

# USE AND MAINTENANCE MANUAL

Translation of the original instructions in Italian

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## LAVA STONE GRILL LADY QUEEN

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**saro**  
**1001**

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*Dear Customer,*

*thank you for choosing us. We are certain that this appliance will satisfy your needs and live up to your expectations.*

*We kindly ask you to read this Use and Maintenance Manual carefully in order to be able to use the appliance to its full potential. For any further information regarding use and maintenance, please do not hesitate to contact us. We will be delighted to answer any questions you may have.*

## **Introduction**

### **Warning on the ownership of information**

- *In order to foster its policy of continual development and updating of the product, the Manufacturer reserves the right to make any modifications necessary to improve its basic features without having to give notice and without being under any obligation to do so. If the modifications do not change any safety aspects, the Manufacturer is not obliged to give notice of them in this document attached to the appliance.*
- *The Manufacturer also reserves ownership of this document and strictly forbids its reproduction or disclosure to third parties without prior authorization.*
- *Any illustrations or drawings in this document are merely simplified representations of the appliance; on the basis of any improvements and modifications made, they may not correspond to the actual appliance.*

### **Updating procedure**

- *Updating and/or drafting of a new version of the above-mentioned document will only be carried out if the functional or safety aspects of the appliance are modified.*

### **Original version**

- *This document was originally issued in Italian. In the event of any controversy arising due to the translation of the same, even if carried out by the Manufacturer, the reference text will be the Italian version alone.*

- Reproduction of this document, either in total or in part, is forbidden without prior written consent by the Manufacturer, who reserves the right to modify it without any obligation to give notice, unless this represents a safety risk.
- Drafted by: VEGA srl

<b>1</b>	<b>General information</b>	<b>5</b>
1-1	Purpose and description of the manual	6
1-2	Correct manual storage	7
1-3	Identification data	8
1-4	Requests for assistance	10
<b>2</b>	<b>Technical information</b>	<b>11</b>
2-1	General description of the appliance	12
<b>3</b>	<b>Safety information</b>	<b>15</b>
3-1	Safety	16
<b>4</b>	<b>Information for correct use</b>	<b>19</b>
4-1	First use	20
4-2	Complete map of the controls	20
4-3	Burner start and turning off	21
4-4	Recommendations for use	22
4-5	What to do in the event of long periods of inactivity	22
<b>5</b>	<b>Maintenance information</b>	<b>23</b>
5-1	Maintenance recommendations	24
5-2	Ordinary cleaning	24
5-3	Useful tips for stainless steel care	26
5-4	Troubleshooting	28
<b>6</b>	<b>Instructions for qualified fitters</b>	<b>29</b>
6-1	General information	30
6-2	Storage	30
6-3	Packaging	30
6-4	Technical specifications	31
6-5	Positioning and installation	36
6-6	Gas Connection	40
6-7	Inspection and start-up	41
6-8	Adjustments	44
6-9	Adjustment for operation with different gases	45
6-10	Maintenance to be carried out by a fitter or qualified technician	47
<b>7</b>	<b>Tables and annexes</b>	<b>49</b>

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# **1 GENERAL INFORMATION**

## 1-1 Purpose and description of the manual

This manual is an integral part of the appliance and aims to provide all the information necessary to:

- make operators fully aware of any safety issues;
- guarantee correct installation;
- ensure full understanding of its operating principles and correct, safe use;
- carry out any maintenance correctly and safely;
- dispose of the appliance safely and in compliance with applicable legislation concerning health and safety and environmental protection.

Correct operation of the appliance is guaranteed only if these regulations are complied with.

The Manufacturer declines any responsibility for: damage resulting from poor maintenance, incorrect use, tampering with or any use which does not comply with the terms and conditions indicated in this manual.

The Manufacturer reserves the right to modify any drawings, texts and technical specifications without prior notice or responsibility and without any obligation to update this manual each time.

In the event of problems in understanding this manual, please contact the Manufacturer.

This manual is divided into the following sections:

- Section **1** contains information regarding consultation of this manual and the data necessary to correctly identify the manufacturer and appliance.
- Section **2** contains general information, essential for knowing all about the appliance and its main parts, its permitted uses, its technical specifications, etc.
- Section **3** is dedicated to user safety.
- Section **4** addresses the user and contains instructions for correct use of the appliance.
- Section **5** contains information about maintenance, describing operations the user needs to carry out and those which must be carried out by a fitter or authorized technician. It also contains a chapter dedicated to troubleshooting, identifying the cause of problems and possible solutions.
- Section **6** is intended for qualified fitters and concerns correct installation of the appliance.
- Section **7**, if present, contains tables and annexes.

### 1.1.1 Symbol used

During machine use, it is possible to face situations for which special considerations and adequate close examinations are needed.

The following "graphic safety symbols" are used in this manual. They aim to highlight risks or important information:



#### **DANGER**

**Draws attention to actions which, if not correctly carried out, may cause serious injury or death or may be a health risk for people and the environment.**



#### **WARNING**

**Draws attention to operations, procedures or actions which, if not carefully carried out, may cause serious damage to the appliance or product.**



#### **IMPORTANT**

**Draws attention to technical information or practical recommendations that ensure efficient and economical use of the appliance. Failure to comply with this information may void the warranty.**

### 1.1.2 Abbreviations used

Ref.	Description
Ann.	Annex
Chap.	Chapter
Fig.	Figure
Max.	Maximum
Min.	Minimum
Mod.	Model
Page	Page
Par.	Paragraph
Ref.	Reference
Tab.	Table
U.m.	Units of measurement

Tab. 1 Abbreviations used

## 1-2 Correct manual storage

This manual must be handled with care and clean hands and it should never be placed on dirty surfaces. It should be stored in a cool, dry place.

No part of the manual should be removed, torn out or arbitrarily changed.



#### **DANGER**

**This manual is an integral part of the appliance and must be kept until final disposal of the same.**

**1-3 Identification data**

Check that the instruction manual corresponds to the appliance being referred to.

In the event of any request for information or technical assistance, it will be necessary to specify the model and type of appliance, as well as its serial number.

**1.3.1 Appliance type and model**

The appliance type and model are indicated on the identification plate.



**1.3.3 Identification plate**

The identification plate shown is applied directly to the appliance.  
It includes all appliance and manufacturer identification data and the CE mark of conformity.








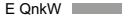










<b>1001</b>						
CE  Tipo/Type  Mod:  Art:  Nr: 	<b>CAT.</b>  	G2.350	G20	G30	G31	G110
		Pmbar				
E QnkW  m3/h  kg/h 	 	m3/h				
		Kg/h				
E QnkW  m3/h  kg/h 	 	Pmbar				
		m3/h				
		Kg/h				
PREPARED FOR GAS: 						

Fig. 1 Identification plate

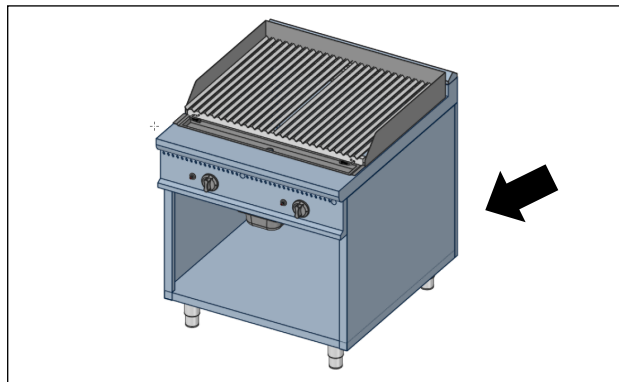


Fig. 2 Plate position

**1.3.4 Identification plates of the main components**

The plates of all the commercial components not produced by the Manufacturer are applied directly to the relevant components, where their respective manufacturers originally placed them.

**1.3.5 CE mark of conformity**

The CE mark applied on the identification plate confirms that the appliance complies with the safety requirements specified in the following directives:

Directive 2016/426/UE (Gas appliances)

#### 1-4 Requests for assistance

- As stated in the sales terms and conditions, the appliance is covered by a warranty. If during the validity period of the same any faults or breakages covered by the warranty should occur, the Manufacturer will repair or replace faulty parts after carrying out the necessary checks.
- Any modifications carried out by the user without express written authorization by the Manufacturer shall void the warranty and relieve the Manufacturer of any responsibility for damage caused by the faulty appliance. This also applies when non-original spare parts are used.
- For all of the above reasons, in the event of an emergency, we recommend contacting the Manufacturer's Technical Assistance Department directly.



#### **IMPORTANT**

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**For any type of service request it is necessary to specify the data on the identification plate and the type of fault.**

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## **2 TECHNICAL INFORMATION**

## 2-1 General description of the appliance

### 2.1.1 Intended uses

The appliance has been designed and manufactured for the professional catering sector.

The lava stone heats up by radiance through the burners and evenly distributes heat thereby allowing uniform cooking of meat and fish (laid on the grill).

In order to use the appliance safely, it is essential to install it according to the laws, regulations and specifications applicable in the country where the appliance is to be installed.

### 2.1.2 Improper use

Improper use means any use of the appliance following criteria that do not comply with the instructions in this manual and that, as a result, may endanger safety.

The Manufacturer shall not be held responsible for any damage caused by improper use of the appliance.

- Do not use the appliance to heat pots or pans.



### **DANGER**

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**Do not use the appliance other than for the use intended by the Manufacturer.  
Improper use is forbidden.**

---



### **DANGER**

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**Do not tamper with the seals applied by the fitter to the gas supply system.**

---

**2.1.3 Main appliance parts**

The picture and descriptions show the appliance fitted with all possible accessories. Depending on the model chosen, your appliance may be different.

- A. Front channel with drain hole
- B. Grill
- C. Control panel
- D. Neutral compartment
- E. Adjustable feet
- F. Removable waste collector tray

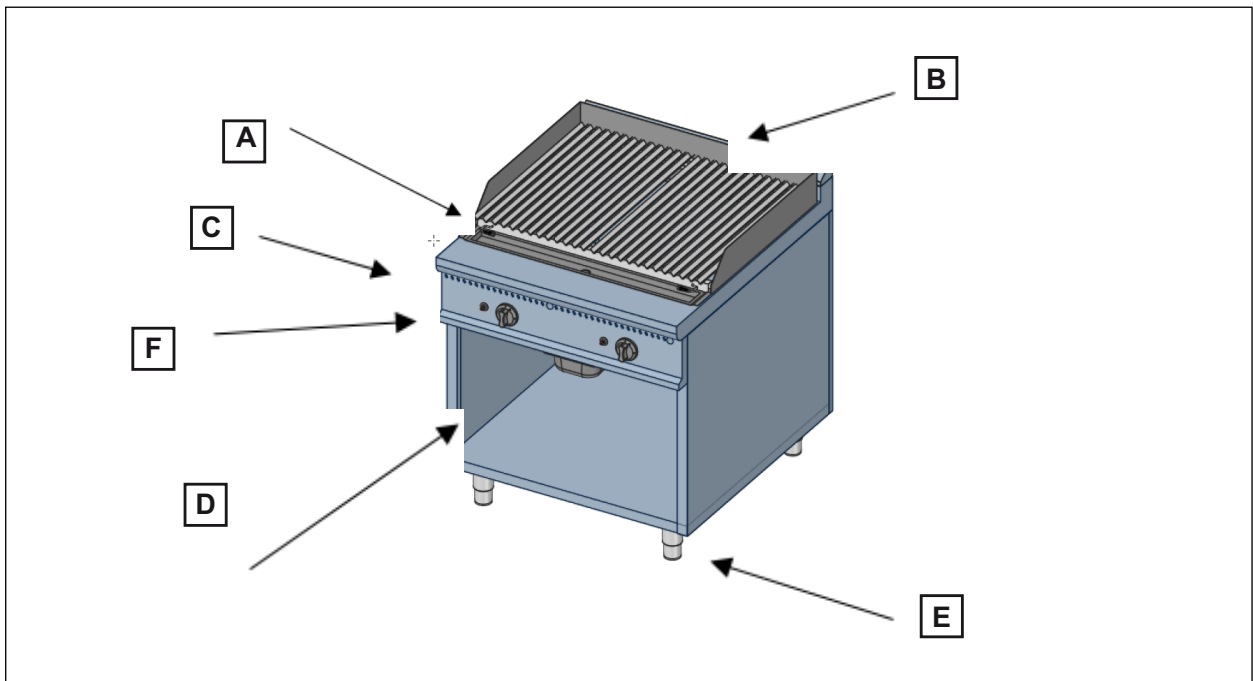


Fig. 3 Main appliance parts

#### 2.1.4 Structural features

The main structure of the appliance is made in stainless steel 18/10 and stands on four height-adjustable feet.

The structural features of the main elements that make up the appliance are described below:

- Stainless steel grill 430, V-shaped to collect cooking fats and rod grill for fish (on request);
- Front channel with drain hole and removable oil and grease tray;
- Lava stone holder basket;
- Removable waste collector tray under burners;
- Cool-grip knobs and handles;
- Valve-operated taps;
- High efficiency independent gas atmospheric burners;
- Thermocouple (stops gas supply if the flame goes out);
- Piezoelectric ignition.

## **3 SAFETY INFORMATION**

### 3-1 Safety

- Use the appliance only for the purposes intended by the Manufacturer.
- Improper use of the appliance may result in a risk to the health and safety of people, as well as economic damage.
- As the appliance is used to prepare food for human consumption, special attention should be paid to everything related to hygiene and to keeping the appliance and surrounding area clean at all times.
- The appliance must be used by personnel trained on the appliance characteristics and functioning. Please refer to this manual. In case of more than one operator, consider handing out a copy of this manual to each one of them.
- Any maintenance operations requiring technical know-how or specific skills must be carried out exclusively by qualified personnel, properly trained in the specific field.
- To maintain hygiene and protect food from contamination, clean elements that come into direct or indirect contact with food and the surrounding areas thoroughly. Carry out these operations using only detergent products for food use and do not use flammable materials or materials containing substances that are harmful to people's health.
- In the event of long periods of inactivity, besides disconnecting all the power supplies, clean all internal and external parts of the appliance and the surrounding area thoroughly.

#### 3.1.1 Safe use of the appliance

Since this appliance has been designed exclusively for professional use, it must only be used by qualified personnel.

- During the appliance operation, the surfaces next to the cooking plate may become hot. Risk of scalding! Before carrying out any intervention on the appliance (for instance for cleaning operations), ensure that it has cooled down.
- Never leave the appliance unsupervised when it is on.
- Do not leave any flammable objects, such as paper, plastic, rags, polystyrene, etc., near the appliance when it is on as they may start a fire.
- Keep the work area clean: do not leave any objects lying around the room as they might make it unsafe for personnel to move around.
- Do not obstruct air intake or heat extraction openings.
- Do not tamper with the seals applied by the fitter to the gas supply system.



#### **WARNING**

**It is strictly forbidden to modify or carry out any type of intervention on the appliance, except those related to routine maintenance.**

**Any modification not explicitly approved by the Manufacturer will automatically void the warranty and the appliance conformity to the directives.**



### 3.1.2 Safety instructions in the event of malfunctioning

In an emergency:

- Turn the gas supply off.
- Contact the Manufacturer's Customer Care Service or a specialized technician.



#### **DANGER**

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**Turn off the appliance if any faults or malfunctioning occur.**

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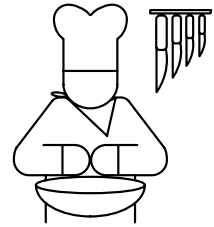
### 3.1.3 Appliance disposal

The appliance has been manufactured using recyclable raw materials and does not contain any harmful or toxic substances.

All materials must be disposed of in compliance with the regulations applicable in the country of use of the appliance.

**Always comply with environmental protection regulations.**

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## **4 INFORMATION FOR CORRECT USE**

### 4-1 First use

Clean the appliance thoroughly when using it for the first time.

Remove all packaging and clean the appliance using hot water and a sponge. Stainless steel parts must be cleaned with a non-abrasive detergent specifically designed for cleaning such surfaces. (see par. *Useful tips for stainless steel care*);

After cleaning the appliance, rinse thoroughly with clean water and dry with a cloth.

Do not use water jets to clean the appliance.



#### WARNING

**The appliance is delivered with lava stones. Ensure that lava stones are evenly distributed before starting the burners.**



#### IMPORTANT

**Lava stone load changes from appliance to appliance; it is good practice to distribute lava stones so as to form an even layer. The stones have an average diameter size of approx. 30/40 mm.**

### 4-2 Complete map of the controls

The pictures show the control panel configuration with all available accessories.

A. Pilot ignition switch.

B. Burner control knob.

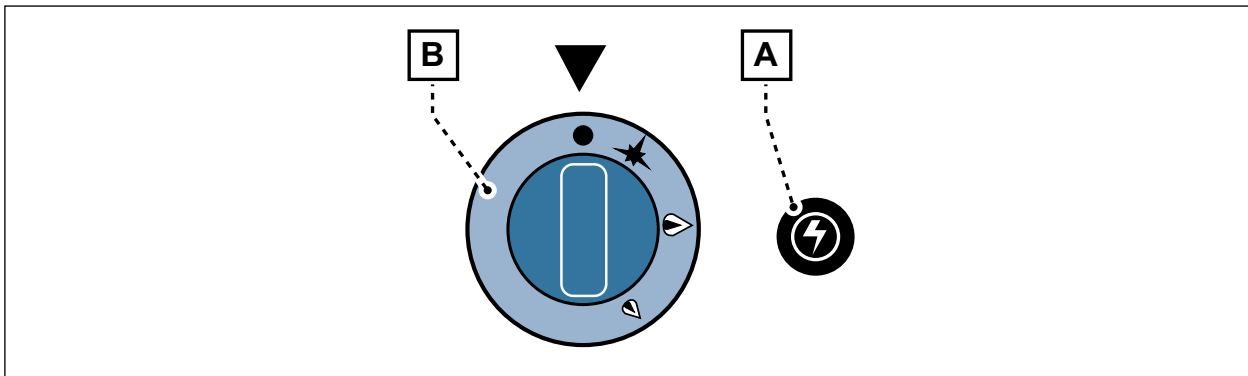


Fig. 4 Map of the controls

### 4-3 Burner start and turning off

#### 4.3.1 Pilot burner ignition

- Press the knob **(B)** and turn it anti-clockwise from the ● (Off) position to the ★ (Pilot) position.
- Wait for a few seconds to allow the air in the gas tube to be expelled.
- Press the piezoelectric ignition switch **(A)** ⚡. After igniting the pilot flame, hold the knob down for about 10 seconds in order to allow the safety thermocouple to heat up sufficiently, then release it.

Knob position	Temperature
●	OFF
★	Pilot*
🔥	Max.
🔥	Min.

Tab. 2 Cooking temperature

(\*) In this position, gas only reaches the pilot burner.



#### IMPORTANT

If, after releasing the knob, the pilot flame should go out, repeat the operation.



#### IMPORTANT

If, due to any kind of failure, the ignition does not spark, it is possible to light the appliance manually. Open the door and, while keeping pressed the knob **(B)**, approach a small flame to the pilot burner.

#### 4.3.2 Burner ignition

- Set the required cooking temperature by turning the adjustment knob **(B)** counter clockwise.

#### 4.3.3 Burner turning off

- In order to turn the burner off, turn the knob **(B)** to the ★ (Pilot) position; to turn the pilot flame off as well, turn the knob to the ● (Off) position.

**4-4 Recommendations for use**

- Before laying the food to be cooked, allow the lava stone to reach a suitable temperature.
- Cover the appliance when it is not used.

**4-5 What to do in the event of long periods of inactivity**

If the appliance is not to be used for a certain period of time, it is necessary to:

- close the gas cut-off tap;
- clean and dry the appliance;
- after cleaning and drying the appliance, protect it with a film of a suitable product (for example, Vaseline oil spray or a similar product);

## **5 MAINTENANCE INFORMATION**

### 5-1 Maintenance recommendations

Keeping the appliance working to maximum efficiency, also thanks to scheduled maintenance recommended by the Manufacturer, will guarantee optimal performance, a longer lifespan and maintenance of all the safety requirements.

After **each use** or whenever necessary, clean the external parts of the appliance and surrounding area. At least **twice a year**, have an authorized technician check the appliance; **it would be advisable to enter a maintenance contract.**



#### **DANGER**

**Before cleaning, turn the appliance off and disconnect the gas supply (turn off the gas shut-off tap, fitted upstream of the same); wait for the cooking plate to cool down.**

**Cleaning must be carried out once the appliance has cooled down.**

### 5-2 Ordinary cleaning

Thorough daily cleaning of the appliance after use ensures perfect operation and a long lifespan. Clean using a damp cloth, water and soap or detergents and avoid abrasive or acidic products; these must not be used even to clean the floor near the appliance as the vapours may deposit on and deteriorate the steel.

Rinse thoroughly with clean water and dry. Never use direct water jets so as not to cause infiltrations that may be harmful to the appliance.

Description	Products
For washing and cleaning	Room temperature drinking water
For cleaning and drying	A non-abrasive cloth that does not leave any residues
Recommended detergent products	Detergents containing:
	- caustic potash at 5% (max) - caustic soda at 5%
Products for eliminating unpleasant smells	Rinse-aid products containing:
	- citric acid - acetic acid

Tab. 3 Table of cleaning products



### 5.2.1 Cleaning the grill

To properly clean the grill, use a scraper, cold water and mild detergent.



### IMPORTANT

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**Thoroughly rinse and ensure no detergent residues remain on grill surface.**

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### 5.2.2 Main causes of deterioration or corrosion of stainless steel

This list shows the main causes of deterioration or corrosion of stainless steel.

- Use of abrasive or acid detergents, especially with a chlorinated base, such as hydrochloric acid or sodium hypochlorite (bleach); therefore, before purchasing a detergent product, ensure it does not cause steel corrosion;
- Stagnation of ferrous deposits (such as those produced by the rust present in the water that runs through the pipes, especially after a certain period of inactivity); such stagnation must thus be avoided. Also avoid using iron wool to remove food residues that are hard to eliminate; instead, use scourers or spatulas made of stainless steel or softer materials but, in any case, non-ferrous materials;
- Stagnation of acidic substances, such as vinegar, lemon juice, sauces, salt, etc. Do not allow such substances to stay in contact with the steel parts of the appliance for long periods. The evaporation of saline solutions on the surfaces is particularly harmful for them.

See also par. *Useful tips for stainless steel care.*

### 5-3 Useful tips for stainless steel care

Stainless steel is defined as such because it owes its resistance to corrosion to a thin oxide protective film which forms at a molecular level on its surface; it is created by the oxygen absorbed by exposure to the air of the metal itself. It is clear therefore, that anything that prevents the formation of this film and its permanence on the surface, such as foreign materials on it, food or salt residues, etc. reduce the resistance of stainless steel to corrosion.

Its resistance and duration, however, is also directly related to good maintenance during use and in choosing suitable materials and products for such maintenance.



#### IMPORTANT

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**Before using any detergent product for cleaning stainless steel, as well as for the floor underneath or near the appliances, ask your usual detergent supplier about the most suitable product to ensure this product cannot cause corrosion.**

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**Daily cleaning:** clean the surfaces thoroughly and frequently using a damp cloth. You can also use water and soap or common detergents that do not contain abrasive or coloured substances. Wipe only in the direction of the satin finish. Rinse with plenty of clean water and dry thoroughly.

**Food stains or hardened leftovers:** Wash any food stains using hot water before they harden. If they have already hardened, use water and soap or non-abrasive detergents, using a wooden spatula or soft stainless steel scourer. Rinse with plenty of water and dry well.

**Limescale deposits:** Limescale deposits on cookware bottoms, tanks, etc. must be removed using descaling products.

**Scratches on the surfaces:** If scratches or lines are detected on the surfaces, smooth them using very fine stainless steel wool or synthetic fibre abrasive felt pads, wiping in the direction of the satin finish. Rinse well and dry.

**Elimination of possible fading** of the steel caused by food stains or burns or heat stains: Use smooth stainless steel wool or synthetic fibre abrasive felt pads, wiping in the direction of the satin finish. Rinse well and dry. Take care not to scratch the surface.

**Rust:** If rust stains are detected, contact manufacturers of industrial detergents for a product capable of removing the stains. For this purpose, you can also use industrial products for removing limescale. After use and after rinsing with clean water, it may be necessary to use an alkaline detergent to neutralize the acid compounds still on the surface.



#### IMPORTANT

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**After cleaning the stainless steel, especially the external surfaces of the appliance, and once they are completely dry, protect them with products commonly found on the market.**

**Besides eliminating marks or rings, they also restore the shine to the steel and prevent the infiltration of humidity and dirt, which cause corrosion.**

---

### 5.3.1 Products that must not be used on stainless steel

- Never use chlorinated products, for example bleach, hydrochloric acid or any other solutions deriving from the same. These products quickly attack stainless steel, causing irreversible corrosion.
- To clean the floors underneath and near the appliances, never use the products mentioned above, since vapours or drops that may fall on the steel produce similar corrosive effects to those described above.
- Never use iron scouring pads or leave them on the surfaces, since small deposits may remain on it and lead to the formation of rust; use a soft stainless steel wool or synthetic fibre abrasive felt pads, always wiping in the direction of the satin finish and taking care not to scratch the surfaces, then rinse and dry.

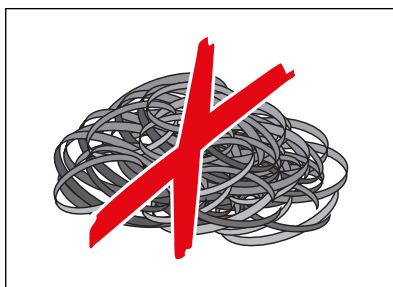


Fig. 5 Steel scouring pad

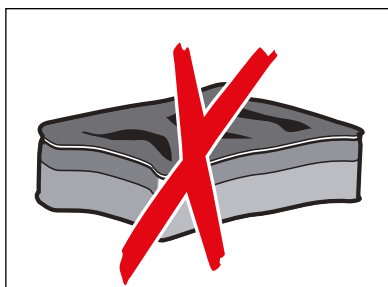


Fig. 6 Abrasive sponge



Fig. 7 Acidic substances


### 5.3.2 Some useful tips

- The pipes that supply water for use in pots, sinks, kitchens, washing machines, etc. inevitably surrender some rust, especially when taps are turned on after a period of inactivity or in case of new systems. Take care to prevent these oxides or ferrous deposits from coming into contact with the stainless steel for a long period of time, since they produce corrosion. It is always advisable to use galvanized pipes and to let the water run until it is perfectly clean.
- Avoid letting saline solutions evaporate, dry or stay in contact with stainless steel surfaces. For pots, never use coarse kitchen salt, which stays on the bottom and due to its weight cannot circulate and dissolve completely; this undissolved salt can cause corrosion. Therefore, it is advisable to crush it and add it to the pots when the water is boiling; if this is not possible and the salt is coarse, dissolve it in a separate container first. Avoid putting salt in pots of cold water or without water.
- When pots, washing machine compartments, bain-marie recipients, sinks, etc. are not used, they should preferably remain uncovered in order to keep the passivation film protecting the stainless steel stable and prevent it from coming into contact with possible aggressive agents.

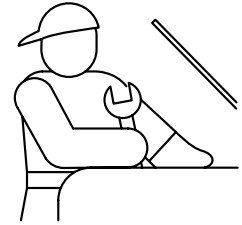
## 5-4 Troubleshooting

Prior to start-up, the appliance has been tested by **qualified personnel**. The information contained in the following table is intended to help find and fix possible failures and faults that may occur during use.

Some of these problems can be solved by the user, whilst all others **require specific technical know-how and skills and must therefore be solved by qualified and expert personnel**.

Problem	Likely cause	What should the user do	What should authorized personnel do
The pilot flame does not come on	Load loss in the main gas pipe	Contact the gas supply company.	-
	Pilot hole obstructed	Contact a qualified technician.	Clean the pilot hole.
After releasing the knob, the pilot flame goes out	The knob has not been kept for long enough in the  (Pilot) position to allow for thermocouple heating	Repeat the ignition procedure for longer.	-
	Thermocouple damaged	Contact a qualified technician.	Replace the thermocouple.
The pilot stays on, but the burner cannot be turned on	Load loss in the gas pipe	Contact the gas supply company.	-
	Nozzle obstructed	Contact a qualified technician.	Clean the burner nozzle.
	Burner holes are obstructed	Contact a qualified technician.	Clean the burner
Smell of gas	Leak from the gas piping	Contact a qualified technician.	Check sealing.
The flame intensity cannot be adjusted any longer	Adjustment screw damaged	Turn off the gas shut-off tap and contact a qualified technician.	-

Tab. 4 Problems associated with gas



## 6 INSTRUCTIONS FOR QUALIFIED FITTERS

### 6-1 General information

The system and installation of the appliance must comply with existing UNI-CIG 8723 regulations and Italian Ministerial Decree dated 12 April 1996.

Appliance installation and maintenance **must be carried out by qualified and authorized personnel**, who must comply with the safety regulations applicable in the country where the appliance is to be installed.

### 6-2 Storage

If the appliance is stored in a warehouse at temperatures below 0°C, bring it to a temperature of at least +10°C before use.

### 6-3 Packaging

The appliance is usually packaged and shipped with all parts already assembled; therefore, when delivered, assembly is not necessary. The stainless steel parts and all framework panels are protected by an adhesive, scratch-resistant film.

The appliance is packaged inside a special wooden frame and placed on a pallet.

The packed appliance must be handled with care and kept in the correct position, according to the symbols present on the packaging.

During unpacking, ensure the appliance is in order and has all its components. When removing the scratch-resistant film, take care not to leave pieces of adhesive film on the panels.

It is advisable not to remove the packaging until the appliance is to be used so as to guarantee preservation of the same.

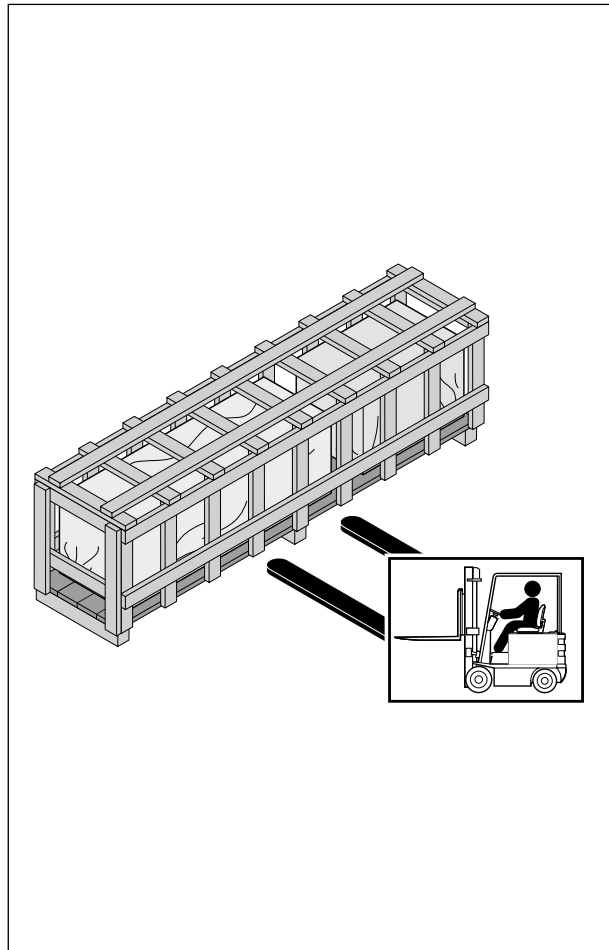


Fig. 8 Packaging



#### WARNING

**Do not use cutters or any other sharp tools when unpacking. They may scratch the appliance surfaces irreparably.**



#### WARNING

**Packaging materials must be disposed of in compliance with the regulations applicable in the country where the appliance is to be installed. The various types of material must be separated and taken to special collection centres.**

**Always comply with environmental protection regulations.**

## 6-4 Technical specifications

### 6.4.1 Composition and power of the appliance

Model	Description	Dimensions (mm)	Number of burners	Gas total thermal power (kW)
LQ/BS1BB	Counter top lava stone gas grill	400 x 900 x 270	1	11,0
LQ/BS2BB	Counter top lava stone gas grill	800 x 900 x 270	2	22,0
LQ/BS1BA	Lava stone gas grill with open cabinet	400 x 900 x 850	1	11,0
LQ/BS2BA	Lava stone gas grill with open cabinet	800 x 900 x 850	2	22,0

Tab. 5 Model technical specifications

# 6

## Instructions for qualified fitters

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### 6.4.2 Dimensions

#### Counter top grill

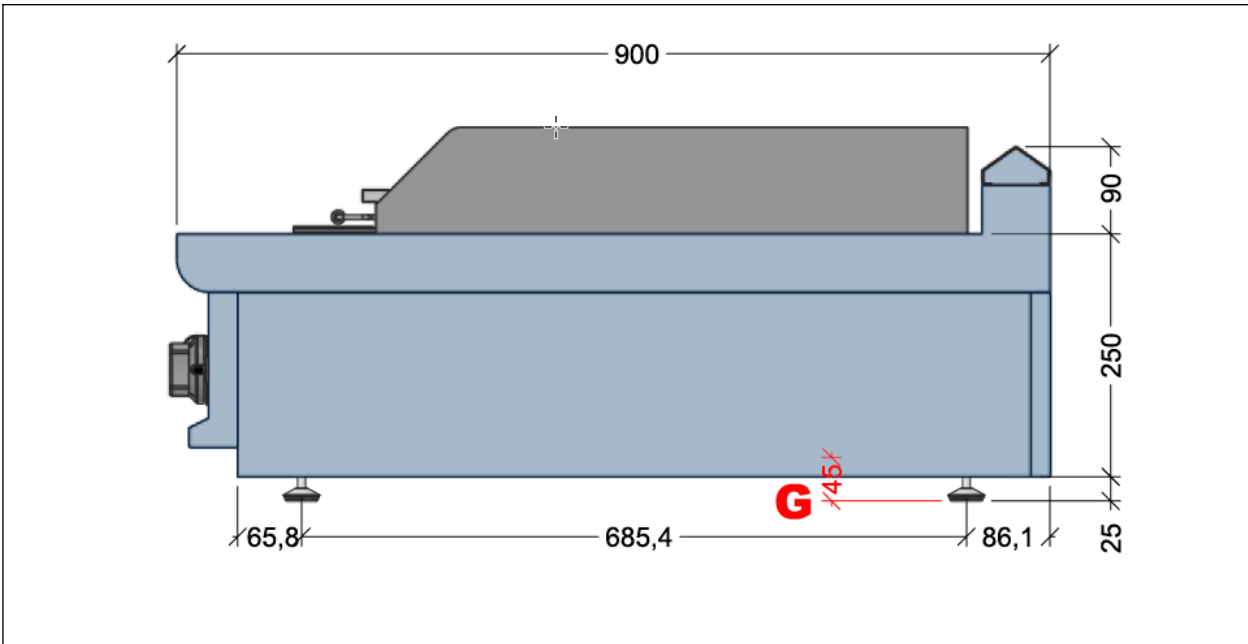


Fig. 9 Counter top grill dimensions

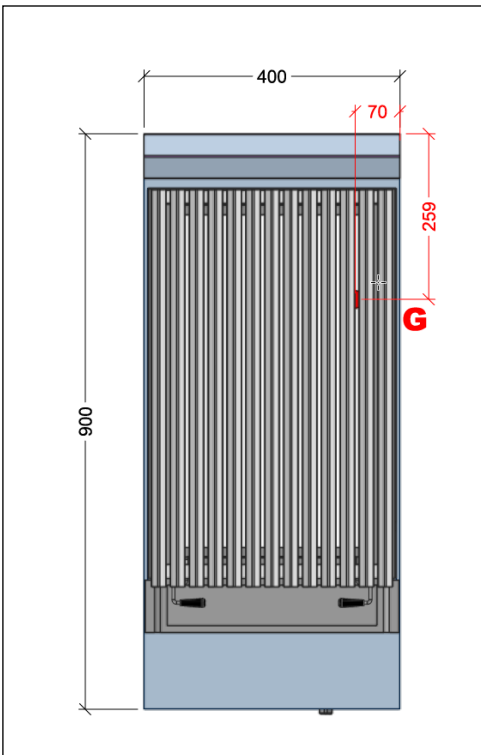


Fig. 10 Grill with 1 burner

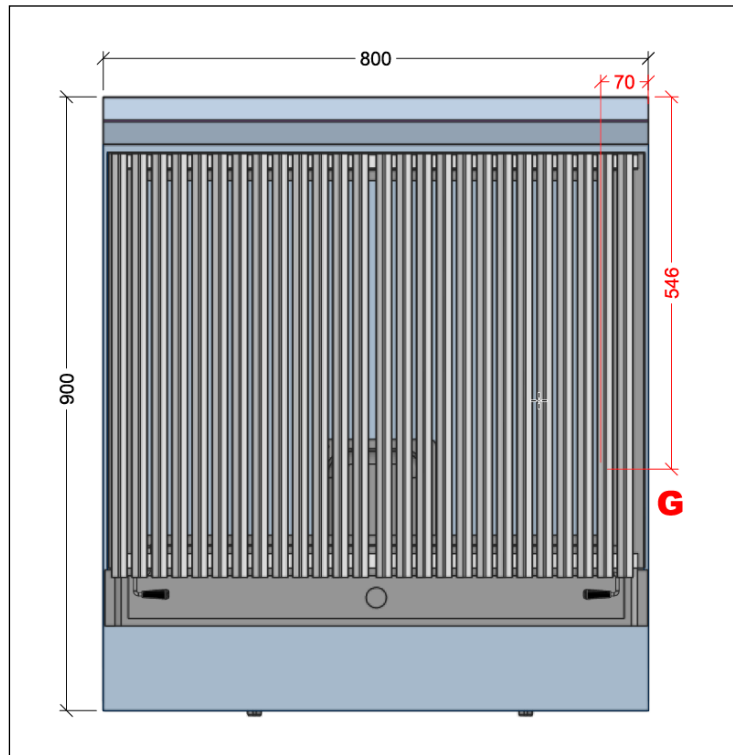


Fig. 11 Grill with 2 burners



Gas supply  $\varnothing$  3/4"



Grill with open cabinet

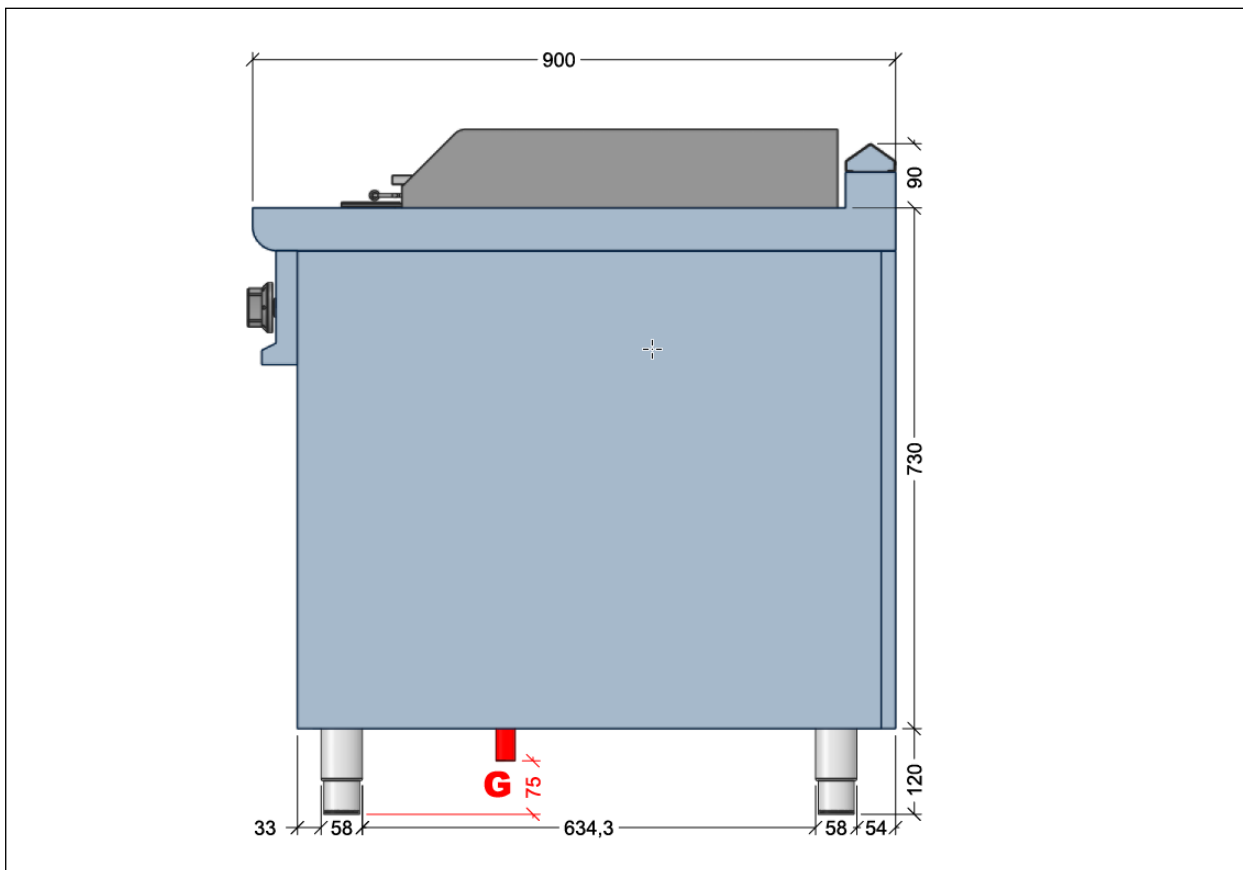


Fig. 12 Grill with open cabinet dimensions

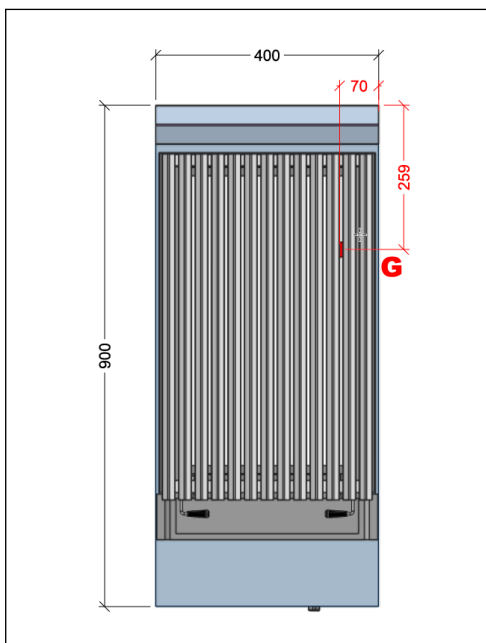


Fig. 13 Grill with 1 burner

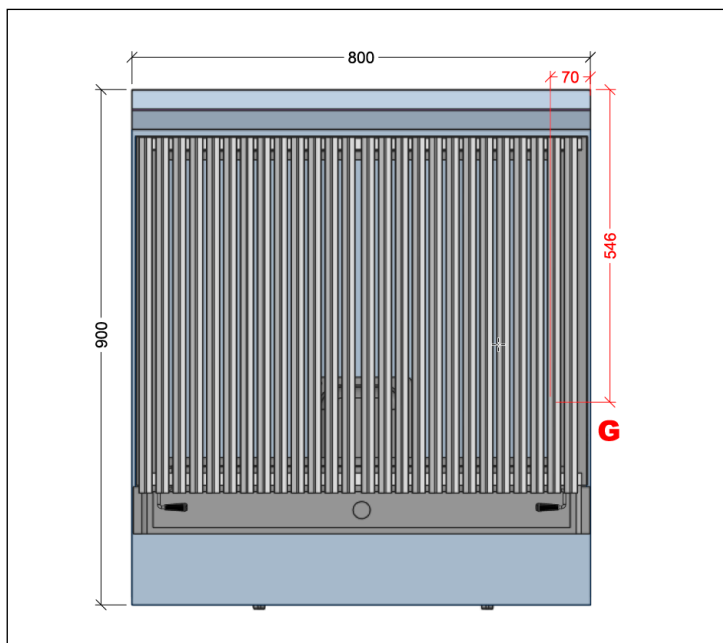



Fig. 14 Grill with 2 burners

 Gas supply  $\varnothing$  3/4"

### 6.4.3 Burner and nozzle specifications and adjustments depending on the type of gas used

All data relating to the power and consumption of the appliance, indicated in the following table, have been obtained using standardised gases (see *Tab. 9 Families of standardised gases*);

Description	Gas	Pressure (mBar)	Small burner*
Primary air adjustment H (mm) for methane gas (see figure below)	G20	20	22
	G25	20	23
		25	23
Main nozzle hole diameter (1/100 mm) for methane gas	G20	20	195
	G25	20	215
		25	205
Pilot diameter (1/100 mm)	G20	20	35
	G25	20	35
		25	35
By-Pass	G20	20	Adjustable
	G25	20	Adjustable
		25	Adjustable

Tab. 6 Methane gas

(\*) Nominal load 8 kW

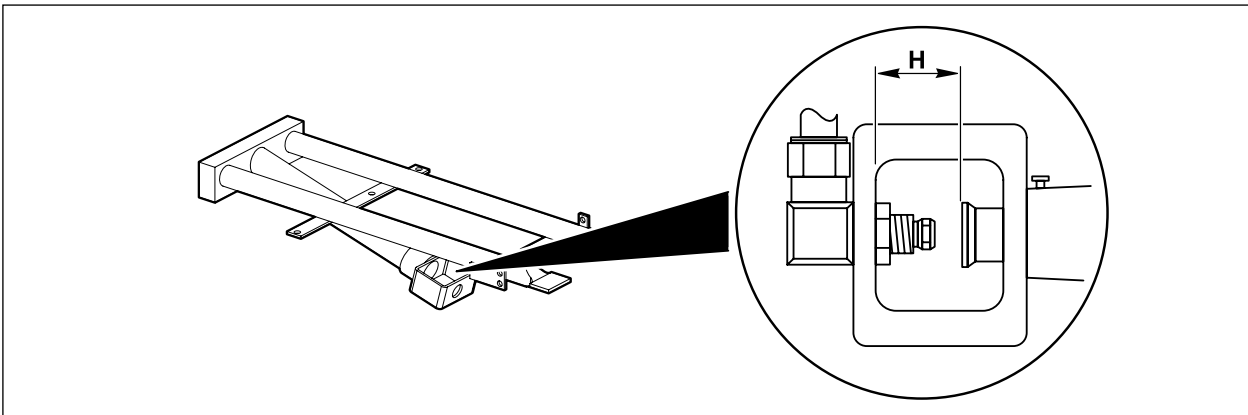


Fig. 15 Gas burner primary air adjustment

Description	Gas	Pressure (mBar)	Small burner*
Primary air adjustment H (mm) for liquid gas (see figure below)	G30	30	13
		50	14
Main nozzle hole diameter (1/100 mm) for liquid gas	G30	30	135
		50	125
Pilot diameter (1/100 mm)	G30	30	25
		50	25
By-Pass	G30	30	80
		50	80

Tab. 7 LPG gas

(\*) Nominal load 8 kW

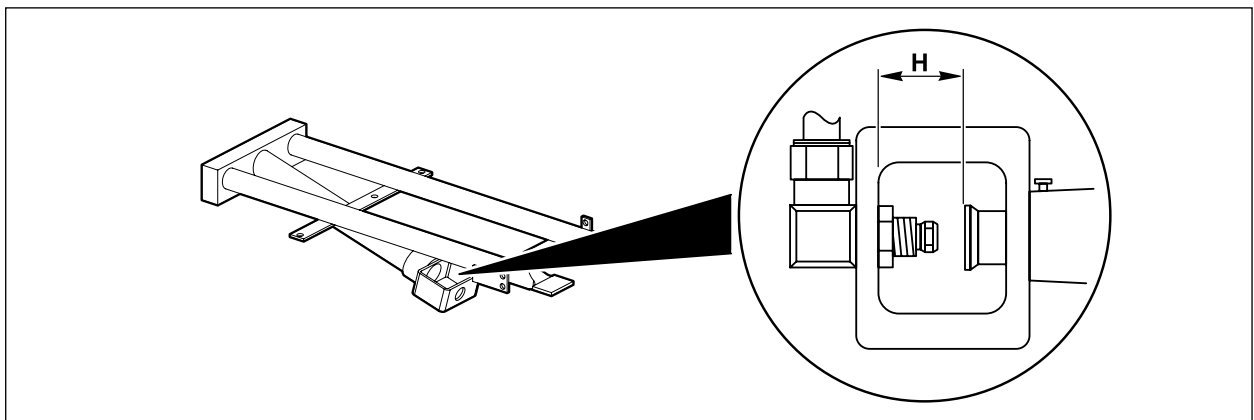


Fig. 16 Gas burner primary air adjustment

## 6-5 Positioning and installation

The installation area must be equipped with all necessary power supply, ventilation, air intake and extraction connections, it must be properly illuminated and must comply with all health and safety requirements, in compliance with applicable laws, in order to avoid food contamination.

Ensure that the floor or support surface is flat and solid so that the base of the appliance is level and stable.



### **WARNING**

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**The Manufacturer shall not be held responsible for any damage to people or objects caused by installation errors or by an inappropriate use of the appliance.**

**Any fault caused by wrong installation shall automatically void the warranty.**

---

The system and installation of the appliance must comply with existing UNI-CIG 8723 regulations and Italian Ministerial Decree dated 12 April 1996.

Appliance installation and maintenance **must be carried out by qualified and authorized personnel**, who must comply with the safety regulations applicable in the country where the appliance is to be installed.

### 6.5.1 Positioning of the appliance



#### **DANGER**

The appliance must be installed at least 200 mm from flammable walls. This distance may be lower when the walls are fireproof or protected by heat insulating material.  
The appliance is not suitable for built-in systems.



#### **WARNING**

Ensure that, once installed, the appliance can easily be reached by technical service personnel in the event of any fault occurring.

- Remove the appliance from its packaging and position it where it is to be used.
- Adjust the feet so that the appliance is level.
- Remove the transparent adhesive protective film from the surfaces, detaching it slowly to avoid leaving glue residues on the appliance.
- Connect the appliance to the gas distribution network (chap. *Gas Connection* on page 40);

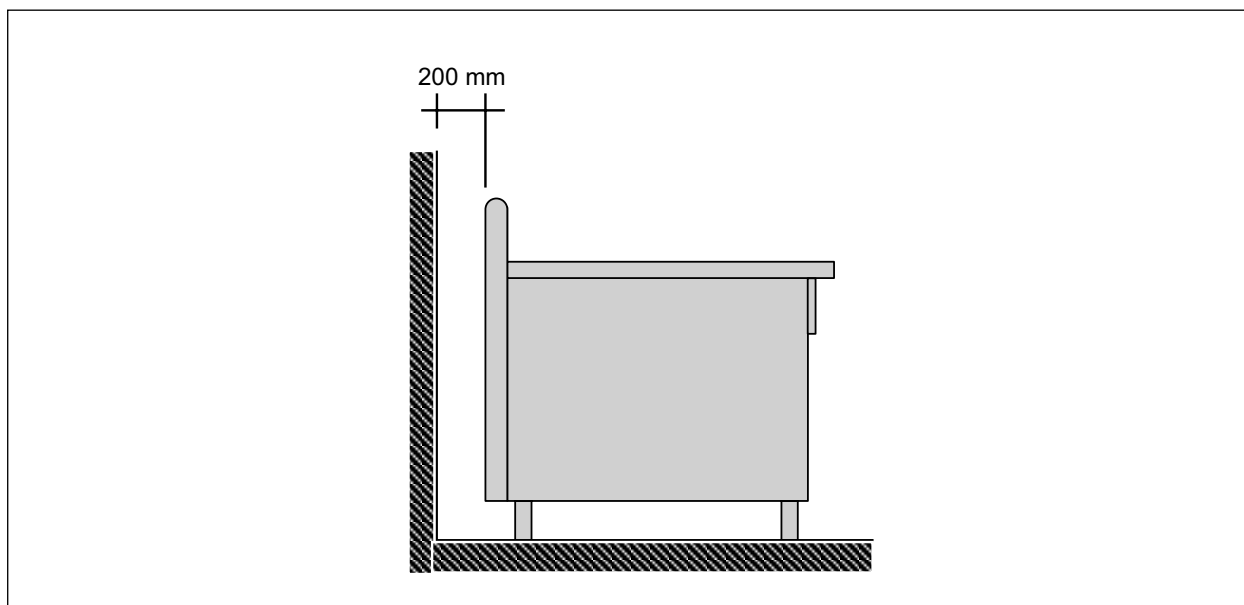


Fig. 17 Minimum distance from flammable walls

### 6.5.2 Ventilation of the installation premises and fume extraction

The premises where the appliance is installed must have air intakes to ensure the correct functioning of the appliance and proper air exchange.

Air intakes must be of a suitable size, must be protected by grilles and must be placed in such a way that they cannot be obstructed.

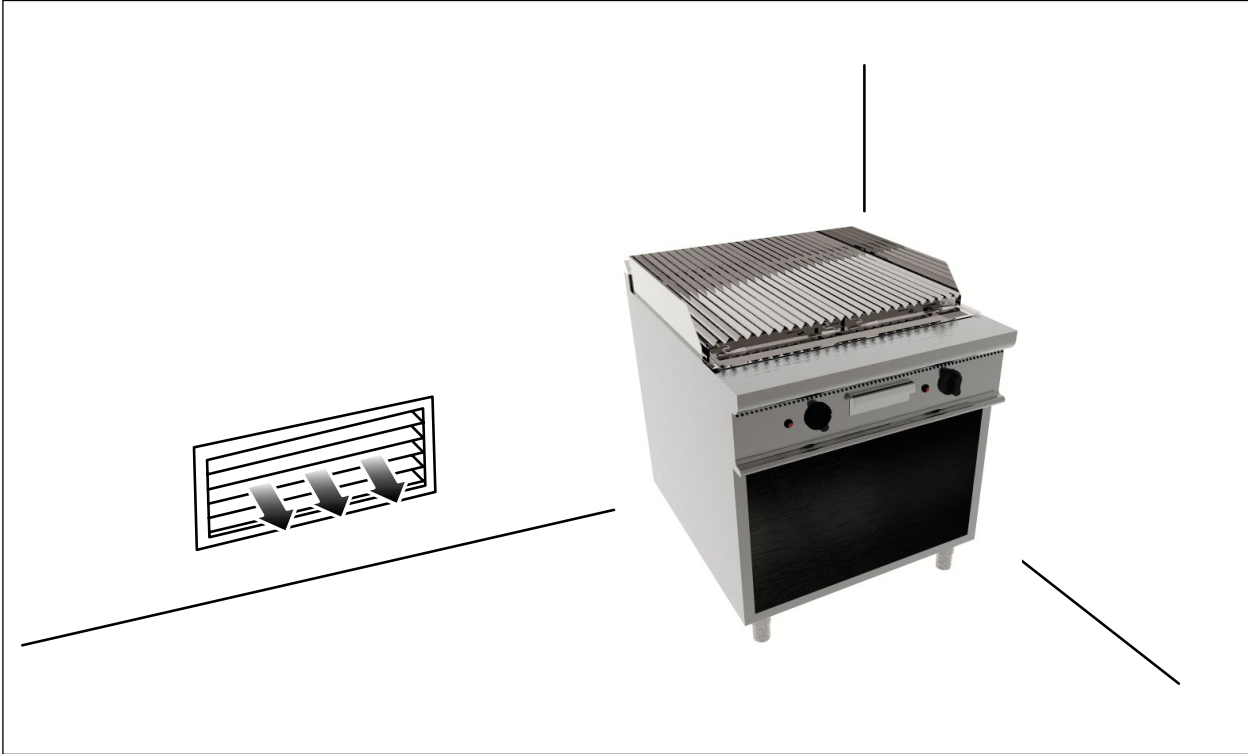


Fig. 18 Ventilation of the installation premises

In compliance with applicable legislation on installation, the appliance can be defined as **Type A1**: an appliance not intended for connection to a chimney/flue or to a device for the extraction of combustion products to the outside of the premises where the appliance is installed. The extraction of comburent air and combustion products is carried out in the installation premises.

To guarantee the complete extraction of steam produced during cooking and gases produced during the combustion process, the appliance must be installed in well-ventilated premises (possibly under a mechanical extraction hood), in compliance with applicable regulations.

If a mechanical extraction hood is installed, it is necessary to follow the regulations for the installation below.:

- Gas supply to the appliance must be interrupted if the power of the forced extraction system falls under the established safety value; the gas supply must only be restored manually.
- The final part of the appliance extraction duct must be about **1,8 m** from the appliance support surface; the outlet of the combustion product extraction duct must be placed within the basic perimeter of the hood (see figure below).
- The power of the mechanical extraction system must not be lower than required.

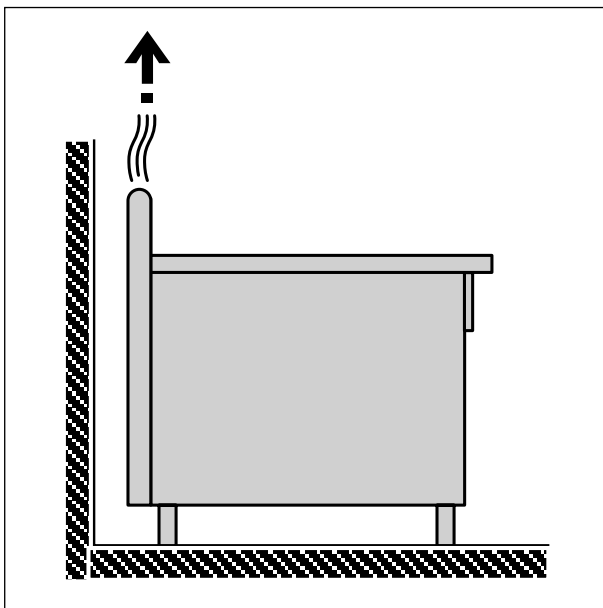


Fig. 19 Fume extraction

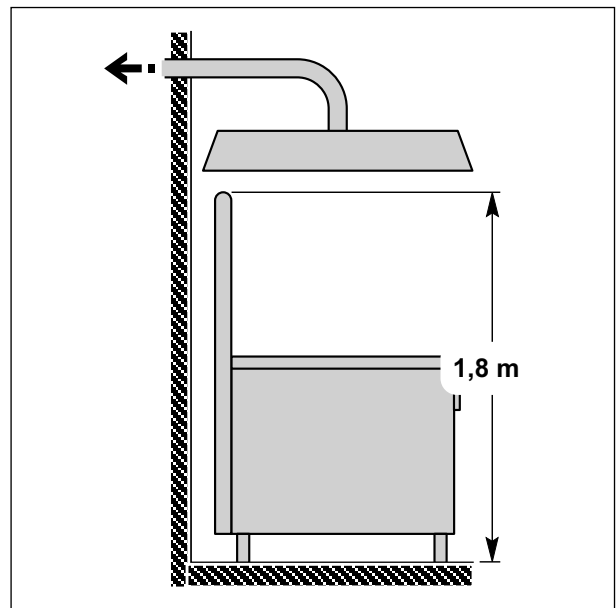


Fig. 20 Fume extraction through extraction hood

## 6-6 Gas Connection

Before connecting the appliance, make sure that the data on the identification plate corresponds to that of the gas supply network. If the gas indicated on the plate is not the same available in the premises, follow the instructions in chap. *Adjustment for operation with different gases* on page 45.

- Connection to the gas supply network must always be carried out using rigid or flexible metal piping with proportionate cross-section, inserting a sealing gasket suitable for gas use.
- Connections between the 3/4"G piping from the appliance and the gas pipes should preferably be carried out using a three-piece metal joint, in order to facilitate connection and dismantling if necessary.
- Seal the joint threads using TFE tape (tetrafluoroethylene) or other materials declared by their manufacturers as being suitable for LPG too.
- Always insert a cut-off tap between the appliance and the gas supply pipes, in a position that makes it easy to handle and turn off after use.
- During connection between the gas piping and the appliance, make sure you do not cause any kind of stress to the appliance itself.
- Gaskets must be metallic or of other elastic materials that cannot be altered by the gas distributed.
- Copper piping junctions must be realized using mechanical couplings without gaskets or putty.
- After connection to the gas supply, check the absence of any leaks in the joints and connections using water and soap or a suitable leak detection product.

### 6.6.1 Characteristics and requirements of the gas supply network

The appliance is started at the nominal capacity of the gas used with the nozzles indicated in par. *Burner and nozzle specifications and adjustments depending on the type of gas used* on page 34.

Depending on the gas used, the supply pressure must fall within the following values; **do not connect the appliance if the pressure values are different.**

GAS	Nominal pressure (mbar)	Minimum pressure (mbar)	Maximum pressure (mbar)
G20 (methane)	20	17	25
G30 (LPG)	30	28	50
G31 (LPG)	37	28	50

Tab. 8 Intended supply pressures

The appliance is delivered for use with natural gas, G20 (methane gas) at a pressure of 20 mbar; check the category of the country in which it is to be installed *Tab. 10 Gas category and pressure*.

If the gas indicated on the plate is not the same available in the premises, follow the instructions in chap. *Adjustment for operation with different gases* on page 45.



## 6-7 Inspection and start-up



### IMPORTANT

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**Before start-up, the system should be tested in order to assess the operating conditions of each component and detect any possible failures. At this stage it is important to check that all safety and hygiene conditions are strictly complied with.**

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#### 6.7.1 Checking the gas system

Carry out the following checks:

- check that the gas supplied through the network corresponds to the gas needed for the start-up of the appliance and make any necessary modifications (see chap. *Adjustment for operation with different gases* on page 45);
- turn on the gas supply tap and check the seal of the connections; to do this, brush soapy water over all the joints. Any leaks will be highlighted by foam bubbles;



### DANGER

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**Never use naked flames to check for leaks.**

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- check you have removed all the plastic protective film from the panels, taking care not to leave traces of glue on the steel surface; if necessary, remove the glue using suitable solvents;
- check correct ignition and combustion of every burner;
- check the correct functioning of the pilot flames and that the nozzles are correct;
- check the proper functioning of the safety thermocouple.

### 6.7.2 Checking the supply pressure

The connection pressure is measured when the appliance is running using a pressure gauge as follows:

- Remove the front panel after removing all the knobs;
- Remove the screw and sealing ring from the manometric pressure socket;
- Connect the pressure gauge and check the pressure. If the pressure falls within the nominal values indicated (see par. *Characteristics and requirements of the gas supply network* on page 40) the appliance can be used; otherwise contact the gas supply company;
- After checking the pressure, remove the pressure gauge and refit the screw and corresponding sealing ring. Using red paint, seal the pressure control screw, then refit the front panel and knobs.



### IMPORTANT

**The Manufacturer shall not be held responsible for any damage to people or objects caused by installation errors.**

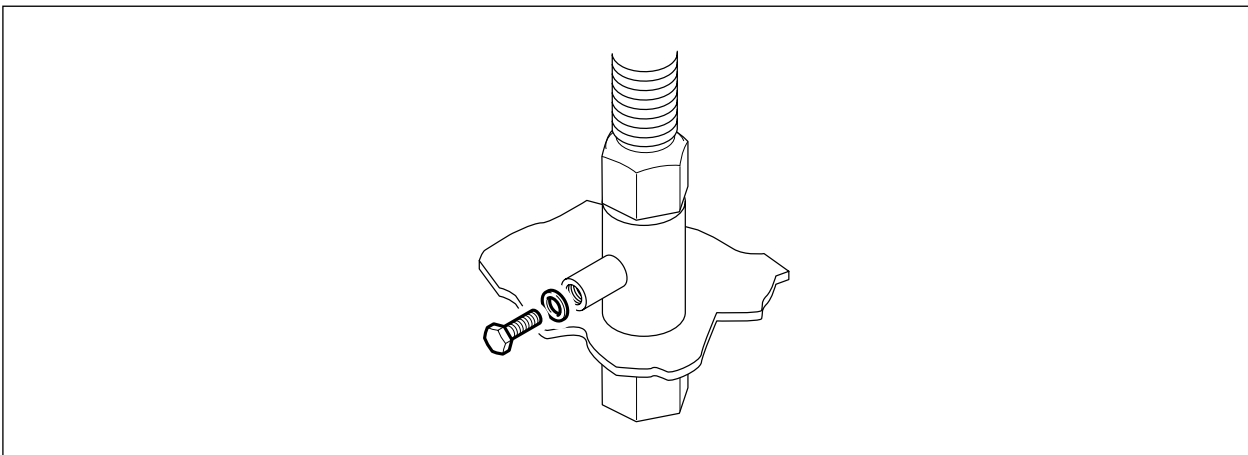


Fig. 21 Manometric pressure socket

### 6.7.3 Checking the extraction of combustion products

Carry out the following checks:

- check that the exhaust gases come out correctly from the special ducts;
- check that nothing obstructs air intake or heat extraction openings;
- check that any combustion product extraction system (extraction hoods or other) permits extraction of at least 1 cubic meter of fumes per kW of power absorbed by the connected appliances.

### 6.7.4 Checking ventilation of the installation premises

Carry out the following checks:

- check that the area where the appliance is installed is well-ventilated during operation, with air flow for gas combustion as well as for air exchange (ventilation);
- air intake openings must be placed in the lower part of the external walls, preferably opposite the wall where the extraction of combustion gases is situated;
- air intake openings must be built in such a way that they cannot be obstructed.

### 6.7.5 Instructions for users

After testing, if necessary, train users so that they acquire all the necessary skills to start-up the appliance in safe conditions, as provided for by applicable regulations.



## IMPORTANT

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**While explaining, always refer to this Use and Maintenance Manual.**

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## 6-8 Adjustments

### 6.8.1 Primary air adjustment

Primary air must be adjusted as explained in par. *Burner and nozzle specifications and adjustments depending on the type of gas used* on page 34 . Primary air is adjusted correctly if flame stability is guaranteed. In other words, there is no flame gap when the burner is cold and there is no blow-back (ignition of the gas at the nozzle) when the burner is hot.

### 6.8.2 Pilot flame adjustment

Adjust and check that the flame wraps around the thermocouple and that its appearance is correct.

For further explanation, we provide a brief description of the characteristics and behaviour of the gas on the basis of the gas-air ratio. Below we illustrate the characteristics of a flame, when air adjustment in the burner is excessive, lacking or correct.

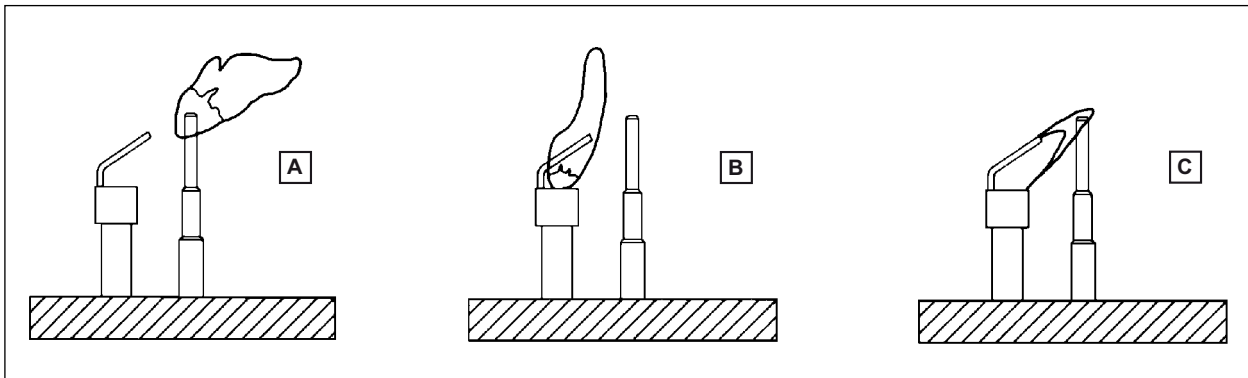


Fig. 22 Pilot flame adjustment

- A. **Too much air in flame - Light blue flame.** The flame tends to separate (blowing) or to return (blow-back) with possible ignition at the nozzle. Usually, with methane and liquefied gases, flames tend to blow.
- B. **Too little air in flame - Flame with yellow peak.** Production of harmful carbon monoxide with a subsequent depositing of black soot on the bottom of pans. Very poor burner performance.
- C. **Correct flame - Blue or dark blue flame.** Maximum burner performance; if this does not occur, check that the nozzles fitted are the correct ones - for this purpose, see par. *Burner and nozzle specifications and adjustments depending on the type of gas used* on page 34.



## DANGER

**Carbon monoxide is an odourless, colourless and toxic gas and is lethal even at very low concentrations.**

## 6-9 Adjustment for operation with different gases

Conversion to another type of gas must be carried out by authorized and qualified fitters.

For example, to switch from natural gases to liquid gases, the nozzles of pilot and main burners must be replaced. The correct nozzles are indicated in par. *Burner and nozzle specifications and adjustments depending on the type of gas used* on page 34.

### IMPORTANT

All the nozzles necessary for adjustment are supplied in a bag with the appliance; the main burner injectors are marked in hundredths of mm, whereas the pilot ones are marked with their reference number.

### IMPORTANT

Each time the appliance is adjusted to operate with a different type of gas or at a different pressure value, the indications of the new adjustment must replace the previous ones (apply the gas setting plate).

#### 6.9.1 Replacing the main burner nozzles

To carry out this operation proceed as follows:

- Turn off the gas supply tap;
- Access the burner;
- Unscrew the nozzle (**D**) from its support and replace it with the nozzle suitable for the type of gas used (see par. *Burner and nozzle specifications and adjustments depending on the type of gas used* on page 34);
- Adjust the primary air operating on the adjustment bushing (**C**) (for primary air distance "H" see par. *Burner and nozzle specifications and adjustments depending on the type of gas used* on page 34);
- Refit all the parts removed so that the appliance can be used.

- A. Main burner
- B. Fixing screw for air adjustment
- C. Air adjustment bushing
- D. Main burner nozzle
- E. Gas ramp
- F. Nut

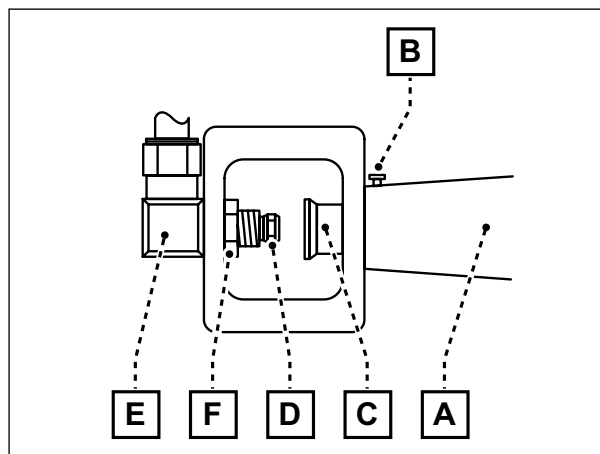


Fig. 23 Nozzle main parts

### 6.9.2 Replacing the pilot nozzle

- Turn off the gas supply tap;
- Access the burner;
- Unscrew the nozzle (**F**) and replace it with the nozzle suitable for the type of gas used (see *Burner and nozzle specifications and adjustments depending on the type of gas used* on page 34);
- Refit all the parts removed so that the appliance can be used;
- No air adjustment is required.

- A. Pilot blowpipe
- B. Burner body
- C. Thermocouple
- D. Ignition electrode
- E. Fixing screw
- F. Nozzle
- G. Pilot bracket

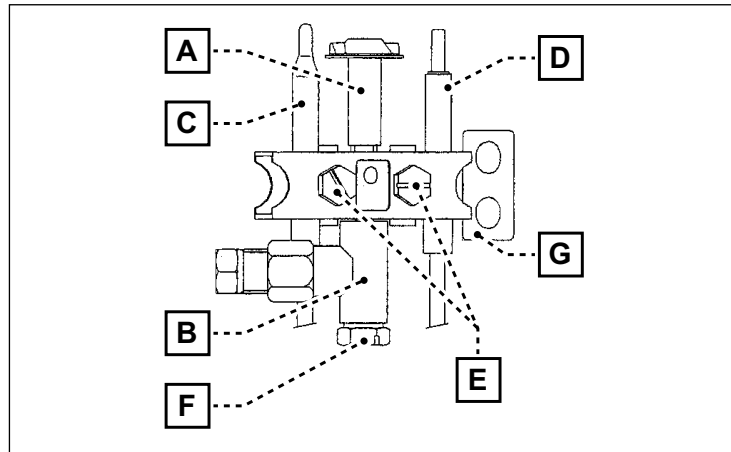


Fig. 24 Pilot nozzle main parts

## 6-10 Maintenance to be carried out by a fitter or qualified technician

The following maintenance operations must be carried out **at least once a year**:

- Check the pressure and sealing of the system;
- Check safety thermocouple efficiency;
- Check the efficiency of the fume extraction system (if any);
- Check combustion;
- Check the minimum adjustment screw to ensure it is sealed; sealing must be intact.



### **DANGER**

**Before carrying out any repair or maintenance operation on the appliance, turn off the gas supply tap.**

#### 6.10.1 Burner cleaning

Clean the burners as follows:

- Unscrew the nut (**F**) on the gas ramp;
- Unscrew the burner fixing screws and remove it from its seat;
- Clean the gas outlet holes by means of a drill (for instance, a twist drill) or a similar tool;
- Once cleaned, refit the pieces in reverse order;
- Check the combustion gas extraction duct and the anti-draught device (if present).

A. Main burner

B. Fixing screw for air adjustment

C. Air adjustment bushing

D. Main burner nozzle

E. Gas ramp

F. Nut

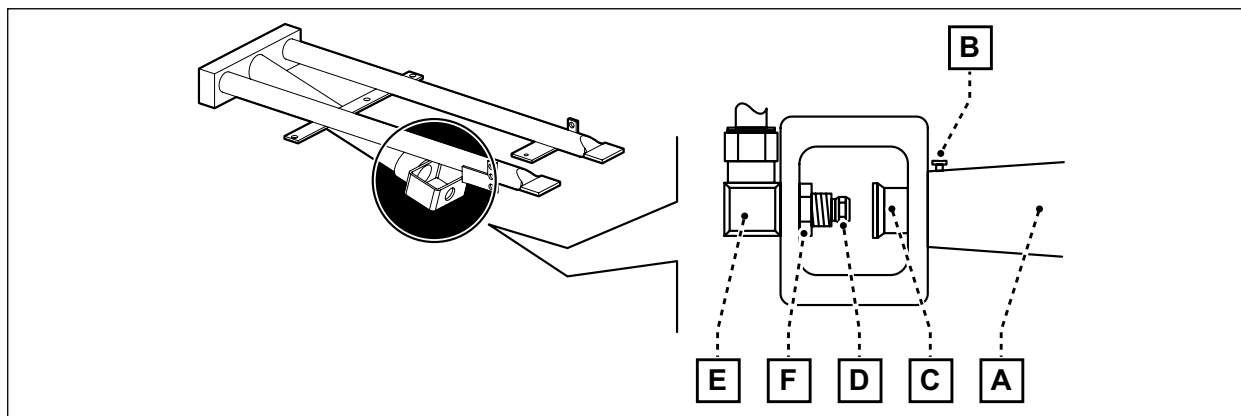


Fig. 25 Burner main parts

### 6.10.2 Replacing the ignition spark plug

To carry out this operation proceed as follows.

- Turn off the gas supply tap;
- Access the burner;
- Unscrew the two screws (**E**);
- Remove the spark ignition plug (**D**), disconnect the cable and refit the new spark ignition plug;
- Refit all the parts removed so that the appliance can be used.

- A. Pilot blowpipe
- B. Burner body
- C. Thermocouple
- D. Ignition electrode
- E. Fixing screw
- F. Nozzle
- G. Pilot bracket

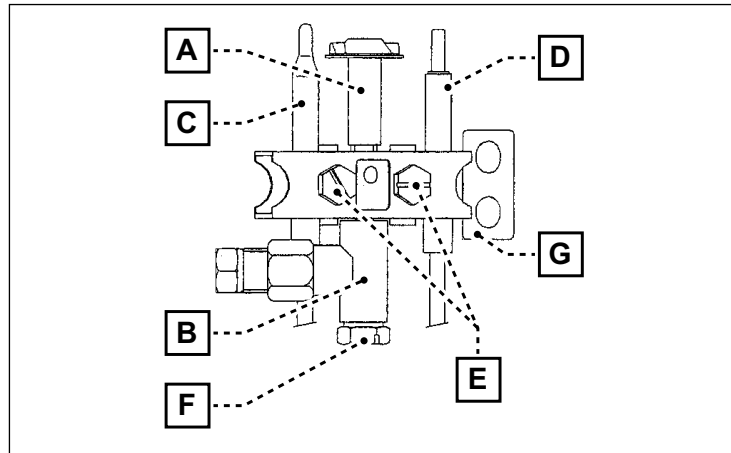


Fig. 26 Pilot nozzle main parts

### 6.10.3 Thermocouple replacement

To carry out this operation proceed as follows.

- Turn off the gas supply tap;
- Access the burner;
- Unscrew the two screws (**E**);
- Remove the thermocouple (**C**) from the support.
- Install the new thermocouple, repeating the above sequence in reverse order;
- Refit all the parts removed so that the appliance can be used.



## **7 TABLES AND ANNEXES**

Family	Gas type	Gas symbol	Inferior calorific value (Hi) Kcal/cu. M	Inferior calorific value (Hi) MJ/cu. M	Inferior calorific value (Hi) kW/cu. M	Calibration and testing pressure mbar	Calibration and testing pressure mmWC
2nd family	Natural gas (group H)	G 20 (methane gas)	8.570	35,9	9,97	20	200
3rd family	Liquefied petroleum gases (LPG)	G 30 (butane)	29.330 (Kcal/cu. M)	122,7 (MJ/cu. M)	34,1(kW/cu. M)	30	300
			11.000 (Kcal/kg)	45,6(MJ/kg)	12,67(kW/kg)		
		G 31 (propane)	22.190 (Kcal/cu. M)	92,91 (MJ/cu. M)	25,8 (kW/cu. M)	37	370
			11.000 (Kcal/kg)	46,4(MJ/kg)	12,88(kW/kg)		

Tab. 9 Families of standardised gases

Country	Appliance category	Gas	Nominal pressure (mbar)
AUSTRIA	II2H3B/P	G20	20
		G30 / G31	50
BELGIUM	II2E+3+	G20 / G25	20/25
		G30 / G31	28 - 30/37
CYPRUS	I3B/P	G30 / G31	30
	I3+	G30 / G31	28 - 30/37
CZECH REPUBLIC	II2H3B/P	G20	20
		G30 / G31	30
DENMARK	II2H3B/P	G20	20
		G30 / G31	30
ESTONIA	II2H3+	G20	20
		G30 / G31	28 - 30/37
ESTONIA	II2H3B/P	G20	20
		G30 / G31	30
FINLAND	II2H3B/P	G20	20
		G30 / G31	30
FRANCE	II2H3+	G20 / G25	20/25
		G30 / G31	28 - 30/37
GERMANY	II2ELL3B/P	G20	20
		G25	20
		G30 / G31	50
GREAT BRITAIN	II2H3+	G20	20
		G30 / G31	28 - 30/37
GREECE	II2H3+	G20	20
		G30 / G31	28 - 30/37
HUNGARY	II2H53B/P	G20	25
		G30 / G31	30
		G25.1	25
ICELAND	I3B/P	G30 / G31	30
IRELAND	II2H3+	G20	20
		G30 / G31	28 - 30/37
ITALY	II2H3+	G20	20
		G30 / G31	28 - 30/37
LATVIA	II2H3+	G20	20
		G30 / G31	28 - 30/37
LATVIA	II2H3B/P	G20	20
		G30 / G31	30
LITHUANIA	II2H3B/P	G20	20
		G30 / G31	30
LITHUANIA	II2H3+	G20	20
		G30 / G31	28 - 30/37
LUXEMBOURG	I2E	G20	20
MALTA	I3B/P	G30 / G31	30
NETHERLANDS	II2L3B/P	G25	25
		G30 / G31	30
NORWAY	II2H3B/P	G20	20
		G30 / G31	30
POLAND	I2E	G20	20
PORTUGAL	II2H3+	G20	20
		G30 / G31	28 - 30/37
SLOVAKIA	II2H3B/P	G20	20
		G30 / G31	30
SLOVENIA	II2H3B/P	G20	20
		G30 / G31	30
SPAIN	II2H3+	G20	20
		G30 / G31	28 - 30/37
SWEDEN	II2H3B/P	G20	20
		G30 / G31	30
SWITZERLAND	II2H3B/P	G20	20
		G30 / G31	50
SWITZERLAND	II2H3+	G20	20
		G30 / G31	28 - 30/37
TURKEY	II2H3B/P	G20	20
		G30 / G31	30

Tab. 10 Gas category and pressure

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