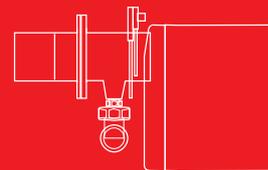
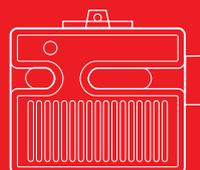




# Riello 40 GS Series

One Stage Gas Burners

GS3	11 ÷ 35	kW
GS5	18 ÷ 58	kW
GS10	42 ÷ 116	kW
GS20	81 ÷ 220	kW



The Riello 40 GS series of one stage gas burners, is a complete range of products developed to respond to any request for home heating. The Riello 40 GS series is available in four different models, with an output ranging from 11 to 220 kW, divided in four different structures.

All the models use the same components designed by Riello for the Riello 40 GS series. The high quality level guarantees safe working. The Riello 40 GS burners are fitted with a microprocessor based control box with diagnostic functions.

In developing these burners, special attention was paid to reducing noise, to the ease of installation and adjustment, to obtaining the smallest size possible to fit into any sort of boiler available on the market.

All the models are approved by the EN 676 European Standard and conform to European Directives for EMC, Low Voltage, Machinery and Boiler Efficiency.

All the Riello 40 GS burners are tested before leaving the factory.

## Technical Data

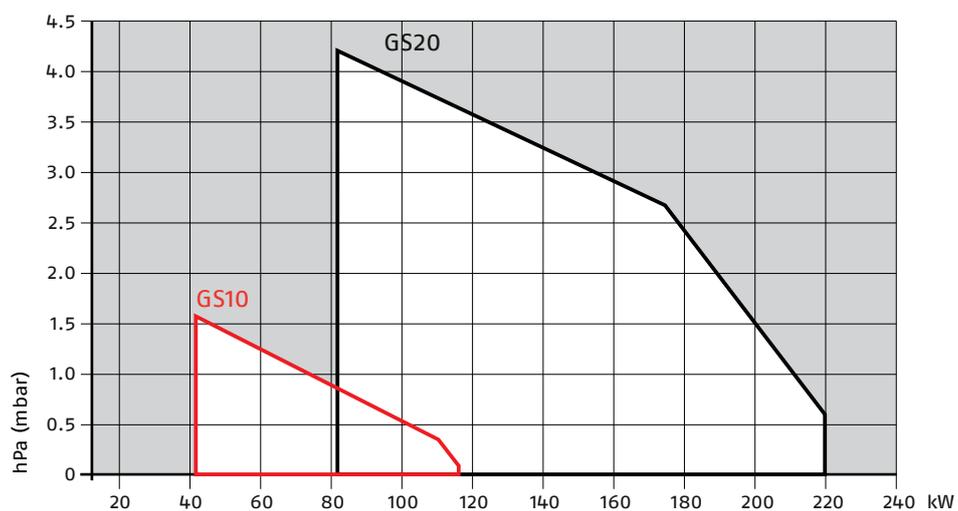
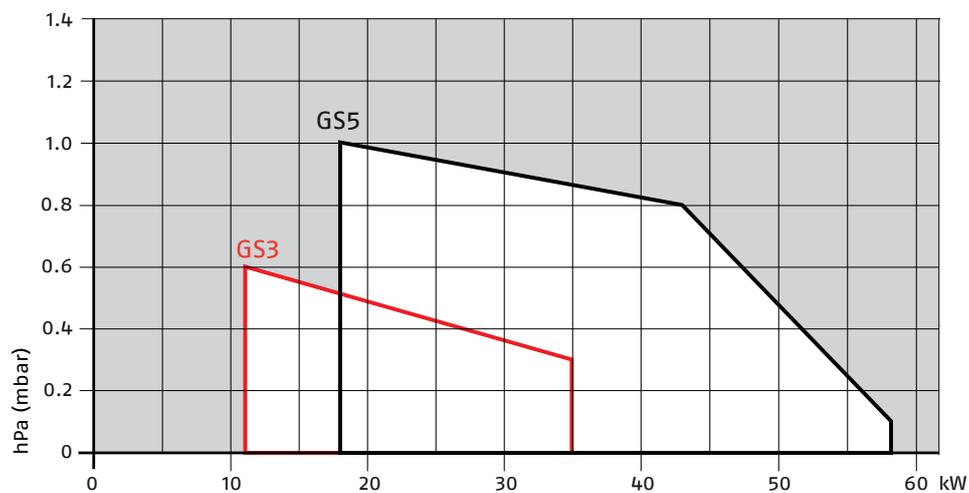
MODEL			GS3	GS5	GS10	GS20	
Burner operation mode			One stage				
Modulation ratio at max. output							
Servomotor		type	R.B.L.				
		run time s	6 ÷ 28				
Heat output		kW	11 ÷ 35	18 ÷ 58	42 ÷ 116	81 ÷ 220	
		Mcal/h	9.5 ÷ 30	15.5 ÷ 50	36 ÷ 100	70 ÷ 189	
Working temperature		°C min./max.	0/40				
<b>FUEL/AIR DATA</b>							
G20 gas	net calorific value	kWh/Nm <sup>3</sup>	10				
	gas density	kg/Nm <sup>3</sup>	0.71				
	gas delivery	Nm <sup>3</sup> /h	1.1 ÷ 3.5	1.8 ÷ 5.8	4.2 ÷ 11.6	8.1 ÷ 22	
G25 gas	net calorific value	kWh/Nm <sup>3</sup>	8.6				
	gas density	kg/Nm <sup>3</sup>	0.78				
	gas delivery	Nm <sup>3</sup> /h	1.3 ÷ 4	2.1 ÷ 6.7	4.9 ÷ 13.4	9.4 ÷ 25.6	
LPG gas	net calorific value	kWh/Nm <sup>3</sup>	25.8				
	gas density	kg/Nm <sup>3</sup>	2.02				
	gas delivery	Nm <sup>3</sup> /h	0.4 ÷ 1.4	0.7 ÷ 2.2	1.6 ÷ 4.4	3.1 ÷ 8.5	
Fan		type	Centrifugal with forward curve blades				
Air temperature		max °C	40				
<b>ELECTRICAL DATA</b>							
Electrical supply		Ph/Hz/V	1/50/230 (±10%)				
Auxiliary electrical supply		Ph/Hz/V	--				
Control box		type	MG 557/5	MG 557/5	RMG 88.620A2		
Total electrical power		kW	0.10	0.11	0.13	0.25	
Auxiliary electrical power		kW	--				
Protection level		IP	X0D				
Fan motor		electrical power	kW				
		rated current	A	0.6	0.65	0.7	1.4
		start up current	A	2.4	2.6	2.8	5.6
		protection level	IP	20			
Ignition transformer		type	Incorporated in the control box		Separated from the control box		
		V1 - V2	230V - 8 kV		230V - 8 kV		
		I1 - I2	0.2 A - 12 mA		1.8 A - 30 mA		
Operation			Intermittent (at least one stop every 24 h)				
<b>EMISSIONS</b>							
Noise levels		sound pressure	dB (A)	55	58	65	72
		sound power	W	66	69	76	83
Gas G20		CO emission	mg/kWh	< 40			
		NOx emission	mg/kWh	≤ 120			
<b>APPROVAL</b>							
Directive			2006/42/EC - 2009/142/EC - 2014/30/UE - 2014/35/UE				
Conforming to			EN 676 - EN 12100				
Certification			CE-0063AP6680				

Reference conditions:

Temperature: 20°C - Pressure: 1013,5 mbar - Altitude: 0 m a.s.l. - Noise measured at a distance of 1 meter.

Since the Company is constantly engaged in the production improvement, the aesthetic and dimensional features, the technical data, the equipment and the accessories can be changed. This document contains confidential and proprietary information of RIELLO S.p.A. Unless authorised, this information shall not be divulged, nor duplicated in whole or in part.

## Firing Rates



Useful working field for choosing the burner

Test conditions conforming to EN 676:

Temperature: 20°C

Pressure: 1013,5 mbar

Altitude: 0 m a.s.l.

# Gas train

## GAS TRAIN DESIGNATION

Series: MB	
MBC	
Size:	405    407    412
	65
Operation:	/1 stage mode opening
Leak detection control:	- 0
Joint type:	R threaded joint
	F1 square flange BS1
	F2 square flange BS2
	F3 square flange BS3 - BS4
Electrical connection:	SD Domestic plug
	T Terminals - Terminal strip
Standard output pressure range:	- without pressure governor
	0 with governor and air/gas proportional pressure
	2 with governor and output pressure up to 20 mbar
	3 with governor and output pressure up to 30 mbar
	4 with governor and output pressure up to 40 mbar
	5 with governor and output pressure up to 50 mbar
Valve control:	0 shared

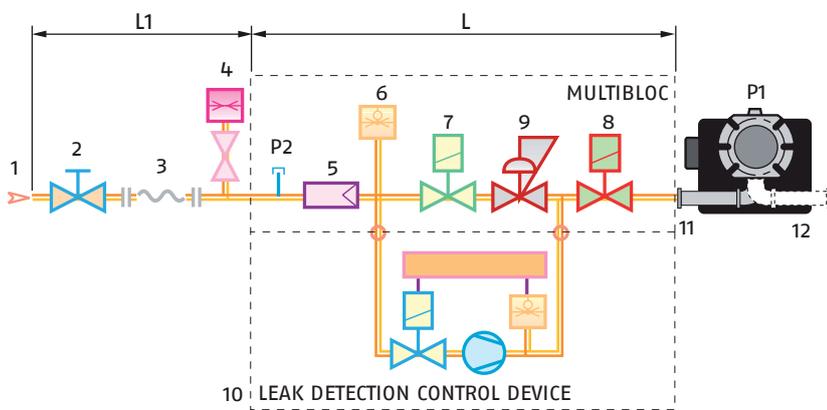
  

MB	407	/1	-	R	SD	2	0
BASIC DESIGNATION				EXTENDED DESIGNATION			

**GAS TRAINS**

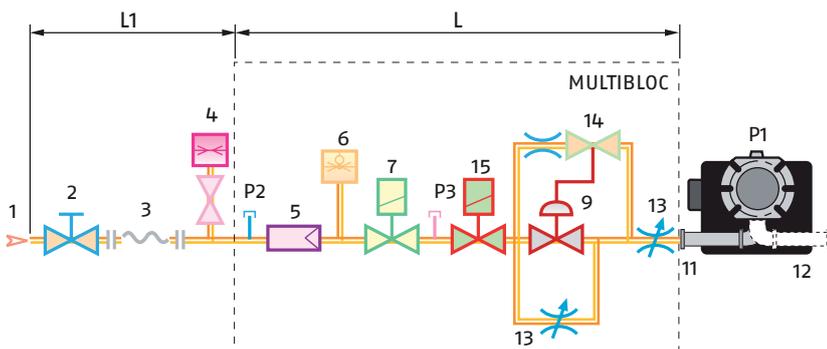
The burners are set for gas supply from either the right or left hand sides. Depending on the fuel output and the available pressure in the supply line, you should check the correct gas train to be adapted to the system requirements. The gas train is Multibloc type, containing the main components in a single unit. Except for the MBC 65 DLE model, a valve seal control (as accessory) can be fitted to the Multibloc gas trains. The MBC 65 DLE Multibloc gas train can be fitted only to the left of the burner.

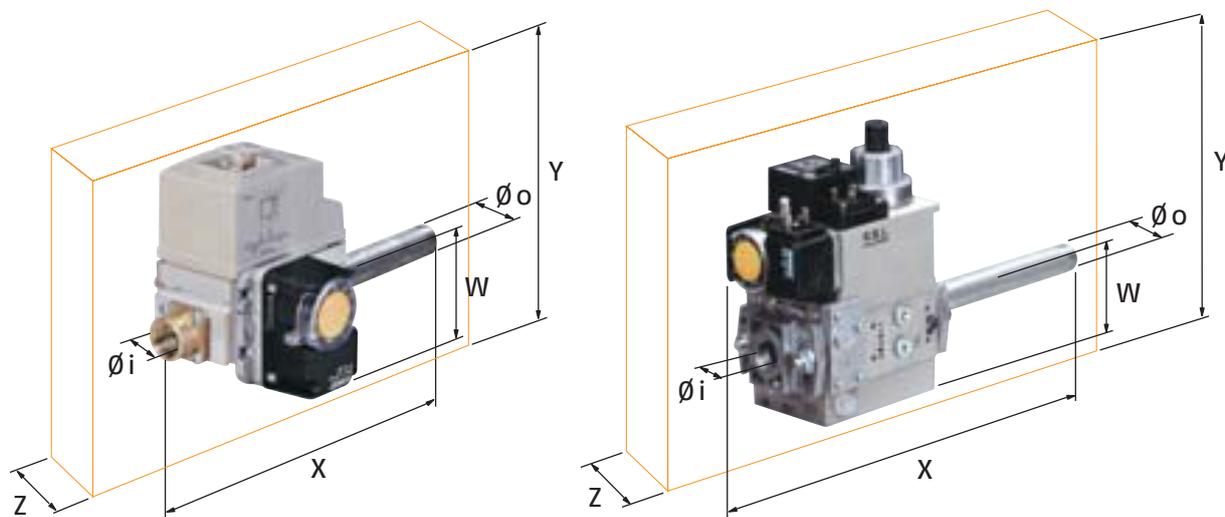
**MB 405-407-410**



- |    |  |
|----|--|
| 1  | Gas input pipework   |
| 2  | Manual valve (charged to the installer)  |
| 3  | Antivibrating joint  |
| 4  | Gas pressure gauge   |
| 5  | Gas filter   |
| 6  | Min. gas pressure switch   |
| 7  | Safety gas valve   |
| 8  | Adjustment solenoid:<br>firing delivery adjustment (rapid opening)<br>maximum delivery adjustment (slow opening) |
| 9  | Pressure regulator   |
| 10 | Leak detection control device for valves 7 and 8 (accessory)   |
| 11 | Gas train-burner adapter   |
| 12 | Burner   |
| 13 | Shutter with adjustment screws   |
| 14 | Pressure regulator setting device  |
| 15 | Regulation solenoid  |
| P1 | Combustion head pressure   |
| P2 | Upstream pressure from the filter  |
| P3 | Upstream pressure from the control valve   |
| L  | Gas train supplied separately  |
| L1 | Installer's responsibility   |

**MBC 65**





The dimensions of the gas trains vary depending on their construction features. The following table shows the dimensions of the gas trains that can be fitted to Riello 40 GS burners, intake and outlet diameters.

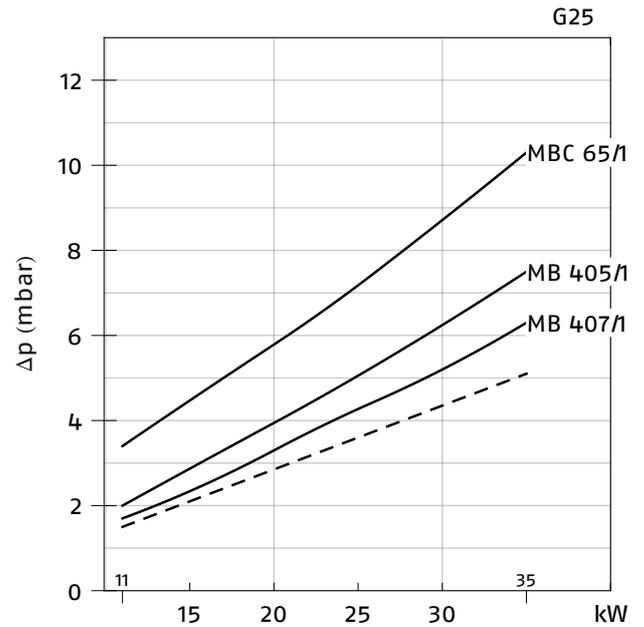
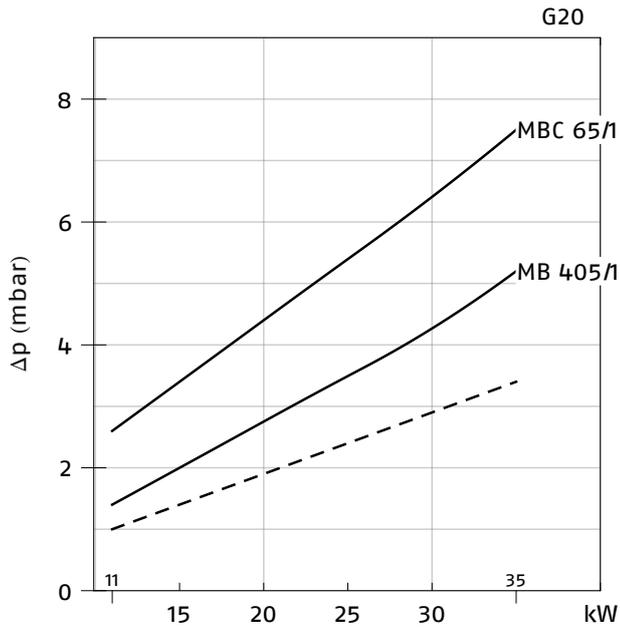
<b>GAS TRAIN</b>							
<b>MODEL</b>	<b>CODE</b>	<b>Ø in</b>	<b>Ø out</b>	<b>X mm</b>	<b>Y mm</b>	<b>W mm</b>	<b>Z mm</b>
MBC 65/1 - RDS 20	3970569	Rp 1/2"	Rp 1/2"	307	155	31	122
MB 405/1 - RSD 20	3970530	Rp 1/2"	Rp 1/2" (*)	321	186	46	120
MB 405/1 - RT 20	3970500	Rp 3/4"	Rp 3/4"	371	186	46	120
MB 407/1 - RSD 20	3970531	Rp 3/4"	Rp 3/4"	371	186	46	120
MB 407/1 - RSD 20	3970532	Rp 1"	Rp 3/4"	405	221	55	145

(\*) With 1/2" - 3/4" reduction nipple supplied.

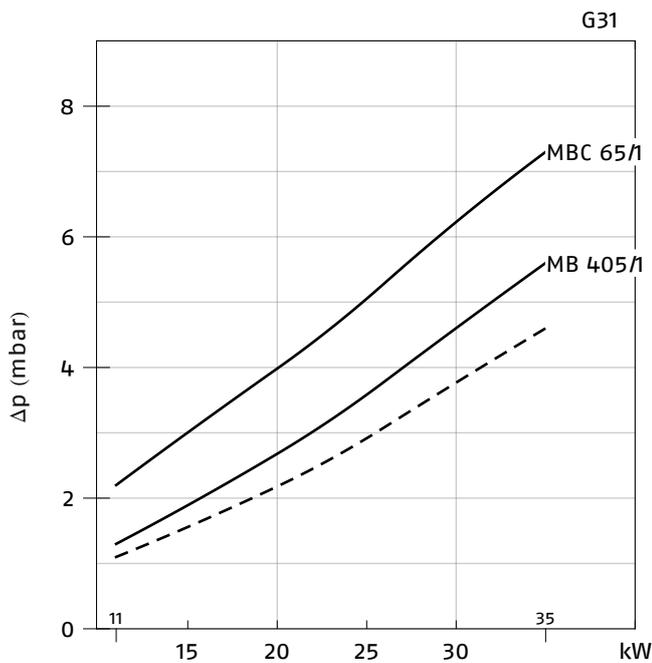
# Pressure Drop Diagram

The diagrams indicate the minimum pressure drop of the burners with the various gas trains that can be matched with them; at the value of these pressure drop add the combustion chamber pressure. The value thus calculated represents the minimum required input pressure to the gas train.

## GS3 (NATURAL GAS)



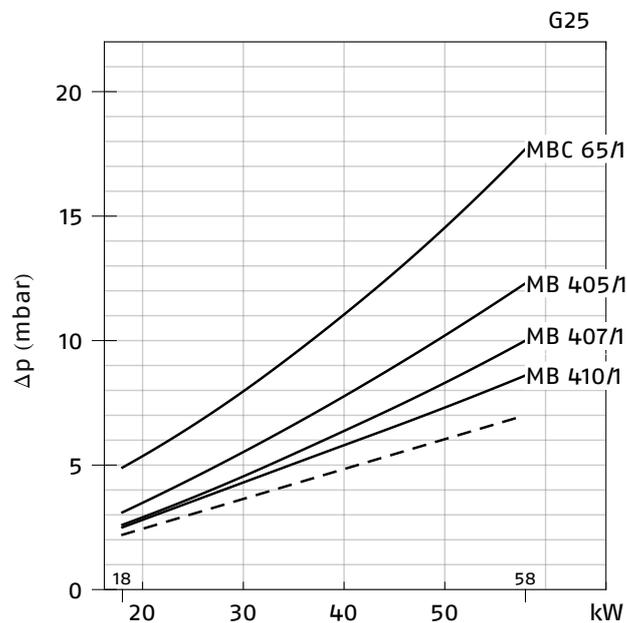
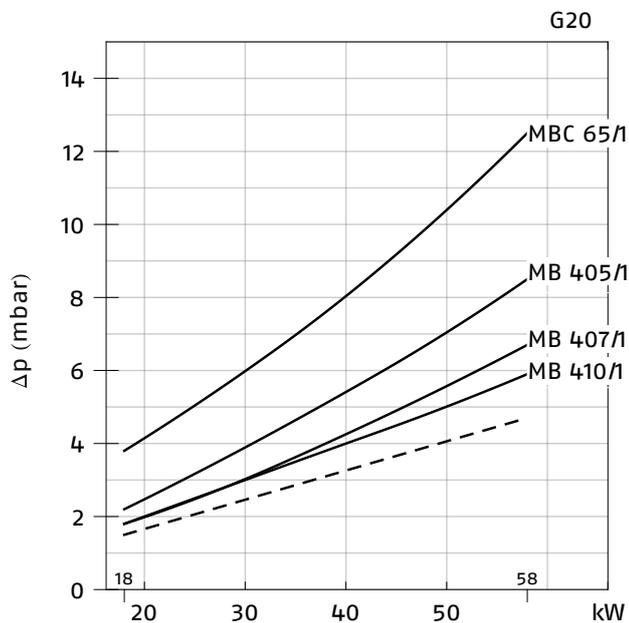
## GS3 (LPG)



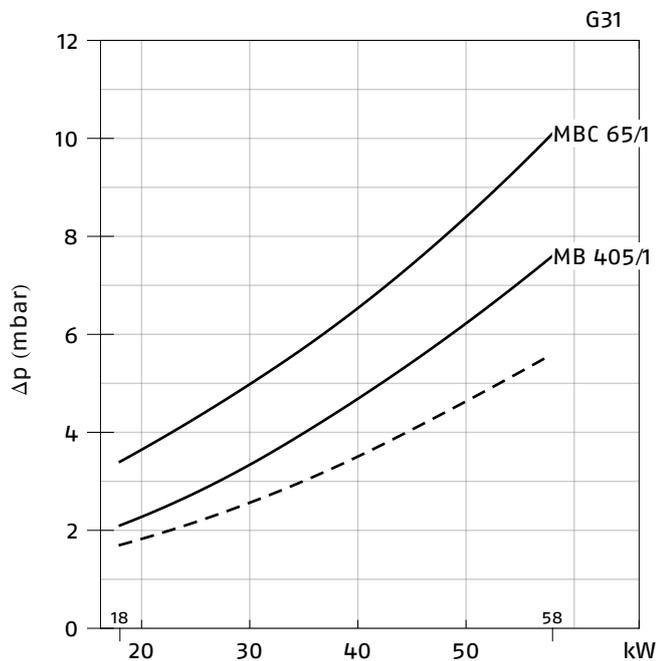
For pressure levels different from those indicated above, please contact Riello Burners Technical Office.  
 In LPG plants, Multibloc gas trains do not operate below 0°C.  
 They are only suitable for gaseous LPG (liquid hydrocarbons destroy the seal materials).

- Combustion head + gas train
- - - Combustion head

**GS5 (NATURAL GAS)**



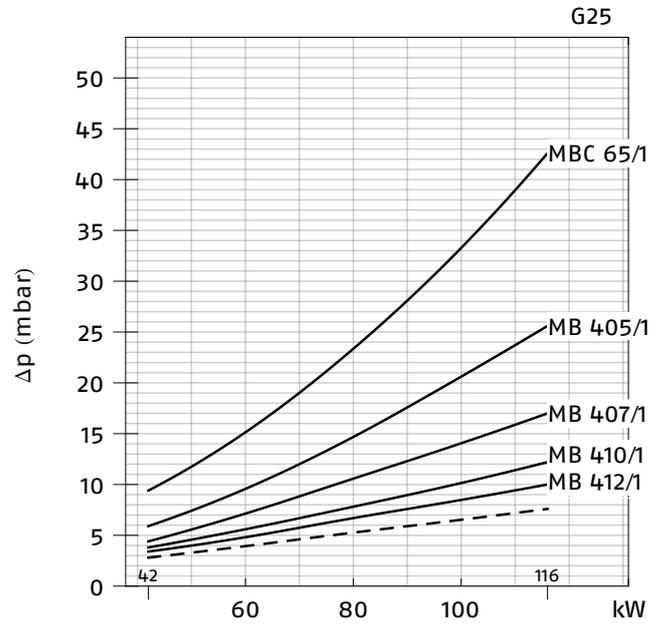
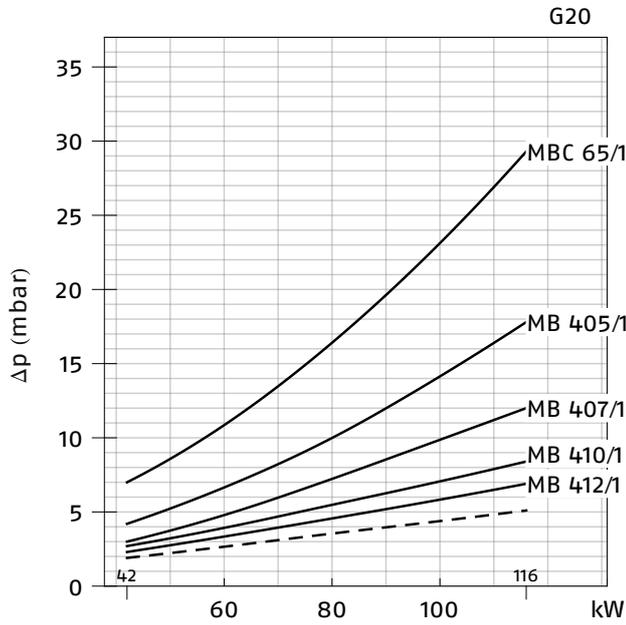
**GS5 (LPG)**



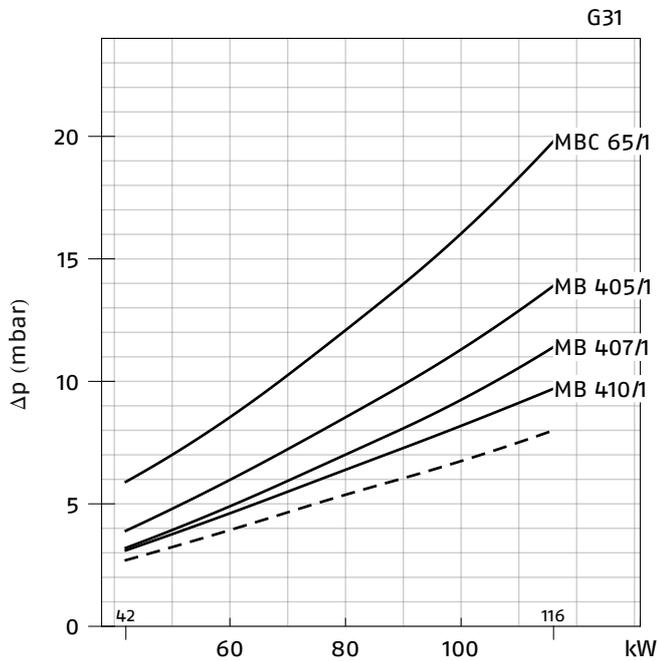
For pressure levels different from those indicated above, please contact Riello Burners Technical Office.  
 In LPG plants, Multibloc gas trains do not operate below 0°C.  
 They are only suitable for gaseous LPG (liquid hydrocarbons destroy the seal materials).

- Combustion head + gas train
- - - Combustion head

**GS10 (NATURAL GAS)**



**GS10 (LPG)**



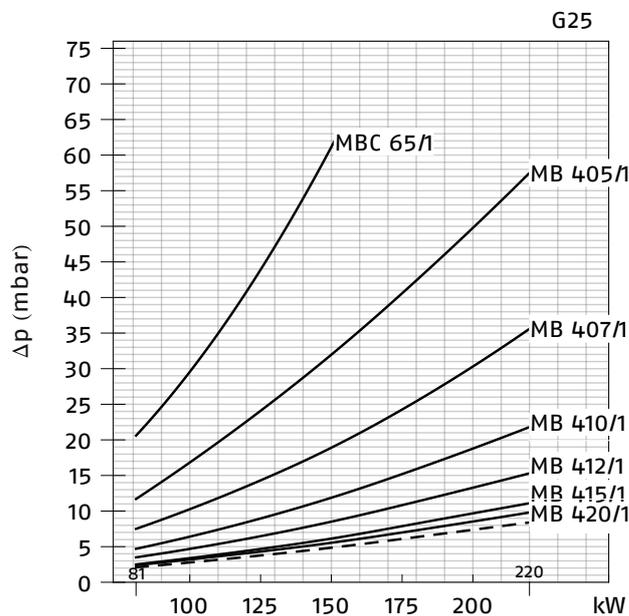
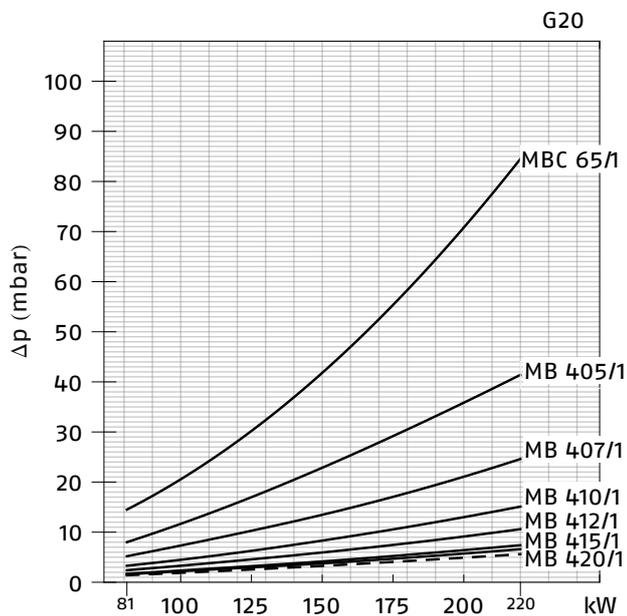
For pressure levels different from those indicated above, please contact Riello Burners Technical Office.

In LPG plants, Multibloc gas trains do not operate below 0°C.

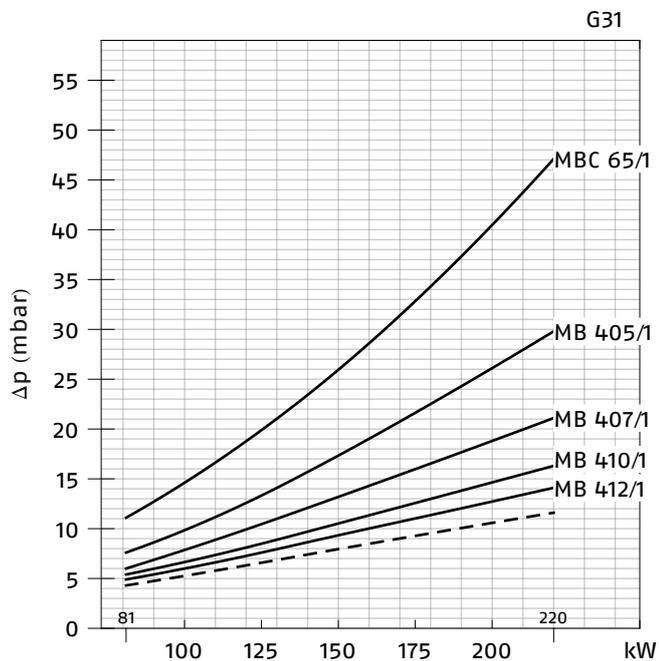
They are only suitable for gaseous LPG (liquid hydrocarbons destroy the seal materials).

- Combustion head + gas train
- - - Combustion head

**GS20 (NATURAL GAS)**



**GS20 (LPG)**



For pressure levels different from those indicated above, please contact Riello Burners Technical Office.

In LPG plants, Multibloc gas trains do not operate below 0°C.

They are only suitable for gaseous LPG (liquid hydrocarbons destroy the seal materials).

- Combustion head + gas train
- - - Combustion head

## Ventilation

The different ventilation circuits always ensure low noise levels with high performance of pressure and air delivery, inspite of their compact size. The burners are fitted with an adjustable air pressure switch, conforming to EN 676 standards.



Air suction



Air pressure switches

## Combustion Head

The combustion head in Riello 40 GS burners is the result of an innovative design, which allows combustion with low polluting emissions, while being easy to adapt to all the various types of boilers and combustion chambers.



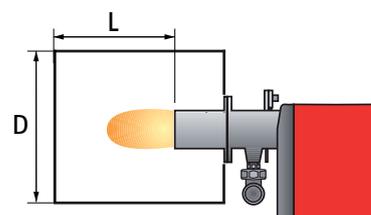
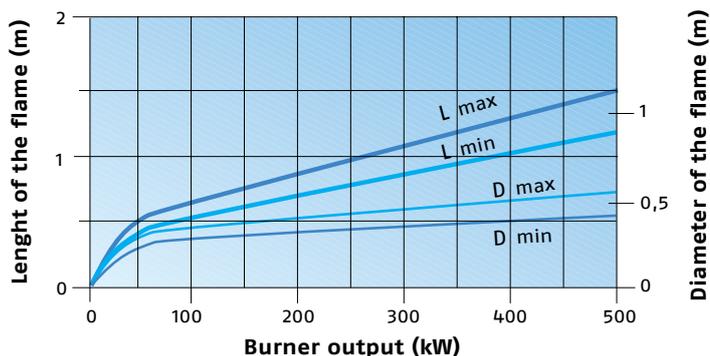
Combustion head



Mobile flange

Simple adjustment allows the internal geometry of the combustion head to be adapted to the burner output.

## DIMENSIONS OF THE FLAME

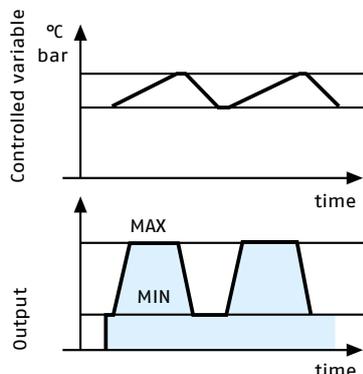


Example:  
 Burner thermal output = 350 kW;  
 L flame (m) = 1.2 m (medium value);  
 D flame (m) = 0.6 m (medium value)

# Operation

## BURNER OPERATION MODE

All these models are one stage operation.



One stage operation



Air damper partially open (GS3, GS5)



Air damper partially open (GS10, GS20)



Air damper completely open (GS10, GS20)

The GS3 and GS5 models are fitted with the new MG 557 microprocessor control panel. For helping the commissioning and maintenance work, there are two main elements:

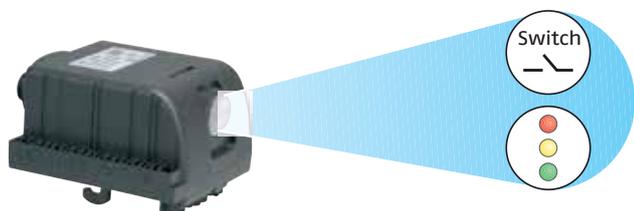


The lock-out reset button is the central **operating element** for resetting the burner control and for activating / deactivating the diagnostic functions.



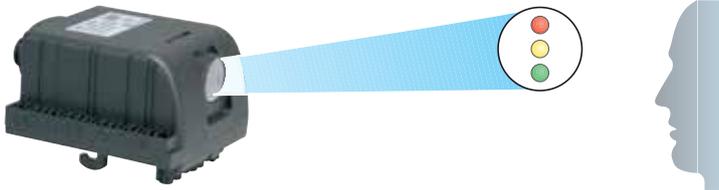
The multi-color LED is the central **indication element** for visual diagnosis and interface diagnosis.

Both elements are located under the transparent cover of lock-out reset button, as showed below.



There are two diagnostic choices, for indication of operation and diagnosis of fault cause:

**- visual diagnosis:**



**- interface diagnosis:**



By the interface adapter and a PC with dedicated software.

**Indication of operation:**

In normal operation, the various statues are indicated in the form of colour codes according to the table below.

**Color code table**

Operation status	Color code
Stand-by	○ Led off
Pre-purging	● Green
Ignition phase	● Green
Flame OK	● Green
Post purge	● Green
Undervoltage, built-in fuse	○ Led off
Fault, alarm	● Red
Flame simulation	○ Led off

**Diagnosis of fault causes:**

After lock-out has occurred, the red signal lamp is steady on. In this status, the visual fault diagnosis according to the error code table can be activated by pressing the lock-out reset button for > 3 seconds.

The interface diagnosis (with adapter) can be activated by pressing again the lock-out button for > 3 seconds.

Example of blinks sequence:



**Error code table**

Signal	Possible cause
2 flashes ⊛ ⊛	The flame does not stabilise at the end of the safety time: - faulty ionisation probe - faulty or soiled gas valves - neutral/phase exchange - faulty ignition transformer - poor burner regulation (insufficient gas)
3 flashes ⊛ ⊛ ⊛	Min. air pressure switch does not close or is already closed before the limit thermostat closed: - air pressure switch faulty - air pressure switch incorrectly regulated
4 flashes ⊛ ⊛ ⊛ ⊛	Presence of flame: - in stand-by position after heat demand - during pre-purging
6 flashes ⊛ ⊛ ⊛ ⊛ ⊛ ⊛	Loss air pressure: - during pre-purging - during safety time or operations
7 flashes ⊛ ⊛ ⊛ ⊛ ⊛ ⊛ ⊛	Loss of flame 4 times during operations after 3 attempts of re-cycle: - poor burner regulation (insufficient gas) - faulty or soiled gas valves - short circuit between ionisation probe and earth - faulty ionisation probe

The GS10 and GS20 models are fitted with the new microprocessor control panel RMG 88.620A2 for the supervision during intermittent operation. For helping the commissioning and maintenance work, there are two main elements:

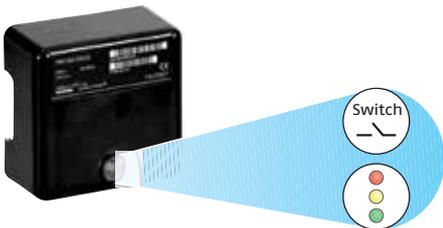


The lock-out reset button is the central operating element for resetting the burner control and for activating / deactivating the diagnostic functions.



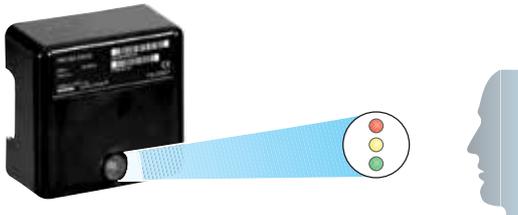
The multi-color LED is the central indication element for visual diagnosis and interface diagnosis.

Both elements are located under the transparent cover of lock-out reset button, as showed below.

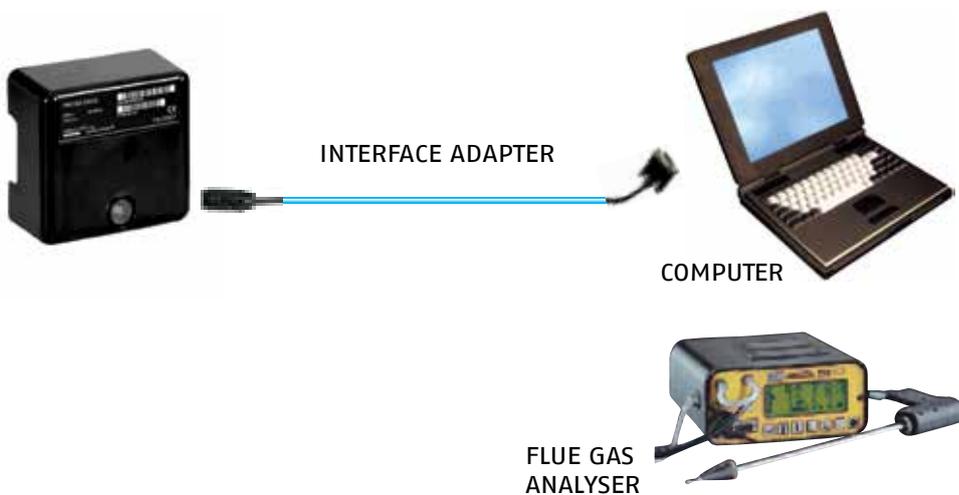


There are two diagnostic choices, for indication of operation and diagnosis of fault cause:

**- visual diagnosis:**



**- interface diagnosis:**



By the interface adapter and a PC with dedicated software or by a predisposed flue gas analyzer (see paragraph accessories).

**Indication of operation:**

In normal operation, the various status are indicated in the form of colour codes according to the table below. The interface diagnosis (with adapter) can be activated by pressing the lock-out button for > 3 seconds.

**Color code table**

Operation status	Color code
Stand-by	○ ○ ○ ○ ○ ○ ○ ○
Pre-purging	☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀
Ignition phase	☀ ○ ☀ ○ ☀ ○ ☀ ○
Flame OK	● ● ● ● ● ● ● ●
Poor flame	● ○ ● ○ ● ○ ● ○
Undervoltage, built-in fuse	☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀
Fault, alarm	☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀
Extraneous light	☀ ● ☀ ● ☀ ● ☀ ●

○ LED off

**Diagnosis of fault causes:**

After lock-out has occurred, the red signal lamp is steady on. In this status, the visual fault diagnosis according to the error code table can be activated by pressing the lock-out reset button for > 3 seconds. The interface diagnosis (with adapter) can be activated by pressing again the lock-out button for > 3 seconds. The flashes of red LED are a signal with this sequence :

*(e.g. signal with n° 3 flashes – faulty air pressure monitor)*

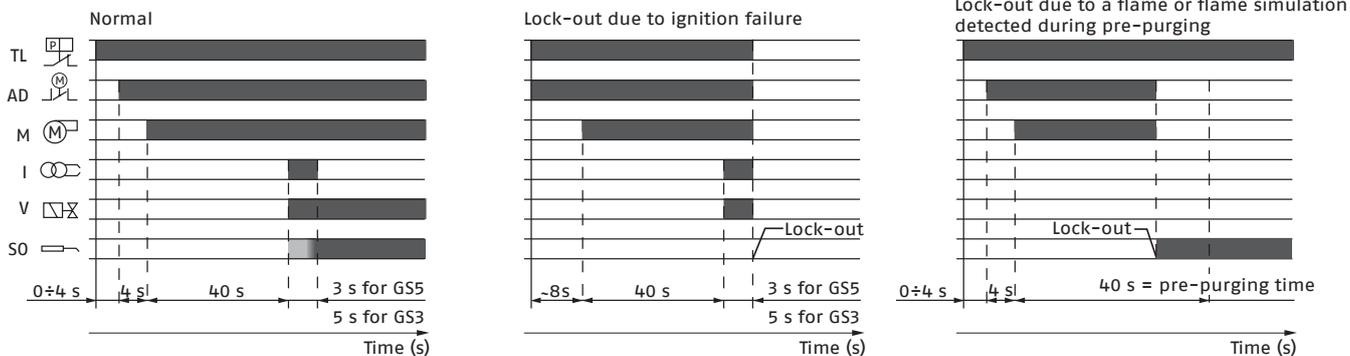


**Error code table**

Flash code	Possible cause of fault
2 flashes ☀ ☀	No establishment of flame at the end of safety time : - faulty or soiled fuel valves - faulty or soiled flame detector - poor adjustment of burner, no fuel - faulty ignition equipment
3 flashes ☀ ☀ ☀	Faulty air pressure monitor
4 flashes ☀ ☀ ☀ ☀	Simulation of flame on burner start up
7 flashes ☀ ☀ ☀ ☀ ☀ ☀ ☀	Loss of flame during operation : - faulty or soiled fuel valves - faulty or soiled flame detector - poor adjustment of burner
10 flashes ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀ ☀	Wiring error or internal fault

**START UP CYCLE**

**GS3 - GS5**



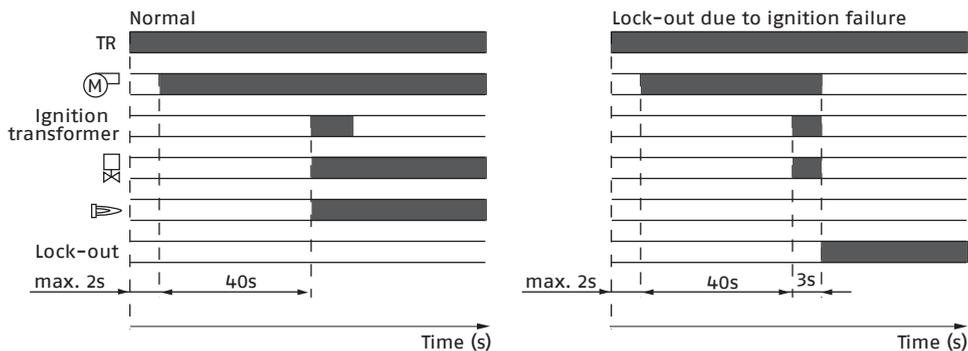
**Correct operation for GS3 and GS5 models**

- 0s The burner begins the ignition cycle
- 0s-4s The control box waits still after the heat request
- 4s-8s Electrical damper time to reach the opening position
- 8s-48s Pre-purging time with start of the fan motor
- 48s-53s GS3 safety time as total ignition time
- 48s-51s GS5 safety time as total ignition time

**Lock-out due to ignition failure**

If the flame does not light for 4 times within the safety limit (3s for GS5, 5s for GS3) the burner locks-out.

**GS10 - GS20**



**Correct operation for GS10 and GS20 models**

- 0s The burner begins the ignition cycle
- 0s The burner begins the ignition cycle
- 0s-2s Safety time
- 2s-42s Pre-purge with the air damper open
- 42s Ignition

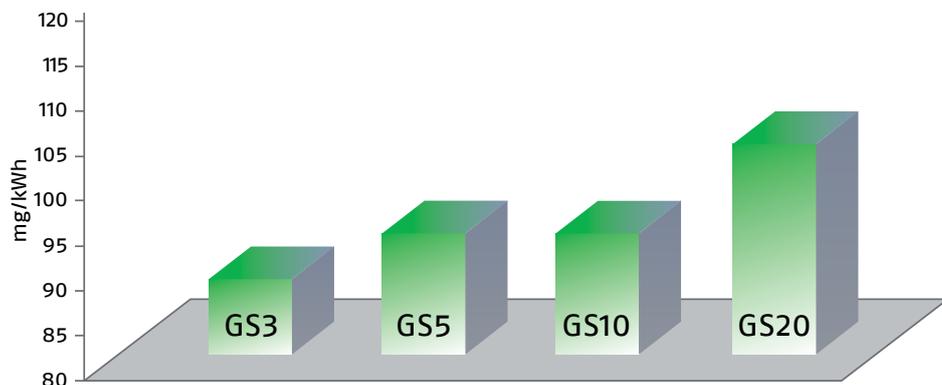
**Lock-out due to ignition failure**

If the flame does not light within the safety limit (3s) the burner locks-out. When flame-failure occurs during working, shut down takes place within one second.

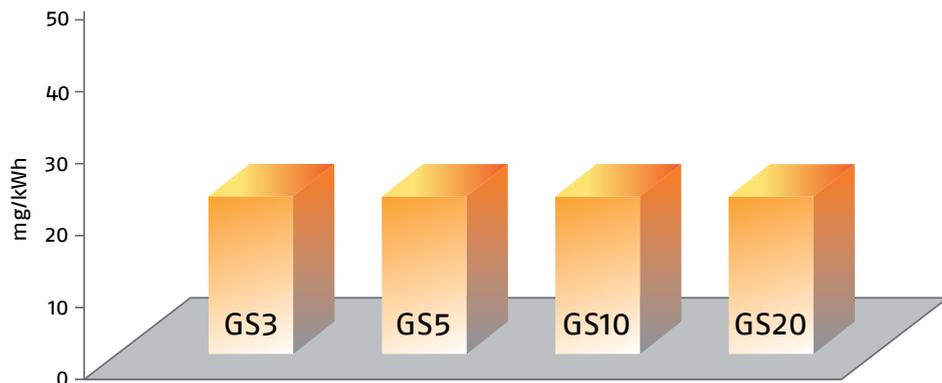
## Emissions

The burners in the GS series guarantee controlled combustion, reducing emissions of both CO and NOx, this combustion control is due to the recirculation of the combustion products in the chamber (thanks to different combustible air flow speeds) and to the fuel staging technique (thanks to the special geometry of the gas nozzles).

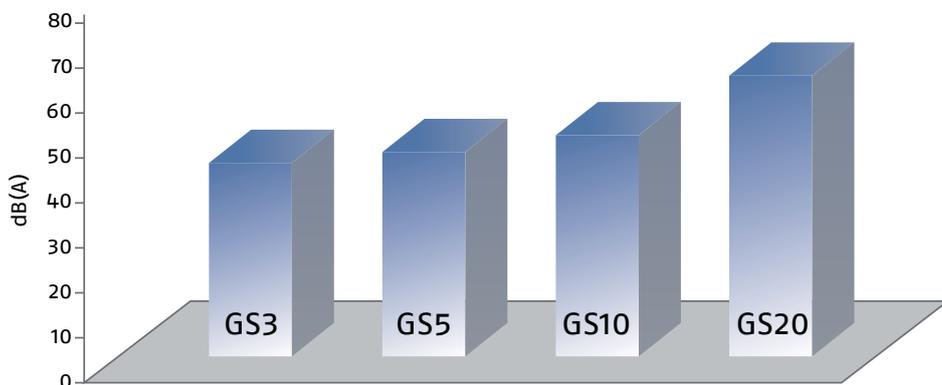
**NO2 EMISSIONS**



**CO EMISSIONS (gas G20)**



**NOISE EMISSIONS**



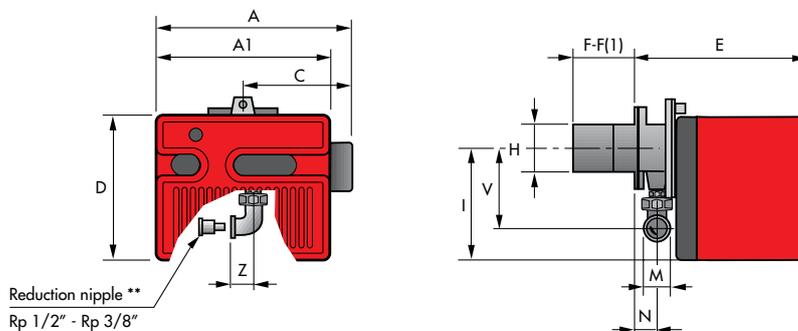
Special attention has been paid to noise reduction. All models are fitted with sound-proofing material inside the cover.



# Overall Dimensions (mm)

These models are distinguished by their reduced size, in relation to the outputs achieved, which means they can be fitted to any boiler on the market.

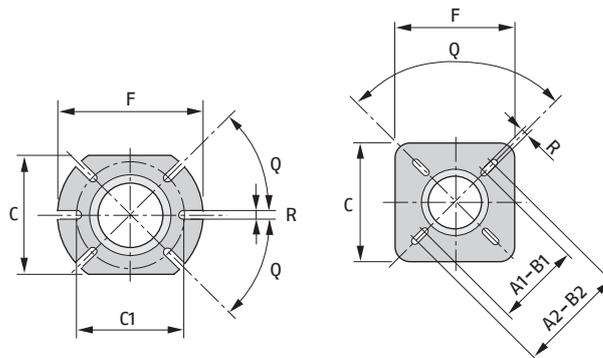
## BURNER



MODEL	A	A1	C	D	E	F - F(1)	H	I	M	N	V	Z
GS 3	-	252	-	215	230	100	91	165	Rp 3/8"	37	132	25
GS 5	-	272	-	233	295	100	91	180	Rp 1/2"	48	138	28
GS 10	341	-	188.5	262	346	110	105	204	Rp 3/4"	61	142	33
GS 10***	-	305	-	262	346	110 - 170	105	204	Rp 3/4"	61	142	33
GS 10	387	-	212	298	389	120 - 280	125	230	Rp 3/4"	67	152	33
GS 20***	-	350	-	298	389	120	125	230	Rp 3/4"	67	152	33

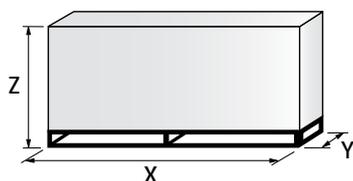
- \* With reduction nipple
- \*\* Standard equipment on R40 GS3
- \*\*\* Versions with air damper opening motor inside the cover
- (i) dimension with extended head

## BURNER - BOILER MOUNTING FLANGE



MODEL	A1	A2	B1	B2	C	C1	F	Q	R
GS 3	-	-	-	-	140	130	170	45°	10
GS 5	-	-	-	-	140	130	170	45°	10
GS 10	-	-	-	-	160	130	185	45°	11
GS 20	155	200	155	200	170	-	170	45°	11

## PACKAGING



MODEL	X	Y	Z	kg
GS 3	375	335	310	11
GS 5	445	355	325	11
GS 10	483	423	330	15
GS 20	535	463	375	21

## Installation Description

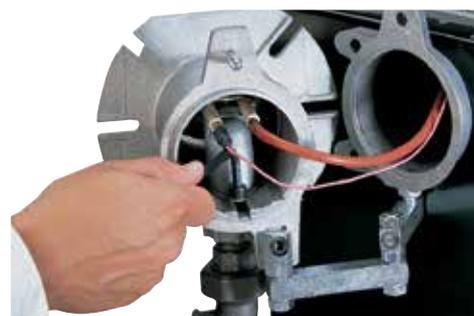
Installation, start up and maintenance must be carried out by qualified and skilled personnel. The burner is set in factory on standard calibration (minimum output), if necessary adjustments can be made on the basis of the maximum output of the boiler. All operations must be performed as described in the technical handbook supplied with the burner.

### BURNER SETTING

The air damper position can be easily adjusted removing the burner cover.



Head setting is easy and aided by a graduated scale, a test point allows reading the air pressure in the combustion head.



Riello 40 GS burners are fitted with an air pressure switch which, in accordance with EN 676 standards, can be adjusted by the installer using a graduated selector, on the basis of the effective working conditions.



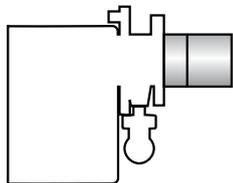
### MAINTENANCE

Maintenance is easily solved because the combustion head can be disassembled without having to remove the burner from the boiler.



## Burner accessories

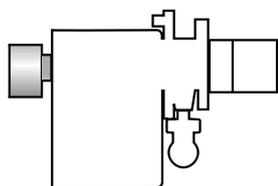
### EXTENDED HEAD KIT



“Standard head” burners can be transformed into “extended head” versions by using the special kit. Below the KITS available for the various burners are listed, showing the original and the extended lengths.

BURNER	STANDARD HEAD LENGTH (mm)	EXTENDED HEAD LENGTH (mm)	CODE
GS3 - GS5	100	125	3000820
GS10	110	170	3001064
GS20	120	280	3000873

### REMOTE RESET CONTROL KIT FOR THE MG 557/3/5 CONTROL BOX



The MG 557 control box can be remotely released using an electric command kit. This kit must be installed in conformity with the local authority.

BURNER	CODE
GS3 - GS5	3002750

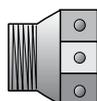
### LPG KIT



For burning LPG gas, a special kit is available to be fitted to the combustion head on the burner, as shown in the following table.

BURNER	STANDARD HEAD CODE	EXTENDED HEAD CODE
GS3	3000881	3000881
GS5	3000882	3000882
GS10	3000884	3000884
GS20	3000886	3000886

### TOWN GAS KIT



BURNER	KIT CODE
GS3	3000888
GS5	3000889
GS10	3000891
GS20	3000893

### GROUND FAULT INTERRUPTER KIT



A “Ground fault interrupter kit” is available as a safety device in case of electrical system fault. It is supplied with burners with pin plug.

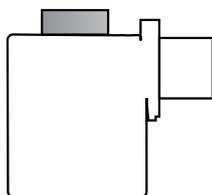
BURNER	CODE
GS3 - GS5 - GS10 - GS20	3001180

### 7-PIN PLUG KIT

If necessary a 7-pin plug kit is available (in packaging of n. 5 pieces).

BURNER	CODE
GS3 - GS5 - GS10 - GS20	3000945

### INLET AIR ASPIRATION KIT



This kit allows to channel the external air directly into the burner and is available as accessory for models.

BURNER	KIT CODE
GS3	3000888
GS5	3000889
GS10	3000891
GS20	3000893

### END CONE WITH TURBULATOR DISK



The end cone turbulator disk reduces the flame length. It is suitable for hoven application (CO emissions) and short boiler chamber.

BURNER	PROJECTION (mm)	CODE
GS5	+15	3000916
GS10	+18	3000918
GS20	+23	3000919

### CONTINUOUS VENTILATION KIT FOR RMG CONTROL BOX

If the burner requires continuous ventilation in the stages without flame, a special kit is available as given in the following table.

BURNER	CODE
GS10 - GS20	3010094

### PC INTERFACE KIT



To connect the control box to a personal computer for the transmission of operation, fault signals and detailed service information, an interface adapter with PC software are available.

BURNER	KIT CODE
GS3 - GS5	3002731
GS10 - GS20	3002719

## Gas train accessories

### SEAL CONTROL KIT



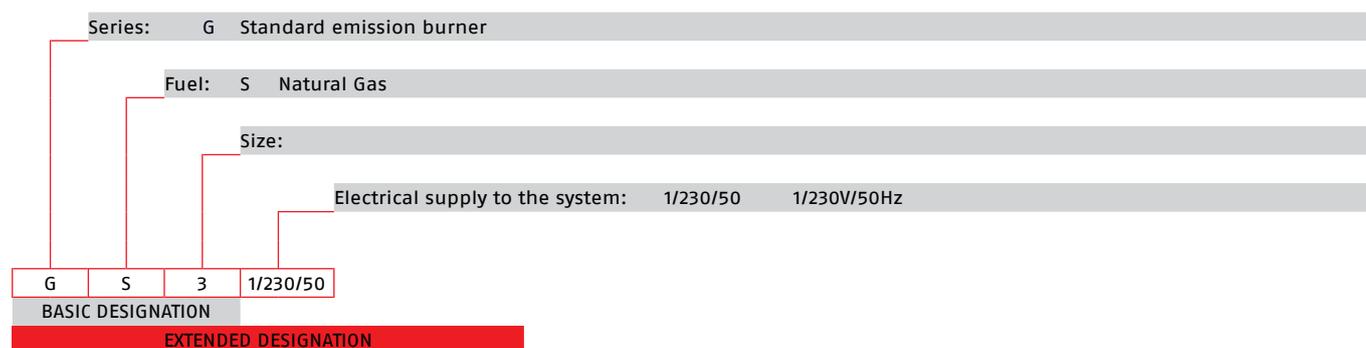
To test the valve seals on the gas train, (except for the model with Multibloc MBC 65 DLE) a special "seal control kit" is available.

GAS TRAIN	CODE	CODE
	for 50Hz operation	for 60Hz operation
MB/1 type	3010123	20050030

# Specification

## DESIGNATION OF SERIES

A specific index guides your choice of burner from the various models available in the BS series. Below is a clear and detailed specification description of the product.



## AVAILABLE BURNER MODELS

BURNER MODELS	ELECTRICAL SUPPLY	HEAT OUTPUT		TOTAL ELECTRICAL POWER (kW)	CERTIFICATION	NOTE
		(kW)	NATURAL GAS (Nm <sup>3</sup> /h)			
GS3	1/230/50	11 – 35	1,1 – 3,5	0,100	CE-0694 CN7805	(1) (5)
GS5	1/230/50	18 – 58	1,8 – 5,8	0,110	CE-0694 CN7805	(1) (5)
GS5	1/220/60	23 – 65	2,3 – 6,5	0,180	-	(2) (4) (5)
GS10	1/230/50	42 – 116	4,2 – 11,6	0,130	CE-0694 CN7805	(1)
GS10 TL	1/230/50	42 – 116	4,2 – 11,6	0,130	CE-0694 CN7805	(1)
GS10	1/230/50	42 – 116	4,2 – 11,6	0,130	CE-0694 CN7805	(2) (3)
GS10	1/220/60	42 – 116	4,2 – 11,6	0,200	-	(2) (4)
GS10	1/220/60	42 – 116	4,2 – 11,6	0,200	-	(1) (4) (5)
GS20	1/230/50	81 – 220	8,1 – 22	0,250	CE-0694 CN7805	(1)
GS20 TL	1/230/50	81 – 220	8,1 – 22	0,250	CE-0694 CN7805	(1)
GS20	1/230/50	81 – 220	8,1 – 22	0,250	CE-0694 CN7805	(2) (3)
GS20	1/220/60	81 – 220	8,1 – 22	0,430	-	(2) (4) (5)

Net calorific value G20: 10 kWh/Nm<sup>3</sup> – Density: 0,71 kg/Nm<sup>3</sup>

The burners of GS series are in according to EN 676

(1) With plug and socket

(2) With terminal block

(3) Belgium version

(4) Korea version

(5) With air damper opening motor inside the cover

## SPECIFICATION

### STATE OF SUPPLY

#### **Burner**

Monoblock, gas burners, completely automatic, with one stage settings fitted with:

- Fan with forward curve blades
- Cover lined with sound-proofing material
- Air damper, completely closed in stand by, with adjustment inside the cover
- Single phase electric motor 230 V, 50 Hz
- Combustion head fitted with:
  - stainless steel head cone, resistant to high temperatures
  - ignition electrodes
  - ionisation probe
  - gas distributor
  - flame stability disk
- Adjustable air pressure switch, with graduated selector, to guarantee burner lock out in the case of insufficient combustible air
- Microprocessor-based burner safety control box MG 557 (with diagnostic, remote reset, continuous purge integrated, recycle, post-purge)
- IP X0D (IP 40) electric protection level

#### **Standard equipment:**

- Flange insulation screen
- Screws and nuts for fixing the flange to the boiler
- 7-pole socket
- Hinge
- Reduction nipple Rp 1/2" - Rp 3/8" (for R40 GS3 only)
- Grommet
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue

#### **Conforming to:**

- 2014/30 UE Directive (electromagnetic compatibility)
- 2014/35 UE Directive (low voltage)
- 2009/142 EC Directive (gas)
- 2006/42 EC Directive (machine)
- EN 676 (gas burners)

#### **Available accessories to be ordered separately:**

- Extended head kit
- Remote reset control kit for MG 557/3/5 control box
- LPG kit
- Town gas kit
- Ground fault interrupter kit
- 7-pin plug kit
- Inlet air aspiration kit
- End cone with turbulator disk
- Continuous ventilation kit for RMG control box
- PC interface kit



# Riello Burners a world of experience in every burner we sell.

05/2016

T50025UK04



[ 1 ]

Across the world, Riello sets the standard in reliable and high efficiency burner technology.

With burner capacity from 5 kW to 48 MW, Riello gas, oil, dual fuel and Low Nox burners deliver unbeatable performance across the full range of residential and commercial heating applications, as well as in industrial processes.

With headquarter in Legnago, Italy, Riello has been manufacturing premium quality burners for over 90 year. The manufacturing plant is equipped with the most innovative systems of assembling lines and modern manufacturing cells for a quick and flexible response to the market.

Besides, the Riello Combustion Research Centre, located in Angiari, Italy, represents one of the most modern facility in Europe and one of the most advanced in the world for the development of the combustion technology.

Today, the company's presence on worldwide markets is distinguished by a well-constructed and efficient sales network, alongside many important Training Centres located in various countries to meet its customers' needs. Riello has 13 operational branches abroad (in Europe, America and Asia), with customers in over 60 countries.



[ 2 ]

[ 1 ] BURNERS PRODUCTION PLANT  
S. PIETRO, LEGNAGO (VERONA) - ITALIA

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