



**IMPORTANT FOR FUTURE REFERENCE**  
 Please complete this information and retain this manual for the life of the equipment:

Model #: \_\_\_\_\_  
 Serial #: \_\_\_\_\_  
 Date Purchased: \_\_\_\_\_

**Owner's Manual**

# Infrared/Radiant Compact Broiler



**! WARNING**

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

1100 Old Honeycutt Road Fuquay-Varina, North Carolina 27526 USA  
[www.southbendnc.com](http://www.southbendnc.com)



# SAFETY PRECAUTIONS

Before installing and operating this equipment, be sure everyone involved in its operation is fully trained and aware of precautions. Accidents and problems can be caused by failure to follow fundamental rules and precautions.

The following symbols, found throughout this manual, alert you to potentially dangerous conditions to the operator, service personnel, or to the equipment.



**DANGER**

This symbol warns of immediate hazards that will result in severe injury or death.



**WARNING**

This symbol refers to a potential hazard or unsafe practice that could result in injury or death.



**CAUTION**

This symbol refers to a potential hazard or unsafe practice that could result in injury, product damage, or property damage.

**NOTICE**

This symbol refers to information that needs special attention or must be fully understood, even though not dangerous.

 **WARNING**  
**FIRE HAZARD**  
**FOR YOUR SAFETY**

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. Keep area around cooking appliances free and clear of combustibles.

Purchaser of equipment must post in a prominent location detailed instructions to be followed in the event the operator smells gas. Obtain the instructions from the local gas supplier.

 **WARNING**  
**BURN HAZARD**

Contact with hot surfaces will cause severe burns. Always use caution when operating cooking appliances.

 **WARNING**  
**EXPLOSION AND ASPHYXIATION HAZARD**

In the event a gas odor is detected, shut down equipment at the main gas shut-off valve and immediately call the emergency phone number of your gas supplier.

Improper ventilation can result in headaches, drowsiness, nausea, and could result in death. Do not obstruct the flow of combustion and ventilation air to and from cooking appliances.

 **WARNING**  
**ELECTRIC SHOCK HAZARD**

For appliances that use electric power, disconnect the power to the appliance before cleaning. Do not remove panels that require tools to remove. Disconnect power before opening kick panel below oven.

**NOTICE**

This appliance is intended for commercial use, and is only for professional use. It shall be used by trained, qualified people.

Warranty will be void if service work is performed by other than a qualified technician, or if other than genuine Southbend replacement parts are installed.

Give this Owner's Manual and important papers to the proper authority to retain for future reference.

Congratulations! You have purchased one of the finest pieces of heavy-duty commercial cooking equipment on the market.

You will find that your new equipment, like all Southbend equipment, has been designed and manufactured to meet the toughest standards in the industry. Each piece of Southbend equipment is carefully engineered and designs are verified through laboratory tests and field installations. With proper care and field maintenance, you will experience years of reliable, trouble-free operation. **For best results, read this manual carefully.**

RETAIN THIS MANUAL FOR FUTURE REFERENCE.

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Read these instructions carefully before attempting installation. Installation and initial startup should be performed by a qualified installer. Unless the installation instructions for this product are followed by a qualified service technician (a person experienced in and knowledgeable with the installation of commercial gas an/or electric cooking equipment) then the terms and conditions on the Manufacturer’s Limited Warranty will be rendered void and no warranty of any kind shall apply.

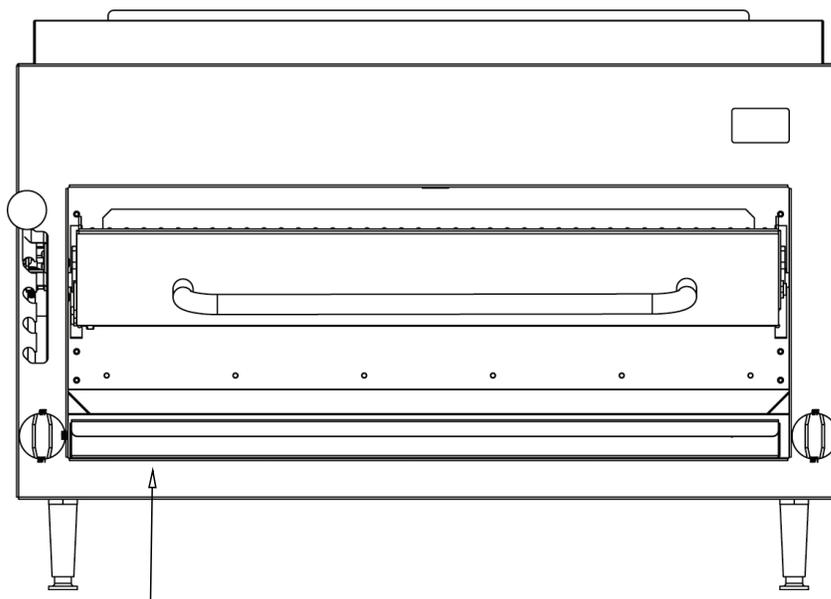
In the event you have questions concerning the installation, use, care, or service of the product, contact:

Southbend  
1100 Old Honeycutt Road  
Fuquay-Varina, North Carolina 27526 USA

The serial plate is located on the interior side of the lower front panel, as shown below.

Figure 1

### Location of Serial Plate



Serial Plate (Located under grease drawer)

# SPECIFICATIONS

## NOTICE

Local codes regarding installation vary greatly from one area to another. The National Fire Protection Association, Inc. states in its NFPA 96 latest edition that local codes are the “authority having jurisdiction” when it comes to installation requirements for equipment. Therefore, installations should comply with all local codes.

Southbend reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, additions, or replacements for previously purchased equipment. This product is intended for commercial use only, not for household use.

The installation must conform with local codes, or in the absence of local codes, with the *National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1*, or the *Propane Installation Code CAN/CGA-B149.2*, as applicable, including:

1. The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.45 kPa).
2. The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.45 kPa).

## CLEARANCES

There must be adequate clearance between the broiler and adjacent construction due to the heat generated by the broiler. Clearance must also be provided for servicing and for operation.

The minimum clearance from non-combustible construction is 1” on the sides (to permit combustion air to enter the sides of the broiler). To service the broiler components, all models require at least 6” accessibility clearance on the right and left side.

Adequate clearance must be provided in front of the broiler for operation and cleaning.

The high-temperature flue products from the broiler burners flow out through a vented cover on top of the broiler. Installation under a vented hood is recommended.

## WARNING

### MINIMUM CLEARANCES FROM COMBUSTIBLE CONSTRUCTION

The countertop model requires a minimum clearance from combustible surfaces of 1” on the sides.

The wall-mount model requires a minimum clearance from combustible surfaces of 1” on the sides.

The range-mount model should comply with the range’s minimum clearance from combustible surfaces of 6” on the sides and rear.

## VENTILATION

## WARNING

Improper ventilation can result in personal injury or death. Ventilation which fails to properly remove flue products can cause headaches, drowsiness, nausea, or could result in death.

All units must be installed in such a manner that the flow of combustion and ventilation air is not obstructed. Provisions for adequate air supply must be provided. Do not obstruct the front of the unit at the bottom where the air filter is located or below the oven door as combustion air enters at these locations.

**NOTICE**

Proper ventilation is the owner's responsibility. Any problem due to improper ventilation will not be covered by the warranty.

Be sure to inspect and clean the ventilation system according to the ventilation equipment manufacturer's instructions.

Canopies are set over ranges, ovens, etc., for ventilation purposes. It is recommended that a canopy extend 6" past the appliance and the bottom edge be located 78" above the floor. Filters should be installed at an angle of 45° or more from the horizontal. This position prevents dripping grease and facilitates collecting the run-off grease in a drip pan, usually installed with a filter.

A strong exhaust fan tends to create a vacuum in the room and may interfere with burner performance or may extinguish pilot flames. Fresh air openings approximately equal to the fan area will relieve such a vacuum.

The exhaust fan should be installed at least 2" above the vent opening at the top of the broiler.

If the broiler is connected directly to an outside flue, a CSA design-certified down draft diverter must be installed.

**NOTICE**

Due to the variety of problems encountered by outside weather conditions, venting by canopies or wall fans is preferred over any type of direct venting.

If the unit is connected directly to an outside flue, a CSA design certified down draft diverter must be installed.

In case of unsatisfactory performance on any appliance, check the appliance with the exhaust fan turned OFF. Do this only long enough to check whether doing so corrects any problems with equipment performance. Then turn the exhaust fan back on and let it run to remove any exhaust that may have accumulated during the test.

## GAS SUPPLY

The broiler is design-certified for operation on natural gas or propane. The broiler is shipped configured and adjusted for the type of gas specified by the purchaser, which is indicated on the serial plate (see Figure 1). Connect the broiler **ONLY** to the type of gas for which it is configured and adjusted.

Sectional range (field mount), wall mount, or countertop broilers will be supplied with the appropriate regulator and will require field piping. Restaurant range mounted broilers will connect to the existing regulator on the restaurant range oven base.

A model that mounts on the flue riser of a range will have a 3/8" rear gas connection (with a 3/8" male NPT connector) extending through the rear of the flue riser (see Figure 2 on page 7).

Wall-mount and countertop models will have a 3/8" rear gas connection (with a 3/8" male NPT connector). The gas connection can extend directly out the rear of the broiler (near the bottom right-rear corner).

Minimum supply pressure is 7" W.C. for natural gas, 11" W.C. for propane. If using a flexible-hose gas connection, the I.D. of the hose must not be smaller than the connector on the broiler, and must comply with ANSI Z21.69. Provide an adequate means of restraint to prevent undue strain on the gas connection.

If applicable, the vent line from the gas appliance pressure regulator must be installed to the outdoors in accordance with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1, or the Propane Installation Code CAN/CGA-B149.2, as applicable.

An adequate gas supply is imperative. Undersized or low pressure lines will restrict the volume of gas required for satisfactory performance. A 1/8" pressure tap is located on the manifold to measure the manifold pressure.

Purge the supply line to clean out dust, dirt, or other foreign matter before connecting the line to the broiler.

All pipe joints and connections must be tested thoroughly for gas leaks. Use only soapy water for testing on all gases. **NEVER** use an open flame to check for gas leaks. All connections must be checked for leaks after the range has been put into operation. Test pressure should not exceed 14" W.C. (3.47 kPa).

# INSTALLATION

## NOTICE

These installation procedures must be followed by qualified personnel or warranty will be void.

Local codes regarding installation vary greatly from one area to another. The National Fire Protection Association, Inc. states in its NFPA 96 latest edition that local codes are the “authority having jurisdiction” when it comes to installation requirements for equipment. Therefore, installations should comply with all local codes.

The installation must conform with local codes, or in the absence of local codes, with the *National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1*, or the *Propane Installation Code CAN/CGA-B149.2*, as applicable, including:

1. The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.45 kPa) or 35 mbar (14” W.C).
2. The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.45 kPa) 35 mbar (14” W.C).

## NOTICE

**EXHAUST FANS AND CANOPIES:** It is recommended that the Southbend equipment be installed under a ventilation hood. Consult local codes for proper installation of hoods. Proper ventilation is the owner’s responsibility. Any problem due to improper ventilation will not be covered by warranty.

## NOTICE

In the Commonwealth of Massachusetts all gas appliances vented by either mechanical systems or ventilation hoods shall comply with 248 CMR interlocking requirements.

## STEP 1: UNPACKING

### IMMEDIATELY INSPECT FOR SHIPPING DAMAGE

All containers should be examined for damage before and during unloading. The freight carrier has assumed responsibility for its safe transit and delivery. If damaged equipment is received, either apparent or concealed, a claim must be made with the delivering carrier.

Apparent damage or loss must be noted on the freight bill at the time of delivery. The freight bill must then be signed by the carrier representative (Driver). If the bill is not signed, the carrier may refuse the claim. The carrier can supply the necessary forms.

A request for inspection must be made to the carrier within 15 days if there is concealed damage or loss that is not apparent until after the equipment is uncrated. The carrier should arrange an inspection. Be certain to hold all contents plus all packing material.

For each section, do the following:

1. Cut the banding straps and remove the corrugated cardboard surrounding the broiler. If legs were shipped in the same container, set them aside for installation in later steps of this procedure. Do not remove any tags or labels attached to the broiler until the broiler is installed and working properly.
2. Cut the banding strap holding the broiler to the wooden skid.
3. If installing the broiler over a range, go to Step 2a.  
If installing the broiler on a wall, go to Step 2b.  
If installing the broiler on legs for countertop use, go to Step 2c.

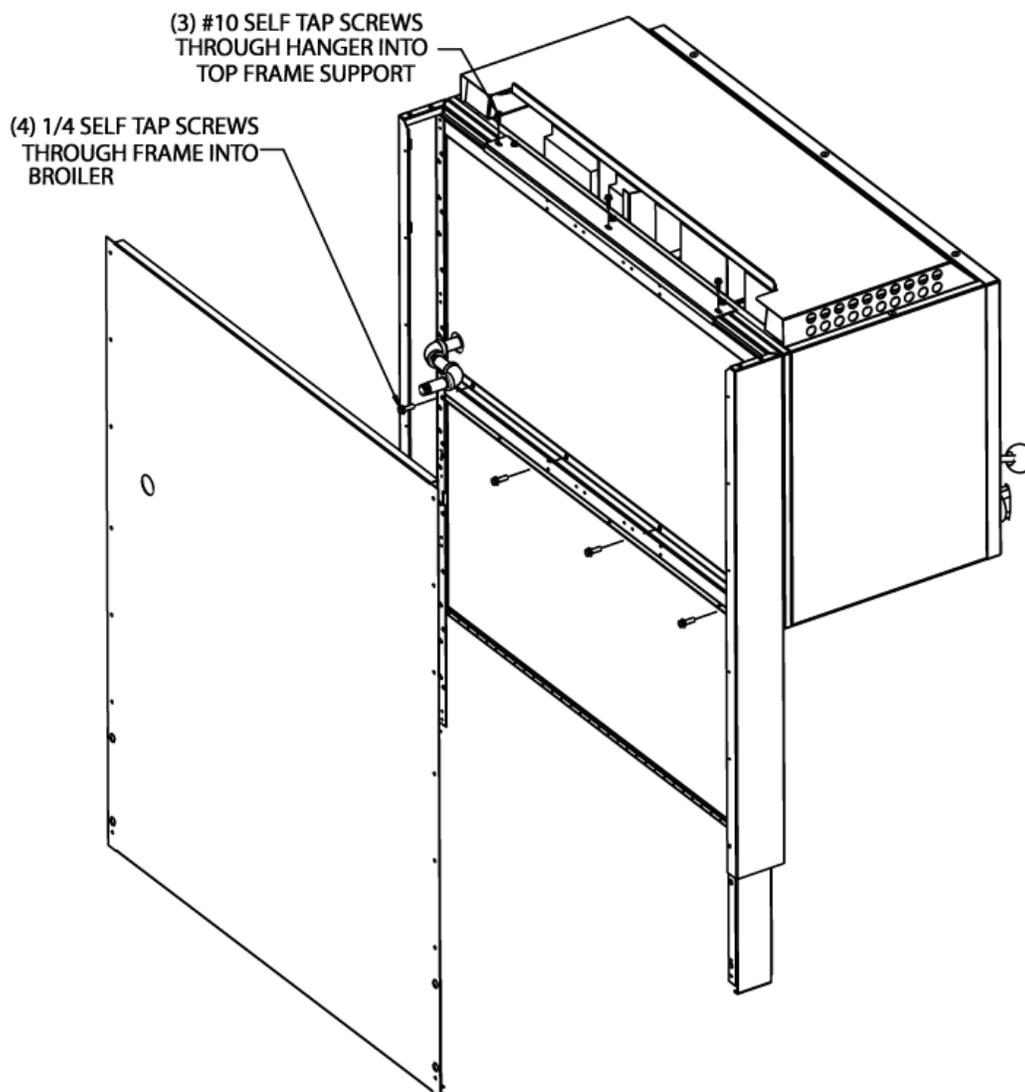
## STEP 2A: MOUNT ON FLUE RISER OF RANGE

If the broiler is to be mounted over a range, a special flue riser is shipped with the broiler and range. Depending on the shipping requirements, the broiler, flue-riser, and range base may already be partially or completely assembled.

1. Attach the flue riser to the rear of the range using the installation procedure included in the range manual, but do not attach the wall shield (the back of the flue riser) yet.
2. Lift the broiler (using two people is recommended) and hook the broiler-hook over the top-front edge of the flue riser. If necessary, move the broiler left or right so that the holes in the top of the broiler hook line-up with the holes in the top of the flue riser, then secure the broiler-hook to the flue riser using three #10 self tapping screws provided.
3. Secure the bottom of the broiler to the flue riser with the four 1/4" self-tapping screws provided. The holes are accessible from the rear of the unit behind the wall shield.
4. Attach the wall shield, which forms the rear of the flue riser. The gas supply inlet extending out from the rear of the broiler should be accessible through the corresponding hole on the back of the flue riser.
5. Go on to Step 3.

Figure 2

### Mounting of Infrared Compact Broiler on Flue-Riser



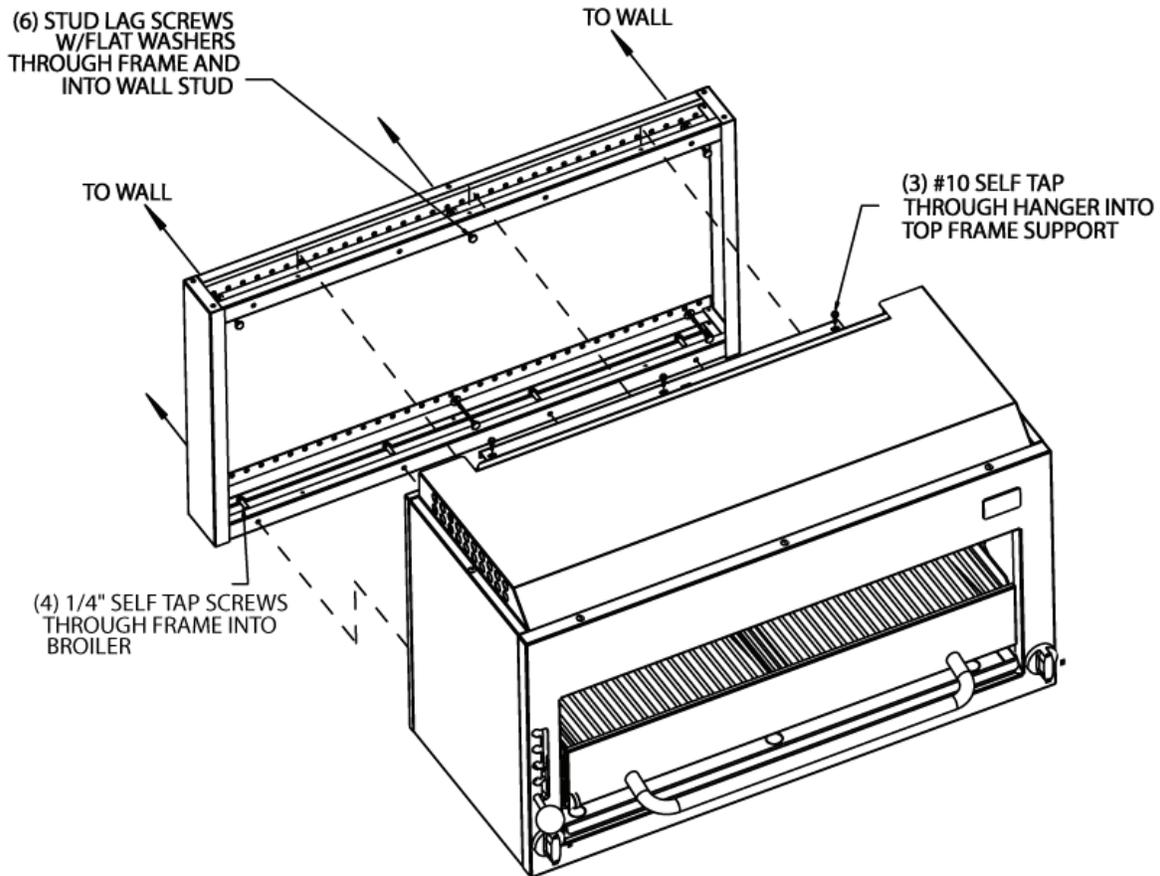
## STEP 2B: MOUNT ON WALL

The broiler is installed by first attaching a mounting bracket to the wall, then attaching the broiler to the bracket.

1. Attach the wall-mount assembly to the wall using the six 1/4" x 2" lag screws and six washers provided (see Figure 3). Screw through frame and into wall studs since the broiler weighs about 175 pounds (77 kilograms).
2. Check that the wall-mount is level (both side-to-side and front-to-back).

Figure 3

### Installation of Wall Bracket for Infrared Compact Broiler



3. It may be more convenient to prepare the gas supply line before the broiler is mounted on the wall bracket. If so, install the supply line and connector now (but do not yet attach it to the broiler).
4. Lift the broiler (using two people is recommended) and hook the broiler-hook over the top of the front of the wall bracket. If necessary, move the broiler left or right so that the holes in the top of the broiler hook line-up with the holes in the wall bracket, then secure the broiler-hook to the wall-mount bracket using three sheet-metal screws.
5. Secure the bottom of the broiler to the wall-mount bracket with the four provided 1/4" self-tap screws. The holes are accessible from the opening in the bottom of the wall-mount unit.
6. Go on to Step 3.

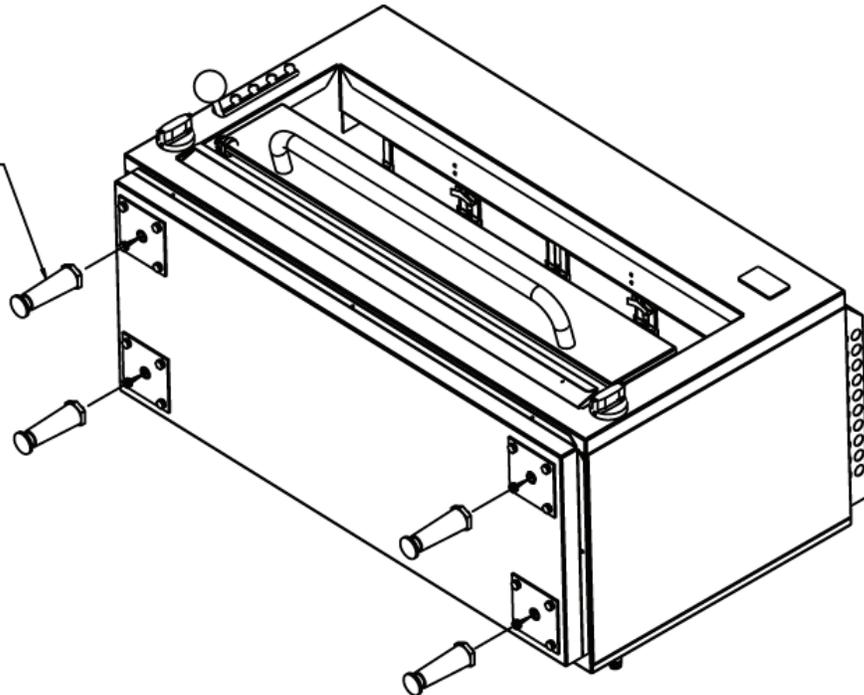
## STEP 2C: ATTACH COUNTERTOP LEGS

1. Install each leg by screwing them into the threaded holes in the bottom of the base.
2. Stand the broiler on its legs and position to minimum clearances specified on serial tag.

Figure 4

### Attaching Legs for Countertop Infrared/Radiant Compact Broiler

(4) 4" ADJUSTABLE LEGS  
SCREW INTO BASE



## STEP 3: CONNECT GAS SUPPLY

If this equipment is being installed at over 2000 feet (610 meters) altitude and that information was not specified when ordered, contact the appropriate authorized Southbend Service Representative or the Southbend Service Department. Failure to install with proper orifice sizing will result in poor performance and may void the warranty.

The broiler is design-certified for operation on natural or propane gases. The broiler is shipped configured and adjusted for the type of gas specified by the purchaser, which is indicated on the serial plate (see Figure 1). Connect the broiler **ONLY** to the type of gas for which it is configured and adjusted.

Sectional range (field mount), wall mount, or countertop broilers will be supplied with the appropriate regulator and will require field piping. Restaurant range mounted broilers will connect to the existing regulator on the restaurant range oven base. Broilers mounted on the flue riser of a range will have a 3/8" rear gas connection (with a 3/8" male NPT connector) extending through the rear of the flue riser (see Figure 3).

For wall-mount and countertop models, the gas connection (3/8" male NPT) extends directly out the rear of the broiler (near the bottom-right-rear corner), or (using an elbow) out the top of the broiler near the top-right-rear corner.

Minimum supply pressure is 7" W.C. for natural gas, 11" W.C. for propane. If using a flexible-hose gas connection, the I.D. of the hose must not be smaller than the connector on the broiler, and must comply with ANSI Z21.69. Provide an adequate means of restraint to prevent undue strain on the gas connection.

If applicable, the vent line from the gas appliance pressure regulator must be installed to the outdoors in accordance with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1, or the Propane Installation Code CAN/CGA-B149.2, as applicable.

An adequate gas supply is imperative. Undersized or low pressure lines will restrict the volume of gas required for satisfactory performance. A 1/8" pressure tap is located on the manifold to measure the manifold pressure.

**⚠ CAUTION**

ALL PIPE JOINTS AND CONNECTIONS MUST BE TESTED THOROUGHLY FOR GAS LEAKS. USE ONLY SOAPY WATER FOR TESTING ON ALL GASES. NEVER USE AN OPEN FLAME TO CHECK FOR GAS LEAKS. ALL CONNECTIONS MUST BE CHECKED FOR LEAKS AFTER THE EQUIPMENT HAS BEEN PUT INTO OPERATION. TEST PRESSURE SHOULD NOT EXCEED 1/2 psi (3.45 kpa) or 35 mbar (14" W.C.).

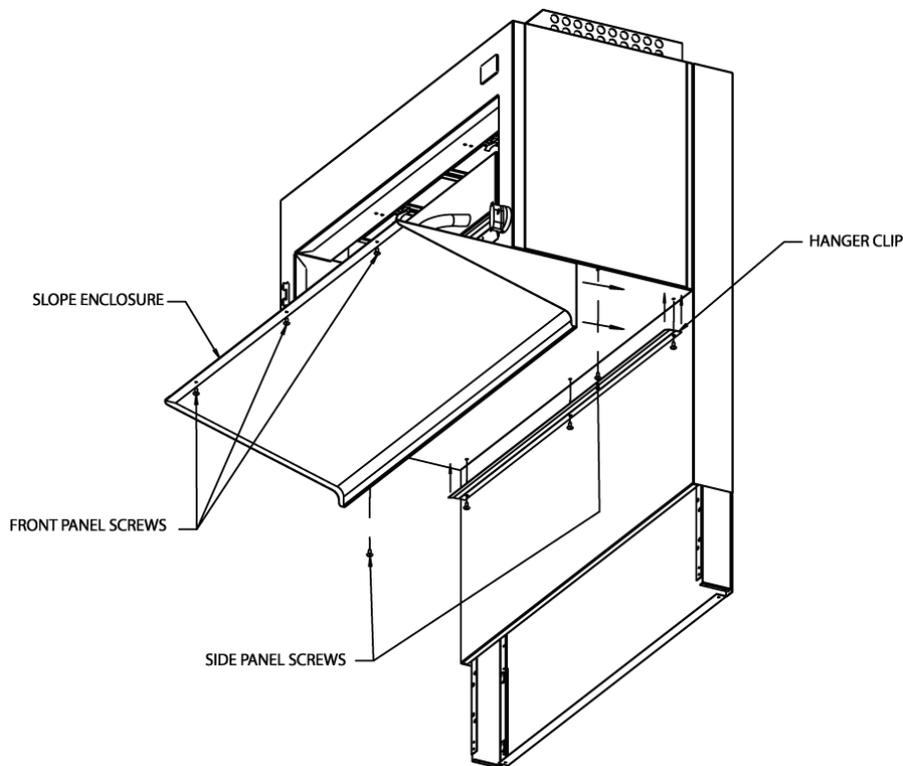
1. Check that the control valves on the broiler are in the OFF position.
2. Purge the gas supply line to clean out dust, dirt, or other foreign matter before connecting the line to the broiler.
3. For wall-mount and countertop models, connect the gas supply to the inlet at right rear corner using the external regulator shipped with the unit.
4. For flue-riser mounted installation, use the supplied regulator. Connect gas supply from broiler, which extends through a hole on the rear of the riser, to the rear tailpipe of the oven base.
5. Turn on the gas and check for leaks using soapy water.

## STEP 4: INSTALL SLOPED ENCLOSURE (OPTIONAL ACCESSORY)

To install a sloped enclosure, remove the body-side screws and discard. Remove three screws on the bottom, toward the rear of the unit. Position the hanger clip and fasten with three screws. Remove three screws in the bottom of the face plate. Slide the enclosure so that the bracket inserts into the hanger clip. Align the holes in the front of the enclosure with the holes in the bottom of the face plate. Fasten with three screws.

Figure 5

### Installation of Sloped Enclosure (If Ordered)



## STEP 5: CHECK THE INSTALLATION

Check the installation of the broiler, as follows:

1. Check that all screws and bolts are tightened.
2. Check that the gas connection has been made correctly.
3. With the broiler in the position that it will be operated, check that the broiler is level (both front-to-back and side-to-side).
4. Check that the appropriate minimum clearances are satisfied (see page 4), including adequate clearance for combustion air to enter the sides of the broiler.
5. Check that there is sufficient clearance in front of the broiler to pull out the broiler rack and bottom drip pan.
6. Check that adequate ventilation (fresh air supply and hood exhaust) is available to the room in which the broiler will operate.
7. Wipe clean all surfaces.

## STEP 6: CHECK BROILER OPERATION

Check the operation of the broiler, as follows:

1. Turn gas supply on. Immediately check all gas connections for leaks using soapy water.
2. Light the pilots. Check that the pilot flames are large enough to extend along the flame carrier to the burner surface. If not, adjust the pilots.
3. **Infrared:** Turn on the broiler burners and check for correct flame appearance and height at both the HIGH and LOW settings. When the burners ignite, a blue haze-type flame will cover the surface of the ceramics, but will gradually disappear within two minutes. When the burner control is set to HIGH, the ceramics should glow red and the flame on the surface of the ceramics should be barely visible, with little or no blue haze. When the burner control is set to LOW, the surface of the ceramics should glow very dull red and the flame should have a blue-haze color. The flame should not flutter or “pop.” If necessary, adjust the burners.  
**Radiant:** Turn the burner control to HIGH and visually check that the burners have ignited. Flames from the tube burner will spread over the stainless steel radiants. The stainless steel radiants will glow red within 3 minutes.
4. Check that gas supply is adequate by simultaneously turning on all burners of all appliances connected to the same gas supply to their highest setting, then again checking that the broiler’s pilot and burner flames have correct appearance and height.
5. Turn off all burners and allow the broiler to cool.

## STEP 10: SHUT-DOWN AND WIPE-CLEAN

1. Wipe clean all surfaces.
2. Unless the broiler is to be placed in service immediately, shut off the gas and electricity supplies.
3. Make sure that a copy of this manual will be available to the people who will operate and maintain the broiler.

# OPERATION

## DANGER

### EXPLOSION HAZARD

In the event a gas odor is detected, shut down equipment at the main gas shut-off valve and immediately call the emergency phone number of your gas supplier.

Improper ventilation can result in headaches, drowsiness, nausea, and could result in death. Do not obstruct the flow of combustion and ventilation air to and from cooking appliances.

## CAUTION

To eliminate gas build up which could result in an explosion, in the event of a burner ignition failure a five minute purge period must be observed prior to re-establishing ignition source.

## NOTICE

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

## NOTICE

Southbend Infrared broilers cook food in about half the time of conventional broilers, so adjust cooking times accordingly.

Southbend **infrared** broilers are unique in design. They incorporate our exclusive ceramic tile burners, which generate infrared rays that provide better quality products in about one-half the usual broiling time, and with less gas input than ordinary broilers. Very little energy is wasted in heating secondary surfaces, which is necessary for conventional-type broilers.

Since the surface of the ceramic tiles becomes red hot in less than one-half minute, the broiler is ready to start broiling with a very short preheat time, thereby saving time, labor and energy. These glowing surfaces emit intense infrared rays, which are transmitted directly onto the product, thereby yielding better tasting broiled food in less time.

The broiler design supplies 100% clean primary air to the burners, ensuring efficient combustion and maintaining full production capacity and maximum recovery, even in the most severe conditions of grease vapors and smoke atmospheres, which are created during any broiling process.

Southbend **radiant** broilers offer durable stainless steel radiants with anti corrosive steel tube burners. Flame from the burners are distributed over radiant plates providing a penetrating heat suitable for broiling or finishing delicate dishes

The location of the broiler controls and other components are shown in Figure 3 on the following page.

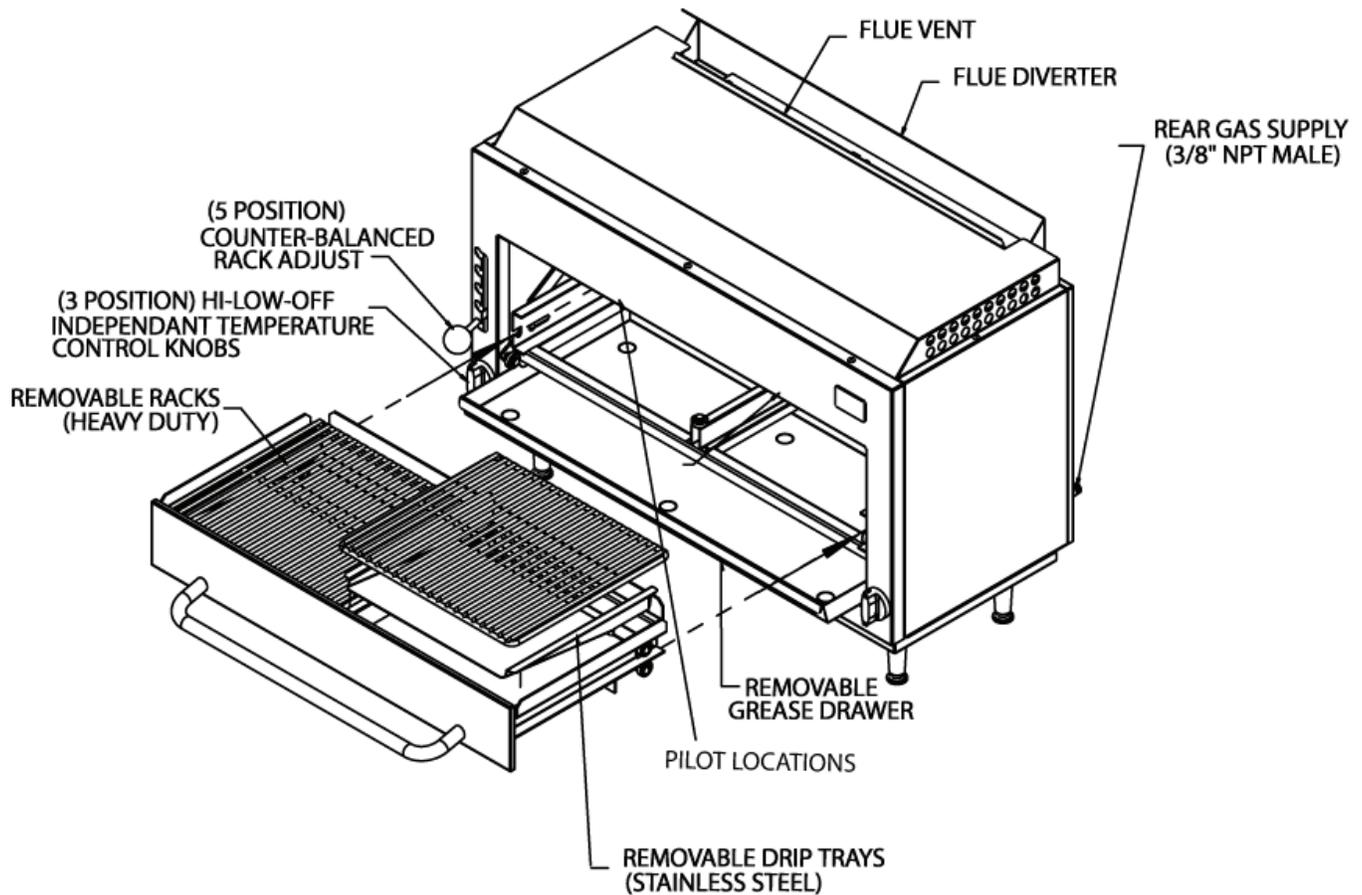
## LIGHTING AFTER GAS HAS BEEN SHUT OFF

When turning on the main gas supply after it has been shut off, do the following:

1. Make sure that all the control valves and power switches are in the OFF position.
2. Turn on the main gas supply valve(s).
3. Light the standing pilots of the appliance.

Figure 6

## Broiler Operation



Keep the bottom drip pan in place when broiling. Without it in place, excessive air is pulled past the burners, reducing temperture and cooking effnciency.

## OPERATION OF INFRARED COMPACT BROILER

Southbend infrared broilers broil in half the time of ordinary broilers. The burners reach operating temperature in just 90 seconds, and their intense infrared energy quickly heats the food, not the surrounding air. The broiling rack adjusts to five heights, and rolls out for easy access.

The cooking area has removable racks and drip trays for cleaning. As food cooks, drippings drain into a collection tray on the bottom of the broiler cavity. To operate the broiler, do the following:

1. Light the constant-burning pilots located near the front of the broiler burners, unless the pilots are already lit. (See page 10 for directions on how to light the pilots).
2. If necessary, pull out and empty the bottom grease drawer. (Always keep the drip trays in place while broiling. Without it in place, excessive air will be pulled past the burners, reducing the cooking temperature and efficiency.)
3. **Infrared:** Turn the burner control to HIGH and visually check that the burners have ignited. When the burners ignite, a blue haze-type flame will cover the surface of the ceramics, but will gradually disappear within two minutes.

Whether the burner control is set to HIGH, the ceramics will glow red and the flame on the surface of the ceramics should be barely visible, with little or no blue haze. When the burner control is set to LOW, the surface of the ceramics will glow very dull red and the flame will have a blue-haze color. (If the flame flutters or “pops” the broiler requires adjustment by a service technician.)

**Radiant:** Turn the burner control to HIGH and visually check that the burners have ignited. Flames from the tube burner will spread over the stainless steel radiants. The stainless steel radiants will glow red within 3 minutes

4. If searing the food to mark it with grid marks is desired, before placing food on the grid move the broiler rack to its highest position and allow the burners to operate on HIGH for five minutes.
5. Turn the burner control to HIGH or LOW (as appropriate for the food to be cooked).
6. Raise or lower the broiler rack to the height appropriate for the food to be cooked. To raise or lower the rack, move the lever arm to the right, raise or lower it, then move it to the left into a notch.
7. Pull out the rack, place food on the grid, and slide the rack back into the broiler. (It is recommended the rack be in the lowest position for loading food.)
8. Cook the food for the appropriate time, turning it when appropriate. Periodically check the broiler grease drawer and empty it when necessary.
9. When done broiling, turn the burner control to OFF. (To keep the broiler grid hot in order to mark food with sear marks without preheating, turn the burner controls to LOW and move the broiler rack to its highest position.)

## LIGHTING BROILER PILOTS

The pilots should burn continuously unless the broiler is to be completely shut down. The broiler cavity has two or three pilots, each near the front of a pair of burners. If the pilots are extinguished, the pilot gas supply is NOT automatically interrupted (unless the flame-failure option was ordered).

To light the pilots on a broiler WITHOUT the flame failure option, do the following:

1. Turn the control valves on the front of the broiler to OFF.
2. Turn on the gas supply to the broiler (if not already on).
3. Light the pilots.

To light the pilots on a broiler WITH the flame failure option, do the following:

1. Turn the control valves on the front of the broiler to OFF.
2. Turn on the gas supply to the broiler (if not already on).
3. Turn one of the burner control knobs to the PILOT position and push the knob inward and hold it in place. While continuing to hold the knob in, light the corresponding pilot and allow it to burn for 30 to 45 seconds. Release the knob and check that the pilot remains lit. Repeat this step for the remaining burner control knobs and pilots.

## SHUTDOWN OF BROILER

To place the broiler in a standby state (ready for use), turn the burner control valves to OFF (or to PILOT on units with the flame-failure option). The pilots will remain lit.

To completely shut down the broiler for an extended period (or prior to disconnecting the gas supply), turn the burner control valves to OFF, then turn off the manual shutoff valves of all gas supply connections. (This will extinguish all pilots.)

# CLEANING

## WARNING

Disconnect the power supply to the appliance before cleaning. Do not remove panels that require tools to remove.

## WARNING

Adjustments and service work should be performed only by a qualified technician who is experienced in, and knowledgeable with the operation of commercial gas cooking equipment. To assure confidence, contact your authorized service agency for reliable service, advice and other assistance with your appliance. Insist upon genuine factory parts to be used for any repair or service of your appliance.

Southbend appliances are sturdily constructed of the best materials and are designed to provide durable service when treated with ordinary care. To expect the best performance, your equipment must be maintained in good condition and cleaned daily. Naturally, the periods for this care and cleaning depend on the amount and degree of usage.

*Following daily and periodic maintenance procedures will enhance long life for your equipment. Climatic conditions (such as salt air) may require more thorough and frequent cleaning or the life of the equipment could be adversely affected.*

Keep exposed, cleanable areas clean at all times.

## DAILY CLEANING AND MAINTENANCE

To prevent excess smoking, the broiler grid, bottom grease drawer, and the other broiler components must be kept clean of food remnants. Use a wire brush or similar scraping utensil. DO NOT use steel wool or a similar scrub pad that will leave small particles, which can get into food. The daily cleaning procedure is as follows:

1. Turn all controls to OFF, shut off the gas supply, and allow time for the broiler to cool.
2. Move the broiling rack to the low position. Pull out the rolling broiler rack.
3. Lift out the broiler grids and clean them with a wire brush or non-toxic solvent.
4. Lift out the two drip shields and clean them with soap and water.
5. With rolling rack pulled-out to its "stop," clean all parts where residue can collect.
6. Remove the bottom grease drawer and clean it.
7. Clean all parts of the raising-and-lowering frame.
8. Lubricate bearings with cooking oil (helps to extend the life of the bearings).
9. Reassemble broiling rack mechanism.
10. Check that nothing has been placed on top of the broiler (which will block the escape of combustion exhaust).
11. Check that the air-intake openings on the rear of the broiler are not obstructed.
12. Turn on gas supply, check that all controls are turned to OFF, and light the pilots.

## MONTHLY CLEANING AND MAINTENANCE

The following tasks should be performed monthly:

1. Check for proper pilot operation. The flame on each pilot should be just large enough to extend along the flame carrier to the burner surface. If adjustment is necessary, call for service (919-762-1000).
2. **Infrared:** Check for proper burner operation. When the burner control is set to HIGH, the ceramics should glow red and the flame on the surface of the ceramics should be barely visible, with little or no blue haze. When the burner control is set to LOW, the surface of the ceramics should glow very dull red and the flame should have a blue-haze color. The flame should not flutter or "pop." If adjustment is necessary, call for service (919-762-1000).

**Radiant:** Check for proper burner operation. When burner control is set to HIGH, blue flames should emit from the tube burner, and spread over the stainless steel radiant causing the radiant to glow.

## STAINLESS-STEEL SURFACES

To remove normal dirt, grease and product residue from stainless steel surfaces that operate at LOW temperature, use ordinary soap and water (with or without detergent) applied with a sponge or cloth. Dry thoroughly with a clean cloth.

To remove BAKED-ON grease and food splatter, or condensed vapors; apply cleanser to a damp cloth or sponge and rub cleanser on the metal in the direction of the polishing lines on the metal. Rubbing cleanser, as gently as possible, in the direction of the polished lines will not mar the finish of the stainless steel. NEVER RUB WITH A CIRCULAR MOTION. Soil and burnt deposits which do not respond to the above procedure can usually be removed by rubbing the surface with SCOTCH-BRITE scouring pads or STAINLESS scouring pads. DO NOT USE ORDINARY STEEL WOOL as any particles left on the surface will rust and further spoil the appearance of the finish. NEVER USE A WIRE BRUSH, STEEL SCOURING PADS (EXCEPT STAINLESS), SCRAPER, FILE OR OTHER STEEL TOOLS. Surfaces which are marred collect dirt more rapidly and become more difficult to clean. Marring also increases the possibility of corrosive attack. Refinishing may then be required.

“Heat tint” is darkened areas that sometimes appear on stainless steel surfaces where the area has been subjected to excessive heat. These darkened areas are caused by thickening of the protective surface of the stainless steel and are not harmful. Heat tint can normally be removed by the foregoing, but tint which does not respond to this procedure calls for a vigorous scouring in the direction of the polish lines using SCOTCH-BRITE scouring pads or a STAINLESS scouring pad in combination with a powered cleanser. Heat tint may be lessened by reducing heat to equipment during slack period.

# TROUBLESHOOTING

**⚠ WARNING**

ADJUSTMENTS AND SERVICE WORK MAY BE PERFORMED ONLY BY A QUALIFIED TECHNICIAN WHO IS EXPERIENCED IN, AND KNOWLEDGEABLE WITH, THE OPERATION OF COMMERCIAL COOKING EQUIPMENT. HOWEVER, TO ASSURE YOUR CONFIDENCE, CONTACT YOUR AUTHORIZED SERVICE AGENCY FOR RELIABLE SERVICE, DEPENDABLE ADVICE OR OTHER ASSISTANCE, AND FOR GENUINE FACTORY PARTS.

**NOTICE**

Warranty will be void and the manufacturer is relieved of all liability if service work is performed by other than a qualified technician, or if other than genuine Southbend replacement parts are installed.

Replacement parts (including parts not listed in this manual) may be ordered either through a Southbend Authorized Parts Distributor or a Southbend Authorized Service Agency.

When ordering parts, please supply the Model Number, Serial Number, Part Number, and Part Description.

In case of problems in operation at initial installation, check type of gas and manifold pressure and compare with information listed on the serial plate.

## TROUBLESHOOTING

The following table lists the possible causes of oven-related problems that may occur

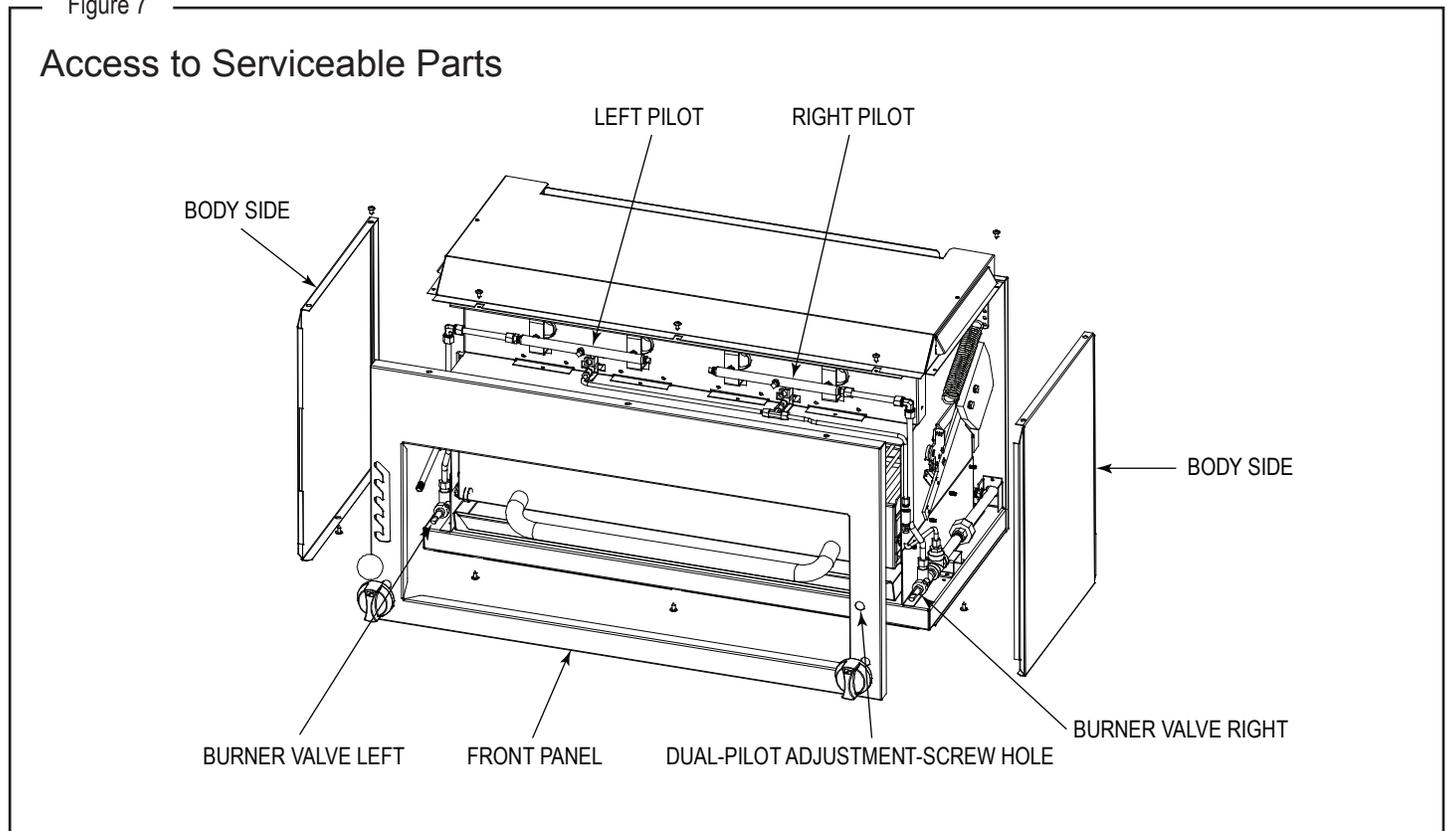
<b>Problem</b>	<b>Look for - 1</b>
- Not enough heat	- Low pressure in gas supply - Restriction in gas piping and/or valves - Misalignment of burner orifice tube - Clogged burner orifice - Incorrect burner orifice
- Too much heat	- Incorrect orifice. - Defective or incorrectly set pressure regulator.
- Burner flame fluttering or has excessive blue haze	- Obstruction of combustion-air intake on rear of broiler - Exhaust gases blocked by objects sitting on top of broiler - Low pressure in gas supply - Misalignment of orifice tube
- Burner flame popping (infrared)	- Cracked or loose ceramic.
- Slow (or no) burner ignition	- Pilot flame out of adjustment - Pilot alignment out of adjustment - Thermocouple not in pilot flame (for units with the flame-failure option)
- Pilot outage	- Pilot flame out of adjustment - Draft condition - Pilot orifice clogged - Incorrect pilot orifice - Thermocouple not in pilot flame (for units with the flame-failure option)

## ACCESS TO SERVICEABLE PARTS

Some serviceable parts are only accessible by removing body side panels and the front panel.

The main front panel is fastened with six sheet-metal screws. To remove the front panel, remove these screws, as well as the burner-control-valve knob and the rack-height-position-lever knob. The main front panel can then be pulled forward and removed. Each body side panel is fastened with two sheet-metal screws. Remove body-side screws and slide the body side forward and away from the unit.

Figure 7



If necessary (or convenient), wall-mounted and flue-riser-mounted models can be un-mounted for servicing or repairs. Use two people since the broiler weighs about 175 pounds (77 kilograms). Refer to the installation procedure in the previous section of this manual for guidance.

## ADJUSTMENT OF BROILER PILOTS

The pilots are adjusted at the factory. If later the pilots are over-adjusted to the point where the flame is leaving its port, or “blowing off,” the result is an unstable condition in which the pilot may extinguish. If necessary, adjust the pilots using the following procedure:

1. If necessary, light the pilots.
2. Locate the pilot adjustment screw (which adjusts both pilots). It is a small slotted screw located on the pilot valve, and is accessed through the hole in the front panel above the right control-valve knob. On flame-failure option units, the adjustment screw is located on the valve, and each pilot is adjusted separately.
3. Turn the pilot adjustment screw to adjust the size of the pilot flames. The flame on each pilot should be large enough to extend along the flame carrier to the burner surface.

## ADJUSTMENT OF BROILER BURNER

The infrared burners require no air adjustment after they have left the factory. If a major change in burner operation is noticed, check for obstruction of airflow, around the orifice. Burner performance is affected by (a) orifice size, (b) pressure, (c) injection, and (d) primary airflow. The burner orifice must be centered within the air mixer opening.

## ADJUSTMENT OF GAS PRESSURE REGULATOR

The regulator is preset for 4" W.C. for natural gas, or 10" W.C. for propane gas. If adjustment is necessary, do the following:

1. Turn broiler control knob to OFF.
2. Attach a pressure-measuring device to the 1/8" NPT connector located on the front of each burner manifold.
3. Turn the broiler control knob to HIGH and, with the burners lit, check the manifold pressure. The pressure should be 4" W.C. (for natural gas) or 10" W.C. (for propane gas).
4. If necessary, adjust the pressure by unscrewing the top of the pressure regulator (use a screwdriver) to expose the adjustment screw underneath. Rotating the adjustment screw clockwise increases the manifold pressure.
5. After the pressure has been adjusted, turn the broiler control knob to OFF, replace the top of the pressure regulator, and disconnect the pressure-measuring device (replacing the plug into the connector on the manifold).

Notes:

# Infrared/Radiant Compact Broiler



A product with the Southbend name incorporates the best in durability and low maintenance. We all recognize, however, that replacement parts and occasional professional service may be necessary to extend the useful life of this appliance. When service is needed, contact a Southbend Authorized Service Agency, or your dealer. To avoid confusion, always refer to the model number, serial number, and type of your appliance.



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