

RIELLO 40 GS/M SERIES

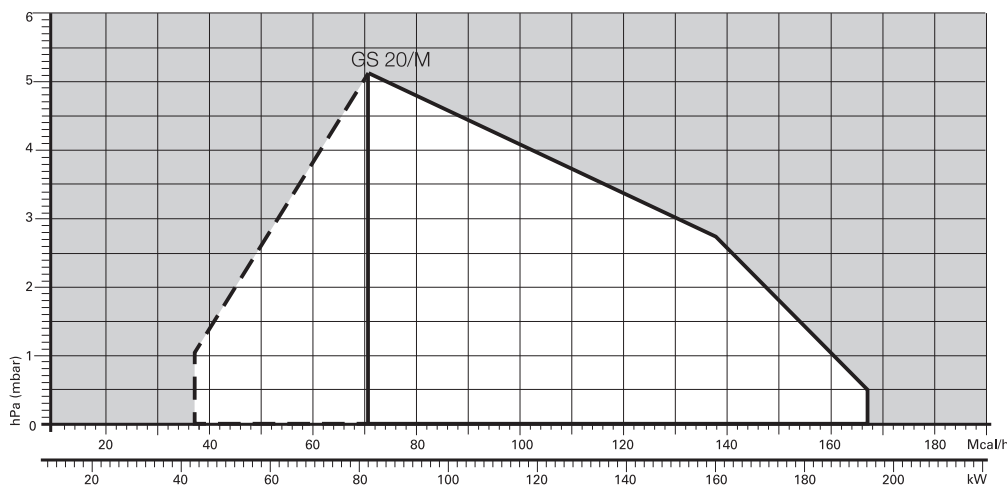
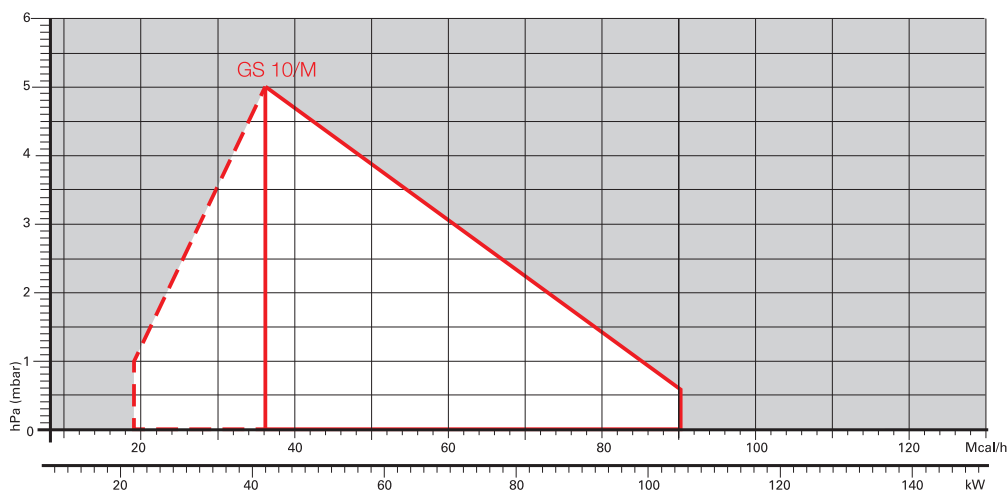
The Riello 40 GS/M series of two stage progressive or modulating gas burners, is a complete range of products developed to respond to any request of gas burners for hot air generator according to EN 1020. These new models complete the Riello 40 gas series which prides itself on many years of experience 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.



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

FIRING RATES



 Useful working field for choosing the burner

 Modulation range

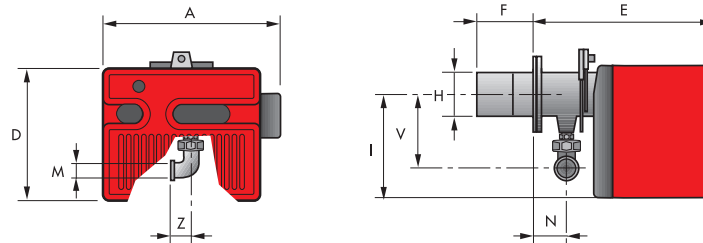
Test conditions conforming to EN676
 Temperature: 20°C
 Pressure: 1013,5 mbar
 Altitude: 0 m a.s.l.

Two Stage Progressive and Modulating Gas Burners

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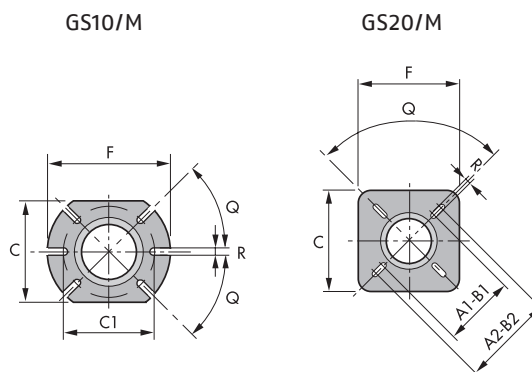
Overall dimensions (mm)

BURNER



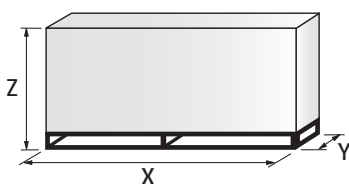
| MODEL | A | D | E | F | H | I | M | N | V | Z |
|----------|-----|-----|-----|-----|-----|-----|---------|----|-----|----|
| ▶ GS10/M | 425 | 262 | 347 | 110 | 105 | 204 | Rp 3/4" | 61 | 142 | 33 |
| ▶ GS20/M | 488 | 298 | 389 | 120 | 125 | 230 | Rp 3/4" | 67 | 152 | 33 |

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

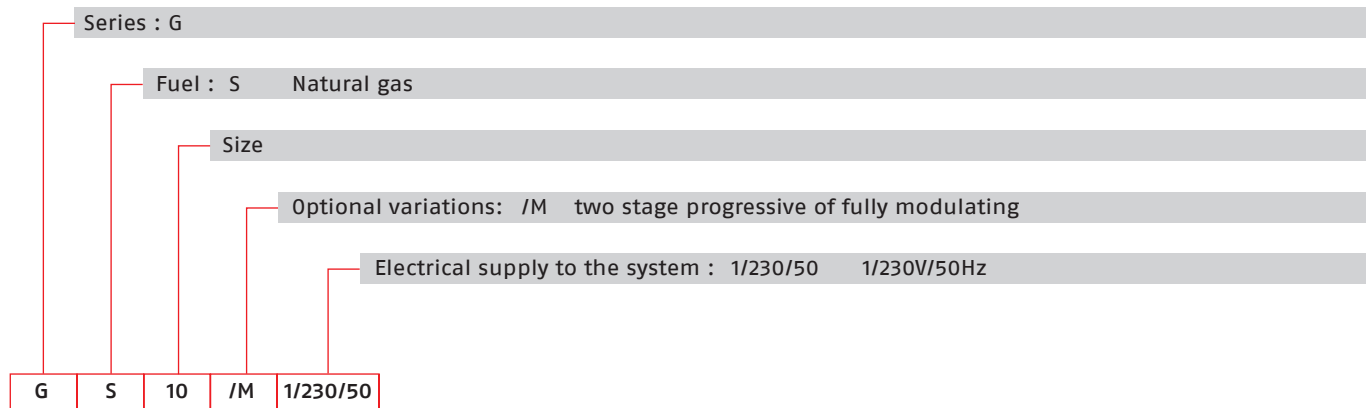


| MODEL | X | Y | Z | kg |
|----------|-----|-----|-----|----|
| ▶ GS10/M | 505 | 490 | 330 | 17 |
| ▶ GS20/M | 560 | 535 | 375 | 17 |

RIELLO 40 GS/M SERIES

Specification

DESIGNATION OF SERIES



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.

Two Stage Progressive and Modulating Gas Burners

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Available models

Burners

| CODE | MODEL | HEAT OUTPUT | | TOTAL ELECTRICAL POWER (kW) | CERTIFICATION | NOTE |
|----------|-----------------|------------------|----------------------------------|-----------------------------|------------------|------|
| | | NATURAL GAS (kW) | NATURAL GAS (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

| MULTIBLOC GAS TRAINS | GAS TRAIN CODE * | GAS TRAIN MODEL | NATURAL GAS | | LPG | | NOTE |
|----------------------|------------------|-------------------|---------------|----------------|---------------|----------------|---------|
| | | | BURNER (type) | ADAPTER (code) | BURNER (type) | ADAPTER (code) | |
| | 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.

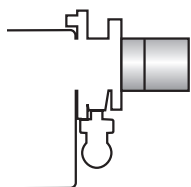
The valve seal control device is compulsory (conforming to EN 676) on gas trains to burners with a maximum output over 1200 kW.

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

RIELLO 40 GS/M SERIES

Burner accessories

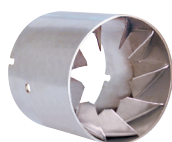
Extended head kit



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 | 188 | 3001064 |
| ▶ GS20/M | 120 | 280 | 3000873 |

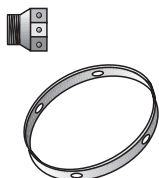
End cone with turbulator disk



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

| BURNER | PROJECTION (mm) | KIT CODE |
|----------|-----------------|----------|
| ▶ GS10/M | +18 | 3000918 |
| ▶ GS20/M | +23 | 3000919 |

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 |

Two Stage Progressive and Modulating Gas Burners

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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 40 | 3001074 |



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 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 |