

Kalamazoo Hybrid Fire Grills

USE AND CARE GUIDE



Important Safety Warnings

This appliance is FOR OUTDOOR USE ONLY. It is not to be used inside a garage, other building or any type of enclosed area.

WARNING: Failure to follow the information in this Use and Care Guide exactly may result in fire or explosion, causing property damage, personal injury or death. Read and follow all warnings and instructions before assembling and using the appliance.

WARNING: This appliance is not intended to be installed in or on a boat or recreational vehicle.



DANGER: IF YOU SMELL GAS:

1. Shut-off gas to the appliance.
2. Extinguish any open flame.
3. Open grill lid.
4. If odor continues, keep away from the appliance and immediately call your gas supplier or fire department.

Failure to follow these instructions could result in fire or explosion which could cause property damage, personal injury or death.



WARNING: FOR YOUR SAFETY:

1. Do not store or use gasoline or other flammable liquids or vapors in the vicinity of this or any other appliance.
2. An LP cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

IMPORTANT: Damage caused by a failure to heed the warnings or follow the safety instructions and practices described in this Use and Care Guide is not covered by the warranty.

This Use and Care Guide contains important information necessary for the proper assembly and safe use of the grill.

Read and follow all warnings and instructions before assembling and using the grill.

Follow all warnings and instructions when using the grill.

Keep the Use and Care Guide for future reference.



Version 02.01.2022

Thank you for choosing Kalamazoo Outdoor Gourmet cooking equipment.

Because of the high performance nature and unique design of Kalamazoo Hybrid Fire Grills, we recommend familiarizing yourself with this book before using your grill for the first time. Your *Use and Care Guide* contains important safety information as well as helpful guidance for successful cooking experiences and care. Following the guidance of this book will help ensure many years of outdoor cooking enjoyment.

Should you ever have any questions about cooking with or caring for your Kalamazoo Hybrid Fire Grill, we are here to help. Contact Kalamazoo Outdoor Gourmet Customer Service at:

+1.800.868.1699

or

customerservice@KalamazooGourmet.com

Please have your model number and serial number ready or include it in your email.

Model Number

- | | |
|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> K500HB-2-NA | <input type="checkbox"/> K500HT-2-NA |
| <input type="checkbox"/> K750HB-2-NA | <input type="checkbox"/> K750HT-2-NA |
| <input type="checkbox"/> K1000HB-2-NA | <input type="checkbox"/> K1000HT-2-NA |
| | <input type="checkbox"/> K500HS-2-NA |
| | <input type="checkbox"/> K750HS-2-NA |
| | <input type="checkbox"/> K1000HS-2-NA |

Fuel Type

- | | | |
|--------------------------------------|--|--|
| <input type="checkbox"/> Natural Gas | <input type="checkbox"/> Liquid Propane Cylinder | <input type="checkbox"/> Bulk Liquid Propane |
|--------------------------------------|--|--|

Serial Number

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The best grills in the world. Period.

That's a bold statement. But it's no coincidence a James Beard Award-winning chef like Rick Bayless credits our grills with changing the way he cooks outdoors. No other grill offers the ability to cook with any combination of charcoal, wood and gas. And hybrid fire grilling is only the beginning of our advantages.

Unrivalled Gas Grill Performance The operating temperature range from the innovative Kalamazoo burner layout is from 250°F (120°C) air temperature using the barbecue burner to 750°F (399°C) using the cast bronze Dragon Burners™. With our optional laser-cut grill grates installed, that translates to 850°F searing at the grates — anywhere in the grill, with no dedicated searing burner.

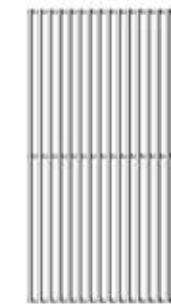
Complete Versatility Grilling, searing, roasting, smoking, wok cooking, rotisserie turning, barbecuing and even baking. The power and versatility of Kalamazoo grills enable home chefs to passionately pursue any and every cooking style they desire. One secret to this performance is our deep firebox design. Turn the page to take a peek inside.

Custom Cooking Surfaces Select your ideal combination of cooking surface patterns optimized for meat, fish or vegetables. The optional laser-cut cooking surfaces can be personalized with initials, logos or other artwork. The added mass leads to better browning and cooking times decreased by as much as 50%.

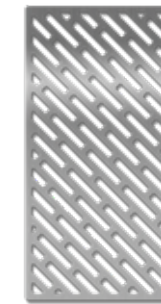
Hybrid Cooking with Charcoal, Wood and Gas Changing fuels is as easy as opening the Hybrid Fire Grilling Drawer. Our powerful gas burners sit right below the drawer and can be used alone to cook with gas. Or place wood and charcoal in the drawer and the burners will quickly and conveniently light a fire, as well as maintain the heat for longer cooking sessions.

Exclusive Dragon Burners™ Weighing in at more than 13 pounds, each cast bronze Dragon Burner™ is warranted for 25 years and engineered for superior performance. Kalamazoo grills are the most powerful and capable grills on the market, and these burners are at the heart of every one.

Safety Kalamazoo grills feature safety valves on every burner. These valves are engineered to cut off the flow of gas if they do not sense the heat of a flame coming from the burner. Lights around each control knob serve as a helpful reminder that a burner is still on.



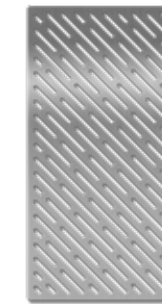
Standard Rod



Laser-cut Meat



Laser-cut Fish



Laser-cut Vegetable



Laser-cut Plancha

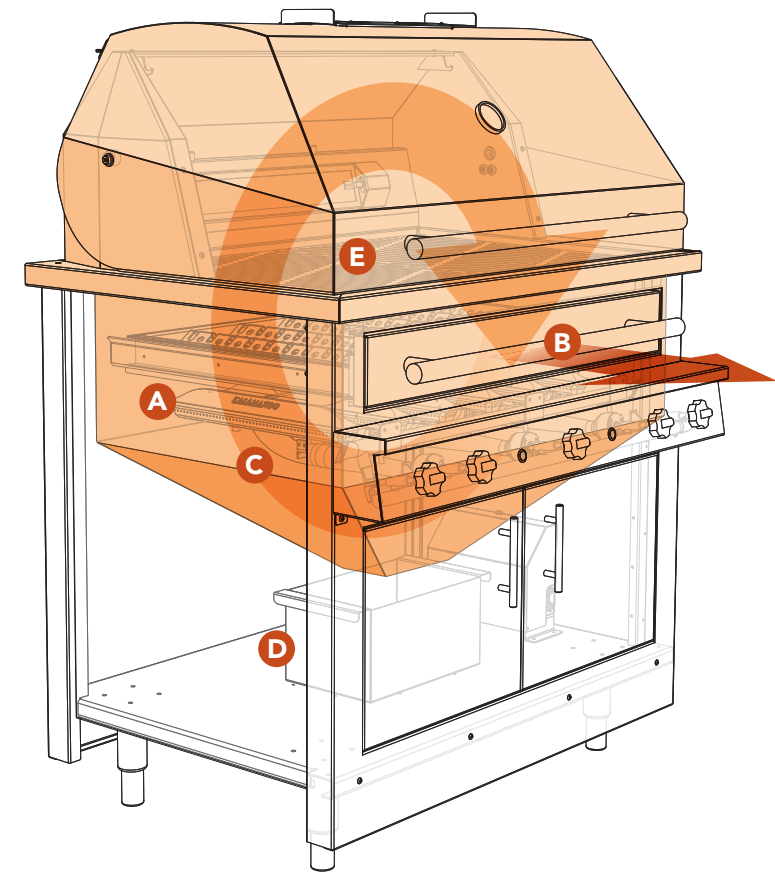


Our Advanced Cooking Concept

There is nothing like a Kalamazoo Hybrid Fire Grill. Literally. Just look inside. From the burners that deliver more than 100 BTUs of cooking power per square inch of the grill grate, to the ability to cook with any combination of charcoal, wood and gas, no one makes a grill more worthy of being the centerpiece of your outdoor kitchen.

- A Awesome Cooking Power** Exclusive cast bronze Dragon Burners™ deliver the cooking heat. Simply leave the Hybrid Fire Grilling Drawer empty to cook with gas.
- B Hybrid Fire Grilling Drawer** Want to change flavors by changing fuels? Just open the drawer and add your choice of wood or charcoal. The Dragon Burners below not only ignite your fuel — they can be used to prolong the fire for extended cooking. With a charcoal fire, you can sear at 1,000°F (538°C).
- C Ultimate Versatility** The deep firebox is engineered to open up a world of new cooking possibilities. The improved heat dynamics of a Kalamazoo create even heat at the grill grates when grilling directly above the fire. The circulation created by the expanded firebox also enables superior roasting, smoking and even baking capabilities.
- D Hassle-Free Cleaning** Ash, grease and debris funnel down to a cleanout pan that is large enough to hold everything and deep enough to be easy to handle and prevent spills.
- E Custom Cooking Surfaces** Homeowners can select their ideal combination of cooking surface patterns optimized for meat, fish and vegetables.

FIGURE 1





Important Safety Information

Safe Operation

WARNING: When in use, portions of your grill get hot enough to cause severe burns. Children and pets should never be left alone or unattended in the area where the grill is being used. Never allow children to sit, stand or play on or around the grill.

IMPORTANT: Improper use or installation is dangerous. Because this grill produces intense heat, the risk of accidents or potential injuries is increased. Extreme care must be taken.

Carefully follow all instructions, including the following:

- To reduce the risk of fire, burns or other injury, read this Use and Care Guide thoroughly. Begin by ensuring proper installation and servicing. Do not repair or replace any part of the grill yourself unless it is specifically recommended in this Use and Care Guide. All other service must be carried out by a qualified gas technician.
- Never allow children to operate the grill. Do not store items of interest to children in or around the grill.
- Do not heat unopened food containers in the grill. The build up of pressure resulting from the heat may cause the container to burst.
- Never lean on any part of the grill. When lighting the grill, always pay close attention to what you are doing. Make sure you are aware of which burner you are lighting and can see whether or not it is lit. Make sure you have ready access to the burner valves when you are lighting the burner. Make sure you are pushing in the burner valve to activate the ignition when you attempt to light the burner.
- When the burners are on or the grill is hot, do not touch the grilling surface, warming rack, any part of the grill's interior or any surface of areas surrounding the grilling surface. These areas become extremely hot and may cause severe burns. Likewise, do not touch any part of the grill lid or grilling drawer other than the handles. Do not touch any surface of the cook box that can be accessed within the cabinet below the grill.
- The cabinet below the grill is not for storage. It is for service access and cleaning. Do not store combustible materials in the cabinet below the grill. Likewise, do not store items made with materials that might melt or otherwise be damaged by heat. *It is acceptable to store extra stainless steel grill grates, the rotisserie rod and rotisserie forks in the cabinet below the grill.*
- Do not use any cleaner, including water, on a hot grill.
- Be sure all control knobs are in the OFF position and the grill is cool before using any aerosol cleaner on it or near it. The chemical used for aerosol propellant could ignite in the presence of heat.
- Always wait at least 24 hours after the last time the grill was hot before emptying the ash bin.
- Always use dry pot holders or gloves on hot surfaces or cooking tools: moist or damp pot holders or gloves may cause steam burns. Never use a towel or bulky cloth in place of pot holders. Do not let pot holders touch hot portions of the grill or allow them to get near the open flame.
- Do not operate the grill under an unprotected combustible construction. Use only in a well-ventilated area. The grill is for outdoor use only.
- Do not obstruct any of the openings on the grill or otherwise obstruct the flow of combustion and ventilation air. Do not build the grill into any combustible structure that is closer than 6 inches from the sides and back.

- Do not use the grill when there is a strong wind blowing from behind the grill. For installations with a prevailing wind that blows against the rear side of the grill, a wind break may be required for safe operation.
- Keep all gas hoses away from the hot surfaces of the grill, including all external surfaces of the unit.
- Keep all electrical supply cords away from the hot surfaces of the grill, including all external surfaces of the unit.
- Ensure proper installation and servicing by following all instructions in this Use and Care Guide and any other instructions or markings provided with this product. Have your grill installed by a qualified technician. Have the installer show you where the gas supply shut-off valve is located and instruct you in its operation so that you can shut-off the gas to the grill.
- If you smell gas, there is likely a problem with the installation. If the connections are not perfectly sealed, you can have a small leak resulting in the faint smell of gas — even if the grill appears to be working properly. Close the gas supply shut-off valve and call a qualified technician to locate and resolve the leak.

SPIDER ALERT: Spiders and other insects are prone to nesting inside burners in outdoor cooking equipment. This can create a very dangerous condition where the gas flow is redirected and can create a fire behind the control panel. This will damage the grill and make it unusable. Frequent inspections and care are recommended. See the care section beginning on page 101.

California Proposition 65 Warning:

The burning of gas cooking fuel generates some by-products that are on the list of substances which are known by the State of California to cause cancer or reproductive harm. California law requires businesses to warn customers of potential exposure to such substances. To minimize exposure to these substances, always operate the grill according to this Use and Care Guide and ensure you provide good ventilation when cooking.

State of Massachusetts:

Massachusetts requires all gas appliances be installed by a plumber or gas fitter carrying the appropriate Massachusetts license.

All permanently-installed natural gas or propane installations require a "T" handle type manual gas valve be installed in the gas supply line to this appliance.

This does not apply to portable propane installations using a 20 pound cylinder.

Important LP Tank Safety Information

A liquid propane cylinder should never be overfilled beyond the cylinder filling capacity. Overfilling may create a dangerous condition.

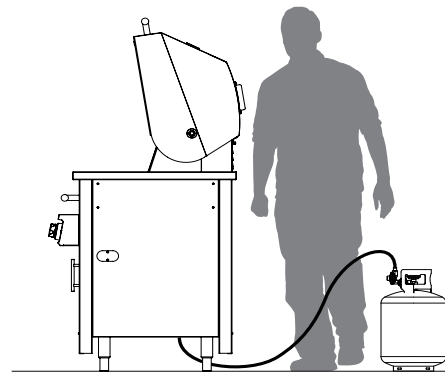
Overfilled tanks can build up excess pressure. The standard safety device on tanks is the safety relief valve. This valve vents propane gas vapors to relieve excess pressure. These vapors are combustible and can be ignited.

To avoid risk of fire or explosion, take the following safety precautions:

- Never replace the liquid propane regulator or hose with a different type than the model supplied.
- Never use a dented or rusty LP tank.
- Never connect the grill to anything other than the fuel source indicated on the serial plate. Factory conversion kits are available for switching fuel sources. Contact Kalamazoo Outdoor Gourmet or an authorized dealer for details. Conversion kit installation must be done by a qualified technician.
- The LP-gas cylinder must include a collar to protect the cylinder valve from damage.
- Ensure proper ventilation of the cylinder. The cylinder supply system must be arranged for vapor withdrawal.
- The LP-gas supply cylinder to be used must be constructed and marked in accordance with the specifications for LP-gas cylinders, U.S. Department of Transportation (DOT) or the standard for Cylinders, Spheres and Tubes for the Transportation of Dangerous Goods, CAN/CSA-B339.
- When the grill is not in use, the gas must be turned off at the supply cylinder.
- The grill may be stored indoors, but only if the cylinder is disconnected and removed from the grill. An LP cylinder **MUST NEVER BE STORED INDOORS**.
- Cylinders must be stored outdoors out of the reach of children and must not be stored in a building, garage or any other enclosed area.
- The pressure regulator and hose assembly supplied with the grill must be used. Replacement pressure regulators and hose assemblies must be the type specified by Kalamazoo Outdoor Gourmet. For replacement parts, contact Kalamazoo Outdoor Gourmet customer service at +1.800.868.1699.

DANGER:

Do not route the gas supply hose or locate a propane cylinder in a way that may create a tripping hazard. Tripping over, or getting caught on, a gas supply hose may tip the grill over or damage the hose, creating serious risk of injury and fire.



Required ventilation for built-in LP-gas cylinder structures:

An enclosure for an LP-gas cylinder shall be ventilated by openings at both the upper and lower levels of the enclosure (See Figure 2). The effectiveness of the opening(s) for purposes of ventilation shall be determined with the LP-gas supply cylinder in place. This shall be accompanied by one of the following:

1. One side of the enclosure shall be completely open; or
2. For an enclosure having four sides, a top and a bottom:
 - a. At least two ventilation openings shall be provided in the side walls of the enclosure, located within 5 in (217 mm) of the top of the enclosure, equally sized, spaced at a minimum of 90 degrees (1.57 rad), and unobstructed. See Figure 1. The opening(s) shall have a total free area of not less than 1 in²/lb (14.2 cm²/kg) of stored fuel capacity.
 - b. Ventilation opening(s) shall be provided at floor level of the enclosure and shall have a total free area of not less than 1/2 in²/lb (7.1 cm²/kg) of stored fuel capacity. If ventilation openings at floor level are in a side wall, there shall be at least two openings. (See Figure 1) The bottom of the openings shall be 1 in (25.4 mm) or less from the floor level and the upper edge no more than 5 in (127 mm) above the floor level. The openings shall be equally sized, spaced at a minimum of 90 degrees and unobstructed.
 - c. Every opening shall be a minimum of a 1/8 in (3.2 mm) diameter.
 - d. Ventilation openings in side walls shall not communicate directly with other enclosures of the outdoor cooking gas appliance.
 - e. A door on the enclosure to gain access to the cylinder is acceptable, provided it is non locking and can be opened without the use of tools.
3. Some means of retention (chain, bracketry, cut-out) must be used to hold cylinder in place inside enclosure.
4. There shall be a minimum clearance of 2 in (50.8 mm) between the floor of the LP-gas cylinder enclosure and the ground.

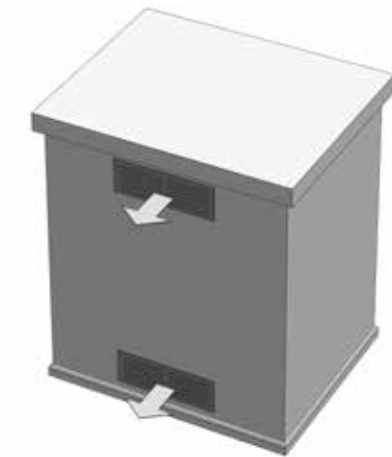


FIGURE 2

Kalamazoo Outdoor Gourmet offers an LP tank mounting bracket to meet the cylinder install requirements



DANGER:

- A. Do not store a spare LP-gas cylinder under or near this appliance;**
- B. Never fill the cylinder beyond 80 percent full; and**
- C. If instructions A and B are not followed exactly, a fire causing death or serious injury may occur.**

Liquid Propane Gas Requirements (30-Pound Cylinder)

Verify the type of gas your grill has been configured for by the factory by checking the serial tag inside the door of the grill cabinet. Grills configured for liquid propane (LP) gas are orificed differently than grills configured for natural gas (NG). Grills configured for use with 30-pound LP cylinders (Type 1) are shipped with a dual-stage LP regulator hose assembly attached (see Figure 3).

Connection: LP regulator hose assembly (included) connects to the grill via 0.5" NPT male with a 0.375" flare adapter (included).

Input Pressure via LP regulator hose assembly: 11" W.C.

Manifold Pressure: 10.5" W.C.

To connect the LP regulator hose assembly to the LP tank, first make sure the main valve on the tank is completely closed. Make sure also that all control valves on the front of the grill are OFF.

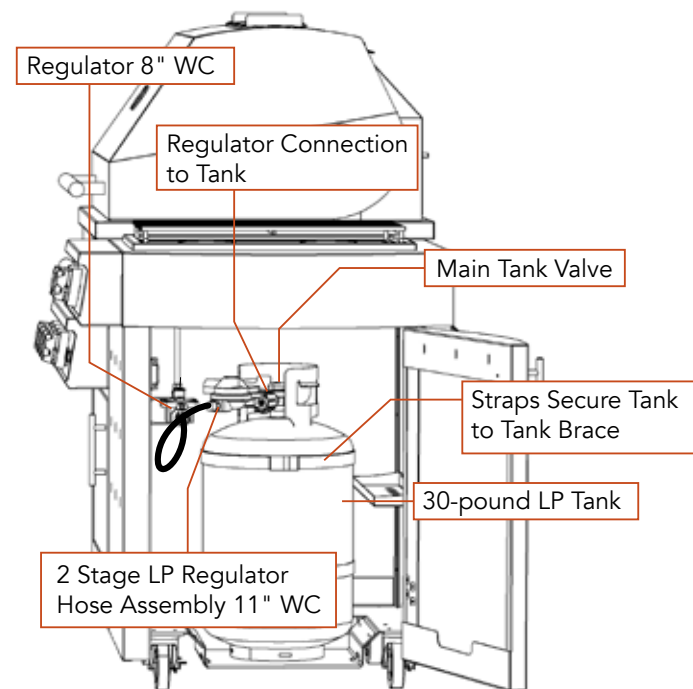
Thread the regulator inlet over the tank valve. Use care to ensure proper alignment of the threaded coupler and avoid cross-threading or damaging the coupler. Turn the green coupler clockwise until tightened up, but do not over-tighten.

IMPORTANT: Always close the main valve on the tank before disconnecting or transporting the tank.

IMPORTANT: After connecting a fresh LP tank, you may need to purge air from the system. Before lighting, open the main valve on the tank. Turn the control valves on the grill to the HIGH position for about 15 seconds to purge air from the system. Turn the control valves on the grill OFF and wait 5 minutes for any gas to clear. Finally, continue with the normal lighting procedure.

The installation must conform with local codes. In the absence of local codes, the installation must conform with the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*; *Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA 58*; *Natural Gas and Propane Installation Code, CSA B149.1*; or *Propane Storage and Handling, CSA B149.2*.

FIGURE 3 (Side Cabinet Model)



Bulk Gas Plumbing Information

IMPORTANT: An installer-supplied safety shut-off valve **MUST** be installed at the gas supply line connection point for the grill. The valve should be easily accessed and located between 3 and 20 feet away from the grill. There is an onboard shut-off valve inside the grill for everyday convenience, but the supply line shut-off valve is necessary for safety.

All gas connections should be made by a qualified technician. The installation and all installer-supplied parts must conform to local codes. In the absence of local codes, the installation and all parts should conform to the *National Fuel Gas Code, ANSI Z223.1/NFPA 54* or *Natural Gas and Propane Installation Code, CSA B149.1*. Cooktops to be connected to a fixed fuel piping system must use rigid pipe, semi-rigid tubing, and/or a connector that complies with the Standard for Connectors for Outdoor Gas Appliances and Manufactured Homes, ANSI Z21.75/CSA 6.27.

IMPORTANT: Always close gas supply shut-off valve before disconnecting the grill gas supply hose.

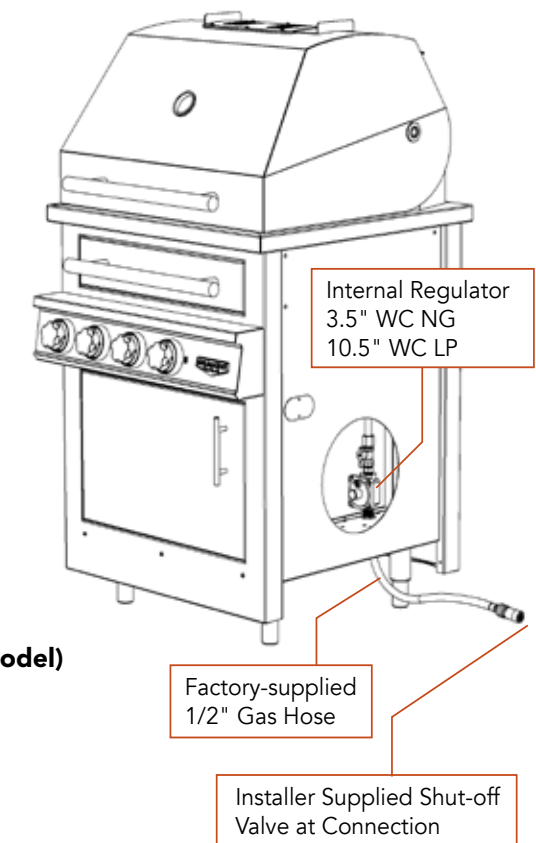
All pipe sealants must be an approved type.

IMPORTANT: Diameter and length of the gas supply pipe may limit the pressure and BTU delivery of gas to the grill. The installer must ensure proper delivery to the grill or it will not operate properly.

The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at pressures in excess of 1/2 psi (3.5 kPa).

During any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa), the appliance must be isolated from the system by closing its onboard manual shut-off valve.

FIGURE 4 (Built-In Model)



Bulk Supply Liquid Propane Gas Requirements

Verify the type of gas your grill has been configured for by the factory by checking the serial tag inside the door of the grill cabinet. Grills configured for liquid propane (LP) gas are orificed differently than grills configured for natural gas (NG). Grills configured for use with a bulk LP supply are shipped with a gray hose with a quick-connect fitting (see Figure 4).

Connection: 1/2" NPT male. Quick-connect hose assembly (included) connects to the grill via 0.625" flare fitting.

Input Pressure: 11.0" W.C. (27.4 mbar)

Manifold Pressure: 10.5" W.C. (26.1 mbar)

All pipe sealants must be an approved type and safe for use with LP gas.

Natural Gas Requirements

Verify the type of gas your grill has been configured for by the factory by checking the serial tag inside the door of the grill cabinet. Grills configured for natural gas (NG) are orificed differently than grills configured for liquid propane (LP) gas. Grills configured for use with natural gas are shipped with a gray hose with a quick-connect fitting (see Figure 4).

Connection: 1/2" NPT male. Quick-connect hose assembly (included) connects to the grill via a 0.625" flare fitting.

Input Pressure: 7.0" W.C. (17.4 mbar)

Manifold Pressure: 4.0" W.C. (10 mbar)

High Altitudes

For all gas types, the stated BTU ratings of this appliance apply to installation at sea level.

With increased altitude, there is decreased atmospheric pressure. The National Fuel Gas Code recommends down-rating burner BTUs by 4% for every 1,000 feet (305 meters) of altitude above 2,000 ft (610 meters) to ensure complete combustion while operating at higher altitudes. Please call Kalamazoo Customer Service at +1.800.868.1699 for a high altitude kit for your appliance.

Leak Testing

Although gas connections on the grill are leak tested at the factory prior to shipment, a complete test must be performed after installation due to possible mishandling during shipping or installation.

Periodic checks are also recommended. Immediately check for leaks if you smell gas.

Never use an open flame to look for leaks.

Before Testing: Extinguish all open flames. Do not smoke.

You will need a spray bottle, a brush or a rag. For LP units using a 30-pound cylinder, a full cylinder should be used.

IMPORTANT: Homeowners should only check for leaks on the gas connections that are external to the grill. If the valves or other internal connections need to be checked, please call a qualified technician or Kalamazoo Outdoor Gourmet customer service at +1.800.868.1699.

To Conduct the Test:

Make a soap solution of one part liquid dish soap and one part water.

Make sure all grill control valves are in the OFF position. Turn the gas supply ON. Use a spray bottle, brush or rag to apply the mild soap solution to all connections from the supply line or LP cylinder to the connection on the grill. Check all connections. Soap bubbles will appear at any connections with a leak. Turn OFF the gas supply and tighten any leaky connections. Recheck, applying more mild soap solution.

IMPORTANT: Do not use the grill until all connections have been checked and do not leak.

Electrical Connection

The grill requires AC power for ignition, the control panel lighting, and rotisserie motor functionality. It must be connected with an outdoor-rated, grounded electric extension cord.

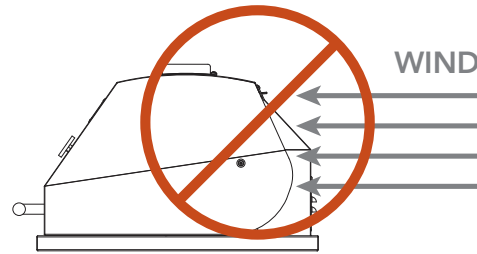
The grill, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.1.

See additional electrical precautions on page 43.

Grill Location

The Kalamazoo Hybrid Fire Grill is designed for easy placement on an outdoor patio or deck. It is recommended that the grill be placed on a non-combustible surface. Important considerations for grill placement include exposure to wind, proximity to foot traffic and areas where people congregate and access to the gas supply.

- Do not place the grill in a location where the rear lid openings are likely to be exposed to strong wind. Wind from behind may prevent the heat of the grill from venting properly, causing the front of the grill, including the control panel and control knobs to become dangerously hot. A wind break wall is recommended for installations where the prevailing wind may be a problem.
- Do not place the grill where it is likely to be bumped into or inadvertently touched by passers by. It is recommended that the counter top or other surface extend 9 inches beyond the sides and back of the grill as a safety clearance to protect people from injury.
- Do not place the grill on a surface that is unable to safely support the weight of the grill or may cause it to be unstable.
- Never place the grill where the gas hose creates a safety hazard (see Figure 2). Tripping over an exposed gas hose may create a gas leak or create other serious safety hazards.
- Never locate the grill in a building, breezeway, shed or other such enclosed areas.
- The grill is not intended to be installed in or on a boat or recreational vehicle.



REQUIRED CLEARANCES

IMPORTANT: Do not build the grill into a combustible enclosure. Maintain at least 6 inches of clearance between the sides and back of the grill and any combustible surface, or use an insulating surround provided by Kalamazoo Outdoor Gourmet. NEVER place the grill underneath an unprotected overhead combustible structure or surface.

For ease of use and safe operation, it is recommended the grill be placed on a level surface.

Installing a Vent Hood

A properly-installed hood can sometimes be used to address the safety restrictions regarding overhead combustible structures. Please check your local building codes to confirm if this is an option for your installation.

Important information:

- Outdoor ventilation hoods will not “suck” smoke into the hood. The smoke must collect naturally within the capture area of the hood, where the fan can then exhaust the smoke.
- Breezes, together with the lack of any sealed system or controlled recovery air, make it unlikely in many situations that all of the smoke will be collected.
- A standard residential ventilation hood **does not** make it okay to use an outdoor grill in a building, breezeway, shed or other such enclosed area.
- The bottom of the vent hood must be located no more than 36 inches above the grill grates. The closer the hood is positioned to the grill grates, the more effectively it will capture smoke.
- The front of the vent hood must be positioned at least 4 inches beyond the front of the grill. If the hood is positioned too far back relative to the grill, the smoke will be more likely to roll out in front of the hood.

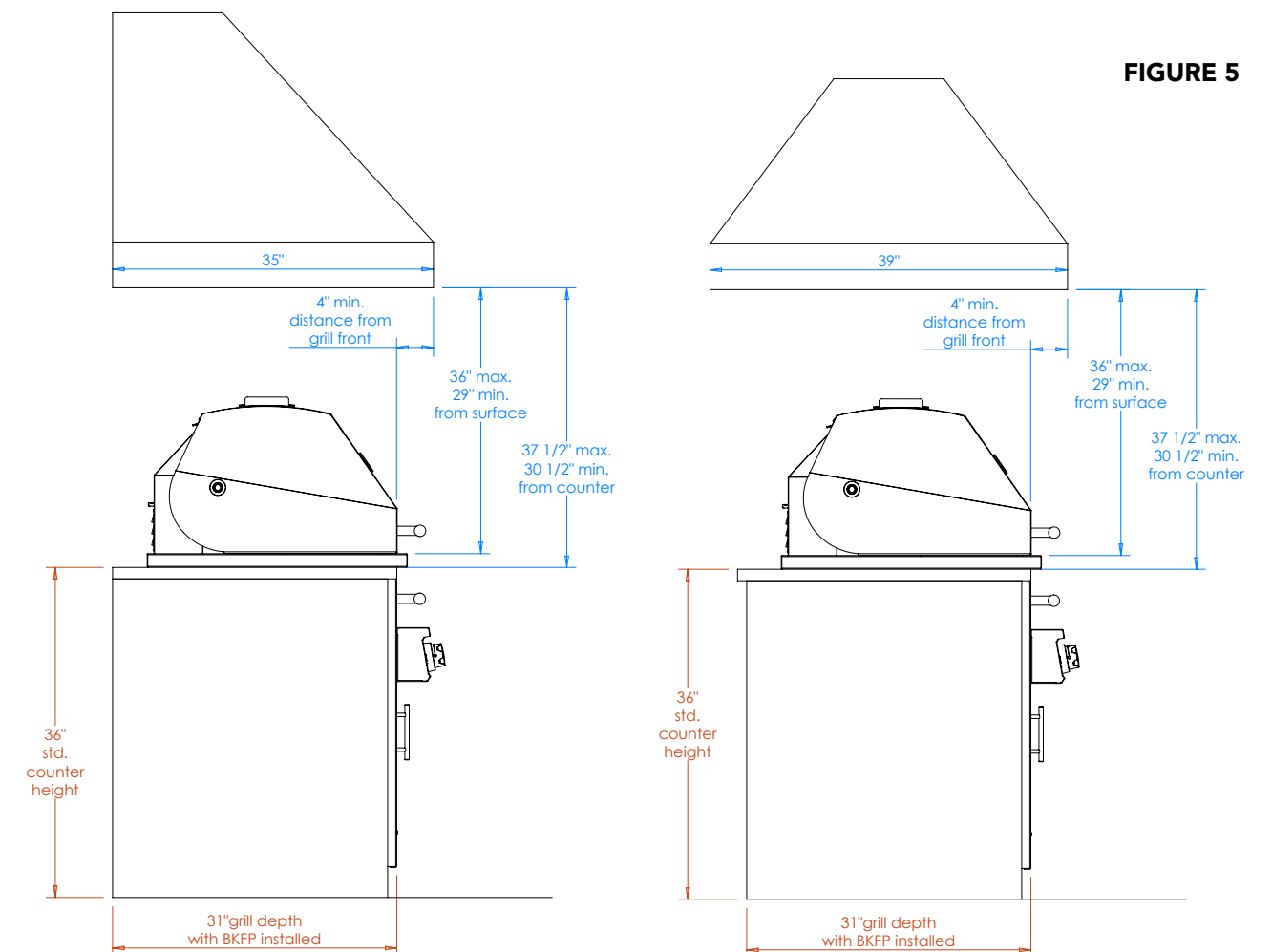


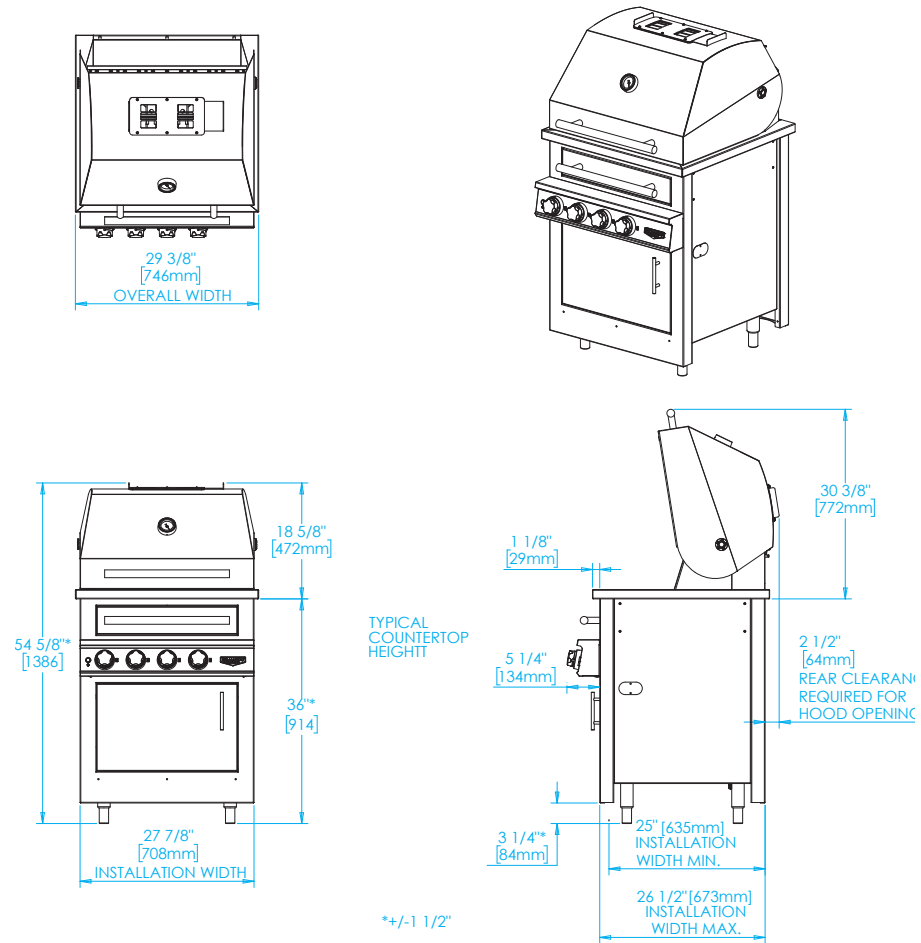
FIGURE 5



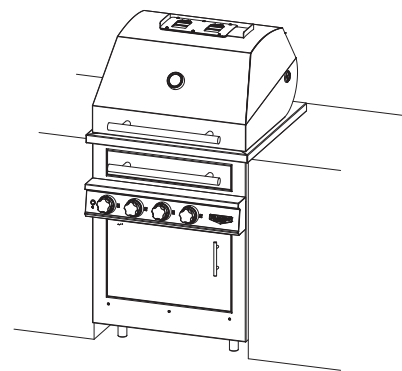
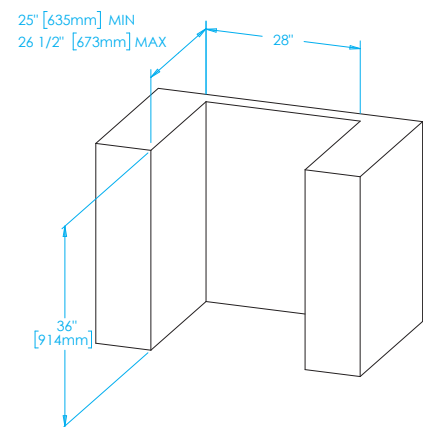
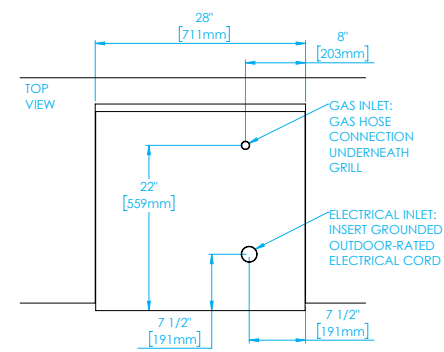
Product Dimensions

K500HB Hybrid Fire Built-in Grill

K500HB

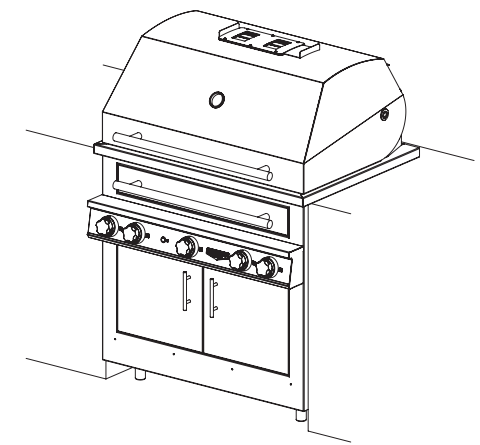
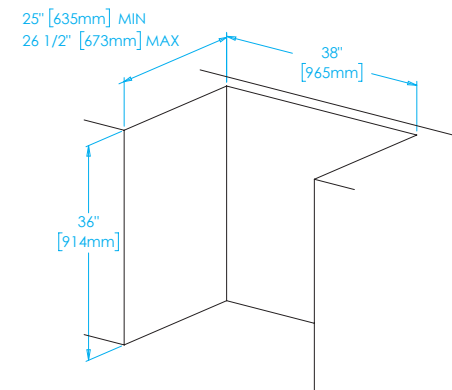
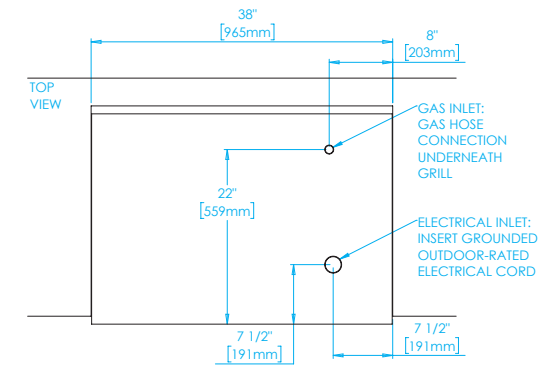
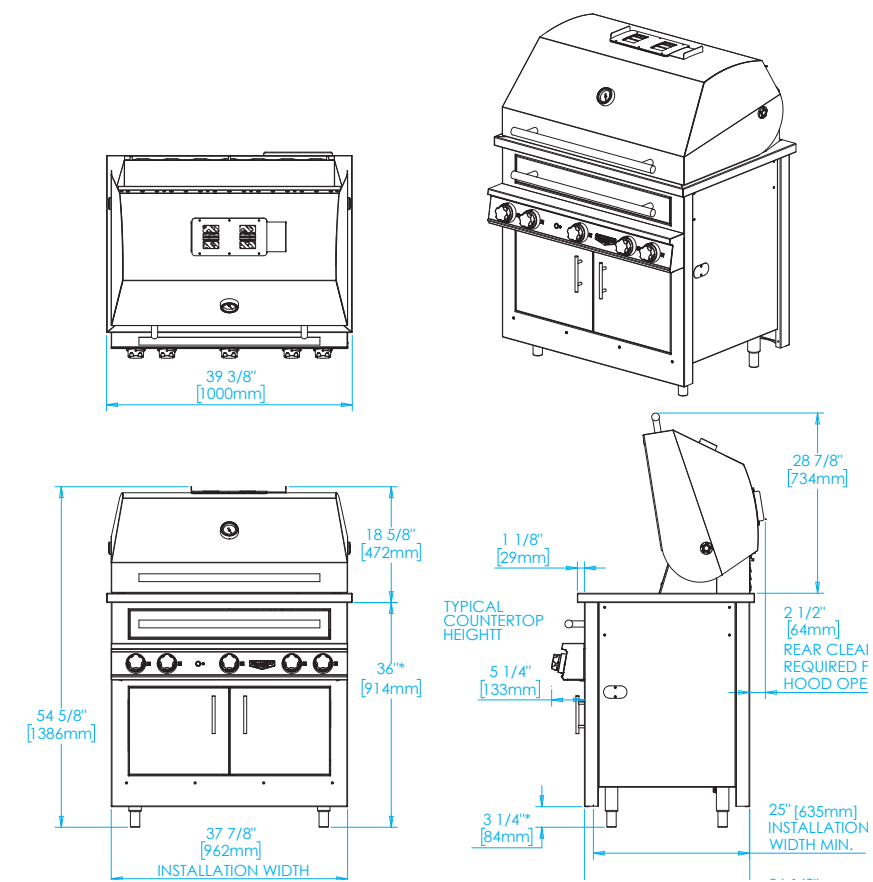


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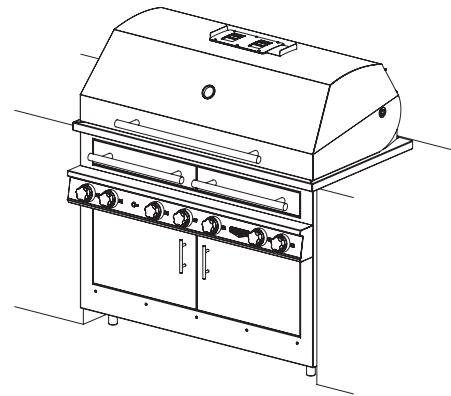
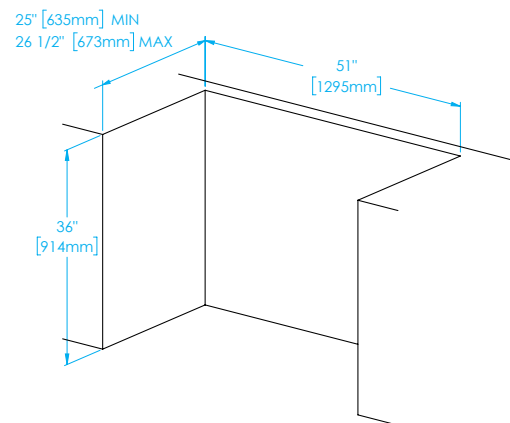
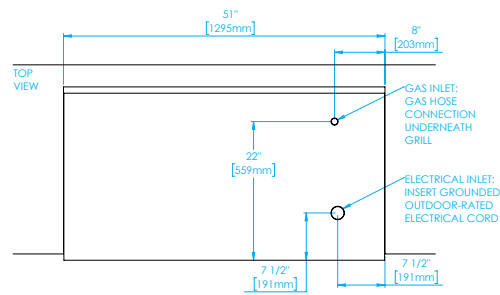
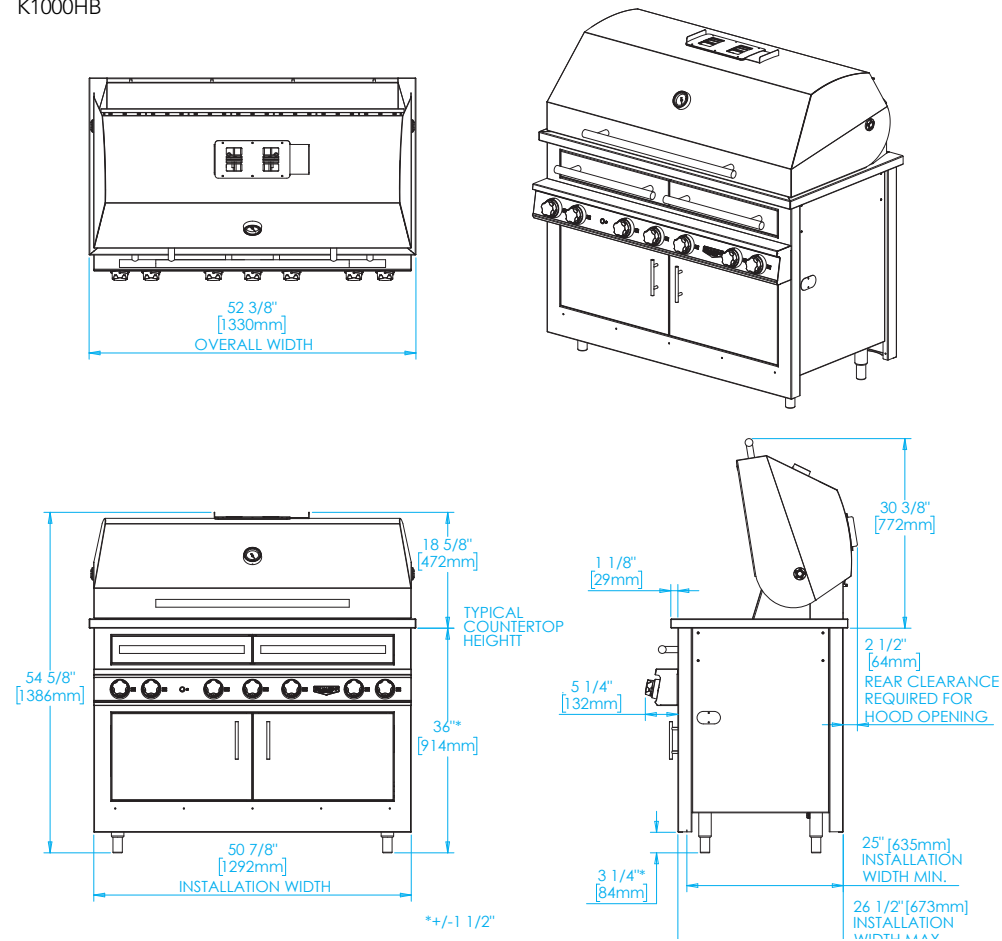
K750HB Hybrid Fire Built-in Grill

K750HB



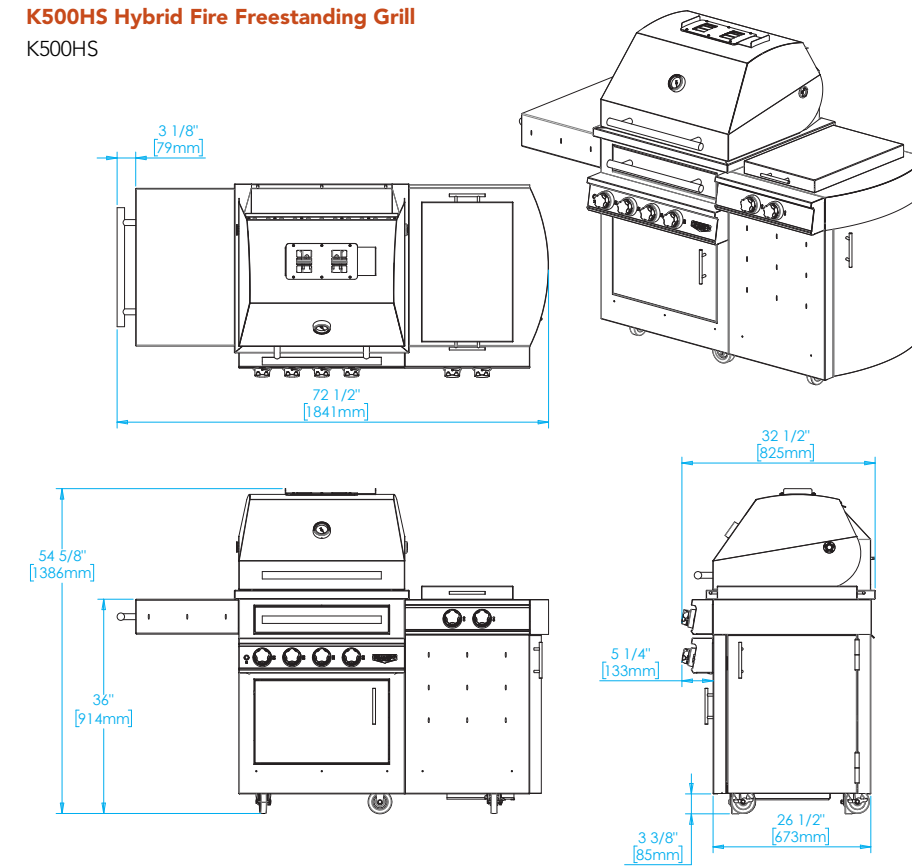
K1000HB Hybrid Fire Built-in Grill

K1000HB



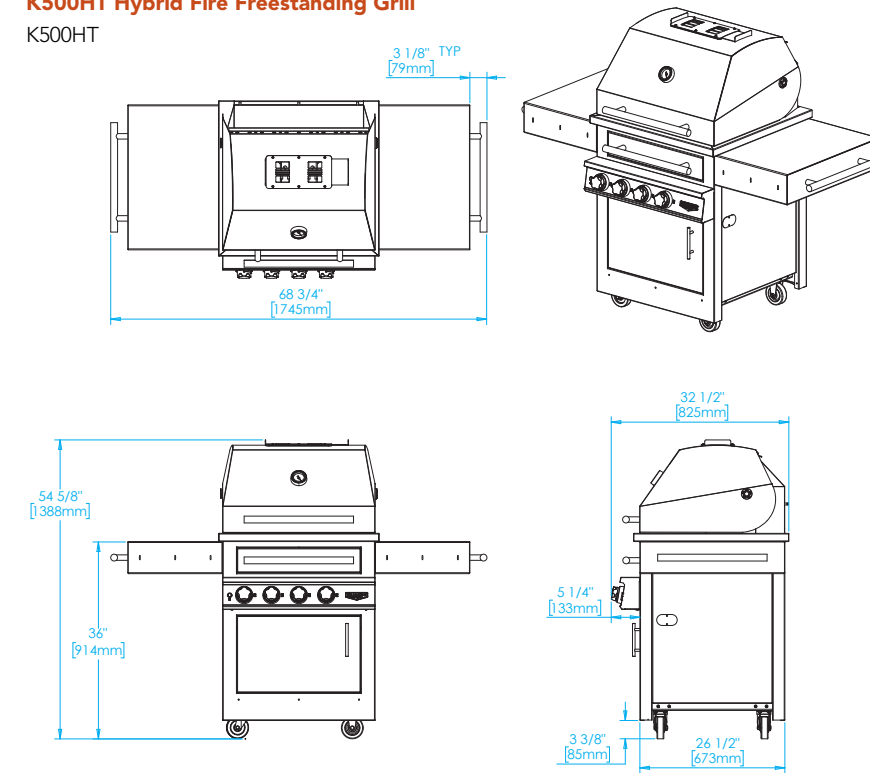
K500HS Hybrid Fire Freestanding Grill

K500HS



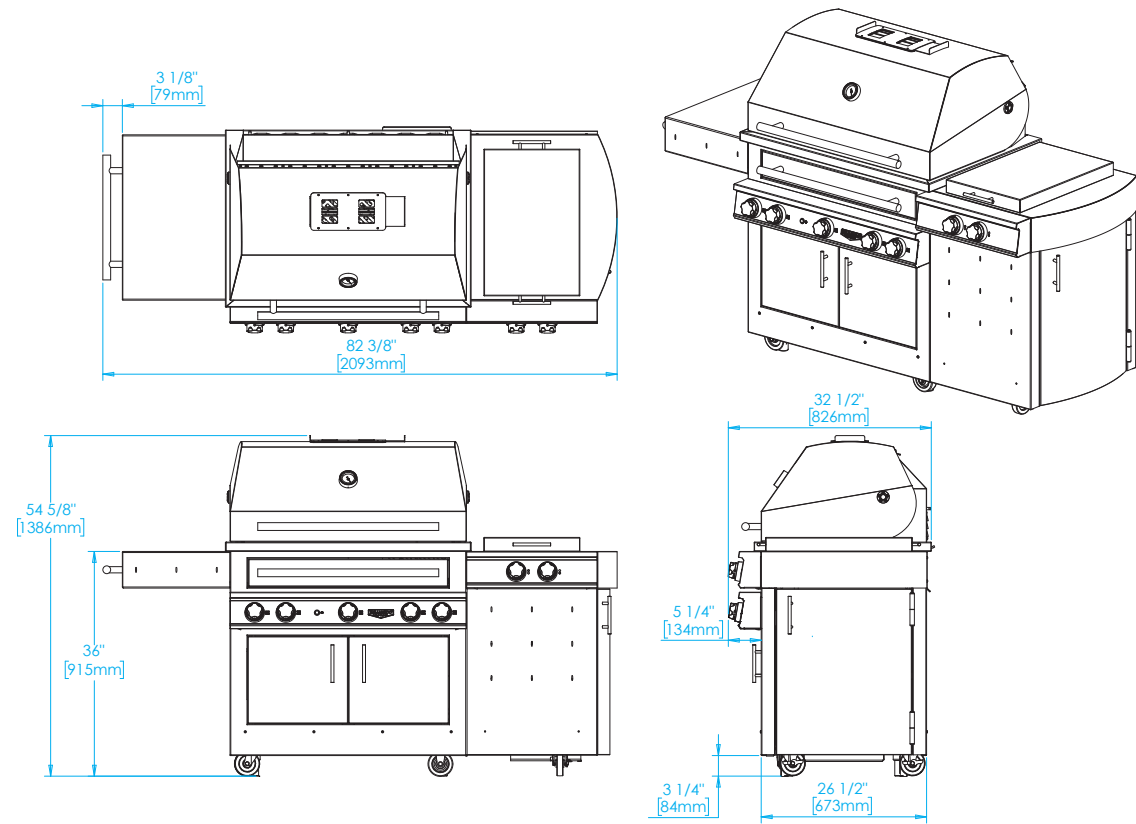
K500HT Hybrid Fire Freestanding Grill

K500HT



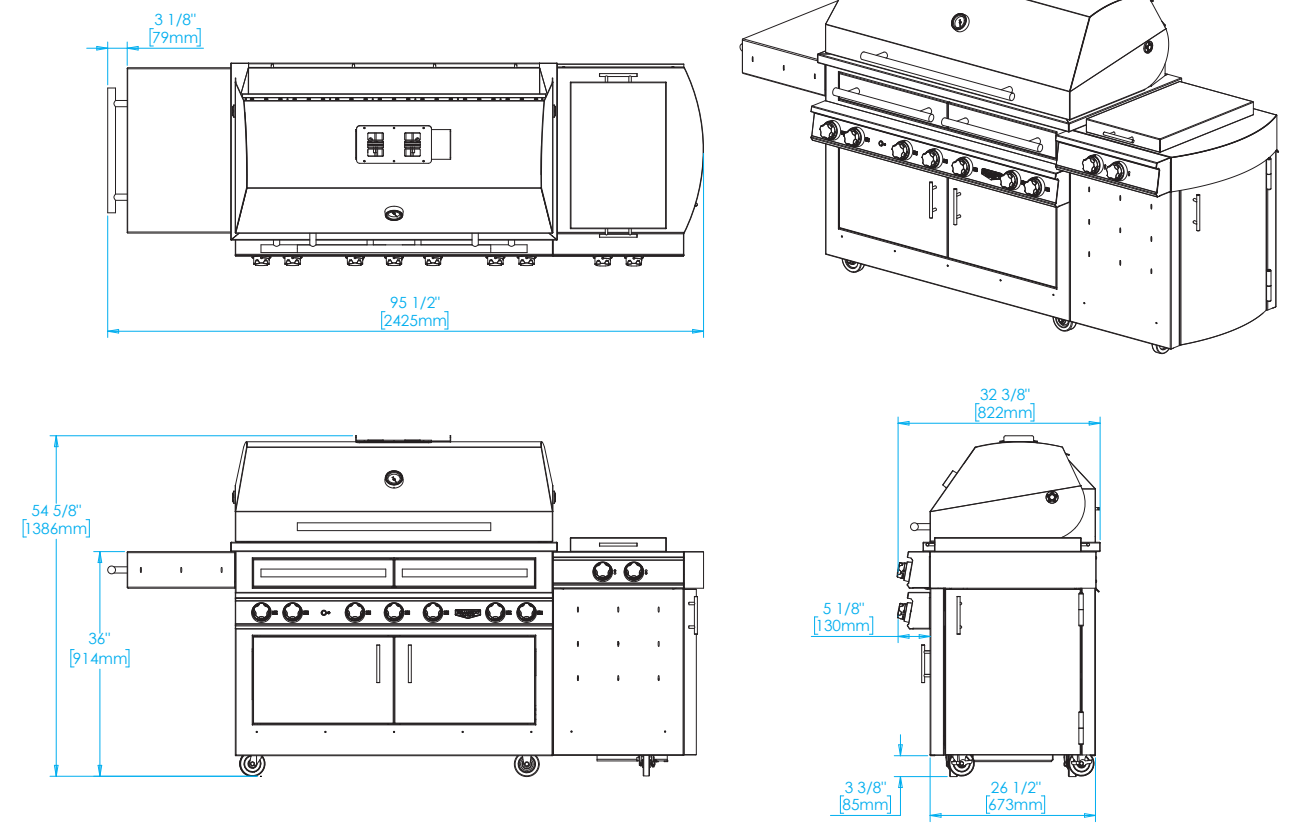
K750HS Hybrid Fire Freestanding Grill

K750HS



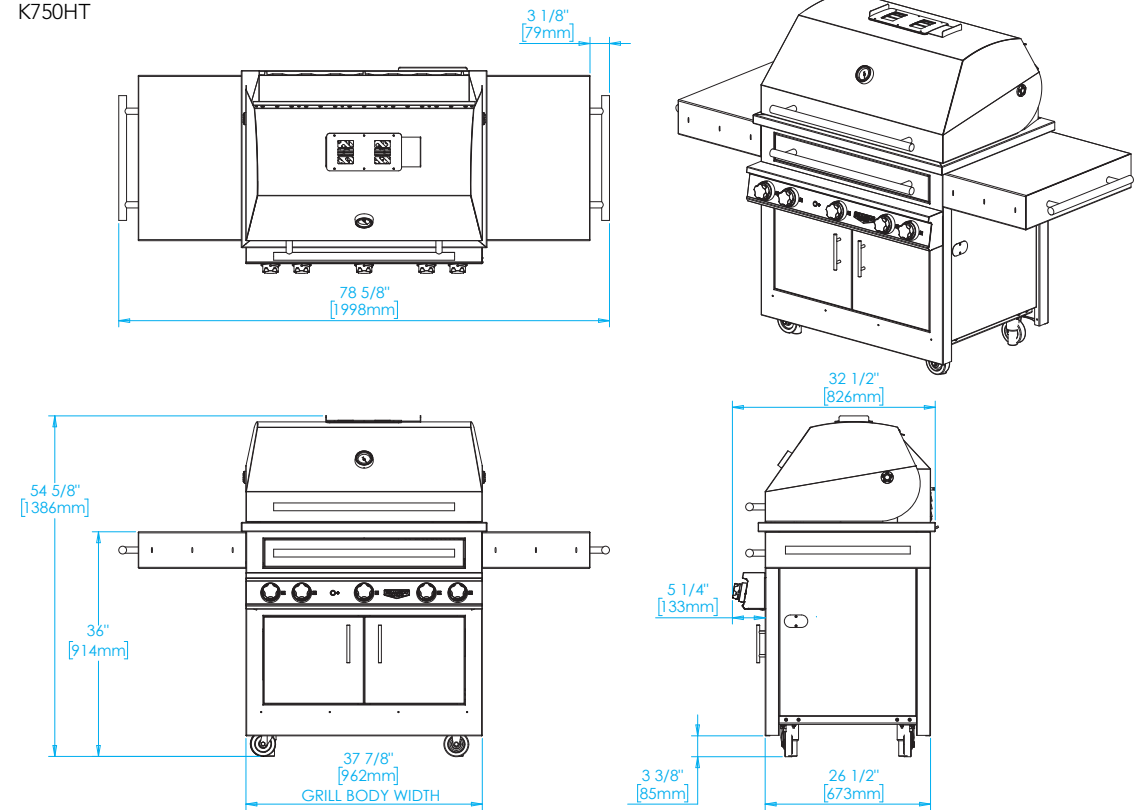
K1000HS Hybrid Fire Freestanding Grill

K1000HS



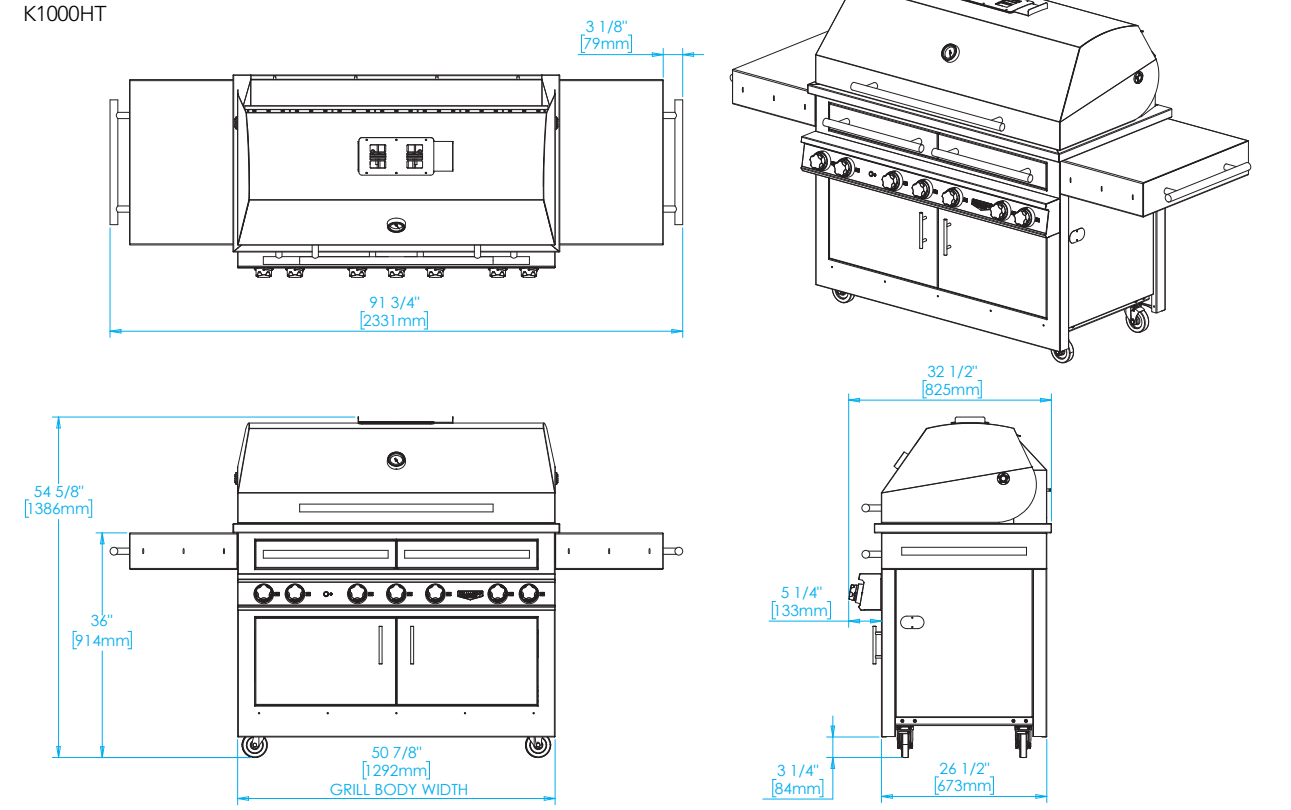
K750HT Hybrid Fire Freestanding Grill

K750HT



K1000HT Hybrid Fire Freestanding Grill

K1000HT





Initial Assembly

Initial Assembly

Your Hybrid Fire Grill does not require any major assembly, but some pieces are wrapped individually to prevent shipping damage.

A. If not already attached, secure the gas hose to brass supply fitting on the grill. The gas hose connection is a flare fitting. No sealant is required. Tighten with a wrench and check for leaks before use.

For HS model grills (shown), the connection is inside the side cabinet. (See Figure 3)

For HB and HT model grills, the connection is underneath the floor pan. (See Figure 4)

B. Place the warming rack above the rotisserie burner(s). The end with the dog leg bend should be toward the front right side of the grill.

C. See page 32 for rotisserie rod installation instructions.

D. Place the primary cooking grates in the grill.

E. Insert the Hybrid Fire Grilling Drawer.

F. Mount the CONTROL KNOBS onto the valve stems.

G. Place the ash bin in the cabinet, seated between the posts mounted in the floor.

WARNING: Never touch or empty the ash bin when the grill is hot. Always wait at least 24 hours before emptying the ash bin.

H. Place the LP cylinder (HS LP-CYL models only) in the side cabinet and secure with the straps.

I. Place the cooktop burner diffusion caps on the cooktop burners.

J. Mount the cooktop CONTROL KNOBS onto the valve stems.

K. Place the cooktop burner grid on the cooktop burner tray.

L. Place the cooktop cover over the cooktop.

WARNING: Never place the cooktop cover over the cooktop when one or both of the burners are active/lit.

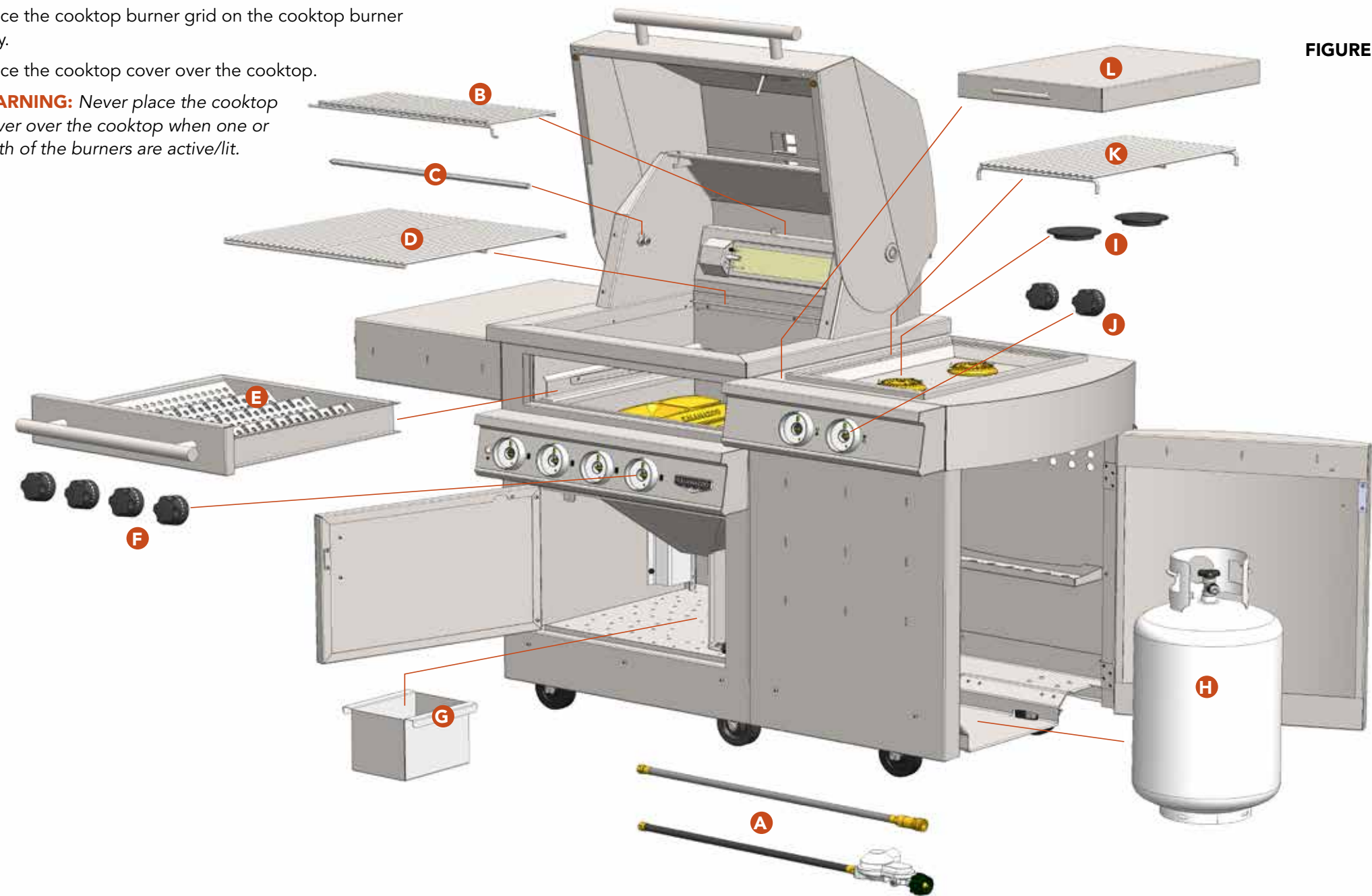


FIGURE 6



Operation

Get to Know Your Grill

- A. Lid Vent:** Adjusts air flow for charcoal and wood cooking. Wear a protective grilling glove to operate the lid vent as it can become quite hot.
- B. Lid Thermometer:** Measures the air temperature inside the grill's cook box. The cooking surface temperature is typically greater than the temperature of the air as read by the lid thermometer.
- C. Grill Lid:** Always open grill lid before lighting the grill. *Keep grill lid open when starting a charcoal or wood fire and when the lid thermometer temperature reads greater than 750°F.*

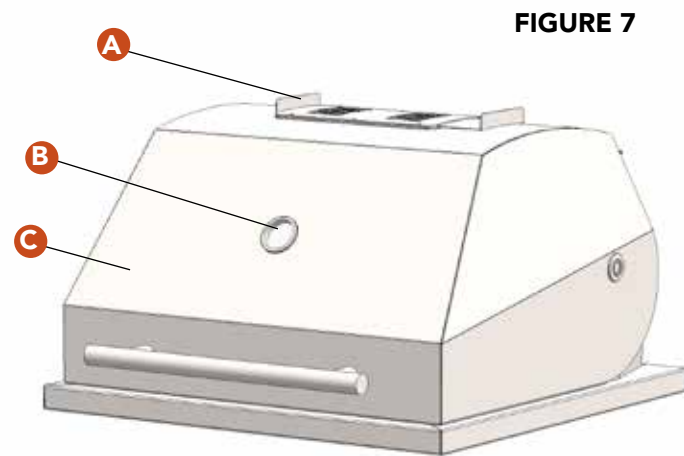


FIGURE 7

- F. Rotisserie Spit and Forks:** Use for rotisserie cooking. Always balance the food on the spit as well as possible by centering its weight around the spit. Secure the food tightly with the rotisserie forks and tighten the thumb screws well. Butchers twine may be used in addition to the rotisserie forks to hold rolled roasts securely. Always wear gloves and use caution when handling a hot rotisserie spit. Beware of the sharp point on the rotisserie spit. Keep the rotisserie spit away from children when hot and when not in use.
- G. Rotisserie Spit Mounts:** The rotisserie motor uses an indirect chain drive system to rotate the rotisserie spit. The spit inserts first through the opening on the LEFT and then backs into the drive socket on the RIGHT. The pointed end of the rotisserie spit rod should always point to the LEFT.

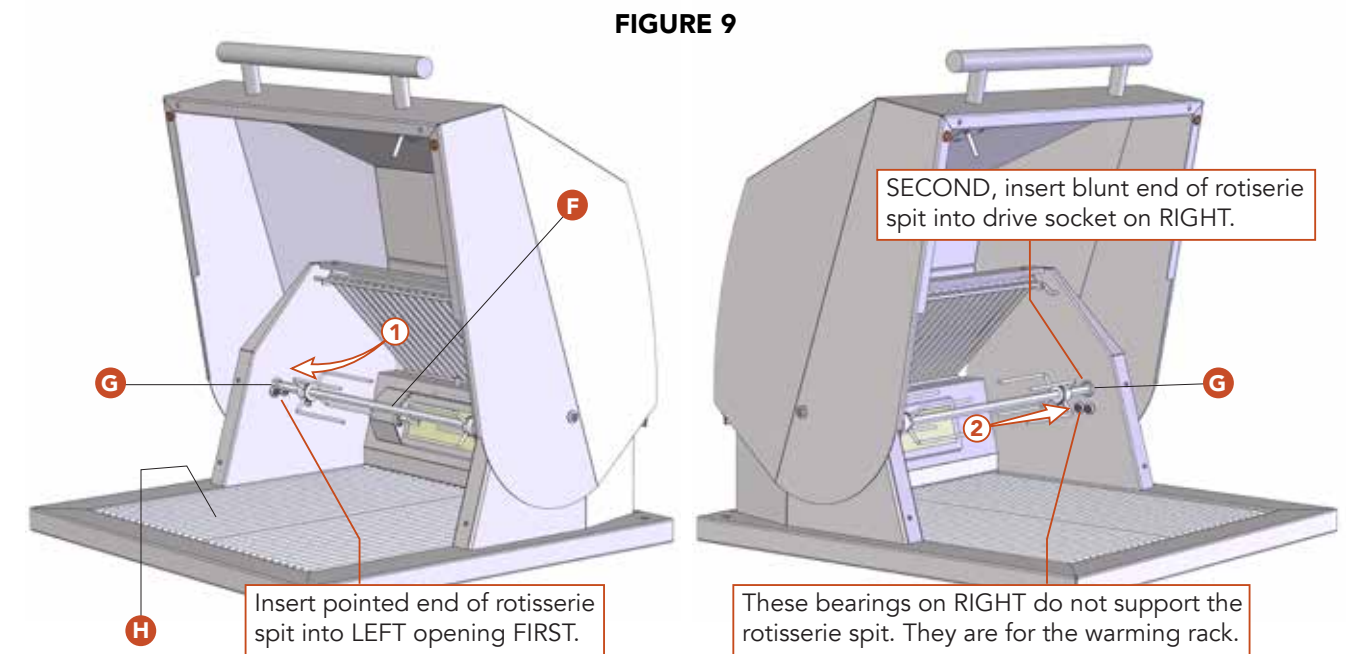
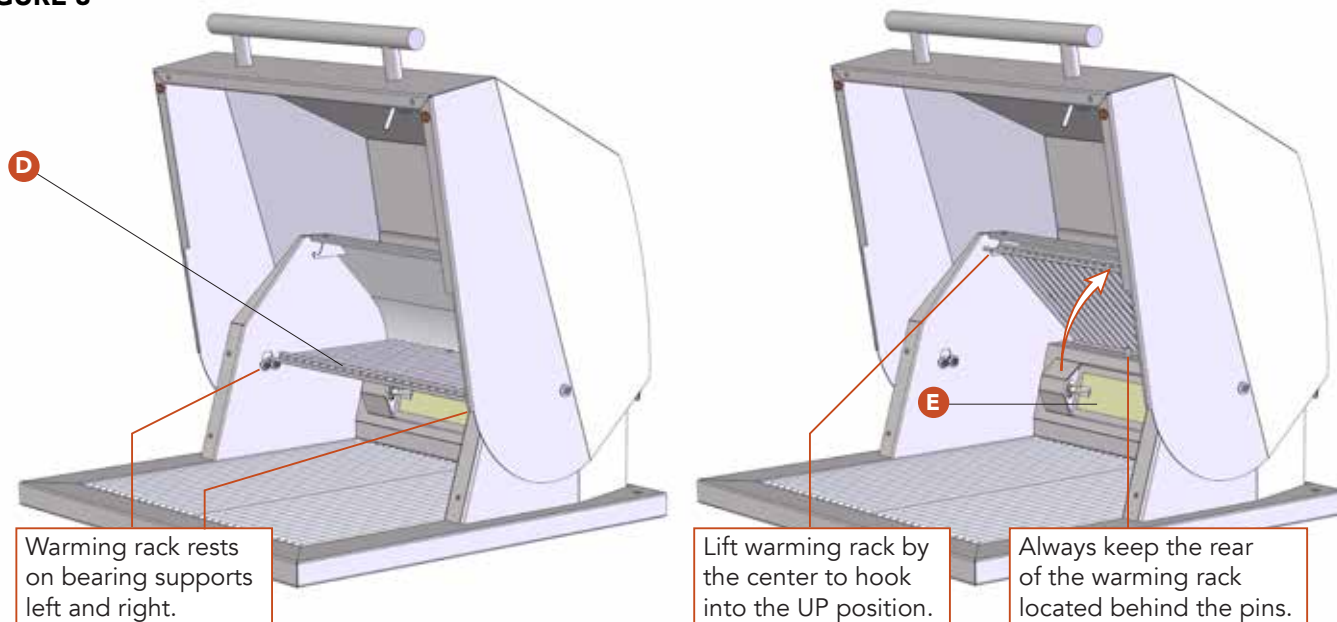


FIGURE 9

IMPORTANT: To avoid collecting excessive rain water, keep the lid vent closed when the grill is not in use.

- D. Warming Rack:** The warming rack can be used for warming food or for cooking food more slowly than on the primary cooking surface. The warming rack flips up out of the way for using the rotisserie system. *Do not operate the rotisserie burner(s) while the warming rack is in the down position.*

FIGURE 8



- E. Rotisserie Burner(s):** Infrared burners for optional use with rotisserie spit system. Rotisserie cooking can be done using heat from the rotisserie burner(s) OR heat from below. *NEVER operate rotisserie burner(s) at the same time as the main burners or other heat source below.*

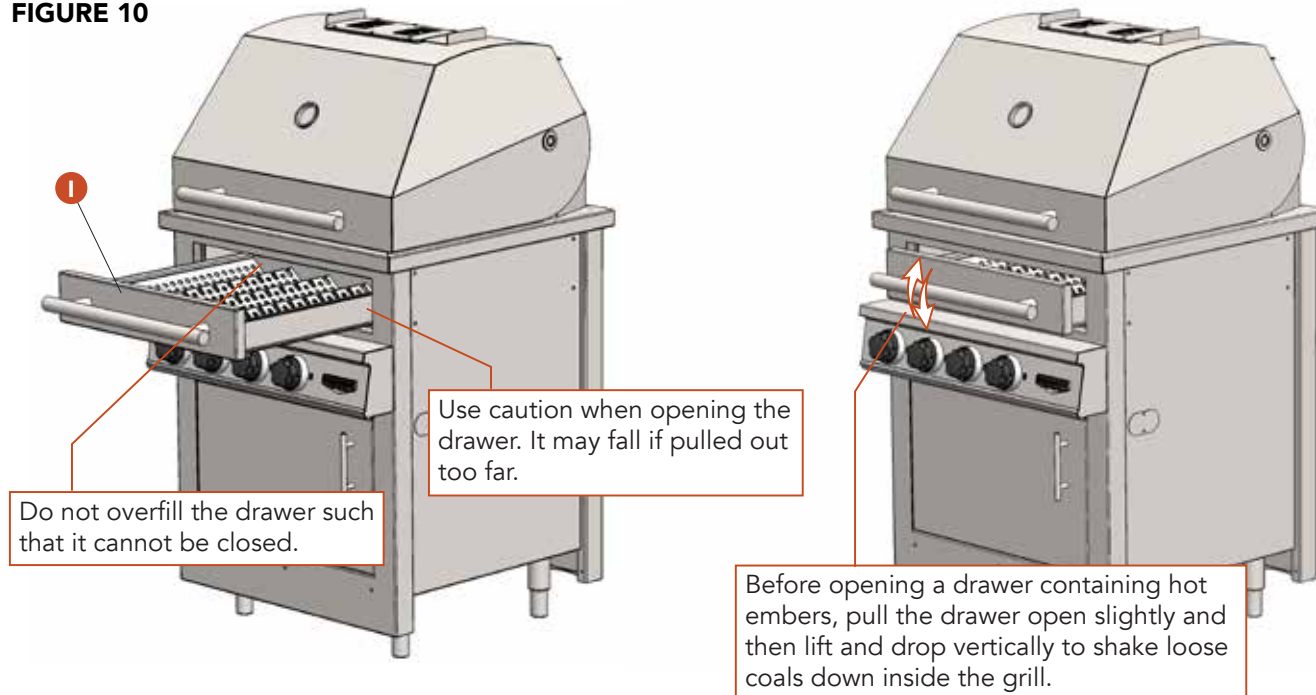
H. Primary Cooking Surfaces: The standard grill grates are crafted from heavy stainless steel rod. Optional laser-cut cooking surfaces are available in a variety of specialized cooking patterns.

I. Hybrid Fire Grilling Drawer: When empty, the special patterns and angles in the Hybrid Fire Grilling Drawer diffuse the main burner heat for gas-fired grilling. Add charcoal and/or wood to the drawer for grilling with solid fuel.

IMPORTANT: Never over-fill the drawer to the point where it cannot be opened and closed. *Over filling the drawer can create a fire so hot that it may be dangerous or may damage your grill.* If the solid fuel does not fit through the drawer opening to close the drawer, it is too large to be used or the drawer is too full.

IMPORTANT: Before opening a drawer containing hot embers, pull the drawer open slightly (about 1 inch) just until the drawer front is clear of the face of the drawer opening. Lift the drawer up by the handle and then release to drop the drawer and shake embers loose down inside the grill. Repeat several times before opening the drawer any further.

FIGURE 10



Use caution when opening the Hybrid Fire Grilling Drawer. It is possible to pull it all the way out of the grill, and there is no stop mechanism to prevent it from coming all the way out.

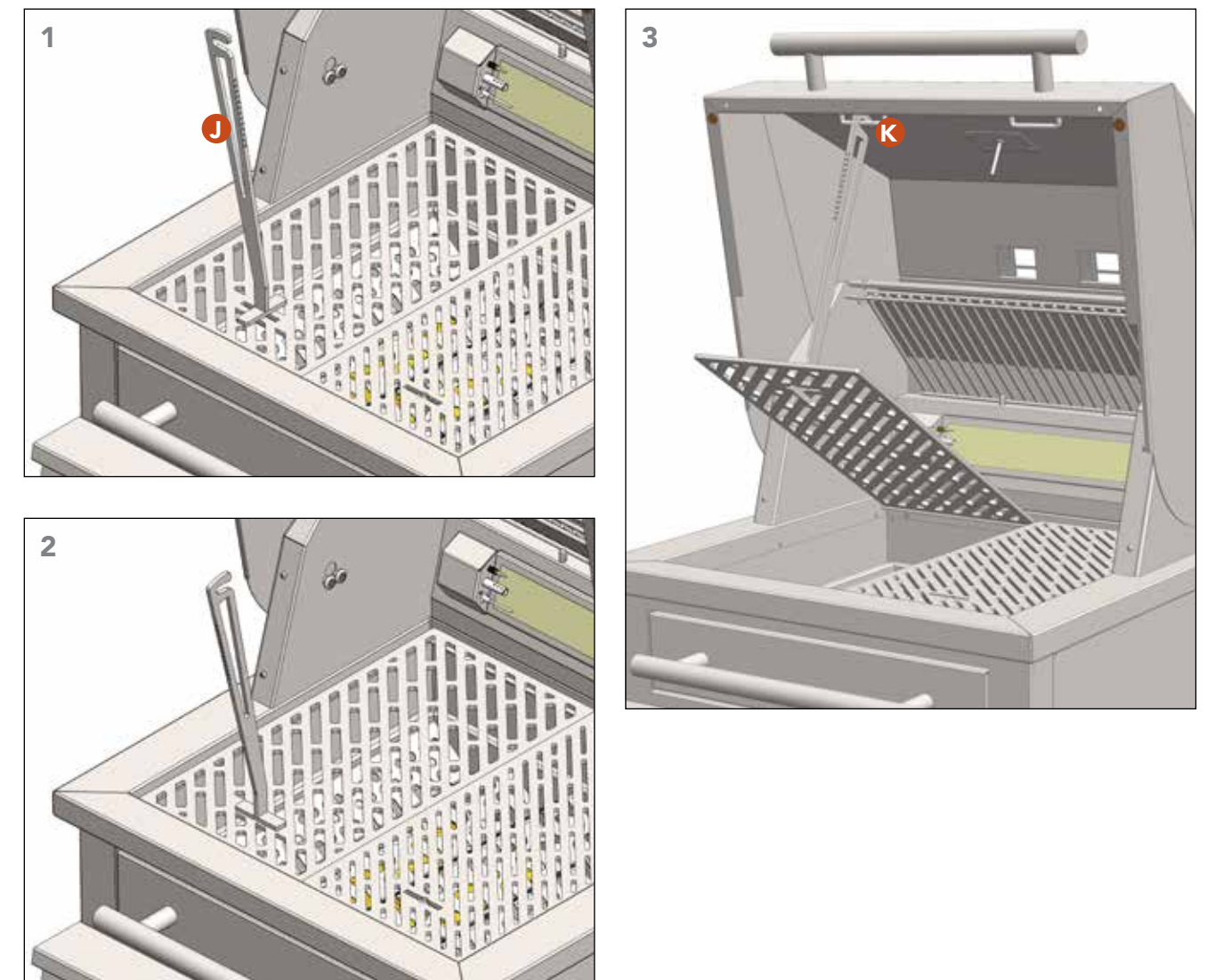
Always use caution when opening a Hybrid Fire Grilling Drawer containing live embers. Embers may fall through the perforations. Never touch any part of the drawer other than the handle if the grill is, or has recently been, hot.

J. Grate Lifter: The grate lifter is included if optional laser-cut grill grates are ordered. The grate lifter allows access to charcoal and wood inside the Hybrid Fire Grilling Drawer (I) without opening the drawer.

1. Insert the grate lifter into the keyhole slot in the grill grate.
2. Rotate the grate lifter 90 degrees so that the hook on the top of the lifter is pointed toward the rear of the grill.
3. Lift and hook the grate lifter onto the hanger inside the grill lid (K).

IMPORTANT: Only one laser-cut grill grate can be hung from the grill lid at any time.

WARNING: If left inside a hot grill, the grate lifter will become hot. Use caution and wear protective gloves. Do not leave the grate lifter inside the grill any longer than necessary



- L. Main Burners:** These cast bronze burners provide the primary heat for the grill. Located below the Hybrid Fire Grilling Drawer, they can also be used to start a charcoal and/or wood fire. The main burners do not have their own individual ignition points. The main burners are started by the ignition burner that runs across the front of the grill.
- M. BARBECUE Burner (not visible in drawing):** Crosses the front of all main burners. The flame from the ignition burner lights the main burners of the grill.
- N. Ignition Burner Flash Tube:** This tube is engineered to protect the electronic hot surface igniter and provide for convenient manual ignition. Open the Hybrid Fire Grilling Drawer a few inches to access the flash tube.
- O. Ignition Burner Hot Surface Igniter:** The igniter inside the flash tube glows hot to ignite the ignition burner gas that collects in the ignition burner flash tube. You can see the glow of the igniter from the front of the flash tube. Never touch the igniter or you may damage the ignition system.
- P. Main Control Panel:** See the following section on grill controls.

FIGURE 11

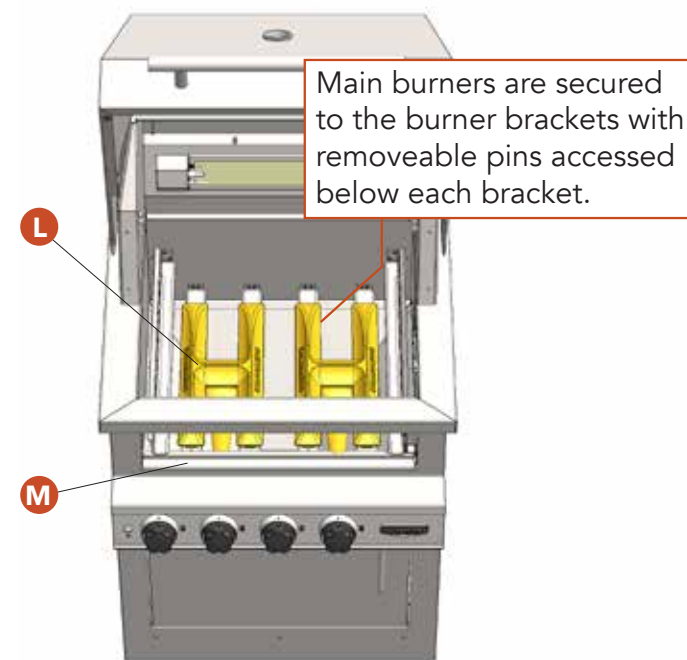


FIGURE 12

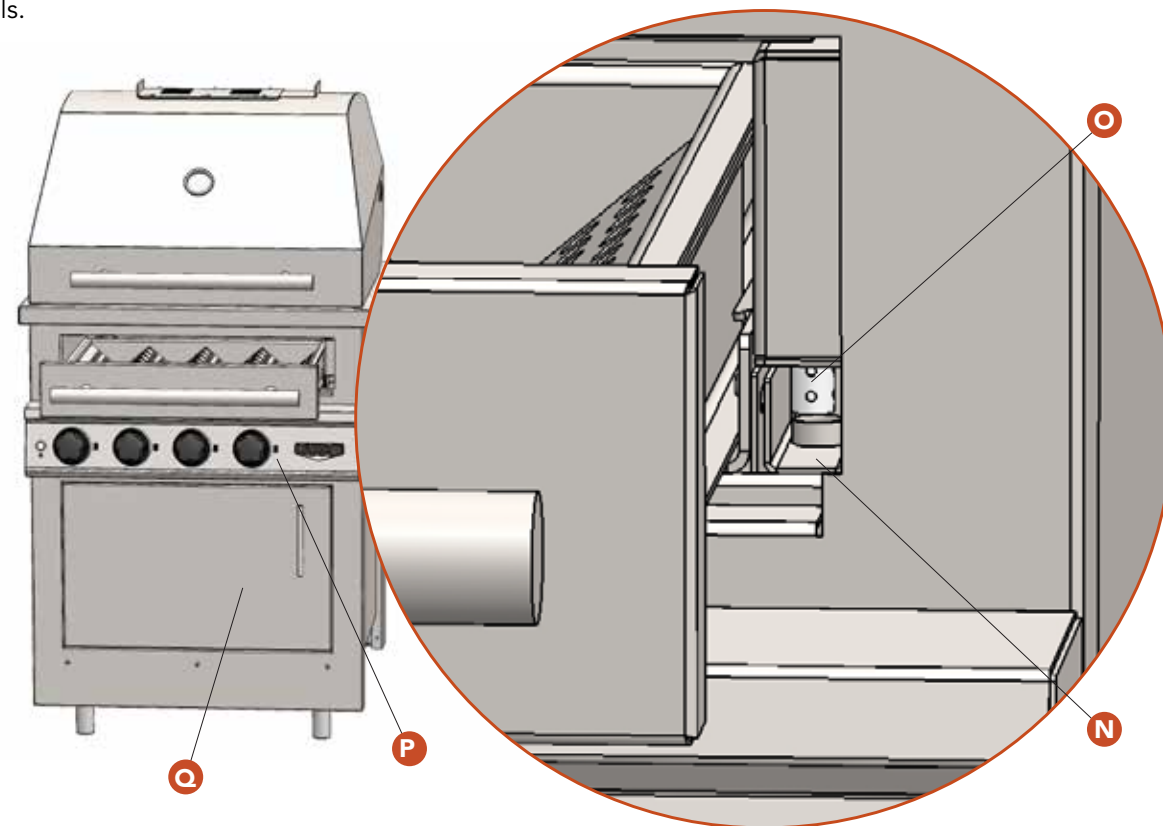
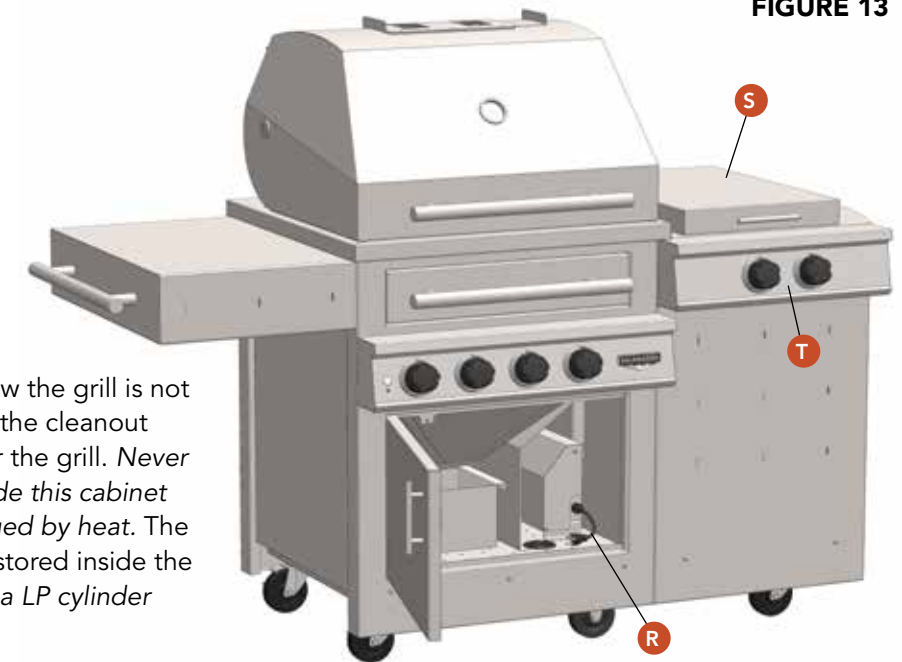
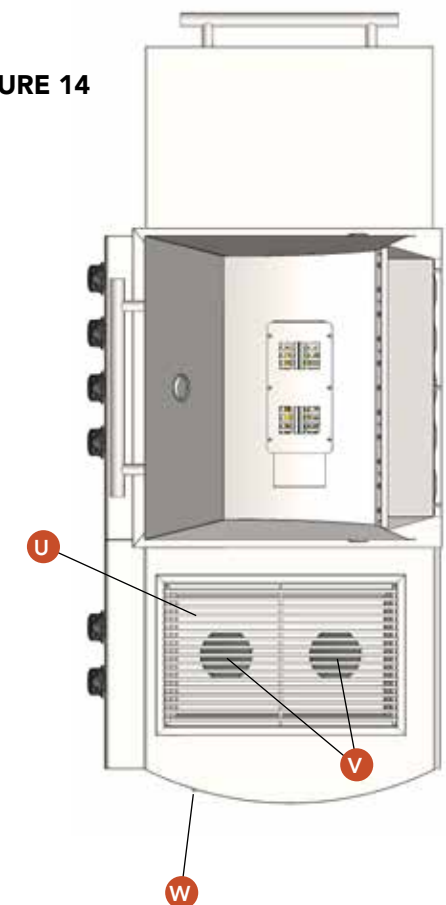


FIGURE 13



- Q. Access Doors:** The cabinet below the grill is not for storage. This space contains the cleanout pan and the electrical system for the grill. *Never store combustible materials inside this cabinet or any items that may be damaged by heat. The rotisserie spit and forks may be stored inside the cabinet. Never attempt to store a LP cylinder underneath the grill.*
- R. Electrical System Power Cord:** This cord connects the power for the ignition system, the rotisserie motor, and control panel lighting. Use a customer-supplied single-outlet outdoor-rated extension cord to connect this short cord provided by Kalamazoo Outdoor Gourmet to an outdoor-rated GFI outlet. The customer-supplied cord should be fed up through the hole in the floor pan of the grill that is protected by a rubber grommet.
- S. Cooktop Cover:** *Never operate the cooktop burners with this cover in place.* Stow the cover in the side door when using the cooktop burners (see Figure 15). Cover the burners when not in use.
- T. Cooktop Control Panel:** See the following section on grill controls.
- U. Cooktop Grate:** Supports pots and pans above the cooktop burners. Do not cover the entire grate with a griddle or otherwise block airflow above the burners.
- V. Cooktop Burners:** The cooktop burners are made from machined brass with enameled cast iron diffusion caps. The diffusion caps sit loosely on top of the machined brass pieces. The caps must be in place on top of the brass cooktop burners before the burners can be used.
- W. Side Cabinet Door:** Access the LP cylinder by opening the side cabinet door.

FIGURE 14



Grill Controls

Each grill control knob corresponds to an individual burner control. The symbol to the right of the knob indicates which type of burner and the burner position that knob controls. The electronic ignition system works with one burner at a time. Activate the electronic ignition point by pressing inward on the control knob.

FIGURE 15



Main Burner Controls: Controls the flame on the main burners. Hybrid Fire Grills have two, three or four main burners depending on the model.



BARBECUE Burner Control: Controls the flame on the barbecue burner. The barbecue burner also serves as an ignition burner to light the main burners when following the manual lighting procedure. All Hybrid Fire Grills have just one barbecue burner.



Rotisserie Burner Control(s): Controls the flame on the rotisserie burner(s). Hybrid Fire Grills have one or two rotisserie burners depending upon the model.



Cooktop Burner Controls: Controls the flame on the cooktop burner. HS model Hybrid Fire Grills have two cooktop burners.



Rotisserie Motor On/Off Switch: Activates the rotisserie motor. Requires grill to be plugged into an outdoor GFI outlet (120V).

FIGURE 16



OFF POSITION

'0' indicates the valve is in the fully closed position.

See "Lighting Your Grill" on page 41.



HIGH/START POSITION

'1' indicates the valve is in the fully open position. Push in on the knob to turn it counter-clockwise from the OFF position to HIGH/START.



LOW POSITION

Without pushing in on the knob, turn counter clockwise for the range of burner control between HIGH and LOW.

Control Bezel Lights

- A flashing white light indicates the hot surface ignition is active and the valve stem is pressed inward. The flash interval timing is one second to aid in following the proper lighting procedure as described on page 41.
- A flashing blue light indicates the valve stem is pressed inward, but the ignition system has timed out and turned off.
- A steady orange glow indicates the system senses heat at the burner. Please note this can be triggered by a charcoal or wood fire even if the burner is OFF.
- A steady blue glow is shown when the system is booting up after being connected to power.

An Important Note About LP Cylinders

Kalamazoo strongly recommends connecting our grills to a bulk fuel supply (either bulk liquid propane or a natural gas connection). The BTU rating of our high performance equipment means that a standard 20-pound liquid propane cylinder cannot supply enough gas. Gas appliance design and safety standards do not allow us to configure these grills to operate off dual cylinders or to supply customers with a cylinder larger than 30 pounds.

We provide a 30-pound cylinder for those customers who cannot connect their grill to a bulk fuel supply. In testing, a full cylinder effectively supplies a Kalamazoo grill with three primary burners on HIGH for approximately 3 hours before the safety check valve causes the grill to stop operating.

What is a safety check valve?

Liquid propane cylinders feature a safety device intended to prevent gas from unintentionally flowing from the cylinder. The device senses the pressure differential related to the flow of gas from the cylinder.

Why does the safety check valve shut down the grill?

When liquid propane is converted from a liquid in the cylinder to a gas to supply the grill, heat is required for the change. This heat is drawn from the cylinder itself. The more BTUs needed by a grill, the more heat needed. A 100 pound liquid propane cylinder can easily handle this exchange because of the increased surface area. A 20 pound liquid propane cylinder cannot. The smaller cylinder will ice over. When it ices over, the pressure inside the cylinder drops. If the internal pressure in the cylinder drops too far, the safety check valve detects a small enough pressure differential in the gas flow that it will activate. The activated safety check valve reduces the gas flow so greatly that it effectively turns off the grill.

WARNING: Even though a safety check valve has been activated, gas is still flowing through the system. If the burners have extinguished, immediately turn off the LP cylinder at the master valve on the cylinder. Next, turn off all grill control valves. Disconnect the regulator from the LP cylinder, then reconnect it. The safety check valve should now be reset. However, if the cylinder is iced over, it is likely the safety check valve will soon be triggered again.

What can I do if I have to run off liquid propane cylinders?

Keep a spare, filled cylinder available. When the cylinder in use ices over and the safety check valve kicks in, switch to the other cylinder to continue cooking.

Where can I get the 30-pound cylinder refilled?

Most equipment rental and many party rental businesses will refill LP cylinders.

Before You Cook

A quick safety check should be performed before each time you use the grill.

1. Clean and inspect the gas hose. If there is evidence of abrasion, wear, cuts or leaks, do not use the grill. The hose must be replaced prior to using the grill. Replace the hose assembly with the exact type specified by Kalamazoo Outdoor Gourmet.
2. Ensure the gas hose is clear of the grill. Keep the fuel supply hose away from all surfaces of the grill.
3. Check that the area near the grill is clear of combustible materials and vapors, including alcohol, gasoline, aerosol containers and dry goods. Keep electrical cords from being in contact with any surfaces of the grill.
4. Do not use the grill with overly loose-fitting clothing, especially loose sleeves that may come in contact with the hot surfaces inside or outside the grill.
5. Have insulated gloves with long cuffs ready and available.

While You are Cooking

1. Never move the grill while it is in use or when it is hot.
2. The use of alcohol, prescription or non-prescription drugs may impair your ability to properly assemble or safely operate the grill.
3. Do not touch the grill lid, any surfaces inside or around the cooking surfaces, the surface of the Hybrid Fire Grilling Drawer or any surfaces inside the cabinet below the grill while the grill is hot. These surfaces can cause serious burns.
4. Be very careful transporting hot food. Sauces, juices and oils can cause serious burns to yourself or those around you.
5. Only use a brass or stainless steel bristle brush, or wooden grate scraper, to clean the cooking surfaces and warming rack. Wear insulated gloves with long cuffs to protect your hands.
6. Never empty the ash pan while the grill or the contents of the pan are hot. Always wait at least 24 hours after the grill has been hot before emptying the ash pan.

Follow all warnings and instructions when using this appliance.

This appliance is not intended for and should never be used as a heater.

This appliance is not intended for commercial use.

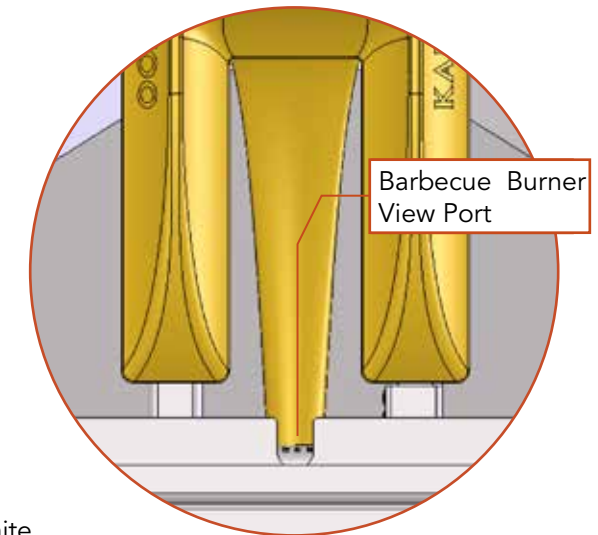
Lighting Your Grill

Before lighting your grill, be sure you have followed the instructions in this Use and Care Guide regarding proper setup, placement, gas connections leak testing (see page 15) and safe operation, all of which precede this page.

IMPORTANT: Do not use the grill if the odor of gas is present at any time. Follow leak testing procedures before using the grill.

Standard Lighting Procedure:

1. Open the grill lid.
2. Make sure all control knobs are in the OFF position.
3. Turn the main gas supply on.
4. To light one burner at a time, press the control knob inward. The bezel light should flash white. Continue pressing in for 4 seconds, which is 4 flashes of the bezel light. This pre-heats the hot-surface igniter.
5. While continuing to press inward, rotate the knob 90 degrees counter-clockwise to the HIGH/START position (see Figure 16). This begins the flow of gas.
6. Keep pressing inward. Listen and watch for the burner to ignite.
If the burner does not ignite within five seconds return the valve back to the OFF position. Wait five minutes for the gas to clear before trying again to light the burner.
7. Once the burner has lit, you must continue pressing in on the valve while the safety thermocouple heats up. This can take up to 20 seconds. Once the bezel light changes from flashing white to flashing blue, release the control knob. The bezel light should change to a steady orange glow.





IMPORTANT: This grill uses safety valves to help protect you and your property. These valves are connected to thermocouples designed to sense when there is flame coming from the burner. Once the burner is lit, it takes up to 20 seconds for the thermocouple to heat up. During this time, the safety device must be bypassed by pressing inward on the control knob. It is very important to observe the burner has successfully lit during this time. If it has not successfully lit, gas will be flowing into the grill, which can result in serious injury.


If you stop pressing in before the thermocouple has heated up, the safety device will cut off the flow of gas to the burner and the flame will go out. You will have to reignite the burner. After returning the control knob to the OFF position, follow steps 4 through 7 above.

Manual Lighting Procedure:


Main Burners

1. Open the grill lid
2. Make sure all control knobs are in the OFF position.
3. Turn the main gas supply on.
4. Pull open the Hybrid Fire Grilling Drawer 6 inches.
5.  Keeping your face well away from the unit, hold a match or lighter wand in front of the opening at the end of the flash tube (see Figure 12:N). Press in the **BARBECUE BURNER control knob** (see Figure 15) and turn it to the HIGH position. Ignition should take place within 4 to 5 seconds. You will see and hear the flash at the end of the flash tube when the ignition burner ignites. If the burner does not light within 4 to 5 seconds, turn the knob to the OFF position and wait 5 minutes for the gas to dissipate before trying again. Once the burner has lit, you must continue pressing in the control knob until the thermocouple has heated up. This can take up to 20 seconds. If you release the control knob too early, the safety device will stop the gas flow.
6.  Once the barbecue burner is lit, the main burners can be ignited from the flame on the barbecue burner as though it is a pilot light. Press in any **MAIN BURNER control knob** (see Figure 15) and rotate to the HIGH position. If the burner does not light within 4 to 5 seconds, turn the knob to the OFF position and wait 5 minutes for the gas to dissipate before trying again. Once the burner has lit, you must continue pressing in the control knob until the thermocouple has heated up. This can take up to 20 seconds. If you release the control knob too early, the safety device will stop the gas flow.

Rotisserie Burner(s)

1. Open the grill lid
2. Make sure all control knobs are in the OFF position.
3. Turn the main gas supply on.
4.  Keeping your face well away from the unit, hold a match or lighter wand in front of the rotisserie burner. Press in the **ROTISSERIE BURNER control knob** (see Figure 15) and turn it to the HIGH position. Ignition should take place within 4 to 5 seconds. If the burner does not light within 4 to 5 seconds, turn the knob to the OFF position and wait 5 minutes for the gas to dissipate before trying again. Once the burner has lit, you must continue pressing in the control knob until the thermocouple has heated up. This can take up to 20 seconds. If you release the control knob too early, the safety device will stop the gas flow.

Cooktop Burners

1. Remove the cover from the cooktop burners.
2. Make sure all control knobs are in the OFF position.
3. Turn the main gas supply on.
4.  Keeping your face well away from the unit, hold a match or lighter wand at the side of the cooktop burner. Press in the **COOKTOP BURNER control knob** (see Figure 15), and turn it to the HIGH position. Ignition should take place within 4 to 5 seconds. If the burner does not light within 4 to 5 seconds, turn the knob to the OFF position and wait 5 minutes for the gas to dissipate before trying again. Once the burner has lit, you must continue pressing in the control knob until the thermocouple has heated up. This can take up to 20 seconds. If you release the control knob too early, the safety device will stop the gas flow.

Ignition System Power Supply

The ignition system utilizes a hot surface electronic ignition system with an AC power supply.

Plugging in the Grill

A short, factory-supplied cord is connected to the grill's electronic control box inside the main cabinet below the grill (see Figure 13:R). Run a customer-supplied, single-plug, grounded, outdoor-rated extension cord into the grill cabinet through the opening in the floor pan that is protected by the rubber grommet. Connect the customer-supplied cord to the short, factory-supplied cord inside the cabinet.

Be certain to connect the power to a GFI outlet. Check that the grill's central system is receiving power by turning on the rotisserie motor (see Figure 15).



ELECTRICAL PRECAUTIONS:

1. To protect against electric shock, do not immerse cord or plugs in water or other liquid;
2. Unplug from the outlet when not in use and before cleaning. Allow to cool before putting on or taking off parts;
3. Do not operate any outdoor cooking gas appliance with a damaged cord, plug, or after the appliance malfunctions or has been damaged in any manner. Contact the manufacturer for repair;
4. Do not let the cord hang over the edge of a table or touch hot surfaces;
5. Do not use an outdoor cooking gas appliance for purposes other than intended;
6. When connecting, first connect plug to the outdoor cooking gas appliance then plug appliance into the outlet;
7. Use only a Ground Fault Interrupter (GFI) protected circuit with this outdoor cooking gas appliance;
8. Never remove the grounding plug or use with an adapter of 2 prongs; and
9. Use only extension cords with a 3 prong grounding plug, rated for the power of the equipment, and approved for outdoor use with a W-A marking.

Flame Characteristics

Every burner is tested and adjusted at the factory for proper performance. If a burner is not operating properly, it may be due to variations in the local gas supply or because of an obstructed air shutter or orifice. Flames should be stable without lifting from the burner. The flames should burn cleanly without creating any sooty residue.

Main Burner Flame Characteristics:

- The flame should be blue and stable with only a small amount of orange, if any, at the tips. There should be little noise and no lifting.
- On HIGH, the inner cone (see Figure 20:A) should be approximately 3/8 inch long.
- On HIGH, the outer cone (see Figure 20:B) should be approximately 1 1/4 inches high.

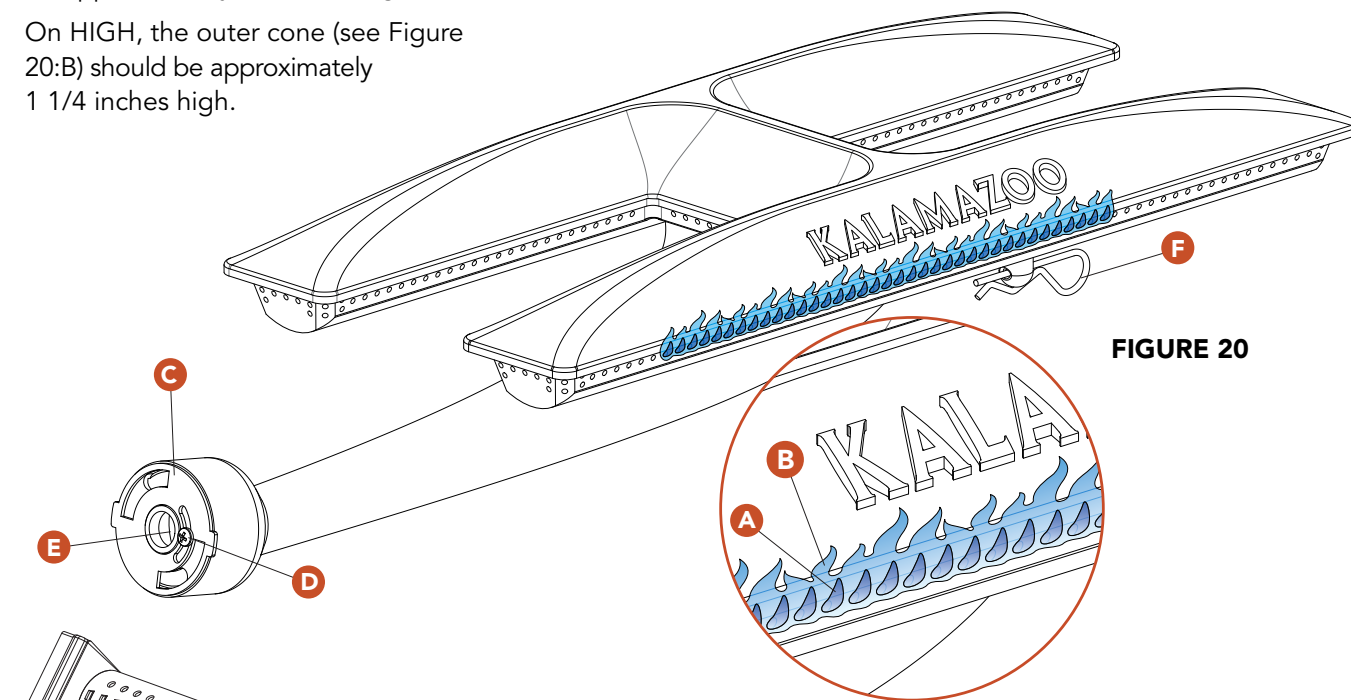


FIGURE 20

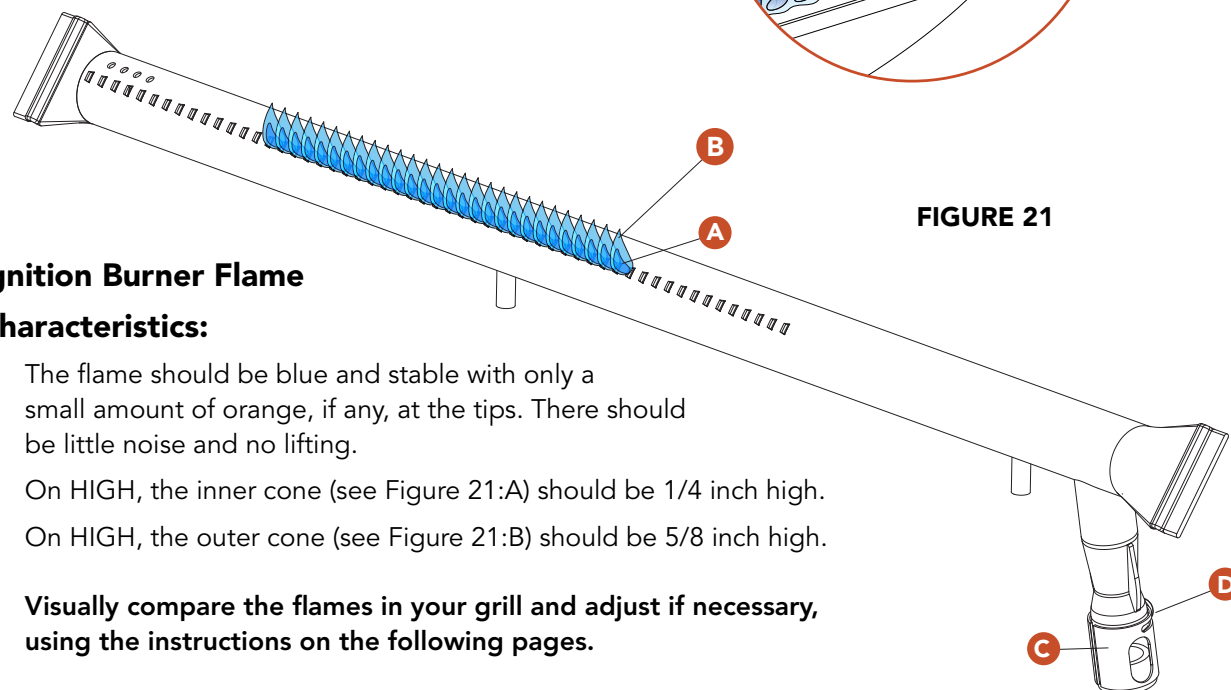


FIGURE 21

Ignition Burner Flame Characteristics:

- The flame should be blue and stable with only a small amount of orange, if any, at the tips. There should be little noise and no lifting.
- On HIGH, the inner cone (see Figure 21:A) should be 1/4 inch high.
- On HIGH, the outer cone (see Figure 21:B) should be 5/8 inch high.

Visually compare the flames in your grill and adjust if necessary, using the instructions on the following pages.

Rotisserie Burner Flame Characteristics:

- The flame should be blue and stable. It should be an even blanket over the entire burner, and the burner ceramics should glow red within a couple of minutes of lighting.

Cooktop Burner Flame Characteristics:

- The flame should be blue and stable with only a small amount of orange, if any, at the tips. There should be little noise and no lifting.
- On HIGH, the inner cone (see Figure 22:A) should be approximately 1/2 inch long.
- On HIGH, the outer cone (see Figure 22:B) should be approximately 1 1/4 inches high.

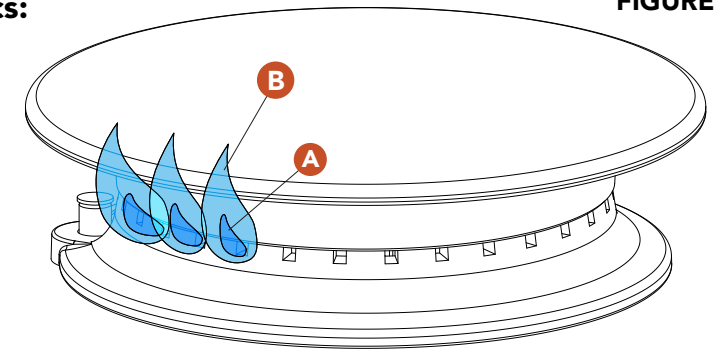


FIGURE 22

Burner Adjustments

IMPORTANT: A sooty flame is usually caused by dirt, debris or spider nests blocking the air shutter or orifice. This is a dangerous condition. The grill should NOT be used until the problem is rectified. If you are not comfortable addressing the issue yourself, please hire a qualified technician or contact Kalamazoo Outdoor Gourmet Customer Service at +1.800.868.1699.

To Adjust the Main Burner Air Shutter:

The main burner air shutters are easily accessed after carefully removing the main control panel. Ensure all of the control knobs on the grill are in the OFF position. Remove the control knobs from the main control panel, and then remove the two clips that secure the control panel (see Figure 24:A). Carefully lift up on the control panel to disengage it from the brackets on the body of the grill (see Figure: 24:B). If your grill has two cabinet doors, you may open them and rest the control panel on top of the doors to hold it. If your grill has only one cabinet door (K500H Series), you must disengage the wiring harness connection (see Figure 24:C) to free the control panel.

Adjust the main burner air shutters (see Figure 20:C, 23:A) by loosening the lock screw (see Figure 20:D, 23:B). The grill is factory adjusted so that the air shutter is about 50% open. If the flames are too orange, the burners may need more combustion air. Adjust the air shutter to a more open position.

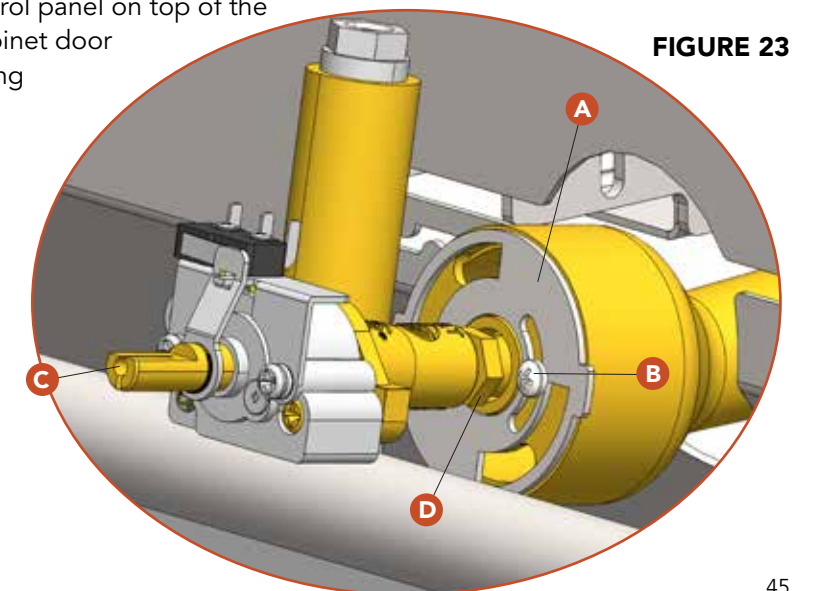


FIGURE 23

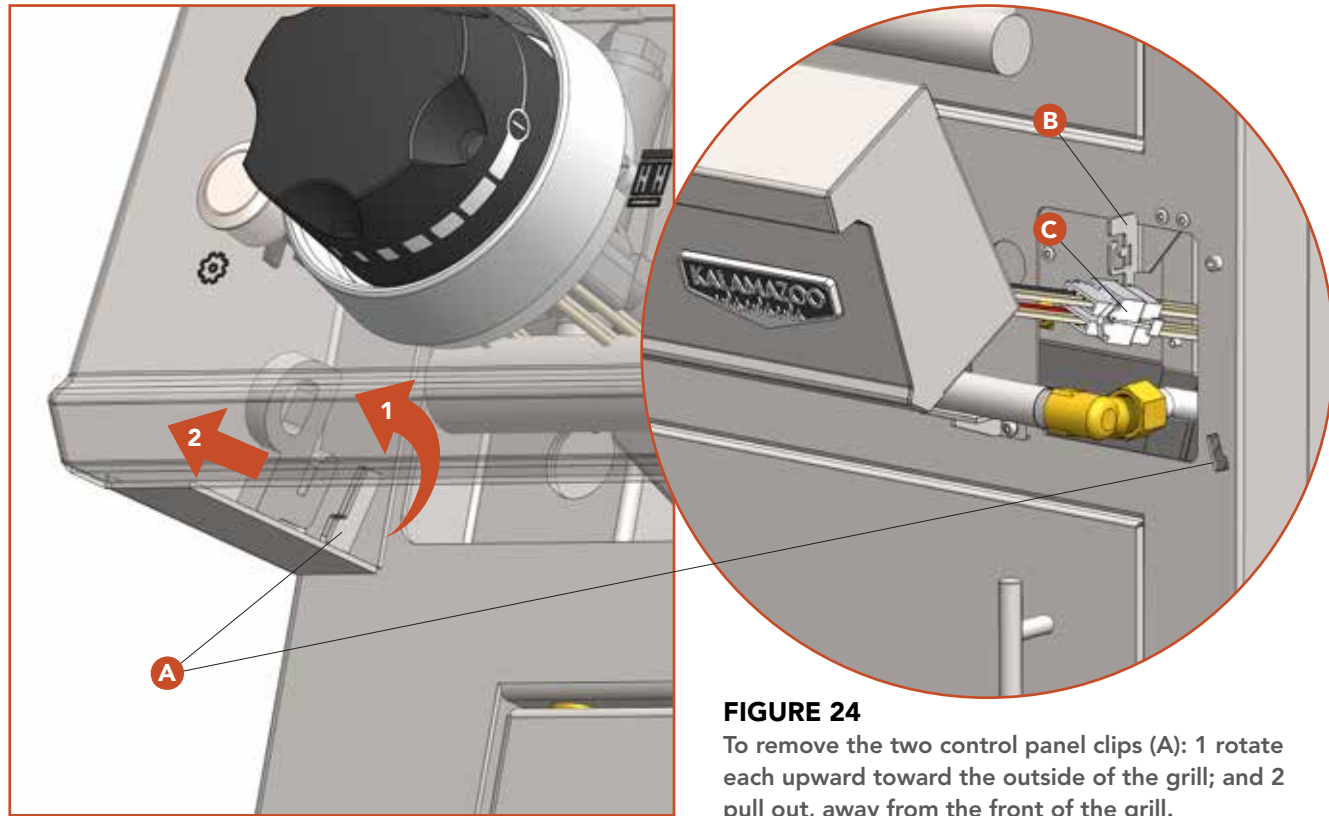


FIGURE 24
To remove the two control panel clips (A): 1 rotate each upward toward the outside of the grill; and 2 pull out, away from the front of the grill.

Too much air may cause the flames to “lift off” the burner. This is a dangerous condition that must be avoided. Do not open the air shutter too far. Too much air will also make it more difficult to light the burner. You may test burn the grill to fine-tune the air shutter. Light only the burner to be adjusted and fine-tune the air shutter. Adjustments should be made with the burner on HIGH.

Once adjusted to a stable flame that burns cleanly and does not lift, turn the burner OFF. Tighten the lock screw.

To Adjust Burner LOW Settings (All Burners):

The low setting on the main burners can be adjusted WITHOUT removing the control panel. A long and thin flat-blade screw driver is needed to make the adjustments. Light the burner and set it to LOW.

Remove the control knob and insert the screw driver into the opening in the center of the valve stem (see Figure 23:C, Figure 25). Turn the adjustment screw (see Figure 25:A) until the flame on the burner is the minimum stable flame height. The flame should be steady at all ports around the burner. The flame should not be easily blown out without quickly reestablishing itself.

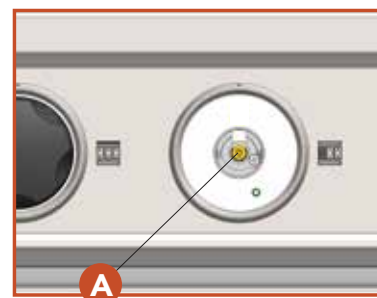
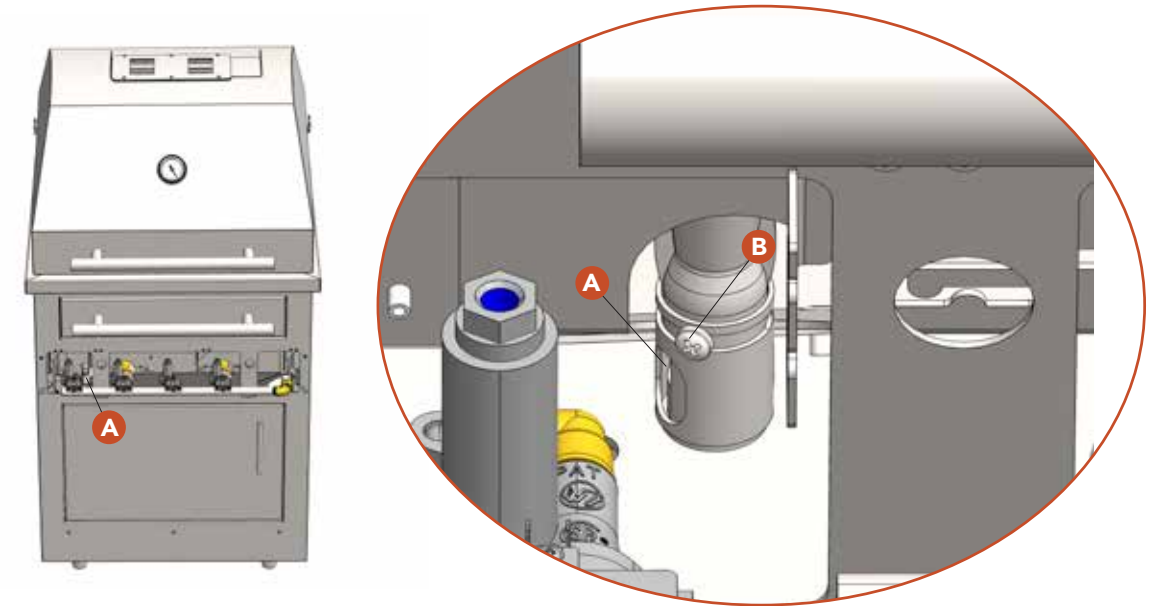


FIGURE 25

To Adjust the Ignition Burner Air Shutter:

The ignition burner air shutter (see Figure 26:A) is accessed within the base cabinet of the grill at the left-hand side or by removing the control panel (see previous section on adjusting the main burner air shutters for instructions on removing the control panel). Open the cabinet door and look inside up below the control panel to locate the ignition burner air shutter. The air shutter is factory adjusted and should rarely need any further adjustment. If you are experiencing yellow or orange flames rather than blue, it is possible the insect screen over the air shutter has become clogged. Check the screen before adjusting the opening.

FIGURE 26



Loosen the screw that secured the air shutter (see Figure 26:B). Use care not to remove the screw by loosening too far. Adjust the air shutter until the flames burn blue, are stable, and do not lift off the burner. Secure the air shutter in position by re-tightening the screw.

To Clean the Ignition Burner Air Shutter:

Gently brush away debris from the screen using an old toothbrush.

Rotisserie Burners and Cooktop Burners Do Not Require Any Air Mixture Adjustment



Cooking Tips

Cooking with Your Hybrid Fire Grill

IMPORTANT: Kalamazoo Hybrid Fire Grills are high-performance pieces of equipment that get very hot. Use caution when working with the grill and do not leave the grill unattended. Use insulated gloves with a long cuff to protect your hands and forearms from heat.

Essential Equipment

- Leather insulated gloves with long cuffs to protect your hands and forearms
- Stiff, dense stainless steel brush or a grate scraper for cleaning the cooking surfaces
- Long-handled grill tongs (18" long)

Other Helpful Accessories

- Cast iron skillets, dutch ovens, fajita pans and other cookware
- Thin and flexible turner for burgers and delicate fish fillets
- Silicon basing brushes
- Kalamazoo laser-cut custom grilling surfaces with patterns optimized for cooking meat, fish and vegetables

IMPORTANT: Before cooking, become familiar with all the information in this Use and Care Guide regarding safe operation of your grill.

Preheating

Always preheat the grill before beginning to cook. When cooking with gas, preheat the grill with the lid closed. Keep the lid open when starting a charcoal or wood fire.

- **Gas-fired Cooking:** Follow the lighting instructions on page 41. Light all main burners. CLOSE THE LID and open the lid vent half way. The thermometer should read above 500°F within 15 minutes. Turn off or adjust individual main burners as needed for the desired cooking temperature after the first 15 minutes have elapsed.
- **Charcoal-fired Cooking:** Place an even layer of charcoal in the Hybrid Fire Grilling Drawer or the area of the drawer where the charcoal fire is desired. Follow the lighting instructions on page 41. Light all main burners. LEAVE THE LID OPEN while the charcoal fire starts. Once the charcoal is burning at a sufficient level, you may turn off the main burners as desired. The charcoal fire will go through an intense heat cycle before it is ready to be used for cooking. Wait until the fire has subsided to an appropriate level before proceeding with cooking on the grill. Generally, charcoal grilling is done over coals that show little visible flame, but are glowing red underneath a layer of white ash.

Kalamazoo strongly recommends the use of natural, lump charcoal rather than briquettes.

- **Wood-fired Cooking:** Place a moderate amount of hard wood splits or chunks in the Hybrid Fire Grilling Drawer. Follow the lighting instructions on page 41. Light all main burners. LEAVE THE LID OPEN while the wood fire starts. Once the wood is burning at a sufficient level, you may turn off the main burners as desired. The wood fire will go through an intense heat cycle before it is ready to be used for cooking. Wait until the fire has subsided to an appropriate level before proceeding with cooking on the grill. Generally, wood grilling is done over a fire with a low and even flame that does not reach as high as the cooking surface.
- **Combination Fire Cooking:** You have a choice. You may extinguish the main burners to cook with a pure wood or charcoal fire, or you may leave the burners on to supplement the heat. When cooking over this combination fire, you should use less charcoal or wood than you would if the burners were turned off. This is one of the best features of the Kalamazoo. You can enjoy cooking with the dry heat of a charcoal fire while burning less charcoal by using the burners below to supplement and prolong the heat.

Temperature Range

Your Kalamazoo Hybrid Fire Grill is designed to support the full range of outdoor cooking techniques. Direct grilling, indirect cooking or roasting, intense searing and traditional American barbecue are all possible (see the following section on cooking techniques).

The temperature range of each grill will vary somewhat based on altitude, local gas supply and ambient temperature, but it should be reasonably close to the following performance guidelines.

- **Direct Grilling, Gas-Fired:** The main burners are capable of heating the grill to 700°F or greater. Remember, the cooking surface is hotter than the reading on the grill thermometer.
- **Indirect Cooking, Gas-Fired:** You can create indirect cooking zones at temperatures between 250°F and 500°F for slowly- or quickly-roasting foods by leaving at least one main burner turned off and adjusting the control valve on the remaining burners. It is recommended that you pre-heat the grill with all main burners on and the lid closed for 10 minutes before adjusting the grill for indirect cooking. It is also recommended that the indirect zone (the burner that is off) be the far-right or the far left of the main grilling area. You may also use the ignition burner as the source of indirect cooking heat.
- **Charcoal or Wood Fire:** Intense, searing heat in excess of 1,000°F can be created by a wood or charcoal fire. It is recommended that these temperatures be used in only a single zone of the grill and not for the entire cooking area. Temperatures as low as 200°F can be maintained with a charcoal fire. Add just a couple of briquettes at a time to the stable fire in order to maintain the heat at the desired level.

WARNING: The grill lid must remain open any time the lid thermometer is reading temperatures above 750°F.



Outdoor Cooking Techniques

Gas, Charcoal or Wood Cooking Which is best? This question cannot be answered easily, perhaps not at all. We can, however, describe the differences. A charcoal fire produces a drier heat than a gas fire (a gas flame produces more water vapor). Contrary to popular myth, a charcoal fire has very little flavor. Most of the flavor that was in the wood was burned out in the kiln used to produce the charcoal. It is the dry heat characteristic that helps create the desirable “crust” outside a perfectly cooked steak.

Grilling or roasting with a wood fire is our favorite way to cook. A wood fire can produce a drier heat, similar to a charcoal fire, but there is more flavor left in the fire. Similar to working with charcoal, you should not grill over a wood fire until the fire has settled down. The wood chunks should be somewhat ashed over and glowing red. A wood fire will not last as long in this state as a charcoal fire will.

A great way to get started cooking with wood is to try wood-fired rotisserie using an indirect wood fire built across the front of the Hybrid Fire Grilling Drawer. Read on for more information in the rotisserie section on page 55.

A gas fire offers more convenience than wood or charcoal cooking, and the food can indeed taste great, especially with the Hybrid Fire Grill. The whole experience is a little cleaner and a little less time consuming than using charcoal or wood.

Hybrid Cooking Kalamazoo Hybrid Fire Grills combine the best of all worlds — gas, charcoal *and* wood. These grills offer the convenience of a gas grill while still delivering the cooking experiences of a charcoal grill. Perhaps best of all, a hybrid grill consumes less charcoal or wood thanks to the ability of the gas burners to supplement the heat.

Direct Grilling The most common type of outdoor cooking, direct grilling, places the food on the grill grate *directly* above the fire. The food is cooked for a relatively short period of time, usually less than 20 minutes. The temperatures used typically range between 350° and 600°F, and the technique is generally appropriate for food that is less than 2 inches in thickness. Direct grilling is used for delicious steaks, fish fillets, burgers, chops, chicken breasts and vegetables.

How do you know what the temperature is at the grilling surface? The lid thermometer won't tell you (exactly), but there is a pretty reliable technique you can use: Place your open hand, palm-down, a few inches above the grill grate and count the number of seconds before the heat becomes too uncomfortable. For most people, pulling your hand away after about six seconds will equate to 400°F. Five

seconds is usually about 500°F, and the equivalent to four seconds is about 600°F.

Finally, a note on sticking food: First, make sure the grill grate is hot and clean; second, oil the food and not the grate; third, be patient. Most foods, especially fish, will release from the grate when it is time to flip. We prefer to use tongs for turning almost everything except burgers and some fish fillets. Lifting food away from the surface is often easier than scraping it off the surface with a turner.

Searing Searing is a type of direct grilling using more extreme heat. A grill must be able to reach at least 700°F for good searing. Searing is done quickly and is often followed by continued cooking at lower temperatures.

Indirect Grilling Indirect grilling places the food next to the fire rather than above the fire. This technique is used for larger foods with longer cooking times, typically more than 20 minutes. Turkeys, prime rib, whole chickens, racks of lamb and large chops are all ideal for roasting on the grill using the indirect grilling technique.

While roasting food, the grill lid should remain closed as much as possible, and you should be able to rely on the lid thermometer for accurate cooking temperature readings. Using wood smoke with roasting techniques is called “smoke roasting,” and this can add fabulous flavor. Read on for different options for adding smoke to your grilling.

Preheat the entire grill and then turn some of the burners off for the indirect zone before putting the food on the grill.

Using indirect heat in combination with searing or direct grilling is the best way to cook thick steaks and chops. Some people prefer to sear first, and then continue cooking in the indirect zone. Others prefer the “reverse sear.” In this technique, indirect heat is used to bring a steak or chop slowly up to an internal temperature that is close to the desired finishing temperature, then it is moved to a very hot part of the grill to sear.

Barbecue Barbecue sauce does not make barbecue. Low heat and long cooking times with the use of wood smoke are the key characteristics. Temperatures as low as 200°F are used for as long as 24 hours. The food is kept away from the fire by using the indirect grilling technique or even an offset fire box.

Barbecue techniques are best for meats that would otherwise be undesirable or a tough cut, such as beef brisket. The longer cooking times and lower temperatures will render the fat into the muscle to deliver more tender results. One hallmark of good barbecue is the “smoke



ring,” an outer pink layer that penetrates the meat as a result of the smoking process. Barbecued pork ribs should be penetrated all the way through. Pink ribs are not undercooked — actually, they are perfectly smoked.

The Hybrid Fire Grill is equipped with a barbecue burner that runs all the way across the front of the grill. This burner delivers 200°F to 250°F indirect temperatures inside the grill. Use it for steady, predictable heat. Optional pellet inserts can be used to generate smoke and flavor in conjunction with the gentle heat of the barbecue burner.

Spit Roasting or Rotisserie Food roasted on a spit bastes in its own juices. The only difference between roasting and rotisserie cooking is the use of the spinning spit. Rotisserie is generally done with indirect heat, next to the fire, but can be done directly above the fire.

One of the best tricks in the Hybrid Fire Grill’s arsenal is wood-fired rotisserie. First, remove all the grill grates and flip up the warming rack to make way for the rotisserie. Then place two splits of hardwood fire wood in valleys of the drawer. Light the main burner(s) below to start the wood fire, as well as the barbecue burner, which will help sustain heat during the cook. Once the wood is burning strongly enough that it will continue on its own, turn off the main burners. Use long tongs and protective gloves to relocate the burning wood across the front of the drawer (inside the grill). This situates the wood fire so that it will provide indirect heat to the food on the rotisserie spit. Leave the barbecue burner on to sustain the fire, and carefully put the food and spit into position. Start the motor.

If the flames from the wood fire are large, leave the lid open to cook with the radiant heat. When the fire dies down, close the lid to capture the smoke and maintain even heat. If the fire dies down too much, simply lay an additional wood split on top of the dying fire, or add a few wood chunks as needed.

Smoking Wood smoke flavor can be added to food cooked in your grill in a number of ways. When using smoke on a grill, keep the lid closed as much as possible and give the smoke time to permeate the food.

Pellets Optional pellet inserts are available that fit within the valleys of your Hybrid Fire Grilling Drawer. Fill the insert with pellets, and then start a fire at the front of the insert. Once the pellets are burning, blow out the fire as though you are blowing out a birthday candle. The pellets should slowly smolder from the front to the rear without bursting into flames again. This technique produces ample smoke without much heat. Use the pellets in conjunction with the barbecue burner.

Charcoal or Hybrid Fire Wet wood chips can be scattered over a charcoal fire once the coals are ashed over and ready for cooking. Smoke can be produced in this manner for both direct and indirect grilling techniques.

Foil Smoking Envelopes A convenient way to produce smoke for indirect grilling or smoke roasting is through the use of foil smoking envelopes. A layer of dry wood chips under a layer of wet wood chips is folded into a foil envelope and sealed. Holes are pierced with a fork to allow smoke to escape without providing so much oxygen that the wood bursts into flames.

Multiple smoking envelopes can be used for longer cooking sessions. Once an envelope is spent, simply replace it with another. Smoking envelopes can be placed directly on the grill grate, in your Hybrid Fire Grilling Drawer, or on a bed of ashed-over charcoal.

Cooking Pizzas The best way to cook pizza is on a high-quality pizza stone. Of course, you can cook pizza in a pizza oven, but you can also do it on the grill. Simply preheat the pizza stone in the indirect grilling zone of the grill for an hour, usually at a temperature of 500°F. Bake the pizza with the crust directly on the stone, with the lid closed, until done, about ten minutes.

To cook a pizza directly on the grill grate, place the rolled-out or tossed dough over the fire for direct grilling. After a minute or two, flip the crust with tongs and add the toppings on the grilled side, being sure not to overload the pizza. Close the grill lid and continue cooking until the toppings are melted



Optional pellet inserts turn your Hybrid Grill into a smoker.



Grilling Basics: Grilling Better

A few key skills make grilling more satisfying and successful. The following tips and tricks represent some of the best of what we have learned from cooking with fire over the years.

Whole Chicken More than rotisserie, “Beer Can” or other popular methods for cooking a whole chicken, we prefer to butterfly and roast it. Butterflying a chicken (also called spatchcock) lays the bird flat for quicker and more even cooking. A butterflied chicken can be cooked at higher temperatures, so you are able to more easily achieve a nice, crispy skin and perfectly cooked meat. Whether using a barbecue rub or simply brushing the bird with olive oil, this is our favorite way to prepare chicken. It takes about 35 minutes for a whole fryer laid directly on the grill grate in the indirect cooking zone at 500°F. Remove the bird when the juices from a prick in the thigh meat run clear or when an instant-read meat thermometer reads 165°F. (The USDA recommends 180°F. See page 99 for a complete Food Temperature Chart.)

To butterfly a chicken, use kitchen shears to cut out the backbone and discard it. Without cutting through the breast meat, snip the breast bone part way down the middle from the top. Open the chicken out flat with the skin-side-up. The thighs should point in toward the middle with the drumsticks pointing out the back. Tuck the wings up and under as shown in the photo at left.

Chicken Breasts The challenge with cooking a boneless chicken breast perfectly is the shape: thick at one end and pointed at the other. For even grilling, a “palliard,” which flattens the breast to a uniform thickness, will yield juicy and tender results throughout. Place the breast between two layers of heavy plastic (split open a zip-top freezer bag and place it between the layers) and then pound it to about 1/2-inch thick. Brush each breast with olive oil, sprinkle with salt and grill directly over a hot fire for a few minutes per side until cooked through but still juicy and tender.

Burgers First, try to select USDA Choice grade beef or better. Kalamazoo recommends 85/15 grass-fed ground beef for the best flavor. Chef Bobby Flay offers a tip to compensate for the way a juicy burger plumps up on the grill. By recessing the patty in the middle before cooking, the burger becomes flat when it plumps up. Just use your fingers to recess the middle of each patty a bit from both sides.

The next step in a perfect burger is to brush it with olive oil. This helps form the flavorful crust that is one of the hallmarks of a great burger. Grill the burgers directly over a medium-hot fire (about 450°F), turning only once, until it is cooked to the desired doneness. When cooking for larger parties, it can be a good idea to cook an extra, sacrificial burger. Break into this burger a couple of minutes before you expect the burgers to be cooked to medium to check your timing. Continue cooking to at least medium-well, an internal temperature of 160°F.

Skirt Steak Skirt steak should be cooked quickly over a hot fire to medium doneness — no more, no less. Squeeze a lime over the steak, then brush it with olive oil, sprinkle it with salt and toss it over a wood fire. When prepared properly, skirt steak is tender and full of flavor. After letting it rest a few minutes, slice skirt steak across the grain to compensate for its stringy character.

Filet Mignon, Ribeye or New York Strip Our favorite way to cook a thick steak (at least 1.5 inches) is to sear it directly over a hot charcoal fire and then move it to an indirect cooking zone, close the lid and let it coast up to temperature for 15 to 20 minutes. This creates a nicely browned exterior crust and a tender, juicy center. Lightly oil and salt the steaks before they hit the grill. The searing is done at about 900°F, and the indirect time is spent at about 500°F. Flip, turn and move the steaks every 5 minutes during the indirect cooking time.

Let the steaks rest for 10 minutes after coming off the grill before cutting into them.

Pork Chops Our favorite way to cook chops is super-thick and with the bone. A 3-inch-thick chop can be seared over direct heat for a minute or two and then get smoke-roasted for up to 30 minutes at 500°F. For the juiciest chops, try brining them before cooking. As with steaks, give chops a light brushing with olive oil and a little salt before they go onto the grill.



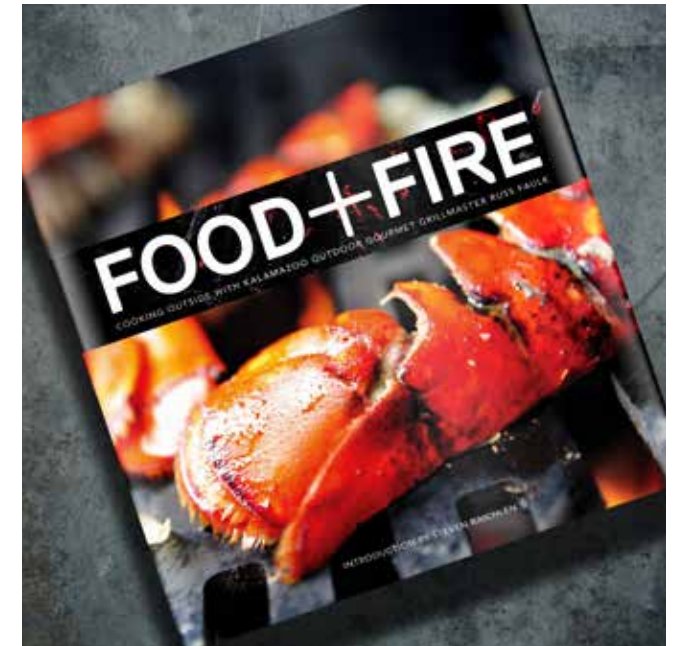
Salmon Salmon is one of the most popular fishes on the grill. We prefer fillets to steaks, so that is the cut we'll walk through. Squeeze a little lemon over the fillets, brush them with olive oil and sprinkle with salt. Cook them in the direct cooking zone at 500°F with the skin-side up. When the fish starts to draw up away from the surface at the edges and the skin is pulling flat across the top, it is time to turn them over. This usually takes 6 to 8 minutes. Continue cooking with the skin-side down until the fish flakes cleanly under gentle pressure. When done, you can slide the turner between the meat and the skin, removing the meat and leaving the skin behind on the grill to crisp up and serve separately to those who appreciate it.

Shrimp The secret to great grilled shrimp is great big shrimp. For the grill, the bigger the better. Devein the shrimp with a slit down the back that also partially butterflies the shrimp. Grill over medium-high direct heat, turning once, until the flesh down in the slit turns opaque. Remove from the grill immediately.

Asparagus or Green Beans Grilled green vegetables make a great side dish. The technique for grilling green beans and asparagus is the same, and the secret is to use a little lemon juice.

Prepare the grill for cooking over a direct fire with a grilling temperature of 500°F. A Kalamazoo Outdoor Gourmet laser-cut vegetable grill surface — sized so that the veggies won't fall down into the fire — is very helpful. Whisk together equal parts lemon juice and olive oil. Toss in the cleaned and trimmed asparagus or green beans to coat. Remove the vegetables from the oil and lemon mixture and put them in the direct grilling zone, being careful not to drop too much oil into the grill. Move them around on the grill until nicely marked, then remove them while still crisp. Season with a little salt and serve them quickly.

Pick up more tips, including cooking videos, online at KalamazooGourmet.com.



Food+Fire

Food+Fire is the Kalamazoo Outdoor Gourmet cookbook, featuring more than 170 recipes. Get your copy at KalamazooGourmet.com. All of the recipes in the next section were taken from Food+Fire.

"This is serious food, big-flavored food — alive with the primal flavors of smoke and fire. And this is a serious book designed to help you up your grill game and take your barbecue to the next level."

- Steven Raichlen



Recipes



Asparagus Wraps with Crispy Speck and Herbed Cheese

This appetizer tastes phenomenal and is super easy to prepare. Asparagus is one of our favorite vegetables to grill because the hot fire really enhances its flavor. The speck (similar to prosciutto but cured with smoke rather than salt) crisps up beautifully on the grill, making the perfect complement to the creamy, garlicky Boursin. A hint of lemon zest cuts through the richness of the cheese.

Serves 2 to 4

- 1 pound asparagus (about 30 medium-sized spears)
- 1 tablespoon freshly squeezed lemon juice
- 1 tablespoon Extra virgin olive oil
- Fine gray sea salt
- 5 ounces Boursin garlic herb cheese
- 1 teaspoon finely grated fresh lemon zest
- 10 slices speck (1 slice for every 3 asparagus spears)

Directions

Prepare the grill for direct grilling over medium-hot fire, about 400°F.

Trim the toughened bases off the asparagus spears and discard, leaving all spears a uniform length. Whisk together the lemon juice and olive oil in a medium-size bowl and toss in the asparagus to thoroughly coat. Season with salt. (Note, if you substitute prosciutto for speck, go very easy on the salt.)

Work together the Boursin cheese and lemon zest to thoroughly combine.

Lay out a slice of speck. Place 3 asparagus spears across one end of the slice and place a 1½ teaspoon-sized dollop of cheese mixture on the center of the asparagus. Roll the speck tightly around the bundle. Repeat, rolling 3 spears into each slice of speck.

Grill the wraps over direct heat, turning frequently, until the asparagus is marked and the speck is crispy. Serve hot.



Crab-Stuffed Mini Sweet Peppers

This easy-to-make grilled appetizer is sure to delight. Miniature peppers have a sweeter, fruitier taste than a bell pepper and take a delicious charred flavor when combined with the magic of a hot grill. These are stuffed with a simple but flavorful mixture of lump crab meat, fontina cheese, bread crumbs, lemon zest and parsley.

Serves 8

- 1 cup finely grated fontina cheese, about 4 ounces
- ½ cup finely grated Pecorino Romano cheese, about 2 ounces
- ½ cup sour cream
- 2 tablespoons chopped fresh parsley
- ½ cup panko bread crumbs
- ½ pound cooked jumbo lump crab meat
- ½ teaspoon fine sea salt
- 2 cloves garlic
- 2 lemons
- 16 mini sweet peppers

Directions

To make the crab filling, combine the grated cheeses, sour cream, parsley, panko, crab meat and salt in a bowl. Crush the garlic and finely grate the zest of one lemon into the bowl. Stir to combine.

Use a paring knife to cut off the end of each pepper and discard the stem. Use the handle of a small teaspoon to remove the ribs inside each pepper, taking care not to damage the fruit. Use your fingers to gently fill each pepper with crab filling.

Prepare the grill for direct grilling over a hot fire, about 500°F. I recommend a charcoal fire for extra flavor.

Cut the remaining lemon in half through the equator and grill with the cut-side facing down on the grill grate. Grill the stuffed peppers over the fire. Turn occasionally until the filling is heated through and the peppers are nicely marked, about 8 minutes.

Serve peppers hot on a platter with the grilled lemon halves. Squeeze lemon over the tops for a bright citrus finish.



Buttermilk Hot Wings

These wings take advantage of a buttermilk brine to yield tender and flavorful meat. The chile rub on the outside finishes the wings off with a perfect crust. The heat level on these would best be described as medium-hot.

Serves 4 to 6

4 pounds chicken wings, segmented and tips discarded

For the Buttermilk Brine

1 cup buttermilk

9 to 10 ounces hot sauce

¼ cup canola oil

¼ cup liquid smoke

2 tablespoons light-brown sugar

1 tablespoon kosher salt

Cloves from 1 head garlic, crushed

For the Blue Cheese Dressing

6 ounces crumbled blue cheese

⅓ cup sour cream

⅓ cup mayonnaise

1 tablespoon Dijon mustard

Zest of ½ lemon, finely grated

For the Chile Rub

1 dried pasilla chile, stem removed

1 teaspoon whole coriander seeds

1 teaspoon dried chopped garlic

1 tablespoon dried sliced onions

¼ teaspoon ground cayenne pepper

1 teaspoon kosher salt

For Garnish

1 handful flat-leaf parsley, chopped

Directions

Whisk together the brine ingredients in a large bowl. Add the wings, cover and refrigerate for 6 hours.

Prepare the blue cheese dressing by combining all the ingredients in a bowl. Cover and refrigerate for at least 2 hours or as long as 24.

Combine the rub ingredients in the bowl of a food processor or spice grinder. Grind them until a fine texture is achieved. (Using chopped and sliced dried garlic and onion and then grinding it immediately before use delivers more flavor than starting with granulated ingredients.)

Transfer the wings from the brine to a half-sheet pan. Shake off most of the brine while doing so, minimizing the liquid in the pan. Discard the brine. Sprinkle one side of the wings with half of the rub mixture. Turn the wings over and sprinkle the other side with the remainder. Let the wings rest at room temperature for about 20 minutes before grilling them.

Prepare the grill for direct grilling over a medium fire, about 350°F. A charcoal fire is preferred.

Transfer the wings to the grill grate. Grill them with the grill lid closed, turning a couple of times along the way, until cooked through to an internal temperature of 165°F. Total cooking time should be about 20 minutes.

Transfer the wings to a platter, sprinkle with chopped parsley and serve with the blue cheese dressing.



Smoky Bacon Mini-Quiches

Quiche on a grill? Absolutely! One of the best things about cooking on the Kalamazoo Hybrid Fire Grill is the even heat consistency for baking and roasting. You can bake quiches, custards and even cakes without difficulty — and you have the opportunity to add flavor with wood or charcoal. Shallow cast-iron muffin pans are perfect for baking these mini-quiches. The bacon is smoked for an extra-smoky flavor, but feel free to skip this step for convenience or a more subtle flavor.

Serves 12

8 slices smoked bacon

6 eggs

$\frac{3}{4}$ cup heavy cream

$\frac{1}{2}$ teaspoon salt

Butter for greasing the muffin pans

Cast-iron muffin pans for baking

4 pie crusts for 9-inch pies (I purchase pre-made Pillsbury crusts from the refrigerated section at the market)

2 green onions, green parts only, thinly sliced

$\frac{1}{2}$ pound white Cheddar cheese, grated

$\frac{1}{4}$ cup finely grated Parmigiano Reggiano

Directions

For twice-smoked bacon (optional), smoke the bacon at 300°F for 90 minutes. The end result should be fully cooked and somewhat “stiffened” without being crispy. If not smoking the bacon, cook it to similar doneness using whatever method desired. Chop the bacon and reserve.

Prepare the grill for baking with indirect heat at 350°F.

Beat together the eggs, cream and salt in a bowl.

Use butter to grease the inside of the cast-iron muffin pans.

Cut each large pie crust into smaller circles that are sized to fit the cups of your pans. Line the cups of the pans with the crusts, then place a little bacon, Cheddar and green onion into each cup. Distribute the egg mixture evenly among all the crusts, then top with the grated Parmesan.

Place the pans in the indirect zone, close the grill lid and bake until the internal temperature of each quiche reaches 165°F, about 40 minutes baking time. Rotate the pans halfway through cooking.



Roasted Sweet Potato and Poblano Tacos with Crispy Shallots and Cilantro Yogurt Sauce

These vegetarian tacos are a unanimous staff favorite here at Kalamazoo. The bright and tangy flavor of the sauce balances the mellow sweetness of the roasted sweet potatoes. Tender poblano offers an easygoing heat while crispy shallots deliver a welcome crunch. Together with a warm tortilla fresh off the grill, these ingredients make a perfect combination.

Yields 12 tacos

- 10 ounces plain Greek yogurt
- ½ ounce fresh cilantro, roughly chopped
- 2 cloves garlic, peeled and roughly chopped
- ½ ounce fresh lime juice
- Kosher salt
- 2 large shallots, peeled
- Canola oil
- 2 poblano chiles
- 4 sweet potatoes, peeled and cut into ½-inch sticks
- Extra virgin olive oil
- Freshly ground black pepper
- 12 soft white corn tortillas (or 24 if they are thin, because you'll want to double them up)

Directions

To make the Cilantro Yogurt Sauce, combine the yogurt, cilantro, garlic and lime juice in the bowl of a food processor. Add ½ teaspoon kosher salt. Process until smooth. Cover tightly and refrigerate until serving time.

Prepare the grill for direct grilling over a very hot fire, about 600°F, and an indirect zone with an air temperature between 350° and 400°F.

Thinly slice the shallots. (I suggest using a mandoline.)

Preheat a small cast-iron skillet on the direct zone of the grill. Fill with ½-inch of canola oil and bring the oil to a temperature of about 350°F. Add the sliced shallots to the hot oil. Fry, stirring occasionally, until golden brown. Remove fried shallots from the oil and dry them on paper towels. Reserve.

Roast the poblanos over the hottest part of the fire. Turn them occasionally until they are blackened all over. Transfer to a bowl and cover with a plate to lock in the steam.

Lightly coat the sweet potato sticks with olive oil. Season generously with salt and pepper. Place them in the indirect zone and close the grill lid. Roast the sweet potatoes until tender and browned, about 25 to 30 minutes. Turn them once or twice during this time for even browning.

While the sweet potatoes are roasting, scrape the blackened skins off of the poblanos and discard. Stem and seed the chiles, then dice the remaining flesh. Reserve.

After the sweet potatoes are done and off the grill, lightly grill the tortillas in the direct zone.

To serve, place 3 sweet potato sticks in each tortilla. Top with the sauce, then diced poblano and crispy shallots.



Kalamazoo Sliders

If you're looking for the most delicious burger you have ever tasted, then consider your search officially over. These sliders have all of the makings of a great burger: a perfectly grilled beef patty with just the right amount of browning, grilled red onion for sweetness and a lightly toasted pretzel bun. But what makes these sliders truly special is a triple cream blue brie from Germany called Cambozola. It melts to make a buttery sauce that elevates these sliders to the next level.

Serves 4

1 red onion, cut into 4 slices $\frac{3}{4}$ -inch thick

Extra virgin olive oil

Fine sea salt

4 pretzel rolls, about 3 inches in diameter

1 pound 85% lean grass-fed ground beef

4 ounces Cambozola Black Label cheese cut into 1-ounce chunks

4 cocktail skewers

24 paper napkins

Directions

Prepare the grill for direct grilling over a searing fire, about 700°F.

Oil both sides of each onion slice and season liberally with salt. Reserve.

Slice the pretzel rolls. Pour oil into the center of a dessert plate, then dip the cut sides of each roll into the oil for an even coating. Season the oiled side with a little salt. Reserve.

Form the ground beef into patties 1 inch larger in diameter than the rolls and about $\frac{3}{4}$ inch thick. Use care to work the ground beef as little as is necessary to maintain a desirable texture. Recess the centers of the patties so that, when the burgers plump up on the grill, they will turn out flat. The reason I form the patties 1 inch larger than the rolls is so that they do not become smaller than the rolls when they shrink on the grill.

Brush each patty on all sides with olive oil and season with salt. The olive oil will help form a nice crust on the outside of the patty.

Grill the onion slices until nearly black on each side and translucent and soft in the centers, about 10 minutes. Remove from the grill, break the slices down into rings and reserve.

Toast the rolls directly on the grill grate or on a warming rack until golden. Reserve.

Grill the beef patties for 3 to 4 minutes on the first side. When the juices begin to rise to the surface, it is time to flip. Flip the patties, then add a large ring of onion to the top of each patty, so it sits neatly in a circle. Add a small ring of onion inside the larger ring, also sitting neatly. Add the cheese on top of the onion. The cheese will melt into a creamy sauce, and the onions will help hold it on top of the burger. Close the grill lid to finish cooking, about 2 to 3 minutes more.

Gently remove the burgers when they are done and transfer directly onto the pretzel rolls. Skewer each burger to hold it together. Serve with at least 6 napkins per burger.



Blueberry and Pancetta Pork Chops

Pork and fruit are well-matched, especially pork and blueberries. These glorious chops blend smoky, sweet and savory flavors.

Serves 4

4 pork loin chops, preferably bone-in, about 1½ inches thick

Extra virgin olive oil

½ teaspoon smoked salt, plus more to season the chops

1 pint blueberries

½ cup pure maple syrup

6 ounces pancetta, cooked crisp and broken up

Directions

Preheat the grill for combination direct grilling over a searing fire, about 800°F, plus indirect grilling with an air temperature of 500°F. These pork chops use the “sear and slide” technique.

While the grill is heating, lightly brush the chops on all sides with olive oil and sprinkle with salt. Smoked salt will jump-start the smoky flavor and is good to use for this recipe even when grilling over a wood fire. Leave the chops sitting at room temperature while the grill is getting ready, up to 20 minutes. Wash the blueberries at this time.

Grill the pork chops over direct heat for about 1 minute per side and then transfer them to the indirect-cooking zone. Close the grill lid and roast the chops for about 20 minutes, turning once halfway through, until an instant-read meat thermometer measures 155°F when inserted away from the bone.

As soon as you have moved the chops to the indirect zone, combine the maple syrup, blueberries and 1/2 teaspoon smoked salt in a large skillet. (Although the ingredients would easily fit in a smaller pan, the broader bottom should help reduce the sauce more quickly.) Bring to a strong simmer over a cooktop burner on medium heat. Stir the sauce frequently and avoid a rapid boil. If bubbles begin to build on top of bubbles, lower the heat to avoid burning the sauce.

When cooked to 155°F internal temperature, remove the chops from the grill and transfer to plates. Let the chops rest 3 to 5 minutes. During this time, stir the cooked pancetta into the blueberry sauce. Top the chops with sauce to serve.



Chile and Morel Dusted Baby Back Ribs

Dried chiles and morels make for an earthy and complex barbecue rub on these baby back ribs. Smoked for five hours at 225°F, these ribs are tender, juicy and flavorful. You won't need any sauce for this recipe.

Serves 8

½ cup Chile Morel Barbecue Rub

4 racks baby back pork ribs

Oak wood pellets and optional pellet inserts for smoking

Directions

Prepare the Chile Morel Barbecue Rub.

Remove the silver skin membrane from the bony sides of the ribs. Generously rub the meaty sides with the rub. Refrigerate seasoned ribs for 1 to 2 hours.

Prepare the grill for 225°F smoking using the barbecue burner for heat and optional pellet inserts and oak pellets for smoke.

Transfer the ribs from the refrigerator to the grill.

Smoke the ribs for 4 hours, maintaining moderate wood smoke the entire time. Wrap each rack of ribs in aluminum foil and return to the grill for 1 more hour of cooking (5 hours total). This makes for juicier ribs.

The ribs are done when the meat is pulling away from the ends of the bones and tender. We prefer our ribs to be tender but still have a little "chew" to them. The goal is not to have them "falling off the bone."

Chile Morel Barbecue Rub

This rub combines the earthy flavor of dried morels with the complex heat of dried guajillo chiles. The extra effort required to grind your own ingredients is well worth it, as this produces a rub that is bursting with flavor. Chile Morel Barbecue Rub pairs wonderfully with pork and beef.

Yields about 1 cup

3 dried guajillo chiles, stemmed and seeded

1 dried chipotle grande chile, stemmed and seeded

1 ounce dried morel mushrooms

1 tablespoon minced dried garlic

¼ cup light-brown sugar

2 tablespoons kosher salt

1 tablespoon coarsely ground black pepper

Directions

Toast the guajillo chiles in a cast-iron skillet over medium heat. Coarsely chop. Combine the guajillo and chipotle chiles, mushrooms and garlic in a food processor, blender or spice mill. Process to a somewhat uniform texture. Transfer to a small bowl and mix in the sugar, salt and pepper.

Rub will keep refrigerated in an airtight container for up to one month.



Dry-Rubbed Hanger Steaks with Jalapeño Butter

Hanger steaks, or hanging tenders, are one of those “butchers’ cuts” — cuts that butchers usually reserve and take home for themselves. Hanger steaks are full of that rich beef flavor we love so much and are a perfect match for a hot charcoal fire. The dry rub in this recipe is full of garlic and black pepper. The fresh jalapeño butter melts into the beef upon serving, turning this relatively modest steak into something truly special.

Serves 4

4 hanger steaks, about ½ pound each
Extra virgin olive oil

For the jalapeño butter

8 tablespoons (1 stick) butter at room temperature

½ large jalapeño, stemmed, seeded and chopped

1 teaspoon coarsely ground black pepper

½ teaspoon kosher salt

For the dry rub

1 tablespoon dried chopped garlic, coarsely ground in a mill

1 tablespoon kosher salt

1 teaspoon ground sweet paprika

1 teaspoon coarsely ground black pepper

Directions

Prepare the jalapeño butter at least 1 hour or up to 1 day ahead of time. Combine the ingredients in the bowl of a food processor, then process until the jalapeño bits are quite fine. Transfer the mixture onto a sheet of plastic wrap. Form into a log shape and wrap tightly. Refrigerate until use.

Prepare the dry rub by mixing all of the ingredients together in a small bowl. Lightly coat the beef with olive oil, then season liberally with the dry rub on all sides. Use all of the rub. Let the steaks sit at room temperature while you prepare the grill.

Prepare the grill for direct grilling over very hot fire, about 650°F. A charcoal fire is preferred.

Place the steaks on the grill grate in the direct zone. Turn them after 2 to 3 minutes, or once the first side is nicely browned. Continue moving the steaks every 2 minutes until all sides are browned. Check the internal temperature after the first 6 to 8 minutes, depending on the heat of your fire. For the best flavor and texture, remove the steaks from the grill when the internal temperature reaches 125°F. Let rest for 3 to 5 minutes. To serve, slice across the grain and top with pats of jalapeño butter.



Rib Cap Steaks with Chimichurri

The meat from rib cap steaks is extremely flavorful, rich and tender. Because this cut is relatively thin, it can be grilled with direct heat the entire time. Rib cap steaks are also very forgiving in regards to the internal temperature. We like ours medium-rare, but can enjoy them all the way to medium-well because the meat is just that good.

Serves 4

For the chimichurri sauce

½ ounce fresh oregano leaves (roughly all of the leaves from a ¾-ounce packet of the fresh herbs)

1 small handful fresh parsley, about 1½ ounces

¾ cup Extra virgin olive oil

¼ cup sherry vinegar (I use BLiS #9 sherry vinegar)

2 cloves garlic, chopped

2 pinches ground cayenne pepper

½ teaspoon red pepper flakes

¼ teaspoon fine sea salt

For the steaks

4 rib cap steaks, about 10 ounces each

Extra virgin olive oil

Fine sea salt

Freshly ground black pepper

Directions

Prepare the chimichurri by combining all the ingredients in a blender. Blend until smooth, then adjust the taste with more salt if needed. Refrigerate until it's time to use it, but no more than 5 hours.

Remove the steaks from the refrigerator. Brush with olive oil and season liberally with salt and pepper.

Prepare the grill for direct grilling over a very hot fire, about 600°F. A charcoal fire is preferred.

Grill the steaks above the fire for roughly 9 minutes total, flipping once after about 5 minutes. For medium-rare steaks, remove them from the grill when the internal temperature reads 125°F. Let rest for 2 to 3 minutes before serving.

Rib cap steaks are best when sliced across the grain. You may wish to slice the steaks on the bias for your guests, fan them out and top with a drizzle of chimichurri sauce.



Hopped-Up Beer-Can Chicken with Mushrooms, Potatoes and Onions

Beer-can chicken is a favorite among many grilling enthusiasts. It yields beautifully browned, crispy skin and tender, juicy meat. The Hopped-Up Chicken Rub is a simple blend of hop salt, lemon pepper and turbinado sugar — a delicious mix of sweet and salty. This classic is taken a step further by roasting the chicken in a skillet over potatoes, onions and mushrooms. The drippings from the bird collect in the skillet, adding incredible flavor to the veggies.

Serves 6 to 8

For the hopped-up chicken rub

1 tablespoon hop salt (I use Rogue Rations Hop Salt)

1 tablespoon lemon pepper blend

1 tablespoon turbinado sugar

For the pot

1 whole fryer chicken, 3-4 pounds

Extra virgin olive oil

1 red onion

24 marble potatoes (variety of colors) cut in half

8 baby bella mushrooms, quartered

2 cloves garlic, peeled and smashed

1 can of beer (12-ounce)

¼ cup water

Directions

Rather than using a can of beer inside the chicken, I suggest using a beer-can chicken rack that has its own stainless-steel vessel to hold the beer. By not putting the can in the grill, you don't have to worry about the effect of any chemicals from the labeling.

Prepare the grill for indirect roasting at 400°F air temperature.

Combine the ingredients for the Hopped-Up Chicken Rub in a small bowl.

Rinse the chicken inside and out and pat dry. Brush with olive oil and season liberally with roughly $\frac{2}{3}$ of the chicken rub.

Cut the top off the red onion and remove the papery outer layers. Cut the onion into 8 wedges, leaving a portion of the root end at the end of each wedge to hold the layers together.

Toss the onion, potatoes, mushrooms and garlic with olive oil and season with the remaining chicken rub.

Place the beer-can chicken rack and vessel in the center of a cast-iron skillet. Pour half of the beer into the vessel and enjoy the other half. Place the chicken cavity over the rack and beer (legs down, wings up) and position the legs in a forward position. Arrange the potatoes, onion, mushrooms and garlic in the skillet around the chicken and pour in the water.

Place the skillet in the indirect zone of the grill and close the lid. Roast for 45 minutes to an hour, rotating the skillet once or twice for even cooking. Remove the skillet from the grill when an instant-read meat thermometer registers 165°F in the chicken's thigh.



Rotisserie-Smoked Turkey

An overnight brine helps create a more succulent and flavorful turkey. This brine is particularly flavorful, with hints of orange, cloves and cinnamon that really shine through. But the real key to elevating the flavor is smoke-roasting the turkey on the rotisserie.

Serves 10 to 12

For the brine

- 1 dried ancho chile
- 1 tablespoon whole cloves
- 1 cup kosher salt
- 1 cup brown sugar, packed
- Freshly grated zest of 2 oranges
- 1½ teaspoons ground allspice
- 1½ teaspoons ground cinnamon
- 1 tablespoon ground ginger
- 6 quarts ice-cold water plus
2 quarts to boil
- 2 turkey brining bags

For the bird

- 12 pound organic fresh turkey
- Butcher's string

Directions

Place the ancho chile and cloves in a blender or food processor and grind them together. Remove from the blender and place in a large pot along with the kosher salt, brown sugar, orange zest, allspice, cinnamon, ginger and 2 quarts of water. Bring to a boil over medium heat, whisking occasionally. Remove from heat and stir in 6 quarts of ice-cold water to cool the brine.

Remove the neck, giblets, trussing and any temperature probes from the turkey. Place one brining bag inside the other, then place the turkey inside the inner bag. Give the brining solution one last stir and pour it into the bag. Remove as much air as possible and seal the inner bag. Seal the outer bag for security. Refrigerate for 12 to 16 hours.

Remove the turkey from the brining solution and pat dry. Tie the legs of the turkey together with cotton butcher's string. Use 2 additional lengths of string to secure the thighs and the wings to the body so that they do not move around as the spit turns. Mount the turkey on the spit with the mass centered on the shaft as much as possible. Use pliers to tighten the forks so that they do not loosen while cooking.

Prepare the grill for rotisserie roasting with strong wood smoke and an air temperature of 300°F.

1. Remove the grill grates and flip the warming rack into the upward position, making room for the rotisserie spit.
2. Place 9 to 12 wood chunks or a pair of wood splits near the rear of the Hybrid Fire Grilling Drawer. Preheat the grill for 10 minutes with the lid closed, and all main burners, plus the ignition burner on high.
3. Carefully relocate the now smoldering wood across the front of the Hybrid Fire Grilling Drawer. Turn off the main burners, leaving the ignition burner on high.

Once setup is complete, install the turkey on the rotisserie. Place an aluminum roasting pan underneath the turkey to catch drippings, add 1 cup of water to the pan, and close the lid to begin cooking.

Add new wood chunks at the front of the drawer about every 20 minutes, or as often as needed to maintain temperature. (A K750 Hybrid Grill will hold a temperature of about 250°F using just the ignition burner. The additional heat from the smoldering wood will boost the temperature to the desired 300°F.)

Roast the turkey on the rotisserie, ensuring strong wood smoke and indirect heat. Cooking time should take 12 to 15 minutes per pound, about 2½ to 3 hours total. Remove the turkey from the grill when the internal temperature reaches 165°F. Let rest for 20 minutes before carving.



Rotisserie Bone-In Pork Loin with Espresso Garlic Rub

This recipe uses a simple rub that imparts a wonderfully earthy, flavorful crust as the meat bastes itself in its own juices on the rotisserie. Wood smoke from the grill adds complexity and depth to the flavor.

Serves 7

For the espresso garlic rub

- 3 tablespoons turbinado sugar
- 3 tablespoons kosher salt
- 1 tablespoon roasted garlic flakes
- 1 teaspoon dried minced onion
- 2 tablespoons ground espresso (I use Illy brand)

For the roast

- 7-bone, center-cut pork loin roast, about 5½ pounds (not Frenched)
- Wood chips or pellets for smoking

Directions

Combine the ingredients for the Espresso Garlic Rub in a small bowl.

Trim the fat on the outside of the roast down to a thickness of 1/8 to 1/4 inch. Use a knife to lightly score a crosshatch pattern through the remaining layer of fat on the outside of the meat. This helps render the fat more quickly and allows the flavor from the rub and smoke to penetrate the meat.

Liberally apply rub to all sides of the pork, taking time to massage it into the crevices.

Rest the roast at room temperature while you prepare the grill for rotisserie roasting at 400°F with a wood fire or with wood smoke.

1. Flip up the warming rack, making room for the rotisserie spit.
2. Prepare 3 foil smoking envelopes with wood chips or pellets (see page 55). Place 1 envelope in the Hybrid Fire Grilling Drawer above the main burner on the far left of the grill.
3. Fire up the ignition burner on HIGH and the left main burner below on MEDIUM. Preheat the grill with the lid closed until the lid thermometer reads 400°F. When you mount the roast on the rotisserie spit, mount it so that the roast will be on the right side of the grill (away from the active main burner) and the larger end of the roast faces to the left (toward the active burner).
4. Replace the smoking envelope every 30 minutes with a fresh one.

Mount the roast on the rotisserie spit, centering the mass of the meat on the axis of the spit as well as you can. Install the spit in the grill and roast the pork until the internal temperature reads 150°F, approximately 90 minutes cooking time. Remove the meat from the grill, leaving the rotisserie spit in the roast, and let it rest for 10 minutes. The temperature will continue to rise to the desired 160°F. Remove the spit and serve.



Grilled Zucchini Ribbons

Cooked al dente over a hot fire, zucchini is a fantastic side. It is our go-to summer vegetable to accompany grilled meats of any kind. In this impressive method, thin ribbons are lightly buttered, seasoned and then coiled up on skewers before being grilled over a hot charcoal fire. They look great and taste even better.

Serves 8

12 tablespoons butter (or Extra virgin olive oil)

2 cloves garlic

Freshly grated zest of 2 lemons

¼ teaspoon ground cayenne

8 zucchini squash

Fine gray sea salt

Freshly ground black pepper

½ cup chopped fresh parsley leaves

16 bamboo skewers, soaked in water

Directions

Prepare the grill for direct grilling over a hot fire, about 500° to 600°F. A charcoal fire is recommended.

Melt the butter in a saucepan over medium heat. Crush the garlic into the butter, then stir in the lemon zest and cayenne. Continue cooking until the garlic and lemon zest are browned. Remove from the heat.

Cut off and discard the stem ends of the zucchinis. Slice into thin ribbons about 2 millimeters thick. (I use a Kyocera ceramic mandoline to make this task easy.) Lay the zucchini ribbons flat on a baking sheet. Use a silicon brush to lightly brush a little of the butter mixture on the top sides of the ribbons only. Season with salt and pepper, then sprinkle on some parsley. I suggest proceeding with one squash at a time, working all the way through to coiling it on the skewers before slicing the next one. It is great to have a pair of helping hands working with you.

Working with one ribbon at a time, gently coil it into a loose 'W' shape and thread onto a pair of skewers. (I use pairs of skewers to lock the food orientation in place for grilling, as the zucchini is likely to spin on a single skewer.) Keep all of the ribbons on the skewer aligned so that the dark-green edges are always on the top and bottom.

Repeat this process for the remaining zucchinis to create 8 skewers.

Place the assembled skewers on the grill over the hot fire, with one side with the dark-green edges down. Grill until browned on the edges, then turn over so the other side with the dark green edges is down. Total grilling time should be 5 to 8 minutes to get the edges browned and the zucchinis heated through without cooking past al dente.



Smoke-Roasted Butternut Squash Casserole

Filled with butternut squash that has been smoke-roasted before joining the other ingredients, this dish is not only incredibly flavorful but also looks beautiful. With all that smoky goodness, plus bacon and cheese, how could it not be a hit?

Serves 6 to 8

3 pounds butternut squash, peeled, seeded and cubed

Extra virgin olive oil

Fine gray sea salt

Coarsely ground black pepper

1 pound bacon, cut into "batons" (thick sticks)

2 ounces shelled pine nuts

2 tablespoons unsalted butter, plus more to grease the skillet

1 red onion, diced

1 large garlic clove, chopped

3 eggs

1 cup buttermilk

8 ounces Campo de Montalban cheese (or Manchego), shredded

1 cup Italian parsley, chopped

2 cups croutons

10-inch cast-iron skillet

½ cup finely grated Pecorino Romano cheese

Flaky finishing salt, such as Maldon

Directions

Prepare the grill for roasting (indirect grilling) at 350°F air temperature with strong wood smoke.

Toss the squash pieces in 2 tablespoons of olive oil. Place in a single layer on a wire cooling rack and season liberally with salt and pepper. Place the rack in the indirect zone, close the grill lid, and roast for 45 to 60 minutes, rotating once halfway through the cooking time. Remove from the grill and reserve.

Cook the bacon to medium doneness. Drain and reserve.

Toast the pine nuts in a skillet over medium heat with a splash of olive oil and a pinch of salt until lightly browned, about 8 minutes. Reserve.

Melt the butter over medium heat in a large skillet. Add the onion and garlic, then sauté until translucent and tender, about 10 minutes. Reserve.

Beat the eggs in a large bowl. Whisk in buttermilk. Fold in the squash, bacon, onion, garlic, Campo de Montalban, parsley and croutons.

Grease a 10-inch cast-iron skillet. Transfer the mixture into the skillet and place the skillet in the indirect zone of the grill at the same 350°F used to roast the squash. You no longer need smoke, but it doesn't hurt. Roast for 40 minutes with the grill lid closed, turning once. Top with the Pecorino Romano, and roast 10 minutes more (with the grill lid closed again).

Finish with a sprinkling of flaky sea salt and serve hot.





Grill-Roasted Fingerling Fries

Roasted fingerling fries are a marvelous upgrade from the common French fry — even more so when cooked with a wood or charcoal fire. A touch of rosemary and garlic enhances the flavor of this healthier alternative, and the potatoes only require about 10 minutes to cook.

Serves 4

Leaves from 3 sprigs fresh rosemary, finely chopped

2 tablespoons Extra virgin olive oil

2 cloves garlic

10 to 12 fingerling potatoes — golden, red and purple

Fine sea salt

Freshly cracked black pepper

Directions

Combine the rosemary and olive oil in a small bowl. Crush the garlic into the oil. Reserve for 1 hour to let the flavors mingle.

Prepare the grill for roasting (indirect grilling) at 500° to 600°F air temperature.

Slice the potatoes in half lengthwise. For larger-bodied spuds, slice them lengthwise and then again into quarters to make all the pieces about the same size.

Toss the potatoes with the olive oil mixture. Season liberally with salt and pepper.

Place the potatoes in the indirect zone of the grill, skin-side down, close the lid and roast until browned and tender, about 10 minutes.

Remove from the grill and enjoy.



Blueberry Peach Crumble

This recipe was inspired by a technique Chef Sherry Yard uses to make a fruit dessert with a crumbled almond-cookie topping. Our recipe adopts her approach to avoid the need for any baking time — but with a different flavor profile. There is a hint of fresh ginger in the fruit and a touch of nutmeg in the sugar-cookie topping. This recipe is quick, easy and a perfect end for any summer barbecue.

Serves 6 to 8

1 pound soft sugar cookies, broken up

1 teaspoon fine sea salt

Freshly grated nutmeg, about ¼ teaspoon

¼ cup melted butter

½ cup blueberry juice

½ cup granulated sugar

1 tablespoon tapioca starch (or cornstarch)

1 teaspoon freshly grated ginger

Finely grated zest of 1 lemon

1 pint blueberries

3 peaches, pitted and thinly sliced

Vanilla ice cream, optional

Directions

Prepare the grill for direct-grilling over a hot fire, about 500°F with an indirect zone as well. (The indirect zone is optional if you don't have room for both.)

Place the cookies in a blender or food processor and pulse until they have become coarse crumbs. Transfer to a bowl. Stir in the salt, nutmeg and melted butter.

Combine the blueberry juice, sugar, tapioca starch, ginger and lemon zest in another bowl. Whisk to combine. Stir in the blueberries and peaches.

Pour the fruit mixture into a heavy, grill-safe 12-inch round pan. (You can use a cast-iron skillet or enameled cast-iron pan.) Top with the cookie crumble.

Place the pan over the hottest part of the fire. The fruit mixture should begin bubbling within 2 minutes. Once bubbling, close the grill lid and continue cooking for 3 minutes more. If the crumble has not browned, move the pan to the indirect zone, close the grill lid and cook for a few minutes more. The dish should need no more than 10 minutes cooking time.

Remove from the grill and serve warm with vanilla ice cream, if desired.

TIP: The keys to this dish being easily and quickly cooked on the grill are the pre-cooked cookies for the topping and the thin layer of the fruit mixture. It is important to use a 12-inch round pan or a rectangular pan sized such that there is a single layer of fruit and only a thin layer of cookie topping.



Bourbon Gingerbread Pudding

Gingerbread pudding is a perfect dessert for holiday meals, but it is so good you can enjoy it any time of the year. The wood smoke, molasses, candied ginger, bourbon and spices thoroughly infuse the brioche bread, creating an incredibly tasty dessert. A sweet bourbon sauce tops it off and really turns up the flavor.

Serves 8

For the pudding

Wood chips or pellets for smoking

2 large eggs

3 egg yolks

½ cup light-brown sugar

½ cup unsulphured molasses

¾ cup whole milk

¼ cup bourbon

3 cups half-and-half

1 tablespoon of vanilla extract or paste

¼ teaspoon ground cinnamon

½ teaspoon freshly grated nutmeg

¾ cup golden or green raisins

¼ cup finely chopped candied ginger

Unsalted butter to grease the skillet

18 ounces brioche loaf, cut into cubes

⅓ cup pecan halves

For the bourbon sauce

¼ cup (½ stick) unsalted butter

½ cup light-brown sugar

3 tablespoons heavy whipping cream

2 tablespoons bourbon

⅛ teaspoon fine gray sea salt

Directions

Prepare the grill for indirect cooking at 325°F air temperature, preferably with wood smoke. Pecan wood is an ideal choice. Wood smoking packets can be placed over the active burner.

Whisk the eggs and yolks together in a large mixing bowl. Whisk in the brown sugar and molasses. Next add the milk, bourbon, half-and-half, vanilla, cinnamon and nutmeg, whisking one last time to thoroughly combine. Stir in the raisins and candied ginger.

Coat a 12-inch cast-iron skillet with butter. Place the bread cubes in the skillet. Slowly and evenly pour in the egg mixture, making sure all of the bread is soaked. Top with carefully placed pecan halves.

Place the skillet on the grill in the indirect zone. Cook with the grill lid closed until the pudding's internal temperature reaches 170°F, about 45 minutes to 1 hour.

Remove the pudding from the grill and let cool for 10 minutes.

While the pudding is cooling, prepare the bourbon sauce. Melt the butter in a saucepan over medium heat. Whisk in the remaining ingredients. Simmer for 5 minutes. Remove from heat.

Drizzle the bourbon sauce over individual servings of the pudding.



Food Temperature Chart

Beef Steaks	Gourmet	USDA
Rare	120°F	140°F
Medium-rare	130°F	150°F
Medium	140°F	160°F
Medium-well	150°F	170°F
Beef Roasts	Gourmet	USDA
Rare	125°F	140°F
Medium-rare	135°F	150°F
Medium	145°F	160°F
Medium-well	160°F	170°F
Beef Burgers	Gourmet	USDA
	160°F	160°F +
Lamb Racks	Gourmet	USDA
Rare	125°F	140°F
Medium-rare	135°F	150°F
Medium	145°F	160°F
Medium-well	160°F	170°F
Lamb Chops	Gourmet	USDA
Rare	125°F	140°F
Medium-rare	135°F	150°F
Medium	145°F	160°F
Medium-well	160°F	170°F
Pork Chops	Gourmet	USDA
Medium-well	160°F	-----
Well done	180°F	170°F
Veal Chops	Gourmet	USDA
Medium-rare	135°F	-----
Medium	145°F	150°F
Medium-well	160°F	160°F
Whole Chicken	Gourmet	USDA
	170°F	180°F
Whole Turkey	Gourmet	USDA
	170°F	180°F

Doneness of meat should always be determined using an instant-read meat thermometer inserted in the thickest part of the meat and away from the bone.

While USDA temperature guidelines are valuable for food safety, we find them often overdone, especially on the grill. Many restaurants cook to temperatures aligned more with the "gourmet" column shown here. This requires close attention to safe food-handling guidelines.

Rolled Beef Roasts

As with ground meat, surface bacteria may get worked into the center of rolled beef roasts. Therefore, they should be cooked to an internal temperature of 160°F.

Fish

Fish is thoroughly cooked when it turns opaque and the meat flakes cleanly under firm pressure.

Shrimp and Lobster Tails

Shrimp and lobster are fully cooked when the flesh turns opaque.



Product Care

Caring for Your Hybrid Fire Grill

Your Kalamazoo Outdoor Gourmet grill is made from high-quality 304 (or 316L if you opted for marine-grade) stainless steel and engineered for durability. Simple care and cleaning will provide a lifetime of service...

Grilling Surfaces

Before each cooking session, after the grill has pre-heated, use a grate scraper or a grill brush with stiff stainless steel bristles to clean the grilling surface.

After each cooking session, run all of the main burners on high with the lid closed for 10 to 20 minutes before shutting it down. This will help burn away drippings and residue on the grilling surface and in the hopper.

ALWAYS use a stainless steel bristle brush or a brass or wooden grate scraper for cleaning your grilling surface. Do not use brushes or scrapers of other metals with the exception of brass. Brass grill brushes will not harm your grilling surface, but we find that stainless steel brushes last much longer and are a better investment.

NEVER use steel wool on your cooking surfaces. It will leave small amounts of mild steel behind, embedded into the grain of the stainless steel, and it will cause rust.

NEVER use chemicals to clean your grilling surface.

Special Instructions for Laser-cut Grilling Surfaces

Your laser-cut surfaces should be kept clean, dry and BLACK. Treat them as you would a cast iron skillet. The darker the finish, the better.

Before using your surfaces for the first time, they need to be seasoned with oil. Remove the cold surfaces from your grill and use a cloth rag to wipe vegetable oil over the entire surface of each. Place the surfaces back into the grill. Light the grill and run all main burners on HIGH for about 20 minutes. The goal is to turn the surfaces brown. The more you use your grill, the more thoroughly seasoned your surfaces will become. Ideally you want your surfaces to become black and remain that way. You can re-season your surfaces at any time. Re-seasoning may be necessary if your grill sits idle for long periods of time or you cook highly-acidic foods.

Exterior Cleaning

The most difficult part of cleaning your grill is removing the burnt-on food and grease. Start by using a citrus-based or organic degreaser to remove everything that isn't burnt on. Next, we recommend using powdered Bar Keepers Friend with a soft, microfiber towel. Be careful to follow the grain direction of the stainless steel to avoid scratches. With a little elbow grease, Bar Keepers Friend will remove most stains and discoloration. For real problem areas, a Scratch-B-Gone kit can be used to restore the factory finish. After these steps, rinse off all cleaners, wait for the grill to dry, and then apply stainless steel polish.

Saltwater Environments

Oceanfront environments with salt air and sea spray will require regular maintenance and cleaning to prevent rust. Clean stainless steel surfaces at least two times a month to keep the chemical reaction caused by the salt from gaining a foothold on your equipment. With regular cleaning, your equipment will look like new for a lifetime. To achieve maximum corrosion and stain resistance, the surface of the stainless steel must be kept clean. Should some rust spots occur, they can be easily removed with Bar Keepers Friend or a Scratch-B-Gone kit.

Interior Cleaning

It is a good idea to occasionally burn off residue in your grill. Run the grill with the main burners on high with the lid closed for at least 60 minutes. This will burn off accumulated residue and dry everything out. The more you use sauces or grill fatty foods, the more frequently you should do this burn cycle.

To remove ash on a regular basis, pull the Hybrid Fire Grilling Drawer open a couple of inches and

then shake it up and down to encourage any ash that has remained in the drawer to fall down into the hopper.

Occasionally, you will want to be more thorough in removing ash. We recommend that once a month you use a natural bristle painter's brush to sweep ash off all the interior surfaces of your grill. Wait until the grill is completely cool. Empty the cleanout pan before beginning. Remove the cooking surfaces, and then brush all the ash that may have remained in the Hybrid Fire Grilling Drawer down through the slots and into the hopper. Next, remove the drawer. Use the brush again to sweep all ash off the burners and any other surfaces down into the cleanout pan. Empty the cleanout pan again.

If you use wood in your grill, the inside of your lid is probably black. We recommend leaving it this way. However, you may choose to clean it once a year. If so, you will need to use Bar Keepers Friend (recommended) and a lot of elbow grease or a harsh oven cleaner (not recommended). If you choose to use oven cleaner: do not get it into the ceramic rotisserie burner; do not get it on igniters; do not get it on the electronics or wires; do not get it on the cooking surface; and do make sure you thoroughly rinse off all of the cleaner before cooking on your grill. Be careful when rinsing off the oven cleaner not to stain your patio. *Again, we strongly recommend the use of Bar Keepers Friend and discourage the use of oven cleaner.*

Main Burner Care

In addition to removing all the ash from the burners at least once per month as described above, the burners should be visually inspected and cleaned four times a year.

To access the burners, first make sure the grill is completely cooled. Ensure the grill control valves are in the OFF position and turn off the main gas supply. Remove the cooking surfaces and the Hybrid Fire Grilling Drawer. Release the burner (Figure 27:A) from the burner support brackets (Figure 27:B) by removing the retaining pins (Figure 27:C). Reach below the burner and remove the retaining pins by sliding them back to the rear. You can now lift the burner off the burner support brackets from the rear and then slide it backwards off the orifice (Figure 27:F).

Visually inspect each burner to confirm it is structurally sound and that none of the ports are clogged. Shine a flashlight through the end of the venturi (see Figure 20:E, Figure 27:E) to inspect for any blockage.

Carefully clean the burner using a brass brush. Clogged burner ports may be opened up with a #46 drill bit. Insert and twist the bit with your finger. Do not use a power drill. Do not use a toothpick or anything else that could break off inside the burner ports.

After cleaning the burners, reinstall them into the grill. Slide the venturi (Figure 27:E) through the hole in

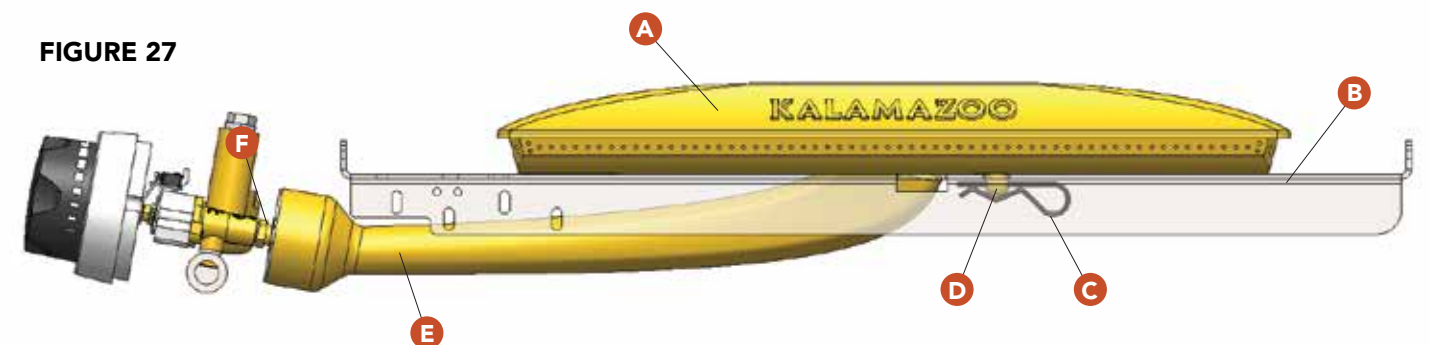


FIGURE 27

the interior grill box toward the front of the grill and seat the venturi opening over the orifice (Figure 27:F) mounted on the valve. Lower the burner onto the burner brackets (Figure 27:B) so that the posts (Figure 27:D) on the bottom of the burner drop through the corresponding holes in the burner brackets. You must make sure the opening at the front of the burner is centered over the brass orifice and securely engaged (Figure 23). Once you have confirmed this, you can reinsert the locking pins under the brackets to secure the burners (Figure 27:C), but you may choose not to so that future cleanings are easier.

Orifice Cleaning:

Clogged orifices create a dangerous condition that must be resolved before the grill may be used. If you are not entirely comfortable with the procedure, please use a qualified technician or contact Kalamazoo Outdoor Gourmet customer service at +1.800.868.1699.

To clean inspect the main burner orifices, remove the control panel according to the instructions beginning on page 47. Remove the main burners according to the instructions on page 103. Use a 1/2" wrench to carefully remove the orifices (Figure 28:A) from the valve bodies (Figure 28:B). Shine a flashlight through the orifice to look for any obstructions. Remove obstructions with a needle. Use extreme care not to enlarge the hole. Reinstall and tighten the orifice. Reinstall the burners according to the instructions on page 103. Test fire the burners and check for proper flame characteristics.

Emptying the Cleanout Bin:

WARNING: The cleanout bin gets extremely hot when the grill oven is operating. Empty the bin only when the grill and bin are completely cool.

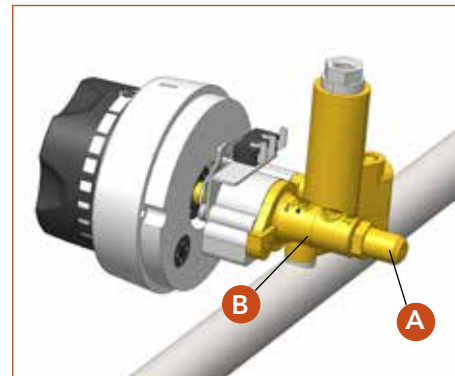
Empty the cleanout bin whenever it becomes more than 1/2 filled.

The tray sits on the floor of the cabinet below the grill and is located in the proper position by a series of pins.

To avoid collecting excessive rain water, keep the lid vent closed when the grill is not in use.

The cleanout bin is dishwasher safe.

FIGURE 28



Troubleshooting

The troubleshooting tips here are for general information only. The information may save you the trouble of a service call. If your grill requires service, contact Kalamazoo Outdoor Gourmet customer service at +1.800.868.1699.

Grill won't light:

- Does the hot surface igniter glow red when you press in and hold the control knob? Do you have the grill plugged in to an AC outlet?

If you are running off of AC power and any of the hot surface igniters are not glowing, call Kalamazoo Outdoor Gourmet customer service.

If the igniter glows, but the burner won't light, verify that it is an ignition problem and not a gas problem by manually lighting the burner (see page 42).

Grill won't get to temperature:

- If the grill does not get hot within 10 minutes of starting, check the flame height of the main burners. On HIGH, the flames on the main burners should be at least 1 inch long. If they are not, check the following:
 - LP cylinder has enough gas to deliver proper pressure. Refill the tank if necessary. In some situations in cold ambient temperatures, an LP cylinder will ice up, creating a drop in pressure. If this happens, turn off the tank and let it warm up before trying again. A full tank is less likely to ice up than a tank that is less than half full.
 - Main gas supply is fully on and not only partially opened.
 - Main burners are clean and in good working order (see page 103).
 - Orifices are clear and not clogged. A clogged orifice creates a dangerous situation. Do not use the grill until the issue has been resolved (see instructions on page 104).
- If the fuel has been switched from liquid propane gas to natural gas, part of the process to convert the oven includes larger orifices. It is not safe to burn natural gas with liquid propane orifices (neither is it safe to burn the other way around). If you suspect a conversion was done improperly, do not use the grill and contact Kalamazoo Outdoor Gourmet customer service at +1.800.868.1699.

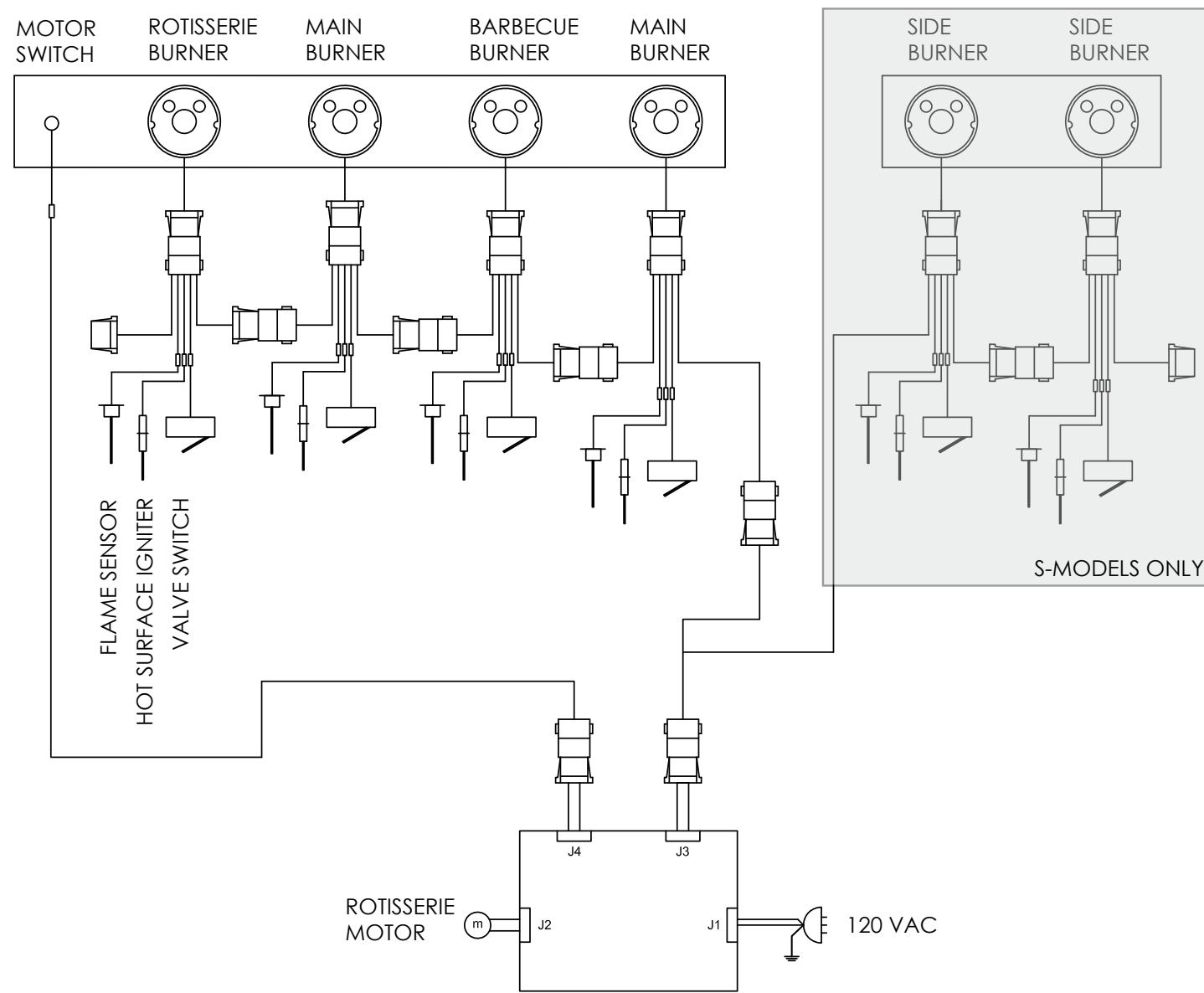
You smell gas:

- Turn off the grill immediately. Follow the leak check procedures on page 15. Contact Kalamazoo Outdoor Gourmet customer service at +1.800.868.1699 for assistance.

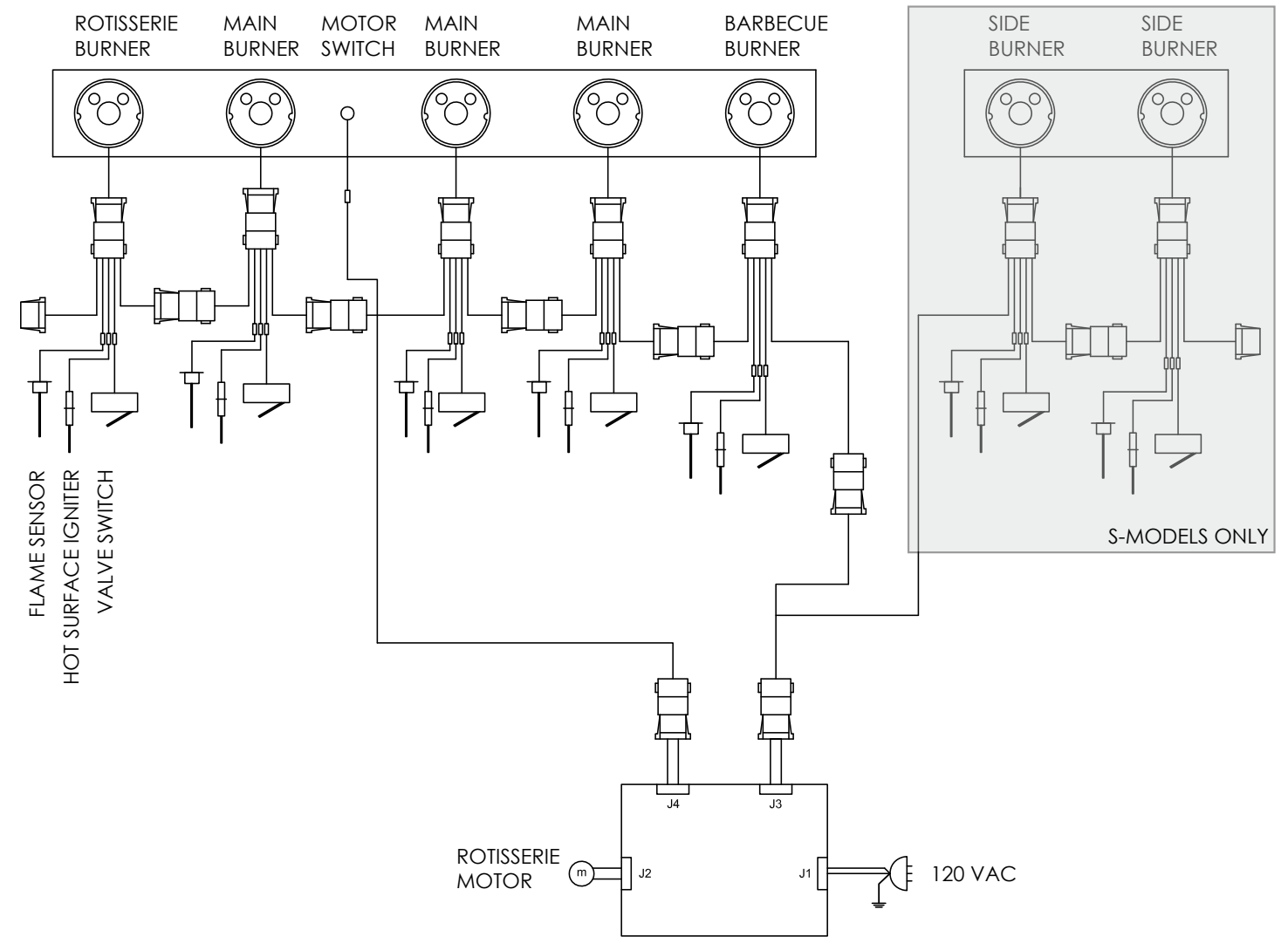


Electrical Diagrams

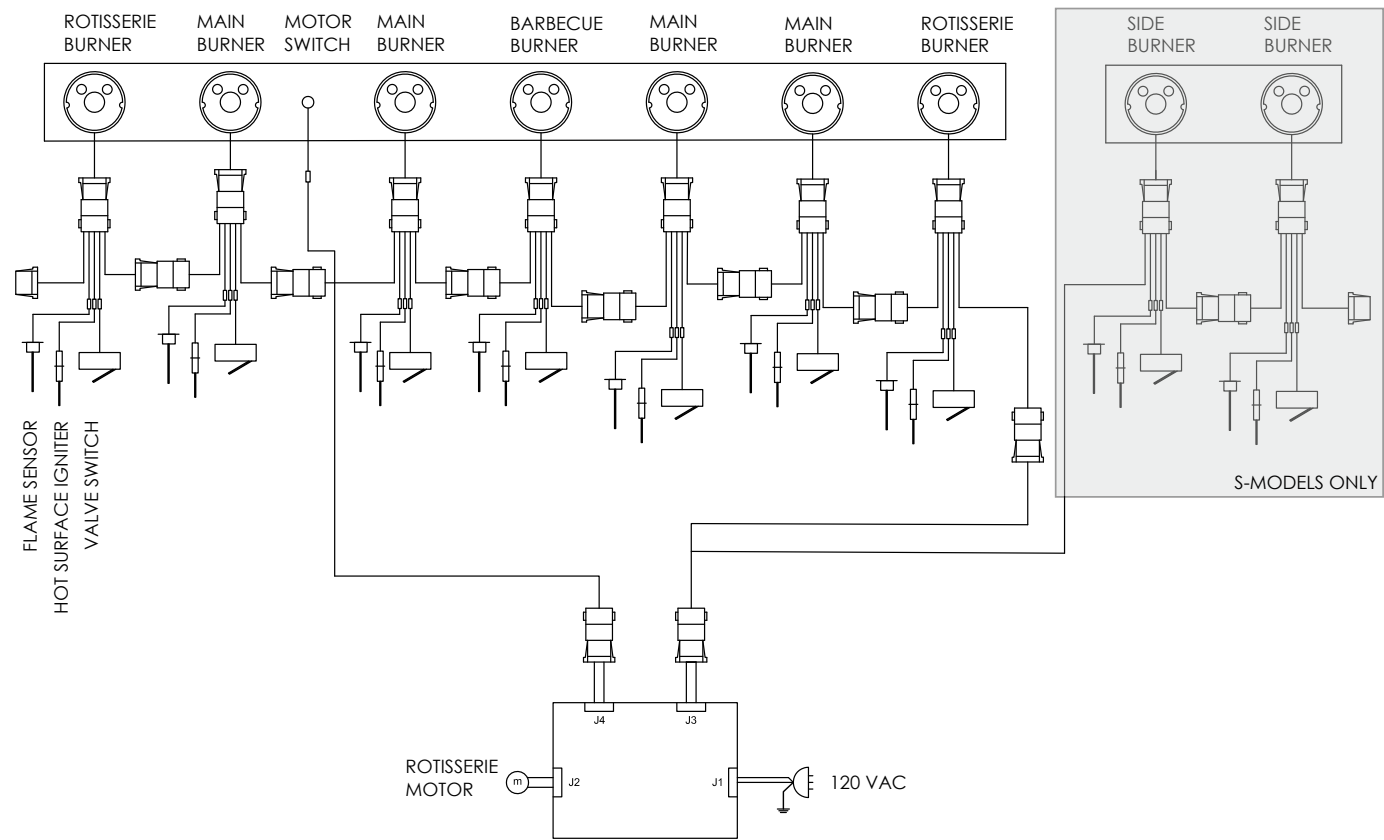
K500H Series Wiring Diagram



K750H Series Wiring Diagram



K1000H Series Wiring Diagram





Installation Checklist

Installation Checklist

Installer should initial next to each item:

- Specified clearances maintained.
- No overhead combustible structure.
- Strong wind is not expected from behind the grill, or a wind break wall has been built.
- Initial assembly completed — all tape and internal packaging removed (see Figure 6):
 - Ash pan installed
 - Control knobs installed
 - Warming rack installed (place in up position to allow rotisserie rod installation)
 - Rotisserie rod and forks installed
 - Hybrid Fire Grilling Drawer installed
 - Primary cooking grates installed
 - Cooktop burner diffuser caps installed (model-dependant)
 - Cooktop burner grate installed (model-dependant)
 - Cooktop cover installed (model-dependant)
- Grill connected to grounded, outdoor-rated extension cord and GFI circuit.
- Rotisserie and ignition burner hot surface igniters glow when rotisserie and ignition burner control knobs are held in.
- Control panel lights working.
- Rotisserie motor working.
- Each burner control valve low setting adjusted to minimum stable flame height.
- Barbecue burner lights within 4 to 5 seconds following lighting procedure.
- Main burners light within 4 to 5 seconds following lighting procedure.
- Rotisserie burner(s) light within 4 to 5 seconds following lighting procedure.
- Cooktop burners (model-dependant) light within 4 to 5 seconds following lighting procedure.

- External manual shut-off valve is installed and accessible.
- Homeowner informed of external shut-off valve location as well as shut-off valve inside grill (model-dependant).
- Unit and supply connections have been tested and are free of leaks:
 - LP cylinder connected to dual-stage regulator at 11" WC
 - OR
 - Bulk LP supply regulated to 11" WC
 - OR
 - Natural gas supply at 7" WC
- Lid opens and closes freely without binding or excessive noise.
- Leave this Use and Care Guide with the homeowner.

HOMEOWNER: Please ensure the installer completes the checklist, explaining each item to you. The installer should initial each item above and sign below.

Installer Signature

Date



Craftsmanship to a Higher Standard

We began our journey as Kalamazoo Sheet Metal more than a century ago. As a custom sheet metal fabrication shop, the family-owned company relied on its reputation for craftsmanship. Through the years, a focus on custom food and dairy processing equipment evolved. The “dairy standard” describes a flawless fit and finish level for stainless steel welding. Every seam has to be finished perfectly so that the equipment is easily cleaned and kept free from bacteria. Kalamazoo Sheet Metal excelled at this, but also served architectural firms and the pharmaceutical industry on a wide variety of projects.

The Birth of the Hybrid Fire Grill™ More than 15 years ago, the founder’s great grandson was running the business, but he wanted to do something more. And so he set out to design the world’s best grill. Leveraging the skills of the company’s stainless steel craftsmen and women as well as his own passionate creativity, the first Kalamazoo Hybrid Fire Grill was born. It did not follow the conventional industry template. A heavy-gauge welded frame offered lasting durability. Casters from industrial dumpsters gave warning of its ruggedness. A deep, hopper-like firebox improved the heat dynamics and made it easier to clean. And, above all, it was designed to combine the convenience of a gas grill with the superior cooking capabilities of a charcoal grill. The outcome was a gigantic departure from the previous expectations of stainless steel grill.

The Birth of a New Company These unique grills developed a passionate and loyal following over the next few years. The focus slowly shifted exclusively to outdoor cooking equipment, but it was still the same craftspeople putting their skills into every bend, weld and stroke of the hand-rubbed finish. The “dairy standard” was (and is) still alive and well.

Before long, we pioneered the first modular outdoor kitchens. The seamless rain gutter that keeps our outdoor kitchen cabinetry weather-tight is the same rain gutter we used to fabricate into the wash-down electrical enclosures on that dairy equipment.

Today, more than a century after our humble beginnings, we are the industry leader in outdoor kitchens. Every piece of Kalamazoo’s equipment is still built by hand with the same dedication to quality and craftsmanship. We build it to order, and we ship directly from our factory in Kalamazoo, Michigan to homes all over the globe. When each grill has been through the process of cutting, forming, welding, finishing, assembly and testing, it is signed by the people who made it with their own hands.



Kalamazoo Accessories

Food + Fire The indispensable Kalamazoo cookbook, of which Steven Raichlen says, "This is serious food, big-flavored food—alive with the primal flavors of smoke and fire. And this is a serious book designed to help you up your grill game and take your barbecue to the next level."



Grill Master's Essential Accessories Long-cuffed leather gloves and precision 16-inch tongs both protect your hands above a hot grill.

Steak Knives A beautiful, wood-fired steak deserves a beautiful steak knife. Treat yourself to Kalamazoo's stunning collection of knives.

All accessories can be ordered by calling +1.800.868.1699 or purchased online at KalamazooGourmet.com.



All specifications and other information contained in this Use and Care Guide are based on the latest product information available at the time of printing. Because Kalamazoo Outdoor Gourmet is always focused on product improvement, we reserve the right to make changes at any time. This includes all specifications of the product.

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KalamazooGourmet.com

Replacement parts can be ordered from Kalamazoo Outdoor Gourmet Customer Service. Email customerservice@kalamazoooutdoor.com or call +1.800.868.1699.



KALAMAZOO™