

Operators Manual

Use and Care Instructions Gas Models, SteamCraft® Ultra 5, Ultra 10



**Series: SteamCraft® Model Nos. 21CGA5,
24CGA10**

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Part No. CGA-OPM Rev. A 10/04

FOR THE USER

FOR YOUR SAFETY

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

WARNING

Disconnect power before servicing!

WARNING

Improper installation, adjustment, alterations, services or maintenance can cause DEATH, INJURY, or PROPERTY DAMAGE. Read installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

WARNING

If door is stuck shut: DO NOT force door open. Door stuck shut may indicate a blocked drain. Hot water will spill out if door is forced open.

- Turn OFF unit
- Call qualified Cleveland Range authorized service technician
- Wait for unit to cool before servicing

DANGER

Wait for unit to cool before servicing!

IMPORTANT

IT IS IMPORTANT TO POST INSTRUCTIONS WHICH ARE TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS. THESE INSTRUCTIONS SHOULD BE DISPLAYED IN A PROMINENT LOCATION, AND BE FULLY UNDERSTOOD BY ALL USERS OF THIS EQUIPMENT. OBTAIN THIS INFORMATION FROM YOUR LOCAL GAS SUPPLIER.

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

Cleveland Range, LLC, strongly recommends the use of non-slip draining anti-fatigue mats (not included) rated for use in wet, greasy, or dry work areas to help prevent slipping and / or falling injuries. Obtain the best mats for your needs from your local supplier.

**Wiring diagram is located on the back of the right side panel on left door hinge models.
Wiring diagram is located on the back of the left side panel on right door hinge models.**

**RETAIN THIS MANUAL FOR REFERENCE
KEEP IT WHERE YOU CAN USE IT**

Cleveland STATEMENT OF POLICIES

LIMITED WARRANTY

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

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

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

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

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

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

WATER QUALITY RECOMMENDATIONS

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

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

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

LIMITED EXTENDED WARRANTY COVERAGE

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

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

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

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

OPERATORS MANUAL

SteamCraft 21CGA5

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CHAPTER 1 INTRODUCTION

To use a SteamCraft® gas steamer safely and effectively, each operator must read and understand this Chapter completely before starting operation. Owner(s) and operator(s) of steamer(s) must keep these instructions in an easily accessible location for reference and training.

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

DANGER

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

DEATH, INJURY, AND/OR EQUIPMENT DAMAGE could result from the improper installation of a steamer.

Before starting a recently installed or repaired steamer, be sure it has been installed by qualified personnel according to the instructions found in the separate Installation and Maintenance Manual.

A. Free Start-Up Program

Cleveland Range's "Free Start-Up" is designed to help owners and operators get the most from their Cleveland Range equipment.

Performance Check-Out: Contact your Cleveland Range maintenance and repair center for your Performance Check-Out. This includes inspection of installation, reviewing cleaning and maintenance instructions, and starting warranty protection.

Equipment Demonstration: After your Performance Check-Out, contact your Cleveland Range sales representative for your free demonstration of proper operation, use, and care of your new equipment.

Use and Care Video: After your Equipment Demonstration, your sales representative will present and explain your free copy of the Cleveland Range Use and Care Video.

Consult your Customer Service Directory or call Cleveland Range at 216-481-4900 to begin your free Start-Up Program

B. GAS LEAK INSTRUCTIONS

If operator(s) smell gas or suspects there is a gas leak: immediately refer to posted gas leak instructions. Posted instructions are provided by local gas suppliers and supersede any other instructions.

Common precautions in the event of a gas leak include:

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

C. OPERATIONAL SAFETY

Safe and effective operation of steamer(s) depends upon proper installation, use, maintenance, and repair. Operational safety must include all of these. The Operational Safety section outlines minimum safety policies and practices that must be used when operating one or more SteamCraft® steamers. Any operational safety program must be tailored to the specific site and use of equipment.

Burn hazards are present in any professional food service operation.

When using steamer(s), observe the following precautions:

- Remember at all times that steam can cause severe burns
- When checking inside steamer: stand on hinge side and back from steamer
- Open door slowly
- Water leaking from door gasket can mean a blocked drain
- If drain is blocked, hot water can fill the compartment and spill out when door is opened
- Open door slightly to allow steam to vent before looking or reaching into cooking compartment
- Do not reach into cooking compartment until steam has cleared
- Do not reach into steamer or handle hot items without wearing DRY heatproof gloves
- Wet or damp gloves conduct heat, and may cause burns when touching hot items
- Do not use anything but hands to operate switches or any other control on steamer(s)
- Do not block vents on sides or rear of steamer
- Do not block combustion and ventilation air flow to steamer
- Do not store articles on top of steamer
- Do not block gas flue exhaust

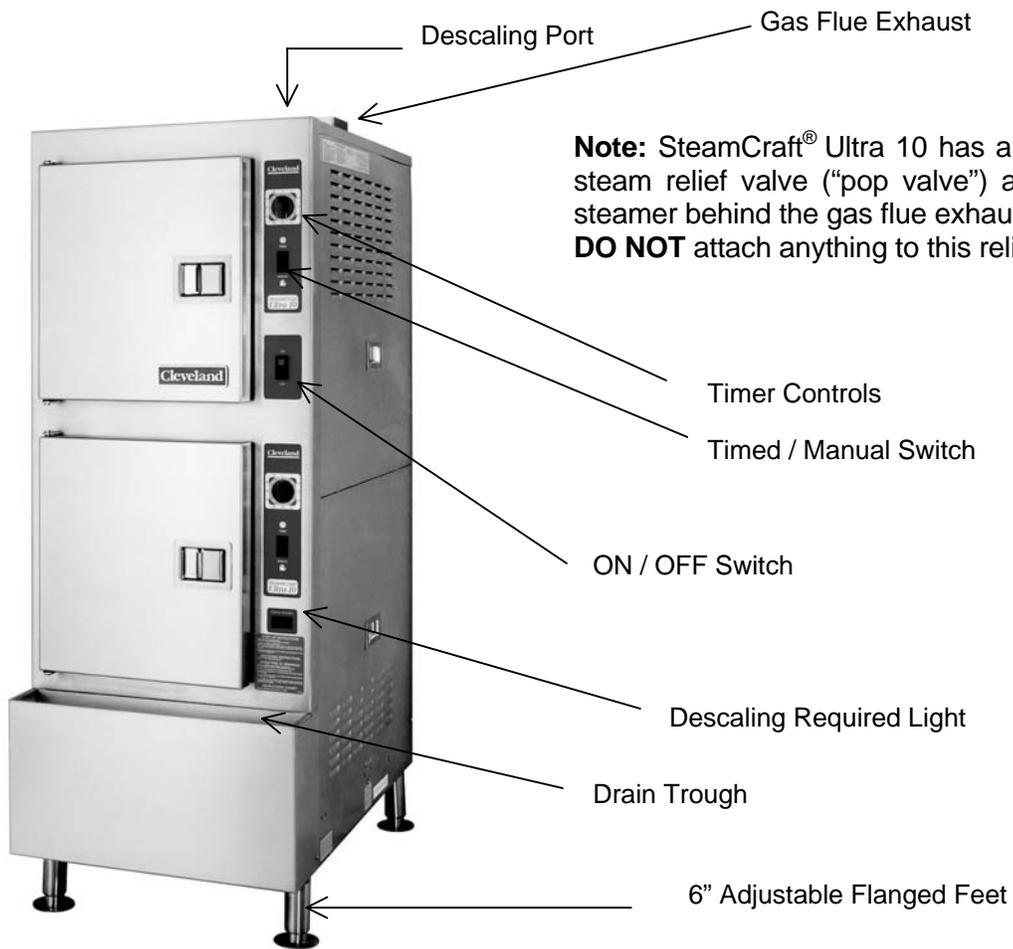
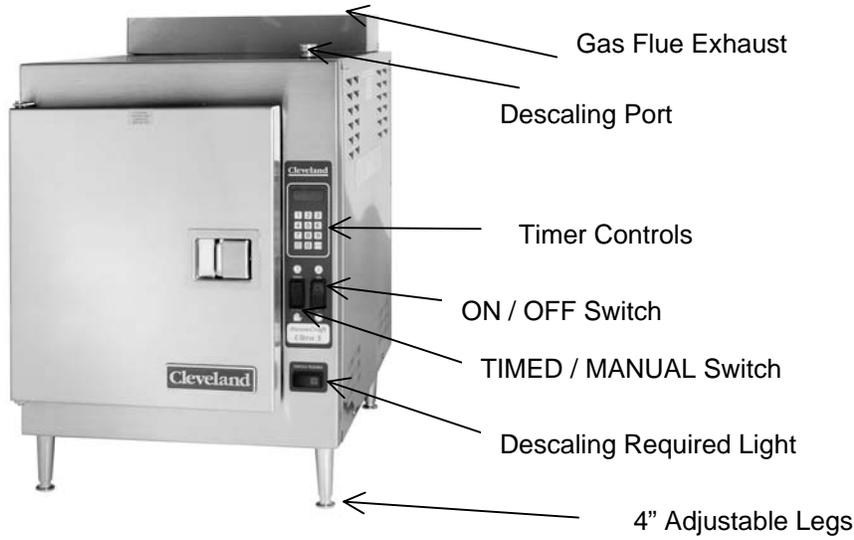
Steamer(s) require minimum service if properly operated and maintained by trained personnel

The following steps will help keep the steamer in a safe, efficient operating condition

1. Do not store or leave combustible materials near steamer(s)
2. Keep the area around and under the steamer(s) free of combustible materials
3. Use non-slip draining anti-fatigue mats rated for use in wet, greasy, or dry work areas to help prevent slipping and / or falling injuries. Obtain the best mats for your needs from your local supplier
4. Train all personnel who will use the steamer
5. Personnel must know how to:

- operate steamer(s)
 - clean interior(s) and exterior(s)
 - drain steamer(s)
 - descale steam generator(s)
6. Steamer(s) may be equipped with a three-prong (grounding) plug for protection against shock hazard
 7. Grounding plugs must be plugged directly into a properly grounded three-prong receptacle
 8. Do NOT cut off or remove or alter the grounding prong
 9. Inspect gas flue exhaust periodically for signs of sooting or blockage
 10. Contact a qualified Cleveland Range authorized service representative to service steamer(s) if any improper operation of the burner system is suspected
 11. Operating personnel must be able to recognize problems and report them so that corrective actions can be taken by trained personnel as outlined in the troubleshooting charts found in the back of this manual and in the separate Installation Manual
 12. Conduct regular steamer inspections. Check for:
 - water line leaks
 - door seal leaks
 - drain leaks
 - clogged drain(s)
 - steam generator scale buildup
 - steamer control malfunctions
 13. Follow the instructions for steamer maintenance found in this manual and the Installation Manual
 14. Before each use of the steamer:
 - inspect compartments for drain and screen blockage
 - inspect door gasket assemblies for proper installation and cleanliness
 - inspect slide racks for proper installation and cleanliness
 15. Allow only qualified Cleveland Range authorized service representatives to service the steamer
 16. Use only factory authorized repair parts
 17. Maintain written records of steamer maintenance and service. Each record should include at least:
 - date of the maintenance or service
 - description of the maintenance or service performed
 - include part numbers if applicable
 - copies of purchase order(s) and invoice(s) for service and parts
 - name and signature of person performing the maintenance or service

D. Product Information



CHAPTER 2 GENERAL OPERATION

A. MAIN EXTERNAL POWER SWITCH

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

1. OPEN water supply valves
2. Turn ON/OFF switch to OFF (Figure 2-2)
3. TIMED/MANUAL switch and timer settings are not important in this procedure. Control panel circuits are not powered while ON/OFF switch is OFF
4. Refer to Figure 2-1. Use main external power switch to turn on electric power to steamer. Steam generators will immediately start blowdown cycles. Blowdown cycle lasts 3 minutes.

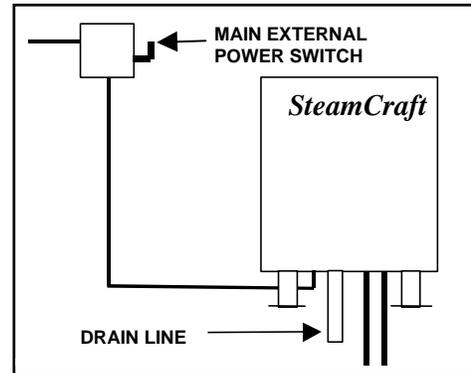


Figure 2-1 Main External Power Switch

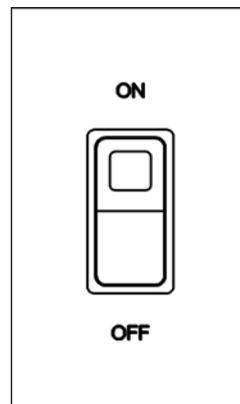


Figure 2-2 Compartment POWER ON/OFF Control

B. DOOR INTERLOCK SWITCH (OPTIONAL)

The steamer compartments of the SteamCraft® Steamer can be equipped with automatic steam cutoff switches, which turn OFF the production of steam to a cooking compartment whenever the door to that compartment is opened.

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

C. POWER ON (AUTOMATIC FILL)

Use this procedure at the start of a shift to prepare the steamer for operation without starting steam generation.

When the steamer is turned ON, the steam generator automatically fills with water.

1. Press TIMED (top end) of the TIMED/MANUAL switch (for ON/OFF models set the compartment(s) ON/OFF switch(es) to OFF)
2. Turn the steamer ON/OFF power switch to the ON position (Figure 2-2)
 - Steamer compartment control panel(s) energizes
 - Steam generator fills to the operating level
 - Steamer heat standby operation starts (see Chapter 2, Section H for details)
3. When ready to start cooking, begin either Timed or Manual operating procedures in Chapter 4

D. LIGHTING AND SHUTDOWN INSTRUCTIONS

DO NOT TRY TO LIGHT BURNERS WITH A FLAME
BURNERS ARE SELF-IGNITING

SteamCraft® Steamers have electronic ignition systems that:

- automatically light burners
- sense flame
- control gas flow.

Electronic ignition systems provide:

- safe ignition
- precise burner control
- safe shutdown.

DANGER

DEATH, INJURY AND/OR EQUIPMENT DAMAGE will result from an improperly adjusted gas control and ignition system.

Do not alter or make adjustments on the gas control and ignition system.
If adjustment is required: contact an authorized service center.

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

START-UP and SHUT-DOWN SUMMARY

For quick reference ONLY.

For safe operation and use of this equipment: operators must comply with all safety and operating instructions

Note: Standby heat timer maintains steam generator water temperature by igniting burner for 20 seconds every six minutes. (See Section H) This is normal.

Model 21CGA5 Gas Fired Table Top Steam Generator and Cooker

Lighting Instructions – 21CGA5

1. Turn the ON/OFF SWITCH to the ON position
 - Steam Generator will fill with water (about 5 minutes)
2. Turn ON the COOKING COMPARTMENT
 - Spark will initiate and main gas valve will open for 4 seconds
 - If the burner fails to light in 4 seconds then the gas valve will close and lock out
3. Turn ON the COOKING COMPARTMENT
4. System may be reset manually
 - Wait 5 minutes
 - Turn the ON/OFF SWITCH to OFF and back to ON

Shutdown Instructions – 21CGA5

1. Turn POWER ON/OFF Switch to OFF.
 - Burners turn OFF
 - Drain opens
 - Steamer starts 3 minute blow down cycle
 - Control panels de-energize

Model 21CGA10 Gas Fired Floor Mounted Steam Generator and Cooker

Lighting Instructions – 21CGA10

1. Turn the ON/OFF SWITCH to the ON position
 - Steam Generator will fill with water (about 5 minutes)
2. Turn on a COOKING COMPARTMENT
 - Blower will start and pilot will attempt to light for 90 seconds
 - If no ignition occurs the system will automatically reset in 6-7 minutes
3. System may be reset manually
 - Turn the ON/OFF SWITCH to OFF for 5 minutes
 - Turn the ON/OFF Switch back ON

Shutdown Instructions – 21CGA10

1. Turn POWER ON/OFF CONTROL to OFF.
 - Burners turn OFF
 - Drain opens
 - Steamer starts 3 minute blow down cycle
 - Control panels de-energize

DANGER

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.

E. INSPECTING COOKING COMPARTMENT

Drain and Drain Screen

Inspect and clean drain and drain screen before each use

Drain screen covers drain at back of cooking compartment (Figure 2-4)

Screen prevents large food particles from entering and blocking drain line

Any blockage of drain line or screen reduces drainage from cooking compartment(s)

- reducing cooking performance
- causing equipment damage
- creating hazards to operators

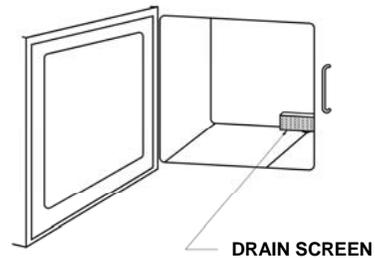


Figure 2-4 Compartment Drain Screen

A blocked or slow drain causes:

- 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 steaming 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 steamer(s) if water stands in the drain opening
2. Clean the drain in accordance with the instructions found in Chapter 5, SHUTDOWN AND CLEANING PROCEDURES and / or Chapter 6 PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING
3. REMOVE any food or debris blocking drain or drain screen
4. DO NOT push food or debris down the drain
5. Make sure screen covers drain. Screen prevents large pieces of food from entering and blocking drain

F. PREHEATING STEAMER

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

Preheating steamers helps productivity and consistency

To preheat: run a cooking cycle of approximately 15 minutes with no food in the cooking compartments.

If using a steamer with a keypad (electronic) timer: set a 1 minute cooking time for preheating.

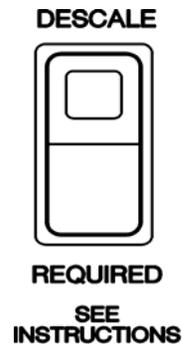
The keypad (electronic) timer will only begin to countdown once the steamer has reached cooking temperature.

G. DESCALING REQUIRED LIGHT FEATURE

These steamers have a reminder light to let the operator know when descaling procedure is required.

1. When the pre-set number of hours passes
 - “DESCALE REQUIRED” light turns on (Figure 2-5)
 - Switch does NOT descale steamer – it is only a REMINDER to perform the descaling operation
2. Descal steam generator as soon as possible according to the instructions in Chapter 6 Section A4
3. Press “DESCALE REQUIRED” switch after descaling to turn off light and reset timer

Note: If the steamer is new or power has been OFF for a prolonged period of time, the Descal Required light timer will reset and the light will turn ON even if it is not time for scheduled descaling. Reset the light and verify the next scheduled descaling from the maintenance records to ensure the steamer remains on its proper descaling schedule.



NOTE: Orientation of switches may vary depending on model.

Figure 2-5 Descal Required Light

H. HEAT STANDBY FEATURE

The steamer has a Heat Standby Feature to keep the Steam Generator near steaming temperature between cooking operations. When timed models have the timer set to zero or ON/OFF models are set to OFF, the Heat Standby Feature will turn the burners on every 6 minutes for 20 seconds as long as the steamer is ON and has water in it.

- **Do not work near or above the exhaust flue whenever power is on.**
- **There is no warning to Heat Standby burner ignition.**

I. MINERAL PURGE CYCLE (OPTIONAL)

The steamer can be equipped with a mineral purge cycle designed to help remove solid particles from the steamer before they form scale. Once every minute the drain valve will open for 1 second to allow mineral laden water to exit the drain. The Mineral Purge Cycle will operate whenever the steamer is ON whether or not it is in cook mode.

CHAPTER 3 CONTROL PANELS

Standard steamer control panels have mechanical timers (Figure 3-1)

Optional electronic keypad timers are available (Figure 3-2)

- Electronic timers count down only when compartments are at cooking temperature

Optional ON/OFF control panels are available (Not Shown)

- ON/OFF control panels use selectors to turn steam ON and OFF
- Operation is identical to the MANUAL mode of timer equipped models

A. DIAL TIMER CONTROL PANEL

1. Cooking Operations – Dial Timer Control Panel

For safe, efficient operation Dial Timer Control Panel steamer(s), operators must at minimum:

- follow all cautions, warnings and instructions
- be familiar with control panel shown in Figure 3-1
- be familiar with all operating features before attempting to operate steamer(s)

2. Manual and Timed Modes

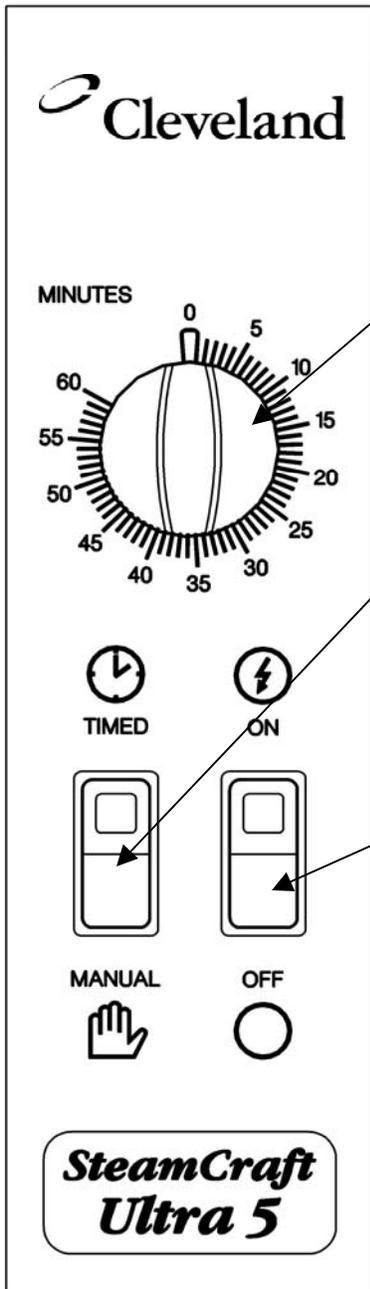
- Steamer has two operating modes: manual and timed
- TIMED/MANUAL rocker switch selects operating mode
- Pressing MANUAL end of switch selects manual operating mode
- Pressing TIMED end of switch selects timed operating mode
- Cooking procedures are slightly different for each mode

a. Manual Mode

- Manual mode provides continuous steaming
- Operator starts and stops steaming operations
- See the Operating and Cooking Procedure – Manual mode in Chapter 4, Section B for more information.

b. Timed Mode

- Timer provides timed control of steaming operations
- Timer starts and stops steaming operations
- To use timer: set timer to desired time
- Steamer will begin cooking as soon as timer is set
- When timer reaches zero:
 - Steaming functions will automatically end
 - Buzzer will sound for 3 seconds to alert operator(s)



1). DIAL TIMER

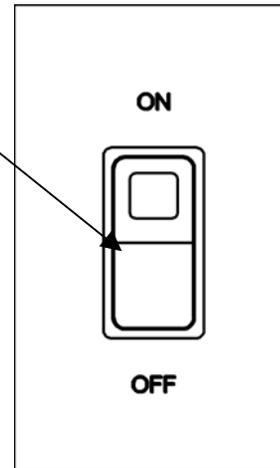
Dial timer sets the operating time from 0 to 60 minutes. Turn dial clockwise until it points to the required number of minutes. When timer reaches 0, a buzzer sounds for 3 seconds.

2). TIMED/MANUAL Switch.

TIMED/MANUAL switch selects the manual or timed operating mode. Pressing MANUAL (bottom) end of switch selects manual mode. Pressing TIMED (top) end of the switch selects timed mode.

3). POWER ON Indicator Switch and Light.

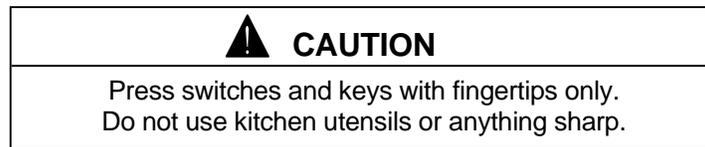
When red indicator light is ON Power is ON to control panel.



**SteamCraft® Ultra 10
Power ON Control
Located below top
compartment control
panel**

Figure 3-1 Dial Timer Control Panel

B. KEYPAD TIMER CONTROL PANEL



1. Cooking Operations – Keypad Control Panel

For safe, efficient operation of the steamer, the operator must, at a minimum:

- Comply with all cautions, warnings and instructions in detailed operating procedures
- Be familiar with the control panel shown in Figure 3-2
- Operator must be familiar with all operating features explained in this manual before attempting to operate the steamer.

2. Manual and Timed Modes

- Steamer has two operating modes: MANUAL and TIMED
- TIMED/MANUAL rocker switch selects operating mode
 - Pressing MANUAL end of switch selects manual operating mode
 - Pressing TIMED end of switch selects timed operating mode
- Cooking procedures are slightly different for each mode
- Manual mode provides continuous steaming
 - Operator starts and stops steaming operations

3. Timed Mode and Use of the Timer

a. Timer Use and Temperature Compensation

Keypad timer control starts and stops steaming operation, and monitors cooking time and compartment temperature for accurate, efficient, uniform steam cooking.

- Keypad control uses a temperature compensation circuit
- Timer automatically adjusts for food defrosting and/or compartment heat up time
- Timer ONLY COUNTS DOWN WHILE THE COOKING COMPARTMENT IS AT COOKING TEMPERATURE.
- This provides automatic control of the steaming operation and assures uniform cooking
- When steamer is below cooking temperature: timer pauses and displays “PAUS”
- When temperature is reached: remaining time is displayed
- When the timer counts down to zero
 - buzzer sounds (Press the START/STOP key to silence the buzzer)
 - steam generator shuts down
- Timer will countdown when steamer is being operated in manual mode only when steamer is at cooking temperature BUT timer does not start or stop steaming cycle

b. Timer Operation

1). Setting the Timer

- Timer must be zeroed (Press the CLEAR key to zero the timer)
- Timer can be set only when cooking time display is clear (00:00)
- Cooking time display contains four digits
 - Left two digits are minutes
 - Right two digits are seconds.
- The display 12:34 is set for 12 minutes and 34 seconds.

2). To set cooking time:

- a) Calculate required cooking time in minutes and seconds.
- b) Press number keys for minutes and then for seconds.
- c) If the cooking time is 99 seconds or less only press the number keys for seconds.

3). Starting/Stopping Timer

Press START/STOP key to start or stop timer

When START/STOP key is pressed steam generator begins heating water

Steam fills the cooking compartment.

- a) Timer display reads "PAUS"
 - until the cooking compartment reaches proper cooking temperature
 - when timer cycle is paused by pressing the START/STOP key again after timer has started
- b) When cooking compartment reaches proper cooking temperature timer display shows count down

Example: A timer setting of 10 minutes may take 11 or 12 minutes for timer to countdown and alarm to sound. This is normal. Heating compartment and food to cooking temperature uses additional time.

4). Shutting Off Alarm

- (a) When timer counts down to zero:
 - alarm sounds continuously
 - generator stops steaming
 - steam flow to cooking compartment gradually stops
- (b) Press the START/STOP key to silence the alarm
- (c) Cooking time display returns to last time set
- (d) Either run same setting again or clear and reset timer

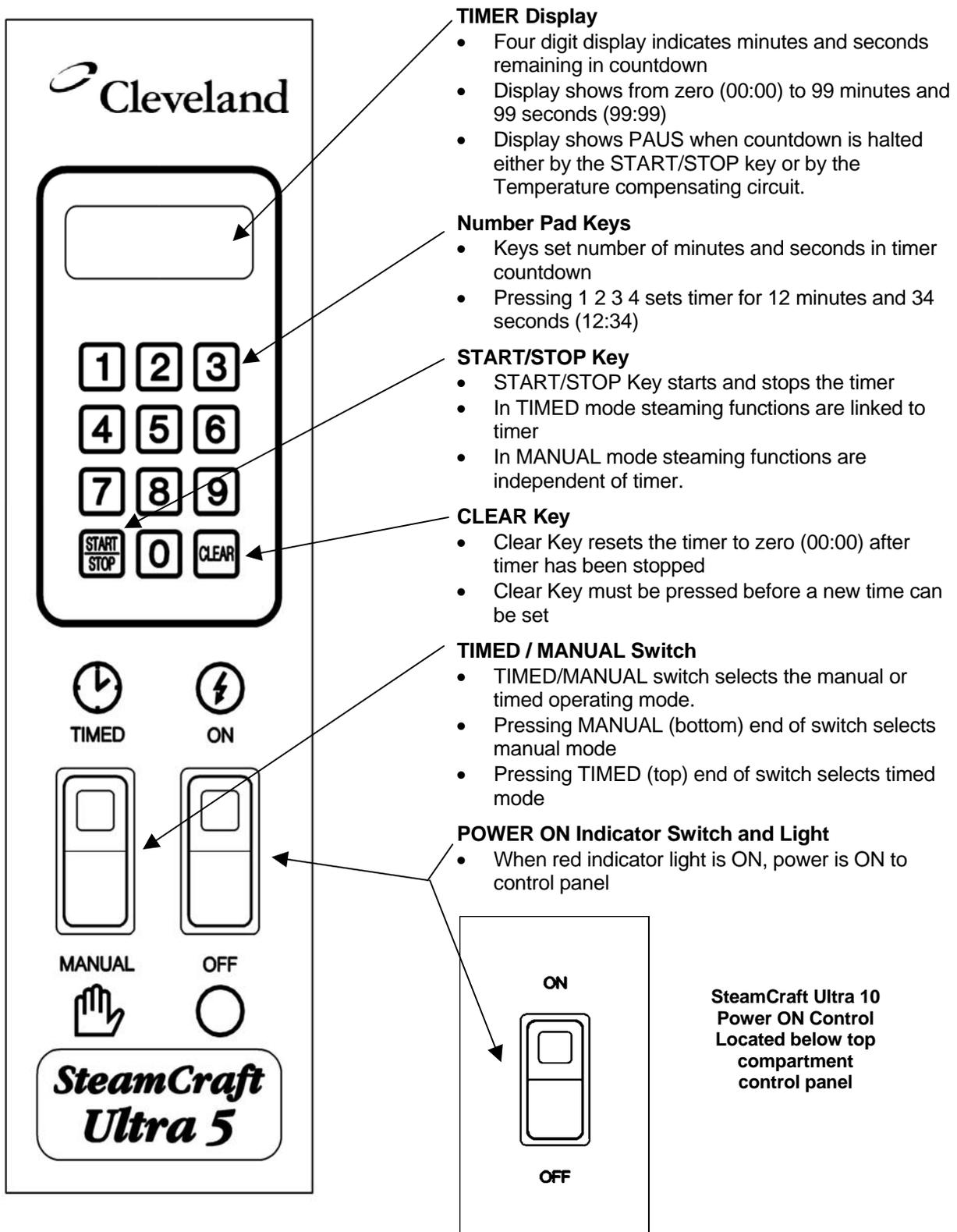


Figure 3-2 Keypad Control Panel

CHAPTER 4 COOKING WITH THE STEAMER

DANGER

When checking inside the steamer: Turn OFF the compartment before opening the door and always open the door slowly and stand to the hinge side and away from the steamer. Water leaking from the door gasket can be a sign of a blocked drain. If the drain is blocked, hot water can accumulate inside the compartment and spill out when the door is opened.

DANGER

FOR STEAMERS WITH OPTIONAL DOOR INTERLOCK: Even though the production of steam ends as soon as a door is opened, it may take up to a minute for residual steam in the system to clear from the steam lines and the cooking compartment. To help prevent injury: always wait until this residual steam has cleared before reaching into the cooking compartment.

DANGER

SEVERE BURNS will result from exposure to steam.

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

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

CAUTION

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

A. OPERATING AND COOKING PROCEDURE – TIMED MODE

In timed mode, timer starts and stops steaming operation

1. Inspect and clean drain and cooking compartment as required. Refer to INSPECTING COOKING COMPARTMENT in Chapter 2, Section E
2. If necessary, preheat cooking compartment. Refer to PREHEATING STEAMER in Chapter 2, Section F
3. Slide pans of food into slide racks inside steamer
4. Do not place pans or anything else on bottom of compartment
 - For best cooking results, use 2-1/2 inch deep, perforated pans without covers
 - These give best heat transfer and shortest cooking time
5. Close steamer door
6. Check control settings. Settings should be:
 - ON/OFF switch is ON
 - TIMED/MANUAL switch is TIMED
7. Set required cooking time. For KEYPAD MODELS press START/STOP key to start cooking cycle
8. Shortly after the door is closed, steam fills the cooking compartment
9. When timer reaches zero cooking cycle is complete
10. Buzzer sounds, steam generator stops and steam flow to cooking compartment gradually stops
 - For DIAL timers the buzzer will stop after 3 seconds
 - For KEYPAD timers, press START/STOP key to silence alarm
11. Carefully open the cooking compartment door, and remove the pans from the slide racks
 - If steamer will be used again in a few minutes shut door to maintain cooking compartment temperature
 - If another use is not planned for more than half an hour leave the cooking compartment door slightly open to reduce internal pressure while steam condenses and compartment cools
 - If steamer is not being used again during this shift, perform Power OFF and Shut Down and Cleaning Procedures found in Chapter 5

B. OPERATING AND COOKING PROCEDURE – MANUAL MODE

- Operator controls cooking functions
- Operator starts and stops steaming operations
- Operator sets cooking time including heat-up time for steam generator, compartment, and food
- Use manual-cooking mode for:
 - Maintaining compartment temperature between cooking batches
 - Continuous supply of steam

1. Using Timer in Manual Mode

- Keypad timer may be used when steamer is operating in manual mode
- BUT keypad timer will not start or stop the steaming cycle

2. Manual Cooking Procedure

Follow this procedure when cooking in manual mode.

- a. Inspect and clean drain and cooking compartment. Refer to INSPECT THE COOKING COMPARTMENT in Chapter 2, Section E
- b. Operator can bring compartment to cooking temperature by either preheating or increasing the cooking time. If the operator chooses to preheat the cooking compartment manually, refer to PREHEATING THE STEAMER in Chapter 2, Section F
- c. Slide pans of food into racks inside steamer. Do not place pans or anything else on bottom of compartment.
 - 1) For best cooking results, use 2-1/2 inch deep, perforated pans without covers.
 - 2) These give best heat transfer and shortest cooking time.
- d. Close steamer door
- e. Select manual mode by pressing MANUAL end of TIMED/MANUAL rocker switch
- f. Steaming cycle starts as soon as switch is pressed
- g. Shortly after door is closed, steam fills cooking compartment
- h. If KEYPAD timer is used to monitor cooking:
 - 1) Set and start timer
 - 2) KEYPAD timer only counts down time when steamer is at cooking temperature
 - 3) buzzer sounds when timer reaches zero
 - 4) Press START/STOP key to turn OFF buzzer
 - 5) In manual mode timer does NOT stop steaming functions
- i. To stop manual mode steaming
 - 1) Turn timer OFF, or set to ZERO, or for ON/OFF Models turn ON/OFF switch OFF
 - 2) Press TIMED end of TIMED/MANUAL rocker switch for timer models
 - 3) Generator stops
 - 4) Steam flow to cooking compartment gradually stops
- j. Carefully open cooking compartment door, wait for steam to clear, and remove pans from slide racks.
 - 1) If steamer will be used again in a few minutes: shut door to maintain temperature.
 - 2) If another use is not planned for more than half an hour: leave cooking compartment door slightly open to reduce internal pressure while steam is condensing and cooling.
 - 3) If steamer is not being used again during this shift, perform POWER OFF, SHUT DOWN, and CLEANING PROCEDURES in Chapter 5

CHAPTER 5 SHUTDOWN AND CLEANING PROCEDURES

A. STEAM GENERATOR BLOWDOWN

1. Power Off (Automatic Blowdown)

- Blowdown occurs automatically when steamer is turned OFF at its ON/OFF switch
- Steam generator drain valve is rinsed with fresh water and drained
- Blowdown at frequent intervals helps decrease scale buildup in steam generators
- Blowdown at frequent intervals reduces frequency of descaling and other maintenance

2. Blowdown Frequency

Supply water quality determines how often blowdown must be performed

More frequent use and higher content of total dissolved solids and particulates in feed water require more frequent blowdown

A determination should be made before installation if additional blowdowns will be required as part of daily maintenance based on water quality analysis done before installation

This information should be noted in the daily maintenance program developed for the equipment

After it has been determined whether or not the local water supply meets the minimum supply water quality standards, observe the following guidelines to establish proper blowdown scheduling:

- When using a supply water system that does not meet the minimum supply water quality standards, blowdown must be performed after every 4 hours of operation, or more frequently as required, and at the end of each shift
- For steamers using water that meets the minimum supply water quality standard, either naturally or by using a water treatment system, blowdown must be performed at the end of each shift

3. Blowdown Procedure

When each steamer is turned OFF, its blowdown cycle starts and runs automatically

A complete cycle takes about 3 minutes.

Do NOT turn power OFF at the main external power switch during blowdown

- a. Turn ON/OFF switch to OFF.
- b. Red indicator light turns OFF
- c. Drain valve opens
- d. Drain valve draws water from steam generator
- e. Fill valve operates for 3 minutes to help flush debris through the drain valve as generator drains
- f. At end of 3-minute blowdown cycle: fill valve closes
- g. When blowdown is complete steamer can be restarted, or shutdown procedure completed
 - To restart steamer, refer to POWER ON in Chapter 2, Section C
 - To shut down steamer, refer to SHUT DOWN and CLEANING in Chapter 5

B. SHUT DOWN AND CLEANING

WARNING

Do not use a hose or water jet to clean steamer!

DANGER

Wait for steamer to cool before cleaning!

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 door is opened.



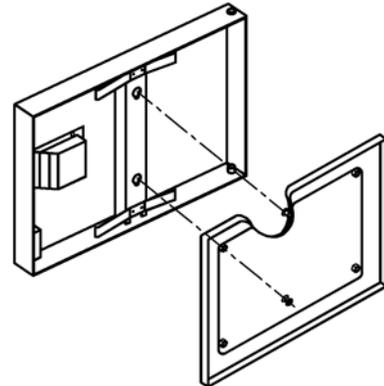
Steam leaks around the door, cooking compartment flooding, reduced cooking performance, and compartment implosion can be caused by a blocked drain or drain screen. Inspect and clean the drain and drain screen before each use.

This procedure should be performed at the end of each shift

1. Refer to Power OFF (Automatic Blowdown), and turn OFF steamer
2. Allow 3 minutes for automatic blowdown cycle
3. Open steamer door and allow steamer to cool
4. Remove slide racks
5. Wash and rinse racks separately or clean them in a dishwasher according to health requirements
6. Do not remove drain screen
7. Remove spilled food from inside compartment
8. Clear residue from drain screen
9. Clean interior of compartment thoroughly
10. Use soft bristle brush to remove stubborn food particles
11. Do not use abrasive cleaning compounds or steel wool
12. Rinse inside of steamer compartment with clean water

13. Clean door assembly

- a. Remove door gasket assembly (see Figure 5-1)
- b. Grasp gasket assembly at sides and lift up and towards you to remove assembly
- c. Note keyhole slots on the door and retaining pins on gasket assembly
- d. Wipe gasket assembly with damp cloth
- e. Wipe inside of door with damp cloth
- f. Rotate gasket assembly 180°
- g. Replace by sliding the retaining pins into the keyhole slots
- h. Either long edge of gasket assembly fits at top
- i. Periodic rotating of door gasket assembly will increase door gasket life



**Figure 5-1
Door Gasket Assembly**

14. Replace cleaned slide racks

15. Wipe exterior with damp cloth

16. NEVER HOSE DOWN STEAMER

- Electrical components inside steamer will not function correctly if wet or damp

17. Leave steamer door(s) open until next steamer operation

- This prevents compartment odor buildup and increases gasket life

CHAPTER 6 PREVENTATIVE MAINTENANCE AND TROUBLESHOOTING

A. MAINTENANCE

Maintenance on steamers must be performed on a regular basis to keep steamers operating properly. By following the maintenance instructions in this chapter and in the separate Installation Manual, problems with steamers will be kept to a minimum. Frequency of steamer maintenance may need to be increased, depending on equipment usage and water quality. If problems occur, refer to the Troubleshooting Guide in this chapter. For more information on products and services, contact your sales representative.

1. Maintenance Records

Make a file for maintenance records

Keep a written record of daily, weekly, monthly, and yearly maintenance

These records will:

- Help protect warranty coverage
- Help personnel know when to perform maintenance
- Assist service personnel

2. Daily Maintenance

a. Blowdown Steam Generator

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

b. Clean the Steamer

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

3. Weekly Maintenance

Clean Drain

- Each cooking compartment is equipped with a drain screen
 - Always operate steamer with screen(s) in place
 - Screen(s) prevents large food particles from entering and blocking drain line
 - Blockage of drain line can cause pressure buildup in compartment(s) resulting in steam leaks around door gasket(s)
 - Drain line blockage reduces convection action of steam in compartment(s) and reduces performance
- a) Inspect drain screen and drain line for blockage
 - b) Rotate drain screen 90 degrees to inspect drain opening
 - c) Clean opening and restore screen to its operating position
 - d) Clean drain with a USDA approved drain cleaner
 - e) Follow the instructions of the drain cleaner manufacturer
 - f) Flush drain with clean water

4. Monthly Maintenance

a. Descale Steam Generator

- Steam generators should be descaled at least once a month, depending on scale buildup.
 - For serious steam generator scale buildup: install a water treatment system for steamer(s) generator water supply
 - If this is not possible: Frequency of descaling must be increased
- Steamer has a descaling reminder light to assist in scheduling maintenance
 - Descaling light has been factory set for an operating time of about 1 month
 - If a different descaling frequency is required: have timer reset by a qualified Cleveland Range authorized service technician
- When descaling light comes on: descale the steam generator as soon as possible
- Cleveland Range recommends the use of **DISSOLVE® Descaler Solution, Cleveland Range Part No. 106174 or 1061741**
- Use no other system of steamer descaling

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

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

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

 CAUTION
--

Do not use any other product or method of descaling other than the <i>DISSOLVE®</i> Descaler method using Part Nos. 106174 or 1061741.
--

WARNING

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

DANGER

The liquid solution in Cleveland Range Descaler Solution Part No. 106174 or 1061741 can be harmful if not handled properly. Follow these basic safety rules for handling and using this product. Instructions and warnings on container labels supercede all other warnings and instructions.

Wear protective clothing when mixing or applying chemical cleaners

Wear rubber gloves, and OSHA approved eye protection when descaling

Avoid breathing fumes

If liquid contacts skin: wash with soap and water and seek medical attention.

If chemical contacts eyes: flush with water and seek medical attention

If chemical is swallowed or ingested: drink 1 or 2 glasses of water and seek medical attention

Descaling Procedure for SteamCraft® Ultra 5 and Ultra 10

Cleveland Range recommends DISSOLVE® Descaler Solution, Part No. 106174 or 1061741

Use no other system of steamer descaling

Appropriate warnings and safe handling procedures must be provided to handlers and users

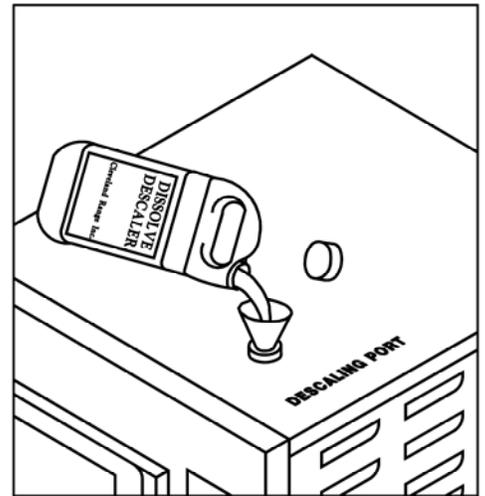
Instructions and warnings on Dissolve® containers and Material Safety Data Sheets supercede and replace instructions and warnings in this manual

General precautions: wear rubber gloves, splash goggles and other protective clothing and equipment as necessary. Refer to Dissolve® container labels and Material Safety Data Sheets for information regarding eyewash, first aid, medical treatment, and spill control.

b. Descaling Procedure

- 1) Turn steamer OFF and open door(s)
 - 3 minute Automatic Blowdown cycle runs
- 2) Turn steamer ON
 - Generator begins to refill

- 3) Press TIMED end of TIMED/MANUAL switch (or for ON/OFF Models put the ON/OFF selector Switch in the OFF Position)
- 4) DO NOT start timer
 - Water must be cold for descaling
 - Open cooking compartment door(s)
 - Leave cooking compartment door(s) open
- 5) Remove descaling port cap (see Figure 6-1)
- 6) Add required amount of Dissolve® through the descale port while generator refills
 - Pour slowly to avoid overflow
 - Refill can take up to 8 minutes
 - Use 1 gallon Dissolve® for Ultra 5 gas
 - Use 1 ½ gallons Dissolve® for Ultra 10 gas
- 7) Add 1-2 gallons of cold tap water to descaling port after refill stops, continue to fill with cold water until descaling solution enters cooking compartment(s) through steam nozzles
 - Note: Some descaling solution will flow from drain of Ultra 10 gas steamers
 - Adding extra water to generator(s) raises descaling solution to higher than normal water fill level, allowing descaling solution to clean sensors and surfaces above normal water fill level
- 8) Let descaling solution soak in generator(s) for 1 hour
- 9) After 1 hour, turn ON/OFF switch OFF to start 3 minute Automatic Blowdown
 - This drains and rinses generator(s)
- 10) After Automatic Blowdown ends, turn ON/OFF switch to ON
- 11) Add cold tap water through descaling port after generator refills, until water enters cooking compartment(s) through steam nozzles
 - This raises the water level to rinse the surfaces cleaned in Step 8
- 12) Turn ON/OFF switch OFF to start 3 minute Automatic Blowdown to rinse generator
- 13) Replace descaling cap and close cooking compartment door(s)
- 14) Turn TIMED/MANUAL switch to TIMED
- 15) Turn steamer ON/OFF switch to ON and set TIMER for 20 minutes
 - For Keypad Timer models: Press START/STOP key to begin the cook cycle
 - For ON/OFF models: Turn the steamer ON for twenty minutes
- 16) After the timer counts down, turn ON/OFF switch to OFF to start Automatic Blowdown
- 17) After Automatic Blowdown cycle ends, reset DESCALE REQUIRED light
- 18) Descaling is complete, resume normal startup, cooking, and shutdown procedures



**Figure 6-1
Descal Port**

B. TROUBLESHOOTING GUIDE

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

- “Problem” (left column) lists common operating problems.
- “Possible Cause” (center column) lists causes of problems in order they should be checked.
- “Remedy / Reference” (right column) lists fixes for problems from easiest to hardest.
- “Notes” in “Remedy / Reference column are at end of Table 6-1 Troubleshooting Guide.

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

Trouble Shooting Guide

Table 6-1

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
Power indicator light does not turn ON when ON/OFF switch is in the ON position	Power turned OFF at main external power switch or breaker	Turn ON power at main external power switch or breaker
	Inoperative controls or failed light	See note #1
Power ON but steam generator does not fill	Water supply to steamer shut off	Open water supply valves
	Water line strainer and/or external filter system is clogged	Clean water supply strainer and/or filter system
	Inoperative solenoids or controls	See note # 1
Control panel POWER indicator light ON and steamer does not make steam in MANUAL or TIMED modes	Water supply to steamer shut OFF	Open water supply valves
	Door interlock switch not engaged or has failed (if unit has this option)	Close door completely If problem persists, see note #1
	Water line strainer and/or external filter is clogged	Clean water supply strainer and/or external filter system
	Gas supply valve is closed	Open gas supply valve
	Inoperative controls or solenoid	See note # 1
Abnormal amount of steam coming from drain	Hot water instead of cold water connected to condenser fitting	Make proper connections See section on Water Supply
	Water supply to condenser turned OFF	Open water supply valve
	Condenser water line strainer and/or nozzle clogged	Clean out condenser water supply strainer and/or nozzle
	Water supply line to condenser blocked, broken, or leaking	Repair or replace water supply line See note # 1
	Inoperative controls, thermostat or solenoids	Turn OFF electricity at main external power switch See note # 1
Power light is ON, but timer does not light (Electronic Timer models only)	Timer transformer has failed	See note #1
	Inoperative controls	See note #1
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 pans

(Continued On Next Page)

**Trouble Shooting Guide
(Continued)**

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
Reduced Steam flow into cooking compartment	Steam generator scale buildup	Descal steam generator with Cleveland Range approved descaler
	Gas inlet pressure low	See note #2
	Inoperative or improperly adjusted controls	See note #1
Water leaking from bottom of cabinet	Broken or loose plumbing inside steamer cabinet	Turn OFF electricity at main external power switch and close water supply valve(s) See note # 1
Steam and / or water draining around compartment door See Warning under Note #7	A small amount of water condensing around the door is normal	No action necessary
	External drain not properly installed, should be free-air vented and pitched down.	See notes #2 and #3.
	External drain is blocked or restricted	Clean external drain See note #3
	Door gasket or door parts worn	See note # 1
	Inoperative controls inside cabinet	Turn OFF power at main external power switch See note # 1
Water leaking from water pipes or drain lines	Plumbing needs repair	See note # 3
Descal Required indicator is lit Note: Switch does not descale steamer, it is just a reminder that steamer must be descaled every 4-6 weeks	If steamer is new, or has just been descaled	Press switch to reset descale timer
	Steamer needs descaling	Descal steamer with Cleveland Range approved descaler After descaling is completed, press switch to reset descale timer
	Bad or improperly set descale timer	See note #1
ON/OFF Indicator ON but steamer does not make steam in timed mode	Timer fuse has blown (Electronic timer models only)	See note #1
	Inoperative timer control or damaged wiring	See note #1
Water is flowing out of steam ports into cooking compartment	Water level floats are dirty and are not moving properly or stuck (21CGA5) or Water probes are dirty (24CGA10)	Turn OFF water supply to steamer and descale steamer manually with Cleveland Range approved descaler See Operators Manual for instructions If condition persists see note #1
	Inoperative controls or solenoid	See note #1
Water coming from drain even when not cooking	Unit is equipped with mineral purge cycle option	If only a small amount of water is coming intermittently from drain. This is normal operation see Chapter 2, Section I
	Condenser valve is bad	See note #1
	Drain solenoid is stuck partway open	Turn OFF power to blowdown steamer. If problem persists, see note #1.

(Continued On Next Page)

**Trouble Shooting Guide
(Continued)**

PROBLEM	POSSIBLE CAUSE	REMEDY/REFERENCE
Steam flow does not stop when TIMER stops.	Operating in manual mode.	Switch to timed mode for timer to control steam flow.
	Inoperative controls inside cabinet.	Turn OFF power to that compartment at ON/OFF lever/switch. See note #1.
Food takes too long to cook To verify steamer's proper operation see note #6	Pans too close to bottom of cabinet	Put pans in racks near top of cabinet
	Compartment overloaded with too much food	Put less food into pan Use fewer pans
	Food is being cooked in covered solid pans	Remove covering Steam must have direct access to food for cooking to take place
	Food is frozen	Increase cooking times for frozen food
	Suggested cooking times are usually listed for cooking at sea level	Extend cooking times for altitudes above 2000 feet
	Hot water connected to condenser line	Make proper connections See section on Water Supply. See note # 3
	Condenser water is turned OFF	Turn ON water to condenser
	Condenser water line strainer and/or nozzle is clogged	Clean out condenser water supply strainer and/or nozzle
	Steam generator scale buildup	Descal steam generator with Cleveland Range approved descaler
	Inoperative or improperly adjusted controls	See note #1
Water comes out of descale port	Descal cap is missing	Install descale cap. Descal port must be closed tightly for steamer to operate properly. If missing see note #8
	Descal cap is loose	Tighten descale cap. Descal port must be closed tightly for steamer to operate properly
	Descal cap and/or gasket is damaged	See note #8

TROUBLESHOOTING NOTES

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

Place a perforated steam table pan in the middle rack position in the cooking compartment. Turn ON the steamer, and set the selector switch to the manual mode (or for ON/OFF models set the selector to the ON position) so that steam is being produced. When wisps of steam have begun to exit the steam nozzles, preheat the steamer by closing the cooking compartment door and leaving it ON for ten minutes. After the compartment is preheated follow the instructions as listed below.

- Place a fresh egg in pan
- Close the door and set the timer as directed by the size chart below

Egg Size	SteamCraft Steamer
Medium	12 minutes
Large	14 minutes
Extra Large	14 minutes

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


WARNING

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

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

CHAPTER 7 STEAM COOKING GUIDE

A. Introduction:

Steam cooking is an excellent way to prepare food. Steam provides an even, intense and penetrating heat so steam cooking is fast and convenient for large or small quantities. Food never burns, pans never boil over, and there is no lifting of water in pots or waiting for water to boil. Steam cooking saves money and time while maintaining high quality and consistency.

Seafood:

Steamed fish is tender, succulent, flaky and table ready in minutes. Steam cooking gives you, the operator, precise portion control of expensive seafood products.

Vegetables:

Steam cooking vegetables – fresh or frozen – on perforated pans provides colorful, flavorful, and vitamin packed servings in minutes. Just follow the recommended timer settings.

Meat:

Steam cooked meat is tender, moist and flavorful and shrinkage is minimal. Stew meat, pot roasts, ham, and corned beef are wonderful when steam cooked. Meat steam cooked for sandwiches is moist, savory, and sliceable. Steam tenderizes poultry for stewing, barbecuing, frying, and other cooking methods.

Desserts:

Prepare pudding and custard without scalding or scorching by steam cooking. Steam “baked” apples are ready in minutes, as are applesauce, and stewed fruit. Dried fruits rehydrate quickly and consistently.

Steam “Baked” Apples: Core apples and arrange in a shallow pan. Fill the apples with your favorite mixture of cinnamon, sugar, raisins, butter, brandy, etc. Steam for 3 minutes. If desired, brown slightly under a broiler to “finish.” Serve with cream or ice cream.

Additional Ideas:

There are many applications for steam cooking besides vegetables and seafood:

- Eggs can be soft cooked, coddled, hard cooked, poached, scrambled, and made into custard or pudding. 25 dozen eggs can be hard cooked in 12 minutes using three 12” x 20” x 2½” perforated pans in one compartment of the steamer.
- Momentary steam blanching of fruits simplifies skin removal.
- Dumplings, steamed breads, muffins, hot cereal, pasta, noodle and rice can be prepared or reheated in the steamer.
- Beef and other meat, cooked by steaming, is moist, tender and flavorful. The meat drippings from the catch pan can be used to make gravy soups or clear stock, or as a salt free broth.
- Turkey, chicken and other poultry are tender, juicy when steamed then combined into a casserole, added to BBQ sauce, or browned under the broiler. Chicken pieces can be breaded, steamed, then finished in the deep fryer. It is crisp, delicious, and juicy.
- Hot Dogs, sausages and other variety meats remain plump and juicy when steamed.
- Entrees such as lasagna, macaroni and cheese, or beef stew can be prepared from scratch. Frozen institutional packs can be reheated in the steamer. It is not necessary to cover them.

B. SIZING UP PAN CAPACITY:

1. Serving Sizes – How Much? How Many?

How to estimate portion size and number of servings from a standard steam table pan.

- A 12" x 20" x 2½" solid pan will hold 7½ quarts or 240 fluid ounces.

Table 7-1 Serving Size

240 Fluid Ounces Produces

<u>Portion Size</u>	<u>Number of Servings</u>	<u>Type of Product</u>
10 oz	24	Stew, Casserole, Lasagna
8 oz	30	Soup, Bisque
6 oz	40	Soup, Bisque
4 oz	60	Mashed Potatoes
2 oz	120	Sauce
1 oz	240	Sauce

- Number of servings of cooked vegetables from one 12" x 20" x 2½" perforated pan.

Frozen Vegetable Yields:

10.0 lbs	Approx. 50-3 oz servings
7.5 lbs.	Approx. 35-3 oz servings
5.0 lbs.	Approx. 25-3 oz servings

2. Reference Chart for Typical Pan Capacities

Size in Inches	Quarts	Fluid Ounces	Pounds
12 x 20 x 1 ¼	3 ½	112	2
12 x 20 x 2 ½	7 ½	240	8
12 x 20 x 4	14 ½	464	10

C. CONVECTION STEAMER – SUGGESTED TIMER SETTING GUIDELINES FOR TIMER CONTROLS WITH THE COMPENSATING THERMOSTAT (see Note)

Timer settings are approximate due to the differences in food quality, age, shape and the degree of doneness desired. Perforated pans are recommended. Starred items (*) must be cooked in solid pans. Items marked with two stars (**) require handling in two steps: 1) steam for approximately ½ the time shown, 2) remove from steamer, separate thawed portion, or stir, and return to steamer for the time remaining. The compensating feature of the timer allows the cooking compartment to reach temperature before the preset time starts to count down. **Note:** Times may need to be increased slightly when using external timers to track cooking times.

VEGETABLES:	Fresh	Frozen		Fresh	Frozen
Artichoke	12		<u>SEAFOODS:</u> Steam all seafood on a perforated pan with catch pan		
Asparagus, spears	6	6	Clams in shell	3-5	
Beans, green, 2" cut	6	5	Cod fillets, 6 oz. Portions	6	8
French cut	4	5**	Crab legs, king		6-8
Whole	6	4	Snow crab		4-6
Broccoli, spears	4-6	3-4	Crab, live, 4 oz.		
Florettes	3	1-2	3/4 - 1 lb.	12	
Chopped		6-8	Halibut, 6-8 oz.	4-6	6-8
Brussels sprouts	4-5	4	Lobster, whole, 1 lb.	6	
Cabbage, whole to remove leaves for cabbage rolls	4		Lobster tails, frozen, 8 oz		12
Carrots-baby whole	7	6	Defrosted, butterflied	4-6	
Sliced,	4	3	Mussels in shell	5	
Cauliflower,			Oysters in shell	2-4	
Florettes	5	3-4	Red snapper, 8 oz.	4-5	4-5
Whole	10		Salmon steak, 8 oz.	6	7
Corn, yellow, whole		2	Shrimp, 10 ct. per lb. IQF	3	4-6
On cob,	5	12**	<u>EGGS (Medium Sized):</u>		
Cobbettes	6	12**	Hard cooked for egg		
Mixed Vegetables	3-6	3-4	Salad, potato salad	11	
Mushrooms,			Soft cooked	3	
Whole 1½"	3		Coddled	6	
Sliced	1		Scrambled*	7-10**	
Onions, diced, sliced	2-3	1	<u>FRUITS:</u>		
Whole	4	2	Blanch for peeling		
Peas, green		3	Fresh: Avocado	1	
Potatoes, whole 8 oz.	20-25		Grapefruit	1	
Peeled, quartered,	15-19		Orange	1	
Fresh peeled, diced	8-10		Apricot	1	
Potatoes, sweet, whole	20-30		Dried: add water to re-hydrate		
Spinach leaf, whole	2	15**	Apple	10	
Chopped		15**	Apricot	10	
Squash, acorn halves	6		Peach	10	
Butternut, quartered	6		Pear	10	
Spaghetti squash			Prune	10	
Halves	15-18				
Tomatoes, sliced*	1				
Turnips, whole	20-25				
Zucchini, sliced	2-4				

MEATS & POULTRY:

Cook meats and poultry in nested pans. Juices can be used for gravy, sauces, beef stock and soups. Portion size, thickness, and grade should be considered when selecting a timer setting for doneness.

POULTRY:	Fresh	Frozen
Turkey, whole	6-8 min./lb.	6-8 min./lb.
Chicken halves, 1¼ -1½lb. per half	20-24 min.	
Breast, boneless, skinless	10-12 min.	

PORK, SAUSAGE, HOT DOGS:	Fresh	Frozen
Pork, Chop, 4 count/lb.	10 min.	
Italian sausage, 4 oz.	10 min.	
Ribs, 3lb. and down	30 min.	
Hot-dogs, 8 count/lb.	5 min.	10

BEEF:	Fresh	Frozen
Cubes, 1 1/2"	6-7 min./lb.**	6 min./lb.**
Ground chuck for chili	6 min./lb.**	4-6 min./lb.**
Pot-roast, choice	8-12 min./lb.	
Rump roast, choice Boned, rolled, tied	12 min./lb.	
Meat loaf, 4lb. Loaf	5 min./lb.	
Corned beef, 6-8lb. cut, add 1/2" water to pan	20-23 min./lb.*	

STEAKS: : Fresh Frozen
 Using a 3/4" to 1" steak, the steaming time listed below produces a "rare" steak. A "well done" steak is first steamed to the "rare" stage, then broiled or grilled for 1 1/2 minutes on each side. This "well done" steak shrinks less, is more tender and juicy; and, when served, is the same size as the "rare" steak.

STEAKS: :	Fresh
Sirloin Chopped 8 oz	4 min.
Ribeye, 8 oz.	4 min.
Sirloin steak 6 oz.	4 min
8 oz.	6 min.

Filet Mignon	4 oz.	3 min.
	6 oz.	3-4 min.
	8 oz.	4 min.
	10 oz. butterflied	5 min.
	16 oz. butterflied	8.min
Strip steak -	10-oz.	5 min.
	12 oz.	7 min.
T-bone	12 oz.	5 min.
	16 oz.	8 min.
	18 oz.	8 min.
	22 oz.	10 min.

PREPARED ENTREES:	Fresh	Frozen
Full Size Pans		
Cabbage rolls, stuffed* Cover with tomato Sauce & serve	30 min.	30 min.
Casserole dishes*		
Beef Stew	30min.	60 min.
Stroganoff	30 min.	60 min.
Lasagna* fresh	30 min.	60 min.
Reheat serving	6-8 min.	12 min.

RICE & BEANS:	
Rice, long grain	
4 cups cold water/lb.	17 min.
Beans, pre-soaked overnight, 1 lb. Beans = 1 ¼ qt. Water	45 min.
Beans* unsoaked, 1 lb. Beans x 1 ½ qt. water	2 ½ Hours
Refried beans, 2-#10 cans	15-17 min.

PASTA:
 Steam in nested pans. Place pasta on 2 ½" perforated pan inside a solid 2 ½" pan. Cover pasta with cold water.

Egg noodles, 1 ½" wide	4-6 min. **
Lasagna noodles	10-12 min.**
Macaroni, shells, elbow	10-12 min.**
Penne	10 min**
Rigatoni	10 min. **
Spaghetti, vermicelli	8 min.**
Spaghetti, regular	8 min.**

D. STEAMING TIPS - LOBSTER - CRAB

1. Live Lobster and Crabs

- a. Live lobsters and crabs are steamed according to the time on the Suggested Timer Setting Guide.
- b. Steam them on a perforated pan with a catch pan (a solid pan) on a lower pan slide. Discard the juices and non-edible matter collected during steaming.

2. Lobster Tail 8 oz.

- a. To serve in a shell, cut the frozen lobster tail in half, lengthwise. Place the cut side up on a perforated pan. Steam 5-6 minutes or until the meat turns opaque white. Season and garnish to serve.
- b. To serve a butterfly lobster tail, thaw tail, cut top shell length-wise all the way to the tail fins. Spread shells apart and pull meat out. Close empty shell and lay meat on top of shell. Steam according to Suggested Timer Setting Guide.

3. King Crab Legs

- a. Pre-cooked, frozen: steam just long enough to heat through.
- b. Serve either whole or cut into 3 sections.

