

RIELLO 40 FS SERIES

The Riello 40 FS series of one stage gas burners, is a complete range of products developed to respond to any request for light industrial application. The Riello 40 FS series is available in five 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 FS series. The high quality level guarantees safe working.

The Riello 40 FS 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.

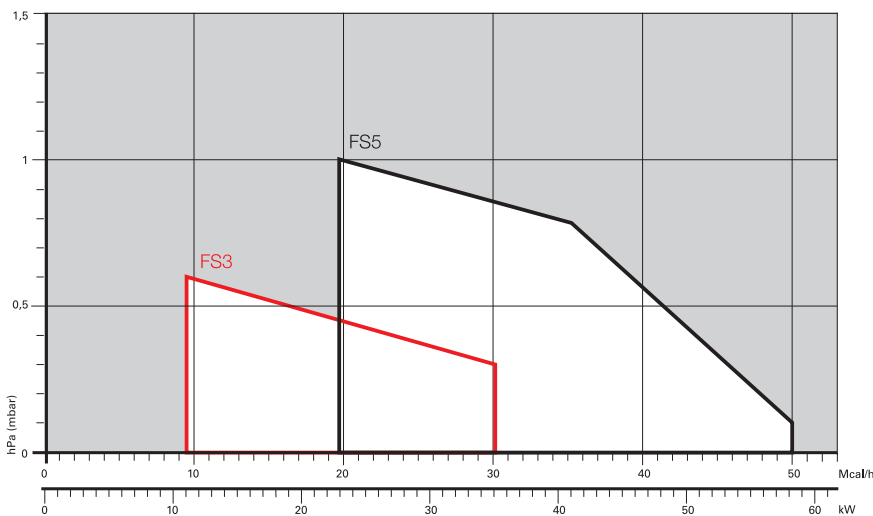
All the models are approved by the EN 676 European Standard and conform to European Directives for EMC, Low Voltage, Machinery and Boiler Efficiency.

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



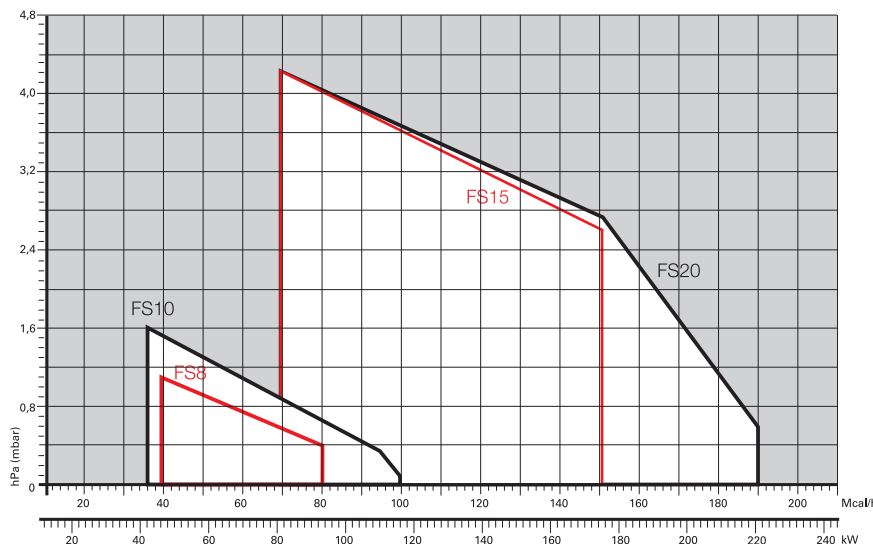
| | |
|------|-------------|
| FS3 | 11 ÷ 35 kW |
| FS5 | 23 ÷ 58 kW |
| FS8 | 46 ÷ 93 kW |
| FS10 | 42 ÷ 116 kW |
| FS15 | 81 ÷ 175 kW |
| FS20 | 81 ÷ 220 kW |

FIRING RATES



Useful working field for choosing the burner

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

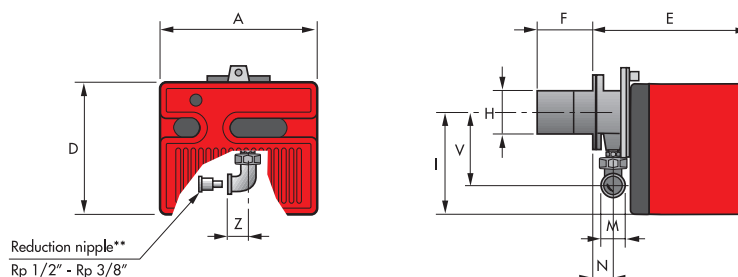


One Stage Gas Burners

RIELLO 40 FS SERIES

Overall dimensions (mm)

BURNER



| MODEL | A | D | E | F | H | I | M | N | V | Z |
|--------|-----|-----|-----|-----|-----|-----|----------|----|-----|----|
| ▶ FS3 | 252 | 215 | 230 | 100 | 91 | 165 | Rp 3/8"* | 37 | 132 | 25 |
| ▶ FS5 | 272 | 233 | 295 | 100 | 91 | 180 | Rp 1/2" | 48 | 138 | 28 |
| ▶ FS8 | 305 | 262 | 347 | 110 | 105 | 204 | Rp 3/4" | 61 | 142 | 33 |
| ▶ FS10 | 305 | 262 | 346 | 110 | 105 | 204 | Rp 3/4" | 61 | 142 | 33 |
| ▶ FS15 | 350 | 298 | 389 | 120 | 125 | 230 | Rp 3/4" | 67 | 152 | 33 |
| ▶ FS20 | 350 | 298 | 389 | 120 | 125 | 230 | Rp 3/4" | 67 | 152 | 33 |

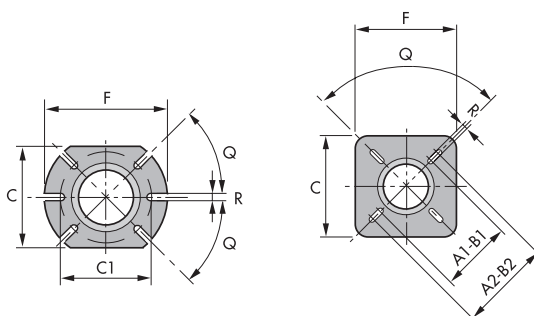
* With reduction nipple

** Standard equipment on R40 FS3

BURNER - BOILER MOUNTING FLANGE

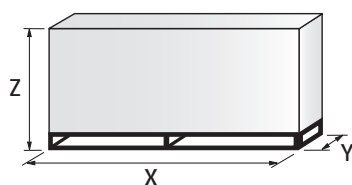
FS3 - FS5 - FS8 - FS10

FS15 - FS20



| MODEL | A1 | A2 | B1 | B2 | C | C1 | F | Q | R |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|----|
| ▶ FS3 | - | - | - | - | 140 | 130 | 170 | 45° | 10 |
| ▶ FS5 | - | - | - | - | 140 | 130 | 170 | 45° | 10 |
| ▶ FS8 | - | - | - | - | 160 | 130 | 185 | 45° | 11 |
| ▶ FS10 | - | - | - | - | 160 | 130 | 185 | 45° | 11 |
| ▶ FS15 | 155 | 200 | 155 | 200 | 170 | - | 170 | 90° | 11 |
| ▶ FS20 | 155 | 200 | 155 | 200 | 170 | - | 170 | 90° | 11 |

PACKAGING

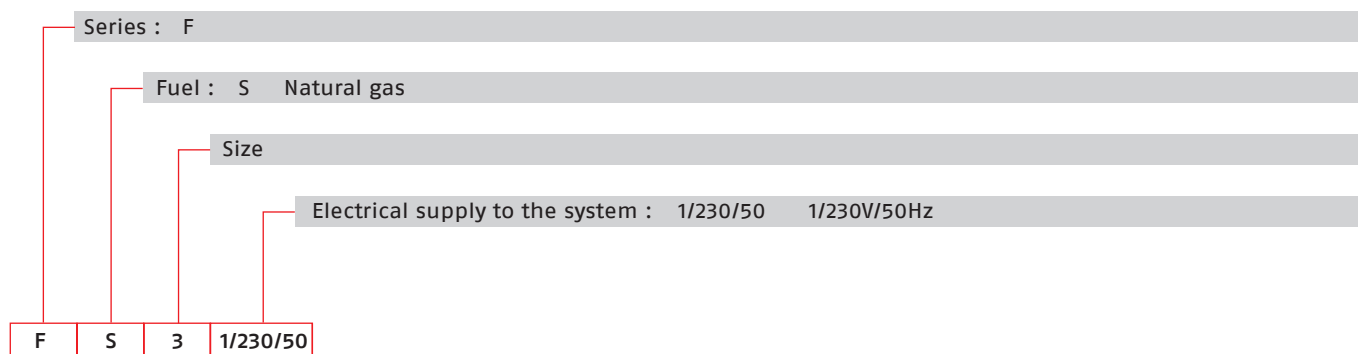


| MODEL | X | Y | Z | kg |
|--------|-----|-----|-----|-----|
| ▶ FS3 | 375 | 335 | 310 | 9,5 |
| ▶ FS5 | 445 | 355 | 335 | 11 |
| ▶ FS8 | 483 | 495 | 330 | 13 |
| ▶ FS10 | 483 | 495 | 330 | 16 |
| ▶ FS15 | 535 | 535 | 375 | 19 |
| ▶ FS20 | 535 | 535 | 375 | 20 |

RIELLO 40 FS SERIES

Specification

DESIGNATION OF SERIES



STATE OF SUPPLY

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

- Fan with forward curve blades
- Cover lined with sound-deadening material
- Metallic and fixed air damper with adjustment
- 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
 - flame inspection window
- Adjustable air pressure switch, with graduated selector, to guarantee burner lock out in the case of insufficient combustible air
- Microprocessor-based flame control box, with diagnostic functions
- 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 FS3 only)
- Grommet
- Instruction handbook for installation, use and maintenance
- Spare parts catalogue.

One Stage Gas Burners

RIELLO 40 FS SERIES

Available models

Burners

| CODE | MODEL | HEAT OUTPUT | | TOTAL ELECTRICAL POWER (kW) | CERTIFICATION | NOTE |
|---------|-------|-------------|----------------------|-----------------------------|---------------|--------------------------|
| | | NATURAL GAS | | | | |
| | | (kW) | (Nm ³ /h) | | | |
| 3756506 | FS3 | 1/230/50 | 11 - 35 | 1,1 - 3,5 | 0,150 | CE - 0694 CN7805 |
| 3756606 | FS5 | 1/230/50 | 23 - 58 | 2,3 - 5,8 | 0,150 | CE - 0694 CN7805 (1) |
| 3756706 | FS8 | 1/230/50 | 46 - 93 | 4,6 - 9,3 | 0,150 | CE - 0694 CN7805 (1) |
| 3756435 | FS10 | 1/230/50 | 42 - 116 | 4,2 - 11,6 | 0,130 | CE - 0694 CN7805 (1) (2) |
| 3756803 | FS15 | 1/230/50 | 81 - 175 | 8,1 - 17,5 | 0,130 | CE - 0694 CN7805 (1) (2) |
| 3756935 | FS20 | 1/230/50 | 81 - 220 | 8,1 - 22 | 0,250 | CE - 0694 CN7805 (1) (2) |

Models for LPG applications

| CODE | MODEL | HEAT OUTPUT | | TOTAL ELECTRICAL POWER (kW) | CERTIFICATION | NOTE |
|---------|-------|-------------|----------------------|-----------------------------|---------------|-------------------------|
| | | LPG | | | | |
| | | (kW) | (Nm ³ /h) | | | |
| 3756439 | FSP10 | 1/230/50 | 42 - 116 | 1,6 - 4,4 | 0,130 | CE - 0063AP6680 (1) (2) |
| 3756939 | FSP20 | 1/230/50 | 81 - 220 | 3,1 - 8,5 | 0,250 | CE - 0063AP6680 (1) (2) |

Net calorific value G20: 10 kWh/Nm³ - Density: 0,71 kg/Nm³
 Net calorific value G31 (LPG): 25,8 kWh/Nm³ - Density: 2,02 kg/Nm³
 The burners of FS series are in accordance with EN 676
 (1) With plug and socket
 (2) French version

Gas Trains

| GAS TRAIN CODE * | GAS TRAIN MODEL | NATURAL GAS | | LPG | | NOTE |
|---------------------|-----------------|-------------------|---------------------------------|---------------|---------------------------------|---------|
| | | BURNER (type) | ADAPTER (code) | BURNER (type) | ADAPTER (code) | |
| MULTIBLOC GAS TRAIN | 3970569 | MBC 65/1 - RSD 20 | FS3 - FS5 | | FS3 - FS5 | (1) |
| | 3970530 | MB 405/1 - RSD 20 | FS5 - FS8 - FS20 | | FS5 - FS8 - FS20 | (1) (2) |
| | 3970500 | MB 405/1 - RT 20 | FS10 | | FS10 | (1) (3) |
| | 3970531 | MB 407/1 - RSD 20 | FS5 - FS8 - FS10 FS15 - FS20 | | FS5 - FS8 - FS10 FS15 - FS20 | (1) (4) |
| | 3970532 | MB 410/1 - RSD 20 | FS10 - FS20 | | FS10 - FS20 | (1) |

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 installed plug (if the plug is not necessary, remove it in accordance with gas train instruction manual indication)

(2) FS8 ≤ 80 kW with natural gas

(3) FS10 ≤ 80 kW with natural gas

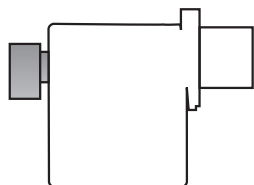
(4) FS20 ≤ 180 kW with natural gas

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.

Burner accessories

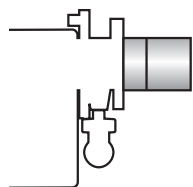
Remote reset control kit for MG 557/3/5 control box



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 | KIT CODE |
|--------------------------|----------|
| ▶ FS3 – FS5 – FS8 – FS15 | 3002750 |

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 |
|---------------|---------------------------|---------------------------|----------|
| ▶ FS3 – FS5 | 100 | 125 | 3000820 |
| ▶ FS8 – FS10 | 110 | 170 | 3001064 |
| ▶ FS8 | 110 | 278 | 3000920 |
| ▶ FS15 – FS20 | 120 | 280 | 3000873 |

End cone with turbulator disk



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

| BURNER | PROJECTION (mm) | KIT CODE |
|--------|-----------------|----------|
| ▶ FS5 | +15 | 3000916 |
| ▶ FS8 | +18 | 3000917 |
| ▶ FS10 | +18 | 3000918 |
| ▶ FS20 | +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.

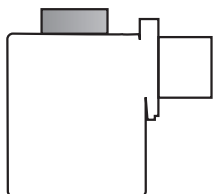
| BURNER | KIT CODE FOR STANDARD HEAD | KIT CODE FOR EXTENDED HEAD |
|--------|----------------------------|----------------------------|
| ▶ FS3 | 3000881 | 3000881 |
| ▶ FS5 | 3000882 | 3000882 |
| ▶ FS8 | 3000927 | 3000927 |
| ▶ FS10 | 3000884 | 3000884 |
| ▶ FS15 | 3000885 | 3000885 |
| ▶ FS20 | 3000886 | 3000886 |

One Stage Gas Burners

RIELLO 40 FS SERIES

Burner accessories

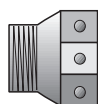
Inlet air aspiration kit



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

| BURNER | KIT CODE |
|---------------|----------|
| ▶ FS3 | 20027571 |
| ▶ FS5 | 20027576 |
| ▶ FS8 - FS10 | 20027578 |
| ▶ FS15 - FS20 | 20027581 |

Town gas kit



| BURNER | KIT CODE |
|--------|----------|
| ▶ FS3 | 3000888 |
| ▶ FS5 | 3000889 |
| ▶ FS8 | 3000890 |
| ▶ FS10 | 3000891 |
| ▶ FS20 | 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 | KIT CODE |
|---------------------------|----------|
| ▶ FS5 - FS8 - FS10 - FS20 | 3001180 |

7-pin plug kit

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

| BURNER | KIT CODE |
|--------------|----------|
| ▶ All models | 3000945 |

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 | KIT CODE |
|----------------------|----------|
| ▶ FS15 - FS10 - FS20 | 3010094 |

Burner accessories

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 |
|----------------------|----------|
| ▶ FS3 - FS5 - FS8 | 3002731 |
| ▶ FS10 - FS15 - FS20 | 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 | KIT CODE | |
|-------------|---------------------|---------------------|
| | for 50 Hz operation | for 60 Hz operation |
| ▶ MB/1 type | 3010123 | 20050030 |