Administrators International, Inc. (BOCA), and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).
2. 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 six feet or less of pipe, and no more than two elbows are required, use 1-1/4-inch pipe and fittings.
   - If the drain outlet extension requires six to twelve feet of pipe, or requires three or more elbows, use 2-inch pipe and fittings.
3. The drain line must have a gravity flow from the CombiCraft Oven/Steamer drain outlet to the floor drain. Do not install a trap in the drain line.
4. Free air venting requires a minimum of one inch clearance between the end of the drain line and the top of the floor drain.

5. Do not connect the steamer drain to drains or plumbing of any other equipment. If drains of two or more units are connected together:
   - Low pressure can develop, causing an implosion and physical collapse of the oven/steamer.
   - Drainage from another unit can flow back into compartment of oven/steamer.

6. Refer to Figure 2-6 and connect the drain line to the 1.5 inch drain pipe connection at the back of the CombiCraft (D).
7. When assembling the drain pipes and fittings, apply a hardening type pipe sealant to the threads, and thread them together FINGER TIGHT ONLY. DO NOT USE A WRENCH.

Exhaust Port Ventilation (CCG gas-fired models only)

Refer to exhaust ports (H & I) on the appropriate dimension drawings. These ports must be vented to an exhaust flue, either through an exhaust hood, or by direct piping from the optional Flue Diverter (J).

1. A ductwork connection must comply with all local and national codes for venting gas-fired appliances. After sizing and positioning the ducts, secure them tightly to the exhaust ports.
2. When venting to an exhaust hood, the hood must be sized to th ventilation requirements of the CombiCraft installed.
   - The model CCG-5 requires a hood at least 3 feet long by 2.5 feet wide, with a minimum ventilation capacity of 250 c.f.m.
   - The model CCG-11 requires a hood at least 3 feet long by 3 feet wide, with a minimum ventilation capacity of 575 c.f.m.
3. Do not connect these ports directly to a forced draft exhaust system or canopy. Excess draft through the flue reduces the oven's efficiency and may affect cooking times.

Install Electric Power Line

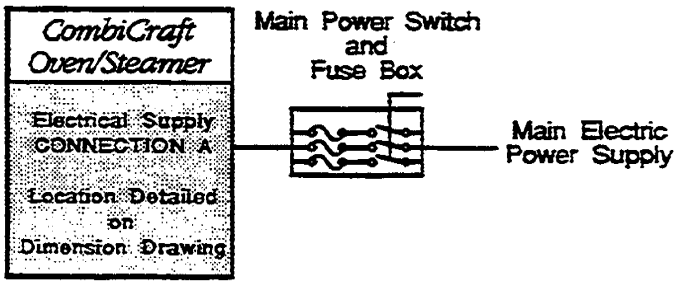


Figure 2-7. Recommended Electrical Layout

Furnishing and installing the electrical power lines, switches, fuse boxes, connectors and accessories is the responsibility of the owner and/or installer. Figure 2-7 illustrates an electrical layout recommended by Cleveland Range. When installing the electrical power lines and accessories, observe the following instructions.

1. Install the electrical power and ground lines in accordance with local codes and/or the National Electric Code, ANSI/NFPA No. 70-(latest edition) (USA).
2. Refer to the electrical schematic diagram that was shipped with the unit.
3. Install the proper size disconnect switch, circuit breaker or fuses, and wire and conduit to conform to all local codes and the national codes cited above. See Table 2-3 for wire requirements.
4. Install a separate disconnect switch and fuses or breakers sized to meet the line amps required by the CombiCraft Oven/Steamer (see Table 2-3). The fuses or breakers may be an integral part of the disconnect switch or in a separate fuse box. Install the disconnect switch for easy access as needed for emergency shutdown. Throughout the remainder of this manual the fused disconnect switch is referred to as the main power switch.

Table 2-3. Minimum Wire Requirements

		CCE-5			
VOLTS	KILO-WATTS	AMPS 1 Phase	AMPS 3 Phase	AWG WIRE SIZE*	mm^2 WIRE SIZE*
208	9.5/8.6	46	30	6/8	13.3/8.3
220	10.5/9.5	48	32	6/8	—
240	10.5/9.5	44	22	6/8	—

		CCE-11			
VOLTS	KILO-WATTS	AMPS 1 Phase	AMPS 3 Phase	AWG WIRE SIZE*	mm^2 WIRE SIZE
208	19.6	—	54.5	4	21
220	21.7	—	57.1	4	—
240	21.7	—	52.2	4	—
480	21.7	—	26.1	10	5.27

*Use solid copper wire rated for 90°C, wet location.

5. There should be a sufficient length of flexible conduit between the CombiCraft Oven/Steamer connector (A on dimension drawing) and the wall so the unit can be moved for service.
6. Each steamer must be electrically grounded by the installer in accordance with the National Electric Code, ANSI/NFPA No. 70-(latest edition).
7. The characteristics of the electric power supply must match the power requirements specified on the CombiCraft Oven/Steamer product identification plate. The plate is located on the right side of the unit in the bottom left corner. Also refer to the electrical schematic diagram that was shipped with the unit.

Connect Electrical Line

Refer to the electrical schematic diagram, and connect the electrical lines to the terminal block inside the right side access panel as described below. Copies of the electrical schematic diagrams are included at the end of this manual, and a copy was shipped with the unit.

1. Remove the right side access panel by removing the screws that hold it in place. Save the screws.
2. Refer to the electrical schematic diagram that was shipped with the unit.
3. Mechanically secure the flexible conduit to the electrical access hole
4. The terminal block and ground connection are near the center of the side opening. Connect the wires to the terminal block and ground connector accordingly.
5. The oven/steamer must be electrically grounded by the installer in accordance with the National Electric Code, ANSI/NFPA No. 70-(latest edition).
6. If no further work inside the side panel is required at this time, such as plumbing and leak checks, secure the right side access panel with the mounting screws.

Install and Connect Water Supply Lines

Furnishing and plumbing the water supply lines is the responsibility of the owner and/or installer. This section explains the plumbing layouts recommended by Cleveland Range. When installing and connecting the water supply lines to the CombiCraft, observe the following guides and instructions.

1. The CombiCraft Oven/Steamer has compression fittings at the back of the unit for connection to the water supply lines. The steam generator fitting (C on dimension drawing) is 3/8-inch IPS, and the condenser fitting (B on dimension drawing) is 1/2-inch IPS.

2. Always connect a cold water supply to the CombiCraft water supply lines. DO NOT USE HOT WATER. The oven/steamer will not function properly or within design safety limits if hot or warm water is supplied to either the condenser connection (B) or the steam generator fill connection (C).
3. Do not connect the CombiCraft to a softened or treated water supply which adds chlorine or chloride salts to the water. Refer to the Softened, Treated, or Filtered Water instructions on page 16 for details.
4. Supply water must have a minimum dynamic pressure of 35 psi (2.4 kg/cm^2) and a maximum static pressure of 60 psi (4.1 kg/cm^2). Water pressure greater than 60 psi will cause damage to the solenoid valves. Local water pressure can be 100 psi or more. If possible, check supply pressure at non-peak demand time. A local water company can assist in this check. If static pressure exceeds 60 psi, a pressure regulator must be installed in the supply lines. For best results, set the regulator for 50 psi dynamic pressure.
5. Refer to the recommended plumbing layouts in Figures 2-8 and 2-9, and install the water supply lines and fittings in accordance with all local and national codes. While constructing and installing the water supply lines, pay particular attention to the following requirements and recommendations.

   a. Apply pipe dope or teflon tape to any threaded connection.

   b. When installing a water supply system without a SteamerGard, Cleveland Range recommends the plumbing layout illustrated in Figure 2-8.

   - Install a single water line from the main cold water supply to the tee just outside the CombiCraft.
   - The two separate lines from the tee to the steam generator and condenser connections are relatively short.

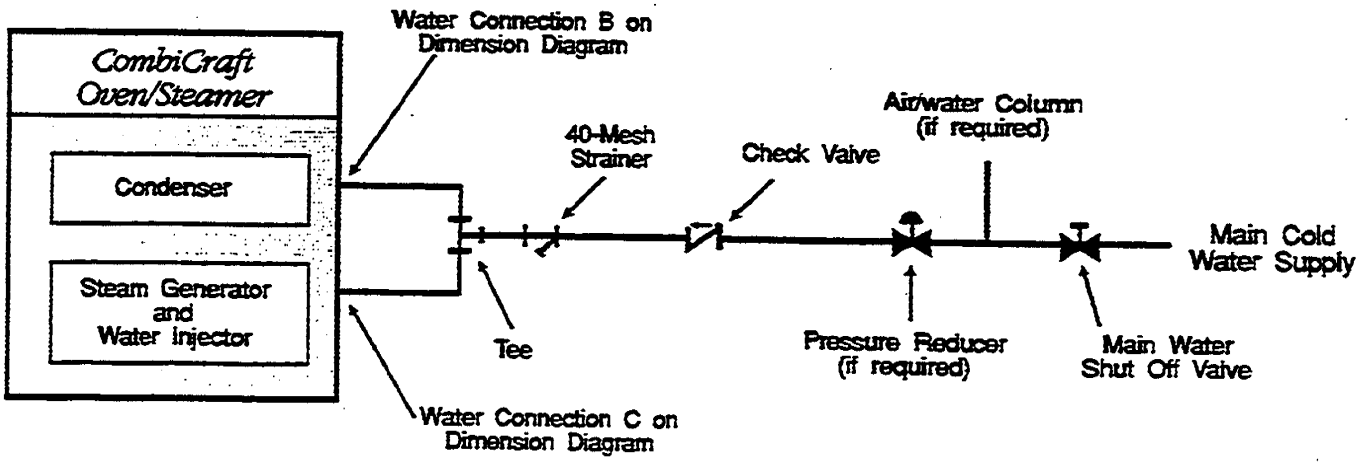


Figure 2-8. Water Supply Lines without a SteamerGard

c. When installing a water supply system with a SteamerGard, Cleveland Range recommends the plumbing layout illustrated in Figure 2-9.

- Install a single water line from the main cold water supply to the tee just before the SteamerGard.
- The lines connecting the tee, SteamerGard, and CombiCraft are relatively short.
- The water supply line from the SteamerGard connects to the steam generator fill connection.
- The water supply to the condenser connection can be untreated.

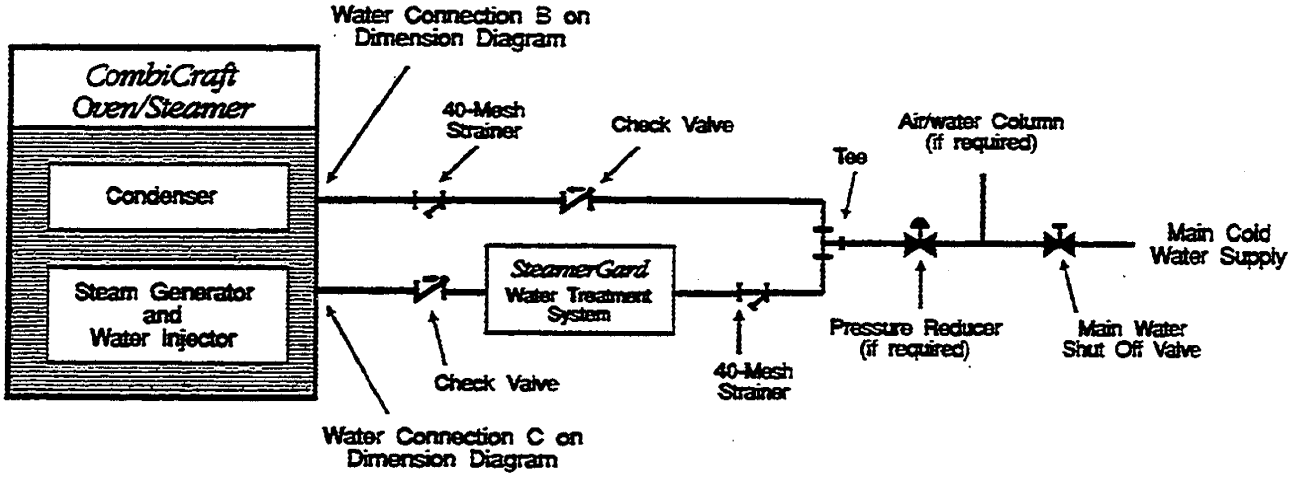


Figure 2-9. Water Supply Lines with a SteamerGard

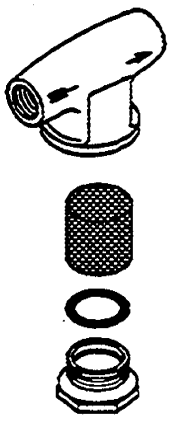


Figure 2-10. Water Strainer Assembly

d. Use 3/4-inch and 1/2-inch IPS lines for the steam generator and condenser lines respectively. If larger lines are used, a pressure regulator must be installed in the supply line to maintain the pressure specified in step 4.

e. Install a manual water valve between the main cold water supply line and the CombiCraft lines.

f. The National Sanitation Foundation (NSF) requires installation of a check-valve in all supply lines in accordance with and as required by local plumbing codes. The recommended locations for check valves are shown in the recommended plumbing layouts.

g. Cleveland Range recommends installing a 40-mesh water strainer at the locations shown in the recommended plumbing layouts. Use a 40-mesh water strainer of the type and construction illustrated in Figure 2-10.

6. Construct all supply lines up to the point of installing the strainer(s). Before connecting the strainer(s), flush the water supply line(s). Then install the strainer(s) at the indicated location(s).
   - Make sure the arrow on the strainer body points in the direction of flow into the oven/steamer fittings.
   - Install the strainer so the access nut points down.
   - If the remaining water lines and/or SteamerGard are not installed and connected immediately after flushing, temporarily cap the strainer outlet(s) to prevent blockage.
7. Construct the remainder of the water supply lines but do not connect them to the CombiCraft.
   a. If the CombiCraft is installed with a SteamerGard, refer to Figure 2-9, and the SteamerGard manual for detailed instructions.
      - The 40-mesh strainer must be installed at the SteamerGard inlet.
      - A check valve must be installed between the SteamerGard and the CombiCraft steam generator inlet.
      - The line from the SteamerGard must connect to the CombiCraft 3/4-inch steam generator inlet.
   b. If the CombiCraft is installed without a SteamerGard, refer to Figure 2-8. Note that the tee is installed after the check valve and strainer to reduce the number of fittings and amount of piping required.
8. Before connecting the water supply lines to the CombiCraft, flush the lines. Then connect the water supply lines to the CombiCraft at the locations shown in the appropriate dimension drawing (Figure 2-2).

Testing Water Supply Lines

1. Check all connections for proper tightness. Remove the right side access 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 oven/steamer.
4. If no other inspections are being made at this time, replace the right side access panel.

Install and ConnectGas Supply Lines

Furnishing and installing the gas supply lines, valves, regulators, and accessories is the responsibility of the owner and/or installer. When installing the gas supply lines and accessories, observe the following instructions.

1. Install the gas supply lines in accordance with local codes and/or the National Fuel Gas Code, ANSI Z223.1-(latest edition).
2. Use 3/4-inch IPS gas supply piping and fittings. Refer to the appropriate CombiCraft dimension drawing for pressure data and con-

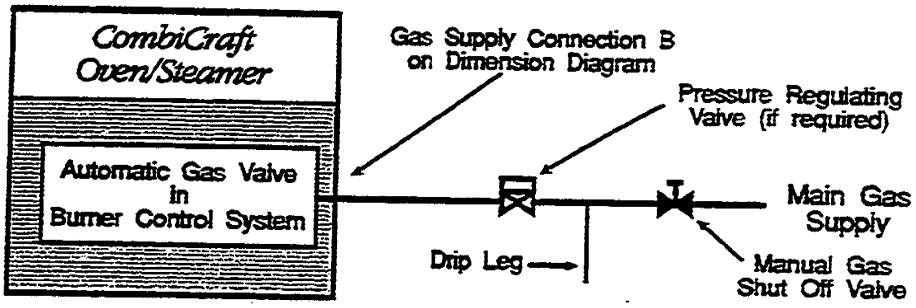


Figure 2-11. Recommended Gas Supply Line Layout

nection locations. Refer to Figure 2-11 for Cleveland Range recommended layout of the gas supply lines.

3. Install a manual shut off valve between the gas supply line and the CombiCraft gas connection (G on dimension drawing).
4. Install a sediment trap (drip leg) in the gas supply line, then connect gas supply piping to the steam generator gas valve piping.
5. If natural gas pressure exceeds 14" water column, a pressure regulating valve must be installed in the gas supply plumbing to reduce th pressure to within the limits specified in Gas Supply Requirement., on page 15.
6. If LP gas is supplied, use a gas pipe joint compound which is resistant to LP gas.

Testing Gas Supply Lines and Burner Controls

After initial installation, both the gas lines and burner controls should be inspected for proper installation and tested for leaks and proper operation. After service or repair, the components affected should be inspected and tested for leaks and proper operation.

Pressure Testing The Gas Supply Lines

The gas lines leading to the CombiCraft can be tested immediately after installation, or during the Start-Up Checks. Do not supply gas to these lines until they have been tested. When testing these lines observe the following.

1. Remove the right side access panel. Check all internal and external connections for proper tightness.
2. Refer to Figure 2-11, and set-up the CombiCraft automatic gas valve according to the test pressure being used. The same pressure criteria apply when testing lines prior to the manual gas shut-off valve.
   - The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any

pressure testing of that system at test pressures in excess of 14" water column (1/2 psi or 3.45 kPa).

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

3. Refer to Figure 2-11, and open the main shut-off valve for the oven/steamer gas supply line.
4. Test the pipe joints for leaks with soap and water solution. If you smell gas, turn off the main gas shut-off valve, and refer to Gas Leak Instructions on page 45.
5. If no other inspections or tests are planned at this time, replace the right side access panel; otherwise proceed to the next test. Do not leave manual gas valve open during initial installation or burner control system servicing, until after the automatic gas valve has been tested.

Testing the Automatic Gas Valve and Burner Control System

Test the automatic gas valve and burner control system during the initial installation Start-Up Checks, or after servicing any components of the valve or system. If this testing is part of initial installation, or if gas line components have been altered, DO NOT TEST the automatic gas valve and burner control system until the gas supply lines have passed the pressure test procedure above.

1. If this test is part of the initial installation Start-Up Checks, perform checks 1 through 10 before starting this procedure.
2. Turn off electrical power to the CombiCraft, at the panel ON/OFF switch (R, Figure 3-2) by pressing the top end of the switch.
3. Turn off the electrical power to the unit at the main power switch. (Refer to Figure 2-7, Recommended Electrical Layout.)
4. Remove the right side access panel from the right side of the unit.
5. Refer to Figure 2-12, and turn manual control knob on the automatic gas valve(s) to the OFF position.
6. Turn main manual gas valve to open position. Wait five minutes.
   - If you smell gas, refer to Gas Leak Instructions on page 45.
   - If you do not smell gas, continue this procedure.
7. Turn gas control knob on the automatic gas valves to the ON position.
8. Turn on the electrical power to the CombiCraft at the main power switch.

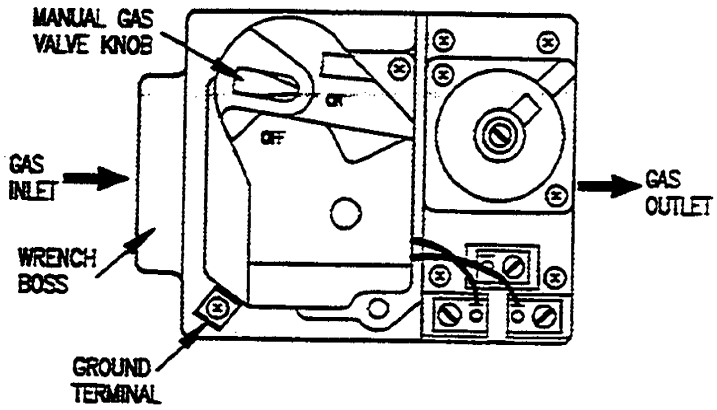


Figure 2-12. Automatic Gas Valve

NOTE A smokey, strong smelling vapor fills the cooking compartment and exhaust ports during initial startup after installation. Refer to Initial Operation and Cleaning, at the end of this chapter.

9. Turn on the CombiCraft by pressing the bottom end of the ON/OFF switch.

10. Install the right side access panel on the right side of the unit.

11. The CombiCraft is now ready for operation.
    - If this test is part of the initial installation Start-Up Checks, continue the check list with step 12.
    - If this is part of component repair, perform start-up check number 12 only. If the unit passes, it is ready to resume normal cooking operations.

WARNING

DO NOT TRY TO LIGHT THE BURNERS OR PILOT WITH A FLAME.THERE IS NO PILOT TO LIGHT OR ADJUST.

CombiCrafts have electronic ignition systems which automatically light the burners, sense the flame, and control gas flow. This provides both precise burner control and safety ignition and shutdown features.

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

Start-Up Check List

This inspection checks proper electrical, water, and drain connections to the CombiCraft, and verifies basic operation of the oven/steamer.

CAUTION

Equipment damage and faulty operation will result if the gas, water, or electrical supplies fall below requirements. This may be caused by other equipment on the same supply lines. During all tests, adjustments, and inspection of the CombiCraft Steamer, turn on all equipment drawing on the same supply lines.

1. Refer to the appropriate dimension drawing and verify that the specified clearances are met.

2. Verify that the voltage supplied complies with the voltage requirements specified on the Product Identification Plate, located on the right side of the unit in the bottom left corner. Verify that the wiring connections are correct for these voltage requirements.

3. Verify proper polarity of the wiring connections by noting fan rotation. Refer to Figure 3-2, and press button T for manual oven ventilation. Observe the direction of fan rotation.
   - If the fan rotates clockwise, polarity is correct.
   - If the fan rotates counterclockwise, turn the unit off at both the CombiCraft ON/OFF switch and the main power switch. Reverse two phases to reverse polarity and change rotation.

CAUTION
Fan rotation in the wrong direction causes serious damage to oven components, and will produce inconsistent cooking results.

4. Check that the door contact switch operates correctly. Refer to Figure 3-2, and press button T for manual oven ventilation. Observe fan rotation, and open the cooking compartment door. The fan will stop rotating when the door is opened.

5. Verify that the flue diverter, fat filter, wire shelves, and drip tray are installed and fit properly.

6. Verify that the exhaust duct is properly installed between the exhaust ports and flue; or the draft hood is the correct size.

7. Verify that the free air vented drain lines are connected properly.

8. Check that the drain exhaust port (E on the dimension drawing, Figure 2-2) is not closed, blocked or connected to any other equipment.

9. Check the water shut off valve at the unit and verify that the water is turned on.

10. If not already done during installation, pressure test the gas supply lines as described in Testing Gas Supply Lines and Burner Controls, page 29.

11. Test the burner control system and valve as described in Testing the Automatic Gas Valve and Burner Control System, page 30. After the system has passed the test, check that the manual gas shut-off valve is turned on.

NOTE A smokey, strong smelling vapor fills the cooking compartment and exhaust ports during initial startup after installation. Refer to Initial Operation and Cleaning, at the end of this chapter.

12. Refer to Chapter 3, Operation, and turn on the burners by placing the unit in manual mode, setting the following operating parameters, and pressing the START/STOP button (E, Figure 3-2).
    - Cooking Time 10 minutes
    - Temperature 218°
    - Cooking Mode Combi (P and Q)

13. After pressing the START/STOP button, the burners should light with a distinctive sound.
    - If the burners light within one minute, the unit is operating properly. Proceed to step 17.
    - If the burners do not light within one minute, there may be air in the gas supply lines. Wait five minutes, and proceed to step 14.
14. Turn off the CombiCraft by pressing the top end of the ON/OFF switch (R).
15. Turn on electrical power to the CombiCraft at the panel ON/OFF switch (R) by pressing the bottom end of the switch.
16. Repeat steps 13 through 15 no more than three times. If the burners do not light after the third attempt, call an authorized service representative to adjust the burner controls.
17. Verify operation of the no-water safety circuit. Refer to Chapter 3, Operation, and start the oven/steamer with the main steam switch. Let the unit fill with water and begin steaming for a few minutes. Shut off the water supply at the unit. The unit automatically shuts off when the water drops to the safety level. Turn the water supply back on, and the unit automatically fills with water, and resumes steaming.
18. Refer to Chapter 3, Operation, and verify operation of the hot air, steam, and humidification functions.

Initial Operation and Cleaning

During shipment, components in the cooking compartment and steam generator are protected by an oily, non-toxic coating. During the first cooking cycle after shipment, this coating vaporizes, filling the cooking compartment and exhaust ports with a smokey, strong smelling vapor. Cleveland Range recommends vaporizing and cleaning this coating from the unit before cooking any food.

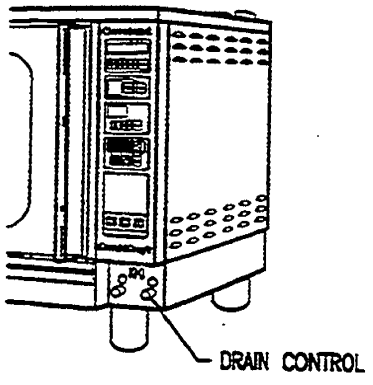


Figure 2-13. Steam Generator Drain Control

1. Be sure the unit has passed all the tests, inspections, and procedures of the Start-Up Check List before performing this procedure.
2. Inspect the cooking compartment and remove any shipping or construction debris. Close the compartment door.
3. Turn on the main water supply and close the steam generator drain control by pushing in the knob at the base of the unit.
4. Spray the inside of the oven/steamer with a grease removing product. Do not scrub the compartment walls with an abrasive. Avoid products that are likely to leave an unpleasant smell in the compartment.
5. Refer to Programmed Operation, page 48, and activate preset program 16: Steam Cleaning at 217°F, for 00 hours and 30 minutes.
    a. As the unit heats up, a smokey, strong smelling vapor fills the cooking compartment and exhaust ports. This will continue for several minutes.

b. When the cleaning cycle has been completed, turn on the fan (T) to clear and cool the cooking compartment. When temperature drops below 100° F, turn off the fan.

6. Drain the steam generator (pull out the drain control knob at the base of the unit).
7. After the steam generator has drained, close the drain valve.
8. Repeat step 5; any remaining coating will be flushed down the drain.
   - If the unit still smokes or the smokey odor is still strong, repeat steps 5, 6 and 7 until there is no smoking.
   - If there is no further smoking, the unit is ready for cooking operations. Turn the unit OFF.

CHAPTER 3. OPERATION

INTRODUCTION

The CombiCraft is safe and easy to operate. The CombiCraft uses the most advanced cooking methods available for commercial cooking. To use the oven/steamer safely and effectively, each operator must read and understand this chapter completely before starting operation. The owners and operators of the CombiCraft should retain these instructions in an easily accessible location for future reference and training.

The owners and operators of the CombiCraft must be aware that steam can cause serious injuries and equipment damage. Pay particular 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 CombiCraft Oven/Steamer during a power outage. Critical safety circuits are not energized, and serious injury to personnel or damage to equipment may result.

DEATH, INJURY, AND EQUIPMENT DAMAGE could result from improper operation of the CombiCraft Oven/Steamer.

Be sure oven/steamer has been installed correctly according to the installation instructions in Chapter 2 before starting operation.

OPERATIONAL SAFETY

The safe and effective operation of any oven/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 CombiCrafts. It is assumed that any operational safety program must be tailored to the specific site and use of the equipment. Such a program will pay handsome dividends in equipment life, performance, and reduced downtime.

Burn hazards are present in any professional food service operation. This is especially so when steam is used in the cooking process. When using the CombiCraft Oven/Steamer, observe the following precautions.

- Remember at all times that steam can cause severe burns.
- Do not open the compartment 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 the cooking compartment until the steam has cleared.
- Do not reach into steamer or handle hot items without wearing heat-proof gloves. Wet or damp gloves conduct heat, and may cause burns when touching hot items.

The CombiCraft 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. 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.
2. Operating personnel must be able to recognize problems and know how to take corrective action as outlined in the Chapter 4 troubleshooting chart.
3. Conduct regular steamer inspections. Check for water line leaks, door seal and drain leaks, clogged drain, steam generator scale buildup, and steamer control malfunctions.
4. Before each use of the CombiCraft, inspect the drain and screen for blockage. Inspect the door gasket assembly, and wire racks for proper installation and cleanliness.
5. Before operating the CombiCraft Oven/Steamer, verify proper installation of the fat filter, wire racks, and drip tray.
6. Allow only Cleveland Range authorized service representatives to service the CombiCraft.
7. Use only factory authorized repair parts. This will maintain Underwriters Laboratories (UL) and/or Canadian Standards Association (CSA) certification, and all approvals to protect warranty coverage.
8. Follow the instructions for oven/steamer maintenance and maintenance records in Chapter 4.

COOKING MODES

The CombiCraft is a combination convection oven and steamer, one of the most advanced methods of commercial cooking available. With the CombiCraft, the operator can steam, stew, brown, grill, braise, precook, regenerate and thaw all foods.

Convection Cooking

While convection cooking, the CombiCraft performs like a traditional oven but with the advantages of heat convection added. Hot air is circulated uniformly through the well insulated compartment. This helps produce even browning. Because the oven is air and water tight, cooking times are reduced in the CombiCraft as compared to traditional convection oven cooking times.

The hot air is circulated at high speed around the food, closing the pores immediately, helping meat retain its natural juices. The CombiCraft's variable exhaust control keeps the oven compartment clean, eliminating burned tastes. Moisture can be injected periodically during convection cooking.

Convection Cooking with Moisture

This standard feature is used when an instant input of humidity is required. The moisture injection can also be used to shorten the cooking time via introduction of humidity to intensify the hot air.

For example, when baking bread, it is ideal to have 20 seconds of moisture, then hot air only. This provides an excellent crusty bread.

On the moisture control, there are six LEDs. Each LED indicates an injection of water for 10 seconds per minute. Water is injected through a tube onto the fan blower wheel, which distributes it at high speed on the heating elements. There it is vaporized creating an instant saturated short-time moist atmosphere.

Steam Cooking

Pressureless steaming is the best way to steam, thaw or reheat any kind of food. Steam enters the unit at 212°F. The steam is circulated evenly and gently throughout the compartment by a fan that operates continually. This provides fast and even cooking of foods. Pressureless steaming does not damage the food cells and allows the food to keep its original taste. The exclusive CombiCraft variable exhaust prevents mixing of different flavors.

Low Temperature Steaming

Low temperature steaming, achieved by using the steam mode and temperature thermostat, allows quality preparation of delicate, temperature sensitive foods such as fish, stuffings, meat, veal, poultry, vegetables and sous vide products.

Combination Convection/Steam Cooking

The CombiCraft in Combi mode combines the steam and convection modes together to produce juicier, moister meats and poultry, baked potatoes without the foil, stuffed vegetables and a variety of better quality foods that can be produced in a regular convection or deck oven. There is continuous induction of steam into the cooking compartment, keeping the cooking atmosphere optimally moist for the product to be cooked. The combination convection/steam cooking can be used for all foods that require two or more different cooking methods. For example:

- steaming then grilling
- browning then steaming
- cooking meat then roasting
- baking bread and pastries
- steaming at low temperature
- cooking a second time
- steaming, braising and roasting
- thawing and regenerating
- thawing, reheating and cooking different products at the same time

OPERATING MODES

Manual Operating

In manual mode, the operator sets the required time and temperature and proceeds with cooking.

Programmed Operating

In programmed mode, the operator selects the required program and proceeds with cooking. Up to 16 memory programs can be stored for use by the operator. A supervisor or manager can preprogram recipes. This feature removes much guesswork and insures product consistency and quality. Four programs are preset at the factory: 1, 2, 3, and 16. These programs are described on page 51.

Steam Generator Standby

Pressing the steam generator preheating switch (S, Figure 3-2) puts the unit into standby. This fills the generator with water and preheats the water to 185°F. This can be done whether the oven is on or off. This will save the operator time; when steaming is required, the unit is ready. Standby can be used as an energy saving feature when steam is not required for a long period of time. No generator elements or water are used during standby.

ɔol Down

The operator may wish to cool down the oven compartment quickly. For example, bread was baked at 375° and now steaming at 212° is required. To cool down the oven compartment, open the oven/steamer door and turn on the fan by pressing the fan operating control (T, Figure 3-2).

The fan will operate with the door open, blowing out all the hot air and drawing in cooler outside air. From high temperatures, the unit will cool down about a degree a second. When the temperature has dropped enough, press the fan operating control (T) again to turn off the fan.

Variable Exhaust System

When the variable exhaust control (Figure 3-1) is turned on, a nozzle sprays cold water into the drain system. This condenses the steam and creates a slight draw to pull out fumes and exhausts.

Cleveland Range, Inc. is the only current manufacturer to provide a control to turn off the condenser system. Gallons of water can be saved by not using the exhaust when it is not necessary as in convection cooking. Ensure that the exhaust vent (labeled E on dimension drawing. Figure 2-2) located at the top of the unit is not blocked.

CONTROL PANEL

Timer, Programming, Temperature Controls, Cooking Mode Selection, Main Controls, and the variable exhaust and drain controls are shown in Figure 3-1. Figure 3-2 illustrates the control panel in detail. The letters used to identify components in Figure 3-2 are used throughout this manual when a component of the control panel is referenced. There is an optional meat probe available for the CombiCraft Oven/Steamer. Operation of the meat probe is described on page 49.

CAUTION
Press switches with finger tip only. Do not use kitchen utensils or anything sharp to operate switches.

Refer to Figure 3-2 for location of panel controls.

A - TIMER DISPLAY
Shows selected and remaining cooking times

B - HOUR BUTTON
Sets hours of cooking time up to 59 hours

C - MINUTE BUTTON
Sets minutes of cooking time up to 59 minutes

D - INCREASE/DECREASE TIME BUTTONS
Sets the required cooking times when pressed while holding in the hour or minute control button (B or C)

E - START/STOP BUTTON
Starts or stops a cooking cycle

F - PROGRAM SELECT BUTTON
Sets desired program number.

G - PROGRAM DISPLAY
Shows selected program (blank during manual operation)

H - TEMPERATURE DISPLAY
Shows the actual oven temperature and the selected temperature when the temperature button (L) is pressed

I - INCREASE/DECREASE TEMPERATURE BUTTONS
Sets the required temperature when pressed while holding the temperature button (L)

L - TEMPERATURE BUTTON
Shows the selected temperature on the temperature display (H) and enables the increase/decrease temperature buttons (I)

M - MOISTURE DISPLAY
Shows moisture inlet time (1 LED = 10 seconds of moisture per minute)

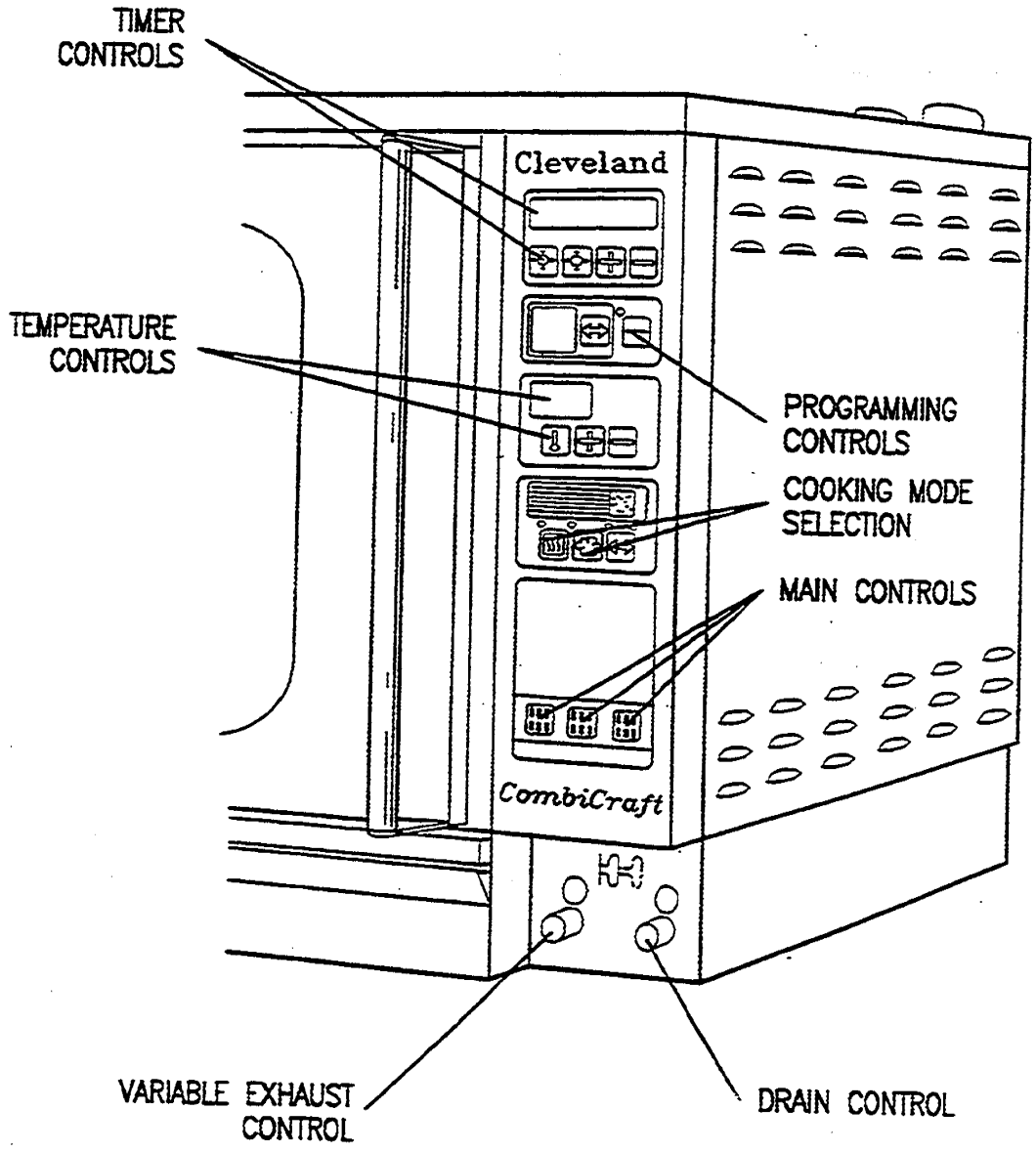


Figure 3-1. CombiCraft Controls

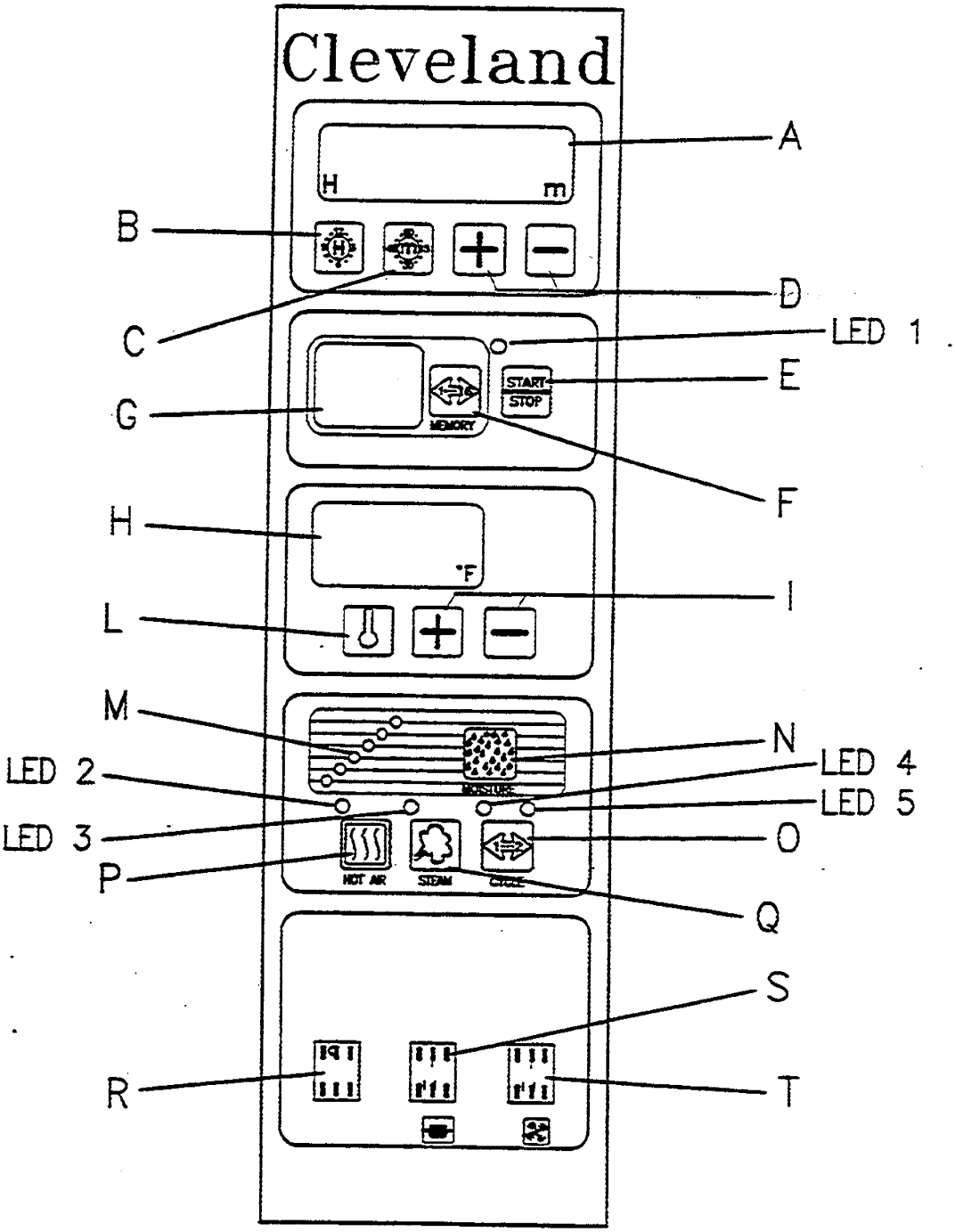


Figure 3-2. CombiCraft Control Panel

N - MOISTURE BUTTON
Selects moisture inlet time

O - CYCLE PROGRAMMING BUTTON
Programs two cooking cycles for each program

P - CONVECTION BUTTON
Enables convection cooking

Q - STEAM BUTTON
Enables steam cooking

LED 1 • - COOKING CYCLE IN PROGRESS
Shows that the cooking cycle is activated

LED 2 • - CONVECTION LED
Shows that convection cooking is activated

LED 3 • - STEAM LED
Shows the steam cooking is activated

LED 4 • - 1st CYCLE LED
Shows that the first cycle of a program is running

LED 5 • - 2nd CYCLE LED
Shows that the second cycle of a program is running

R - ON/OFF SWITCH - Unit Power Switch (Press top for Off; press bottom for On.)

S - Steam generator preheating

T - Fan operating control

BURNER LIGHTING INSTRUCTIONS

DO NOT TRY TO LIGHT THE BURNERS OR PILOT WITH A FLAME. THERE IS NO PILOT TO LIGHT OR ADJUST.
CombiCrafts have electronic ignition systems which automatically light the burners, sense the flame, and control gas flow. This provides both precise burner control and safety ignition and shutdown features.

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 solenoid 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.

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 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.

NOTE During shipment, the CombiCraft Oven/Steamer is protected inside with an oily non-toxic coating. A smokey, strong smelling vapor fills the cooking compartment and exhaust ports during initial startup after installation. If initial operation was not performed during installation, refer to Chapter 2, page 34.

COOKING OPERATIONS

WARNING
DO NOT ATTEMPT TO START OR OPERATE a CombiCraft Oven/Steamer during a power outage. Critical safety circuits are not energized, and serious injury to personnel or damage to equipment may result.

CombiCraft cooking operations are simple and direct. The operator must be familiar with all the operating features explained in this chapter before attempting to operate the CombiCraft Oven/Steamer. Before cooking in either manual or programmed mode, perform the following procedures.

Main Power Switch

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

1. Check that the water supply valves are open.
2. Press the OFF (top) end of the ON/OFF switch (R, Figure 3-2).
3. Refer to the main power switch in Figure 3-3, and turn on electric power to the CombiCraft.
4. Turn off electric power at the main power switch whenever cleaning the exterior of the CombiCraft or during any type of emergency.

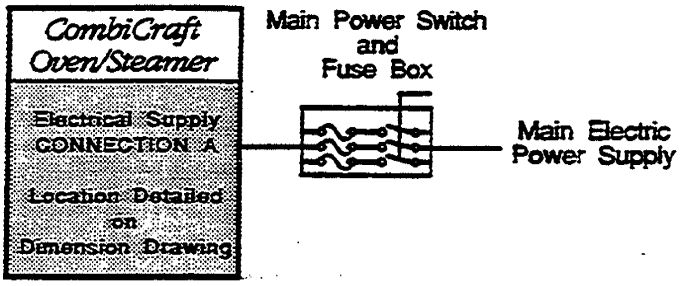


Figure 3-3. Main Power Switch

Inspect the Cooking Compartment and Exhaust Vent

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. Never operate the steamer without the screen in place.

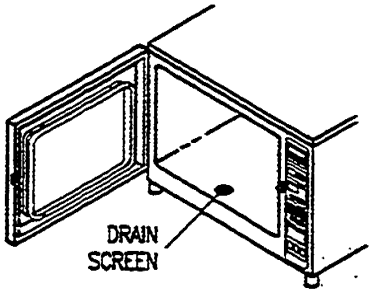


Figure 3-4. Compartment Drain Screen

On the bottom of the cooking compartment, the drain is covered by a moveable drain screen. Refer to Figure 3-4. 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.

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

1. DO NOT USE THE OVEN/STEAMER if water stands in the drain opening. Refer to Chapter 4, drain cleaning instructions immediately.
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.
4. Check that exhaust vent, labeled E on the dimension drawings (Figure 2-2), is clear of obstructions.

Manual Operation

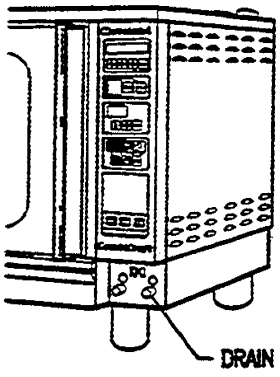


Figure 3-5. Steam Generator Drain Control

1. Start the unit by pressing the bottom end of the ON/OFF switch (R in Figure 3-2). Unit is now energized.
2. Check that drain control at the bottom of the unit is closed by pressing in on the drain control knob. Refer to Figure 3-5.
3. Turn on steam standby by pressing the steam generator preheating switch (S, Figure 3-2). The steam generator fills with water and heats to standby temperature (185°F).
4. If a number shows in the program display (G), press and hold the program select button (F) until the program display (G) is blank.
5. Set the desired cooking time. Press the hour button (B) and either the increase or decrease time button (D) until the required time displays. Press the minute button (C) and either the up or down button (D) until the required time displays. Time can be set from 1 minute up to 59 hours and 59 minutes.
6. Set the desired cooking temperature. Press the temperature butt (L) and either the increase or decrease temperature button (I) unti the required temperature displays. Temperature can be set up to 510°F.
7. Set the required cooking mode. Press either:
   - the convection button (P)
   - the steam button (Q)
   - combination convection/steam (P and Q)
8. During convection cooking, it is possible to inject a quantity of moisture into the cooking chamber by pressing the moisture button (N). Each LED lit on the moisture display (M) is equal to 10 seconds of steam injection per minute (6 LEDs = 60 seconds = continuous steam injection).
9. Press the START/STOP button (E) to start the cycle. LED 1 lit means that cooking has started.
10. The cycle can be temporarily stopped and restarted by pressing the START/STOP button (E). When START/STOP is pressed, all cooking and the timer countdown stop. The timer display shows the remaining time. When START/STOP is pressed again, cooking starts and the timer resumes counting down from where it was stopped.
11. To change any of the values set in steps 3 through 8 after the cycle has started, stop the cycle as in step 9, and reset the values.

12. To stop a cooking cycle before the set time counts down to zero, stop the cooking cycle as in step 9, and set the cooking time to zero.
13. After the cooking process has been completed, a 12 second beeper will sound and the oven and fan will turn off automatically. Carefully open the door and remove the cooked food.
14. At the end of each day or shift, perform the Blowdown and the Shut Down and Cleaning procedures as described on page 52.

PROGRAMMED OPERATION

1. Start the unit by pressing the bottom end of the ON/OFF switch (R in Figure 3-2).
2. Turn on steam standby by pressing the steam generator preheating switch (S). The steam generator fills with water and heats to standby temperature (185°F).
3. Press the program select button (F) until the required program number displays in the program display (G).
   a. The selected time for the first cooking cycle will show on the timer display (A).
   b. The temperature display (H) will show the temperature inside the CombiCraft. To display the preselected temperature of the program, press the temperature button (L).
   c. The LED indicators (2 and 3) will light showing which method of cooking has been programmed, either convection, steam, or both.
4. Press the START/STOP button (E) to start the first cycle. LED 1 lit means that the program has started.
   a. The 1st Cycle LED (4) will light showing that the first cycle is running.
   b. After the first cycle has been completed, the second cycle will begin automatically. Time and temperature for the second cycle will display and the 2nd Cycle LED (5) will light.
5. Either cycle can be temporarily stopped and restarted by pressing the START/STOP button (E). When START/STOP is pressed, all cooking and the timer countdown stop. The timer display shows the remaining time. When START/STOP is pressed again, cooking starts and the timer resumes counting down from where it was stopped.
6. After the cooking process has been completed, a 12 second beeper will sound and the oven and fan will turn off automatically. Open the door and remove the cooked food.
7. At the end of each day or shift, perform the Blowdown and Shut Down and Cleaning procedures as described on page 52.

Core Temperature Sensor (Meat Probe)

This optional CombiCraft feature controls the oven by monitoring the temperature inside the food item being cooked. It is very useful when large pieces of food are cooked, for example, roast beef.

When operating the core temperature sensor, the cooking time will be controlled by the sensor and not by the timer. Set a longer cooking time than normally necessary.

The core temperature sensor is used as follows:

1. Select one of the items to be cooked. This item should be the average shape and size of all the food being cooked.
2. Insert the sensor into the center of the average item.
3. Place this item as near to the center of the oven as possible.
4. Set the oven temperature.
5. Set the required cooking mode.
6. Set the time to cook. This will be an estimate and should be set higher than the actual time anticipated, because the meat probe will turn the oven off when the sensor temperature is reached. For example, if cooking is expected to be done in 1 hour and 20 minutes, set the timer for 2 hours so that the meat probe will be effective.
7. Press sensor switch (1) shown in Figure 3-6.
8. The core temperature sensor display (3) will show the temperature inside the food item in which the sensor has been inserted.

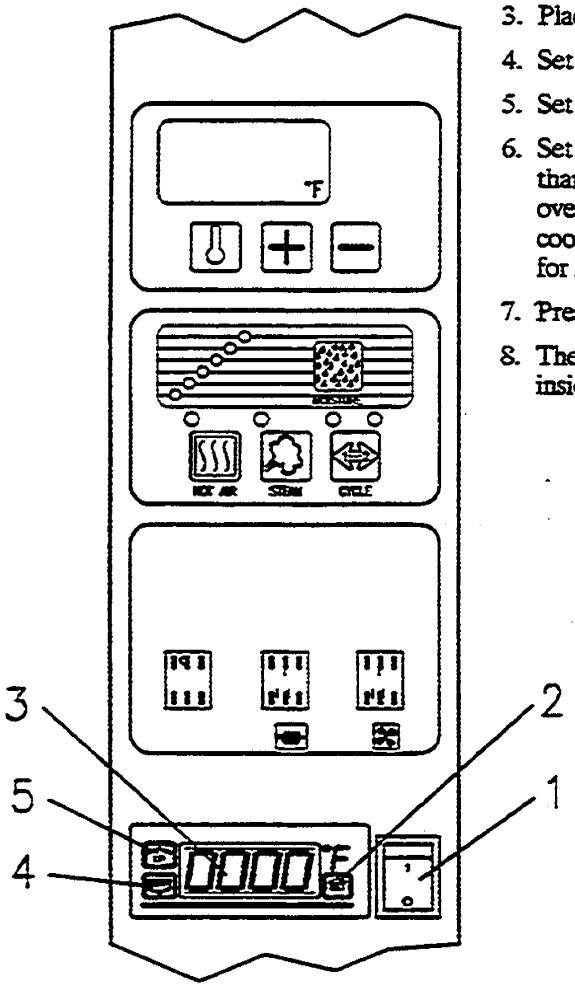


Figure 3-6. Core Temperature Sensor Controls

9. Press the sensor temperature control (2) and either the up (5) or down (4) button until the required temperature displays.
10. Press the START/STOP button (E, Figure 3-2).
11. As soon as the preset core temperature is reached, a 12 second beeper will sound and the oven and fan will turn off automatically.

MEMORY PROGRAMMING

In programmed mode, the operator selects the required program and proceeds with cooking. Up to 16 memory programs can be stored for use. The kitchen supervisor can program recipes and cooking times ensuring product consistency and quality.

Each program consists of two cycles of cooking. Even if the recipe being programmed has only one cooking cycle, two cycles must be programmed for the memory to operate correctly. Four programs are preset at the factory; these are explained on page 51.

Use the following procedure to program a recipe in memory.

1. Start the unit by pressing the bottom end of the ON/OFF switch (R in Figure 3-2).
2. Select the number of the program to be stored by pressing the program select button (F) until the desired program number shows in the program display (G).
3. Press the cycle programming button (O) to activate the first cycle. The cycle button lights.
   a. Select the cooking mode for the first cycle, either convection button (P), steam button (Q) or both.
   b. Set the moisture control if required. Remember that moisture injection only works when heating elements are on and only in convection mode. Press the moisture button (N) until the required moisture inlet time is displayed. Each LED equals 10 seconds of moisture per minute.
   c. Set the required cooking time by pressing the hour control (B) and increase/decrease time buttons (D), then the minute control (C), and increase/decrease time buttons (D).
   d. Set the required temperature by pressing the temperature button (L) and the increase/decrease temperature buttons (I). The temperature will show in the temperature display (H).
   e. Press the cycle programming button (O) to store the first cycle and proceed to the second cycle.
4. Program the second cycle.
   a. Follow step 3 a through e to program the second cycle; step e will store the second cycle.
   b. If only one cycle is required for the program, set the timer to 0000 for the second cycle. Both cycles must be programmed for the memory program to operate correctly.

The program is now stored in memory. Anytime a program is required, follow the instructions for Programmed Operation and enter the number selected for the particular program required. It is advisable to make a reference chart to keep track of program numbers and corresponding recipes.

Factory Preset Programs

Programs 1, 2, 3, and 16 have been preset at the factory for commonly used settings. These programs can be changed, but Cleveland Range recommends having these particular programs readily available.

Program 1: Steam at 217°F (103°C) for 59 hours, 59 minutes.

Program 2: Convection at 356°F (180°C) for 59 hours, 59 minutes.

Program 3: Combi—Convection and Steam at 356°F (180°C) for 59 hours, 59 minutes.

Program 16: Steam at 217°F (103°C) for 30 minutes. This is useful for a cleaning session.

BURNER SHUT-DOWN INSTRUCTIONS

NORMAL SHUT-DOWN. Under normal operating conditions, burner shut-down is totally automatic. The electronic gas ignition and contrc system used in the CombiCraft Oven/Steamers automatically shuts down the burners and stops gas flow when the unit is turned off.

SAFETY SHUT-DOWN. Under some conditions, an experienced and careful operator may choose to perform a more thorough shut-down procedure. Always perform a Safety Shut-Down before servicing the burners, burner control system, control panel, or any of the CombiCraft gas supply lines.

1. Turn off electrical power to the CombiCraft, at the panel ON/OFF switch (R, Figure 3-2) by pressing the top end of the switch.
2. Turn off the electrical power to the CombiCraft at the main power switch. (Refer to Figure 3-3, Main Power Switch.)
3. Remove the right side access panel.
4. Refer to Figure 3-7, and turn gas control knob on the automatic gas valves to the OFF position.
5. Refer Figure 3-8. Recommended Gas Supply Line Layout, and turn main manual gas valve to the closed position.
6. Install the right side access panel on the unit.

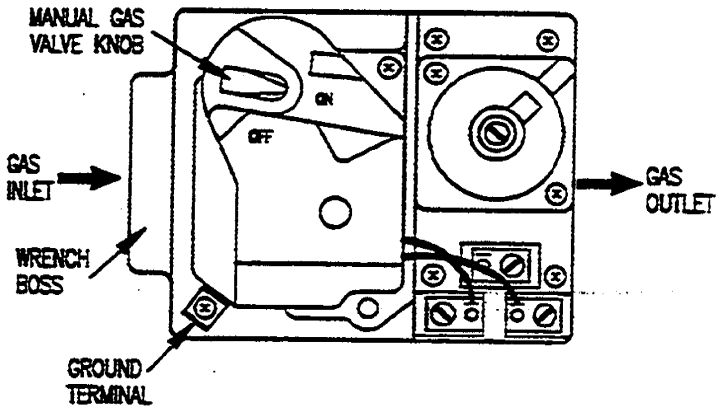


Figure 3-7. Automatic Gas Valve

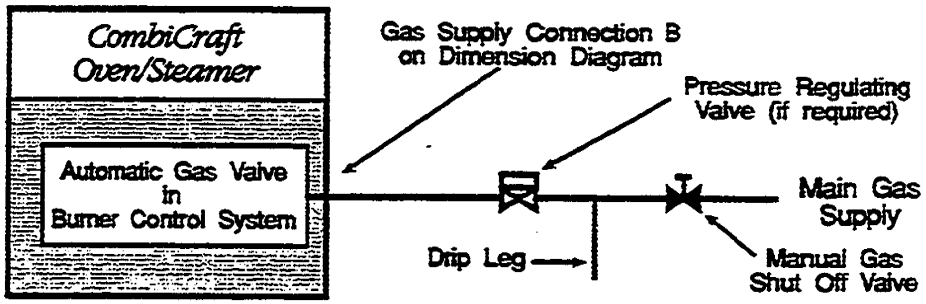


Figure 3-8. Recommended Gas Supply Line Layout

Steam Generator Blowdown Instructions

The CombiCraft steam generator must be drained (blowdown) after a maximum of 8 hours of use. If the steam generator feedwater contains more than 60 parts per million of total dissolved solids, blowdown of the steam generator must be done more often, the frequency depending upon the mineral content of the feedwater.

When steam is produced, the water in the steam generator is being distilled. During this process, the minerals that come into the steam generator with the water, remain in the steam generator as the water boils away as steam. When allowed to accumulate, the water becomes highly mineralized, which results in erratic operation, lime build-up, corrosion, and premature electric heater failures. In some cases, complete steam generator replacement becomes necessary, which is extremely expensive. By draining the steam generator frequently, most sediment present will be washed down the drain.

1. Stop all cooking cycles and remove all food from the cooking compartment.
2. Refer to Shut Down and Cleaning, and clean the cooking compartment.
3. Set the ON/OFF switch to the OFF position by pressing the top of the switch (R, Figure 3-2).
4. Open the steam generator drain control by pulling the knob at the base of the unit out (refer to Figure 3-5). The water can be heard draining from the steam generator.
5. When the water finishes draining, push the control knob in to close the drain.

Shut Down and Cleaning (At end of day or shift)

This procedure must be performed at the end of each day or shift to maintain warranty coverage.

WARNING
Do not use flammable cleaning agents to clean the CombiCraft, or in the vicinity of this appliance.

1. Set the ON/OFF switch in the OFF position (R, Figure 3-2), and drain the steam generator.
2. Open the oven/steamer door and allow oven/steamer to cool to below 170°F.

WARNING
Inside of oven/steamer stays hot for a long time. Be careful when cleaning inside oven/steamer compartment.

3. Remove the wire 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 the compartment and clear any residue from the drain screen.
5. If oven is caked with grease, spray the oven compartment with an oven cleaner diluted to the instructions and proceed with steps 6 through 8. If oven compartment is only slightly soiled, proceed to step 9.
6. Close the door and let the oven cleaner soak into the grease for 5 minutes.
7. Start the steam cycle at 212° and run the unit for about 15 minutes: run the steam cycle longer if the compartment is extremely soiled.

8. After the cycle has been completed, turn the power off and open the door slowly to avoid splashing cleaning residue on hands.
9. Rinse the compartment with clean water. Use a soft bristle brush to remove stubborn food particles. Do not use abrasive cleaning compounds or steel wool as they may damage the polished interior finish. Rinse inside of oven/steamer compartment with clean water.

> **WARNING**
> Let rinse water drain through compartment drain opening. If water does not drain freely, drain lines must be cleaned before cooking again. Clogged or slow drains are dangerous because hot water can collect in compartment and spill out when opening compartment door.

10. Clean the door assembly and oven window areas, paying particular attention to the door gasket.
11. Empty the drip trays into the cooking compartment, and rinse completely.
12. Replace the cleaned wire racks.
13. Turn off electric power at the main power switch before cleaning the exterior of the CombiCraft.
14. Blowdown the unit at the end of each cooking day or shift as part of the routine maintenance program.
15. Clean the exterior of the CombiCraft, paying particular attention to the following points.
    - NEVER HOSE DOWN THE oven/steamer. Wipe the exterior with a damp cloth only.
    - Use the same cleaners and cleaning procedures as for other kitchen surfaces of stainless steel and aluminum. Mild soapy water, with a clear water rinse, is recommended.
    - Do not allow water to run into electrical controls. Electrical components inside the unit will not function correctly if wet or damp.
16. After cleaning, leave the oven/steamer door open until the next operation. This prevents compartment odor buildup and increases gasket life.
17. Turn electric power back on at the main power switch.

SUMMARY OF COMBICRAFT COOKING

Convection Oven

In this mode, hot air circulates around food, closing pores immediately so meat retains its natural juices. The CombiCraft cooks faster than traditional convection ovens, improving productivity.

Steamer

In the pressureless steam mode, steam circulates evenly in the CombiCraft at a high but gentle speed for fast, even cooking. Steam without pressure does not damage food cells and allows food to keep its original taste. No flavor mixing takes place due to the Variable Exhaust Control. The CombiCraft is great for vegetables and seafood.

Combi Oven/Steamer

The Combi mode combines steam and hot air to produce juicier, moister meats and poultry, baked potatoes, vegetables and a variety of foods with better quality than can be produced in a regular convection or deck oven. In the Combi mode, steam is continuously circulating in the oven at the optimum moisture level for the food being cooked.

Convection Oven with Moisture

Standard on each CombiCraft is the Variable Moisture Control. This control is ideal for maintaining a high humidity level in the cooking compartment, and operates only while cooking in the hot air mode. This feature is perfect for proofing, baking crusty breads, and defrosting products.

Low Temperature Steaming

Setting the temperature from 100°F to 200°F in the steam mode allows preparation of delicate foods such as fish, eggs, shrimp and lobster. Low temperature steaming is also ideal for rethermalizing Sous-Vide products and other pre-cooked vacuum packed products.

Cook and Hold

The exclusive memory programming capability allows creation of cook and hold recipes. The CombiCraft can be used to slow cook (to minimize meat shrinkage) and prepare food hours in advance of serving.

COMBICRAFT COOKING TIPS

Roasting

- Use grids to roast meat; this will promote even browning and eliminate the need to turn product over.
- Reduce cooking times or set a lower temperature.
- The flatter the roast, the shorter the cooking time.
- Collect drippings with a pan in the bottom rack.
- Place similar size portions on the same shelves.
- Do not open the door until the fan stops.

Baking/Pastry

- Preheat oven to approximately 10% lower than deck/convection ovens.
- Set the moisture control for the complete 60 seconds of moisture per minute - -continuous moisture injection.
- For partial loads, insert an empty container above and below the product.

Low-Temperature Cooking

- Do not season as heavily as normal; taste intensifies.

General Tips

- Distribute products evenly in the oven.
- Use shallow containers rather than deep to shorten cooking times.

If Food Does Not Cook Evenly

- The food is unevenly distributed and/or packed too tightly on the pan. Ensure better circulation of air among the food by placing food more evenly in the pan.
- The pans have been inserted too close to each other. Ensure better air circulation by inserting pans farther from each other.
- Food cannot tolerate direct hot air. Put the food in a deeper pan. Reduce the temperature by about 20% and increase the cooking time about 20%.

If Food is Too Dry

- There may be a lack of moisture while cooking. Turn on moisture injection feature on the CombiCraft to inject moisture during convection cooking.
- Pour some oil on the food product.

- Food cannot tolerate direct hot air. Put the food in a deeper pan. Reduce the temperature by about 20% and increase the cooking time about 20%.
- Cooking time may need to be shortened.

CombiCraft Cooking Explanations

The following subjects are explained to help the kitchen employees understand how some basic cooking techniques work, thereby helping with the use of the CombiCraft.

At the end of this chapter, there is a cooking chart that lists different food products and provides suggested cooking times, temperatures, cooking modes, product size and how many portions can be prepared at one time.

Cooking Meat

Meat will retain the best flavor and moisture if cooked in steam mode at the correct temperature. To obtain a tender and tasty veal roast, cook it at a low temperature because the proteins contained in the muscles tend to harden the meat as soon as its inner temperature reaches 149°F.

Steaming at a low temperature (suggested maximum 248°F) will keep meat tender. The proteins will not harden and fats will distribute evenly on the meat and improve its quality.

Cooking Poultry

Cook poultry for 15 minutes in steam mode, then finish cooking convection mode.

Cooking Fish

Fish should be steamed with the temperature kept below 212°F. The proteins will not deteriorate and the taste of the fish will not be cooked away. Steaming fish improves the fish taste.

Baking

Baking in the CombiCraft gives great performance whether product is fresh or defrosted. If a frozen product is covered with powdered sugar, take it out of the freezer just before putting it into the oven to keep the sugar from melting. All product without powdered sugar can be thawed and left to leaven in a warm cupboard or a leavening cabinet.

Sometimes a product must be moisturized before baking. To do this, press the moisture button (N) and hold it until the first LED on the left lights up in the moisture display (M).

Reheating

Heat the oven/steamer in the steam mode by pressing the steam button Q. Set the temperature for 212°F and wait about 5 minutes. Then set the convection mode by pressing the convection button P and set the temperature between 390°F and 430°F. Let oven/steamer heat up to this temperature. Put the food to be heated into the oven/steamer.

Food to be reheated should not be completely done when it is initially cooked. Food can be reheated without turning dry or condensing.

CombiCraft Servings per Load Chart

Product	Cook Time	Temp	Mode	Portion Size	CCG-5 CCE-5	CCG-11 CCE-11	CCG-46 CCE-46
Meatloaf	1 hour	375 F	Combi	8 oz.	84	140	560
Steaks	7-9 mins	510 F	Hot Air	8 oz.	72	120	600
Prime Rib	2 hrs 30 mins	275 F	Combi	8 oz.	60	100	360
Beef Ribs	25 mins	350 F	Combi	12 oz.	36	60	240
Hamburgers	8-10 mins	400 F	Combi	1/4 lb.	72	120	480
Pork Chops	12-15 mins	350 F	Combi	each	72	120	180
Whole Chickens	40 mins	350 F	Combi	2-3 lbs. ea.	18	30	120
Boneless Chicken Breasts	12 mins	350 F	Combi	each	72	120	480
Whole Turkeys	1 hr 55 mins	350 F	Combi	18 lb.	2	4	16
Poached Salmon	10 mins	214 F	Steam	7 oz.	96	160	640
Stuffed Cod	12-15 mins	325 F	Steam	10 oz.	96	160	640
Fish Sticks	8-10 mins	375 F	Hot Air	stick	300	500	2000
Lobster-Whole	10-15 mins	214 F	Steam	8-9 oz.	36	60	360
Broccoli Stalks	10 mins	214 F	Steam	5 oz.	120	200	800
Fresh Carrots	10 mins	214 F	Steam	5 oz.	120	200	800
Frozen Mixed Vegetables	10 mins	214 F	Steam	5 oz.	120	200	800
Baked Potatoes	45 mins	400 F	Combi	US #1	108	160	640
Dinner Rolls	15 mins	325 F	Hot Air	roll	180	300	1200
Carrot Cake	30 mins	350 F	Combi	3 x 3"	90	150	600
Cinnamon Rolls	12-15 mins	350 F	Combi	3 x 3"	90	150	600
Fruit Cobbler	40 mins	350 F	Combi	piece	144	240	960
Choc. Chip Cookies	10-12 mins	325 F	Hot Air	3" round	120	200	800
Pumpkin Pies	25 mins	325 F	Hot Air	1/5 slice	54	90	360
Whole Ham	1 hr 15 mins	350 F	Hot Air	9 oz.	33	66	264
Shrimp	5 mins	214 F	Steam	5 oz.	120	200	800
White Rice	25 mins	214 F	Steam	5 oz.	120	200	800
Eggs-hard boiled	15 mins	214 F	Steam	each	216	360	1440
Lasagna	45 mins	375 F	Combi	6 oz.	120	200	800

CHAPTER 4. PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING

INTRODUCTION

Maintenance on the CombiCraft must be performed on a regular basis to keep the unit running properly. Follow the maintenance instructions in this chapter and problems will be kept to a minimum. As with any preventative maintenance schedule, the frequency of oven/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 equipment and services, contact your nearest authorized service representative. The inside rear cover of this manual lists service centers nationwide.

MAINTENANCE RECORDS

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

WARNING
DEATH, INJURY, OR EQUIPMENT DAMAGE may result from improper service or maintenance practices.
Always turn the main power switch to OFF for any unit before starting service, maintenance, or repairs.

DAILY MAINTENANCE

Blowdown Steam Generator

Blowdown the steam generator at least once every 8 hours according to Steam Generator Blowdown Instructions on page 52 in Chapter 3.

Clean CombiCraft

Clean interior and exterior of the CombiCraft according to Shut Down and Cleaning instructions on page 53 in Chapter 3.

Inspect the Cooking Compartment Vent

Cooking vapors leave the compartment through the compartment exhaust vent, labeled E on the dimension drawings. Before operating the CombiCraft Oven/Steamer, check that this vent is clear of obstructions.

WEEKLY MAINTENANCE

Clean Drain

CAUTION
Steam leaks around the door, cooking compartment flooding, reduced cooking performance, and compartment implosion can be caused by a blocked compartment vent, or a blocked drain or drain screen. Inspect and clean the compartment vent, drain and drain screen before each use. Never operate the oven/steamer without the screen in place.

Pouring USDA approved drain cleaner through the compartment drains once a week will help to ensure an open drain. A manual (hand crank) drain auger, or "snake", may be safely used to clear obstructions in the compartment drains. Do not use a power auger, as damage to the drain system will result.

1. 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.
2. Clean drain with a USDA approved drain cleaner once a week. Follow the instructions of the manufacturer of the cleaner.
3. Flush drain with clean water.

Descale Steam Generator

Steam generator should be descaled at least once a week, depending on scale buildup. If you have serious steam generator scale buildup, install a water treatment system for the oven/steamer. Cleveland Range, Inc. recommends use of the descaling kit, part number 104394, which consists of liquid phosphoric acid. Full descaling may take several hours. Perform descaling until all scale buildup is cleaned out. Do not use powdered sulphonic acid descaling material, part number 101751.

The following chart lists steam generator capacities. Please observe the manufacturer's instructions regarding the quantity of descaling product to be used.

Steam Generator Capacity (in Gallons)

CCG-5	2.2 gallons	CCE-5	1.3 gallons
CCG-11	2.2 gallons	CCE-11	2.4 gallons

Descaling should be performed by personnel experienced or trained in the handling of caustic materials, or specifically trained and experienced in descaling the CombiCraft steam generator. A Cleveland Range authorized service representative can perform and/or train operating personnel to perform proper, safe descaling of this equipment. Refer to Authorized Service and Repair below to schedule descaling or training.

Follow hazard and leak cleanup procedures on acid container label. If the label is not readable, refer to the following hazard and emergency instructions as a minimum safety precaution.

THESE INSTRUCTIONS ARE FOR USE WITH PHOSPHORIC ACID ONLY.

- **Health Hazard Data, Effects of Overexposure** - Product is extremely irritating to the eyes and may result in eye burns. Product is severe irritating to skin and can result in skin burns; repeated or prolonged contact with more dilute solutions may result in dermatitis. Aerosol mist or vapors are irritating to respiratory tract, eyes and throat. Prolonged exposure to high concentration may result in pulmonary edema. If ingested, may result in abdominal hemorrhage with severe abdominal pain, nausea, vomiting or loss of consciousness; necrosis of stomach and gastrointestinal tract may also occur.
- **Emergency and First Aid Procedures** - In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical aid. In case of skin contact, immediately wash with soap and plenty of water for at least 15 minutes while removing contaminated clothing. Seek medical aid. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical aid. If swallowed, do not induce vomiting. Give large quantities of water. Seek medical aid. Never give anything by mouth to an unconscious person.
- **Spill or Leak Procedures** - Contain spill. Cover the contaminated surface with sodium bicarbonate or a soda ash-slaked lime mixture (50-50). Mix and add water if necessary to form slurry. Scoop up slurry and wash residue down drain with excess water. Wash site with soda ash solution.

WARNING

The liquid phosphoric acid in descaling kit 104394 can be harmful if not handled properly. Follow these basic safety rules for handling and using acid.

Wear protective clothing when mixing or applying chemical cleaners. Wear rubber gloves, mask and approved cup-type goggles.

Avoid breathing fumes. If liquid comes in contact with skin, flush immediately with large quantities of cold water. Remove contaminated clothing.

If chemical contacts eyes, flush with cold water for a minimum of 15 minutes. Get **immediate** medical attention.

If chemical is swallowed or ingested, follow instructions on the chemical container. Get **immediate** medical attention.

The following procedure is a guide for personnel trained or experienced in the descaling of this equipment. Such personnel are responsible for assessing the safety, environmental, and equipment conditions prior to performing any or all steps in this procedure.

1. Set the ON/OFF switch (R in Figure 3-2) to OFF and drain the steam generator as described in Steam Generator Blowdown Instructions.
2. Close the drain valve when the steam generator is empty.
3. Cool down the compartment by opening the door and turning on the fan (T).
4. Remove the descaling cap from descaling inlet, marked D on the dimension drawing. Do not confuse this with the compartment exhaust vent, marked E on the dimension drawing.
5. Check that the water supply valves are open, and turn the oven/steamer on by pressing the bottom of the ON/OFF switch (R). The generator begins to fill.
6. When the steam generator stops filling, pour 2 or 3 cups of phosphoric acid into the water into the descaling inlet.
7. Start the steam generator preheat cycle by pressing the preheat switch (S in Figure 3-2). The water will reach a temperature of 170° - 180° F or standby temperature. Allow the steam generator to heat up the solution for a minimum of 2 minutes. A bubbling and hissing sound indicates that the acid is dissolving the scale.
8. Press the preheat switch (S) to turn off the steam generator.
9. Leave the acid in the steam generator for 1 - 2 hours. Full descaling may take several hours, depending upon the amount of scale buildup.

If acid is consumed (bubbling and hissing stops), add one or two more cups of acid to the steam generator solution.

NOTE: If steam generator is too full to add more acid, drain some of the solution from the generator by opening the drain valve for a few seconds.

10. When descaling is finished, turn the unit off by pressing the top of the ON/OFF switch (R).
11. Drain the steam generator by opening the drain valve completely and waiting until the generator is empty. Then close the drain valve.
12. Rinse the descaling residue from the steam generator.
    a. Turn on the ON/OFF switch (R) and preheat switch (S). The generator fills and starts preheat.
    b. Add three or four tablespoons of baking soda to the water to neutralize any remaining acid.
    c. When the water stops filling the generator, turn off the ON/OFF switch (R), and drain the steam generator.
    d. Repeat steps a and c several times.
13. Replace the inlet cover and run a 10 minute steaming cycle with the cooking compartment empty. When this cycle is complete, the CombiCraft is ready for cooking operations.

YEARLY MAINTENANCE

Clean Water Line Strainer

NOTE: If water quality does not meet the standards of Table 2-2 on page 16, the strainer may need to be cleaned more frequently than once a year. When the steamer is first installed, check the strainer more frequently to find out how often it must be cleaned.

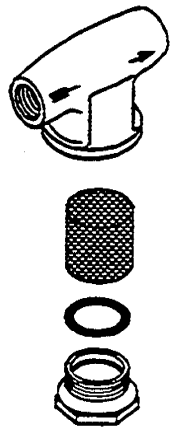


Figure 4-1. Water Strainer Assembly

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

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 4-1.
3. Remove the filter screen and wash it with clean water.
4. Check the O-ring for wear and replace it if necessary.
5. Put screen back into cap and replace the cap in the strainer.
6. Open water supply valve(s) and check for water leaks.

OPERATOR'S TROUBLESHOOTING GUIDE

This troubleshooting guide includes a list of symptoms that may be encountered during routine operation and maintenance. The first column on the left (problem) describes these symptoms. The second column lists possible causes for the problem listed in column one. The third column lists remedies and or references for the problems and causes in columns one and two. The causes and remedies are listed in the order they should be checked, with the least costly and easiest to repair listed first. The third column also refers to notes that are grouped at the end of the troubleshooting guide. Refer to these notes when instructed to do so. Do not try to correct a problem that requires an authorized service representative as this may adversely affect warranty coverage.

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
Power on and unit will not operate.	Blown fuse.	Replace fuse. See note #1.
	Motor overloaded or overheated.	See note #2.
Power on, stand by mode selected and steam generator does not fill.	Water supply to steamer shut off.	Open water supply valves.
	Water line strainer is clogged.	Clean water supply strainer.
	Water sensors shorted by scale deposits.	Descale steam generator with USDA approved descaler.
Power on, steam mode selected and oven/steamer does not make steam.	Temperature set to stand by (185° F).	Reset temperature above stand by.
	No water in steam generator.	See steam generator does not fill (above).
	Steam generator drain valve is open.	Close steam generator drain valve.
	CCG models only Gas supply valve closed.	Turn OFF Combi, and open gas supply valve (see page 30).
	CCE models only Heating elements covered with scale.	Descale steam generator with USDA approved descaler.
	CCE models only Heating elements damaged.	See note #3.
	Water sensors shorted by scale deposits.	Descale steam generator with USDA approved descaler.
	Inoperative controls.	See note #3.
Water comes from steam inlet pipe. (Water level in steam generator is too high.)	Sensors disconnected or solenoid valve failure.	See note #3.

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
Reduced steam flow into cooking compartment.	Steam generator scale build-dup.	Descale steam generator with USDA approved descaler.
	CCE models only Voltage too low for unit.	See note #4.
	CCE models only Faulty heating element or controls.	See note #3.
In convection mode cooking, compartment does not reach set temperature.	CCG models only Gas supply valve closed.	Turn OFF Combi, and open gas supply valve (see page 30).
	CCE models only Voltage too low for unit.	See note #4.
	CCE models only Faulty heating element or controls.	See note #3.
Core temperature sensor display reads 999.	Sensor or controls faulty.	See note #3.
	Digital control out of adjustment.	See note #3.
Abnormal amount of steam coming from drain.	Hot water instead of cold water connected to condenser fitting.	Make proper connections. See page 25.
	Water supply to condenser turned off.	Open water supply valve.
	Condenser water line strainer is clogged.	Clean out condenser water supply strainer.
	Water supply line to the condenser blocked, broken, or leaking.	Repair or replace water supply line. See note #3.
	Inoperative condenser solenoid.	Replace solenoid. See note #3.
	Inoperative controls.	Turn off electricity at main power switch. See note #3.
Steam and/or water draining around compartment door.	Drain clogged or covered.	Clean drain with USDA approved drain cleaner.
	Door gasket or door parts worn.	See note #3.
	Steamer not level.	See note #5.
Steam flow does not stop when timer stops.	Inoperative controls inside cabinet.	Turn off electricity at main power switch. See note #3.
Water leaking from bottom of cabinet.	Broken or loose plumbing inside steamer cabinet.	Turn off electricity at main power switch and close water supply valve(s). See note #3.

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
Water leaking from water pipes or drain lines.	Plumbing needs repair.	See note #6.
Food takes too long to cook.	Not enough steam movement in compartment. Hot water connected to condenser line.	Make proper connections. See page 25.
	Pans too close to the bottom of cabinet.	Put pans in racks near top of cabinet.
	Steam generator scale buildup.	Descale steam generator with USDA approved descaler.
	Compartment overloaded with too much food.	Put less food into pan. Use fewer pans.
	Voltage too low for unit.	See note #4.
	Suggested cooking times are usually listed for cooking at sea level.	Extend cooking times for altitudes above 2500 feet.
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.

TROUBLESHOOTING NOTES

WARNING

DEATH, INJURY, OR ELECTRIC SHOCK can occur by touching electrical components and wires inside the access panel when the main power switch is in the ON position.

NEVER REMOVE THE SERVICE ACCESS PANEL. Allow only Cleveland Range Authorized Service Representatives to perform service, maintenance, and repairs that require the removal of the service access panel(s).

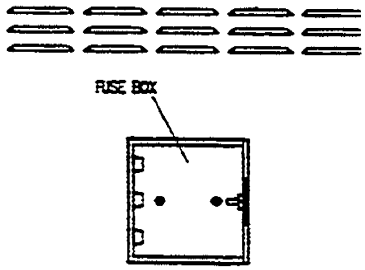


Figure 4-2. Fuse Access

1. Slide fuse access panel to the right and check fuses; refer to Figure 4-2. If a fuse is burned, replace with a new fuse. If fuse blows again, call an authorized service representative.
2. All circuits in the oven/steamer stop working if unit overheats or motor is overloaded. Call an authorized service representative.
3. If problem is inside the oven/steamer, call an authorized service representative. Cleveland Range, Inc. will not pay for warranty repairs by unauthorized repair centers.

4. Repairs to external wiring should be done by a Licensed Electrician.
5. Proper installation of the CombiCraft is the responsibility of the owner or installer. Refer to Cleveland Range, Inc. warranty on the inside front cover.
6. Repairs to external plumbing should be done by a Licensed Plumber.

Cleveland Range supports a comprehensive network of Maintenance and Repair Centers (regional parts and service distributors) throughout the United States and Canada. Please contact your nearest distributor for the name of an Authorized Service Agency in your area, or for replacement parts and information regarding the proper maintenance and repair of Cleveland Range equipment. In order to maintain the various agency safety certifications, only factory-supplied replacement parts should be used. The use of other than factory-supplied replacement parts will void the warranty.

For more information on products and services, contact your nearest Authorized Service Representative. Call factory for a preventative maintenance program, descaling kits, descaling information, and water treatment systems: USA: (800) 782-0040, Canada: (416) 663-7770.