JADE RANGE INFRARED AND RADIANT BROILERS
MODEL: JBB-236 AND JSHB
INSTALLATION AND USER MANUAL INSTRUCTIONS

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

WHAT TO DO IF YOU SMELL GAS
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you can not reach your gas supplier, call the fire department.

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

* Adequate clearances must be provided in front of the appliance for servicing.
* The appliance area must be kept free and clear from combustibles.
* There must be no material or obstacles obstructing the flow of combustion and ventilation air.
* Electrical diagram is located either at front bottom of broiler behind air filter or behind the kick plate.
* This appliance is intended for commercial use only.

NOTE TO THE INSTALLER:
Please, leave this manual with the appliance for the customer.

RETAIN THIS MANUAL FOR FUTURE REFERENCE

7355 E. SLAUSON AVE., COMMERCE, CA 90040 TEL: (213) 728-5700 FAX (213) 889-8035

P/N 240-506-000 05/98

CSA INTERNATIONAL
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RETAIN THIS INFORMATION FOR FUTURE REFERENCE

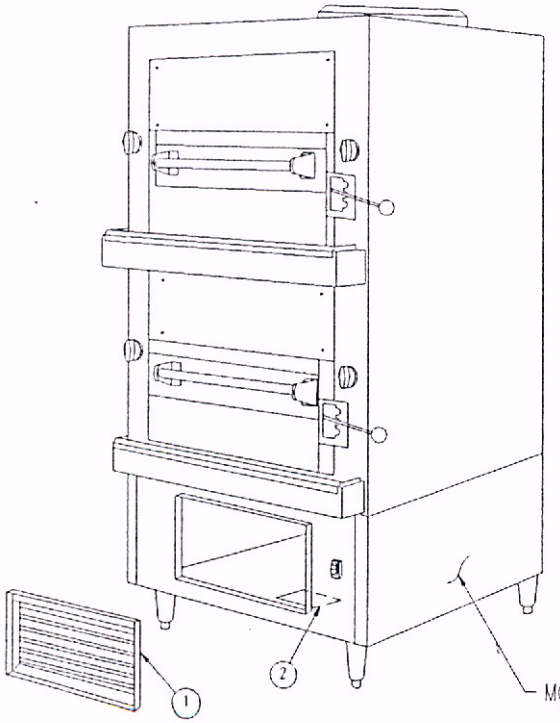
STOP STOP STOP

FOR FUTURE REFERENCE
TO OPERATOR, INSTALLER, USER

- IT IS NECESSARY TO REGISTER THE FOLLOWING:

MODEL #	SERIAL #	DATE PURCHASED

FIND THIS INFORMATION ON THE NAME PLATE



TO LOCATE NAME PLATE:
1. REMOVE AIR FILTER LOCATED AT THE FRONT BOTTOM OF THE BROILER.
2. LOOK THROUGH THE AIR FILTER OPENING AND FIND NAME PLATE AT THE BOTTOM RIGHT.

RETAIN THIS INFORMATION FOR FUTURE REFERENCE

STOP STOP STOP

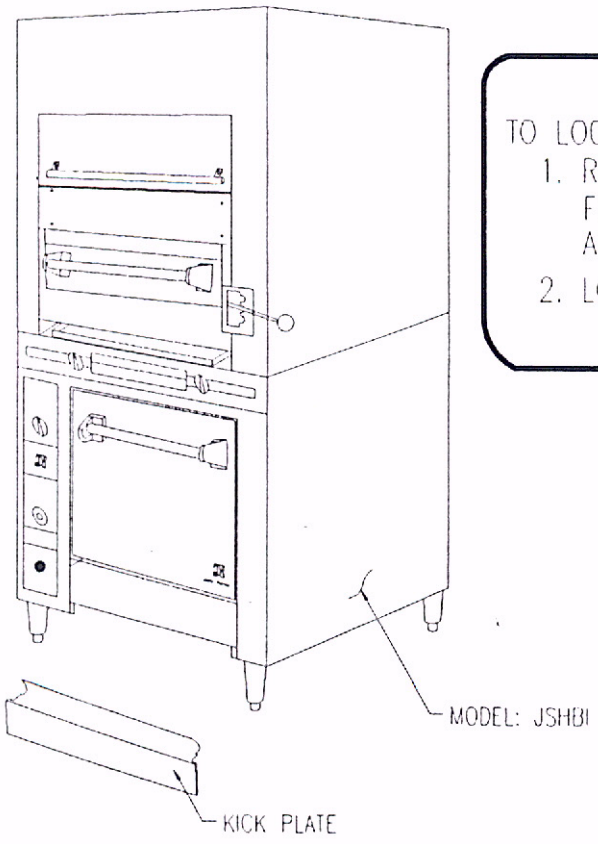
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FIND THIS INFORMATION ON THE NAME PLATE

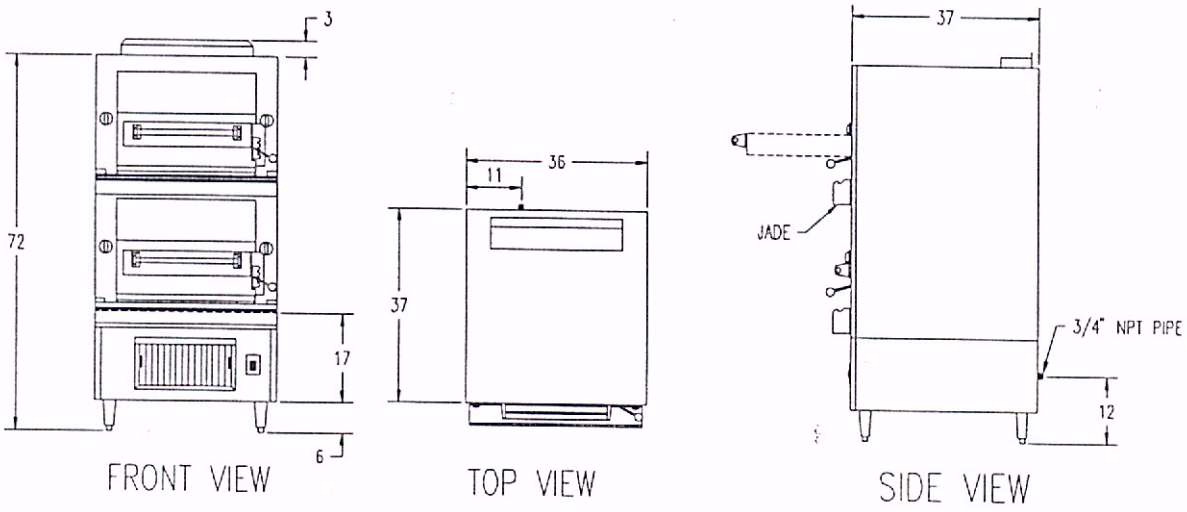
TO LOCATE NAME PLATE:
1. REMOVE KICK PLATE AT THE FRONT BOTTOM OF THE APPLIANCE.
2. LOOK BEHIND KICK PLATE.



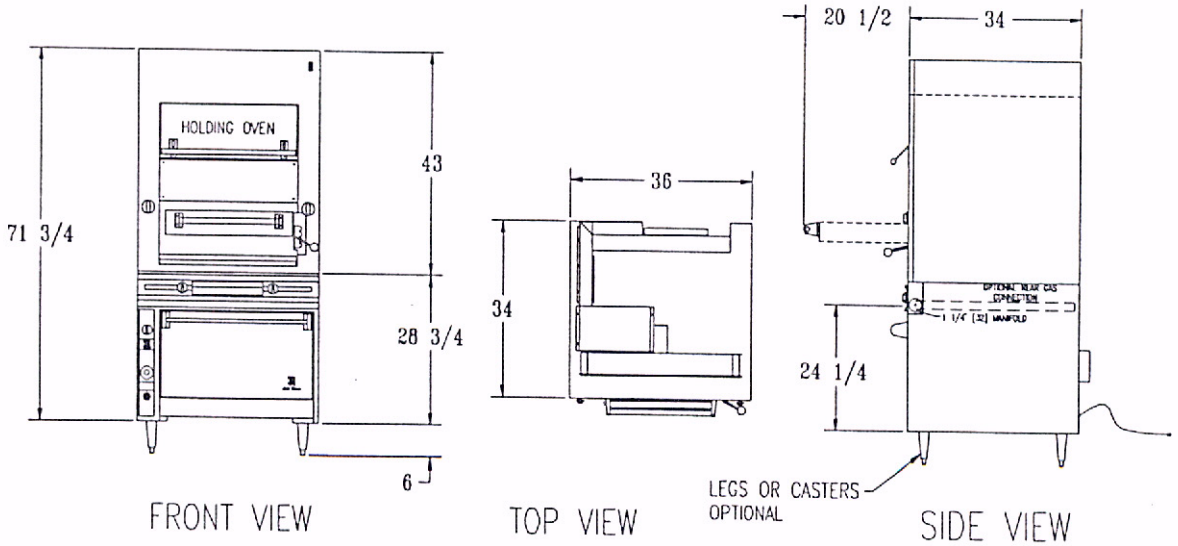
INFRARED BROILER INSTALLATION

GAS SPECIFICATION

MODEL	GAS TYPE	MANIFOLD PRESSURE	BURNER RATE (BTUH)	KWH	NO	PILOT RATE (BTUH)	NO
JBB-236	Natural	5"W.C.	26,000	7.6	8	1,000 EA.	4
	Propane	10"W.C.	26,000	7.6	8	1,000 EA.	4
JSHBI	Natural	5"W.C.	26,000	7.6	4	1,000EA.	2
	Propane	10"W.C.	26,000	7.6	4	1,000EA.	2



JBB-236

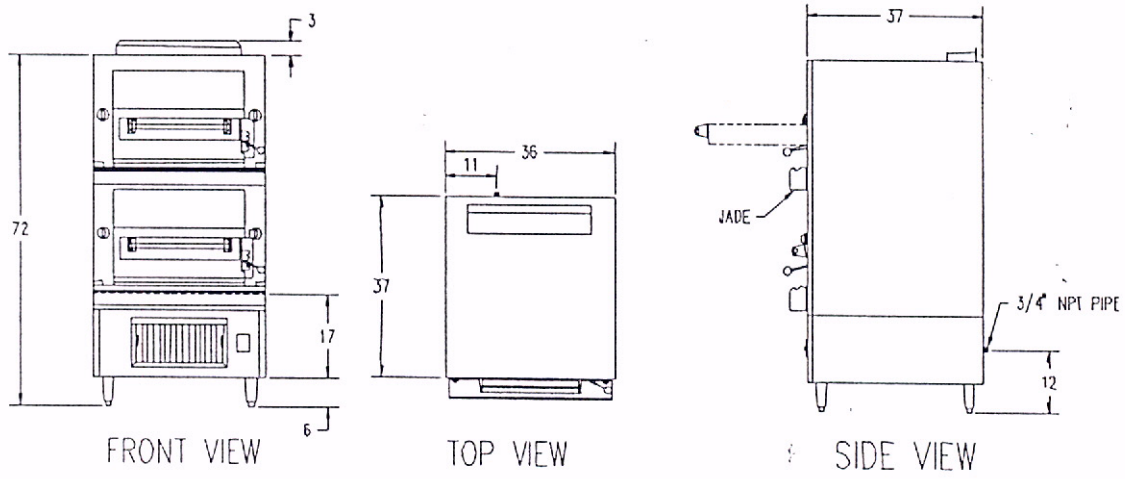


JSHBI - 36H-36C (SHOWN)

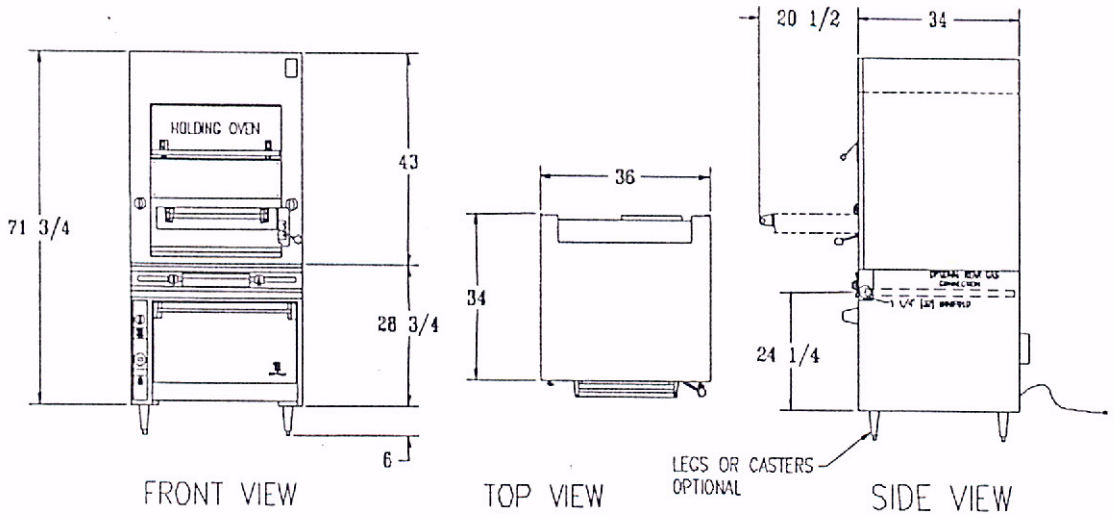
RADIANT INFRARED BROILER INSTALLATION

GAS SPECIFICATION

MODEL	GAS TYPE	MANIFOLD PRESSURE	BURNER RATE (BTUH)	KWH	NO	PILOT RATE (BTUH)	NO
JBBR-236	Natural	5"W.C.	13,500	3.9	12	1,000 EA.	1
	Propane	10"W.C.	13,500	3.9	12	1,000 EA.	1
JSHBR	Natural	5"W.C.	13,500	3.9	6	1,000EA.	1
	Propane	10"W.C.	13,500	3.9	6	1,000EA.	1



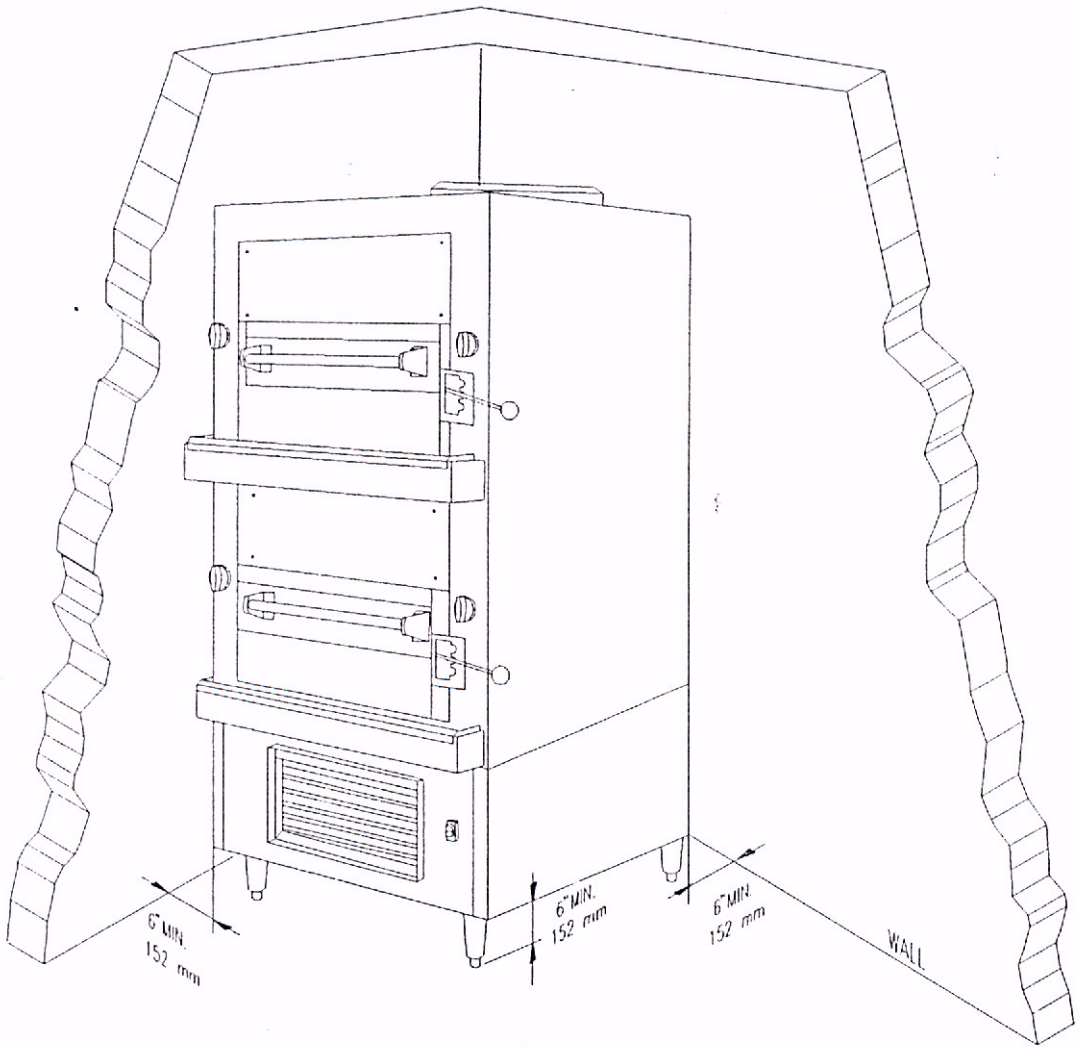
JBBR-236



JSHBR-36H-36C (SHOWN)

MINIMUM CLEARANCE FROM COMBUSTIBLE MATERIALS

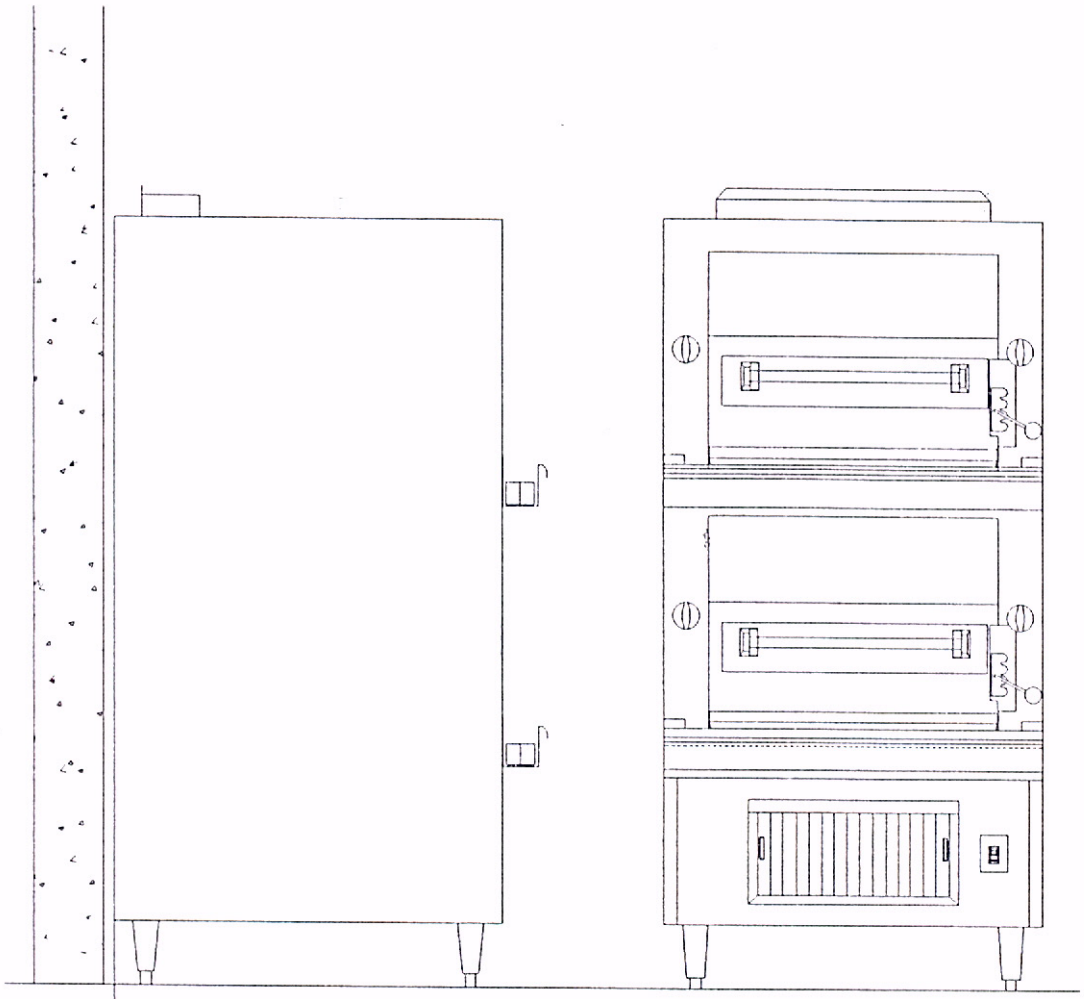
MODEL	HEIGHT	WIDTH	DEPTH
JBB-236	75 ½" (W/6" LEGS)	36"	37" (ADD 20 ½" WHEN RACK IS PULLED OUT)



MINIMUM CLEARANCE FROM NONCOMBUSTIBLE

WARNING:

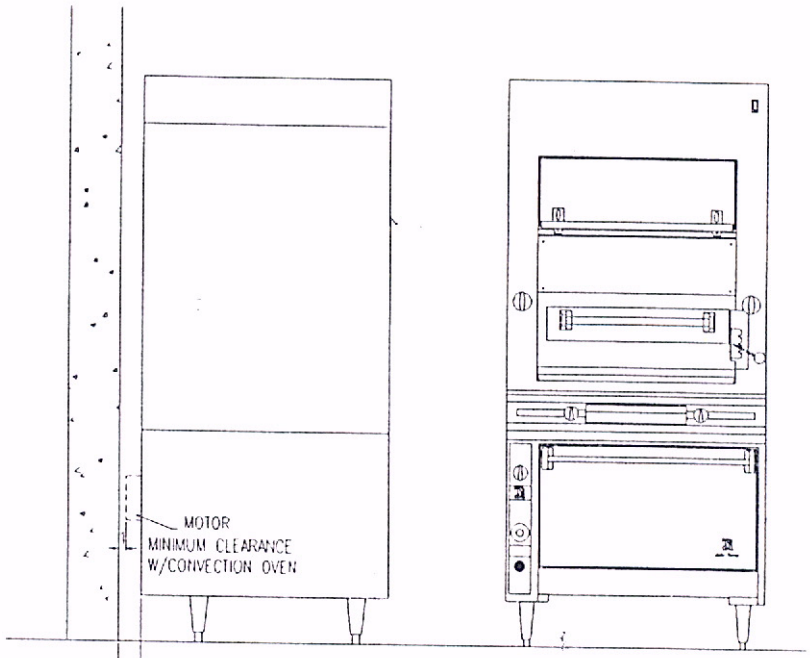
"FOR ANY TYPE OF INSTALLATION THIS UNIT MUST NOT BE INSTALLED OR MAINTANNED AT LESS THAN THE MINIMUM CLEARANCES".



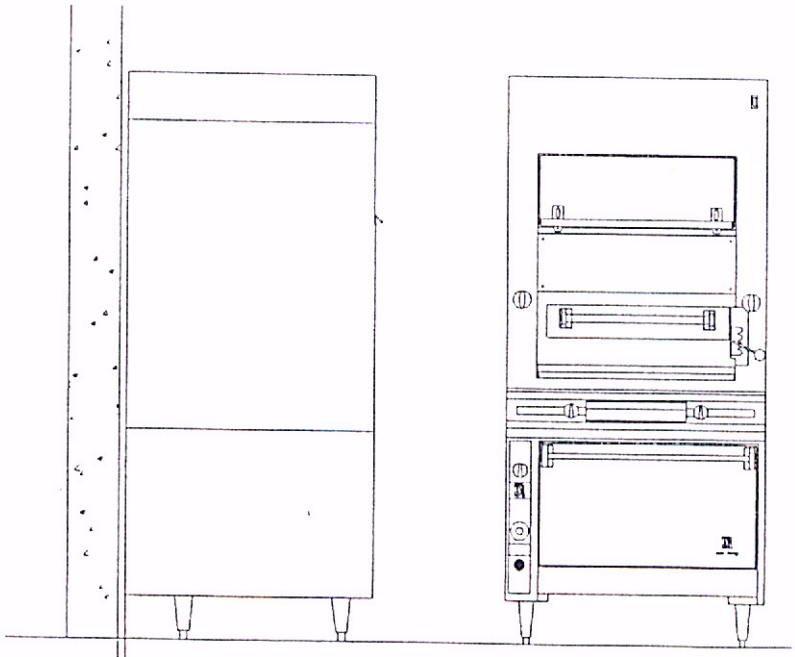
MINIMUM CLEARANCE FROM NONCOMBUSTIBLE

WARNING:

"FOR ANY TYPE OF INSTALLATION THIS UNIT MUST NOT BE INSTALLED OR MAINTAINED AT LESS THAN THE MINIMUM CLEARANCES.



3 – MINIMUM CLEARANCE W/CONVECTION OVEN



1 MINIMUM CLEARANCE W/STANDARD OVEN

INSTALLATION

IMPORTANT:

Read these instructions before starting the installation. Upon receipt of your equipment, thoroughly inspect it for any damage. If damage is observed, contact your delivering agency immediately. After checking for damage, examine the markings on the equipment to ensure that the type of gas is correct.

THIS COOKING EQUIPMENT IS TO BE PROVIDED WITH AN EXHAUST HOOD TESTED FOR COMPLIANCE WITH THE STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS, NFPA 96, OR WITH THE REQUIREMENTS IN THE STANDARD FOR EXHAUST HOODS FOR COMMERCIAL COOKING EQUIPMENT, UL 710.

This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of the local codes, with the NATIONAL ELECTRICAL CODE, ANSI/NFPA 70, or the CANADIAN ELECTRICAL CODE, CSA C22.2, as applicable.

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 a 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 ½ 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 pressures equal to or less than ½ psi (3.45 kPa).

IMPORTANT

Installation and service must be performed by a qualified installer, Service agency or gas installer.

INSTALLATION:

- Keep area around appliance free and clear-from combustibles.

- All units must be installed in such a manner that the flow of combustion and ventilation air are not obstructed.
  Provisions shall be incorporated in the design of the kitchen to ensure an adequate supply of fresh air for proper combustion. Do not obstruct the front of the unit at the bottom where the filter is located, as combustion air enters this areas.

INSTALLATION

- It is recommended that a main shutoff valve be provided outside the unit at the time of installation.
- Locate the ¾" NPT threaded pipe nipple protruding from the lower rear of the unit.

- Connect appliance to gas supply line. Under no circumstances should the gas supply line be smaller than the inlet pipe on the appliance. Use pipe compound on all pipe joints. Compound must be resistant to the action of liquefied petroleum gases.

- It is imperative to provide an adequate gas supply. 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 5"W.C. manifold pressure for natural gas and 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 6" W.C. for natural gas or 11" W.C. for propane gas. The pressure on the supply line must be maintained between 6" W.C. and 7" W.C. It must be maintained at an incoming pressure adequate to provide 5" W.C. just upstream of the regulator with all appliances full on.

- It is suggested that for servicing and proper operation, at least 36 inches of free area be
- provided in front of the appliance.

- The input rating of your equipment is for elevations up to 2,000 feet. For elevations above 2,000 feet, the rating must be reduced 4% for each 1,000 feet above sea level.

- **CAUTION:** During any pressure testing of the system at test pressures in excess of 1/2 psig (3.45 kPa), this appliance and its individual shutoff valve must be disconnected from the gas supply piping system.

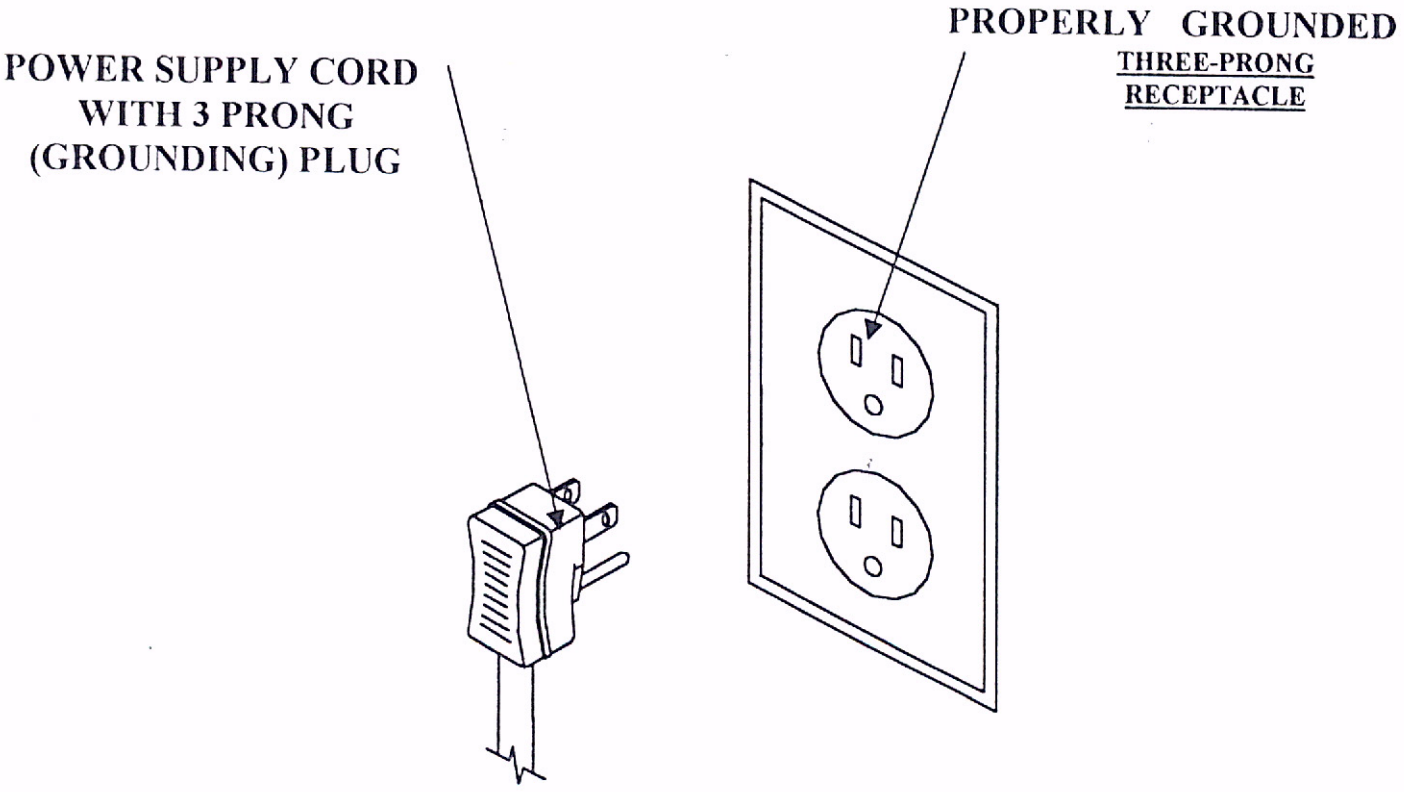
- **CAUTION:** During any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.45 kPa), this appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve.

- Be sure all valves are in closed position before connecting to gas supply.

ELECTRICAL CONNECTION

WARNING!
Electrical Grounding Instructions

This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.



This appliance must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.2, as applicable.

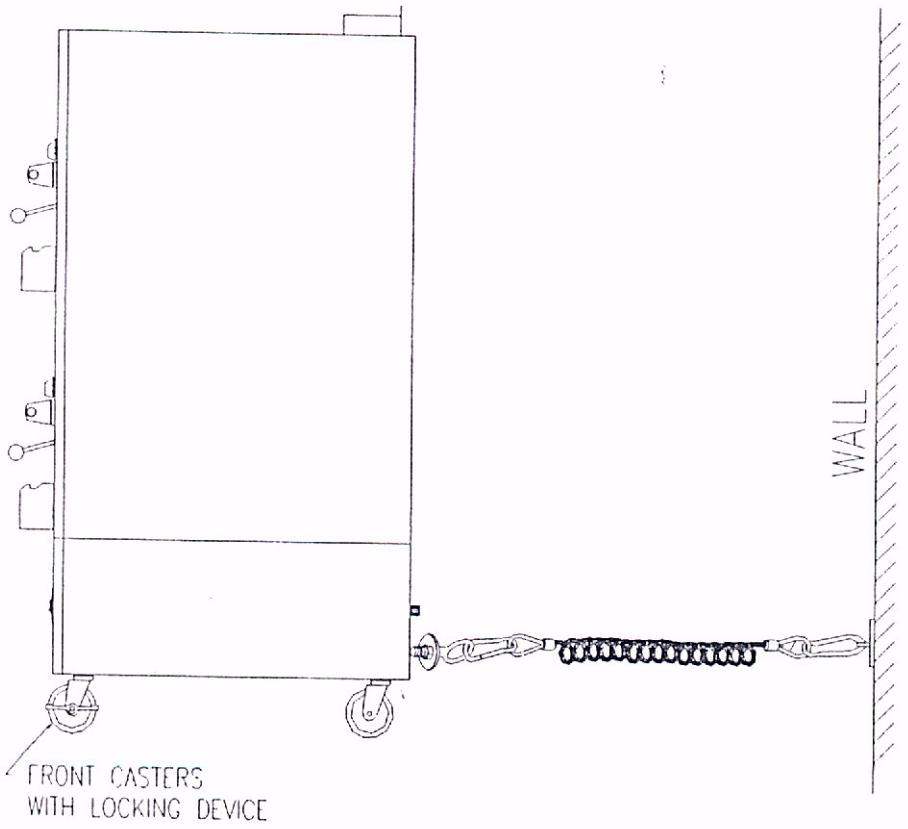
Electrical specifications:
Model JBB-236 provided with one cord, with 3-prong grounded plug for a supply of 115 VAC-60Hz 15 AMP.
For blower: motor rated at 1.1 AMP.

LEGS OR OPTIONAL CASTERS

1. A threaded plate can be found under the base frame at each corner of the unit.
2. Raise unit sufficiently to allow supplied legs or casters to be screwed into the plates. For safety, support the unit with an adequate blocking arrangement strong enough to support the load.
3. If using casters, install casters with locking at the front. Handle unit with care. Never drop or allow unit to fall.

For an appliance equipped with casters:

1. The installation shall be made with a connector that complies with the **Standard for Connectors for Movable Gas Appliances, ANSI Z21.69 or Connectors for Moveable Gas Appliances, CAN/CGA-6.16,** and a quick-disconnect device that complies with the **Standard for Quick-Disconnect Devices for Use with Gas Fuel, ANSI Z21.41, or Quick Disconnect Devices for Use with Gas Fuel, CAN1-6.9**
2. To limit the movement of the appliance without depending on the connector and the Quick-disconnect device or its associated piping attach a restraining device.
3. The restraining device may be attached to the appliance at the location shown in Figure



TYPICAL RESTRAINING DEVICE

INFRARED BROILER OPERATION INSTRUCTIONS

Put the broiler into operation by the following procedure:

1. The pilots should have remained ignited from the installation initial checkout, however, it is good practice to always check if they are burning before proceeding.
2. Press the blower switch to ON.
3. Turn the broiler burner valve to HIGH.

CAUTION: FOR SAFETY REASONS, THE BROILER BURNERS SHOULD BE VISUALLY OBSERVED FOR PROPER IGNITION **EACH TIME** THE UNIT IS PLACED IN OPERATION. THIS SAFETY CONSIDERATION SHOULD BE OBSERVED FOR ALL OVER-FIRED BROILERS. SHOULD IGNITION FAIL AFTER 5 SECONDS TURN BROILER VALVE OFF AND WAIT 5 MINUTES BEFORE TRYING AGAIN.

POWER FAILURE: In the event of an electric power failure, no attempt should be made to operate broiler. Turn off all gas and the blower switch until power is restored.

LIGHTING AND RE-LIGHTING

Your appliance is equipped with four continuously burning pilots. Four pilots light eight burners. Pilots must be manually lighted immediately after the gas is turned ON. Adjustment of the pilot flames can be made by removing plug button through openings at the front panel.

To adjust the pilot flames, use a flat screwdriver and turn the lighter valve screw clockwise or counter-clockwise. After the desirable pilot flame height is obtained, turn fan ON and then turn burner valves ON. If the pilot flames go out, turn burner valves OFF. Wait 5 minutes and repeat procedure.

Be sure all valves are in a closed position before connecting to gas supply.

DO NOT USE AN OPEN FLAME TO CHECK GAS LEAKS.

NOTE: Your appliance was tested, rated and adjusted at the factory before shipment and should be ready for use at the site without any major adjustments.

RADIANT BROILER OPERATION INSTRUCTIONS

Put the broiler into operation by the following procedure:

1. The pilots should have remained ignited from the installation initial checkout, however, it is good practice to always check if they are burning before proceeding.
2. Turn the broiler burner valve to "start" position, leave on the "start" position for three minutes.
3. Turn the broiler burner valve to HIGH or LOW AS DESIRED.

CAUTION: FOR SAFETY REASONS, THE BROILER BURNERS SHOULD BE VISUALLY OBSERVED FOR PROPER IGNITION **EACH TIME** THE UNIT IS PLACED IN OPERATION. THIS SAFETY CONSIDERATION SHOULD BE OBSERVED FOR ALL OVER-FIRED BROILERS. SHOULD IGNITION FAIL AFTER 5 SECONDS TURN BROILER VALVE OFF AND WAIT 5 MINUTES BEFORE TRYING AGAIN.

LIGHTING AND RE-LIGHTING

Your appliance is equipped with a continuously burning trailing pilot. This trailing pilot lights six burners. Pilots must be manually lighted immediately after the gas is turned ON. Adjustment of the pilot flames can be made by removing plug button through openings at the front panel.

To adjust the pilot flames, use a flat screwdriver and turn the lighter valve screw clockwise or counter-clockwise. After the desirable pilot flame height is obtained, turn burner valves ON. If the pilot flames go out, turn burner valves OFF. Wait 5 minutes and repeat procedure.

Be sure all valves are in a closed position before connecting to gas supply.

DO NOT USE AN OPEN FLAME TO CHECK GAS LEAKS.

NOTE: Your appliance was tested, rated and adjusted at the factory before shipment and should be ready for use at the site without any major adjustments.

GENERAL GUIDELINES

In the event of power failure: this appliance is not capable of being operated. The gas valve and unit power switch **should be** turned ofF.

When an appliance is on casters and is connected to the supply piping by means of a connector, there must be present a restraint on the unit.
If disconnection of this restraints is necessary, because the unit needs to be moved, for example, the restraint **must be** reconnected back after the appliance has been returned to its original installed position.

The equipment, as supplied by the factory 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, then at the option of Jade Range such parts will be repaired or replaced by Jade Range.

MAINTENANCE AND CLEANING

WARNING: FOR YOUR SAFETY, DISCONNECT THE POWER SUPPLY TO THE APPLIANCE BEFORE CLEANING OR SERVICING THE UNIT.

WARNING: ADJUSTMENT 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 ASSISTANCE, AND FOR GENUINE FACTORY PARTS.

MAINTENANCE:

Keep exposed, cleanable areas of unit at all times.

Daily:

A. Remove, empty and clean grease drawers.
B. Thoroughly wash grease hopper below rack.
C. Thoroughly wash rack.
D. Clean warming oven (if provided).

Monthly:

A. Clean burner air intake filter at lower front of unit.
B. Visually assure proper pilot operation.
C. Lubricate valves.

Vent system:

At least twice a year the unit venting system should be examined and cleaned.

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 attach. 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 a 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 in the combination with a powdered cleanser. Heat tint action may be lessened by not applying or by reducing heat to equipment during slack periods.

CLEANING AND LUBRICATION OF GAS VALVE

Due to high usage and high heat exposure of the appliance, periodic maintenance is required such as lubricating the gas valves. Cleaning and lubricating the gas valves can be performed at the front of the unit without the necessity of removing side or front panels.

WARNING. BEFORE WORKING ON APPLIANCE DISCONNECT GAS AND ELECTRICAL SUPPLIES

Read all instructions completely before proceeding

1. Shut off gas supply to the unit.
2. Disconnect electrical supply to the unit.
3. Set all knobs in the OFF position.
4. Pull out and remove knob from the valve stem.
5. Snap out cap from opening.
6. Using a ¼ hex nut driver remove two screws from valve cover.
7. Remove valve cover, "D" washer, and spring. Note orientation of the valve cover and "D" washer; the dimple of the "D" washer is facing away from the valve body.
8. Carefully pull out stem of valve.
9. Check and clean the cylinder from any dirt and foreign material.
10. Apply a thin layer of high temperature grease on the cylinder as shown. Do not apply an excessive amount of grease that it could block the gas opening and obstruct gas flow.
11. Assemble valve in reverse order. Make sure the "D" washer is positioned so that its dimple faces away from the valve body.
12. Check for leaks.

