Installation Guide

GAS RANGES

KOS-RG MODELS

KOS-24RG03M | KOS-30RG03M

KOS-36RG03M | KOS-48RG03M

KOSTCH

Gas Supply Requirements

Installation of this range must conform with local codes, or in the absence of local codes, with national Fuel Gas Code ANSIZ223.1 / NFPA 54.

In Canada, installation must conform to the current natural Gas Installation /code, CAN 1-1.1-M81 and with local codes where applicable.

This range has been design-certified according to ANSIZ21.1a, latest edition.

Reading	LP in. w.c.	NG (Natural Gas) in. w.c,
Maximum gas pressure	13.0.	10.0
Appliance Regulator Setting for outlet pressure	10.0	5.0

Safety Tips for Gas Operation

- ✓ Keep appliance area clear and free from combustible materials, gasoline, and otherflammable vapors.
- ✓ Do not obstruct the flow of combustion air into the range and ventilation air away from the range.
- ✓ Ventilation: it is a must that the unit be set under a powered, vented exhaust hood of sufficient size and capacity.
- ✓ Before installing the range, you must locate and secure the included anti-tip bracket to thewall for your range.

⚠ CAUTION

- ✓ The use of cabinets for storage above the appliance may result in a potential burn hazard. Combustible items may ignite; metallic items may become hot and cause burns. If a cabinet storage is to be provided, the risk can be reduced by installing a range hood that projects horizontally a minimum of 5" (12.7cm) beyond the bottom of the cabinets.

Dimension and Clearance

⚠ WARNING

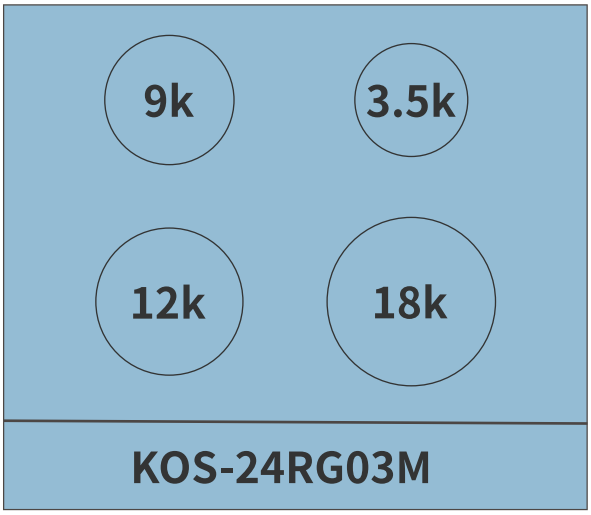
- ✓ The appliance shall not be used for space heating. This information is based on safety considerations.
- ✓ All openings in the wall behind the appliance and in the floor under the appliance shall be sealed.

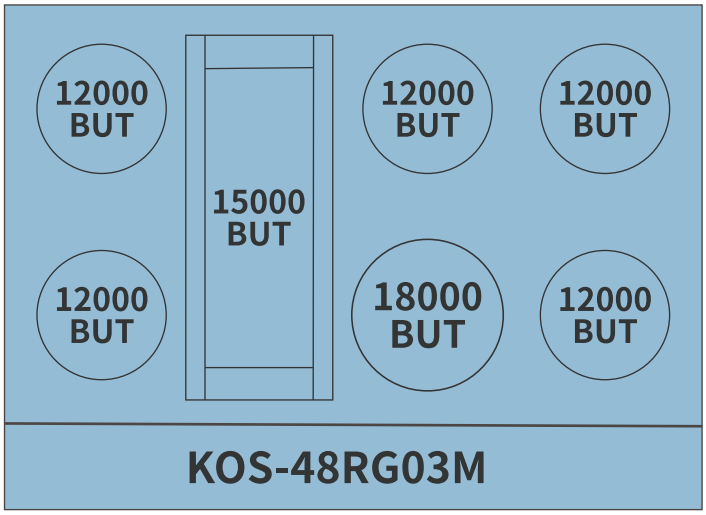
Dimensions and Clearances

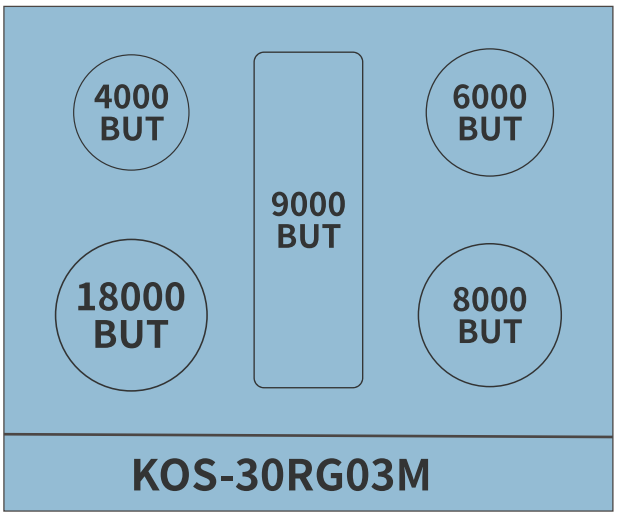
- ✓ The range may be installed flush to the rear wall.
- ✓ You may install a non-combustible material, such as tile, on the rear wall above the range and up the vent hood.
- ✓ It is not necessary to install non-combustible materials behind the range below the countertop height.
- ✓ The minimum distance from the side of the range above the counter top to combustible sidewalls must be at least 10 inches.

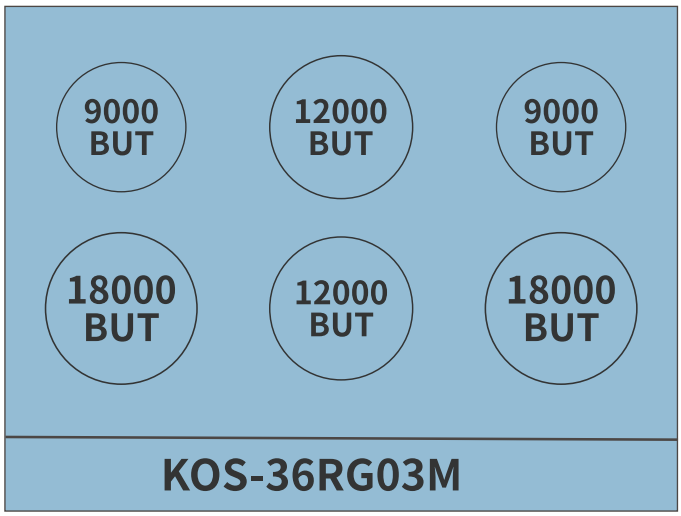
Dimension and Clearance

BTU Design

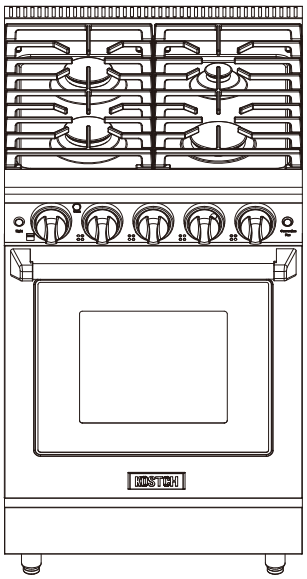




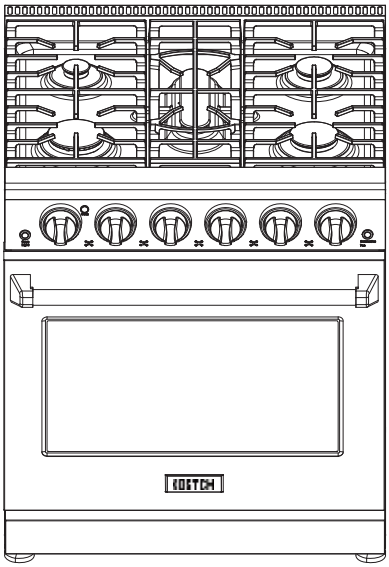




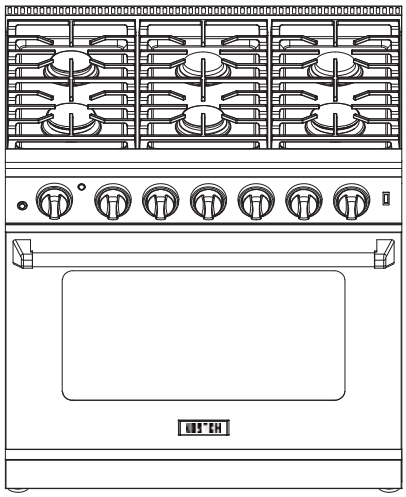
Dimension and Clearance



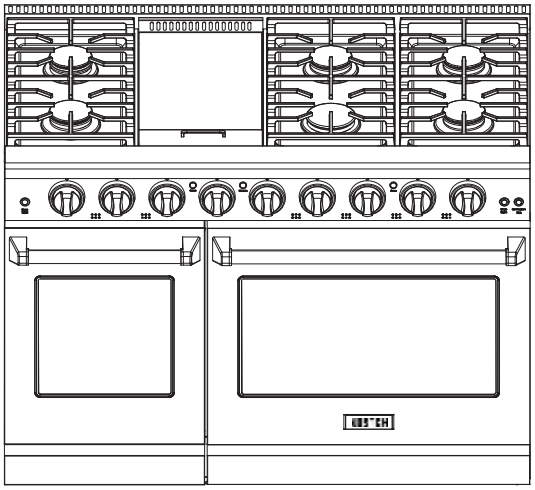
KOS-24RG03M



KOS-30RG03M



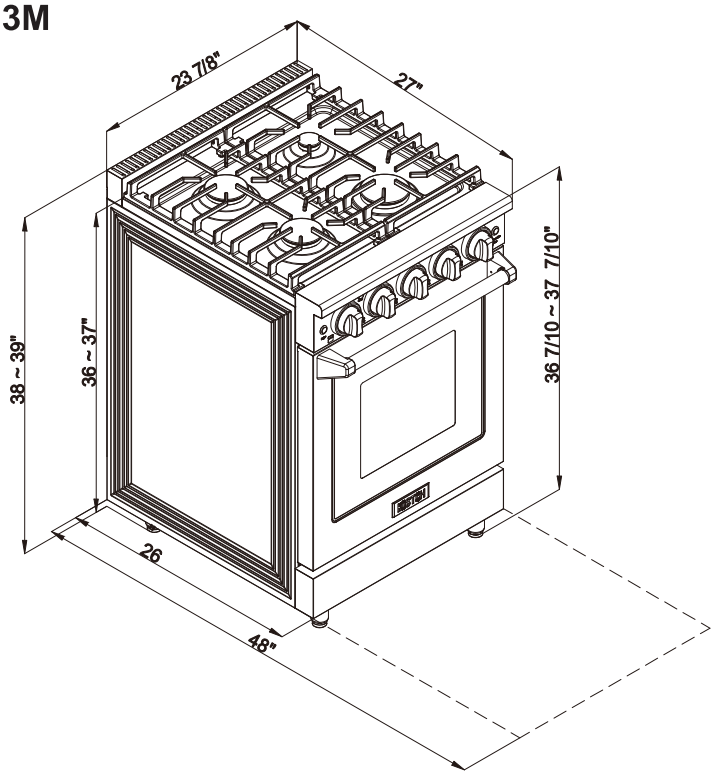
KOS-36RG03M



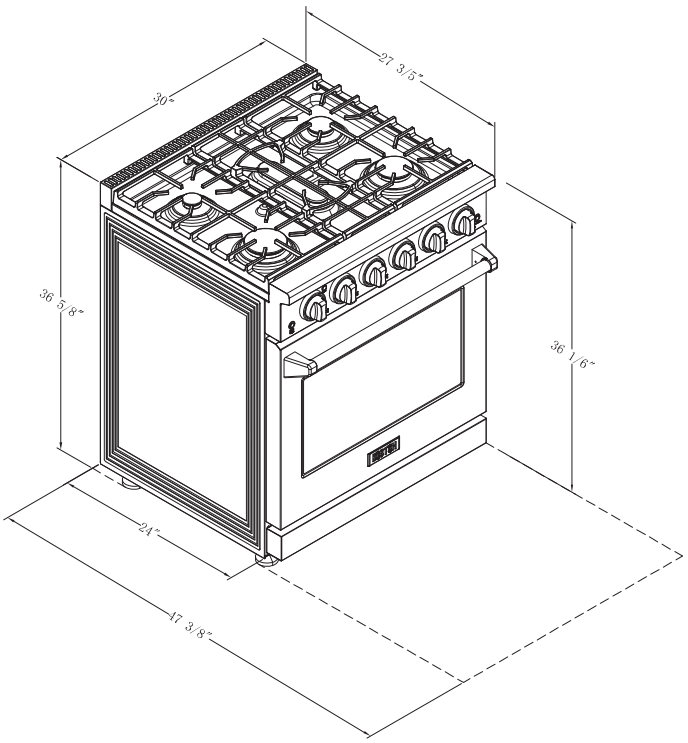
KOS-48RG03M

Dimension and Clearance

KOS-24RG03M

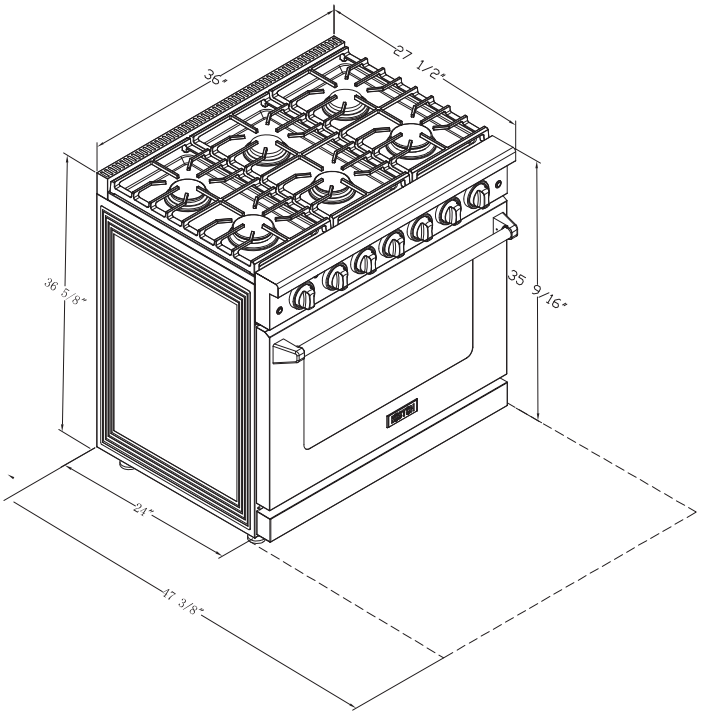


KOS-30RG03M

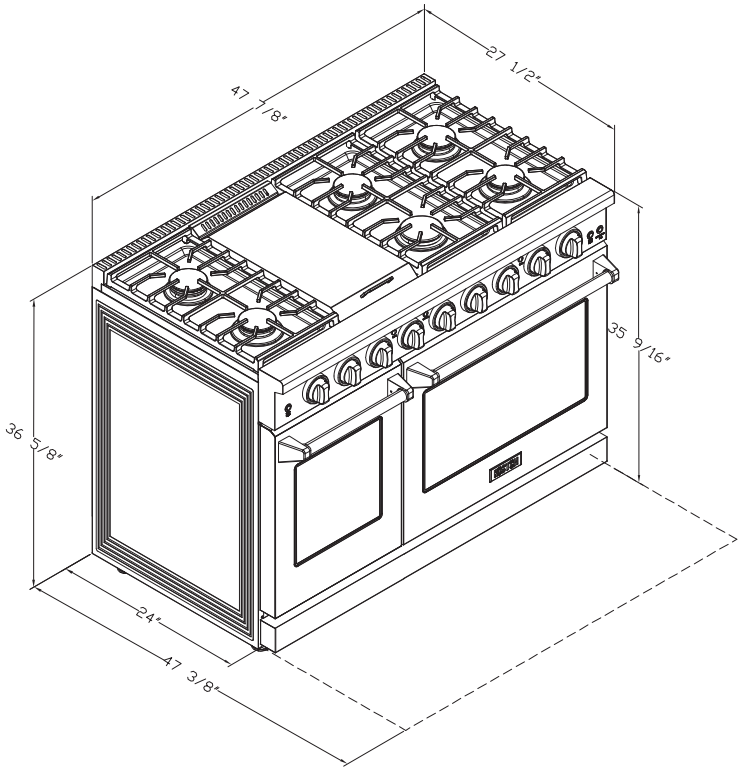


Dimension and Clearance

KOS-36RG03M

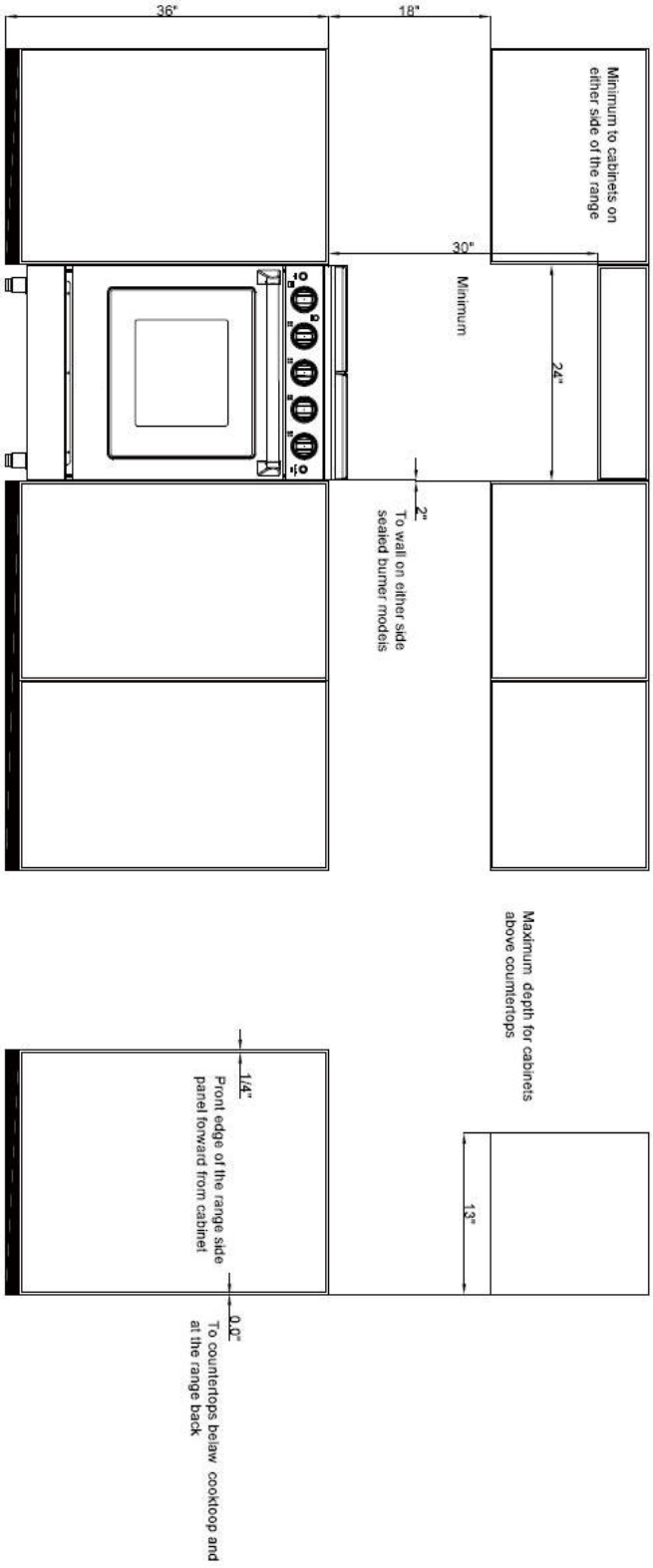


KOS-48RG03M



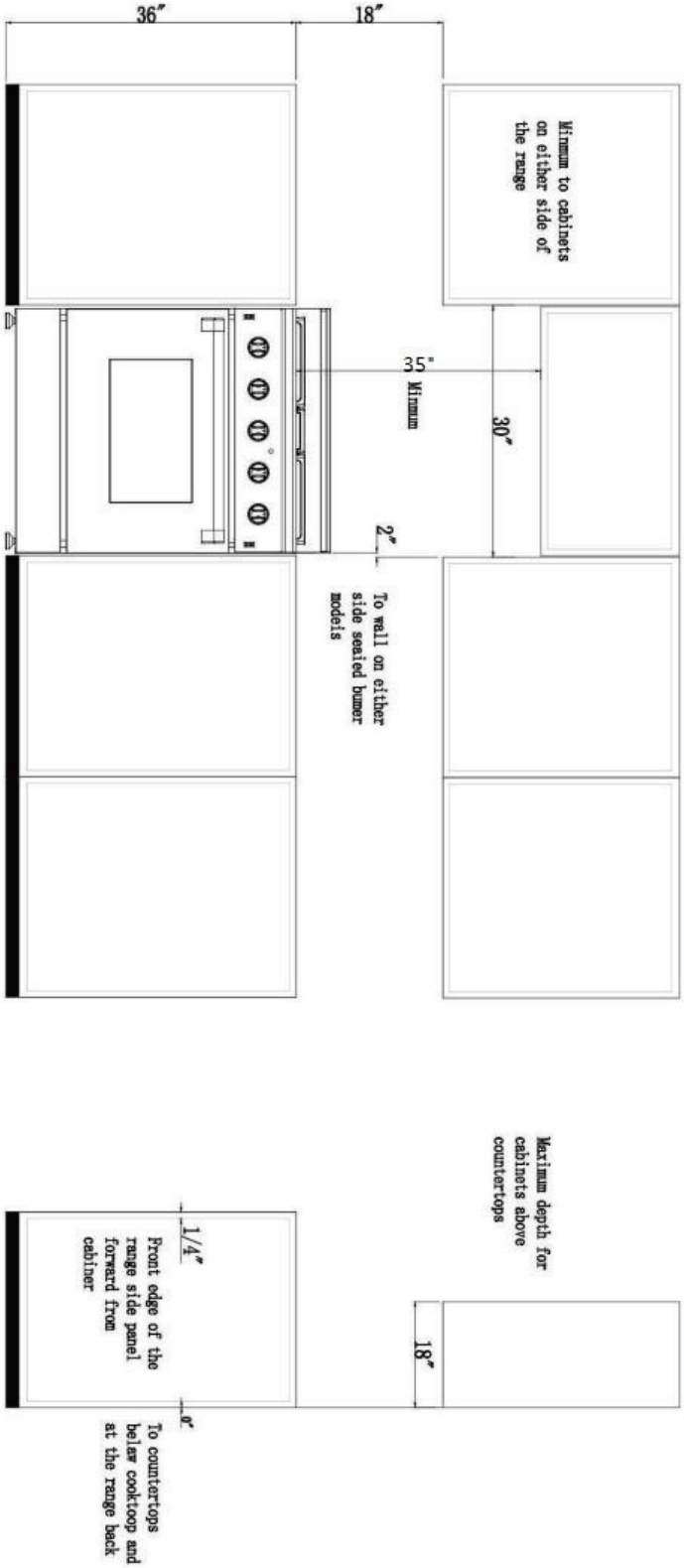
The maximum depth of cabinets installed above cooking tops be 13 in (330mm).

Dimension and Clearance



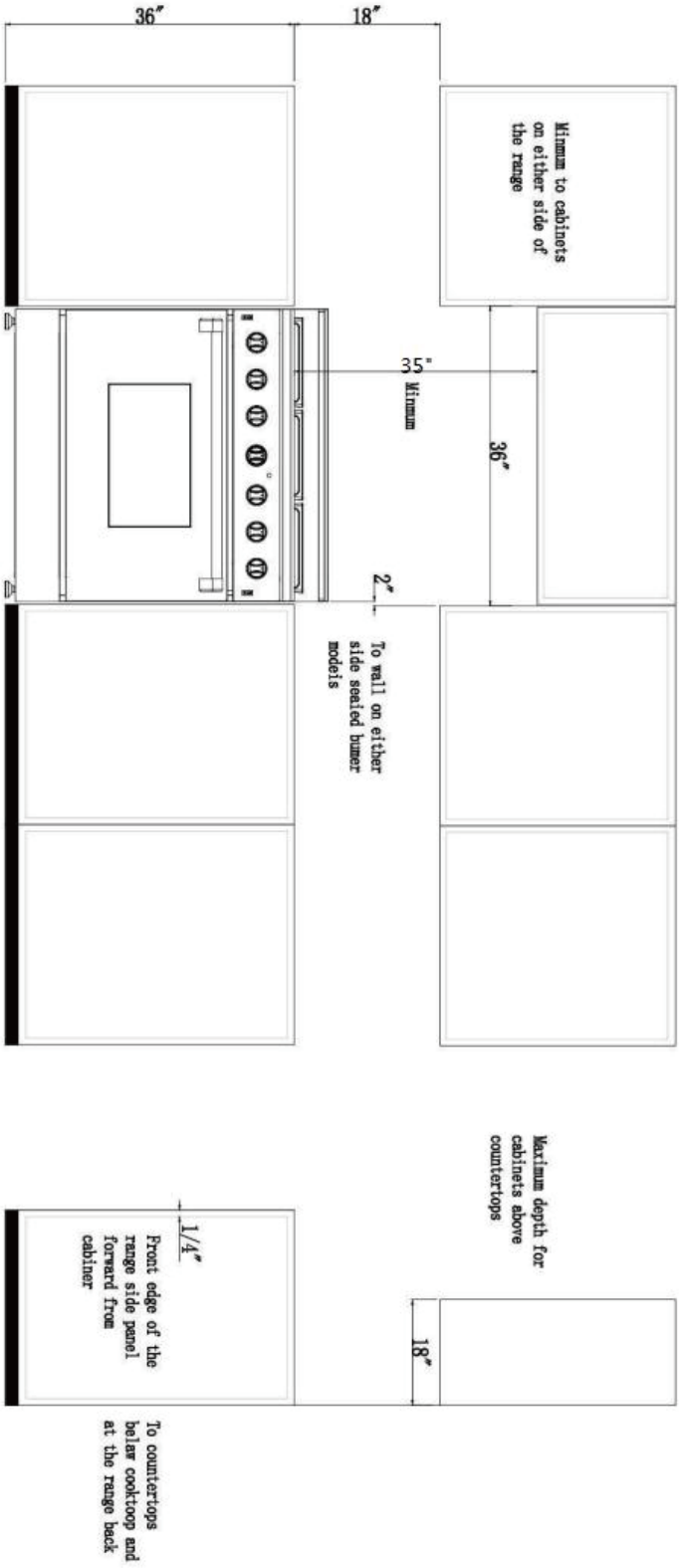
Dimension and Clearance

30” Gas Range Clearance



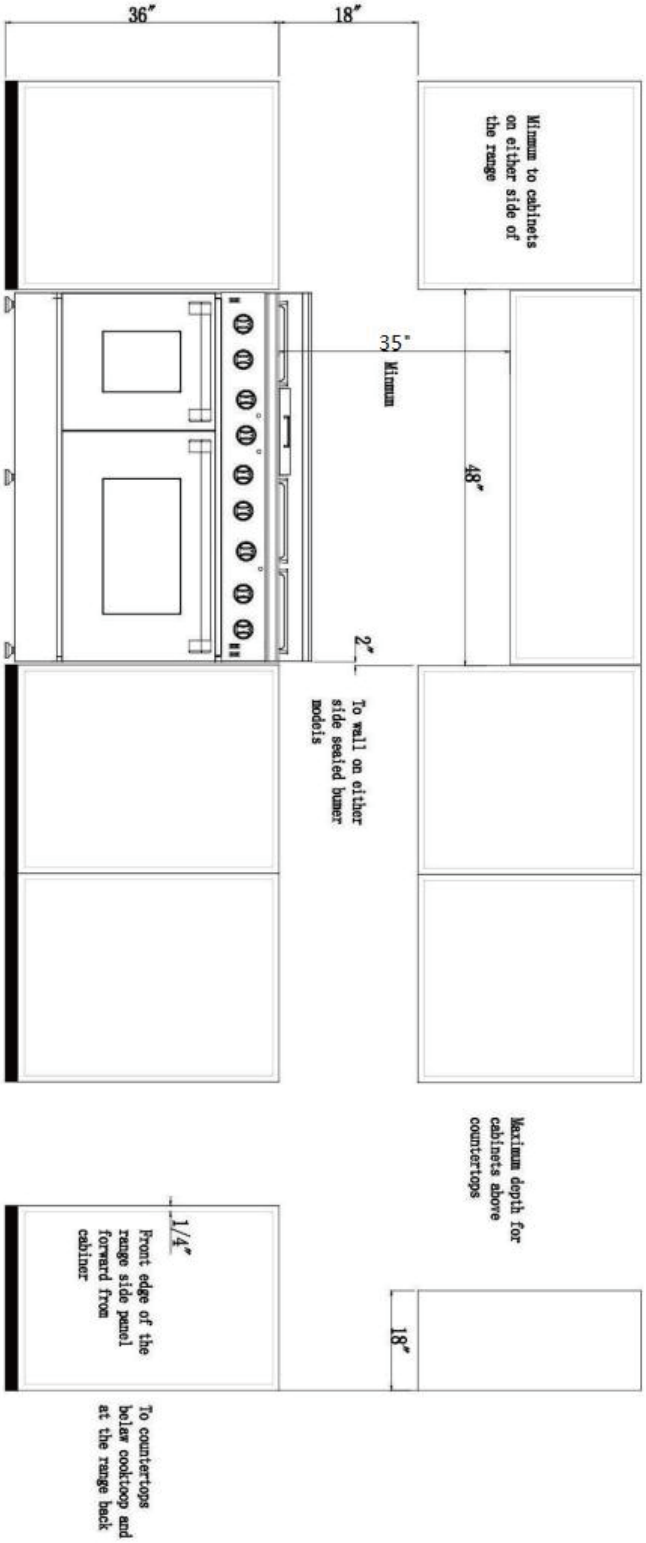
Dimension and Clearance

36” Gas Range Clearance



Dimension and Clearance

48” Gas Range Clearance

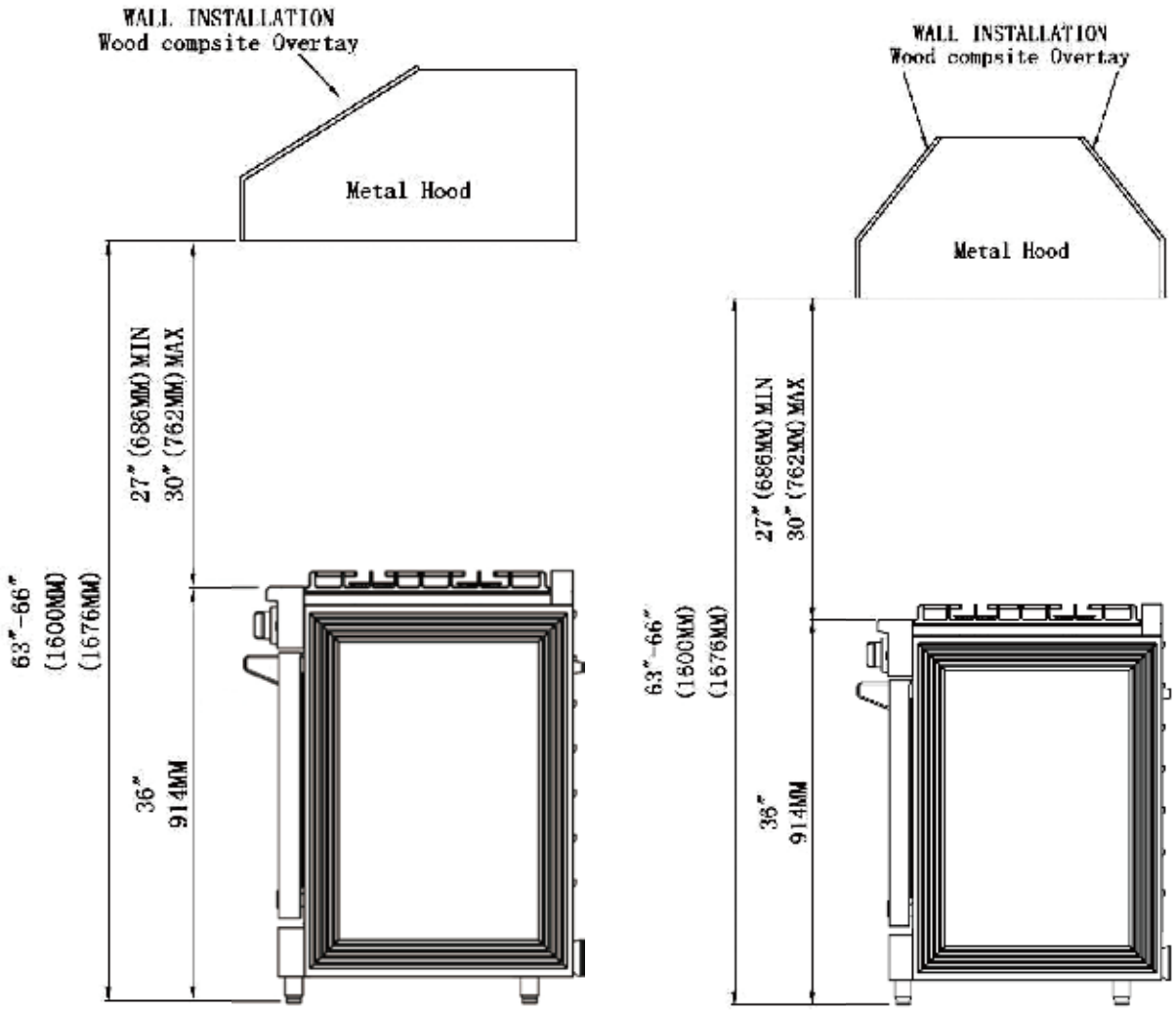


Dimension and Clearance

Top Hood and cabinet specifications

Condition	Minimum clearance allowed
Clearance between the top of the cooking surface and the bottom of an unprotected wood or metal cabinet for any model other than KOS-48RG03M.	35”
Clearance between the top of the cooking surface and the bottom wood or metal cabinet that is protected by not less than: • 1/4-inch-thick flame-retardant mill-board covered with not less than: ○ No. 28 MSG sheet steel or ○ 0.015-inch-thick stainless steel or ○ 0.024-inch-thick aluminum or ○ 0.020-inch-thick copper	24”
Duel fuel ranges clearance between the top of the cooking surface and the bottom of an unprotected wood or metal cabinet for models KOS-48RG03M	40”

Dimension and Clearance



Electric Power Supply Requirements

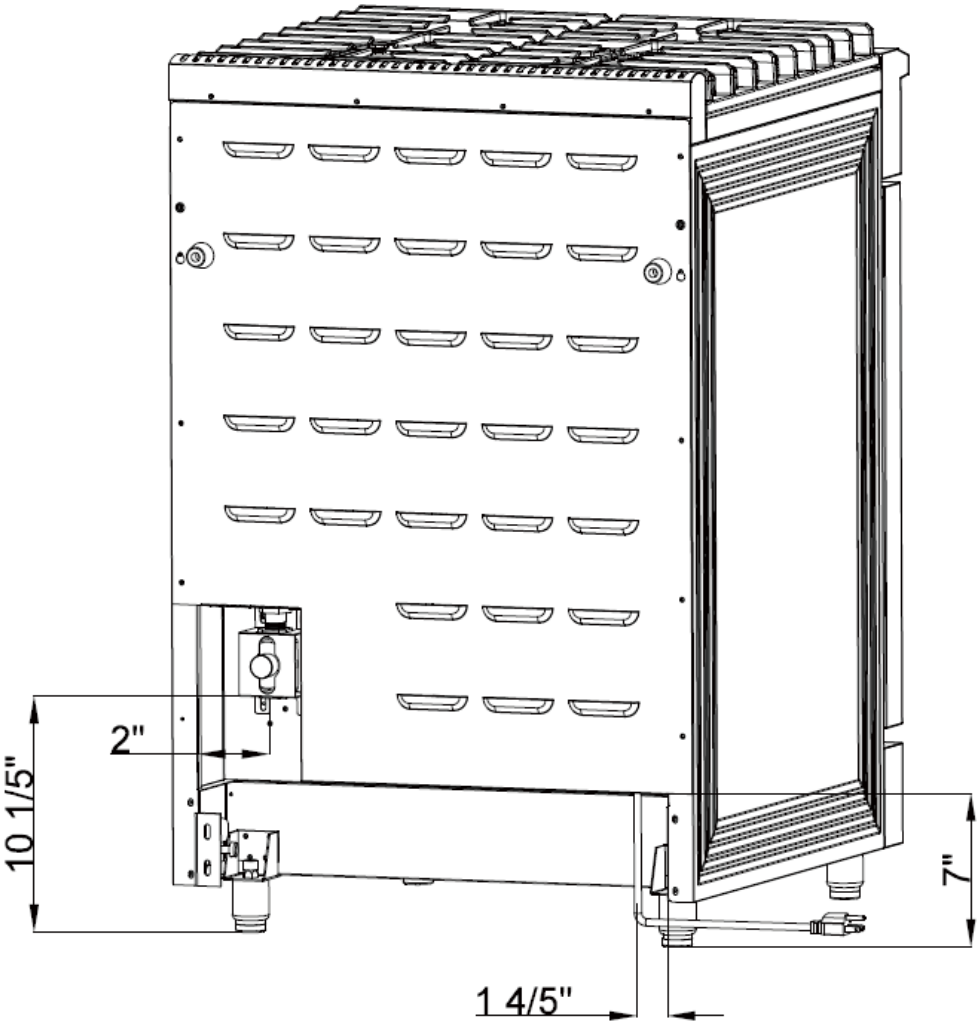
Your range must be electrically grounded in accordance with local codes or, in the absence of local codes, in accordance with the National Electrical Code (ANSI/NFPA 70, latest edition).

In Canada, electrical grounding must be in accordance with the current CSA C22.1 Canadian Electrical Code Part 1 and/or local codes. A copy of this standard may be obtained from: National Fire Protection Association, 1 Battery march Park, Quincy, Massachusetts 02269-9101.

The power supply must be the correct polarity. Reverse polarity will result in continuous sparking of the electrodes, even after flame ignition. If there is any doubt as to whether the power supply has the correct polarity or grounded, have it checked by a qualified electrician.

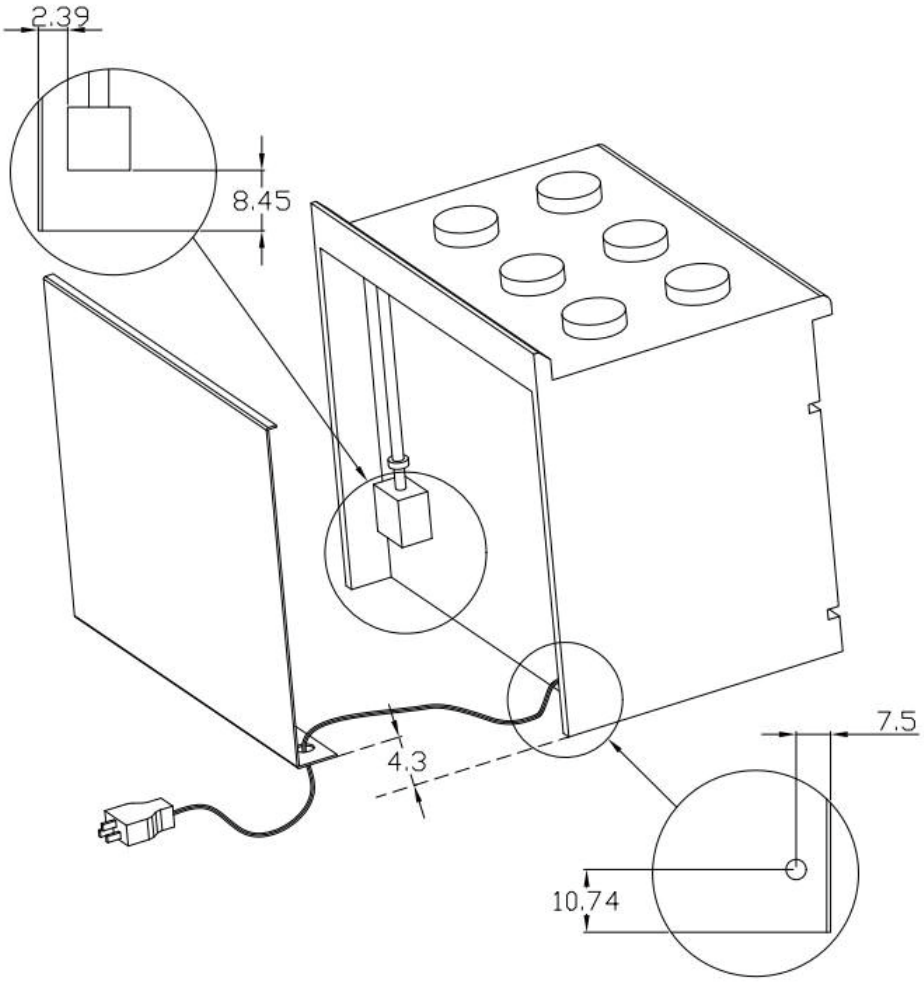
Use 120V, 60Hz, and properly grounded branch circuit protected by a 15-amp or 20-amp circuit

Dimension and Clearance



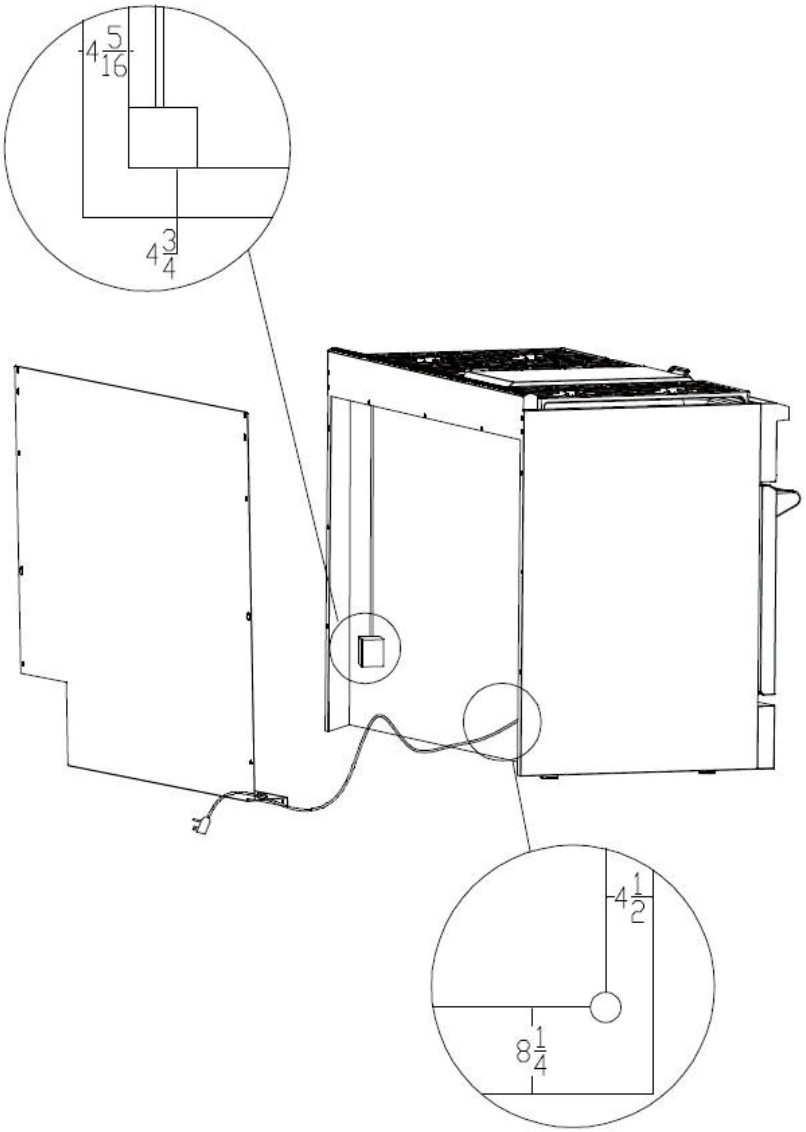
Installation for KOS-RG 24 inches Gas Range

Dimension and Clearance



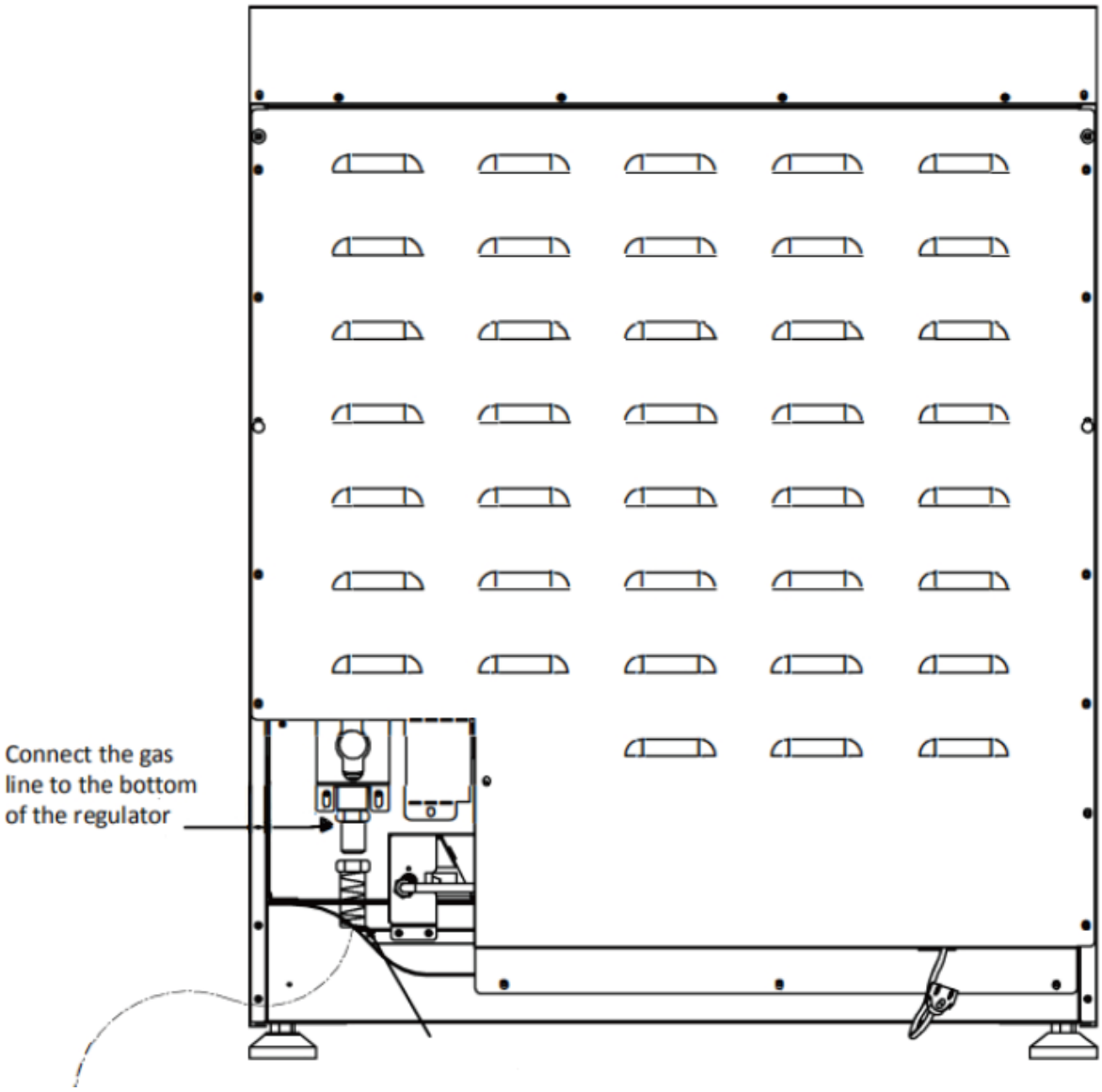
Installation for KOS-RG 30 and 36 inches Gas Range

Dimension and Clearance



Back Layout for KOS-RG 40 inches Gas Range

Dimension and Clearance



Gas Line Connection

Electrical Grounding Instructions

⚠ WARNING

This indoor gas cooking 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-pronged receptacle.

Where a standard two-prong wall receptacle is encountered, it is the responsibility and obligation of the customer to have it replaced with a properly grounded three-prong wall receptacle.

Do not cut or remove the grounding prong from the power cord.

Before connecting plug to the cord, disconnect the electrical supply.

CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

Connect Range to Gas Supply

Most localities will require that the stove shutoff valve and gas connections be installed by a certified technician or plumber. These instructions are for a professional. Gas installation specifications and regulations may vary so please consult your local codes before proceeding.

1. Install a manual gas line shut-off valve in the gas line as follows:

    a. in an easily accessed location outside the range

    b. in the gas piping external to the appliance

2. Install male ½" flare union adapter to ½" NPT internal thread elbow at inlet of regulator.

On models equipped with standard twin burners, install the male pipe thread end of the ½" flare union adapter to the ½" NPT internal thread at inlet of pressure regulator.

Use a wrench on the regulator fitting to avoid damage.

Dimension and Clearance

1. Install male ½" or ¾" (¾" refers to 48-inch gas range) flare union adapter to the NPT internal thread of the manual shut-off valve, taking care to secure the shut-off valve to keep it from turning.
2. The gas supply pressure for checking the regulator setting is 6 in.w.c. (Natural Gas) and 11 inch.w.c. (LP gas) connect flexible gas line connector to the regulator on the range. Position range to permit connection at the shut-off valve.
3. When all connections have been made, make sure all range controls are in the position and turn on main gas supply valve.
4. Leak testing of the appliance shall be conducted according to the manufacturer's instructions. Use some soap water (50% water and 50% soap) or a leak detector at all joints and connections to check for leaks in the system. Do not use a flame to check for gas leaks.
5. The appliance must be isolated from the building's gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressure equal to or less than ½ psig(3.5kPa).

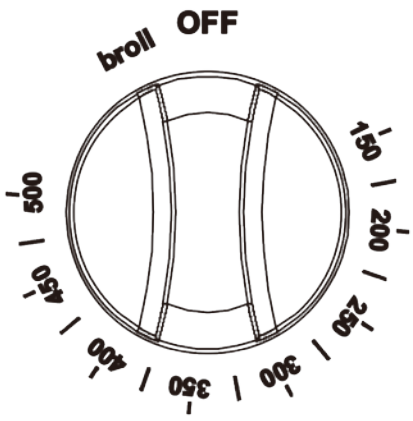
After installation:

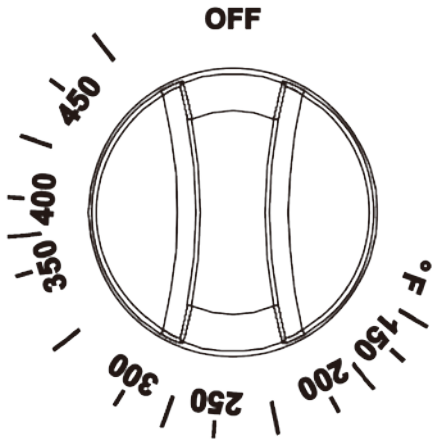
1. Check ignition of cooktop burners.
2. Check ignition of oven burner.
3. Visually check tubular burner (oven burner) re-ignition to be sure both rows of burner ports are relighting each time.
4. Check for gas leaks at all gas connections (using a gas detector, never a flame).
5. Check oven bake and convection bake function.

Appendix 1

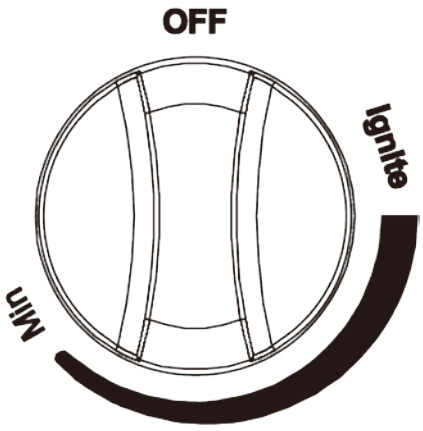
Oven Knob Installation

1. Check the design





①Big Oven Thermostat Knob ②Griddle/Small Oven Thermostat Knob



③Surface Valve Knob

Appendix 1

Oven Knob Installation

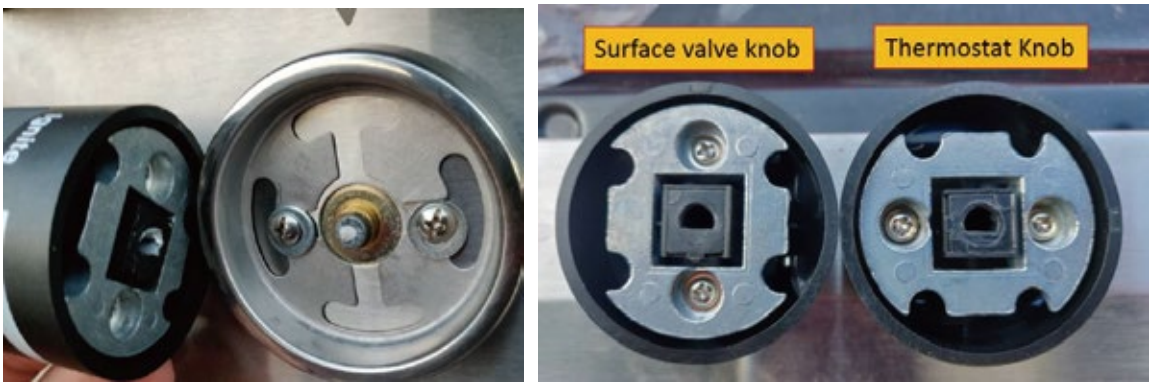
1. Check the sheetfor the quantity of each knobs

Model #	Big Oven Thermostat Knob	Griddle/Small Oven Thermostat Knob	Surface Valve Knob
KOS-30RG03M	1	0	5
KOS-24RG03K	1	0	4
Model #	Big Oven Thermostat Knob	Griddle/SmallOven ThermostatKnob	Surface Valve Knob
KOS-36RG03M	1	0	6
KOS-48RG03M	1	2	6

*For any parts damage or missing, please send email to service@kostch.com

2. Find the right knob for each shaft on the range. Push the knob in to fully attach the shaft and make sure there's no friction between knobs and bezels.

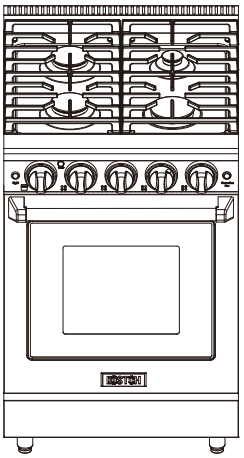
****Incorrect Knob Installation will cause the damage ofthe oven thermostat / burner valve****



(Incorrect knob caused broken thermostat shaft)

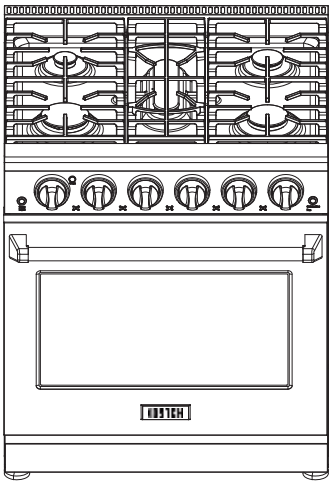
Appendix 1

Oven Knob Installation



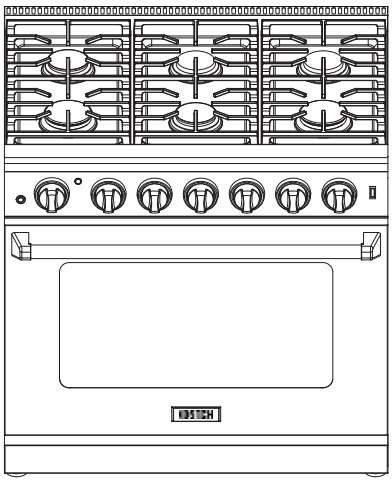
KOS-24RG03M

① ② ③ ④ ⑤



KOS-30RG03M

① ② ③ ④ ⑤ ⑥



KOS-36RG03M

① ② ③ ④ ⑤ ⑥ ⑦

KOS-30RG03M Knobs (From Left to Right):

①: Big Oven Thermostat Knob

②③④⑤⑥: Surface Valve Knob

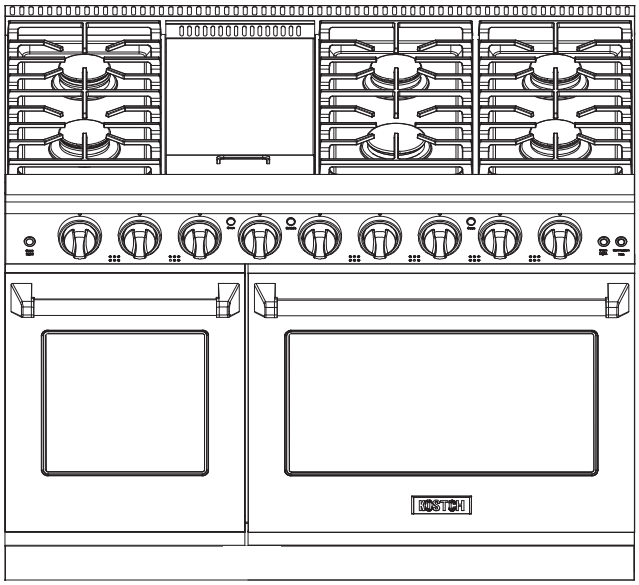
KOS-36RG03M Knobs (From Left to Right):

①: Big Oven Thermostat Knob

②③④⑤⑥⑦: Surface Valve Knob

Appendix 1

Oven Knob Installation



KOS-48RG03M

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

KOS-48RG03M (From Left to Right):

①②: Surface Valve Knob

③④: Griddle/Small Oven Thermostat Knob,

⑤⑥Surface Valve Knob

⑦: Big Oven Thermostat Knob

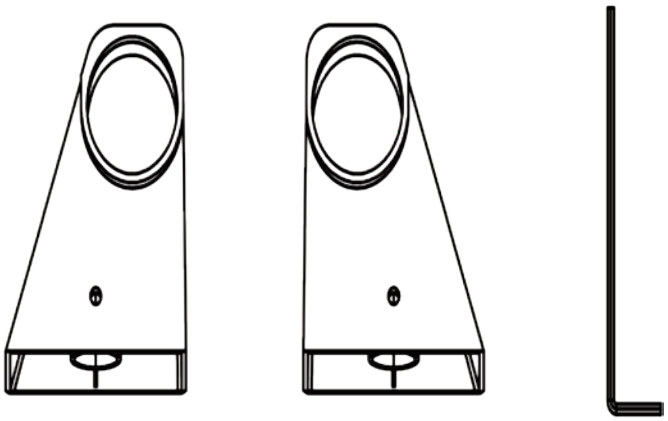
⑧⑨: Surface Valve Knob

Your range might have a KD handle that needs to be installed. Please Follow up the following procedures for the oven door handle installation.

Appendix 2

Oven Handle Installation

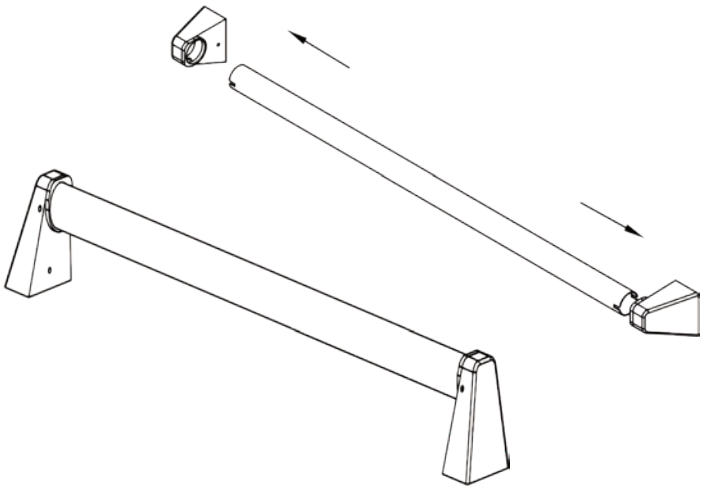
3.1 Check your Installation Kits for Door Handles



2 * Handle Holders, 1 * Installation Wrench,

1 * Handle (For 18”, 30” or 36” Oven)

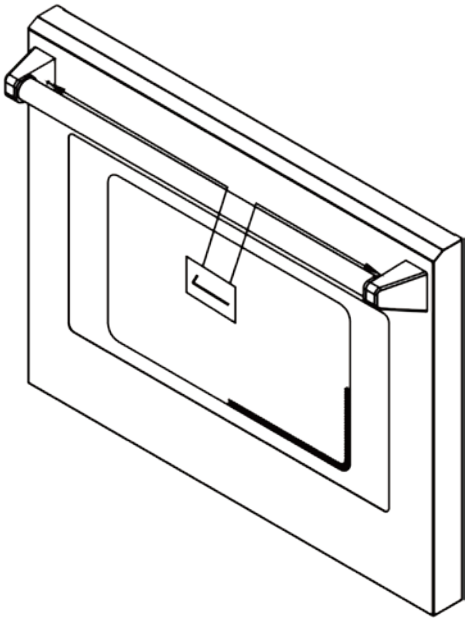
3.2 Connect door handle holders to each side of the handle



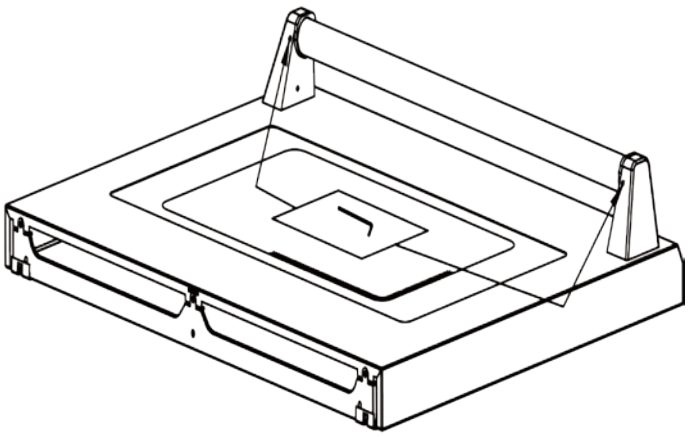
3.3 Lay the door handle againstto the oven door and fit it on the connection part, and use the wrench to get the door handle holder tight;

Appendix 2

Oven Handle Installation



3.4 Use the wrench to tighten the door handle holders.



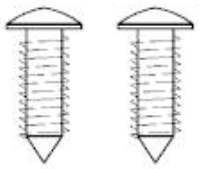
3.5 Check if the oven door handle is level and stable.

Appendix 3

Rubber Pad Installation on Back Panel

In order to meet the requirement for the clearance for the back of your KOSTCH Range, please install 2 pcs Rubber Pad provided in the manual package Please find the accessories and follow the below steps:

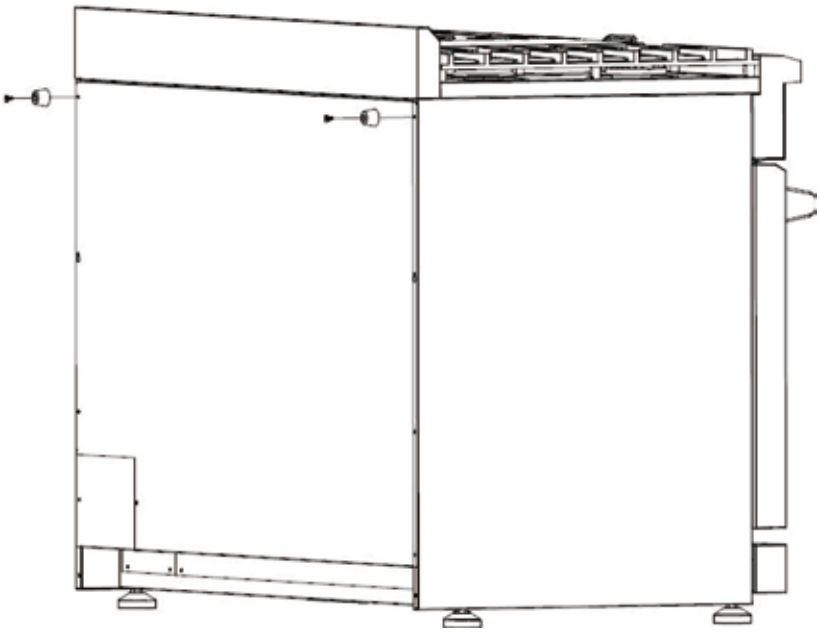
1. **check the installation kit included in the manual package;**



2* screws



2* rubber pad



2. **Install 2 pcs rubber pad shown above.**

Appendix 4

Important: If you ordered a Natural Gas range but your home uses Liquefied Petroleum Gas (LPG), you must convert the range to LPG before use. Please refer to the instructions below for the conversion procedure.

Instructions for Converting Range to Operate on Liquefied Petroleum Gas

INSTALLATION AND SERVICES MUST BE PERFORMED BY A QUALIFIED INSTALLER
IMPORTANT: SAVE INSTRUCTION MANUAL FOR THE LOCAL INSPECTOR'S USE.
READ AND SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

⚠WARNING This conversion kit must be installed by a qualified service technician in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. Failure to follow instructions may result in fire, explosion or production of carbon monoxide causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with this kit.

⚠WARNING Before proceeding with the conversion, shut off the gas supply before disconnecting electrical power to the range. Be sure power supplies are off before installing the conversion kit. Failure to do so could cause serious bodily injury.

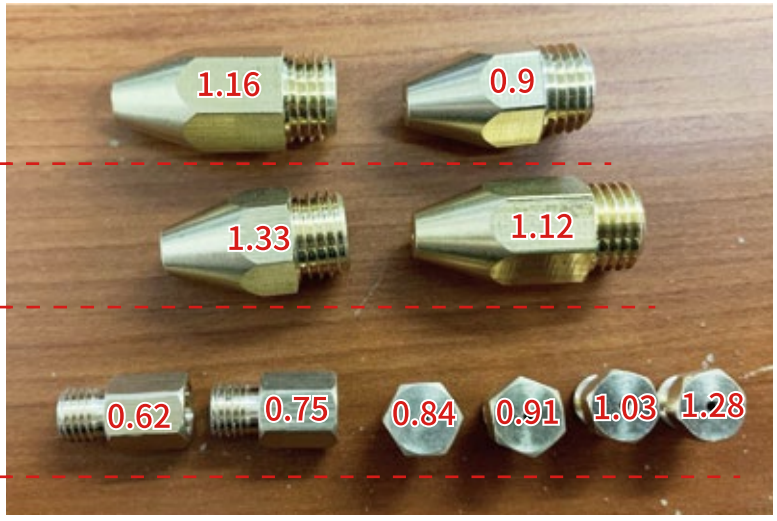
Determine the combination of top burners that are featured on your range. Identify the parts you need from this kit to complete the L.P. conversion. When burners are converted from natural to L.P. the BTU ratings are as follows: Note: For operation at elevations above 2000ft., appliance rating shall be reduced at the rate of 4% for each 1000 ft. above sea level.

	Top Burner						Simmer Burner	Griddle Burner	Bake Burner			Broil Burner		BypassJet
BTU	18000	12000	9000	8000	6000	4000	NA	15000	22000	18500	14000	10000	NA	NA
Orifice Size （MM)	1.28	1.03	0.91	0.84	0.75	0.62	NA	1.16	1.33	1.24	1.12	0.9	NA	NA
48"	1	5	NA	NA	NA	NA	NA	1	1	NA	1	1	NA	NA
36"	2	2	2	NA	NA	NA	NA	NA	NA	1	NA	1	NA	NA
30"	1	NA	1	1	1	1	NA	NA	NA	1	NA	1	NA	NA

First line:
(Left to right) 48" Griddle Orifice, 48" Large Oven & 36"/30" Oven Broil Burner Orfice

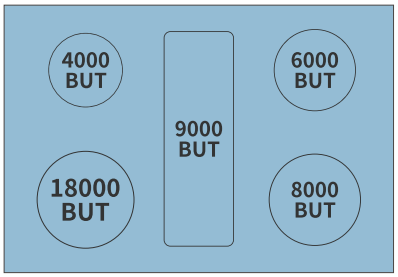
Second line:
(Left to right) 48" Large Oven Bake Burner Orifice, 48" Small Oven Bake Burnwer Orifice

Third line:
(Left to right) 4000BTU, 6000BUT, 8000BTU, 9000BTU, 12000BTU, 18000BTU Top Burner Orifice



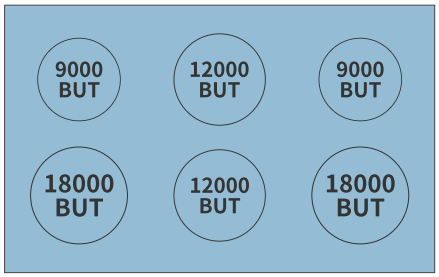
Appendix 4

Instructions for Converting Range to Operate on Liquefied Petroleum Gas



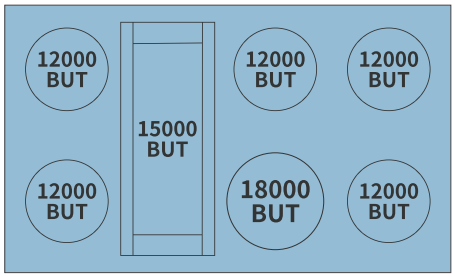
KOS-30RG03M

Oven: Bake Burner: 18500 BTU
Broil Burner: 10000 BTU



KOS-36RG03M

Oven: Bake Burner: 18500 BTU
Broil Burner: 10000 BTU



KOS-48RG03M

Griddle Burner: 15000 BTU
Large Oven: Bake Burner: 22000 BTU
Broil Burner: 10000 BTU
Small Oven: Bake Burner: 14000 BTU

IMPORTANT: After replacing the natural gas to LP orifices, be sure to keep the original factory installed natural gas orifices for future range conversion back to natural gas.

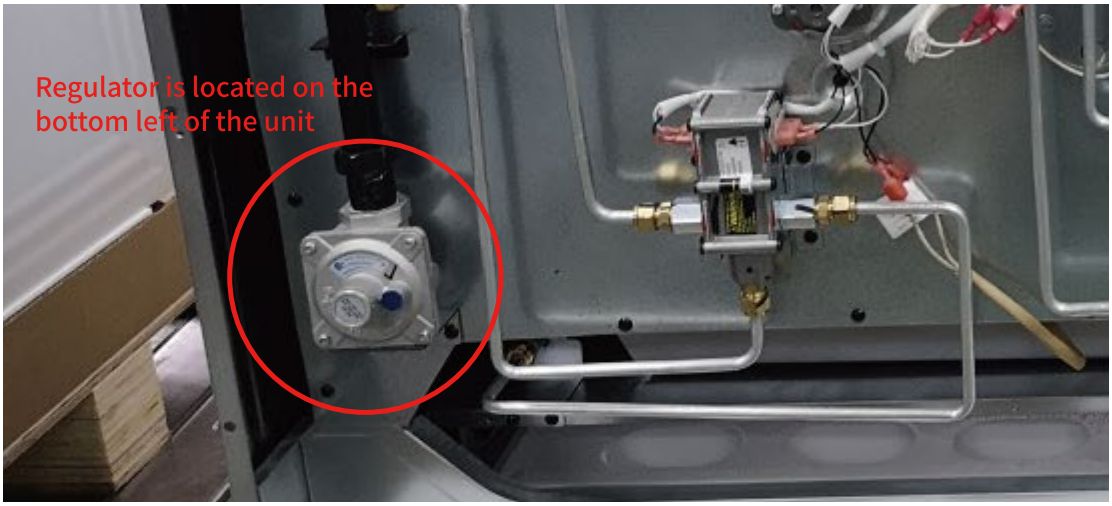
Tools for LP Conversion

7mm Tool – Top Burner Orifice Replacement
Flat Screw Driver ¢ 2.0*130 (Not Available with the LP Conversion Kit Package) – Bypass Adjustment
Adjustable Wrench *2 (Not Available with the LP Conversion Kit Package) – Orifice Adjustment

LP Conversion

1. Convert the Pressure Regulator

You could find your regulator on the back left of the range's back panel.

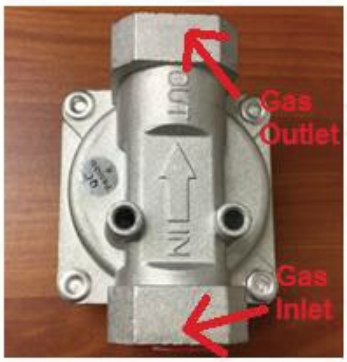


IMPORTANT Pay attention that the NG and LP are in different direction. All the gas ranges are initially designed with NG position, please have it changed in to LP position.

Appendix 4

Instructions for Converting Range to Operate on Liquefied Petroleum Gas











LP Position: Metal Ring is away from the Cap



NG Position: Metal Ring is next to the Cap

Important:
The regulator plunger inside the regulator cap is reversible. It can be unscrewed and flipped over to convert the pressure regulator between Natural Gas (NG) and LP gas settings. Ensure the plunger is reinstalled in the correct orientation for the gas type being used.

2.Convert Top Burner for LP/ Propane Gas

Save the natural gas orifices removed from the appliance for possible future conversions to natural gas. You should rely on the following process when converting unit back to Nature gas. Take extra care when handling orifice parts, making sure the orifice is not damaged, dropped, or contaminated.

a. Remove top grates, burner caps and inner burner rings.

b. Lift off outer burner heads and burner bases.

c. Remove the factory installed natural gas orifices from the center of the orifice holders using a 7mm nut driver

Remember to keep the original natural gas orifices for future conversions back to natural gas.

"IMPORTANT" to identify their markings.

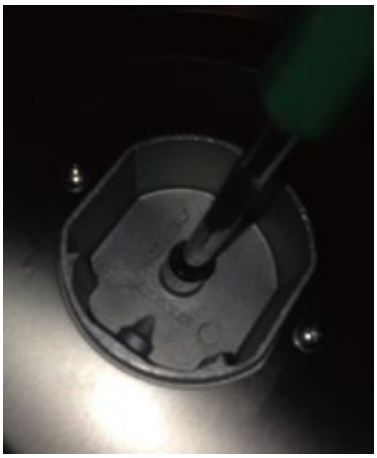
c.1. Replace the 18000BTU burner orifice in each with orifice size **1.28 mm**.
c.2. Replace the 12000BTU burner orifice in each with orifice size **1.03 mm**.
c.3. Replace the 9000BTU burner orifice in each with orifice size **0.91 mm**.
c.4. Replace the 8000 BTU burner orifice in each with orifice size **0.84 mm**.
c.5. Replace the 6000 BTU burner orifice in each with orifice size **0.75 mm**.
c.6. Replace the 4000 BTU burner orifice in each with orifice size **0.62 mm**.

Please remember not to over tighten the orifice and keep the orifice clean.
Put the burner flame ring back to the main burner bases. Put back the inner burner rings, burner caps and grates.

Appendix 4

Instructions for Converting Range to Operate on Liquefied Petroleum Gas

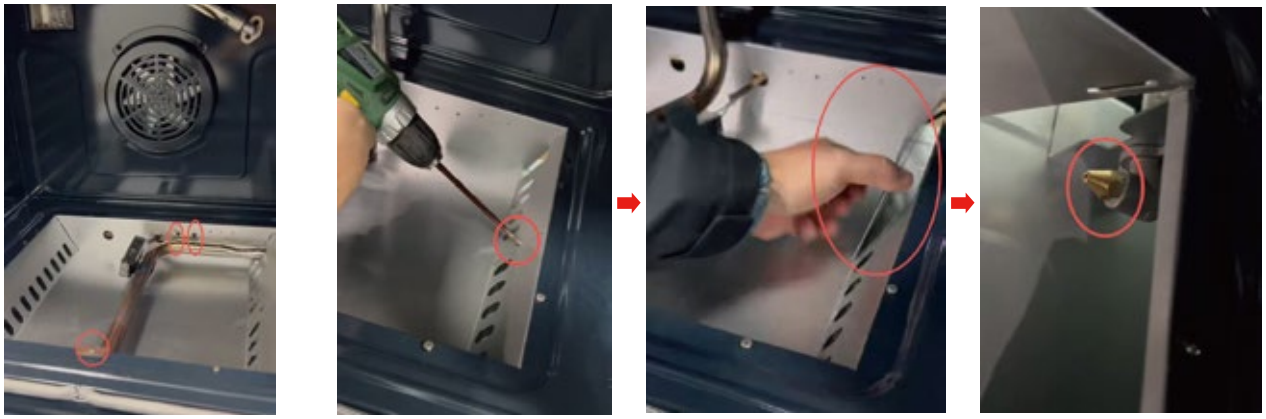




3. Convert Oven Bake Burner Orifice for LP/Propane Gas

3-1. For 30", 36", and 48" Large Ovens
Orifice Size Specification:
For 30" and 36" ovens, install the **1.24 mm** orifice.
For the 48" large oven, install the **1.33 mm** orifice.

a. Remove the bottom panel cover.
b. Remove the screws securing the bottom burner tube, then carefully remove the burner tube.
c. Unscrew the screw located on the bottom right side, then remove the side panel as shown in the diagram.
d. Remove the natural gas (NG) orifice and replace it with the LPG orifice of the correct size.
e. Reinstall the bottom burner tube and securely tighten the screws.

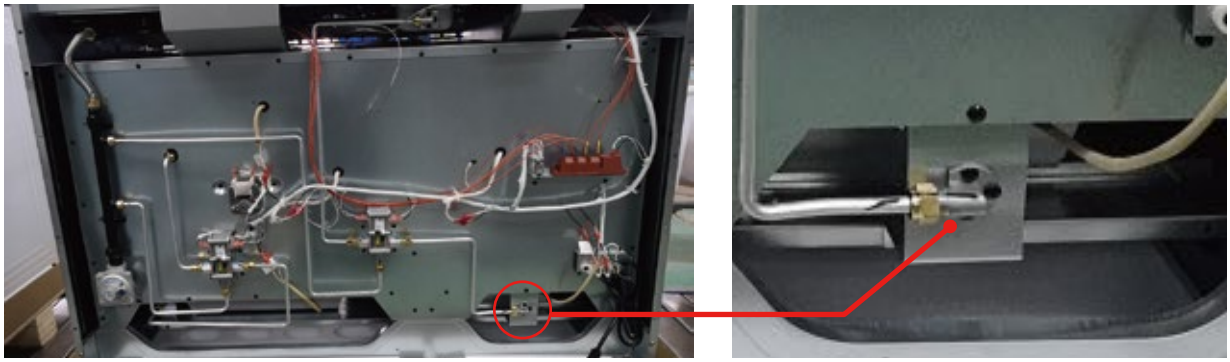


Appendix 4

Instructions for Converting Range to Operate on Liquefied Petroleum Gas

3-2. For the 48" Small Oven

The bake orifice is located at the back of the oven, as shown in the diagram. Remove the screw, replace the orifice with the **1.12 mm** orifice, then reinstall and secure it properly.



4. Covert Broil Burner Orifice - For 30, 36, 48inch large oven

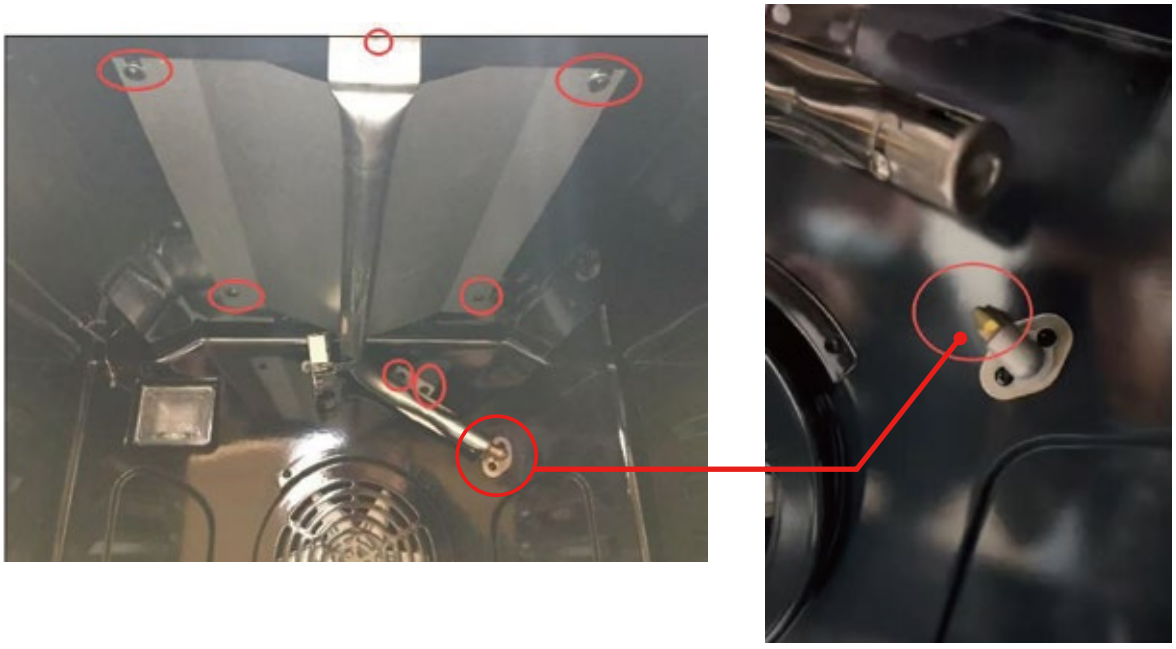
The broil orifice is replaced from the top of the oven. It is not necessary to remove the rear panel.

a. Remove the screw shown in the diagram. Gently shift the top burner tube aside to access the orifice. Do not fully remove the burner tube, as it is still connected to the igniter wire. Support the burner to prevent strain on the wire.

b. Remove the natural gas (NG) orifice and replace it with the **0.9 mm** LP orifice.

c. Ensure the broil burner tube is returned to its original position. The orifice must be properly aligned with the burner venturi opening; incorrect alignment may cause air turbulence and affect burner performance.

d. Reposition the top burner tube and securely fasten it with the screw.

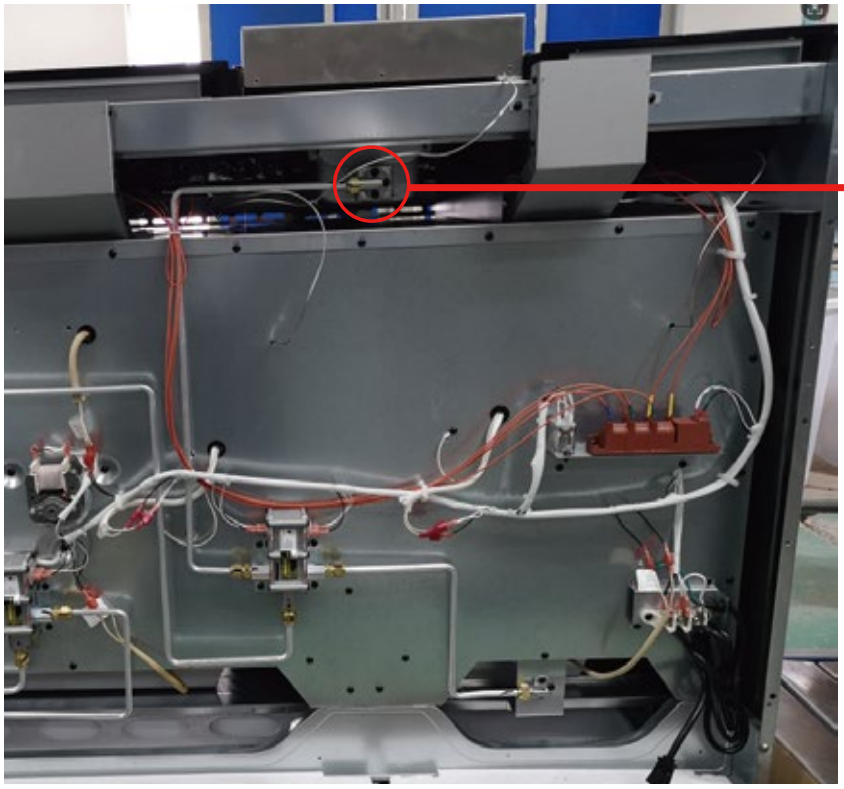


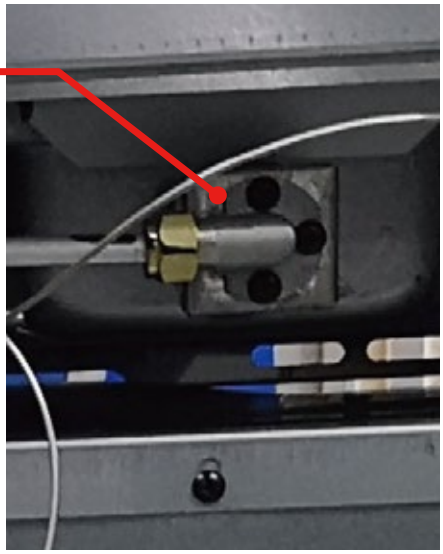
Appendix 4

Instructions for Converting Range to Operate on Liquefied Petroleum Gas

5. Convert the Griddle Orifice (Only for 48 inch gas range)

a. Remove the backsplash and rear panel.
b. Locate the griddle orifice at the upper center area of the rear panel layout.
c. Using a Phillips-head screwdriver, remove the three screws securing the orifice holder. Then use a 10 mm wrench to remove the natural gas (NG) orifice from the griddle orifice holder. Replace it with the **1.16 mm** LP griddle orifice.
d. Reinstall the rear panel and backsplash.





6. Convert Burner Valves for LP/Propane Gas

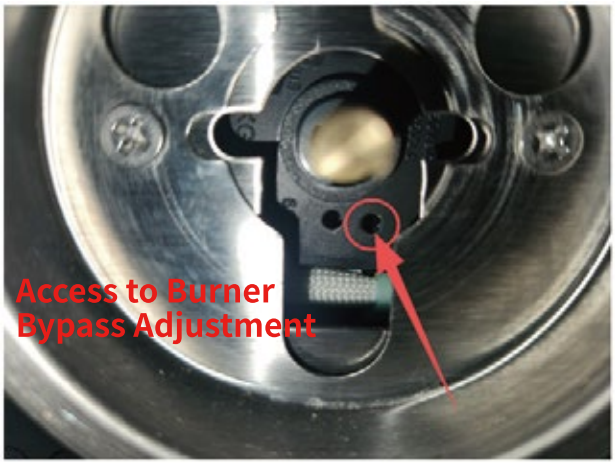


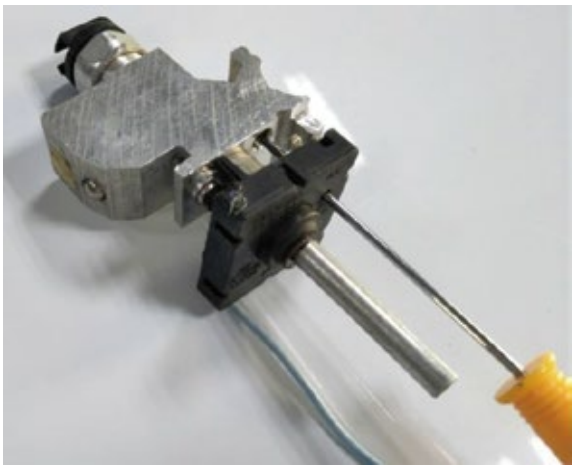
One 5/64" flat screw driver is needed for the Bypass Adjustment on Buner Valve (**Not included in LPK Package**),

a. Please take off the top burner knobs to get access to the burner valve part. There's a hole located at bottom right of the burner valve, providing access to the adjustment of burner valve bypass orifice. Take out the bezel if needed.

Appendix 4

Instructions for Converting Range to Operate on Liquefied Petroleum Gas





The hole is part of the micro-switch (the black part) sticking to the burner valve. Use the screw driver to go across the micro-switch and reach the bypass orifice on the burner valve. Bypass orifice could help to control the flame.

b. Put the knob back, adjust the flame by rotating the knob. The original location of bypass is for NG. If converted to LP, the bypass needs to be screwed in (in **clockwise direction**) to **tightest position**.

Originally, the Bypass is located at NG Position and it's not screwed to the bottom (tightest)

For LP conversion of bypass, not bypass orifice needs to be changed.

Screw the Bypass Orifice to bottom (clockwise).

c. Save the main bypass jets, in the plastic bag labeled main jets and simmer bypass jets in the bag for simmer jets.

When you are using your top burners, if the flame needs to be adjusted accordingly to fit your need, please adjust the **bypass orifices** on the burner valve.

Put back the knob on and adjust the flame by rotating the bypass via a small flat screw driver. Check the flame's condition to get the best performance.

7. Reconnect Gas and Electrical Supply to Range.

Leak testing of the appliance shall be conducted according to the installation instructions provided with the range.

Checking for Manifold Gas Pressure

If it is necessary to check the manifold gas pressure, remove the burner cap, inner ring, outer burner head and burner base of the right front top burner and connect a manometer (water gauge) or another pressure test device to the burner orifice. Use a rubber hose with inside diameter of approximately ¼" and hold the end of the tube tight over the orifice. Turn the gas valve on. For a more accurate pressure check, have at least two other top burners burning. Be sure that the gas supply (inlet) pressure is at least one inch above the specified manifold pressure. The gas supply pressure should never be over 14" water column. When properly adjusted the manifold water column pressure is 10" for LP/Propane gas or 5" for Natural Gas.

Appendix 4

Instructions for Converting Range to Operate on Liquefied Petroleum Gas

8. Installation of New LP / Propane Rating / Serial Plate

Record the model and serial number on the LP / Propane Rating serial plate provided in this kit. The information can be obtained from the existing Rating / Serial plate. Place the new plate as close as possible to the existing Rating / Serial plate on the range.



Do not use a flame to check for gas leaks

a. Disconnect the range and its individual shut-off valve from the gas supply piping system during any pressure of that system at test pressures greater than 14” of water column pressure (approximately ½” psig)
b. The appliance must be isolated from the gas supply piping system by closing its individual manual hut-off valve during any pressure testing of the supply system at test pressure equal to or less than 14” water column pressure (approximately ½” psig)