# Rinnai®

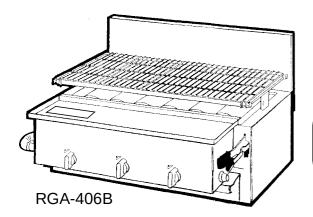
# リンナイ

# Infrared Gas Griller (Lower Flame Type)

#### For Commercial Use



RGA-404B RGA-406B RGA-408B RGA-410B RGA-404C RGA-406C RGA-408C RGA-410C



# **Operation Manua**

# RGA-406C

#### **Contents**

1 SAFETY PRECAUTIONS

Safety Precautions Be sure to observe the precautions ......1

#### **Dear Valued Users**

Thank you for purchasing this infrared gas griller (lower flame type).

- Before use, please read this manual carefully for safe and proper use of this appliance.
- This appliance is for commercial use.
   Not for domestic use.
- In case of change of user, be sure to let the new user to read this Manual and provide instructions on the use of this appliance.
- In case this operation manual is missing, please contact your dealer or Rinnai and repurchase this manual.

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### 1 SAFETY PRECAUTIONS Be sure to observe the precautions

Be sure to observe the following precautions for safe use of this appliance. These precautions contain important safety information. The indications and their defi nitions are as outlined below.

Indications	Definitions
<b>⚠ DANGER</b>	This indicates an immediate hazard that, if ignored, could result in death, serious injury or fire due to incorrect operation.
<b>⚠ WARNING</b>	This indicates hazard that, if ignored, could result in death, serious injury or fire due to incorrect operation.
<b>⚠</b> CAUTION	This indicates hazard that, if ignored, could result in injury or damage to property only due to incorrect operation.

The above mentioned "injury" and "damage to property" refer to the followings respectively.

Injury : Refers to wound, burns (hot and cold) and electric shock that requires no

hospitalization or long-term outpatient treatment.

: Refers to extended damage in relation to house, household goods, livestock and Damage to property

pets.

The definitions for the following symbols are as follows:



General Danger Warning Caution



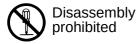
Caution with fi re



General prohibition



Do not touch





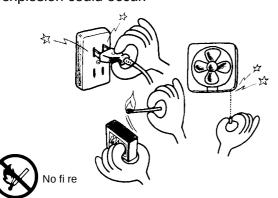
No fi re



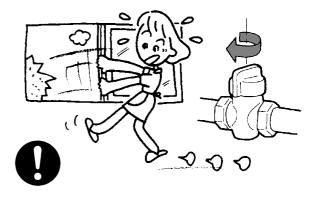
## **DANGER**

If you suspected a gas leakage, never ignite any fire, turn on/off the switch of any electrical appliance or use the telephone located around the gas appliance.

Flame or spark may ignite fire and an explosion could occur.



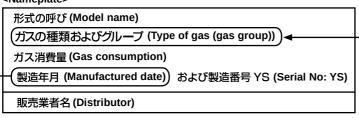
- If you detected a gas leakage, stop using the appliance immediately.
  - 1 Stop using the appliance and shut off the gas valve (gas cock) immediately.
  - 2 Open the windows and door for the gas to escape.
  - 3 Contact the nearest gas operator (supplier).



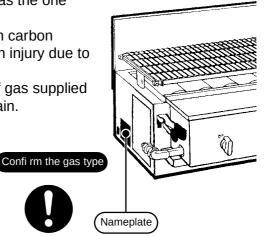
# **⚠ WARNING**

#### Caution for the type of gas supplied

- Ensure that the type of gas (gas group) supplied is same as the one mentioned on the nameplate of the appliance.
- Use of the appliance with incorrect gas type could result in carbon monoxide poisoning due to incomplete combustion or burn injury due to explosive ignition.
- When you move to another house, ensure that the type of gas supplied is same as the one mentioned on the nameplate once again.





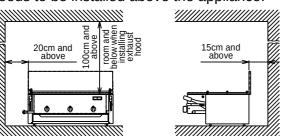


#### About installation

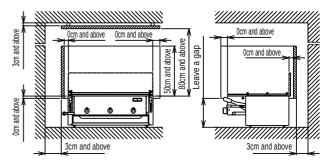
- Be sure to observe the precautions on installation to ensure compliance with the Fire Prevention Ordinance. Insufficient clearance around the appliance may result in fire. Even if an inflammable wall is covered with the object such as stainless steel plate, it is necessary to maintain the same distance as required for combustible objects.
- Do not refurbish the appliance's surroundings after the installation (such as enclosing the appliance, installation of hanging shelf). Such a refurbishment may not be compatible with the installation standards or cause imperfect combustion or fire.

#### Safety distance to combustible object and fi re prevention measures

 If the wall around the appliance is flammable (such as wooden wall), be sure to keep a distance of at least 20cm, 15cm and 100cm for sides, rear and top respectively.
 For RGA-408A, RGA-410B, RGA-408C, RGA-410C, an exhaust pipe with exhaust hood needs to be installed above the appliance.



 If the distance of at least 20cm (sides), 15cm (rear) and 100cm (top) is unavailable between the appliance and flammable wall, installation of a heat insulating plate is required shown in the illustrations on the right.



#### **\* Heat insulating plate**

Material	Thickness	Caution
Steel plate	0.6cm and above	Ensure a space at least 3cm and provide adequate
Stainless steel plate		

#### Prevention of gas accident

Gas pipe work requires specialist qualifications and expertise. Consult your dealer.



# **WARNING**

• No placing of combustible object near the appliance

Do not place any combustible object (such as curtain, newspaper and paper bag) or inflammable object (such as spray can) on top of or around the appliance. These objects could burn or catch fire and may result in fire damage.



No placing of combustible object near the appliance

• Do not leave the griller while the burner is on Leaving the griller or going to sleep while the burner is on is strictly prohibited. The food being grilled could burn or catch fire and may result in fire damage.



Do not leave the griller while the burner is on



 Do not carry the appliance when in use.

Do not move the appliance while the flame is on. Falling or overturning can cause fire or burn injury.



Do not modify the appliance

Never disassemble, repair or modify the appliance unless it is necessary for maintenance work. Failure to observe this precaution could result in gas leakage or fire.



Disassembly prohibited



• Do not use in vehicle or ship. The appliance may tilt while in use and cause fire or burn injury.



• Do not install this appliance in any unstable place or on top of combustible object. Failure to observe this warning may result in fire.



• Make sure that no gas exists around the appliance before repeating ignition. The gas suspended around the appliance can be ignited and may



cause burn injury.

• Do not place any towel or kitchen cloth, etc., on the exhaust outlet while the grill is being used. Failure to observe this warning could result in incomplete combustion or fire. Failure to ventilate while in use may result



in carbon monoxide poisoning.

• Do not use this appliance near other heat source or in a place on which water is spilled or splashed. Failure to observe this warning may result in failure of this appliance.



• Do not allow children to use this product without adult supervision. Keep out of reach of infant and small child. Failure to observe this warning may result in burn or injury.



During cleaning, be careful of projecting parts inside the unit. Hard contact with these parts can cause hand injury. Be sure to wear gloves during cleaning.



• If case of earthquake or fire or when any unusual state is observed, stay calm and stop using the appliance, and shut off the gas valve.



Stop usina

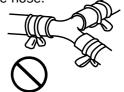


# **A** CAUTION

- Prevention of gas accident (RGA-404B, 404C, 406B, 408B and 408C)
- Use a gas rubber hose (authorized by local association). Crack on the hose or loose hose connection can cause gas poisoning or gas explosion. Be sure to replace damaged rubber hose with new one.
- Push the rubber hose onto the fitting up to the red line and secure it with a hose clamp.



 Do not connect additional rubber hose or branch out the hose.



 After use, make sure that the fire has been extinguished. Be sure to shut off the gas valve before going out or going to sleep.

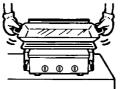




 Do not use any part other than genuine parts and the parts supplied with this appliance. In particular, do not use large iron griddle or ceramic plate of such size that it can cover the whole grilling surface. Use of such part can cause carbon monoxide poisoning may occur due to imperfect combustion,

burn damage or fire due to overheating or abnormal combustion.

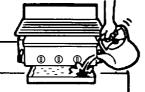




#### Precautions on water tray

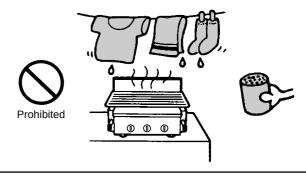
- Oil and fat deposited on the water tray may catch fire and cause burn injury or fire damage.
- Be sure to fill the water tray with water before use. If the oil or fat deposited on the tray starts splashing, be sure to replace water on the tray to remove oil and fat.





#### Do not use the griller for any purpose other than cooking

Fire or burn damage can occur. Do not use the griller for drying clothes, etc. Clothes may drop onto the griller and cause fire.



 Do not touch the hot parts such as rotisserie sticks, top plate, heat-resistant glass and grate during and immediately after use. Do not bring your face or hand near the grill surface to avoid contact with hot exhaust heat. Failure to observe this caution can result in burn injury.







## THINGS YOU NEED TO PAY ATTENTION

 This appliance is for commercial use. Do not use for dosmetic purpose.



 In case of change of user, be sure to let the new user to read this Manual and understand the contents thoroughly before use.



• Do not cover the griller with towel or newspaper after use.

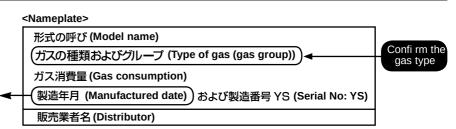
# **2 BEFORE USING THE GRILLER**

#### • Preparation Before Use

#### Check the type of gas supplied

 Ensure that the type of gas (gas group) supplied is same as the one mentioned on the nameplate of the appliance.

Example) 00.08 (Manufactured on August 2008)



#### Gas connection and installation

#### Gas valve

- Prepare a dedicated gas valve for this appliance.
- If there is no gas valve in the installation location or the gas valve is not appropriate, the gas valve needs to be newly installed, relocated or replaced. Consult your dealer or gas operator.

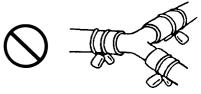
#### Gas connection

- RGA-404B, 404C
   RGA-406B, 406C
   RGA-408B, RGA-408C
   are rubber hose connection type.
- The connection port diameter is ø9.5mm hose end.

RGA-408: Natural gas
Gas other than LP gas:
\$\infty 13mm hose end \tag{7}

- Use a gas rubber hose and make it shorter as much as possible (up to 2m with reasonable margin) to avoid twist or bend. Do not place the rubber hose under the griller. Avoid contact between hose and the griller.
- Push the rubber hose onto the fitting up to the red line and secure it with a hose clamp.
- For RGA-410B and RGA-410C, the connection port diameter is 15A (R1/2).
- Gas pipe work requires specialist qualifications and expertise. Consult your dealer.

 Do not connect additional rubber hose or branch out the hose.



- Use a gas rubber hose only.
   Never use any vinyl hose.
   (Vinyl hose is not resilient and vulnerable to heat.) The hose with any crack or loose connection problem must be replaced with new one.
- When a fuse cock is used, select the one appropriate for the gas type and gas amount to be used.

#### ■ How to adjust shaky legs

• Adjust the shaky legs by leveling of the legs at four corners on the bottom to ensure the level installation.

#### **Installation location**

#### Stable, level location

Do not use this appliance in any unstable or windy location.



# Location without a risk of falling object

Do not use this appliance in a location with a risk of falling object such as under a shelf.



The object fallen on top of it may burn and cause fire.

# Location without flammable object such as curtain and spray can

Do not use this appliance near curtain or flammable object.

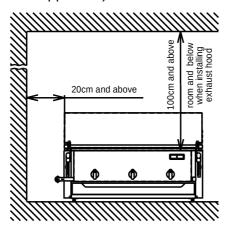


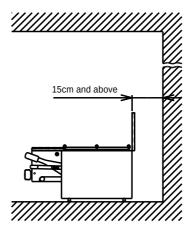
These objects may catch fire and cause fire damage.

- Install the appliance in a location with low humidity to ensure durability.
- Always ensure the ventilation (air inlet/exhaust) of the place where this appliance is used, and do not block the ventilation with any object. Be sure to maintain good ventilation while in use. Using this appliance in a closed location for a long time may cause imperfect combustion due to low oxygen level and, which can result in carbon monoxide poisoning.

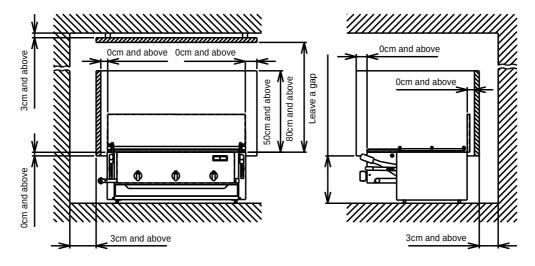
# Safety distance to combustible object and fi re prevention measures for the surroundings

- Be sure to observe the precautions on installation to ensure compliance with the Fire Prevention
  Ordinance. Insufficient clearance around the appliance may result in fire. Even if an inflammable wall
  is covered with the object such as stainless steel plate, it is necessary to maintain the same distance as
  required for combustible objects.
- Do not refurbish the appliance's surroundings after the installation (such as enclosing the appliance, installation of hanging shelf). Such a refurbishment may not be compatible with the installation standards or cause imperfect combustion or fire.
- If the wall around the appliance is fl ammable (such as wooden wall)
- Be sure to keep a distance of at least 20cm, 15cm and 100cm for sides, rear and top respectively.
   (For RGA-408B, RGA-410B, RGA-408C, RGA-410C, an exhaust pipe with exhaust hood needs to be installed above the appliance)





- If the upper distance of at least 20cm (sides), 15cm (rear) and 100cm (top) is unavailable between the appliance and flammable wall.
- Install a heat insulating plate as shown in the illustration below.

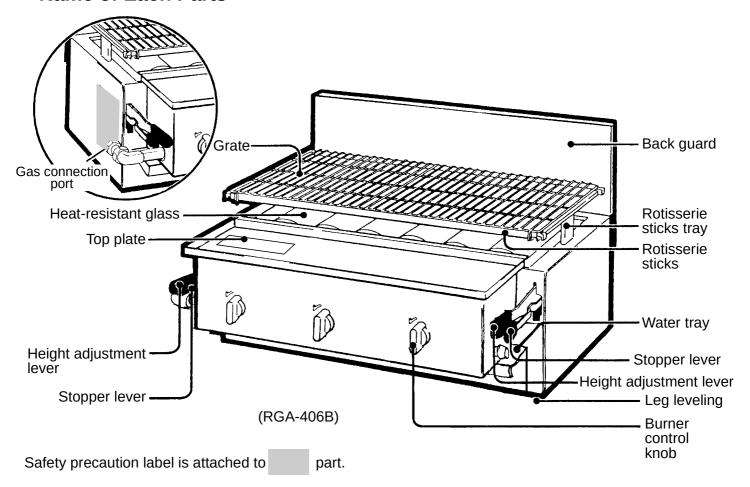


#### \* Heat insulating plate

Material	Thickness	Caution
Steel plate	0.6cm and above	Ensure a space at least 3cm and provide adequate reinforcement to prevent harmful
Stainless steel plate	0.6cm and above	deformation.

<sup>\*</sup> Contact your dealer or gas supplier for a heat insulating plate.

#### • Name of Each Parts

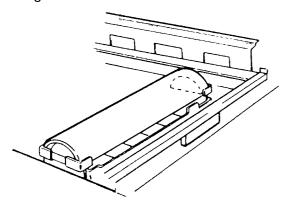


#### Installation of parts and adjustment step

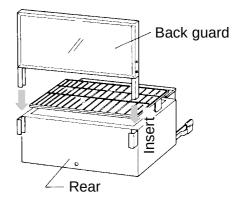
#### ■ Remove the papers/packaging materials and install the appliance correctly.

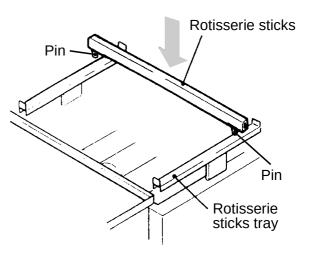
 If the wall at the back of the appliance is flammable, be sure to install the supplied back guard.

There are glass holders on both sides of the burner.
 Place the heat-resistant glasses on the holders.
 If the glass does not sit properly, change the right and left glass.



 Place the rotisserie sticks properly on the rotisserie stick holders.
 (Rotisserie sticks must be placed in such way that the pins are located outside of the rotisserie sticks.)





# **3** HOW TO USE

#### • Preparation and Verifi cation Before Use

#### When using this appliance for the first time

- Wipe the main unit with a clean cloth.
- Wash the grate, heat shield plate, rotisserie sticks and water tray using neutral detergent and then wipe them with a clean cloth.

#### Preparation

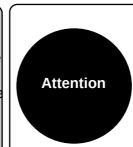
- Make sure that the burner control knob is at the "OFF" position and then fully turn on the gas valve.
- Fill the water tray with water until the water level indication.

#### Verifi cation

- No flammable object such as paper, plastic, oil and spray can is placed near the appliance.
- The rubber hose is not cracked, excessively bent or in contact with the griller. (For a rubber hose connection)
- When an air conditioner with fan is used, do not allow the wind from the air conditioner to blow directly onto this appliance.

#### How To Use

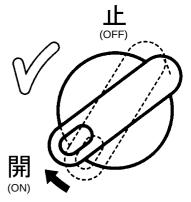
When the burners are ignited for the first time, the ignition may not be smooth due to the air trapped in the hose. In this case, repeat the ignition operation few times until the air is released. If the ignition attempt fails, turn the burner control knob back to the original position and then make another ignition attempt. Ignition may fail if the knob is turned too fast.



- When turning on the gas valve, be extra careful not to turn on a gas valve not connected to any appliance or control the gas valve connected to another appliance.
- Do not bring your face too near when checking an ignition.

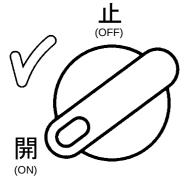
- For RGA-404B, a single ignition (or extinguishing) operation ignites two burners (or turn off).
- For RGA-404C, a single ignition (or extinguishing) operation ignites one burner (or turn off).

 The burner control knob slightly returns up to "ON" position.



#### **Ignition**

 Press the burner control knob and slowly turn counterclockwise until a click sound can be heard.



- A click sounds and the pilot burner is ignited.
   Keep the knob pushed in and turned for a few seconds until the main burner is ignited.
- Release your hand from the burner control knob only after making sure that the main burner has been ignited.

# **↑** CAUTION

- If the griller is used without filling the water tray with water, the oil and fat deposited on the water tray may catch fire. Be sure to fill the water tray with water to approximately half level before use.
- During use, make sure from time to time that the
  water tray is filled with water without a lot of oil and
  fat deposited. If the oil or fat deposited on the tray
  starts splashing, be sure to replace water on the
  tray to remove oil and fat. If the water tray is used
  without replacing water, the splashed oil and fat
  may catch fire. Caution should be exercised during
  water replacement as the water tray may be very
  hot.

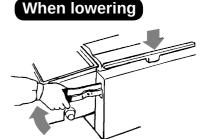
#### How to adjust the grate height

• The grill height can be adjusted to five different levels with the height adjustment lever. Adjust the grill height according to the type and size of the ingredients to be grilled.
To raise the grill surface height, pull down the height adjustment lever without holding the stopper lever and stop at a position with click sound. To lower the grill surface height, hold the stopper lever and pull up the height adjustment lever.

#### Note

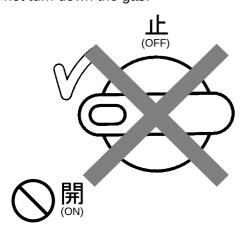
- Operate slowly.
- Be careful not to pinch your finger with the appliance during operation.





#### Flame control

- In the case of high heat grill, lower the grill height while maintaining the burner control knob at "ON" position.
- If the gas is turned down to control the flame, the radiation effect will substantially be lost. To control the grilling heat, adjust the grill height with the height adjustment lever while maintaining the burner control knob at fully turned position. (If gas is turned down, fat from fish, etc. easily adheres to the heat-resistant glass and more smoke is generated.)
- Do not turn down the gas.



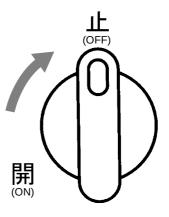
# **⚠** CAUTION

 Do not bring your face too near the burner during ignition. Burn injury on the face may occur due to flame or heat.



#### **Extinguishment**

 Turn the burner control knob clockwise fully (up to the "OFF" position).



 Make sure that the main burner has been extinguished.

#### Re-ignition

- Slowly turn the burner control knob counterclockwise (towards ON direction) until it stops.
- When re-igniting immediately after extinguishing, wait for about 5 seconds before the next ignition attempt.

#### After use

- Make sure that the burner control knob is at the "OFF" position and shut off the gas valve fully.
- Do not cover the griller with towel or newspaper.

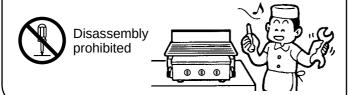
#### • Daily Inspection and Cleaning

First of all, make sure that: 1 the gas valve is shut off.

2 the griller has been cooled down.



Users other than repair personnel must never disassemble, repair or modify this appliance. Failure to observe this warning may result in fire, gas leakage or injury due to malfunction.



Do not put water on the appliance. It could result in incomplete combustion.





#### Inspection

- Check if a gas rubber hose is used and connected to the griller as well as the gas valve properly up to the red line. (RGA-404B, 404C, 406B, 408B and 408C)
- Check for gas leakage from the gas connection from time to time using soap water, etc.
- Check if any combustible object such as paper, plastic, spray can and oil is placed near the appliance.
- Make sure that the heat-resistant glass or griddle is properly installed
- Check if a lot of oil and fat is deposited on the water tray from time to time. If the oil or fat deposited on the tray splashes during use, replace the water on the tray.

#### ■ Cleaning (Be sure to wear gloves when cleaning to prevent injury.)

Usable tools	<ul> <li>Neutral kitchen detergent</li> </ul>	<ul> <li>Soft cloth</li> </ul>	<ul><li>Sponge</li></ul>
Unusable tools	<ul> <li>Acidic detergent, alkaline deter</li> <li>Cleanser (Scrubbing powder)</li> <li>Alcohol, thinner, benzene</li> <li>Metal brush, Nylon brush, meta</li> </ul>		



- Make sure that the cleaned parts have been installed properly.
- A caution label containing safety information is pasted on the main unit. If the label is dirty and unreadable, wipe the appliance with a soft cloth and watch out for the label when cleaning. If the label is peeled off or unreadable, contact your dealer or any Rinnai office for repurchase and re-paste of the label.

#### Main unit, top plate, rotisserie sticks tray

 Wipe well with a dry cloth. In case of stubborn dirt, clean with a cloth dampened with neutral detergent solution, wipe off the detergent adequately and then wipe with a dry cloth. Damage may be promoted if the dirt is left untreated.

#### ■ To ensure long life of heat-resistant glass

Heat-resistant glass may crack due to chemical reaction with the ingredients contained in sauce or seasoning adhered to the glass. Make sure to clean the heat-resistant glass by the following method to ensure its long life.

• After use, wash off the dirt with water or warm water using a cloth or sponge.

• The heat-resistant glass will not break even if water is poured onto it during cooking. Wash off the dirt on the glass while cooking by pouring water on it by way of spray, etc. Be careful not to pour water on the heating surface of the burner.

Heat-resistant glass

Reinstall the glass properly after cleaning. (Read page 7 for details.)

#### Burner

- Do not apply impact or pour/spill water onto the heating surface (main burner).
- Clean the dirt adhered to the side of the main burner with a scrubbing brush dampened with neutral detergent solution.

#### • Water tray, grate, rotisserie sticks

- Clean the dirt with neutral detergent and wipe off the water well with a dry cloth.
- Reattach them to the main unit after cleaning.

#### ■ About consumable parts

Contact your dealer or any Rinnai offi ce for purchase of consumable parts.

#### Heat-resistant glass

Damaged heat-resistant glass can cause uneven grilling, damage to the appliance or imperfect combustion due to oil and fat or dirt dropped directly onto the heating surface of the main burner. If the heat-resistant glass is damage, purchase a new heat-resistant glass.

#### • Grate, water tray, rotisserie sticks

Purchase a new grate, water tray and rotisserie sticks if any of these parts is deformed or damaged to the extent that the use of the griller is likely to be affected.

# **4** TROUBLESHOOTING

• Fault/Error Identifi cation and Remedy

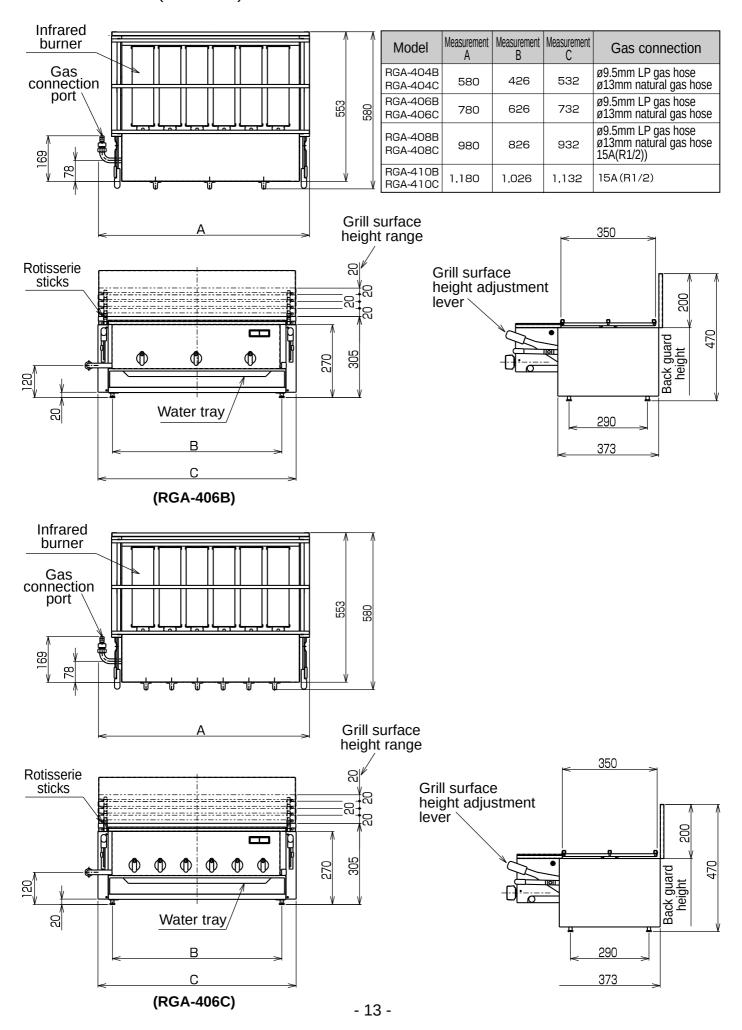
# **MARNING**

If you notice something abnormal while in use, immediately stop using this product and shut off the gas valve.

In a case li (Sympto Things to check (Cause)	om)	The fl ame is not ignited. It is hard to ignite.	The burner does not turn red when heated.	It is hard to ignite (from pilot burner to main burner)	Explosion-like ignition	Flame is yellow	Flame is not stable	Flame burns with abnormal noise	The fl ame goes off while using. It is easy to distinguish.	Action to be taken
Forgot to turn on the gas or the gas valve is not suffi ciently turned on.	as valve	•	•	•	•		•			Check the position of the burner control knob and then fully turn on the gas valve.
Air is trapped inside the pipe	e gas		•							Repeat ignition operation with care until gas is properly supplied.
Gas pressure is not appropriate	Low High	•	•	•	•	•	•	•	•	Request for inspection if this is also observed on other appliances.
Bent or squashed rubb	er hose	•	•	•	•					Straighten the bent hose in case of rubber hose connection.
Not fully connected to the fuse cock		•	•	•	•		•		•	Fully connect the rubber hose to the fuse cock in case of rubber hose connection
Deterioration of rubber due to wear and tear	hose	•			•		•		•	Replace the rubber hose or cut off the hose tip in case of rubber hose connection.
Dirt on the electrode of system	ignition	•								Wipe off the dirt. If problem persists, request for inspection.
Clogged fl ame hole or	air hole		•	•	•	•	•	•	•	Remove the clogging object. If problem persists, request for inspection.
Improper installation of	glass		•	•	•	•	•	•	•	Install the glass properly.
Improper ignition opera	Improper ignition operation									Refer to "How to Use (Ignition)"
Lead wire connection profor ignition system	Lead wire connection problem for ignition system									Request for inspection.
Failure of ignition syste	em	•								Request for inspection, repair or parts repair
Gas type on the name gas type used are not i		•		•	•	•		•		Request for inspection or repair

If the problem still persists even after you have checked the above items, stop using the griller immediately and contact your dealer or any Rinnai offi ce.

#### • **Dimensions** (Unit : mm)



# Specifi cations

#### ■ Specifi cations

Mode	name		Infrared Gas Griller (Lower Flame Type)							
Mod	el no.	RGA-404B RGA-404C		RGA-406B RGA-406C		04B RGA-404C RGA-406B RGA-406C RGA-408B RGA-408C		RGA-410B	RGA-410C	
Dimensi	on (mm)	(W) (D) (H) (W) (D) 580 x 580 x 470 780 x 580			, , ,	(W) (D) (H) 980 x 580 x 470		(W) (D) (H) 1180 x 580 x 470		
Weigl	nt (kg)	26.5	26.5 26.9 26.5 26.9			26.9 45.2 46.2		54.0	55.3	
Gas	LP gas		ø9.5mm	gas hose		ø9.5mm gas hose		15A (R1/2)		
connection	Natural gas		ø13mm (	gas hose			gas hose R1/2))	15A	(R1/2)	
Ignition	system	Piezo								
Acces	sories	Rotisserie sticks (3 pcs), back guard (1 pc), operation manual (1 book), contact list (1 pc)						ist (1 pc)		
710000	301103	Heat-resistant glass, grate, water tray, glass cleaning card								

<sup>\*</sup> Ignition (Extinguishment) specifications For RGA-404B, a single ignition (or extinguishing) operation ignites two burners (or turn off).

For RGA-404C, a single ignition (or extinguishing) operation ignites one burner (or turn off).

#### ■ Gas Consumption (Gas consumption per hour)

Model no.  Gas in use Gas group	RGA-404B	RGA-406B	RGA-408B	RGA-410B
	RGA-404C	RGA-406C	RGA-408C	RGA-410C
For natural gas	6.50kW/	9.83kW/	13.1kW/	16.4kW/
	22178.92 BTU	33541.35 BTU	44699.05 BTU	55959.12 BTU
For LP gas	7.00kW/	10.5kW/	14.0kW/	17.4kW/
	23884.99 BTU	35827.48 BTU	47769.98 BTU	59371.26 BTU

<sup>\*</sup> The specifi cations are subject to change without notice for improvements.

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