

RIELLO 40 GS/M SERIES

The Riello 40 GS/M series of two stage progressive or modulating gas burners, is a complete range of products developed to respond to any request of gas burners for hot air generator according to EN 1020. These new models complete the Riello 40 gas series which prides itself on many years of experience in all the world in the field of residential heating and soft industrial applications. This series of burners is available in two different models with an output ranging from 42 to 194 kW, divided in two different structures. Basic version of these models has two stage progressive operation. A simple modification, adding a component, permits obtaining modulating operation with a rate 1:4. The burners are supplied air fuel ratio control gas trains.

This more advanced version can better satisfy market needs for applications where modulation is requested to obtain highest plant efficiency. In developing these burners, special attention was paid to the ease of installation and adjustment, to maintaining the smallest size possible and obtaining high performance for modulating operation to fit into any sort of application available on the market. All the models are approved by the EN 676 European Standard and they conform to European Directives: Gas Appliances, EMC, Low Voltage and Boiler Efficiency.

Guidelines for installation of burners in conformity to EU Regulation:

A RIELLO burner (Heat Generator), where it is matched with a water-based boiler (Heater Housing) with a nominal output ≤ 400 kW, providing heat for heating purposes and heat to deliver sanitary hot water, can be installed:

- With boilers (heater housings) already in service in the field, for replacement of identical products, in conformity to Article 1, paragraph 2, point (G) of the EU Regulation No. 813/2013;
- With boilers (heater housings) on a new installation, if they have emissions complying with the requirement of Annex II, paragraph 4 of the EU regulation No. 813/2013.

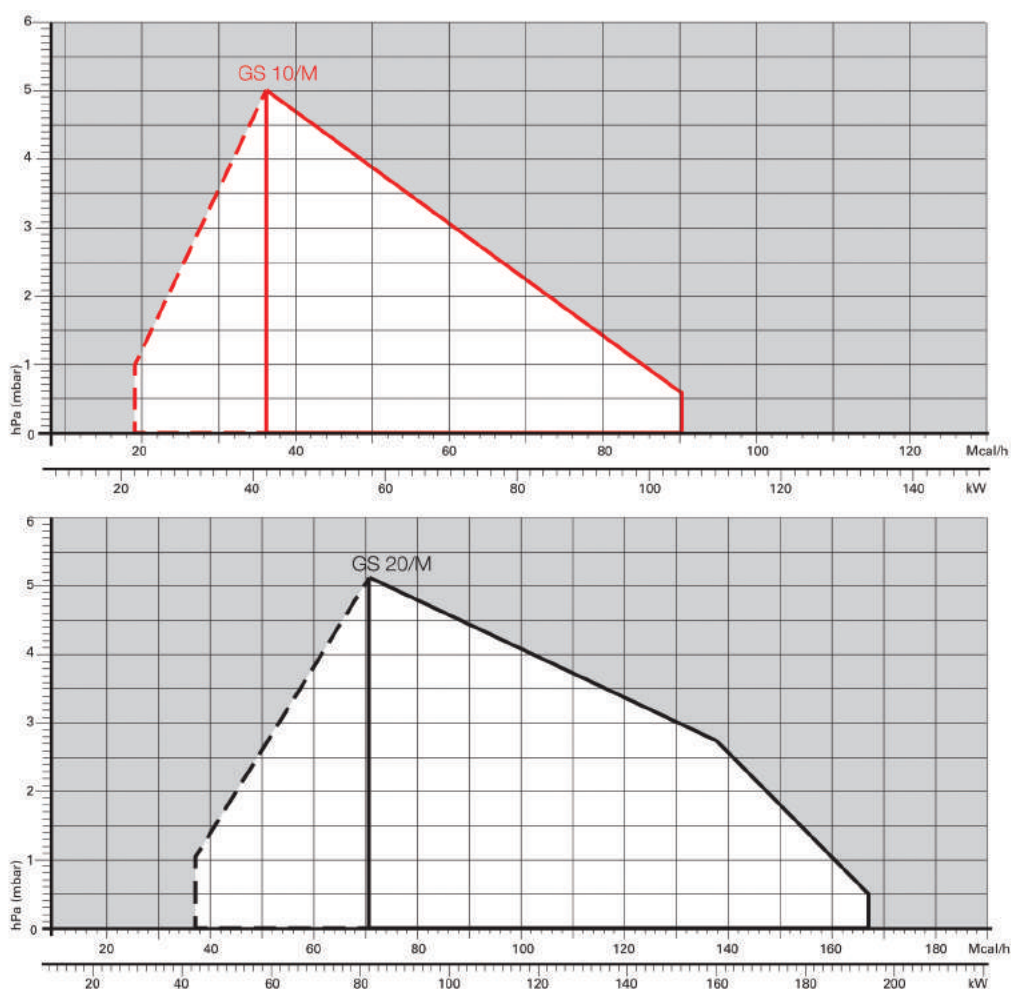


GS 10/M	22 / 42 ÷ 105 kW
GS 20/M	43 / 82 ÷ 194 kW

Two Stage Progressive and Modulating Gas Burners

RIELLO 40 GS/M SERIES

FIRING RATES



Useful working field
for choosing the
burner

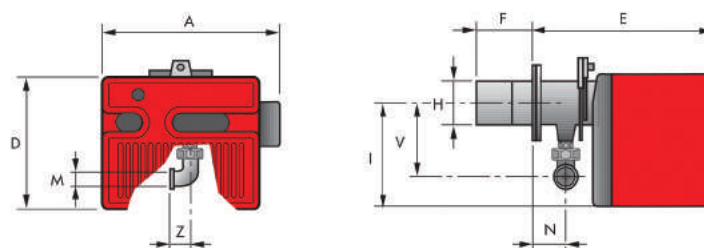


Modulation range

Test conditions
conforming to
EN676
Temperature: 20°C
Pressure: 1013,5
mbar
Altitude: 0 m a.s.l.

Overall dimensions (mm)

BURNER



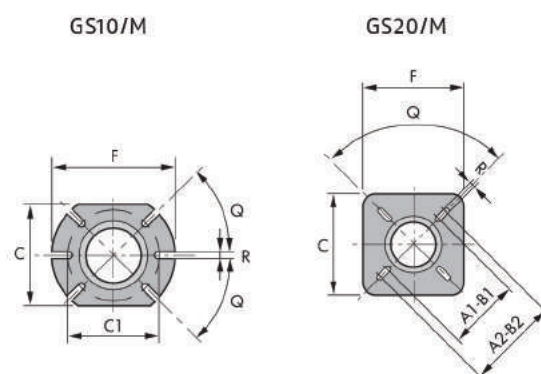
MODEL	A	D	E	F	H	I	M	N	V	Z
► GS10/M	425	262	347	110	105	204	Rp 3/4"	61	142	33
► GS20/M	488	298	389	120	125	230	Rp 3/4"	67	152	33

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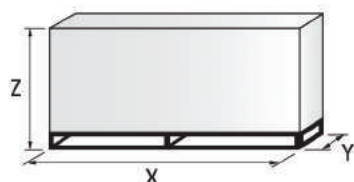
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BURNER - BOILER MOUNTING FLANGE



MODEL	A1	A2	B1	B2	C	C1	F	Q	R
► GS10/M	-	-	-	-	160	130	185	45°	11
► GS20/M	155	200	155	200	170	-	170	90°	11

PACKAGING



MODEL	X	Y	Z	kg
► GS10/M	505	490	330	17
► GS20/M	560	535	375	17

Specification

DESIGNATION OF SERIES

Series : G	
Fuel : S Natural gas	
Size	
Optional variations: /M two stage progressive or fully modulating	
Electrical supply to the system : 1/230/50 1/230V/50Hz	

G	S	10	/M	1/230/50
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GAS

Two Stage Progressive and Modulating Gas Burners

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STATE OF SUPPLY

Monoblock, gas burners, completely automatic, two stage progressive or modulating operation with a kit, made up of:

- Ratio air/fuel controlled by checking both the air and the gas flows
- Two pressure switches on the burner, to make sure the burner operation, detecting both the fan and the chimney functions
- Remote reset available
- Servomotor to drive the air damper to fully closed position at stand-by, low and high fire position
- Turn down fire 1:4
- Fan with forward curve blades
- 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
 - additional device, to keep short the flame shape
- Protection filter against radio interference
- Microprocessor-based flame control box, with diagnostic functions
- IP X0D (IP 40) electric protection level.

Standard equipment:

- Hinge to turn the burner left-side or right-side for the maintenance position
- Flange insulation screen
- Screws and nuts for fixing the flange to the boiler
- 7-pin plug with capacitor for EMC
- 4-pin plug to connect the high-low thermostat
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

Available models

Burners

CODE	MODEL		HEAT OUTPUT		TOTAL ELECTRICAL POWER (kW)	CERTIFICATION	NOTE
			NATURAL GAS (kW)	(Nm ³ /h)			
3755556	GS10/M	1/230/50	22/42 - 105	2,2/4,2 - 10,5	0,130	CE - 0085 BM0453	(1)
3755756	GS20/M	1/230/50	43/82 - 194	4,3/8,2 - 19,4	0,250	CE - 0085 BM0453	(1)
20066426	GS10/M	1/220/60	22/42 - 105	2,2/4,2 - 10,5	0,130	-	(1)
3091960	GS20/M	1/220/60	43/82 - 194	4,3/8,2 - 19,4	0,250	-	(1)

(1) With installed plug.

Net calorific value G20 gas: 10 kWh/Nm³; 8600 kcal/Nm³ - Density: 0,71 kg/Nm³.

Gas Trains

	GAS TRAIN CODE *	GAS TRAIN MODEL	NATURAL GAS		LPG		NOTE
			BURNER (TYPE)	ADAPTER (CODE)	BURNER (TYPE)	ADAPTER (CODE)	
MULTIBLOC GAS TRAINS	3970535	MB 407/P - RSD 00	GS10/M		GS10/M		(1)
			GS20/M		GS20/M		
	3970536	MB 412/P - RSD 00	GS20/M		GS20/M		(1) (2)

Please see Designation of Gas Train Series in the page before the Catalogue index.

* Gas train are 230V/50Hz - 220V/60Hz electrical supply

(1) With plug and socket.

(2) ≥120 kW.

The valve seal control device is compulsory (conforming to EN 676) on gas trains to burners with a maximum output over 1200 kW.

To select the gas train please refer to the technical data leaflet and/or instruction manual.

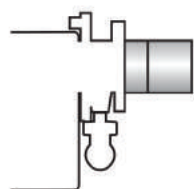
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Burner accessories

Extended head kit



Burners "standard head" can be transformed into "extended head" versions by using the special kit. Here 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)	KIT CODE
► GS10/M	128	170	3001064
► GS20/M	120	280	3000873

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	KIT CODE FOR STANDARD HEAD	KIT CODE FOR EXTENDED HEAD
► GS10/M	3000884	3000884
► GS20/M	3000886	3000886

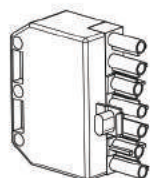
Ground fault interrupter kit



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	KIT CODE
► GS10/M - GS20/M	3001180

7-pin plug kit



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

BURNER	KIT CODE
► GS10/M - GS20/M	3000945

GAS

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Burner accessories

Accessories for modulating operation



To obtain modulating operation, the GS/M series of burners requires a regulator.

BURNER	REGULATOR TYPE	REGULATOR CODE
► GS10/M – GS20/M	RWF 50.2	20105193
	RWF 50.5	20105274

The relative temperature or pressure probes fitted to the regulator, must be chosen on the basis of the application.

BURNER	PROBE TYPE	RANGE (°C) (bar)	PROBE CODE
► GS10/M – GS20/M	Temperature PT 100	-100 ÷ 500°C	3010110
	Pressure 4 ÷ 20 mA	0 ÷ 2,5 bar	3010213
	Pressure 4 ÷ 20 mA	0 ÷ 16 bar	3010214

PC interface kit



To connect the RMG 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
► GS10/M – GS20/M	3002719