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# RCS ARG30 Owner's Manual

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**\* Installer: Leave this manual with the proud new owner \***

**Also be sure to check the grill box completely for ALL parts including the rotisserie spit rod (if applicable)**

# **Renaissance Cooking Systems**

## **Owner's Manual**



**Renaissance**  
Cooking Systems

For Outdoor Use Only

**America's Best Value in Outdoor Kitchen Equipment**

**Installation, Operation, Maintenance  
Instructions & Parts List**

**Models:**

**ARG30, ARG36, ARG42**

These grills are tested and certified to the ANSI-Z21.58/CSA 1.6 standards.

This owner's manual was updated September 1st, 2020

For the latest news, recipes and cooking tips for your new  
Renaissance Cooking Systems grill, check out [www.RCSGasGrills.com](http://www.RCSGasGrills.com)

### **CALIFORNIA PROPOSITION 65 WARNING**

The burning of gas cooking fuel generates some by-products which 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 unit according to the use and care manual, ensuring you provide good ventilation when cooking with gas.

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### **Message to the Proud Owner**

Congratulations on the purchase of this high quality, high performance grill.

Read this manual carefully to understand all the instructions about how to install, operate and maintain for optimum performance and longevity.

Keep this manual in a safe place for future reference.

For any assistance, contact us. Make sure to provide the Model Number and Serial Number of the grill which is located on the right hand side of the control panel.

Thank you for purchasing your new RCS grill. We wish you many years of grilling pleasure.

# Safety and Installation Instructions

## **⚠ WARNING**

To reduce the risk of fire, electric shock, or injury, read and follow these basic precautions before operating your gas grill or side burners.

### **GRILL INSTALLATION**

This gas grill must be installed in accordance with all local codes.

If installation is planned in an area with no local codes, the gas grill must be installed in accordance with the National Fuel Gas Code ANSI Z223.1 and storage and handling of liquefied petroleum gases, ANSI/NFPA 58 or CSA B149.1 natural gas and propane installation code.

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

**NOTE:** This appliance is not intended for commercial use.

### **FOR YOUR SAFETY**

1. If you smell gas:
2. Shut off gas to the appliance.
3. Extinguish any open flames.
4. Open lid.  
If odor continues, immediately call your gas supplier.

### **!!! WARNING !!!**

Read the "Lighting Instructions" in this manual, before lighting this appliance.

**NOTE:** The manufacturer cannot be held responsible for damage or injury cause by improper use of this appliance.

**NOTE:** Do not leave the unit under the sun with the protective film (where applicable) on for a long period of time as it will make the film difficult to remove and/or leave markings on the materials which are not covered by warranty.

## **FOR YOUR SAFETY**

1. Do Not store or use gasoline, caustic or other flammable vapors and liquids 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.

## **TESTED IN ACCORDANCE WITH ANSI STANDARD FOR OUTDOOR COOKING GAS APPLIANCES. THIS GRILL IS FOR OUTDOOR USE ONLY.**

Check your local building codes for the proper method of installation. In the absence of local codes, this unit should be installed in accordance with the National Fuel Gas Code No. Z223.1-CAN/CGA—B149.1, natural gas installation code or CAN/CGA—B149.2, propane installation code.

## **CALIFORNIA PROPOSITION 65- !!! WARNING !!!**

Some by-products which 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 this unit according to the use and care manual, ensuring you provide good ventilation when cooking with gas.

## **STATE OF MASSACHUSETTS !!! WARNING !!!**

Massachusetts requires all gas be installed using 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.

# ⚠ WARNING

## EXPLOSION HAZARD



Do not use the grill as storage area for flammable or caustic materials. Keep area clear and free from combustible, gasoline, swimming pool chemicals, and other flammable vapors and liquids. Failure to do so can result in death, explosion, or fire.

## Safety and Installation Instructions

### Location of your Barbecue

Most importantly, this is an outdoor appliance. Ensure your barbecue is positioned safely away from anything that can catch fire.

Under no circumstances is this barbecue to be used indoors. This includes garages or any other enclosed area.

**Clearance from Combustibles:** Ensure your barbecue remains at a distance of at least 24” from any combustible material such as wood, gyprock, paper and plants. Do not store combustible, caustic materials, gasoline or flammable liquids or vapors within 48” of the barbecue. Do not locate under unprotected combustible materials unless a properly-sized vent hood is included. Do not store ANY types of chemicals, gasoline, flammable liquids or vapor near the grill or any stainless components, cabinets, doors, drawers, etc.

**Wind Guard: WARNING!** Your RCS grill should NOT be installed with the back of the grill facing frequent, prevailing winds like a large body of water or open space unless there is a substantial back splash or some way of blocking the wind. In some rare occurrences, when there is a strong wind present, it can cause heat that is normally exhausted through the rear ports to be forced back into the grill and may cause overheating of the control panel and controls. Damage caused by this type of installation is not covered by warranty. If you are experiencing this problem, please contact us to order a wind guard which may or may not solve your problem but may be a possible alternative to changing the location of the grill if it has been installed with the rear of the grill facing the prevailing wind.

### Model/Part Number

RWGM - ARG30

RWGL - ARG36, ARG42

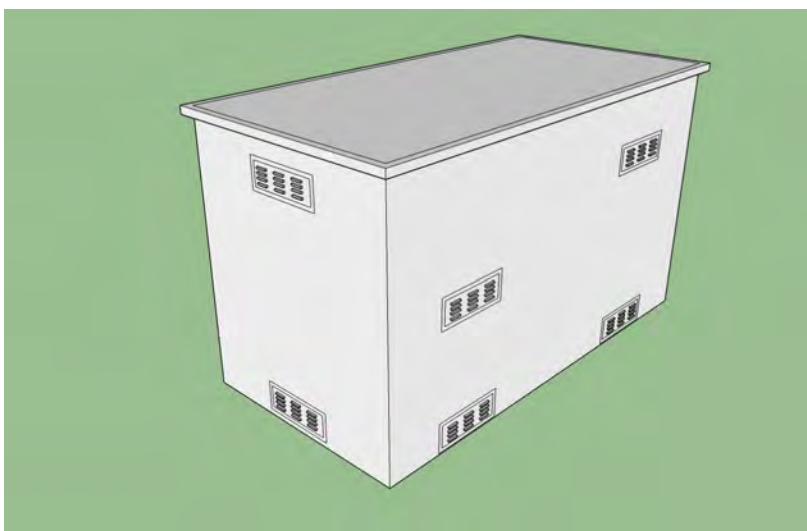


**BEFORE**



**AFTER**

**Adequate Ventilation:** Ensure there is adequate ventilation for both the barbecue, cylinder and all appliances located in this cabinet. Adequate ventilation is required for proper combustion and to prevent gas build up. Kitchen vents (RVNT1) are required every 4 feet to help ventilate and prevent dangerous gas build up, remove excess heat, add air to help with air/fuel mix for the grills and allows moisture/ condensation to evaporate. When using an exhaust hood, the area above the cooking surface of the grill must be covered with a hood larger than the cooking area of the grill, AND with a minimum of 1200 CFM (cubic feet per minute) for proper outdoor application.



**Firm Level Surface:** Use your barbecue only on a firm level surface. This barbecue is not designed for recreational vehicles, and shall not be installed on a boat or any marine craft.

**Protection from Weather:** Keep the barbecue protected from adverse weather, including rain and high winds. Grill and side burner covers are available that have been specially designed for this range of barbecues. Allow clear access to the entire gas supply, hose and regulator.

**Maintenance Access:** When your barbecue is installed, you should be able to access the gas supply line including the gas piping or hose, gas regulator, gas cylinder and any shut off valves. Do not grout or add silicon-in the barbecue grill.

**Partial Enclosures:** Many backyards have areas that are partially closed off, such as balconies and pergolas. In some cases, it is hard to decide whether these partially enclosed areas should be classified as indoor areas, particularly in terms of permanent (non-closable) ventilation.

## **WARNING**

This unit is for outdoor use only! Do not operate in a building, garage or an other enclosed areas. This could result in carbon monoxide buildup which could result in injury or death.

## **FOR YOUR SAFETY**

1. Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
2. Do not store any propane/butane (G31-G30) cylinder (that is not connected for use) in the vicinity of this or any other appliance.

## Safety Rules

- It is important to follow these rules to avoid fire hazard, property damage or bodily injury from improper installation or usage of the grill. For safety, READ all rules carefully and check local codes.
- It is prohibited to install the grill in recreational vehicles/mobile homes, trailers, boats, etc. The grill is for outdoor installation and use only.
- Ensure proper installation by following the installation instructions. Make sure to know where the gas supply shut-off valve is located. It should always be readily and easily accessible.
- Check all gas line joints & connections for gas leak with soap water solution. Never check gas leak with an open flame.
- Do not attempt to repair or replace any part of the grill unless specifically recommended in this manual. All other services should be performed by a qualified service technician.
- Do not place clothing or other flammable material on or near the appliance. Do not wear loose-fitting clothes or long sleeves while using the grill as some fabrics may be highly flammable.
- Children should be carefully supervised when they are in the vicinity of the grill. Do not allow them to get close to the grill while in use. Items of interest to children should not be stored in or around the grill in the cabinet or in the masonry enclosure. Portions of the grill can be extremely hot while in use and can cause severe burns.
- Protect your hand with a glove or mitt when opening and operating the grill. Open grill lid slowly to allow heat and smoke to escape before fully opening.
- Never use aluminum foil to line the crumb pan or grill racks. This can alter airflow for proper combustion and also build up heat in the control area causing the knobs and igniters to melt and void your grill warranty.
- Grease is highly flammable. Allow hot grease to cool down before attempting to handle it. Clean grease tray often so that grease does not accumulate and stay in it which may cause a fire.
- Do not operate the grill in a windy area. For windy areas we recommend the RCS Wind Guard. (see page 13)
- Do not obstruct the flow of air into the front of the grill or any vent areas.
- The grill should be installed facing towards the prevailing winds to help eliminate drafts from behind which can heat up and damage the control panel, controls, electronics, and voids warranty. We have wind guards available to help protect against the wind. (see page 5)
- Always keep your grill CLEAN of grease to prevent dangerous grease fires.
- **Have an ABC extinguisher accessible at all times. Never attempt to extinguish a grease fire with water or other liquids.**

# First Time Operation

Your RCS Appliance comes per-assembled and requires very little setup. We do however; recommend the use of professional help during the installation of your unit as improper installation may affect your warranty. Remove the unit from the box along with all accessories and check that no damage has occurred to the unit or any parts. Remove all packaging materials, labels and protective plastic film before you start cooking. Burners: Check the burner tubes and remove any obstructions that may be in the ports or holes. Make sure all foreign particles are removed from the burner before use. Make sure the air shutter on the burners is slightly opened (to about 1/8" for NG and 1/4" for LP) where applicable. When finished ensure that the burners are aligned with the valve orifice and seated in the bracket slot. This is accomplished by first placing the burner tube shutter hole securely over the valve orifice and ensuring the male post on the grill chassis rests in the corresponding slot in the rear of the burner. Failure to do so could result in a fire and injury.

## MAIN BURNERS:

Before cooking with your grill the first time, burn off any foreign matter and rid the unit of any odors by operating the unit for about 20 minutes with all lower burners on high.

The flame should have a bluish color to it. It may have a tint of yellow and adjustment to the air shutters can be made to obtain a blue flame with a slight yellow tip.

Although the grill can be operated with the hood closed, do not continually operate the rotisserie burner with the hood closed. This will damage the grill and void the warranty. Be sure to remove the upper rack when operating this rotisserie burner, where applicable.

The grill should be preheated with the main burners on HIGH for 15 minutes with the hood closed. If you have an optional infrared burner, the grill lid must remain open while the optional infrared burner is in use.

## Temperature Settings

- Use HIGH burner setting for searing, heavy cooking, preheat and clean up.
- Use other burner settings to create temperatures to fit your personal cooking preferences.
- Internal temperatures may vary with outside temperature and wind conditions.

Remember- your heat indicator is just that, an INDICATOR not an actual thermometer. ALSO-the temperature at the cooking surface is significantly higher than what the heat indicator shows in the lid. Your RCS grill has been designed and manufactured to provide optimum cooking temperatures across a wide range of foods, without "cooking itself to death!"

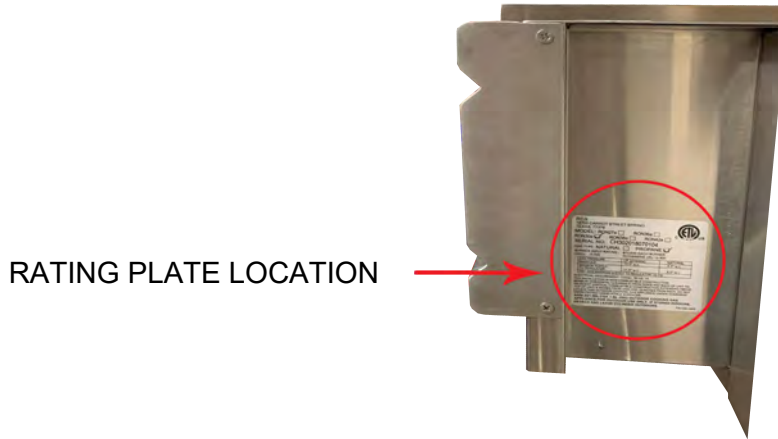
You can cook poultry and larger cuts of meat slowly if you turn OFF the burner directly under the food and use adjacent burners to supply heat (convection cooking or Indirect Cooking). When cooking fattier foods, cooking with indirect heat also greatly reduces flare-ups.

Fats and juices that drip down can cause flare-ups. Since some flare-ups do impart a distinctive and desirable flavor, taste and color to foods being grilled, they should be carefully and reasonably encouraged. Uncontrolled or excessive flare-ups, however, will ruin your food. DO NOT USE ALUMINUM FOIL FOR GREASE ISSUES.

# Gas Connections

Check gas type – use only the type of gas indicated in the rating plate.

-The rating label is located on the left or right hand outside of the unit.




**DO NOT** connect high pressure gas to this grill. This grill uses low pressure 1/2" psi to operate. You **MUST** use the regulator(s) that are available from RCS. An intermediate (step-down) regulator may be necessary. Check with your gas supplier if you are not sure.

Safe and satisfactory operation depends to a great extent on the proper installation of the appliance. The installation must comply with the local codes, or in the absence of local codes, with either the National Fuel Gas Code, ANSI Z223.1 or CAN/CGA – B149.1 or 149.2.

Installer supplied manual gas shut-off valves must be installed in an easily accessible location in the gas supply line ahead of the pressure regulator (4"W.C.).

The outdoor cooking gas appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressures in excess of 1/2 Psi (3.5kPa). Over-pressure will cause the valves to fail and void the warranty!

The supply line must be sized and installed to provide a sufficient supply of gas to meet the maximum demand of the grill without undue loss of pressure. The sealant used on the threaded joints of the gas pipe must be a type resistant to the action of LP gases.

|  |                          |   |
|--|--------------------------|---|
| <b>SAFETY !</b>  | <b>BEWARE OF SPIDERS</b> |  |
| <b>CAUTION: BURNER TUBES MUST BE INSPECTED AND CLEANED BEFORE FIRST USE.</b>   |                          |   |
| Spiders and small insects occasionally spin webs or make nests in the burner tubes during warehousing and transit. These webs can lead to a gas flow obstruction, which could result in a fire in and around the burner tubes. This type of fire is known as "FLASH-BACK" and can cause serious damage to your grill and create an unsafe operating condition for the user. Although an obstructed burner tube is not the only cause of "FLASH BACK" it is the most common cause, and frequent inspection and cleaning of the burner tubes is necessary. |                          |   |



To connect, insert the regulator inlet into the tank valve and turn the black coupler clockwise until the coupler tightens up. **DO NOT OVER TIGHTEN THE COUPLER.**

After completion of assembly, make sure all appliance control valves are OFF then turn the propane tank supply valve on and then turn the control valves on the grill to the 'HI/IGN' position for approximately 5 seconds to purge the line of air out of the gas line. After 5 seconds, you may turn on the other burners.

Inspect the gas hose before each use of the appliance. If it is evident there is abrasion or wear, or the gas hose is cut, it must be replaced prior to the appliance being put into operation. The replacement gas hose assembly shall be that specified by the manufacturer.

To disconnect the propane tank from the appliance, turn the tank valve off. Hold the coupler sleeve and turn counter clockwise. The inlet line will be disengaged.

If the appliance is not in use, the gas must be turned off at the supply cylinder. Propane cylinders must be stored outdoors out the reach of children and must not be stored in a building, garage or any other enclosed area.

A dented, rusty, outdated or damaged propane cylinder must be replaced immediately.

**Check for leaks with a soapy water solution every time the cylinder is replaced or reconnected. All leaks must be corrected immediately.**

**NEVER USE AN OPEN FLAME TO CHECK FOR LEAKS. ALL GAS CONNECTION POINTS SHOULD BE TESTED FOR LEAKS AFTER INSTALLATION PRIOR TO FIRST USE OF THE GAS APPLIANCE(S).**

Before installing an appliance in any outdoor kitchen, make sure that the cut out opening is not larger than the outside frame of the appliance unit. The appliance should rest on the lip of the frame. (See cut out recommendations on page 14).

Pay careful attention to the location of the gas line. It should be routed away from sources of heat, sharp edges, and aggressive surfaces and should make as few bends as possible.

Ensure the gas line connection will be accessible when the appliance is installed. A safety shutoff valve is required at this gas connection point. Before installing the grill into the outdoor kitchen, the main burner cotter pins (where applicable) may be removed for convenience of service, adjustments, and maintenance in the future.

### **LP Tank Requirements:**

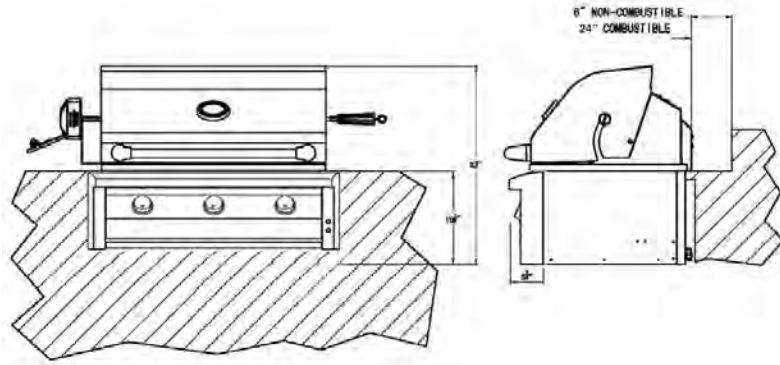
The L.P. gas cylinder must be constructed and marked in accordance with the specifications for L.P. gas cylinders of the U.S. Department of Transportation (DOT) and designed for use with a QCC-1 quick disconnect system only.

The cylinder must be provided with a shut-off valve terminating in an L.P. gas supply cylinder valve outlet specified, as applicable, for connection Number QCC-1.

The cylinder must be provided with a listed overfilling prevention device. The pressure regulator must be used. Replacement of pressure regulators and hose assemblies can be purchased from authorized dealers.

The cylinder supply system must be arranged for vapor withdrawal. Make sure the LP cylinder has a collar to protect the cylinder valve. Do not store a spare LP gas cylinder under or near this appliance. Never fill the cylinder beyond 80 percent full.

## Installation Location for All Models



Choose a location where the flow of air on the front or rear of the grill is not obstructed.

Due to high temperatures, place the grill out of traffic and keep away from clothing, furniture, or any combustible materials. Keep the gas line connection as short as possible. Do not install in recreational vehicles/mobile homes, trailers, boats, etc.

A minimum of five(5) foot clearance is required between the counter top and the overhead non-combustible construction. When installed under combustible overhead construction, the area above the cooking surface of the grill must be covered with an appropriately-sized exhaust hood with a minimum of 1200 CFM and designed for outdoor use.

### Clearances

#### Combustible Construction

Minimum horizontal clearance from sides and back of the unit to adjacent vertical combustible construction extending above top of unit, 24 inches from the sides and back. Do not locate under any overhead combustible construction unless a properly-sized exhaust hood is installed. If island frame construction is built out of a combustible material, you must use an insulated liner jacket from RCS.

#### Non-Combustible Construction

Sides of the grill can be 0" from **non-combustible** wall, below the cooking surface.

**Wind Guard:** **WARNING!** Your RCS grill should NOT be installed with the back of the grill facing frequent, prevailing winds like a large body of water or open space unless there is a substantial back splash or some way of blocking the wind. In some rare occurrences, when there is a strong wind present, it can cause heat that is normally exhausted through the rear ports to be forced back into the grill and may cause overheating of the control panel and controls. Damage caused by this type of installation is not covered by warranty. If you are experiencing this problem, please contact RCS to order a wind guard which may or may not solve your problem but may be a possible alternative to changing the location of the grill if it has been installed with the rear of the grill facing the prevailing winds.

Model/Part Number

RWGM - ARG30



BEFORE

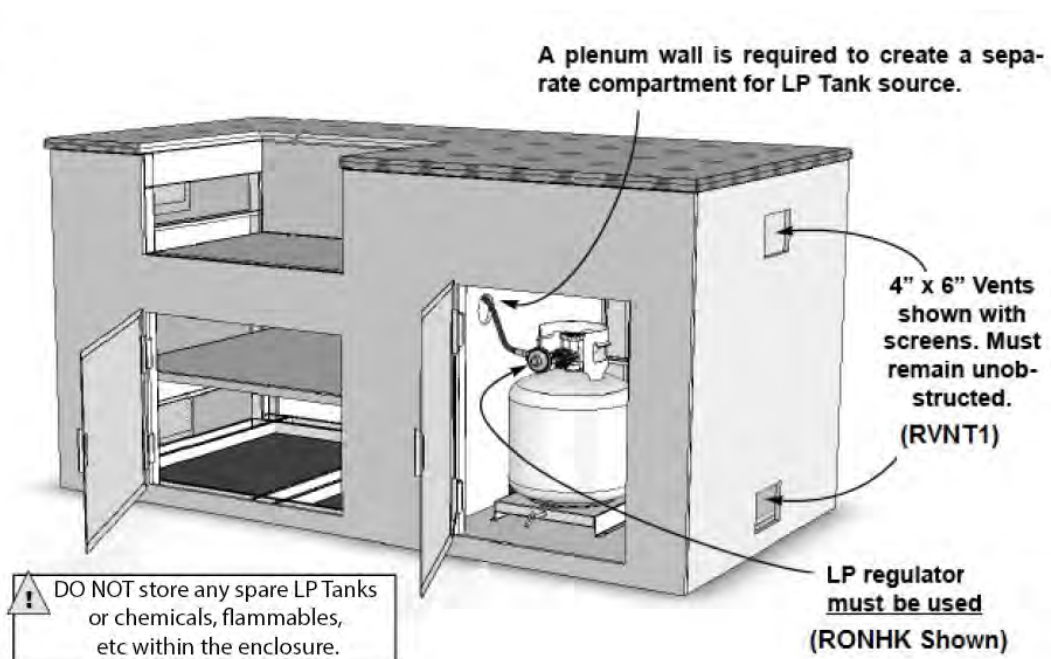
RWGL - ARG36,ARG42

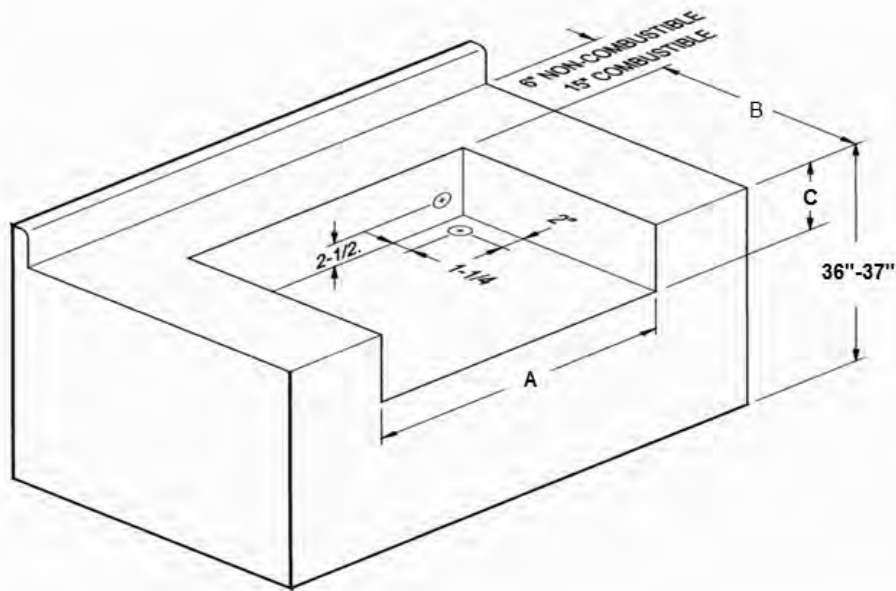


AFTER

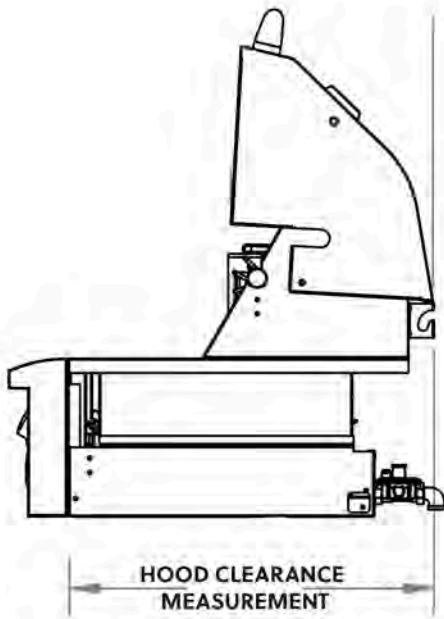
Built-in Installation

For non-combustible cabinet enclosure installation only. Follow the cut-out dimensions as shown. **ALL outdoor kitchen cabinets MUST include ventilation.** There must be 12 square inches of opening for each (running) 4 feet of counter top. See Item # RVNT1 for approved vents. In the event of an installation in a combustible (wooden) cabinet, you must use an insulated jacket available from RCS.





| Model | "A" Width | "B" Depth | "C" Height |
|-------|-----------|-----------|------------|
| ARG30 | 28 5/8"   | 23 1/4"   | 10 3/16"   |
| ARG36 | 34 5/8"   | 23 1/4"   | 10 3/16"   |
| ARG42 | 40 5/8"   | 23 1/4"   | 10 3/16"   |



### REAR HOOD CLEARANCE

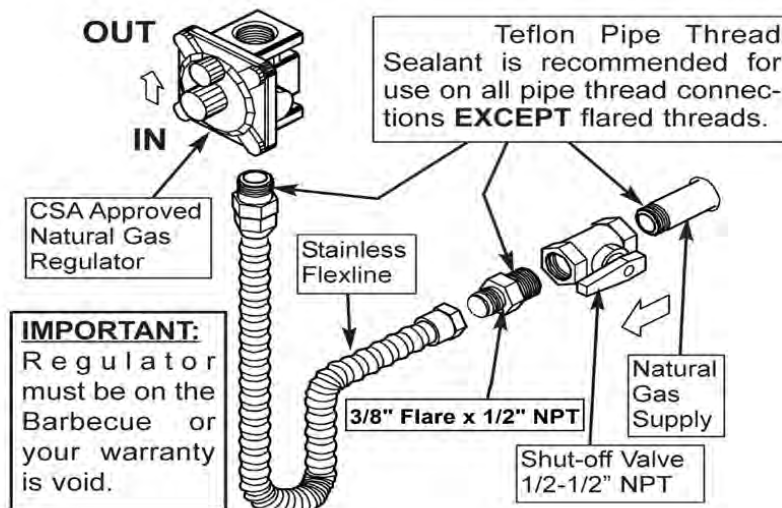
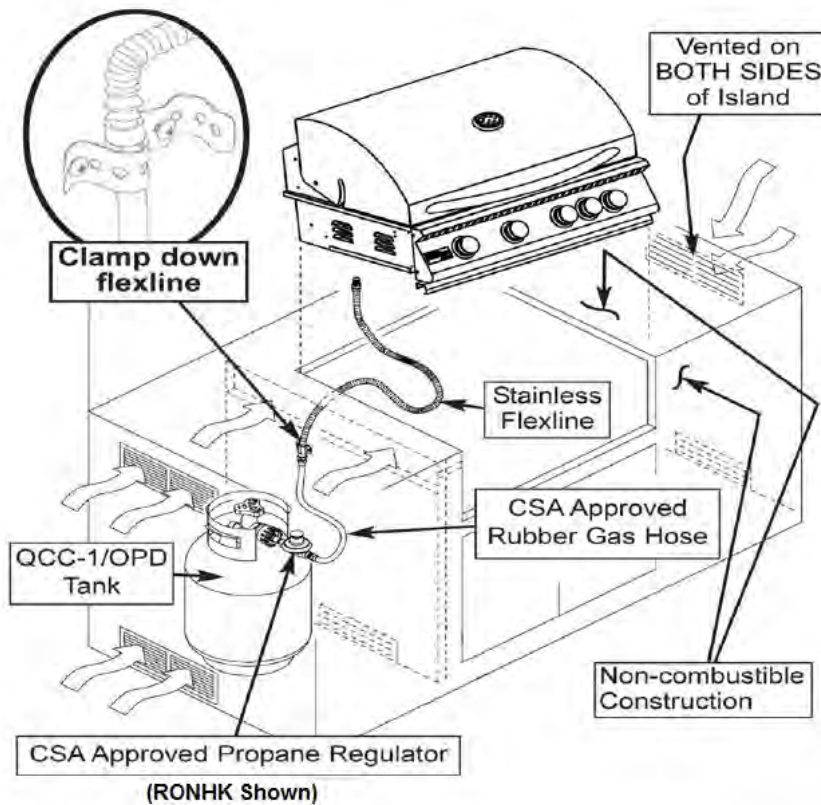
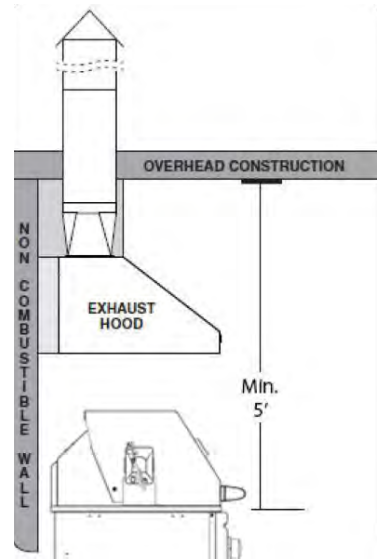
| <u>Model</u> | <u>Hood Clearance</u> |
|--------------|-----------------------|
| ARG30        | 26 1/4"               |
| ARG36        | 26 1/4" "             |
| ARG42        | 26 1/4" "             |

## Exhaust Hood Requirements

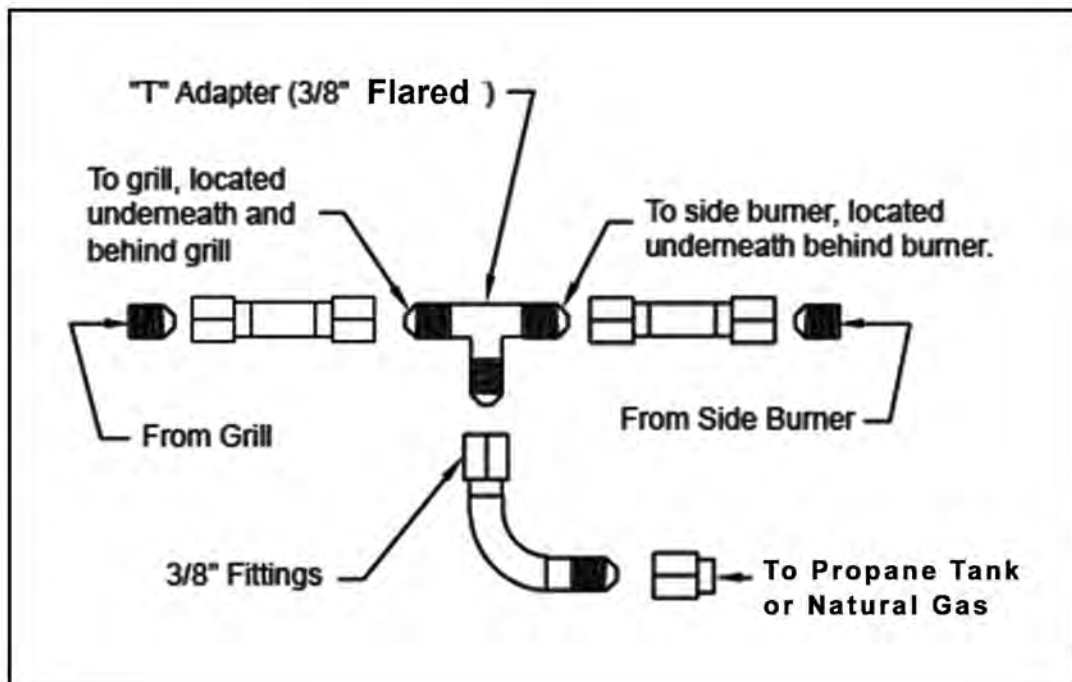
When using an exhaust hood, the area above the cooking surface of the grill must be covered with a hood larger than the cooking area of the grill, AND with a minimum of 1200CFM (cubic feet per minute) for proper outdoor application.

**Combustible Overhead Construction:** Exhaust hood required.

**Non-Combustible Overhead Construction:** Exhaust hood recommended.



## If adding a side burner to your connection:

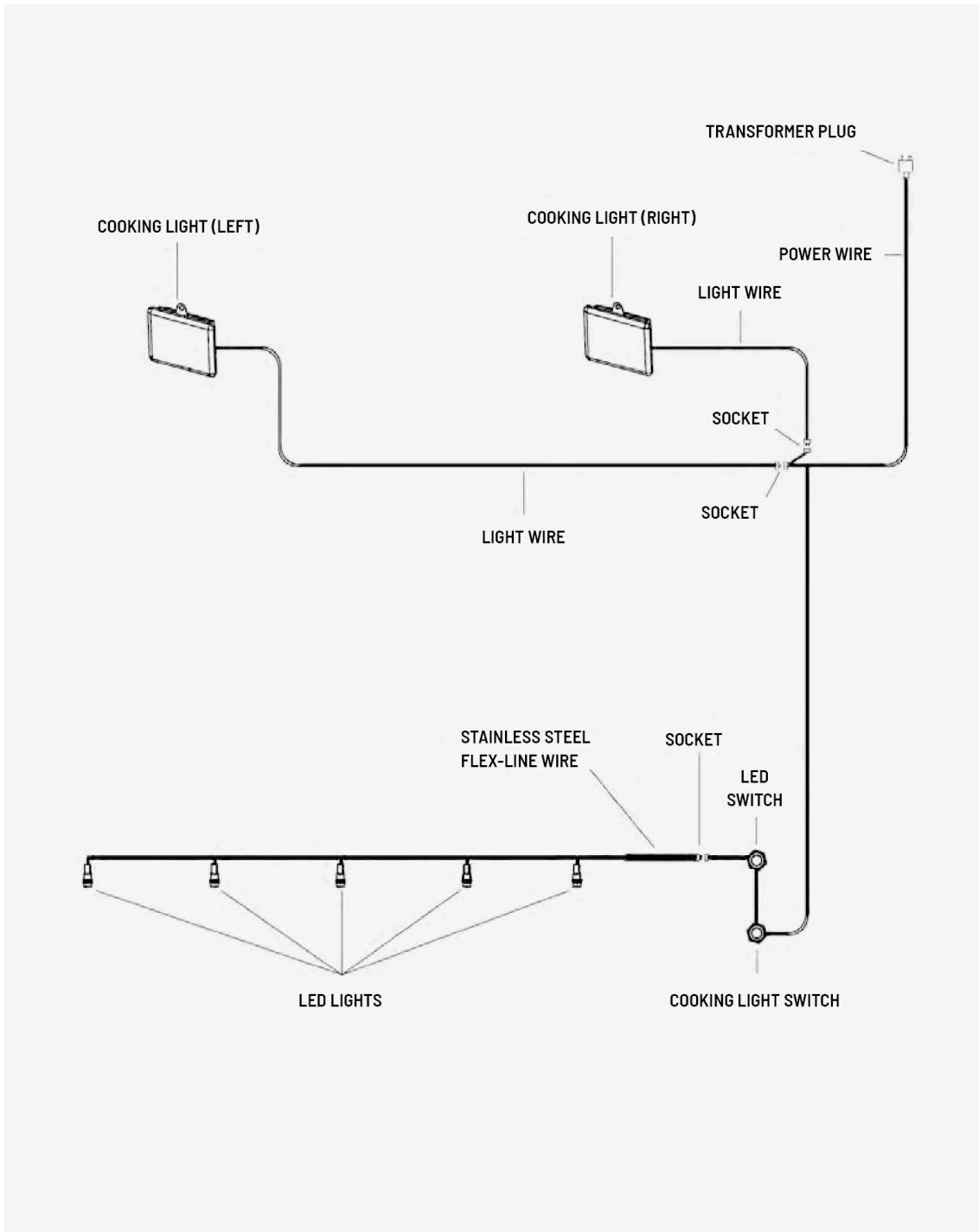


### Electrical

Electrical outlet for Rotisserie motor must be installed to the left side of the grill. The outdoor cooking gas appliance, 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. Keep any electrical supply cord and fuel supply hose away from any heated surface.

**HALOGEN LIGHT:** The ARG30, ARG36 & ARG42 are provided with a low-wattage transformer. Connect 115V power to the grill. USE the transformer provided! Replacement light bulb is 12v, 5 watts.

# ARG Electrical Wiring Diagram



Troubleshooting-If you have any issues, please look for solutions here before calling us our your local dealer. Also check [RCSGasGrills.com](http://RCSGasGrills.com) for videos with solutions as well.

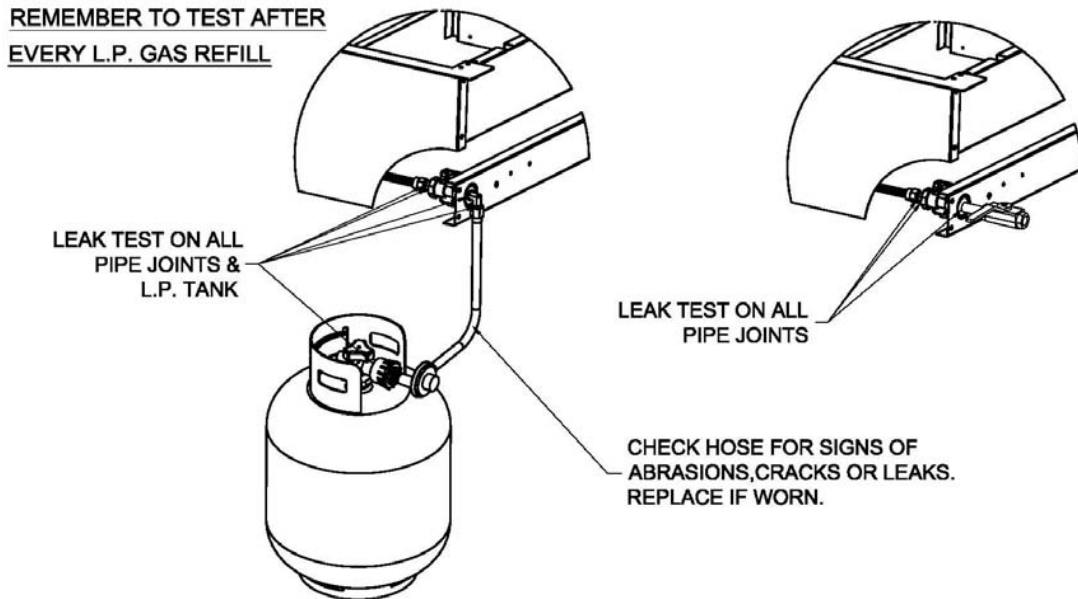
| PROBLEM                                       | POSSIBLE CAUSE  | WHAT TO DO  |
|---|---|---|
| <b>None of the burners light</b>              | <ol style="list-style-type: none"> <li>1. The grill is not getting gas.</li> <li>2. Low gas pressure.</li> <li>3. Propane bottle safety activated.</li> <li>4. Air trapped in the gas line.</li> <li>5. Defective gas regulator.</li> </ol> | <ol style="list-style-type: none"> <li>1. Check gas supply.</li> <li>2. Check gas line for kinking or blockage.</li> <li>3. Close all gas valves. Reset LP bottle.</li> <li>4. Bleed air from gas liine.</li> <li>5. Replace gas regulator.</li> </ol>  |
| <b>An individual burner won't light</b>       | <ol style="list-style-type: none"> <li>1. Gas valve orifice is blocked.</li> <li>2. Fault valve ignitor.</li> <li>3. Faulty gas valve.</li> <li>4. Faulty gas regulator.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Clean gas valve orifice.</li> <li>2. Replace valve valve.</li> <li>3. Replace gas valve.</li> <li>4. Clean burner.</li> </ol>   |
| <b>Low flame/ low heat</b>                    | <ol style="list-style-type: none"> <li>1. Low gas pressure.</li> <li>2. Grill is set up for LP but burning NG.</li> <li>3. Gas line is kinked or partially blocked.</li> <li>4. Burner is dirty or blocked.</li> </ol>                      | <ol style="list-style-type: none"> <li>1. Check gas supply.</li> <li>2. Convert grill to fuel tpye supplied, or provide proper fuel to grill.</li> <li>3. Make sure gas regulator is functioning properly.</li> <li>4. Replace gas regulator</li> </ol> |
| <b>Too much flame/ too much heat (gas)</b>    | <ol style="list-style-type: none"> <li>1. Grill is set up for NG and burning LP.</li> <li>2. Orifice is too large or missing.</li> <li>3. High gas pressure.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Convert grill to LP, or provide NG fuel to grill.</li> <li>2. Install proper orifice.</li> <li>3. Make sure gas regulator is functioning properly.</li> </ol>   |
| <b>Uneven bumer flame/ uneven heat</b>        | <ol style="list-style-type: none"> <li>1. Gas valve orifices and/ or burners are dirty or partially blocked.</li> <li>2. Low gas pressure.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Clean burners and valve orifices.</li> <li>2. Provide sufficient gas pressure to grill.</li> </ol>  |
| <b>Excessively orange or yellow gas flame</b> | <ol style="list-style-type: none"> <li>1. Burner(s) out of adjustment.</li> <li>2. Burner(s) are dirty.</li> <li>3. Burner(s) impinged.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Adjust burner air shutter(s).</li> <li>2. Clean burner(s).</li> <li>3. Check flame paths for foreign objects.</li> </ol>  |
| <b>Bumer flares up at control panel</b>       | <ol style="list-style-type: none"> <li>1. Valve nozzle not inserted in burner.</li> <li>2. Gas valve has a leak.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Properly insert valve nozzle into burner inlet.</li> <li>2. Replace gas valve.</li> </ol>   |
| <b>Bumer blows out</b>                        | <ol style="list-style-type: none"> <li>1. Burner adjustment too lean.</li> <li>2. Burner is exposed to wind.</li> <li>3. Burner unseated from valve nozzle.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Adjust burner air shutter to a more closed position.</li> <li>2. Re-orient the grill away from, or block the wind.</li> <li>3. Reposition the burner on the valve nozzle.</li> </ol>                          |
| <b>Grill shuts off</b>                        | <ol style="list-style-type: none"> <li>1. Faulty gas regulator.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Replace gas regulator.</li> </ol>   |
| <b>Interior cooking lights don't work</b>     | <ol style="list-style-type: none"> <li>1. Grill does not have electricity.</li> <li>2. Broken wire or loose connection.</li> <li>3. Faulty On/Off switch.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Provide power to the grill.</li> <li>2. Repair wire or make connection.</li> <li>3. Replace light switch.</li> </ol>  |
| <b>LED control panel lights don't work</b>    | <ol style="list-style-type: none"> <li>1. Grill does not have electricity.</li> <li>2. Broken wire or loose connection.</li> <li>3. Faulty On/Off switch.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Provide power to the grill.</li> <li>2. Repair wire or make connection.</li> <li>3. Replace light switch.</li> </ol>  |
| <b>LED control panel lights don't work</b>    | <ol style="list-style-type: none"> <li>1. Grill does not have electricity.</li> <li>2. Broken wire or loose connection.</li> <li>3. Faulty On/Off switch.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Provide power to the grill.</li> <li>2. Repair wire or make connection.</li> <li>3. Replace light switch.</li> </ol>  |

# Leak Testing

**NEVER USE AN OPEN FLAME TO CHECK FOR LEAKS.**

All gas piping and connections must be tested for leaks after installation or service. All leaks must be corrected immediately. Remember-before exchanging an empty bottle for a new one, make sure all control valves are in the "off" position.

With the LP regulator connected to tank and grill and the grill knobs turned to OFF. Open the valve on the tank. Test for leaks by applying liquid soap solution to all joints. Bubbles forming indicate gas leak. Fix gas leak before continuing use.



# Burner Adjustments

Every grill is thoroughly checked for proper lighting and burner flame pattern. Conditions at the location may necessitate minor adjustment of the burner air intake, if the flames are not steady/stable as shown in the figure.



The flame should be full length of the burner, blue and stable. The air intake (if applicable) should be adjusted ONLY if the flame is lifting off of the ports or has noticeable amounts of yellow in the flame.

If flame is lifting, remove the front panel to access the burner front (air shutter) then turn the air shutter clockwise reducing this intake. The screw should be loosened before turning the air shutter.

If the flame has more yellow than blue, the air shutter should be turned counter clockwise allowing more air in. This will stabilize the flame. Make sure to tighten the screw after adjustments are made.

In order to provide gas to the burner, the orifice must be inside the burner venturi opening. Check to ensure that the burner is properly secured at the front and back.

## **Lighting Instructions**

### **Before Lighting:**

- Check gas line/hose for signs of wear, abrasion or cuts. If evidence of deterioration is visible, replace the part prior to use.
- If you smell gas, check for leaks. If odor continues, immediately call for service. Keep your face and body away from the grill top when lighting.

## **Grill Burner Lighting**

1. Open lid before lighting. Make sure all burners are in the 'OFF' position.
2. Using one of the main burner control knobs, push and turn burner knob to 'HI/IGN' position. You will hear a "Click".
3. The pilot flame will ignite at this point, lighting the main burner.
4. Continue to hold the knob in until you have burner ignition.
5. If there is no ignition after 2-3 seconds, turn the knob back to the "OFF" position and repeat steps 2-4.

**Caution:** Always wait five (5) minutes for gas to clear after any unsuccessful lighting attempts.

## **Manual Ignition**

1. Follow steps 2-3
2. Place either a burning long-barrel butane lighter or a burning long-stem match near the manual flash tube to the front of the grill at the cooking surface. For back burners, hold the flame against the surface of the back burner.
3. Place ignition source over flash tube then rotate grill knob to high while holding ignition over flash tube for five seconds.
4. If the burner does not light within five (5) seconds of turning the control knob, immediately depress the knob and turn the control knob to off position. Wait five (5) minutes before repeating steps 2-4 of the MANUAL LIGHTING instructions.
5. If the burner does not light after several attempts, immediately close all gas valves and consult an authorized service technician.

## **Rotisserie Burner Lighting**

1. Open lid before lighting. Make sure all burners are in the 'OFF' position.
2. Be sure to remove the upper grid in the back of your grill PRIOR to lighting the rear burner!
3. Push in and hold the control knob for 5 seconds then turn the rear rotisserie control knob to the "on" position. While there, you'll hear the igniter "click" This will ignite the rear burner.
4. If you do not see the rear burner ignite, repeat step 3. You may also see the video online at [RCSGasGrills.com](http://RCSGasGrills.com). Go to Documents, then "How-To Instructions".

## **Optional Infrared Burner**

1. To install the optional infrared burner, begin by removing the far left cooking grid, flame tamer and zone divider, if applicable.
2. Remove conventional burner by first removing the cotter pin or screws that hold the burner in place (unless they were removed prior to installation), located on the bottom rear of the burner and located inside the rear of the grill body. With the cotter pin or screws removed, remove the conventional burner by lifting up then pulling the burner to the rear of the grill housing.
3. Place the infrared burner in place and reattach the screws that hold the burner in place, leaving off the flame tamer. Ensure the burner is seated appropriately around the valve so that gas flows into the burner.
4. If applicable replace the heat zone divider and cooking grid. Do not use this burner with the flame tamer reinstalled above the burner.

### **Preheating the Infrared Burner**

Always preheat the entire appliance before cooking. If the appliance is already hot from cooking, you should still preheat the infrared burner for 3 minutes with hood open. Never place food over the burner until it is fully preheated to avoid clogging the tiny ports and damaging the burner from grease drippings and food particles.

### **Infrared Burner Cleaning**

To keep your infrared burner operating at maximum performance after each use, turn it on HIGH for 5 minutes with the hood open. This allows any food particles or grease drippings to burn away. Once your appliance has cooled completely, use a soft brush or vacuum to remove any ash accumulation on the burner if necessary.

## **Operation**

**DO NOT LEAVE YOUR GRILL UNATTENDED WHILE IN OPERATION.**

### **Grill:**

Grill burners are controlled individually with control knobs. After lighting, turn the knob to HI, LO or in between as desired. Turn on as many burners as required. The lid may be closed during grilling. Keep the lid in closed position during the pre-heat period.

**If you have installed an optional infra-red burner in your grill, you must leave the lid open while the infra red burner is in use, due to the intense heat it will generate! If lid is closed the heat can cause the housing to warp, voiding the warranty.**

### **Rotisserie:**

(Not included with all models) Plug in the motor power cord to a properly grounded receptacle.

Rotisserie cooking can be done with grill burners as well as with the Rotisserie burner 'ON'. KEEP THE MOTOR STORED INDOORS WHEN NOT IN USE.

Be sure to remove the upper grid in the back of your grill PRIOR to lighting the rear burner!

The rotisserie skewers slide in from the side with the tip sliding into the motor shaft adapter. The slot on the handle side should be on the side support panel edge.

Use the prongs to hold the meat. Tighten thumbscrew on the prong hubs to secure in place.

When ready, turn the switch on the motor box to the 'ON' position. The spit rod will rotate slowly.

Stop the motor before removing the skewer or spit rod.

## **Cleaning and Maintenance**

**Cleaning:** Your grill works better and lasts longer if properly cleaned and maintained. Clean the grill after each use. Turn grill off before starting to clean. Protect your hand with a good mitt when cleaning the hot grill. Use a wire brush, dip in water and scrub the cooking grids to soften and loosen food spills. The food spills will fall into the crumb pan. Burn off excess food debris and marinades for 15 minutes after cooking. **Do not use Aerosol cleaners on hot grill surface. Chemicals may produce noxious fumes and may ignite on contact with the hot surface.**

**Shield:** Burner shields are made up of stainless steel. Occasionally, after allowing the shields to cool down, remove and soak them in water with a mild soap or detergent. Replace when dry.

**Briquettes:** If your grill uses briquettes, it is recommended to occasionally use a wire brush to gently clean them.

**Crumb Tray / Grease Pan:** Empty grease pan as required to prevent overflowing. After use, remove the pan and brush off the contents. Clean with hot water and soap or detergent. **NEVER line drip the pan with any type of foil!**

All stainless steel parts should be cleaned with a mild soap or detergent or with a liquid cleanser especially made for stainless steel. Never attempt to clean stainless steel with steel wool, abrasive cloths or powders.

### **Maintenance**

Keep outdoor cooking gas appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.

Do not obstruct the flow of combustion and air ventilation. Keep the ventilation opening(s) of the cylinder enclosure free and clear from debris.

There are many different stainless steel cleaners available. Always use the mildest cleaning procedure first, scrubbing in the direction of the grain. To touch up noticeable scratches in the stainless steel, sand very lightly with dry 100 grit emery paper in the direction of the grain.

Specks of grease can gather on the surfaces of the stainless steel and bake on to the surface and give the appearance of surface rust. Surface rust is caused by using steel wool or steel bristle brushes to clean the surfaces. Never use steel wool or steel bristle brushes on the stainless steel surfaces. It can also be caused by harsh chemicals used in the area of the grill, like common pool chemicals or acid used to wash down patios or decks. NEVER store chemicals of ANY kind in or near your grill! Surface rust may also be caused by other forms of contaminants found in the air or as a result of foreign matter introduced to the grill. For removal of most types of surface rust, use a slightly abrasive pad (Scotch Brite is good) in conjunction with a stainless steel cleaner. Bar Keepers Friend is another excellent product. Always rub in the direction of the grain. Surface rust is not covered under the warranty.

Routinely have a professional barbecue cleaning company detail the barbecue for best results and longevity.

The burners, control area, crumb pan, etc. should be kept clean at all times. During prolonged non-use of the grill, spiders & insects can nest in areas that will adversely affect the functioning of the grill. Check burner inlets, orifice hood (gas inlet to burner), igniter, ignitors, etc. thoroughly and clean before use.

### Important Note: For Locations Near Coastal Areas and Pools

#304 stainless steel materials used in the construction of your RCS grills are highly rust resistant, however, chlorine in the air from swimming pools or the salt from sea air may cause surface rust to appear and even create some pitting if left on the product. Here are a few tips to avoid this:

- Regularly wipe down the exterior surfaces with a damp cloth (micro fiber towels work well with grain of stainless)
- Allow the surfaces to dry before installing the cover. Do not cover a damp grill
- In extreme environments apply a rust inhibitor which leaves a microscopic protective layer on the grill
- For seasonal storage use the product referred to above, ensure the grill is dry, then cover and secure the cover to minimize the amount of damp air getting to the surfaces

### **Fuel (Gas) Conversion Instructions for RCS grills.**

This should only be performed by a licensed gas professional

#### **Gas regulator:**

Currently all grills are supplied with a gas regulator installed. When converting the gas application you must also convert the regulator by removing the large nut on the front of the regulator, pulling out the plastic orifice, flipping it over and re-installing it. Tighten the large nut and you're ready to go. (This step does not apply to the LP hose and regulator set, only the separate regulator that comes with the grill. You must flip this plunger when converting a propane grill from natural gas along with installing a low pressure propane hose and regulator, RONHK).

**In order, the regulator must be installed and converted first in order to achieve the proper pressure to test the conversion steps 1-10 and back burner conversion 1-3 below. To adjust the low flame setting if necessary, see next page.**



Unscrew and remove this brass cap. This exposes the plastic plunger



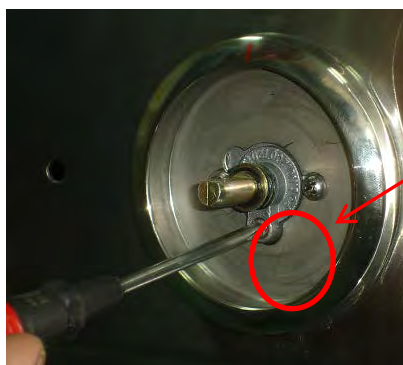
Pull off and flip over the plastic plunger and replace in the hole. Large side down converts the regulator to LP by compressing the interior spring.

Replace the brass cap and you are done!!!

**Note:** the plunger snaps in and out of the cap.

## Fuel Conversion of Main Burners:

- 1- Determine the existing gas type (LP or Natural gas). The method of changing gas types is similar for natural gas or propane gas.
- 2- You must remove all grates and burner covers to expose the main burners in the grill.
- 3- On the bottom rear of each burner may be a cotter pin or screws attaching burners to the grill housing. Remove cotter pins or screws.
- 4- Slide burner to the rear of the grill and up. Repeat for each burner.
- 5- Where the burner was located going through a hole in the basin and connecting to the valve is now evacuated space.
- 6- Inside the space you will find the end of the valve (front of grill), with an orifice (brass fitting), screwed into the end of the valve stem.
- 7- Remove the orifice with a 1/4" socket and extension. (These are extremely fragile when turning. Be extremely gentle when removing).
- 8- Replace with new orifice, (repeat for all burners). When re-installing orifice do not over tighten or you will strip the brass fitting. Little pressure is needed!!!
- 9- Replace burners and test for proper flame height. Flame should stand at approximately 1/2" to 1" on low and 1.5" to 2" on high. (to adjust the low flame setting simply light the grill on the low setting and adjust the screw which is located under the knob on the front of the valve as per diagram below.)
- 10- Replace burner covers and grates.



Low flame setting screw (where applicable)

- 11-If necessary, adjust the low flame setting screw located under the knobs on the front of the valve. (n/a on cast burners)



**Note:** It may be necessary to adjust the air mixture on each burner after a conversion. Typically LP gas requires more primary air so open the air mixers to at least half open. The opposite is true for natural gas. In some cases close these air mixer adjusters completely. (n/a on cast burners)

## **Trouble Shooting: Problem and Solution**

### **Burner will not light**

- Check gas supply to burner by manually lighting the burners.
- See electrode for visible damage, replace if damaged.

### **Improper Burner Flame**

- Check burner gas inlet area for blockage
- Check orifice hoods for any clogging and clean.
- Adjust air shutter, if necessary.
- Check pressure if flame is too low or too high.
- Check gas supply tank (LP) if running low.

### **Light is not ON**

- Connect 115V power at rear. Turn switch ON.
- Make sure the transformer was used in installation and your grill was NOT hooked up directly to 115 volt power source.
- Check bulb. Replace if necessary.
- Check any GFCI plugs in line.

**My knobs are hot and/or the control panel is blue and wiring is burnt up.** Sounds like a rear wind issue. Do you have a back-splash or wind block? Do you live on a hill, lake or large open area?

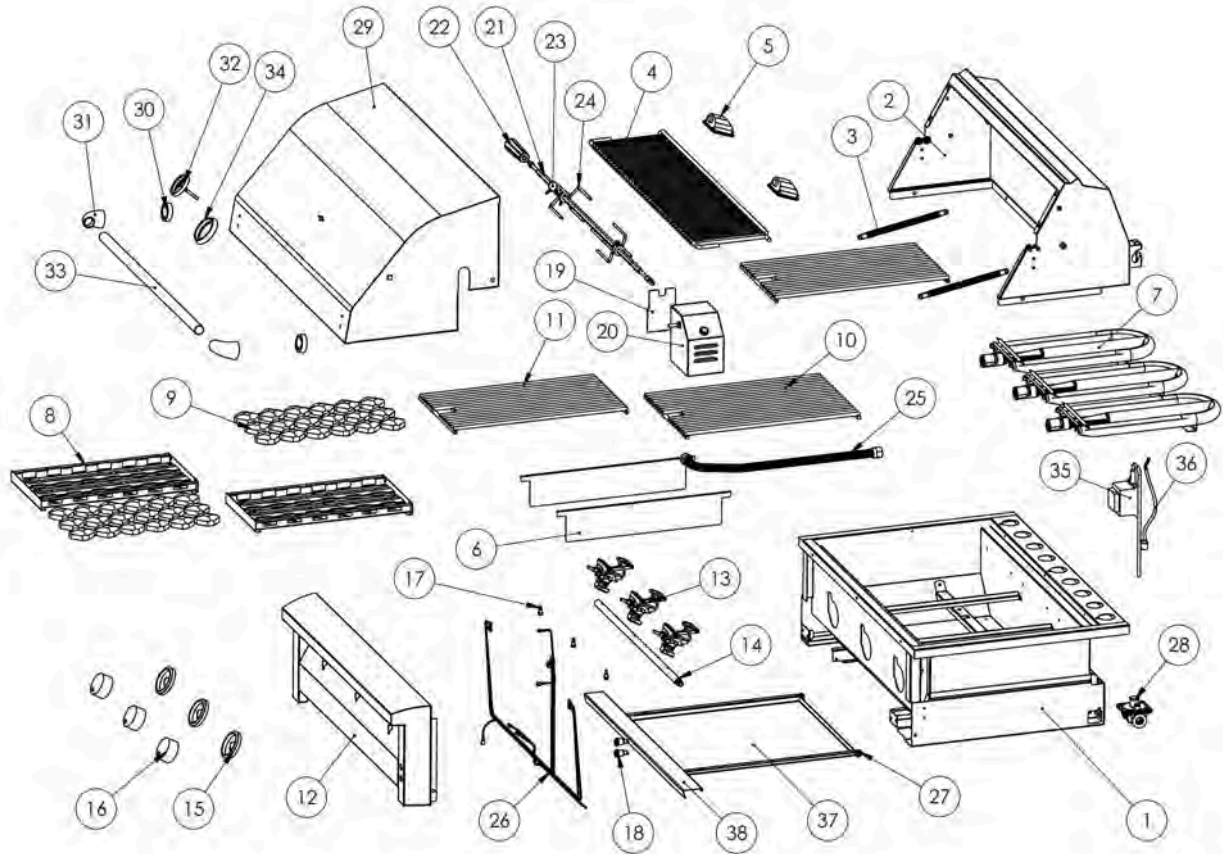
**Fire in the grill** Your grill may be grill is full of grease, or was? Have you cleaned it recently.....or ever? Is there foil in the clean-out tray? Not good, please remove it.

**“Mygrill is covered with rust”.** Do you have a pool nearby? Are chemicals stored under the grill? Do you live on a coast or near it? Is the grill VERY new but the spots have occurred due to acid washing concrete? Are the spots ONLY on the grill and not doors and drawers? Are the “spots” in a spray fashion? Occasionally this occurs when the construction is still going on and the equipment is in the area. Chemicals (acids usually) are sprayed on the brick or stone to clean it. The spots are surface rust and are not covered under warranty. We recommend using Bar Keepers Friend to clean the spots off.

**“My grill does not get over (blank) degrees”** It is possible that you need a new heat indicator, perhaps the original one is mis-calibrated. OR is your grill LP and you have it in a natural gas situation (or vice versa)? See the manual regarding grill conversions. OR if your home builder installed your grill, you they may have a flow-restricter in the line. An easy way to test this is to remove the cooking grids and grates/briquettes below so you may observe the operation of the burners. Light one, notice the height of the flame which on high should be 1 ½” to 2”. Then turn on a second burner then a third. The flame height should remain the same. If not, you have a low-pressure situation and it is not the fault of the equipment, check with your builder.

There are more great FAQ's, documents, and videos on our website [www.RCSGasGrills.com](http://www.RCSGasGrills.com).

# ARG30, ARG36, ARG42 Exploded View

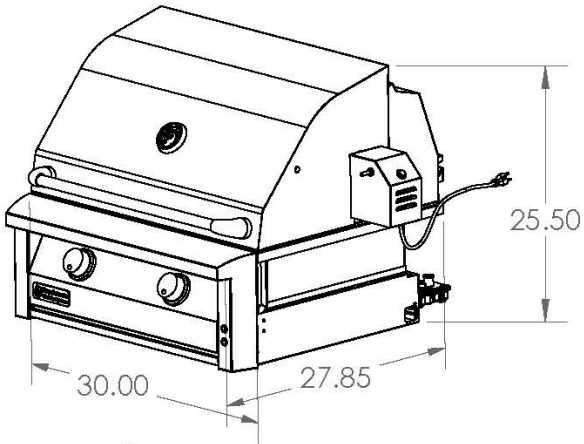


# ARG30, ARG36, ARG42 Parts List

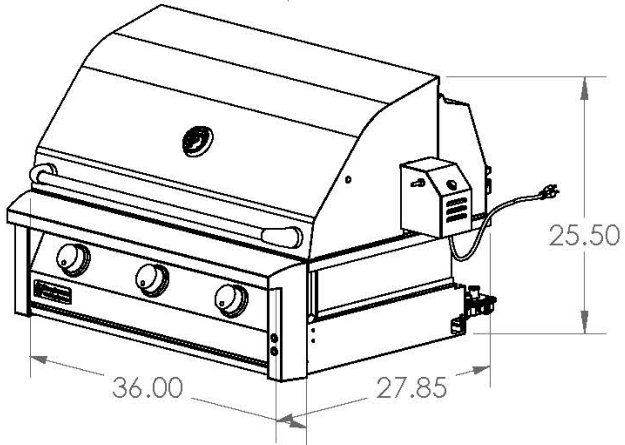
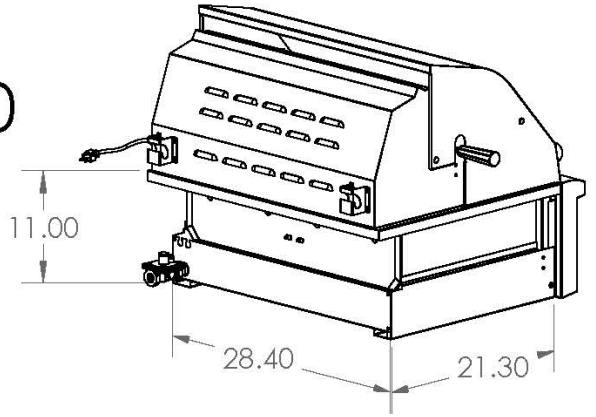
| ITEM | DESCRIPTION                | ARG 30" | QTY. | ARG 36" | QTY. | ARG 42" | QTY. |
|------|----------------------------|---------|------|---------|------|---------|------|
| 1    | Basin                      | ARG001  | 1    | ARG002  | 1    | ARG003  | 1    |
| 2    | Rear Hood                  | ARG004  | 1    | ARG005  | 1    | ARG006  | 1    |
| 3    | Hood Spring                | ARG007  | 2    | ARG007  | 2    | ARG007  | 2    |
| 4    | Warming Rack               | ARG008  | 1    | ARG009  | 1    | ARG010  | 1    |
| 5    | Interior Light             | ARG011  | 2    | ARG011  | 2    | ARG011  | 2    |
| 6    | Heat Separator             | ARG012  | 1    | ARG012  | 2    | ARG012  | 2    |
| 7    | Main Burner - Utube Burner | ARG013  | 2    | ARG013  | 3    | ARG013  | 3    |
| 8    | Briquette tray             | ARG014  | 2    | ARG015  | 3    | ARG014  | 3    |
| 9    | Briquettes                 | ARG016  | 2    | ARG017  | 1    | ARG018  | 2    |
| 10   | Main Burner Grate (Lg)     | ARG019  | 5    | ARG019  | 6    | ARG020  | 5    |
| 11   | Main Burner Grate (Sm)     | -       | -    | -       | -    | ARG021  | 3    |
| 12   | Front Panel                | ARG022  | 1    | ARG023  | 1    | ARG024  | 1    |
| 13   | Main Valve                 | ARG025  | 2    | ARG025  | 3    | ARG025  | 3    |
| 14   | Manifold                   | ARG026  | 1    | ARG027  | 1    | ARG028  | 1    |
| 15   | Knob Bezel                 | ARG029  | 2    | ARG029  | 3    | ARG029  | 3    |
| 16   | Knob                       | ARG030  | 2    | ARG030  | 3    | ARG030  | 3    |
| 17   | LED                        | ARG031  | 2    | ARG031  | 3    | ARG031  | 3    |
| 18   | LED and Light Switch       | ARG032  | 2    | ARG032  | 2    | ARG032  | 2    |
| 19   | Rotisserie Motor Bracket   | ARG033  | 1    | ARG033  | 1    | ARG033  | 1    |
| 20   | Rotisserie Motor           | ARG034  | 1    | ARG034  | 1    | ARG034  | 1    |
| 21   | Rotisserie Spit            | ARG035  | 1    | ARG036  | 1    | ARG037  | 1    |
| 22   | Rotisserie Handle          | ARG038  | 1    | ARG038  | 1    | ARG038  | 1    |
| 23   | Rotisserie Collar          | ARG039  | 1    | ARG039  | 1    | ARG039  | 1    |
| 24   | Rotisserie Forks           | ARG040  | 2    | ARG040  | 2    | ARG040  | 2    |
| 25   | Flex Tube                  | ARG041  | 1    | ARG041  | 1    | ARG041  | 1    |
| 26   | LED Harness                | ARG042  | 1    | ARG043  | 1    | ARG044  | 1    |
| 27   | Roll Bearing               | ARG045  | 2    | ARG045  | 2    | ARG045  | 2    |
| 28   | Regulator                  | ARG046  | 1    | ARG046  | 1    | ARG046  | 1    |
| 29   | Top Hood                   | ARG047  | 1    | ARG048  | 1    | ARG049  | 1    |
| 30   | Hood Handle Spacer         | ARG050  | 2    | ARG050  | 2    | ARG050  | 2    |
| 31   | Hood Handle End Cap        | ARG051  | 2    | ARG051  | 2    | ARG051  | 2    |
| 32   | Temperature Gauge          | ARG052  | 1    | ARG052  | 1    | ARG052  | 1    |
| 33   | Hood Handle                | ARG053  | 1    | ARG054  | 1    | ARG055  | 1    |
| 34   | Temperature Gauge Bezel    | ARG056  | 1    | ARG056  | 1    | ARG056  | 1    |
| 35   | Transformer                | ARG057  | 1    | ARG057  | 1    | ARG057  | 1    |
| 36   | Transformer Wire           | ARG058  | 1    | ARG058  | 1    | ARG058  | 1    |
| 37   | Drip Tray                  | ARG059  | 1    | ARG060  | 1    | ARG061  | 1    |
| 38   | Drip Tray Handle           | ARG062  | 1    | ARG063  | 1    | ARG064  | 1    |

\*Rotisserie kit not included.

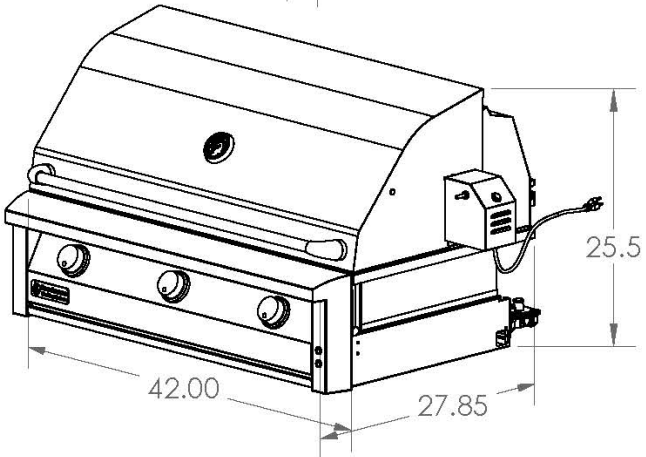
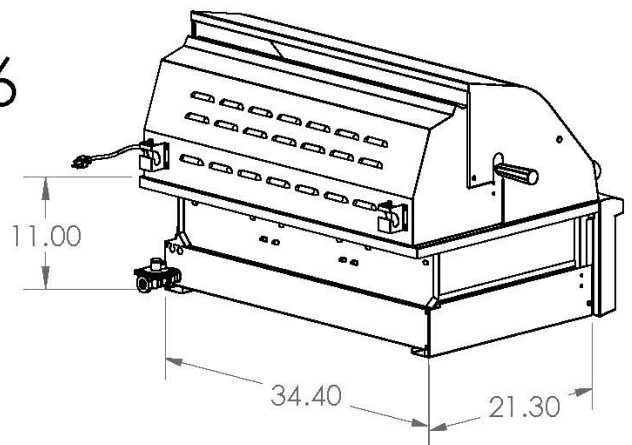
# ARG30, ARG36, ARG42 Dimensions



ARG30



ARG36



ARG42

