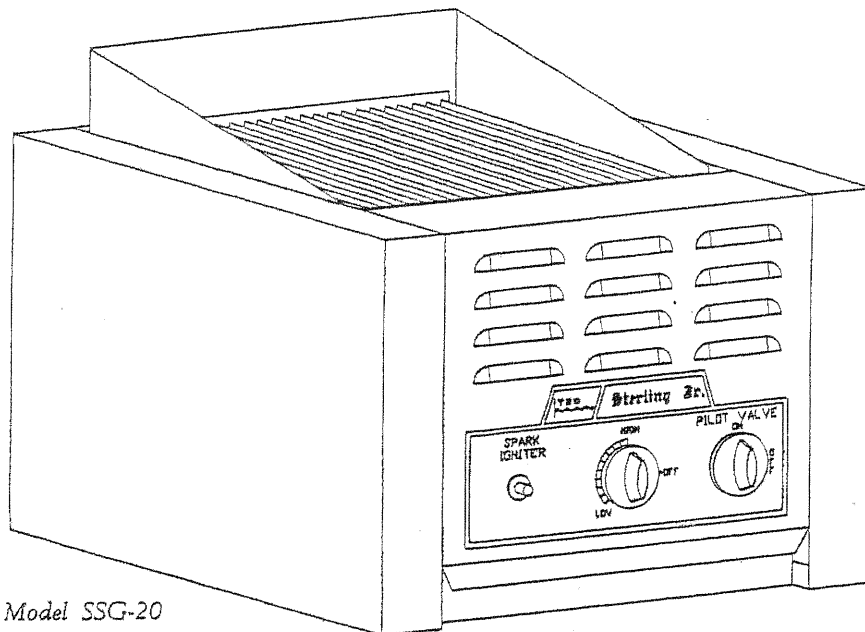


Sterling Jr.

Owner's Manual



Model SSG-20

THERMAL ENGINEERING CORPORATION

POST OFFICE BOX 868 • COLUMBIA INDUSTRIAL PARK

COLUMBIA, SOUTH CAROLINA 29202

(803) 783-0750



Nationally Registered Testing Laboratory

FOR YOUR SAFETY

If you smell gas:

1. Shut off gas to the appliance.
2. Extinguish any open flame.
3. Open lid.
4. If odor continues, immediately call your gas supplier.

FOR YOUR SAFETY

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

WARNINGS TO CONSUMER

DO NOT INSTALL OR OPERATE THIS APPLIANCE WITHOUT HAVING CAREFULLY READ THIS MANUAL. FOR FUTURE REFERENCE, HAVE THIS MANUAL AVAILABLE WHILE USING THIS APPLIANCE AND ALWAYS FOLLOW THE INSTRUCTIONS PROVIDED.

THIS APPLIANCE IS DESIGN CERTIFIED BY THE AMERICAN GAS ASSOCIATION, A NATIONALLY RECOGNIZED TESTING LABORATORY, ONLY WHEN INSTALLED IN A FIXED LOCATION SUCH AS A MASONRY OR OTHER SIMILAR FIXED FUEL LOCATION STRUCTURE WHEN SPECIFIED CLEARANCES ARE MAINTAINED. THIS APPLIANCE IS NOT INTENDED FOR PORTABLE USE OR FOR USE ON RECREATIONAL VEHICLES OR BOATS.

NEVER ATTEMPT TO MAKE CONVERSIONS OR MODIFICATIONS TO YOUR GRILL WITHOUT FIRST OBTAINING WRITTEN INSTRUCTIONS FROM THERMAL ENGINEERING CORPORATION.

NOTICE TO CONSUMER

READ THIS MANUAL PRIOR TO INSTALLING AND USING THIS APPLIANCE. INSURE THAT ALL PERSONS OPERATING THIS APPLIANCE HAVE CAREFULLY READ AND BECOME FAMILIAR WITH THE INFORMATION CONTAINED IN THIS MANUAL.

THIS UNIT HAS BEEN CAREFULLY INSPECTED AND PACKAGED AT THE FACTORY PRIOR TO SHIPMENT. UPON ARRIVAL, INSPECT THE APPLIANCE CAREFULLY FOR ANY CONCEALED DAMAGE. IMMEDIATELY REPORT ANY DAMAGE TO YOUR RETAILER.

SHOULD YOU HAVE ANY QUESTIONS REGARDING EITHER OPERATION OR USE OF THIS APPLIANCE CONTACT THERMAL ENGINEERING CORPORATION AT 803-783-0750.

NOTICE TO INSTALLER

THIS APPLIANCE IS DESIGN CERTIFIED BY THE AMERICAN GAS ASSOCIATION, A NATIONALLY RECOGNIZED TESTING LABORATORY, ONLY WHEN INSTALLED IN A FIXED LOCATION SUCH AS A MASONRY OR OTHER SIMILAR FIXED FUEL LOCATION STRUCTURE WHEN SPECIFIED CLEARANCES ARE MAINTAINED. THIS APPLIANCE IS NOT INTENDED FOR PORTABLE USE OR FOR USE ON RECREATIONAL VEHICLES OR BOATS.

IN THE UNITED STATES, INSTALLATION OF THIS APPLIANCE SHOULD BE IN ACCORDANCE WITH LOCAL CODES. IN THE ABSENCE OF LOCAL CODES, REFERENCE THE NATIONAL FUEL GAS CODE ANSI Z223.1 - (Latest Edition).

IN CANADA, INSTALLATION OF THIS PRODUCT SHOULD BE IN ACCORDANCE WITH THE CAN/CGA-B149 INSTALLATION CODE. FOLLOWING INSTALLATION, LEAVE THIS OWNER'S MANUAL WITH THE CONSUMER FOR FUTURE REFERENCE.

LIFETIME LIMITED WARRANTY

EXPRESS WARRANTIES

Thermal Engineering Corporation (TEC) warrants this grill to be free of defects in material and workmanship when subjected to normal domestic use and service from the date of purchase as follows:

LIFETIME

All stainless steel components other than cooking grids are warranted indefinitely. This includes the hood, cooking unit structure, sideshelf, pedestal and cabinet.

TEN YEARS

All components not covered by the lifetime warranty above are warranted for ten years.

UNDER THIS WARRANTY

We will, at our option, repair or replace any component part deemed by TEC to be defective when returned to a TEC authorized dealer or to our factory, freight prepaid, within the warranty period. Prior to authorization of repair or replacement, you must supply the date of original purchase and serial number of your grill.

This warranty excludes damage caused by failure to follow the instructions in your Owner's Manual or alteration of the grill's structure or components, or from operator abuse, negligence or accident.

DISCLAIMER OF IMPLIED WARRANTIES

This warranty excludes incidental and consequential damages. Except as stated above, all other warranties, including *implied warranties of merchantability and fitness for a particular purpose*, are excluded.

If you have questions concerning this warranty, please call us at 1-800-331-0097.



INFRA-RED GAS GRILLS

Thermal Engineering Corporation • P.O. Box 868 • Columbia, S.C. 29202-0868
2741 The Boulevard, Columbia, S.C. 29209

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INSTALLATION AND ASSEMBLY

GENERAL OVERVIEW

This appliance needs only minimal assembly, however, all instructions must be followed carefully to insure proper installation. Proper installation is essential to insuring safe and trouble-free operation. Any alterations made to the appliance without prior written consent from Thermal Engineering Corporation will void the product's warranty.

The installation of this appliance must conform to local codes or, in the absence of local codes, the National Fuel Gas Code ANSI Z223.1 (latest edition).

LOCATION OF GRILL

WARNING: THIS APPLIANCE SHOULD NOT BE LOCATED CLOSER THAN 24 INCHES TO ANY COMBUSTIBLE SURFACE OR UNDER ANY COMBUSTIBLE MATERIAL.

WARNING: THE APPLIANCE IS DESIGN-CERTIFIED FOR USE OUTDOORS ONLY AND NOT INTENDED FOR PORTABLE USE OR USE ON RECREATIONAL VEHICLES OR BOATS.

When considering stationary locations for your grill, keep these important factors in mind. The grill must be located outdoors only. As with any charcoal or gas grill, harmful carbon monoxide gas is produced during the combustion process that should not be allowed to accumulate in a confined space. Also, since hot air rises above the grill while in operation, covered locations should be avoided. Do not locate the grill in locations where an overhang or awning may cover the grill.

Minimum clearances must be maintained when operating this grill. Refer to Table A.1 for clearance specifications on combustible and non-combustible installations. The determination of whether an installation is combustible or non-combustible construction is made by the local fire marshal or the local safety authority having jurisdiction.

INSTALLATION

The Sterling Jr. is designed to be installed in a patio fixture such as a free-standing masonry or other suitable construction. Reference specifications for installing the grill may be found in the Appendix of this manual.

The appliance ventilation louvers must remain clean and clear of debris to avoid any obstruction to the flow of combustion and ventilation air. Reference Table A.1 for clearance specifications.

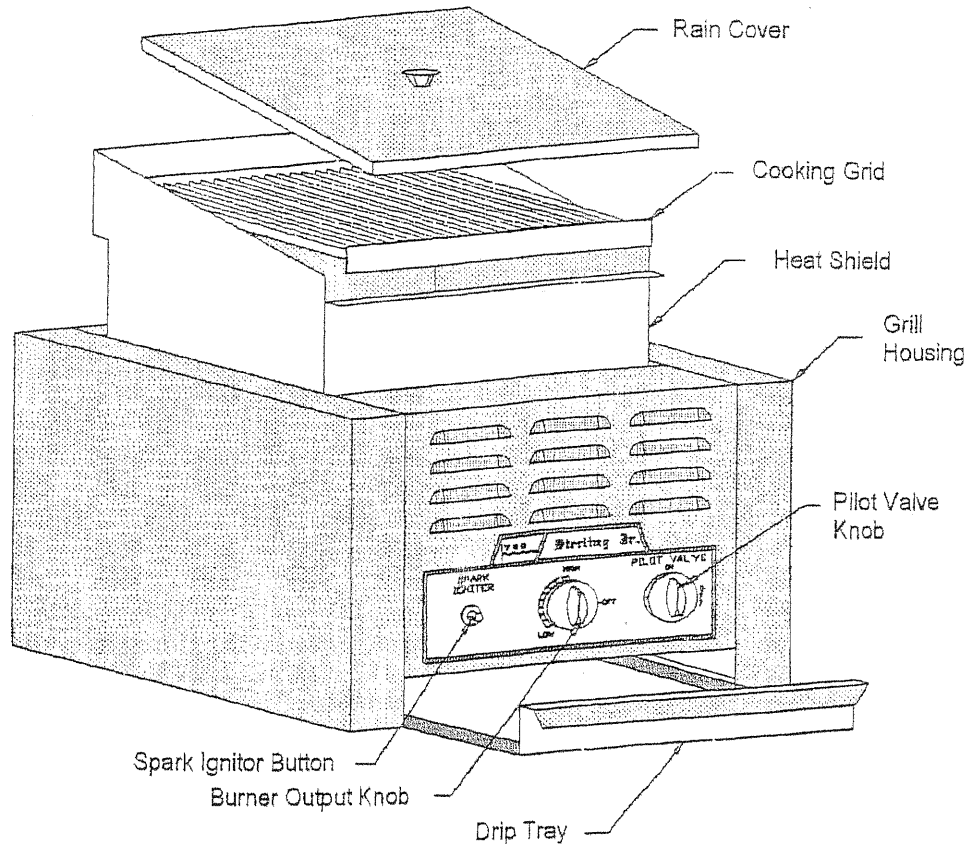
ASSEMBLY

Once installed, simply place the Heat Shield and U-channel Cooking Grid as shown illustrated below.

The Cooking Grid is designed with a slight backward tilt that directs flow of product juices to the Drip Tray. The drip holes in the Cooking Grid should be placed to the rear. The open side of the U-channel should face upward.

	Combustible Construction	Non-Combustible Construction
Sides	24"	0"
Back	24"	0"

Table A.1 Clearance Specifications



GAS CONNECTION

GENERAL OVERVIEW

Gas supply specifications are listed in Table A.2 or on rating plate located on the inside rear panel of the Sterling Jr.

	NAT	LPG
SUPPLY PRESSURE (in. WC, max / min)	14.0 / 5.0	14.0 / 12.0
OPERATING PRESSURE (in. WC)	4.0	11.0
MAIN BURNER ORIFICE SIZE (DMS / Ø Dia.)	49 (.0730")	58 (.0420")
BURNER OUTPUT (BTU/hr.)	16,500	

Table A.2 Gas Supply Specifications

GAS SUPPLY

CAUTION: GAS PIPING TO THIS APPLIANCE MUST BE IN ACCORDANCE WITH LOCAL CODES. IN THE ABSENCE OF LOCAL CODES, USE THE NATIONAL FUEL GAS CODE, ANSI Z223.1 (latest edition).

NOTICE: TEC® RECOMMENDS THAT A FIRE EXTINGUISHER FOR CLASS A, B, C & D FIRES BE READILY AVAILABLE AT ALL TIMES.

CAUTION: THE GAS SHUT-OFF VALVE MUST BE TURNED OFF WHEN THE APPLIANCE IS NOT IN USE.

Your grill was built at the factory for use with Natural or LP gas fuel, as ordered. Attempts to alter the grill from its specified fuel type should not be made without first consulting TEC® Customer Service. The rating plate, located on the inside back body panel, specifies the fuel type.

The gas supply piping to your grill should be installed by your local gas company. An American Gas Association approved shut-off valve is required to be installed in the gas supply line at the appliance. Reference illustration at right for arrangement. This valve is used to isolate the appliance from potential damage such as that caused by pressure surges in the gas line when the grill is not in use.

The appliance and its shut-off valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressures in excess of ½ PSIG (3.5 KPa). The appliance must also be isolated from the gas supply piping system by closing its shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ PSIG (3.5 KPa).

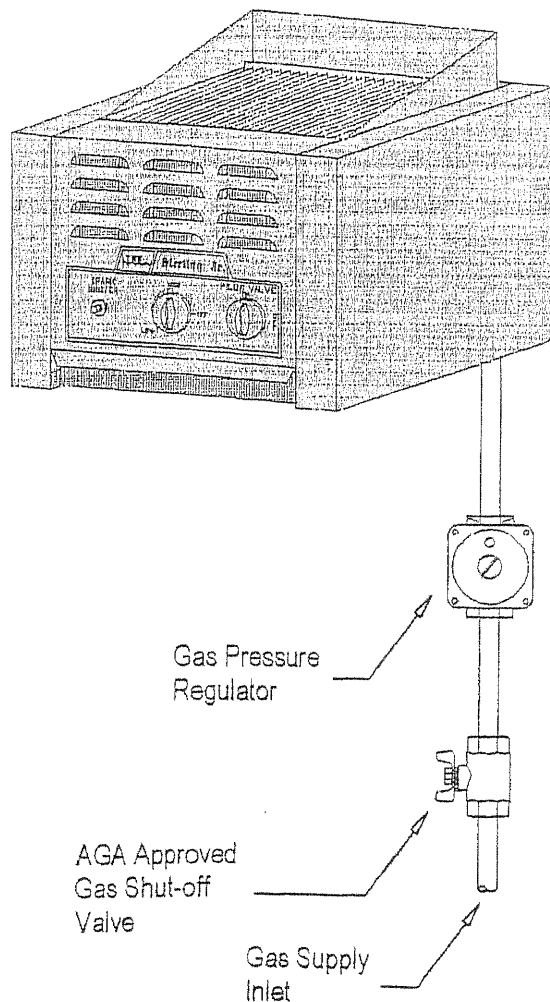
GAS LEAK TEST

WARNING: DO NOT USE OPEN FLAME TO PERFORM LEAK TEST!

Open flame should not be used in the area around the appliance during this test. The procedure should be carried out each time the gas connection is disconnected.

Procedure:

1. Insure that the Burner Output Knob and Pilot Valve Knob are in the OFF position.
2. Open appliance's supply line gas shut-off valve slowly. Apply heavy soapy water or similar solution to all connections including those made at the factory.
3. Inspect connections for presence of bubbles. If bubbles appear, close valves and tighten connections. Repeat steps 1 and 2 above until bubbles cease.



OPERATION

GENERAL OVERVIEW

WARNING: NEVER ATTEMPT TO USE EQUIPMENT WHEN YOU SMELL GAS.

CAUTION: NEVER PLACE FOOD OVER A BURNER THAT IS NOT IN OPERATION; DRIPPINGS WILL NOT BE INCINERATED AND THEREFORE BLOCKAGE OF THE SMALL PORTS MAY RESULT. THE BURNER SHOULD NOT COME IN CONTACT WITH WATER OR OTHER CLEANING FLUIDS. DAMAGE MAY RESULT CAUSING THE BURNER TO FUNCTION IMPROPERLY.

CAUTION: The Heat Shield should be in place at all times during Burner operation.

NOTICE: TEC® RECOMMENDS THAT A FIRE EXTINGUISHER FOR CLASS A, B, C & D FIRES BE READILY AVAILABLE AT ALL TIMES.

BURNER IGNITION

Procedure:

1. Insure all valves are closed and that top of appliance is not covered.
2. Open gas valves in supply line.
3. Depress and turn Pilot Valve Knob to ON.
4. Slowly depress red Spark Ignitor button completely 5 times and check for pilot flame. If flame is not present, turn Pilot Valve knob to OFF, wait 5 minutes the repeat step three.
5. Rotate Burner Output Knob to HIGH. Burner will ignite. Maintain operation at HIGH until ceramic surface of burner is red hot.
6. Depress and rotate Burner Output Knob to desired cooking level.

BURNER IGNITION WITHOUT PILOT

CAUTION: DO NOT HOLD MATCH ABOVE SCREEN WHEN LIGHTING BURNER MANUALLY. PLACE MATCH DIRECTLY ON BURNER SCREEN AND PULL HAND AWAY FROM GRILL.

If the pilot/spark ignition system is not operational, the burner may be ignited manually, using a match. Use the following procedure to do so.

Procedure:

1. Insure all valves are closed and that top of appliance is not covered.
2. Open gas valves in supply line.
3. Place lighted match on burner. Pull hand away!
4. Rotate Burner Output Knob to HIGH. Burner will ignite. If flame is not present when match burns out, turn Burner Output Knob to OFF, wait 5 minutes then repeat steps three and four
5. Maintain operation at HIGH until ceramic surface of burner is red hot..
6. Depress and rotate Burner Output Knob to desired cooking level.

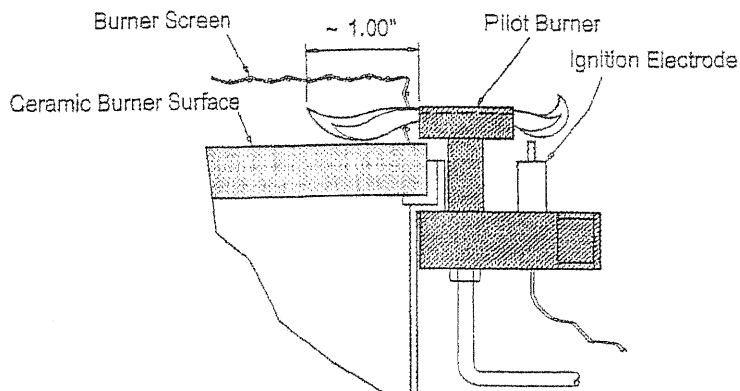
EXTINGUISHING BURNER FLAME

Procedure:

1. Depress and rotate Burner Output Knob and Pilot Valve Knob to OFF.
2. Close main valve from gas supply.

PILOT FLAME ADJUSTMENT

The pilot flame length is preset at the factory. The ideal adjustment of the pilot flame is illustrated below. If it becomes necessary to adjust this setting, follow the instructions listed below.



Procedure:

1. Light the pilot as described in *Burner Ignition*.
2. Remove Pilot Valve Knob.
3. Insert small blade-type screw driver into Pilot Valve Access Hole (see illustration on next page). Engage Pilot Adjusting Screw.
4. Turn clockwise to reduce flame length and counterclockwise to increase flame length. The flame should be approximately 1 inch in length.
5. Remove screw driver and replace Pilot Valve Knob.

BURNER LOW-HEAT ADJUSTMENT

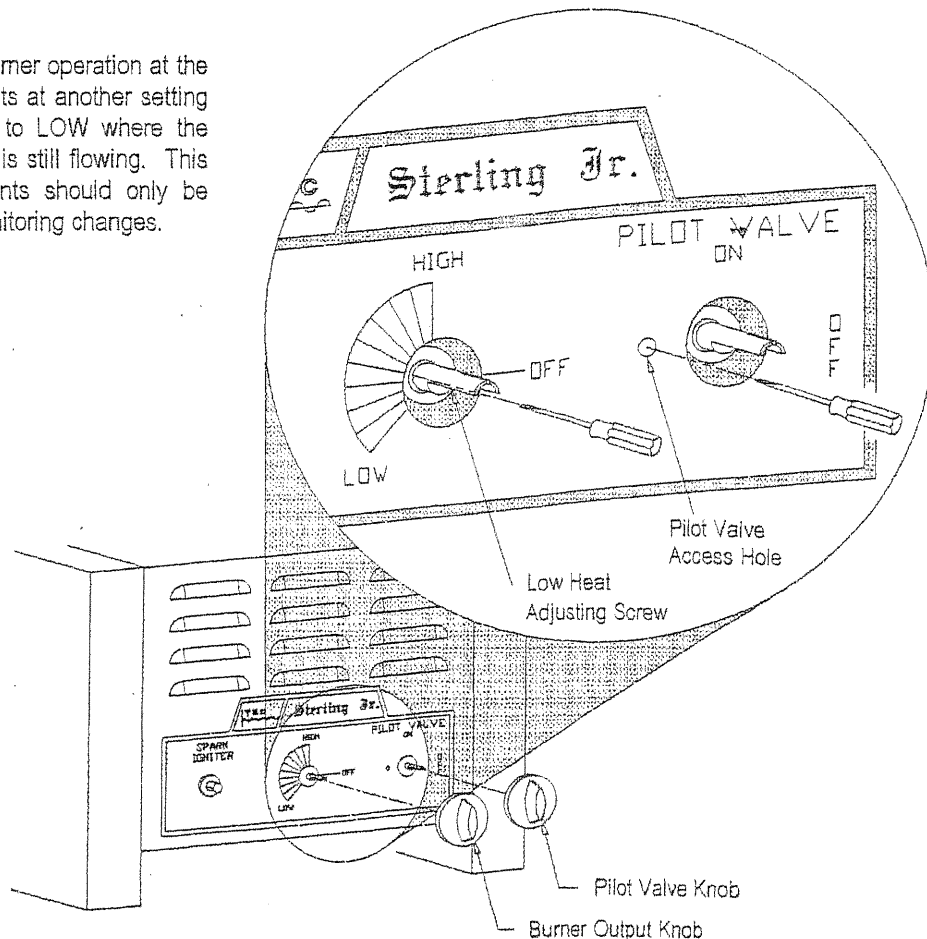
NOTICE: THE LOW HEAT POSITION OF THE BURNERS SHOULD BE SET WHERE INCANDESCENCE OR THE ORANGE COLOR OF BURNER HAS ALMOST DISAPPEARED. THE FLAME MUST BE STABLE AND SHOULD NOT WAIVER ON THE BURNER SURFACE. NEVER ADJUST THE BURNER SO LOW THAT IT MAY GO OUT DURING USE.

The burner's low heat output is preset at the factory. If it should be necessary to adjust this setting due to a particular cooking style, follow the instructions below.

The Low Heat Adjusting Screw only affects burner operation at the LOW setting. Any efforts to make adjustments at another setting will go unnoticed until the burner is turned to LOW where the burner may involuntarily extinguish while gas is still flowing. This condition is unsafe and therefore adjustments should only be made from the LOW setting while visually monitoring changes.

Procedure:

1. Follow *Burner Ignition* procedures and operate grill for approximately 5 minutes until ceramic surface of burner is red hot.
2. Turn the Burner Output Knob to the LOW position and wait until the temperature drops and stabilizes.
3. Remove Burner Output Knob from valve stem.
4. Insert small blade type screwdriver into valve stem to engage recessed Low Heat Adjusting Screw. Turn clockwise to reduce low heat intensity or turn counter-clockwise to increase low heat intensity. This adjustment affects the flame at the low dial setting only.



HAZARDOUS LOCATIONS AND CONDITIONS

- ◇ Do not use your grill closer than 24 inches to any combustible surface (wood, wall or wooden fence, etc.) nor within 24 inches of any overhead combustible material (i.e. wood, canvas, plastic, etc.).
- ◇ Do not obstruct the flow of combustion and ventilation air.
- ◇ This grill should only be used outdoors in a well-ventilated space and must not be used in a building, garage, or any other enclosed area.
- ◇ Keep all flammable substances away from the grill. These include most aerosols and aerosol containers, gasoline and similar liquids, paper and paper products, containers of grease, paint, etc.
- ◇ Never leave grill unattended while in operation.
- ◇ Never use water in an attempt to control flare-up.
- ◇ Avoid wearing flammable and/or loose clothing such as long-sleeves, neckties, scarves, aprons, etc., while the grill is in operation.

INFRA-RED COOKING

GENERAL OVERVIEW

Now that you're ready to begin cooking, you can enjoy cooking outdoors quickly and effortlessly. In minutes, you can enjoy steaks, hamburgers, poultry, pork chops, roasts, or any other outdoor-cooked food. We hope you find these tips helpful as you cook and develop your own cooking techniques.

TEC[®] INFRA-RED SEARING METHOD

The high Infra-red energy output of your TEC[®] grill has many advantages. For example, meat is evenly cooked throughout. Another major advantage in using this type of high intensity burner is that grease and food particles incinerate upon contact with the burner surface and thereby impart flavor into the food being cooked.

Searing is a short cooking process to seal juices in food products. This develops aroma and flavor on the outside surface of the product. Use the following procedure to sear foods.

1. Perform procedures for *Burner Ignition*.
2. Following a 3 minute heat-up period, set the Burner Output Knob to HIGH and place food products on Cooking Grid for 1-2 minutes or until product begins to lift without sticking.
3. Repeat for other side of food product.
4. Adjust the Burner Output Knob between the low and medium fire positions and continue cooking until the meat is cooked to your satisfaction. Turn portions as often as necessary.

During the searing period, a certain degree of flashing should be expected. The flashings and smoke generated can help "char-cook" your food. The char-cooked flavor is a result of meat juices vaporized upon contact with the burner surface and Cooking Grid U-channel.

HELPFUL HINTS IN COOKING

1. Remove Drip Tray and line with heavy-duty aluminum foil. This will prove helpful when cleaning.
2. Line the inside surface of the Heat Shield with heavy-duty aluminum foil. When cleaning, removal of the aluminum foil will be all that is necessary for this component.
3. Use Proper Tools - long handled tongs, spatula, knife, fork, mitts or a hot pad when handling hot items.
4. Meat Temperature - large cuts of meat, roasts, or fowl should be allowed to come to room temperature before cooking. Smaller meat cuts such as hamburgers, wieners, or small steaks may be cooked directly from the refrigerator. **Note:** Portion meats are not recommended cooked from a frozen state.
5. Start Slowly - Infra-red grilling is unlike other outdoor cooking methods. It may take time to become familiar with the speed of the cooking process.
6. When turning or moving meats, we recommend using long handled tongs or a spatula, instead of a fork. Forks pierce meat, causing the portion to lose the natural juices, and therefore, flavor.

FLAME FLARE-UP CONTROL

NOTICE: NEVER DOUSE A FLARE-UP WITH WATER.

Minimize flame flare-ups by:

- ◇ using Cooking Grids with U-shape facing up.
- ◇ trimming excess fat from meat portions.
- ◇ preheating grill for 3 minutes before each use.
- ◇ reducing heat and repositioning meat portions as often as necessary while cooking.
- ◇ placing meat portions on the rear cooking surface until the source of the flare-up has diminished.
- ◇ disallowing excessive grease build up on cooking surfaces.

MAINTENANCE AND CLEANING

GENERAL OVERVIEW

CAUTION: ALWAYS ALLOW GRILL TO COOL SUFFICIENTLY BEFORE CLEANING. WATER MUST NOT MAKE CONTACT WITH THE BURNER SURFACE, WHILE HOT OR COLD.

Good maintenance and clean up will help insure long life of your grill. Periodic cleaning will help avoid accumulations of flammable grease, fats, and other debris.

Due to the high intensity of the Infra-red burner, during normal operation, drippings and food particles that fall onto the burner surface are incinerated. However, some debris and residue may remain. To remove this residue, operate grill on HIGH for 5-10 minutes. Any substantial particles will disappear. For further burner maintenance instructions, see *Maintenance*.

CLEANING

Drip Tray

Remove the soiled aluminum foil and re-cover. The Drip Tray may require cleaning with soap and water.

Grill Body

Remove soiled aluminum foil and re-cover. If necessary, the Heat Shield may be lifted out for further cleaning.

Cooking Grid

Leaving the Cooking Grid in place for 5-10 minutes while the burner is at high fire will facilitate easier cleaning. However, the Cooking Grid may be removed and cleaned with a brass or stainless steel bristle brush and soap solution. Typical oven cleaning solutions may also be applied for further cleaning. Rinse the Cooking Grid thoroughly with clean water before each use.

MAINTENANCE

Burner

The most important consideration in maintaining the performance of the Infra-red burner is to insure that the burner is operated on HIGH for a period of at least 5 minutes after each use.

From time to time, ash will accumulate on the surface of the burner. This ash, if allowed to accumulate, may contribute to blockage of the small ports in the ceramic surface. To prevent this blockage, remove the Cooking Grid and the Burner Screen. Vacuum the burner surface with a low-suction vacuum cleaner every six months or as necessary. The ceramic surface of the burner is fragile and must be handled carefully. Take care to leave fibrous insulating material undisturbed while vacuuming.

TEC® Replacement Parts

Contact your authorized TEC® Dealer regarding information on replacement parts and accessories. Reference the Appendix of this manual for a listing of replacement parts and accessories.

A P P E N D I X

Sterling Jr. Built-in Installation Specifications

Sample Cooking Methods

Rear-Fed Gas Supply

Figures A.1-3 reference built-in installation where gas supply line penetrates fixture at rear.

* Dashed line represents applicable dimensions when TEC[®] Insulated Sleeve is used.

Dimensions for reference only. Appliance should be on site prior to installation.

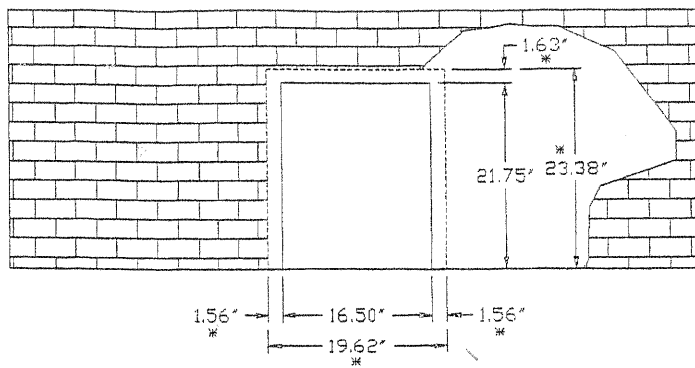


Figure A.1 TOP VIEW

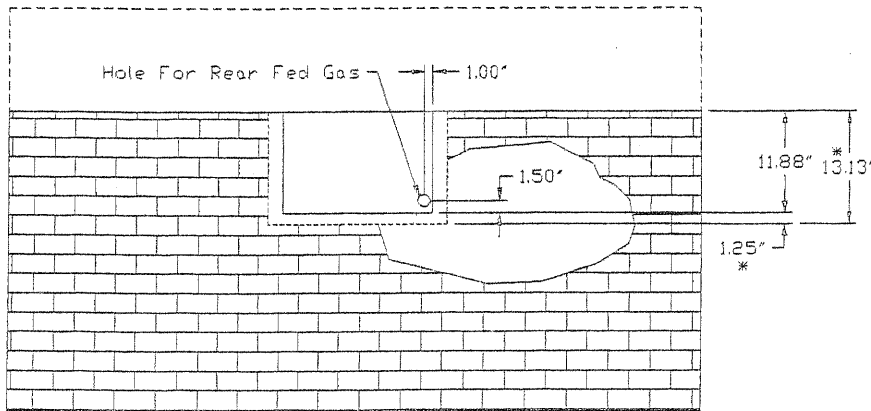


Figure A.2 FRONT VIEW

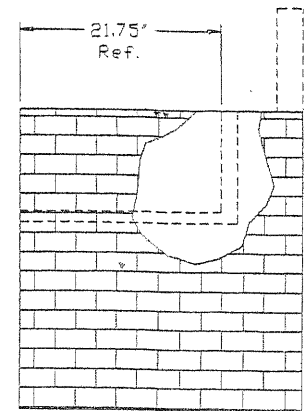


Figure A.3 END VIEW

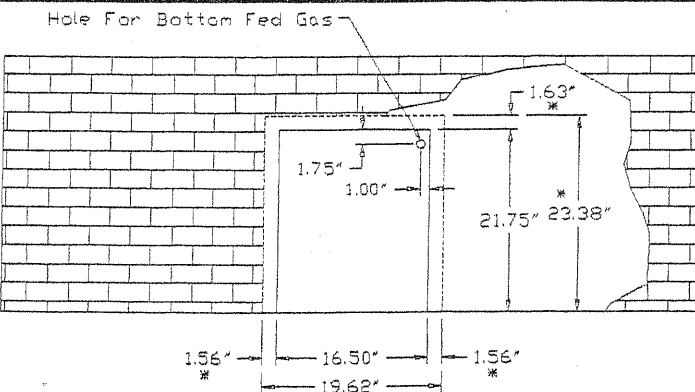


Figure B.1 TOP VIEW

Bottom-Fed Gas Supply

Figures B.1-3 reference built-in installation where gas supply line penetrates fixture at bottom.

* Dashed line represents applicable dimensions when TEC[®] Insulated Sleeve is used.

** Shut-off valve and regulator located in open space below appliance.

Dimensions for reference only. Appliance should be on site prior to installation.

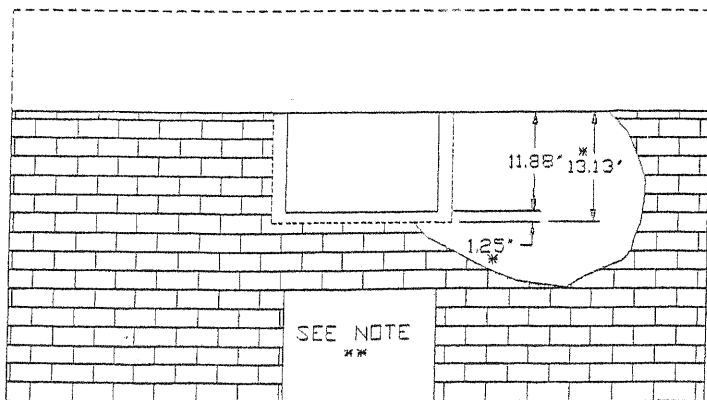


Figure B.2 FRONT VIEW

SSG-20 -Revised 09/04/96

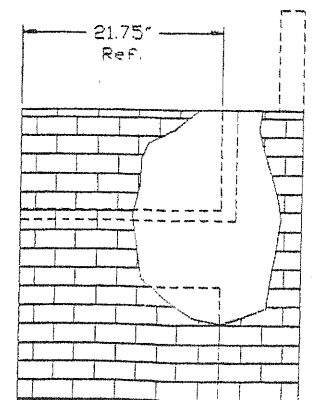


Figure B.3 END VIEW

SAMPLE COOKING METHODS

Product	Control Setting	Total Cooking Time
Steak 1" Thick	High fire 2 min. each side	4 min. - Rare
	High fire 2 min. each side. Balance medium fire	6 min. - Medium
	High fire 2 min. each side. Balance medium fire	8 min. - Well Done
Hamburger ½" Thick	High fire 2 min. each side	4 min. - Rare
	High fire 2 ½ min. each side	5 min. - Medium
	High fire 3 min. each side.	6 min. - Well Done
Chicken Parts	High fire, 2 min. per side Balance medium low to low fire	15-25 min.
		20 min./pound - Medium
		25 min./pound - Well Done