

# Thor Gas Salamander

## Installation and Operation Instructions



0359-14

PIN: 0359CR1486

BS EN203-1:2014

Gas heated catering equipment(TYPE A)

Model: GL163-P, GL163-N

### IMPORTANT FOR FUTURE REFERENCE

Please complete this information and retain this manual for the life of the equipment. For Warranty Service and/or parts, this information is required.

Model Number

Serial Number

Date Purchased



**WARNING:** For your safety, do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliances. Keep the area free and clear of combustible materials.



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



**WARNING:** Instructions must be posted in a prominent location. All safety precautions must be taken in the event the user smells gas. Safety information can be obtained from your local gas supplier.



# thor

Fourth Way, Avonmouth, Bristol, BS11 8TB

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## Introduction

We are confident that you will be delighted with your Thor Gas Salamander, and it will become a most valued appliance in your commercial kitchen.

To ensure you receive the utmost benefit from your new Gas Salamander, there are two important things you can do.

### Firstly:

Please read the instruction book carefully and follow the directions given. The time taken will be well spent.

### Secondly:

If you are unsure of any aspect of the installation, instructions or performance of your appliance, contact your dealer promptly. In many cases a phone call could answer your question.

### CE Only:

These instructions are only valid if the country code appears on the appliance. If the code does not appear on the appliance, refer to the supplier of this appliance to obtain the technical instructions for adapting the appliance to the conditions for use in that country.

#### **WARNING:**

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.

READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS APPLIANCE.

#### **WARNING:**

INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS, ARE TO BE POSTED IN A PROMINENT LOCATION. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING THE LOCAL GAS SUPPLIER.

#### **WARNING:**

GREAT CARE MUST BE TAKEN BY THE OPERATOR TO USE THE EQUIPMENT SAFELY TO GUARD IT AGAINST RISK OF FIRE.

- THE APPLIANCE MUST NOT BE LEFT ON UNATTENDED.
- IT IS RECOMMENDED THAT A REGULAR INSPECTION IS MADE BY A COMPETENT SERVICE PERSON TO ENSURE CORRECT AND SAFE OPERATION OF YOUR APPLIANCE IS MAINTAINED.
- DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPOURS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.
- DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.

#### **CAUTION:**

THIS APPLIANCE IS;

- FOR PROFESSIONAL USE
- ONLY QUALIFIED SERVICE PERSONS ARE TO CARRY OUT INSTALLATION, SERVICING AND GAS CONVERSION OPERATIONS.
- COMPONENTS HAVING ADJUSTMENTS PROTECTED BY THE MANUFACTURER SHOULD NOT BE ADJUSTED BY THE USER/OPERATOR.

## Specifications

### General

Commercial heavy duty, wall mounted gas fired infra-red grilling salamander.

### Pack Contents

The following is included:

- Thor Gas Salamander
- 1pc rack
- Instruction Manual
- Wall Mounting Bracket, including:
  - 2 x 25mm Black Plastic Spacer.
  - 2 x 3/8" Bolts/Nuts

### Gas Supply Requirements

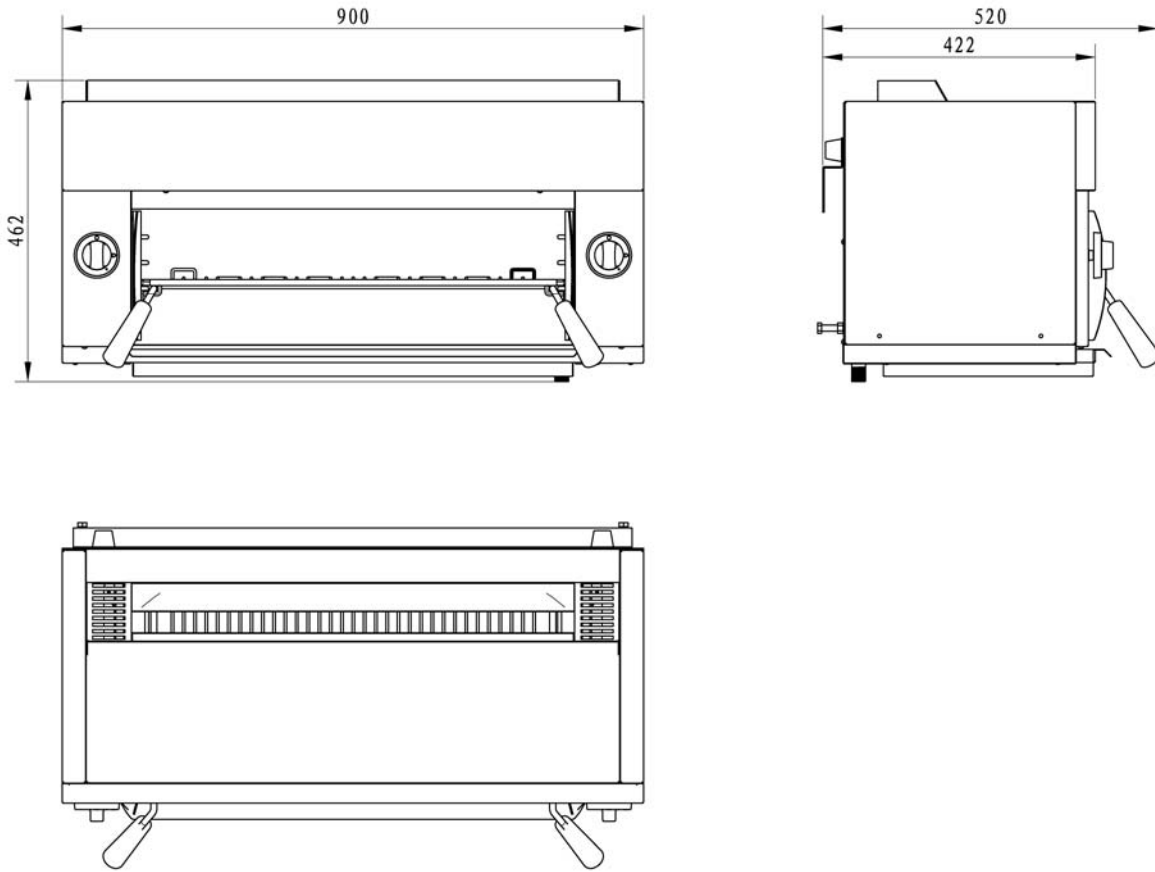
	Natural Gas(G20)	Propane(G31)	Butane(G30)
	GL163-N	GL163-P	GL163-P
Single burner Heat Input	3.8KW	3.8KW	3.8KW
Heat Total	7.6KW	7.6KW	7.6KW
Burner Operating	2.0 kPa	3.7 kPa	2.8-3.0 kPa
Supply Pressure	2.0 kPa	3.7 kPa	2.8-3.0 kPa
Gas Connection	3/4" BSP Male	3/4" BSP Male	3/4" BSP Male

The burner operating pressure is to be measured at the gas control valve outlet test point with two burner operating at 'High' setting. The operating pressure is ex-factory set, through the appliance regulator and not to be adjusted, apart from when carrying out gas conversion, if required. (Refer to the 'Gas Conversion' section for details).

Minimum input of burner: 2.8KW for LPG, 2.8KW for NG

## Dimensions

### Dimensions for Gas Salamander



**Note: gas salamander rack can load-bearing: 15kg (33 lb)**

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## Installation

**NOTE: It is most important that this salamander is installed correctly and that operation is correct before use. Installation shall comply with local gas and health and safety requirements.**

Thor Gas Salamanders are designed to provide years of satisfactory service, and correct installation is essential to achieve the best performance, efficiency and trouble-free operation.

This appliance must be installed in accordance with National installation codes and in addition, in accordance with relevant National / Local codes covering gas and fire safety.

### **Australia:**

AS 5601 - Gas Installations.

### **New Zealand:**

NZS 5261 - Gas Installation.

### **United Kingdom:**

Gas Safety (Installation and Use) Regulations 1998.

BS6173 - Installation of Catering Appliances.

BS5440 - 1 & 2 Installation Flueing & Ventilation.

### **Ireland:**

IS 820 - Non Domestic Gas Installations.

**Installations must be carried out by qualified service persons only. Failure to install equipment to the relevant codes and manufacturer's specifications shown in this section will void the warranty.**

**Components having adjustments protected (e.g. paint sealed) by the manufacturer, are only to be adjusted by an qualified service agent. They are not to be adjusted by the installation person.**

## Unpacking

- Remove all packaging and transit protection from the appliance including all protective plastic coating from the exterior stainless steel panels.
- Check equipment and parts for damage. Report any damage immediately to the carrier and distributor.
- Report any deficiencies to the distributor who supplied the appliance.
- Check that the available gas supply is correct to that shown on the rating plate located on the front lower corner of the right hand side panel.
- Check that all parts have been supplied with the appliance.

## Location

1. Installation must allow for a sufficient flow of fresh air for the combustion air supply. Combustion Air Requirements Natural Gas 9 m<sup>3</sup>/hr minimum. LPG / Propane 9 m<sup>3</sup>/hr minimum.

2. Installation must include adequate ventilation means, to prevent dangerous build-up of combustion products.

3. This appliance must be mounted onto a noncombustible wall or tailored stand, using the rear wall bracket and spacing screws provided.

4. Combustible walls must not protrude past the front of the appliance.

5. This appliance must not be mounted on a combustible surface or metal surface, as radiated heat will cause these surfaces to become extremely hot.

6. Caution should be taken as intense heat is emitted at the bottom front of the appliance.

7. Components having adjustments protected (e.g. paint sealed) by manufacturer are only to be adjusted by an qualified service agent. They are not to be adjusted by the installation person.

8. The unit should be mounted under an extraction hood in compliance with all local regulations.

**In the event that the unit is not mounted under an extraction hood, the installer must ensure that all regulations are met and that there is an unobstructed minimum distance of 750 mm from the top surface of the unit to the ceiling, which must be of non-combustible material.**

## Installation (Continued)

**NOTE: Do not obstruct or block the appliances flue. Never directly connect a ventilation system to the appliance flue outlet.**

### Clearances

**NOTE:**

Only non-combustible materials can be used in close proximity to this appliance.

	Combustible Surface	Non Combustible Surface
Left / Right Hand Side	100mm	25mm*
Rear	50mm	30mm
Top Clearance to:		
- Extraction Hood		200mm
- Grease Arresting Filter**		400mm
- Ceiling***		750mm

\* We recommend allowing a clearance of 100 mm on either side of the appliance to allow access to the side panels for servicing purposes.

\*\* Using the wall mounting accessories provided with this appliance.

\*\*\* Top clearances can be reduced where local fire protection system is provided, if allowed by the local regulations.

### Wall Mounting (To Non-Combustible Wall Only)

1. Fix the wall mounting bracket to the wall with six screws, in such a position that the top of the bracket is level and at least 945 mm (38") above any surface beneath the unit. This will ensure that the bottom of the Salamander is at least 600 mm (24") above any surface.

2. Fit the two black plastic spacers to the top rear corners of the unit. Leave them unscrewed by approximately 5 mm.

3. Fit the two adjusting screws / bolts into the nut inserts at the bottom rear corners of the unit. These should protrude approximately 30 mm from the rear of the Salamander.

4. Lift the Salamander onto the wall bracket, lining up the black plastic spacers on the salamander with the mounting notches in the bracket.

5. Lower the Salamander onto the mounting bracket.

6. Tighten the black spacers securely and adjust the levelling screws / bolts to ensure that the unit is level.

### Gas Connection

**NOTE: ALL GAS FITTING MUST ONLY BE CARRIED OUT BY A QUALIFIED SERVICE PERSON.**

1. Thor salamanders do not require an electrical connection, as they function totally on the gas supply only.

2. It is essential that the gas supply is correct for the salamander to be installed and that adequate supply pressure and volume are available. The following checks should therefore be made before installation:-

- a. **Gas Type** the appliance has been supplied for is shown on a coloured stickers located above the gas connection and next to the rating plate. Check that this is correct for the gas supply the appliance is being installed for. The gas conversion procedure is detailed in this manual.

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## Installation (Continued)

- b. **Supply Pressure** required for this appliance is shown in the 'Specifications' section of this manual. Check the gas supply to ensure adequate supply pressure exists.
- c. **Input Rate** of this appliance is stated on the Rating Plate fitted on the R/H side panel and in the 'Specifications' section of this manual. The input rate should be checked against the available supply line capacity. **Particular note should be taken if the salamander is being added to an existing installation.**

### NOTE:

**A Manual Isolation Valve must be fitted to the individual appliance supply line.**

3. Correctly locate the appliance into its final operating position and using a spirit level, adjust the legs so that the unit is level and at the correct height.
4. Connect the gas supply to the appliance. A suitable jointing compound which resists the breakdown action of LPG must be used on every gas line connection, unless compression fittings are used.

<p style="text-align: center;"><b><u>WARNING:</u></b></p>
-----------------------------------------------------------

<p style="text-align: center;">DO NOT USE A NAKED FLAME TO CHECK FOR GAS LEAKAGES.</p>
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5. Check all gas connections for leakages using soapy water or other gas detecting equipment.
6. Check that the gas operating pressure is as shown in 'Specifications' section.

### NOTE:

**The burner operating pressure is to be measured at the manifold test point with both burners operating at full setting. The operating pressure is ex-factory set and not to be adjusted, apart from when converting between gases, if required. Refer to the 'Gas Conversion' instructions for this appliance for further details.**

7. Turn off the mains gas supply and bleed the gas out of the appliance gas lines.
8. Turn 'On' the gas supply and the appliance.
9. Verify that the operating pressure remains correct.

### NOTE:

**It is important that adequately sized piping runs directly to the connection joint on the appliance with as few tees and elbows as possible to give maximum supply volume.**



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## Installation (Continued)

### Commissioning

The following commissioning checks must be carried out before the appliance is handed over for use, to ensure that the unit operates correctly and the operator(s) understand the correct operating procedure.

1. Before leaving the new installation;
  - a. Check the following functions in accordance with the operating instructions specified in the 'Operation' section of this manual.
    - Light the Main Burners.
    - Check the Low Fire burner operation.
    - Check the High Fire burner operation.
    - Check the Racking System operation.
  - b. Ensure that the operator has been instructed in the areas of correct lighting, operation, and shutdown procedure for the appliance.
2. This manual must be kept by the owner for future reference, and a record of **Date of Purchase, Date of Installation** and **Serial Number of Unit** recorded and kept with this manual. **(These details can be found on the Rating Plate attached to the R/H side panel (refer to the 'Gas Connection' section)).**

#### NOTE:

**If for some reason it is not possible to get the unit to operate correctly, shut off the gas supply and contact the supplier of this unit.**

# Operation

## Operation Guide

### **CAUTION:**

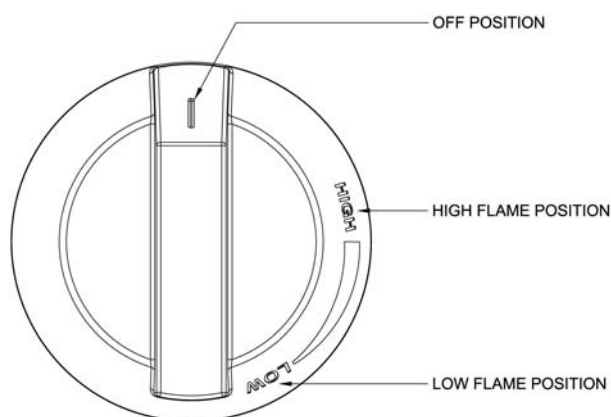
- THIS APPLIANCE IS FOR PROFESSIONAL USE AND IS ONLY TO BE USED BY QUALIFIED PEOPLE.
- ONLY QUALIFIED SERVICE PERSONS ARE TO CARRY OUT INSTALLATION, SERVICING OR GAS CONVERSION OPERATIONS.
- COMPONENTS HAVING ADJUSTMENTS PROTECTED (E.G. PAINT SEALED) BY THE MANUFACTURER SHOULD NOT BE ADJUSTED BY THE USER/OPERATOR.

1. Thor Gas Salamanders have been designed to provide simplicity of operation and 100% safety protection.
2. Improper operation is therefore almost impossible, however bad operation practices can reduce the life of the gas salamander and produce a poor quality product. To use this appliance correctly please read the following sections carefully:-
  - Lighting the Main Burners.
  - Racking System
  - Cooking Recommendations

## Description of Controls

The salamander has individual heat controls for the left and right sides. Select the desired heat level and allow a few minutes for clear the air in the pipe during initial use.

- Thor salamanders provide two independently controlled heat zones.
- The left hand and right hand gas control knobs operate the left side and right side burners respectively, independently of each other.
- Each burner is provided with flame failure protection.



## Lighting the Main Burners

1. Select the burner required, depress and turn the corresponding gas control knob anti-clockwise to 'HIGH' flame position.
2. With the gas control knob depressed, manually light the burner. (It will take about 1 minute to clear the air in pipe during initial use).
3. Release the gas control knob after approximately 10-20 seconds after lighting the burner.

## Operation (Continued)

4. Low flame can be achieved by depressing the gas control knob and rotating fully anti-clockwise to the 'LOW' flame position.
5. To achieve simmer control, depress the gas control knob and rotate between the 'HIGH' and 'LOW' positions to achieve the temperature required.
6. Repeat Items 1 to 5 to light the second main burner.

### Turning 'OFF' the Main Burners

1. To turn off the main burner, rotate the gas control knob to the 'OFF' position. The main burner will extinguish.

### Racking System

The Rack System fitted to the Salamander is self-supporting when withdrawn, to allow easy loading of food. The installation of the rack level is dependent on the cooking function required.

### Cooking Recommendations

**WARNING:**

**TO AVOID THE RISK OF FIRE:-**

- DO NOT LEAVE THIS APPLIANCE UN-ATTENDED WHEN IN USE, AS IT DOES COOK FAST.
- DO NOT USE OR PLACE ANY COMBUSTIBLE MATERIAL WITHIN 600 MM OF THE FRONT COOKING ZONE WHEN THE APPLIANCE IS IN USE.
- SYSTEMATICALLY CHECK AND CLEAN THE COOKING AREA, PARTICULARLY THE GRILL RACK AND DRIP TRAY, BEFORE LIGHTING THE BURNERS.

**MAXIMUM ALLOWABLE LOAD INTO THIS APPLIANCE IS 15 KG INCLUDING ANY ADDITIONAL ACCESSORIES, IF USED. IT IS NOT TO BE EXCEEDED.**

1. The Thor Salamander has been designed to give a good evenness of heat across the rack area, so toasting, cheese melting and grilling should be relatively even wherever food is placed.
2. The HIGH position is recommended for most grilling, cheese melting functions and LOW position for a reduced heat.
3. For cooking food through rather than just surface browning, rack position three and four from the top is recommended.

**IMPORTANT**

**Should any abnormal operation like;**

- ignition problems,
- abnormal burner flame,
- burner control problems,
- partial or full loss of burner flame in normal operation,

**it means the appliance requires IMMEDIATE service by a qualified service person and should not be used until such service is carried out.**

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## Cleaning and Maintenance

### General

- To achieve the best results cleaning must be regular and thorough. All controls and mechanical parts should be checked and adjusted periodically by a qualified service person. If any small faults occur, have them attended to promptly.
- Don't wait until they cause a complete breakdown. It is recommended that the appliance is serviced every 6 months.
- Clean the salamander regularly. A clean appliance looks better, will last longer and will perform better.
- Do not clean the unit and its parts using automatic dishwasher.

### Racking

- For ease of cleaning of this unit and the racking system and to achieve the best results, it is recommended that the racking is removed completely from the unit and cleaned independently. This will allow for a more thorough cleaning of the Salamander.
- To remove the racking system, carry out the following instructions.
  1. Remove the Crumb / Drip Tray from the underside of the salamander unit.
  2. Remove the Branding Plate from the rack (if fitted).
  3. Slide the rack out of the side racks and remove from the unit.
  4. Remove the left and right hand side racks from the unit by removing the single securing screw from each of the side racks.
  5. Withdraw the left and right hand side racks from the unit.
  6. Refit the racking in the reverse order once cleaning has been completed.

### Stainless Steel Surfaces

- Clean with detergent. Baked on deposits or discolouration may require a good quality stainless steel cleaner or stainless steel wool. Always apply the cleaner when the salamander is cool and rub in the direction of the "grain".

### Crumb / Drip Tray

- Empty and clean daily.

### Periodic Maintenance

**NOTE: All maintenance operations should only be carried out by a qualified service person.**

To achieve the best results cleaning must be regular and thorough and all controls and mechanical parts should be checked and adjusted periodically by a qualified service person. If any small faults occur, have them attended to promptly. Don't wait until they cause a complete breakdown. It is recommended that the appliance is serviced every 6 months.

### Gas Control Valve Re-Greasing

The gas control valve should be dismantled and greased every 6 months to ensure the correct operation of the gas control valve. To carry out this operation;

1. Remove the gas control knobs from the gas tap spindles by pulling the knobs away from the control panel.
2. Remove the crumb / drip tray from the appliance.
3. Remove the two screws on the underside of the control panel, securing the control panel to the hob.
4. Remove the control panel from the front of the appliance.
5. Remove the 2 screws holding shaft plate to gas control body and remove control shaft and plate. Note orientation of shaft for correct re-assembly.
6. Using needle nose pliers or similar, pull out gas control spindle, again noting its orientation.
7. Apply a suitable high temperature gas cock grease or lubricant such as ROCOL - A.S.P (Anti scuffing paste) / Dry Moly Paste to the outside of spindle.
8. Replace spindle and re-assemble the gas control in reverse order.
9. Refit the control panel to the appliance and secure with 2 screws.
10. Refit the knobs to the gas control valve spindles.

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## Gas Conversion Procedure

### NOTE:

- These conversions should only be carried out by qualified persons. All connections must be checked for leaks before re-commissioning the appliance.
- For all the following conversion instructions, the side panels have to be removed (Remove the two screws at the bottom of each side panel).
- All conversion details apply to both L/Hand and R/Hand burners.
- For all relevant gas specifications refer to the table at the end of this section.

### Main Burner Injectors

1. Ensure that the gas supply has been turned 'Off'.
2. Unscrew the main burner injectors (½" A/F).
3. Determine the correct injector sizes for the corresponding gas type from the rating plate affixed to the right hand side panel front bottom corner.
4. Replace with the correct size injectors.

### Low Fire Adjustment

1. Remove the gas control knobs from the front of the unit.
2. Remove the 2 front control panels by removing the two screws (per panel) located at the bottom of each panel.
3. Set the burner low fire adjustment. The low fire screw on the gas control valve should be screwed fully in, then unscrewed by the measurement shown in the 'Gas Specifications' table.

### Commissioning

Before leaving the converted installation;

1. Check all gas connections for leakages using soapy water or other gas detecting equipment.
2. Check the following functions in accordance with the operating instructions specified in the 'Operation' section of this manual.
  - Light the Main Burners.
  - Check the Low Fire burner operation.
  - Check the High Fire burner operation.
  - Ensure all controls operate correctly.

### NOTE:

**If for some reason it is not possible to get the appliance to operate correctly, shut off the gas supply and contact the supplier of this unit.**

**WARNING: DO NOT USE A NAKED FLAME TO CHECK FOR GAS**

### Replacement Parts

#### **IMPORTANT:**

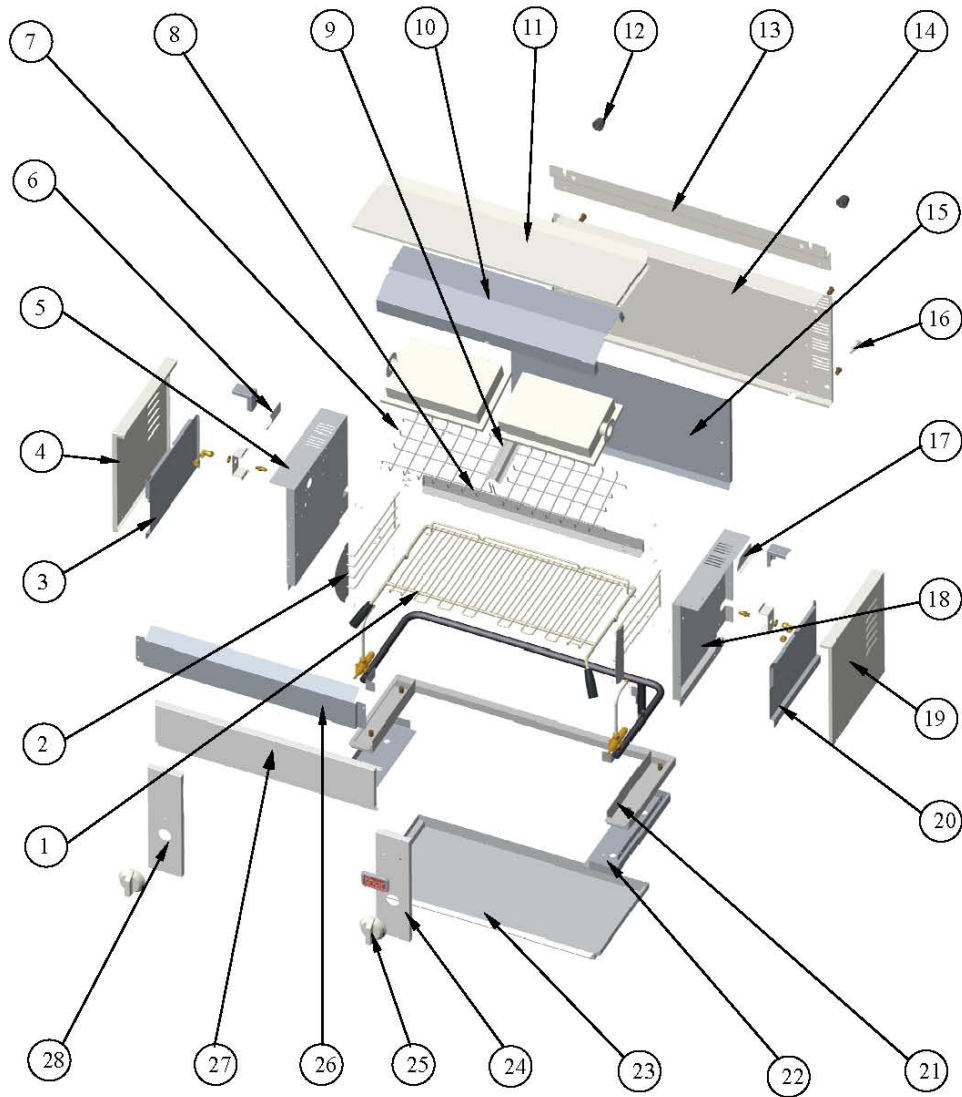
Only genuine authorized replacement parts should be used for the servicing and repair of this appliance. The instructions supplied with the parts should be followed when replacing components.

For further information and servicing instructions, contact your nearest authorized service branch.

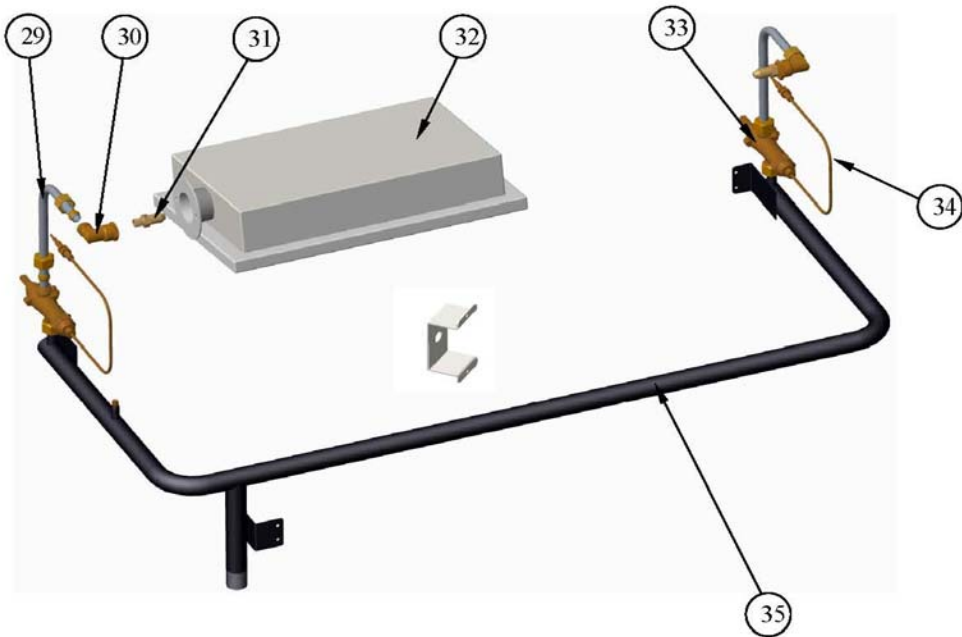
When ordering replacement parts, please quote the part number and the description listing below. If the part required is not listed below, request the part by description and quote model number and serial number which is shown on the rating plate.

**CAUTION: Please replace the corresponding warning label that shows the gas type operated when the qualified person will convert to another gas in order not to cause death or injury or damage.**

# Explosion drawing



## Explosion drawing



## Spare Parts List

NO.	DESCRIPTION	Part No.	MODEL	
			GL163-P	GL163-N
1	Rack	01.11.1062056	1	1
2	Rack support	01.02.1005371	2	2
3	Left insulation	01.15.1066413	1	1
4	Side panel-I	01.05.1029292	1	1
5	Left inner panel	01.15.1066420	1	1
6	Upper left plate	01.05.1029296	1	1
7	Burner protect	01.03.1015100	2	2
8	Upper inner2	01.15.1066419	1	1
9	Burner protect connector	01.05.1029298	1	1
10	Upper inner1	01.15.1066418	1	1

## **Spare Parts List (Continued)**

NO.	DESCRIPTION	Part No.	MODEL	
			GL163-P	GL163-N
11	Top cover	01.05.1029295	1	1
12	Feet1	02.12.1165053	2	2
13	Back hold plate	01.15.1066412	1	1
14	Back panel	01.15.1066415	1	1
15	Back inner plate	01.15.1066417	1	1
16	Feet2	01.02.1005381	2	2
17	Upper right plate	01.05.1029297	1	1
18	Right inner panel	01.15.1066421	1	1
19	Right insulation plate	01.15.1066414	1	1
20	Side panel-l	01.05.1030294	1	1
21	Support assembly	01.09.1050453	1	1
22	Side bottom	01.05.1029291	2	2
23	Oil tray	01.05.1029290	1	1
24	Control panel-r	01.05.1030295	1	1
25	Knob	06.05.1472202	2	2
26	Front insulation	01.15.1066416	1	1
27	Front cover	01.05.1029294	1	1
28	Control panel-l	01.05.1029293	1	1
29	Main pipe assembly	06.05.1472745	2	2
30	L-connector	01.18.1067451	2	2
31	Main burner injector/Orifice (for Natural Gas) - #151	01.20.1068663	/	2
	Main burner injector/Orifice (for LPG) - #102	01.20.1068667	2	/
32	Infrared burner	01.03.1015099	2	2
33	Safety Gas Valve	01.20.1068572	2	2
34	Thermocouple	03.11.1250034	2	2
35	Manifold assembly	01.24.1070916	1	1



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**thor**

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