



**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
INSTALLATION
USER'S GUIDE
SERVICE
PARTS**

**COMPACT
INFRA-RED BROILER**

**MODELS: MRA-32C, MRA-32, MRA-32W
MRA-36, MRA-60**

These instructions should be read thoroughly before attempting installation. Set up, installation and Performance Check should be performed by a qualified service technician. The Manufacturer, Southbend (1100 Old Honeycutt Rd., Fuquay-Varina, North Carolina 27526), informs you that unless the installation instructions for the above described Southbend product are followed and performed by a qualified service technician, (a person experienced in and knowledgeable concerning the installation of commercial gas and/or electrical cooking equipment) then the terms and conditions of the Manufacturer's Limited Warranty will be rendered void and no warranty of any kind shall apply.

If the equipment has been changed, altered, modified or repaired by other than a qualified service technician during or after the 12-month limited warranty period, then the manufacturer shall not be liable for any incidental or consequential damages to any person or to any property which may result from the use of the equipment thereafter. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion thereto may not apply to you.

In the event you have any question concerning the installation, use, care, or service of the product, write Customer Service Department, Southbend, 1100 Old Honeycutt Rd., Fuquay-Varina, North Carolina 27526.

**COMPACT INFRA-RED
BROILER (Manual Section BR)**

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

You will find that your new equipment, like all Southbend equipment, has been designed and manufactured to some of the toughest standards in the industry — those of Southbend Corporation. Each piece of Southbend equipment has been carefully engineered and designs have been verified through laboratory tests and field installations in some of the more strenuous commercial cooking applications. With proper care and field maintenance, you will experience years of reliable, trouble-free operation from your Southbend equipment. To get the best results, it's important that you read this manual carefully.

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Southbend Infra-Red Broilers are unique in design. They incorporate our exclusive Schwank ceramic tile burners, which generate infra-red rays that provide better quality products in about one-half the usual broiling time, with less gas input than ordinary broilers. Very little energy is wasted in heating secondary surfaces, as is necessary in conventional-type broilers. Since the surface of these tiles become red hot in less than one-half minute, the unit is ready to start broiling with a very short preheat time, thereby saving time, labor and energy.

These glowing surfaces emit intense infra-red rays, which are transmitted directly onto the product, thereby yielding better tasting broiled food in less time.

Use of 100% clean primary air, which is constantly conveyed to these burners, insures efficient combustion and maintains 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.

The Southbend Infra-Red Broilers provide such speed and recovery that broiling techniques may require some modification in order to take full advantage of its productive capabilities.

CAUTION: POST IN PROMINENT LOCATION INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE SMELL OF GAS IS DETECTED. THIS INFORMATION SHALL BE OBTAINED FROM LOCAL GAS SUPPLIER.

NOT INTENDED FOR HOUSEHOLD USE. FOR COMMERCIAL USE ONLY.

Retain this manual for future reference.

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 APPLIANCES FREE AND CLEAR FROM COMBUSTIBLES.

IN THE EVENT A GAS ODOR IS DETECTED, SHUT DOWN EQUIPMENT AT THE MAIN SHUTOFF VALVE AND CONTACT THE LOCAL GAS COMPANY OR GAS SUPPLIER FOR SERVICE.



1100 Old Honeycutt
Road Fuquay-Varina.
NC 27526 (919)552-
9161 FAX (919) 552-
9798 (800)348-2558

COMPACT INFRA-RED BROILERS

USER'S GUIDE

LIMITED WARRANTY

Southbend, a Middleby Co., warrants that the Southbend equipment, as originally supplied to the original purchasers, is free from defects in materials and workmanship. Should any part thereof become defective as a result of normal use within the period and limits defined below, then at the option of Southbend such parts will be repaired or replaced by Southbend or its Authorized Service Agency. This warranty is subject to the following conditions:

If upon inspection by Southbend or its Authorized Service Agency it is determined that this equipment has not been used in an appropriate manner, has been modified, has not been properly maintained, or has been subject to misuse or misapplication, neglect, abuse, accident, damage during transit or delivery, fire, flood, riot or Act of God, then this warranty shall be void.

Specifically excluded under this warranty are claims relating to installation; examples are improper utility connections and improper utilities supply. Claims relating to normal care and maintenance are also excluded; examples are calibration of controls, and adjustments to pilots and burners.

Equipment failure caused by inadequate water quality is not covered under warranty.

This equipment is intended for commercial use only. Warranty is void if equipment is installed in other than commercial application.

Repairs under this warranty are to be performed only by a Southbend Authorized Service Agency.

THIS WARRANTY MUST BE SHOWN TO AN AUTHORIZED SERVICE AGENCY WHEN REQUESTING IN-WARRANTY SERVICE WORK. THE AUTHORIZED SERVICE AGENCY MAY AT HIS OPTION REQUIRE PROOF OF DATE OF INSTALLATION.

This warranty does not cover services performed at overtime or premium labor rates nor does Southbend assume any liability for extended delays in replacing or repairing any items in the equipment beyond the control of Southbend. "Southbend, a Middleby Co., shall not be liable for consequential or special damages of any nature that may arise in connection with such product or part."

Should service be required at times which normally involve overtime or premium labor rates, the owner shall be charged for the difference between normal service rates and such premium rates.

In all circumstances, a maximum of one hundred miles shall be allowable for travel.

The actual warranty time periods are as follows:

For a product shipped into the 48 Continental United States and Hawaii, twelve months labor, twelve months parts effective from the date of installation (when installed in place and utilities connected). There will be no labor coverage for equipment located on any island not connected by roadway to mainland.

On all shipments outside of the 48 Continental United States and Hawaii, our warranty will be no labor but twelve months on parts from the shipping date of the equipment from the manufacturer.

Our warranty on all replacement parts which are replaced in the field by our Authorized Service Agencies will be limited to three months on labor, six months on materials (parts) effective from the date of installation. See LIMITED WARRANTY - REPLACEMENT PARTS for conditions and limitations.

If the equipment has been changed, altered, modified or repaired by other than a qualified service technician during or after the 12-month limited warranty period, then the manufacturer shall not be liable for any damages to any person or to any property which may result from the use of the equipment thereafter. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion thereto may not apply to you.

"THE FOREGOING WARRANTY IS IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS, AND CONSTITUTES THE ENTIRE LIABILITY OF SOUTHBEND, A MIDDLEBY CO., IN NO EVENT DOES THE LIMITED WARRANTY EXTEND BEYOND THE DURATION OF 12 MONTHS FROM THE EFFECTIVE DATE OF SAID WARRANTY."



OPERATION

WARNING:

FOR AN APPLIANCE EQUIPPED WITH CASTERS, THE INSTALLATION SHALL BE MADE WITH A CONNECTOR THAT COMPLIES WITH THE STANDARD FOR CONNECTORS FOR MOVABLE GAS APPLIANCES. ANSI Z21.69-1987, AND A QUICK-DISCONNECT DEVICE THAT COMPLIES WITH THE STANDARD FOR QUICK-DISCONNECT DEVICES FOR USE WITH GAS FUEL, ANSI Z21.41-1978, AND ADDENDA, Z21.41a.1981 AND Z21.41b.1983. ADEQUATE MEANS MUST BE PROVIDED TO LIMIT THE MOVEMENT OF THE APPLIANCE WITHOUT DEPENDING ON THE CONNECTOR AND THE QUICK-DISCONNECT DEVICE OR ITS ASSOCIATED PIPING TO LIMIT THE APPLIANCE MOVEMENT.

WARNING: IF DISCONNECTION OF THIS RESTRAINT IS NECESSARY TO MOVE THE APPLIANCE FOR CLEANING, ETC., RECONNECT IT WHEN THE APPLIANCE IS MOVED TO ITS ORIGINALLY INSTALLED POSITION.

OPERATION:

1. Check that the pilots are ignited.
2. Turn burner valve to "HI." Burner will ignite from the pilot. If burner fails to ignite, turn burner to OFF, check pilots.

CAUTION: *THESE ARE NOT SAFETY PILOTS AND WHEN OUT. THEY DO NOT INTERRUPT THE FLOW OF GAS TO THE BURNER. CONSEQUENTLY, IT IS THE RESPONSIBILITY OF THE OPERATOR TO CHECK THE IGNITION OF THE BURNERS IMMEDIATELY AFTER THE BURNER VALVE HAS BEEN TURNED ON. SHOULD IGNITION FAIL AFTER 5 SECONDS, TURN VALVE OFF AND WAIT 5 MINUTES BEFORE TRYING AGAIN.*

The pilots should burn continuously unless the unit is to be completely shut down. When extinguished, the pilot gas supply is *NOT INTERRUPTED* automatically. For complete shutdown, the installer-supplied manual service valve on the inlet gas supply line should be turned to *OFF*.

3. When the burner ignites, a blue haze-type flame will cover the surface of the ceramics for 60 seconds. This haze will gradually disappear and within two minutes the ceramics will glow red. The flame on the surface of the ceramics should be barely visible, with little or no blue haze.

4. LOW SETTING:

After the burner has operated on *HIGH* for several minutes, turn the valve counterclockwise as far as possible, to the *LO* setting.

At this low setting the surface of the ceramics should become a very dull red, with a blue haze. The burner should not "flutter" or "pop" at this setting. If such condition does exist, the setting is too low and should be increased. Regulation of this low setting is by a set screw inside the hollow stem of the valve. Turn *IN* or clockwise to reduce and *OUT* or counterclockwise to increase.

BURNER CONTROL:

There are two definite positions on the burner valve, one at *HI* and the other at *LO*. Between these settings, a variety of burner rates can be obtained.

RACK POSITION:

Models with an adjustable rack handle lever arm (denoted by letter A) incorporate five (5) rack positions. These are adjustable by moving the lever arm to the right and then up or down. Models without letter A incorporate three (3) rack positions and are adjustable by bringing the rack forward, removing and then placing back in the desired position.

PRODUCTS:

This is intended as a guide only. Temperature of meat, size of portion, load in broiler, degree of done-ness, or other variables will effect broiling results to some extent.

- 210 — 1/4 pound, 4" diameter hamburgers to medium doneness in only one hour
- 10 — 8-ounce, 1 "-thick top butt steaks to medium rare in only five minutes
- 4 — No. 7 Mexican food platters — cheese bubbling hot in only 20-25 seconds

It is important that the rack drip pan be used at all times. Without it in place, excessive air is pulled past the burners, reducing temperature and cooking efficiency.



WARNING:

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

MAINTENANCE:

1. Keep exposed, cleanable areas of unit clean at all times.

Daily:

- A. Remove rack and wash daily. Remove grease drawer and wash thoroughly.
- B. Remove the entire side linings, to which the rack slides are fastened, by lifting up and inward. Wash thoroughly. (Models without letter A only.)
- C. Make sure objects are not set on top of broiler to block the escape of exhaust gases.

Monthly:

- A. Lubricate valve as required.
- B. Clean around oven burner air mixer and orifices if lint has accumulated.

STAINLESS STEEL:

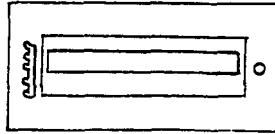
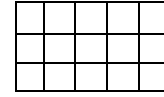
1. To remove normal dirt, grease and product residue from stainless steel that operates at LOW temperature, use ordinary soap and water (with or without detergent) applied with a sponge or cloth. Dry thoroughly with a clean cloth.
2. To remove grease and food splatter or condensed vapors that have BAKED on the equipment, 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.
3. **To remove heat tint:** Darkened areas 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 vigorous scouring in the direction of the polish lines using SCOTCH-BRITE scouring pads, or a STAINLESS scouring pad, in combination with a powdered cleanser. Heat tint action may be lessened by not applying, or by reducing, heat to unit during slack periods.

BLACK BAKED ENAMEL:

1. Allow unit to cool somewhat after use and wash exterior with a hot, mild detergent or soap solution; particularly clean off all grease deposits. Dry thoroughly with a dry cloth.

COMPACT INFRA-RED BROILERS INSTALLATION

SPECIFICATIONS



MRA-30 (5 ADJUSTABLE GRID POSITIONS)
AT 2 1/2", 3 3/4", 5", 6 1/4", 7 1/2" FROM BURNER

END VIEW	FRONT VIEW	MODEL	DIMENSIONS		
			WIDTH IN INCHES	DEPTH IN INCHES	HEIGHT IN INCHES
		MRA-32C Complete Unit Consists of (1) MR-L30 Leg Kit (1) MRA-30 Basic Unit	32"	15 3/8"	22 7/8"
COUNTER UNITS					
		MRA-32W Complete Unit Consists of (1) MR-W-30 Wall Mount Kit (1) MRA-30 Basic Unit	32"	19 1/16"	18 7/8"
WALL MOUNT UNITS					
		MRA-32 Complete Unit Consists of (1) MR-S-32 Riser (1) MRA-30 Basic Unit	32"	19"	35 5/8"
FOR MOUNTING OVER SECTIONAL RANGES (32" Wide)					
		MRA-36 Complete Unit Consists of (1) MR-C36 Riser (1) MRA-30 Basic Unit	36 1/2"	18"	35 1/2"
FOR MOUNTING OVER CAFE RANGES (36 1/2" Wide)					
		MRA-60 Complete Unit Consists of (1) MR-K30 Riser (1) MRA-30 Basic Unit	60 3/4"	18"	35 1/2"
FOR MOUNTING OVER CAFE RANGES (60 3/4" Wide)					



INSTALLATION

WARNING:
THESE PROCEDURES MUST BE FOLLOWED BY QUALIFIED PERSONNEL OR WARRANTY WILL BE VOIDED.

GENERAL:

THE UNIT, WHEN INSTALLED, MUST CONFORM WITH LOCAL CODES, OR IN THE ABSENCE OF LOCAL CODES, WITH THE NATIONAL FUEL GAS CODE ANSI Z223.1-LATEST EDITION. CANADIAN INSTALLATION MUST COMPLY WITH CAN/CGA-B149.1 NATURAL GAS INSTALLATION CODE, CODE CAN/CGA-B149.2 PROPANE INSTALLATION CODE.

These models are design certified for operation on Natural and Propane gases. The Serial Plate is located under the broiler grease drawer at the front, towards the left.

ORIFICE CHART

Gas	Total Rating	burner Orifice	Pilot Orifice	Pressure Regulator
Natural	3 @ 10,666 BTU/Hr.	No. 53 (P/N 1008753)	.0240 (P/N 1161263)	4" W.C.
Propane	3 @ 10,666 BTU/Hr.	No. 63 (P/N 1008763)	.0145 (P/N 1161262)	10" W.C.

Minimum clearances from combustible construction:

MODELS	CLEARANCE	
	SIDES	BACK
MRA-32C	1IN.	1IN.
MRA-32W	1IN.	3% IN.
MRA-32, MRA-36, MRA-60	6 IN.	6 IN.

NOTE: For Model Nos. MRA-32C and MRA-32W a 6" clearance should be provided at the right side, since it is necessary on all models to remove the body side to gain access to the regulator and 1/8 NPT pressure test tap.

An adequate gas supply is imperative. Undersized or low pressure lines will restrict the volume of gas required for satisfactory performance. A pressure regulator, which is provided with each unit, is set to maintain a 4" W.C. manifold pressure for natural gas and a 10" W.C. manifold pressure for propane gas. However, to maintain these conditions the pressure on the supply line, when all units are operating simultaneously, should not drop below 7" W.C. for natural gas or 11" W.C. for propane gas.

All pipe joints should be tested for leaks with a soap and water solution before operating the unit. The test pressure should not exceed 14" W.C.

CAUTION: THIS 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 PSIG (3.45 kPa) (13.84 IN. W.C.).

THIS 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 PSIG (3.45 kPa) (13.84 IN. W.C.).

The unit must be installed in such a manner that the flow of combustion and ventilation air are not OBSTRUCTED. An adequate air supply for combustion is obtained at the right rear of the unit. These openings must NOT be OBSTRUCTED in any way while the unit is operating. The top and right side must be accessible for service.

EXHAUST FANS AND CANOPIES:

Be sure to inspect and clean ventilation system according to the ventilation equipment manufacturers instructions. Canopies are set over ranges, ovens, etc., for ventilation purposes. It is recommended that a canopy extend 6" past appliance and be located 6' 6" from the floor. Filters should be installed at an angle of 45 degrees or more with the horizontal. This prevents dripping of 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 vacuum. In case of unsatisfactory performance on any appliance, check with the exhaust fan in the "OFF" position.

**WARNING:**

FOR AN APPLIANCE EQUIPPED WITH CASTERS, THE INSTALLATION SHALL BE MADE WITH A CONNECTOR THAT COMPLIES WITH THE STANDARD FOR CONNECTORS FOR MOVABLE GAS APPLIANCES, ANSI Z21.69-ANSI Z21.69-1987, AND ADDENDA, Z21.69a.1983, AND A QUICK-DISCONNECT DEVICE THAT COMPLIES WITH THE STANDARD FOR QUICK-DISCONNECT DEVICES FOR USE WITH GAS FUEL, ANSI Z21.41-1978, AND ADDENDA, Z21.41a.1981 AND Z21.41b.1983. ADEQUATE MEANS MUST BE PROVIDED TO LIMIT THE MOVEMENT OF THE APPLIANCE WITHOUT DEPENDING ON THE CONNECTOR AND THE QUICK-DISCONNECT DEVICE OR ITS ASSOCIATED PIPING TO LIMIT THE APPLIANCE MOVEMENT.

IF DISCONNECTION OF THIS RESTRAINT IS NECESSARY TO REMOVE THE APPLIANCE FOR CLEANING, ETC., RECONNECT IT WHEN THE APPLIANCE IS MOVED TO ITS ORIGINALLY INSTALLED POSITION.

GAS CONNECTION:

1. All MRA- Series broilers are factory equipped with a pressure regulator which is set for the type of gas denoted on the serial plate.
2. If applicable, the vent line from the gas appliance pressure regulator shall 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-Latest Edition.
3. Gas supply connection is made on the right side. Remove the right body side for complete accessibility to connection.
4. Gas supply connection can be made:
 - a. Rear:

Connection can be made by going directly into the pressure regulator (female connection 3/8 NPT).
 - b. Top:

Connection can be made by:

 1. Removing knockout hole in top partition.
 2. Screwing elbow into inlet end of regulator.
 3. Cut access hole through expanded metal top.
 4. Screwing supply pipe into elbow.
 - c. Bottom:

Connection can be made by:

 1. Removing knockout hole in bottom.
 2. Removing knockout hole in bottom cover (not supplied in counter units).
 3. Screwing elbow into inlet end of pressure regulator.
 4. Screwing supply pipe into elbow.

CAUTION: BE SURE TO HOLD PRESSURE REGULATOR WITH A WRENCH WHEN TIGHTENING SUPPLY PIPE TO AVOID DAMAGE TO REGULATOR, VALVE, AND OTHER COMPONENTS.

5. The unit should be connected only to the type of gas for which it is equipped. Check type of gas on rating plate. On all threaded connections, the pipe compound must be approved for use with natural and propane gas.
6. Make sure burner valve is in the "OFF" position before connecting gas to unit. Test pipe connections thoroughly for gas leaks. Use soapy water only.
7. Turn on burners and bleed supply line, then turn burners off.
8. Light pilots and adjust so that flame comes out the ends of the pilot flame carriers and extends to the burner tile surface. PILOTS ARE ADJUSTABLE THROUGH THE HOLE ABOVE THE VALVE KNOB.

NOTE: The six burner shipping screws located at each end of the three burners must be removed after installation.



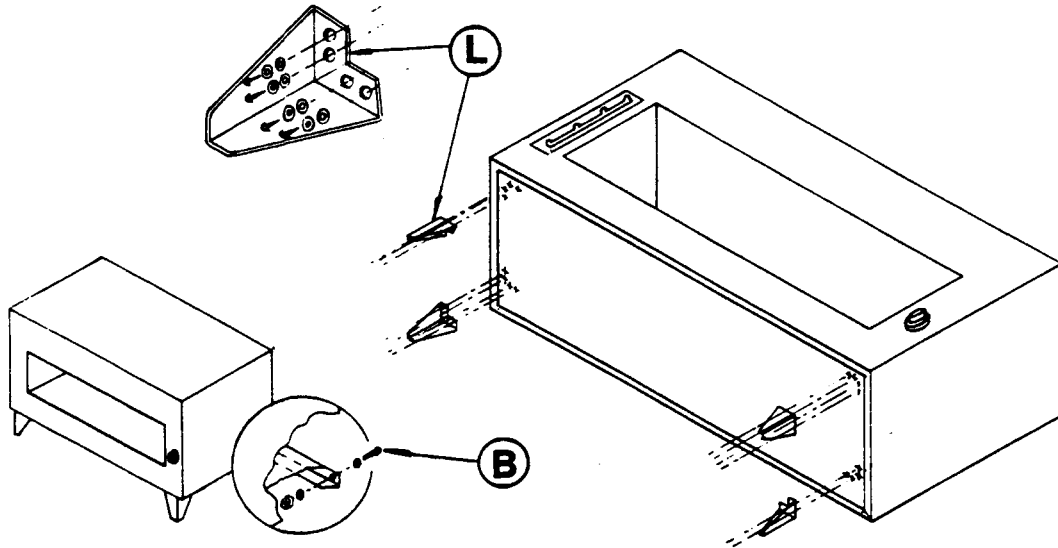
INSTALLATION

FIELD ASSEMBLY INSTRUCTIONS AND DIAGRAMS:

The following section covers Field Assembly instructions for the Compact Infra-Red Broiler combinations noted below and shown on Page 1, Section 1.

1. Installing legs for counter units.	Page
2. Model No. MRA-32C Assembling wall mount and attaching unit.	4
3. Model No. MRA-32C Assembling flue riser and attaching unit for mounting over 32" Sectional Range.	5
4. Model No. MRA-32 Assembling flue riser and attaching unit for mounting over 36%" Cafe Range.	7
5. Model No. MRA-36 Assembling flue riser and attaching unit for mounting over 60%" Cafe Range.	9
Model No. MRA-60	11

MODEL NO. MR-32C OR MRA.32C



INSTRUCTIONS: For Legs and Rear Spacers on Counter Models

1. Remove the broiler from the container.

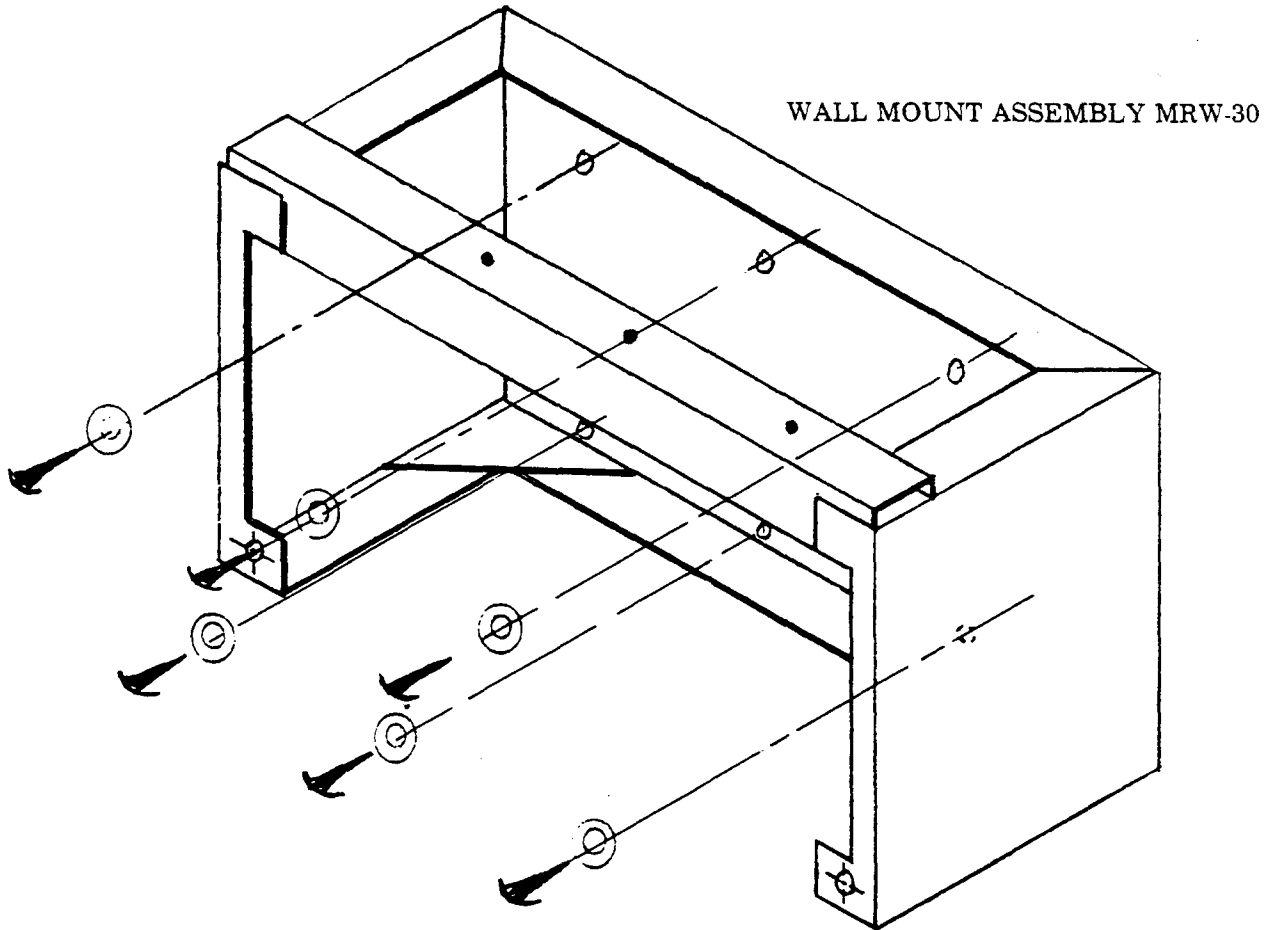
CAUTION: *INSURE BURNER SHIPPING SCREWS HAVE NOT BEEN REMOVED.*

2. Carefully lay the broiler on its back.
3. Install each leg "L" packed in the grease drawer with (4) if 10 x 3/8" slotted sheet metal screws and (8) flat washers in existing 5/32" holes in the main bottom as shown (hardware packed in cloth shipping bag).
4. Stand the broiler on its legs and install shoulder bolt "B" at the rear of the broiler in 1/4" diameter existing holes with (1) flat washer, (1) locknut and (1) #10-24 hex nut as shown in inset. This will insure a space in the rear of the broiler for entrance of primary air.

NOTE: Bottom Cover (Part No. 1078600) is shipped with broiler but is not used on Counter Model.



MODEL NO. MRA-32W
 DIAGRAM FOR
 ASSEMBLING WALL MOUNT BRACKET



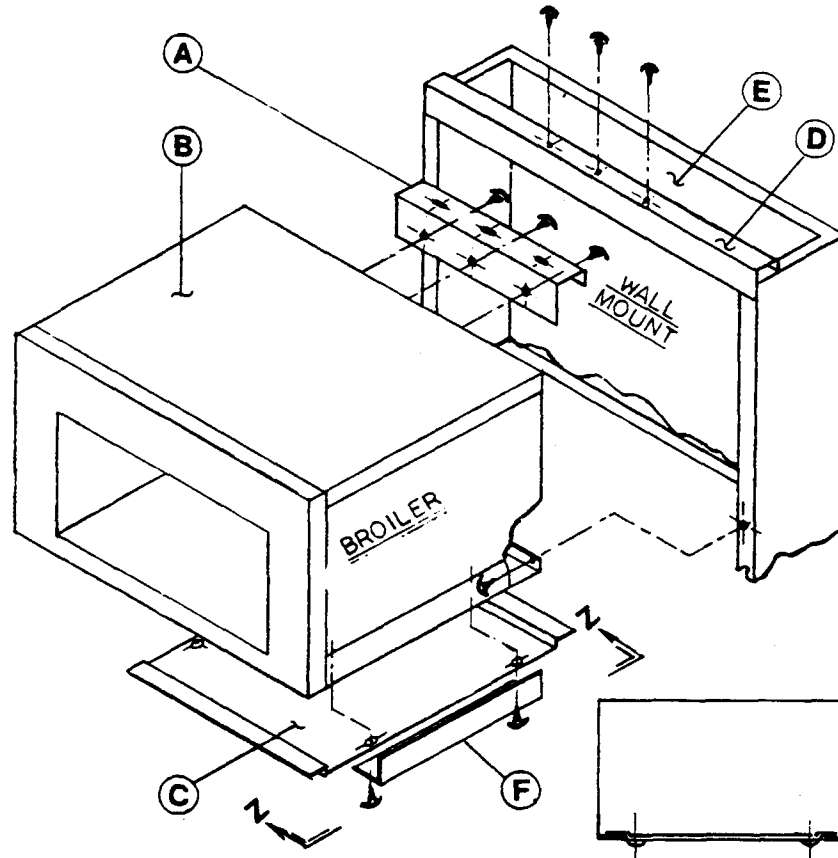
1. Install wall mount to wall using (6) sheet metal screws and (6) washers provided. Make sure screws hit wall studs. Insure wall mount is adequately secured to wall to support weight of broiler (150 lbs.).
2. For installation of broiler (see following instructions on page 6).



INSTALLATION

MODEL NO. MRA-32W

DIAGRAM FOR MOUNTING BROILER TO WALL MOUNT BRACKET

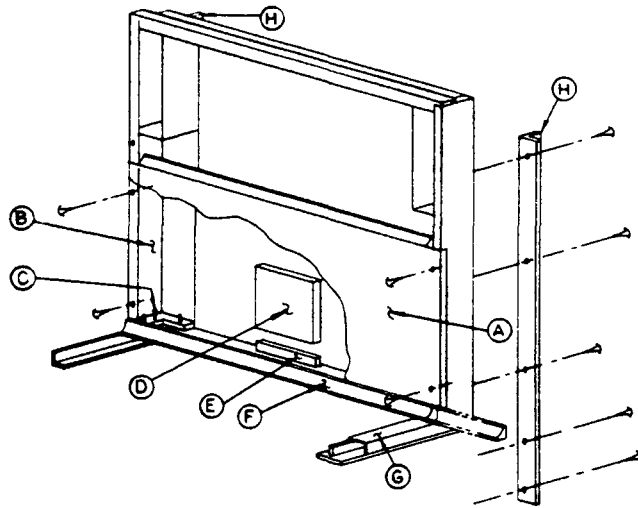


VIEW "Z-Z"
with Bottom Cover Installed

1. Fasten broiler hook "A" to rear of broiler "B" with (3) slotted hex head sheet metal screws provided.
2. Prepare gas supply connection before mounting broiler "B." (See instructions on Page 3, Section 1.)
3. Lift broiler "B" with broiler hook "A" installed. Place hook over broiler hanger, line up holes and fasten with (3) slotted hex head sheet metal screws provided.
4. Fasten bottom of broiler "B" to wall mount with (2) slotted hex head sheet metal screws provided (one each side). Screws are located on underside of broiler "B" as shown.
5. To install Bottom Cover "C":
 - A. Remove (4) slotted hex head sheet metal screws (2 each side) that fasten body side retainer "F" (not body front).
 - B. Position bottom cover "C" above flanges as shown in View "Z-Z" and reinstall (4) screws.



MODEL NO. MRA-32
DIAGRAM FOR MOUNTING
MRS-32 SECTIONAL 32" RISER TO RANGE



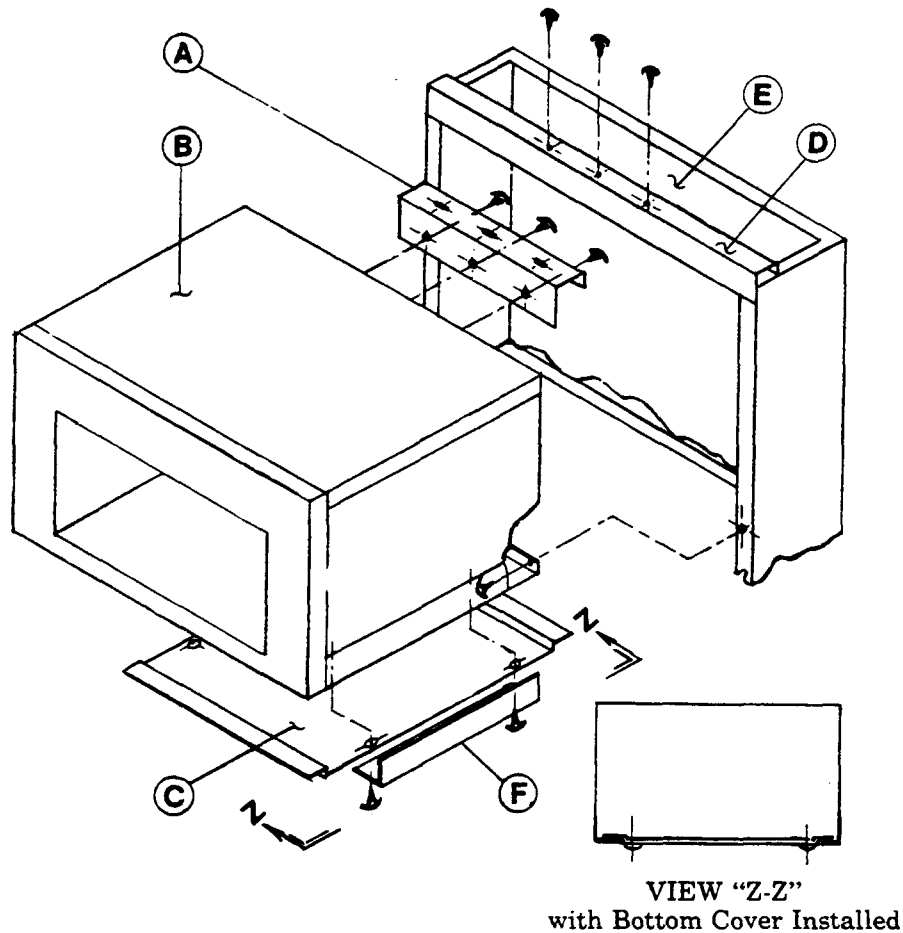
1. Front panel "A" is fastened with (4) hex head sheet metal screws. Remove screws and panel.
 2. Remove nuts and lockwasher from collar plate studs "C" on range.
 3. Lower riser onto range allowing studs "C" to enter holes in riser bracket "B." Secure riser bracket "B" with nuts and lockwasher removed in instruction No. 2.
 4. The oven flue riser extension "D" (12" high) is packed in oven. Slide flue riser extension "D" over the flue collar "E" protruding through the center opening of the collar plate "F."
- NOTE: On units where the top of flue collar "E" is approximately 4" above collar plate "F," the flue riser extension "D" is not required.
5. Install angles "H" packaged in riser container with slotted hex head screws provided, into holes in rear riser bracket "B" and match drill 9/64" diameter holes in range body for mounting angle "H" to range with slotted hex head screws provided.
 6. Install unit (see instructions on page 8).
 7. Replace front panel "A" and fasten with sheet metal screws that were removed in instruction No. 1.
 8. U-shaped channel "G" is provided for all battered ranges. Place U-shaped channel "G" over angles on adjacent ranges to form a sanitary sealing between ranges.



INSTALLATION

MODEL NO. MRA.32

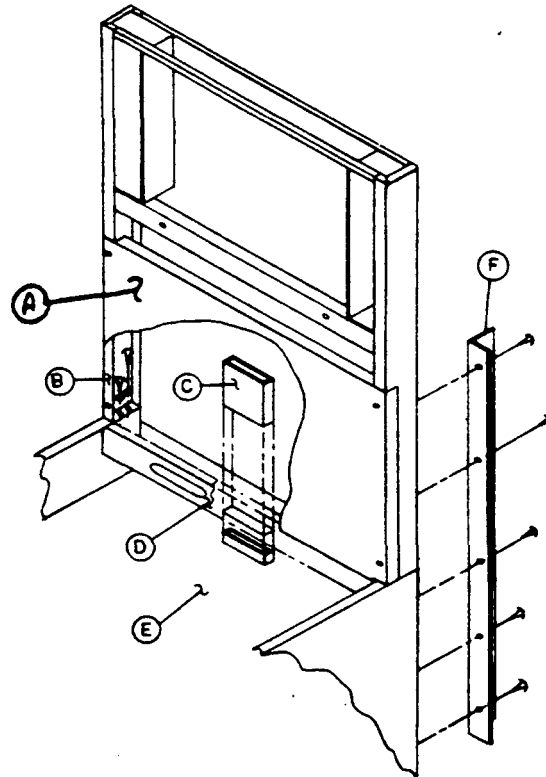
DIAGRAM FOR MOUNTING BROILER TO 32" SECTIONAL RANGE RISER NO. MRS-32



1. Fasten broiler hook "A" to rear of broiler "B" with (3) slotted hex head sheet metal screws provided.
2. Prepare gas supply connection before mounting broiler "B." (See instructions on Page 3, Section 1.)
3. Lift broiler "B" with broiler hook "A" installed. Place hook over broiler hanger, line up holes and fasten with (3) slotted hex head sheet metal screws provided.
4. Fasten bottom of broiler "B" to riser with (2) slotted hex head sheet metal screws provided (one each side). Screws are located on underside of broiler "B" as shown.
5. To install Bottom Cover "Z":
 - A. Remove (4) slotted hex head sheet metal screws (2 each side) that fasten body side retainer "F" (not body front).
 - B. Position bottom cover "C" above flanges as shown in View "Z-Z" and reinstall (4) screws.



MODEL NO. MRA-36
DIAGRAM FOR MOUNTING
MRC-36 CAFE 36" RISER TO RANGE



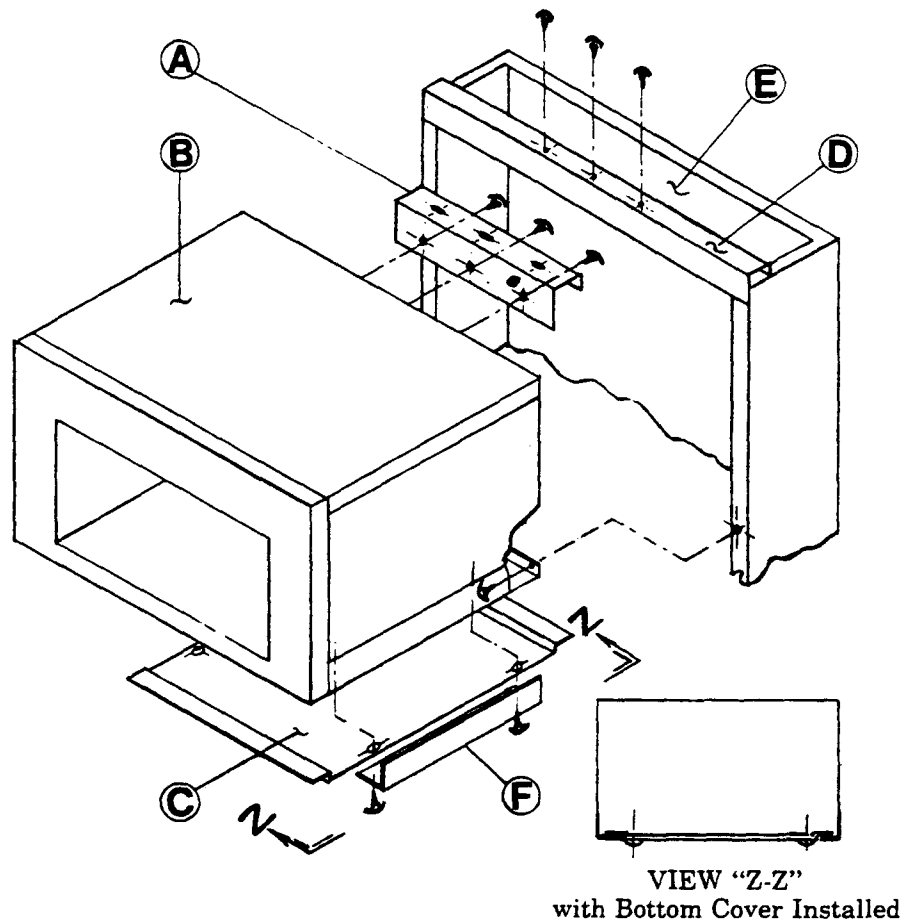
1. Front panel "A" is fastened with (4) hex head sheet metal screws. Remove screws and panel.
2. Lower riser onto range, line up holes in riser bracket "B" with weld nut holes in range. Secure riser bracket "B" to range with (4) hex head $\frac{1}{2}$ -20 screws and (4) washers (2 each side) provided.
3. The oven flue riser extension "C" is packed in oven. Slide flue riser extension "C" through hole in rear rest "D" over collar protruding through burner box bottom "E."
4. Install angles "F" packaged in riser container with slotted hex head sheet metal screws provided into holes in rear of riser bracket "B" and match drill $\frac{9}{64}$ " diameter holes in range body for mounting angle "F" to range with slotted hex head sheet metal screws provided.
5. Install broiler (see instructions on Page 10, Section 1).
6. Replace front panel "A" and fasten with sheet metal screws that were removed in instruction No. 1.



INSTALLATION

MODEL NO. MRA-36

DIAGRAM FOR MOUNTING BROILER
TO 36" CAFE RANGE RISER NO. MRC-36



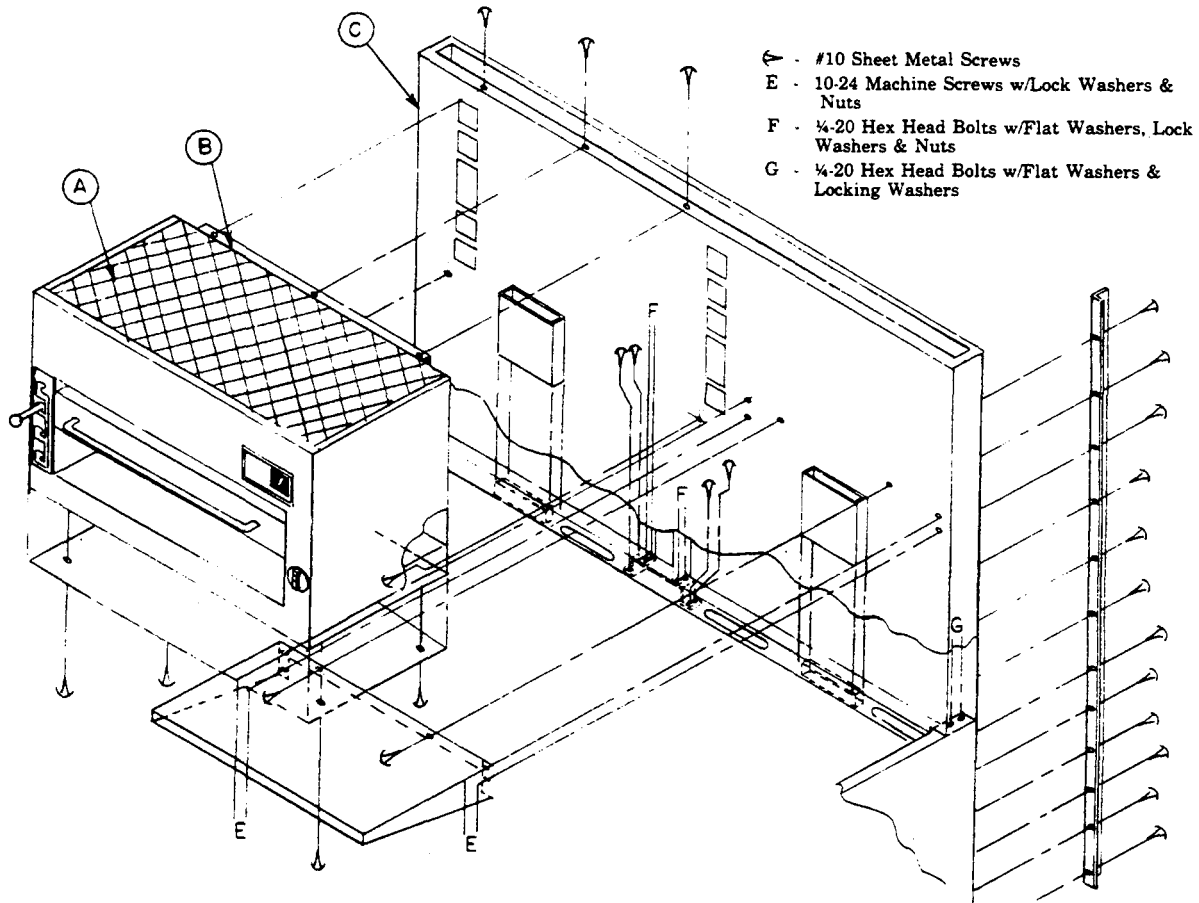
1. Fasten broiler hook "A" to rear of broiler "B" with (3) slotted hex head sheet metal screws provided.
2. Prepare gas supply connection before mounting broiler "B." (See instructions on Page 3, Section 1.)
3. Lift broiler "B" with broiler hook "A" installed. Place hook over broiler hanger, line up holes and fasten with (3) slotted hex head sheet metal screws provided.
4. Fasten bottom of broiler "B" to riser with (2) slotted hex head sheet metal screws provided (one each side). Screws are located on underside of broiler "B" as shown.
5. To install Bottom Cover "Z":
 - A. Remove (4) slotted hex head sheet metal screws (2 each side) that fasten body side retainer "F" (not body front).
 - B. Position bottom cover "C" above flanges as shown in View "Z-Z" and reinstall (4) screws.



MODEL NO. MRA-60

DIAGRAM FOR MOUNTING BROILER

TO 60 3/4" CAFE RANGE RISER NO. MRK-30



NOTE: Most 60" riser and broiler assemblies are shipped from the factory preassembled to the range. If not, however, follow the mounting method depicted in the diagram. The following instructions should then be followed to mount a broiler to an MRK-30, 60" riser assembly.

1. Determine method of gas piping before mounting broiler "A." (See instructions on Page 3, Section 1.)
2. Lift broiler "A" with broiler hook "B" installed. Place hook over broiler hanger, line up holes and fasten with (3) slotted hex head sheet metal screws.
3. Fasten bottom of broiler "B" to riser with (2) slotted hex head sheet metal screws provided (one each side). Screws are located on underside of broiler "B" as shown.
4. To install Bottom Cover "Z":
 - A. Remove (4) slotted hex head sheet metal screws (2 each side) that fasten body side retainer "F" (not body front).
 - B. Position bottom cover "C" above flanges as shown in View "Z-Z" and reinstall (4) screws.

COMPACT INFRA-RED BROILERS

SERVICE

ADJUSTMENTS



WARNING:

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

All units are adjusted at the factory. 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, located under the broiler grease drawer at the front towards the left.

PILOT VALVE LOCATIONS:

There is a single adjustment for the pilot burners located through the hole above the valve knob.

Adjustment to pilots is made by turning the small slotted screw on the pilot valve. The flame on each pilot should be large enough to extend along the flame carrier to the burner surface.

LOW SETTING:

The LO adjustment of the broiler burner valves is by a set screw in the hollow stem of this valve. Turn "IN" or clockwise to reduce, and "OUT" or counterclockwise to increase. Burner flame on low setting should not flutter or "POP," but should burn with a dull red and a blue haze.

AIR ADJUSTMENT:

The infra-red burner requires no field air adjustment. However, if a major change in burner operation is noted, check for obstruction of air flow, as well as around burner air mixer and orifice. Burner performance is effected by (a) orifice size, (b) pressure, (c) injection, and (d) primary air flow.

Burner orifice must be centered with the air mixer opening.

PRESSURE REGULATOR:

1. The pressure regulator is located in the right-hand compartment.
2. For access to the regulator, remove the right body side.
3. The regulator is preset for 4" W.C. for natural gas, or 10" W.C. for propane gas.
4. This pressure regulator is adjustable. The top of the regulator screws off with a screwdriver, exposing the adjustment screw. Rotating this screw clockwise increases the pressure.
Natural = Pre-set 4" W.C. Propane = Pre-set 10" W.C.
5. To check line pressure, a connection is provided toward the rear of burner manifold (1/8 NPT). With valve in "OFF" position, remove pipe plug and connect measuring device. The pressure reading at the manifold, with the burners on high, should be 4" W.C. on natural gas, or 10" W.C. on propane gas.

COMPLETE SHUT DOWN:

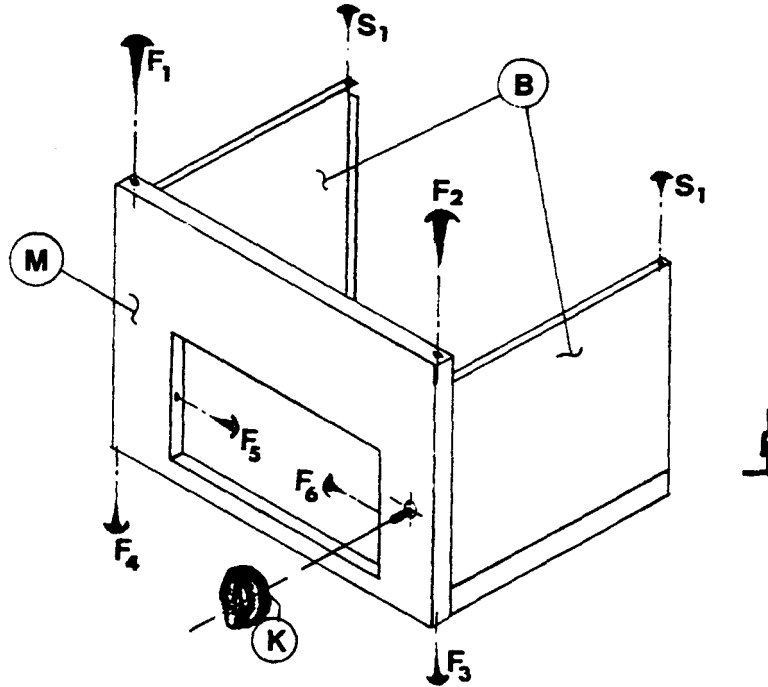
1. Turn off all burner valves.
2. Turn off pilot adjustment valve.
3. Turn off main supply valve. (Valve provided during installation.)



ADJUSTMENTS

ACCESS TO SERVICEABLE PARTS:

Some serviceable parts are only accessible by removing the body side and/or front. The following diagram depicts the procedure to follow should this be necessary.



- A. Body side "B" is fastened with (2) slotted hex head sheet metal screws "S, and F," for left side, or "S, and Fa" for right side, as shown. Remove screws and slide body side "B" rearward and up. It is not necessary to remove the main front when removing the body sides, provided installation clearances are adequate.
- B. The main front "M" is fastened with (6) slotted hex head sheet metal screws "F, F., Fa, F<, F., and Fg, as shown. Valve knob is slipped on and fastened with a set screw. Upon removing these, the main front can now be pulled forward and removed. ("A" models must have arm knob removed.)

There may be times when it will be easier to perform service with the broiler section removed from the riser or wall. This may be accomplished by:

1. Shut off gas supply to broiler.
2. Disconnect gas supply line.
3. Remove bottom cover by removing (4) slotted hex head sheet metal screws — 2 on each side.
4. Remove (2) slotted hex head sheet metal screws from bottom, located on underside of broiler.
5. Remove (3) slotted hex head sheet metal screws from top of hanger.
6. Lift broiler section straight up until rear hanger clears top of riser or wall bracket.

To Reinstall Broiler:

1. Lift broiler back into position, line up holes for (3) screws and fasten same.
2. Install (2) screws at bottom sides.
3. Reconnect gas supply line.
4. After turning on gas supply, check gas connection and any other piping which was affected by the repair, with soapy water to be positive there are no gas leaks.
5. Reinstall bottom cover with (4) screws.

ADJUSTMENTS



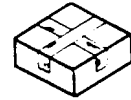
TROUBLE SHOOTING:

Problem	Look for —
Not enough heat	<ul style="list-style-type: none">— Restriction in valve.— Restriction in gas supply.— Misalignment of orifice tube.— Clogged orifice.— Incorrect orifice.— Low pressure on gas supply.
Burner with blue haze	<ul style="list-style-type: none">— Misalignment of orifice tube.— Low gas pressure.— Blocked primary air. exhaust gases blocked by objects setting on top of broiler.
Burner fluttering	<ul style="list-style-type: none">— Adjust valve on low setting.
Burner popping	<ul style="list-style-type: none">— Cracked or loose ceramic.
Too much heat	<ul style="list-style-type: none">— Incorrect orifices.— Defective or incorrectly set pressure regulator.
Slow burner ignition	<ul style="list-style-type: none">— Check for proper pilot flame length.— Check for proper pilot alignment.— Clean pilot orifice.
Pilot outage	<ul style="list-style-type: none">— Clogged orifice.— Draft condition.— Incorrect orifice.— Adjustment.

AT LEAST TWICE A YEAR HAVE YOUR SOUTHBEND AUTHORIZED SERVICE AGENCY CLEAN AND ADJUST THE UNIT FOR MAXIMUM PERFORMANCE.

COMPACT INFRA-RED BROILERS

PARTS



PARTS

WARNING:
INSTALLATION OF OTHER THAN GENUINE SOUTHBEND PARTS WILL VOID
THE WARRANTY ON THIS EQUIPMENT.

The serial plate is located inside unit under drip pan on left.

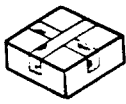
Replacement parts may be ordered either through a Southbend Authorized Parts Distributor or a Southbend Authorized Service Agency.

When ordering parts please supply the Model Number, Serial Number, Part Number, Description, plus Finish, Type of Gas and Electrical Characteristics, as applicable.

For parts not listed consult a Southbend Authorized Parts Distributor or Southbend Authorized Service Agency. If necessary, please consult Southbend Parts Department for assistance.

SUFFIX	DATE	INDICATES
No Suffix	1977 & Before	Unit has a cast iron venturi.
A	1977	Unit has a rack adjustable with a handle and a tubular steel venturi.
B	1977	Unit has a rack which must be moved manually (no handle), also has a tubular steel venturi.
C		Unit is a counter model.
W		Unit is a wall mount model.

COMPACT BROILERS PARTS LIST		MR-32	MR-36	MR-60	MR-32C	MR-32W	MRA-32	MRA-36	MRA-60	MRA-32C	MRA32W
1160486	BROILER RACK						1	1	1	1	1
1075205	BROILER RACK	1	1	1	1	1					
1160620	(1074898) BODY FRONT - BLACK	1	1	1	1	1					
1160619	(1074897) BODY FRONT - S.S.	1	1	1	1	1					
1075109	LT. BODY SIDE - BLACK	1	1	1	1	1	1	1	1	1	1
1075105	LT. BODY SIDE - S.S.	1	1	1	1	1	1	1	1	1	1
1075110	RT. BODY SIDE - BLACK	1	1	1	1	1	1	1	1	1	1
1075106	RT. BODY SIDE --S.S.	1	1	1	1	1	1	1	1	1	1
1080001	BODY SIDE HOLDERS - BLACK	2	2	2	2	2					
1080000	BODY SIDE HOLDERS - S.S.	1	1	1	1	1					
1165590	SOUTHBEND NAME PLATE	1	1	1	1	1	1	1	1	1	1
1078600	MAIN BOTTOM COVER	1	1	1		1	1	1	1		1
1077500	BLACK PERFORATED BODY TOP	1	1	1	1	1	1	1	1	1	1
1077620	RACK DRIP PAN	1	1	1	1	1					
1077200	GREASE DRAWER (1077202)	1	1	1	1	1	1	1	1	1	1
1076599	SIDE DRIP SHIELD ASM. (3 Position)	2	2	2	2	2					
1076598	SIDE DRIP SHIELD ASM. (Special 2 Position Option)										



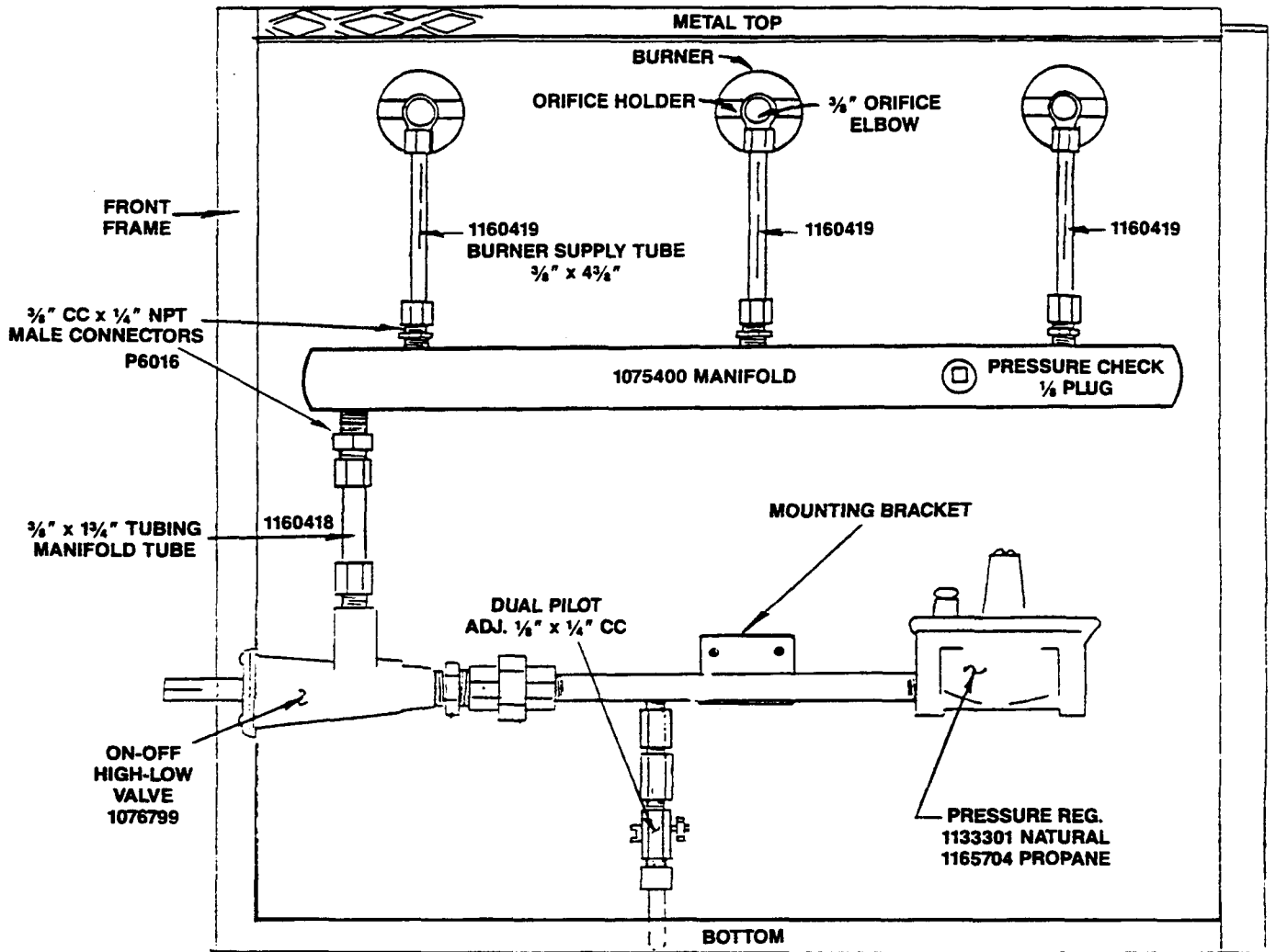
PARTS

COMPACT BROILERS PARTS LIST		MR-32	MR-36	MR-60	MR-32C	MR-32W	MRA-32	MRA-36	MRA-60	MRA-32C	MRA32W
1077400	REAR DRIP SHIELD	1	1	1	1	1					
1073498	VALVE HANDLE (1073400)	1	1	1	1	1	1	1	1	1	1
1079189	PILOT ASM. - NATURAL GAS (Old Style)	2	2	2	2	2	2	2	2	2	2
1079188	PILOT ASM. - LP GAS (Old Style)	2	2	2	2	2	2	2	2	2	2
1079167	PIUDT ORIFICE - NATURAL GAS (.026) (Old Style)	2	2	2	2	2	2	2	2	2	2
1079168	PILOT ORIFICE - PROPANE GAS (.0135) (Old Style)	2	2	2	2	2	2	2	2	2	2
4440011	SHOULDER BOLT ASM. (1077800)	4	4	4	4	4					
1075001	LT. BURNER REST	1	1	1	1	1	1	1	1	1	1
1075099	RT. BURNER REST	1	1	1	1	1	1	1	1	1	1
1076799	HI-LO WLVE	1	1	1	1	1	1	1	1	1	1
P5239-3	PIPE UNION	1	1	1	1	1	1	1	1	1	1
1160515	S.S. BODY FRONT FOR MRA						1	1	1	1	1
1160516	COLD ROLLED BODY FRONT FOR MRA						1	1	1	1	1
1161263	PIIOT ASM. - NAT. GAS (New Style)	2	2	2	2	2	2	2	2	2	2
1161262	PILOT ASM. - LP GAS (New Style)	2	2	2	2	2	2	2	2	2	2
1078381	SUPPLY PIPE ASM. (Pipe w/Briect.)	1	1	1	1	1	1	1	1	1	1
1133301	PRESSURE REGULATOR - NATURAL GAS	1	1	1	1	1	1	1	1	1	1
1165704	PRESSURE REGULATOR - PROPANE GAS	1	1	1	1	1	1	1	1	1	1
1078401	MANIFOLD TUBE	1	1	1	1	1	1	1	1	1	1
1075496	MANIFOLD ASM. (w/Connectors & Plug)	1	1	1	1	1	1	1	1	1	1
1075400	MANIFOLD PIPE	1	1	1	1	1	1	1	1	1	1
P6016	MALE CONNECTORS	4	4	4	4	4	4	4	4	4	4
1077701	BURNER TOP AIR SHIELD	3	3	3	3	3	3	3	3	3	3
1077510	MAIN TOP STIFFNERS	6	6	6	6	6	6	6	6	6	6
1079399	TWIN PILOT VALVE	1	1	1	1	1	1	1	1	1	1
1077911	PILOT SUPPLY TUBE - FRONT	1	1	1	1	1	1	1	1	1	1
1077910	PILOT SUPPLY TUBE - REAR	1	1	1	1	1	1	1	1	1	1
1129390	BURNER ASM. CPL NAT. (Old Style)	NO LONGER AVAILABLE									
1129391	BURNER ASM. CPL LP (Old Style)										
1129399	BURNER ASM. (Old Style) No longer available.	3	3	3	3	3	3	3	3	3	3
1129302	TILE RETAINER (Old Style 1057513)	6	6	6	6	6	6	6	6	6	6
1129301	RAY HEAD TILE (Old Style 1057516)	12	12	12	12	12	12	12	12	12	12
1129304	TILE RETAINER CLAMP (Old Style)	12	12	12	12	12	12	12	12	12	12
1057520	BURNER ASM. CPL - LP (New Style Sheet Metal	3	3	3	3	3	3	3	3	3	3
1057519	BURNER ASM. CPL - NAT. (New Style Sheet Metal	3	3	3	3	3	3	3	3	3	3
1080200	BURNER ORIFICE TUBE (Old Style)	3	3	3	3	3	3	3	3	3	3
1080101	BURNER ORIFICE SUPPORT (Old Style)	3	3	3	3	3	3	3	3	3	3
1057506	LOCKNUT (Old Style)	3	3	3	3	3	3	3	3	3	3
1112899	ORIFICE FITTING (Old Style)	3	3	3	3	3	3	3	3	3	3
1008753	BURNER ORIFICE - NAT. GAS #53 (New)	3	3	3	3	3	3	3	3	3	3
1008763	BURNER ORIFICE - LP GAS #63 (New)	3	3	3	3	3	3	3	3	3	3
1077099	BURNER BRACKET ASM.	6	6	6	6	6	6	6	6	6	6
1048301	JAM NUT FOR 1148306										
1140306	ORIFICE FITTING ASM. - LESS ORIFICE										
1062652	ORIFICE - NAT. GAS D62 (Old Style)										
1062663	ORIFICE - LP GAS «63 (Old Style)										
1057515	FIBERFRAX (New)										
1129305	FIBERFRAX (Old) No longer available.										

PARTS



COMPACT BROILERS PARTS LIST		MR-32	MR-36	MR-60	MR-32C	MR-32W	MRA-32	MRA-36	MRA-60	MRA-32C	MRA-32W
1074901	BURNER SIDE AIR SHIELDS	6	6	6	6	6	6	6	6	6	6
1076200	BROILER HOOK	1	1	1	1	1	1	1	1	1	1
12476	PLUG BUTTON	1	1	1	1	1	1	1	1	1	1
1099002	PILOT ADJ. VALVE (w/New Style Burners)	1	1	1	1	1	1	1	1	1	1
1160413	BEARING						3	3	3	3	3
1160418	MANIFOLD TUBE 3/8" O.D.	1	1	1	1	1	1	1	1	1	1
1057515	SEALING GASKET (Fiber Fax)	3	3	3	3	3	3	3	3	3	3
1160419	BURNER SUPPLY TUBE 3/8" O.D.	1	1	1	1	1	1	1	1	1	1
1168283	PILOT ADAPTER	1	1	1	1	1	1	1	1	1	1
1168281	PILOT TUBING	1	1	1	1	1	1	1	1	1	1
1160420	2 PILOT ADAPTER	1	1	1	1	1	1	1	1	1	1
1160465	SHAFT - LT. ARM ASM. - UPPER						1	1	1	1	1
1160469	SHAFT - LT. ARM ASM. - LOWER						1	1	1	1	1
1160475	RAISING-UOWERING KNOB						1	1	1	1	1
1160477	CRADLE ASM. (Both)						1	1	1	1	1
1160478	LT. CRADLE - SIDE ASM						1	1	1	1	1
1160479	RT. CRADLE - SIDE ASM.						1	1	1	1	1
1160484	ROLLER BEARING						2	2	2	2	2
P1089	SPRING (1160485)						2	2	2	2	2
1160495	INNER RACK FRAME						1	1	1	1	1
1160494	RACK FACE						1	1	1	1	1
P1438	RACK HANDLE						1	1	1	1	1
1160500	BACK DRIP SHIELD						1	1	1	1	1
1160504	SIDE DRIP SHIELD ASM. - RT.						1	1	1	1	1
1160505	SIDE DRIP SHIELD ASM. - LT.						1	1	1	1	1
1160512	INDEX PLATE						1	1	1	1	1
1160507	SPRING MOUNTING BRACKET - RT.						1	1	1	1	1
1160508	SPRING MOUNTING BRACKET - LT.						1	1	1	1	1
1160561	CARTON						1	1	1	1	1
1099002	PILOT ADJ. VALVE						1	1	1	1	1
1160622	SUPPLY PIPE ASM.						1	1	1	1	1
1161024	PILOT SHIELD (Old Style)	1	1	1	1	1	1	1	1	1	1
1168212	PILOT SHIELD (New Style)	1	1	1	1	1	1	1	1	1	1
MRL-30	SET OF LEGS FOR MR-32C (4 Bik. Legs 1077399)				1					1	
MRS32-0	BLACK RISER ASM.	1					1				
MRS32-7	S.S. RISER ASM.	1					1				
MRC36-0	BLK RISER ASM.		1					1			
MRC36-7	S.S. RISER ASM.		1					1			
MRW30-0	BLACK WALL MOUNT ASM.					1					1
MRW30-7	S.S. WALL MOUNT ASM.					1					1
MRK30-0	BLACK RISER ASM.			1					1		
MRK30-7	S.S. RISER ASM.			1					1		
1075700	CARTON	1	1	1	1	1					
1161331	RACK DRIP PAN ASM.						1	1	1	1	1
1163933	INSTRUCTION MANUAL—(One copy furnished free. Extra copies are available thru your parts/service distributor at additional cost.	1	1	1	1	1	1	1	1	1	1

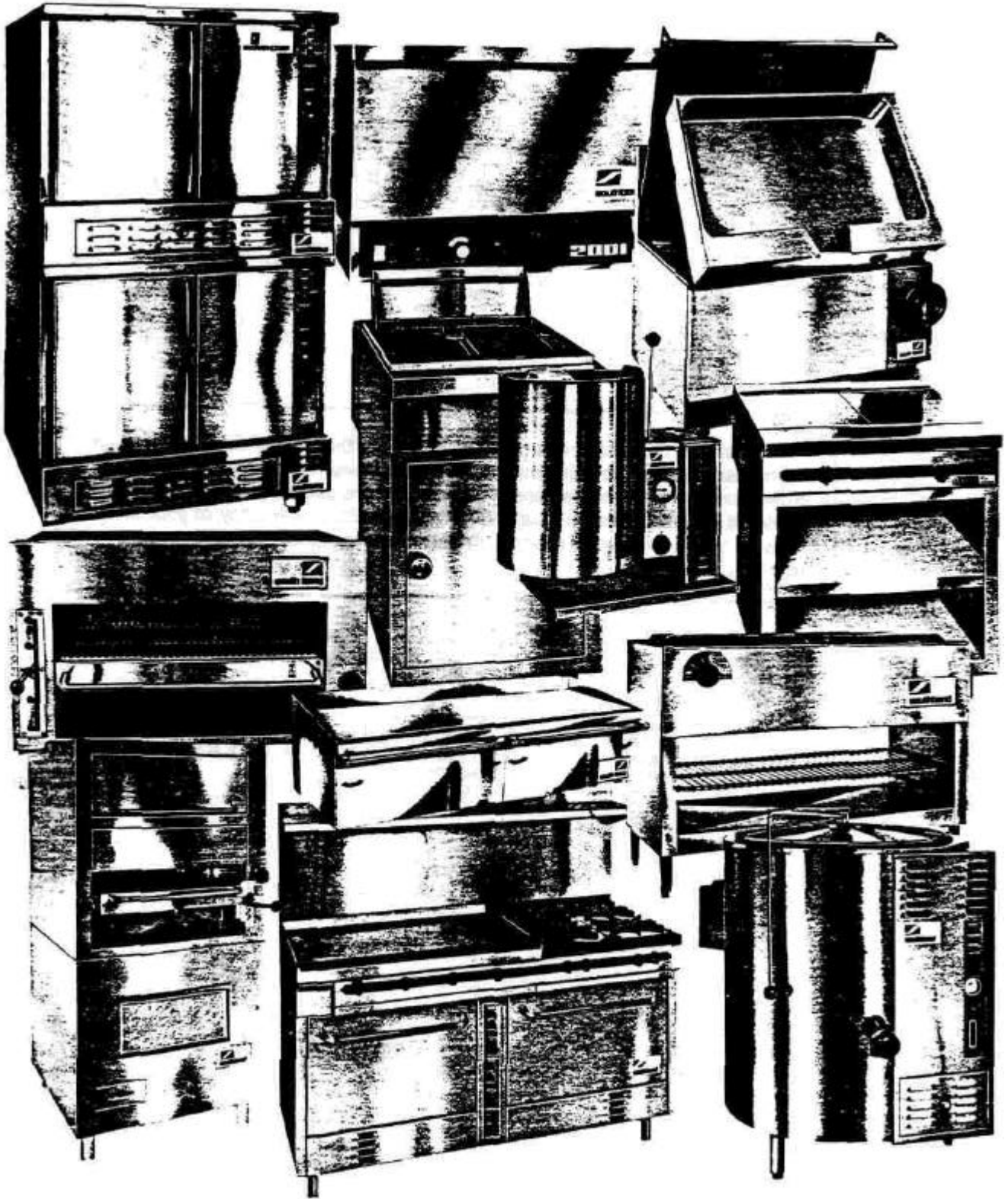




Convection ovens
Cook & hold convection ovens
Bake & roast ovens
Pizza ovens
Ranges

Fryers
Special & custom equipment
Convection steamers
Steam kettles
Tilting braising pans

Cooker/mixer kettles
Floor model broilers
Under fired broilers
Salamander broilers
Cheese meters



COMPACT INFRA-RED 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 unit. 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 unit.



A MIDDLEBURY COMPANY

Litho in U.S.A.

7-91

PART NUMBER 1163933/2

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