

GAS SERIES

The GAS series of burners cover a firing range from 130 to 1050 kW.

Operation is "one stage"; the combustion head, that can be set on the basis of required output, allows optimal performance ensuring good combustion and reducing fuel consumption.

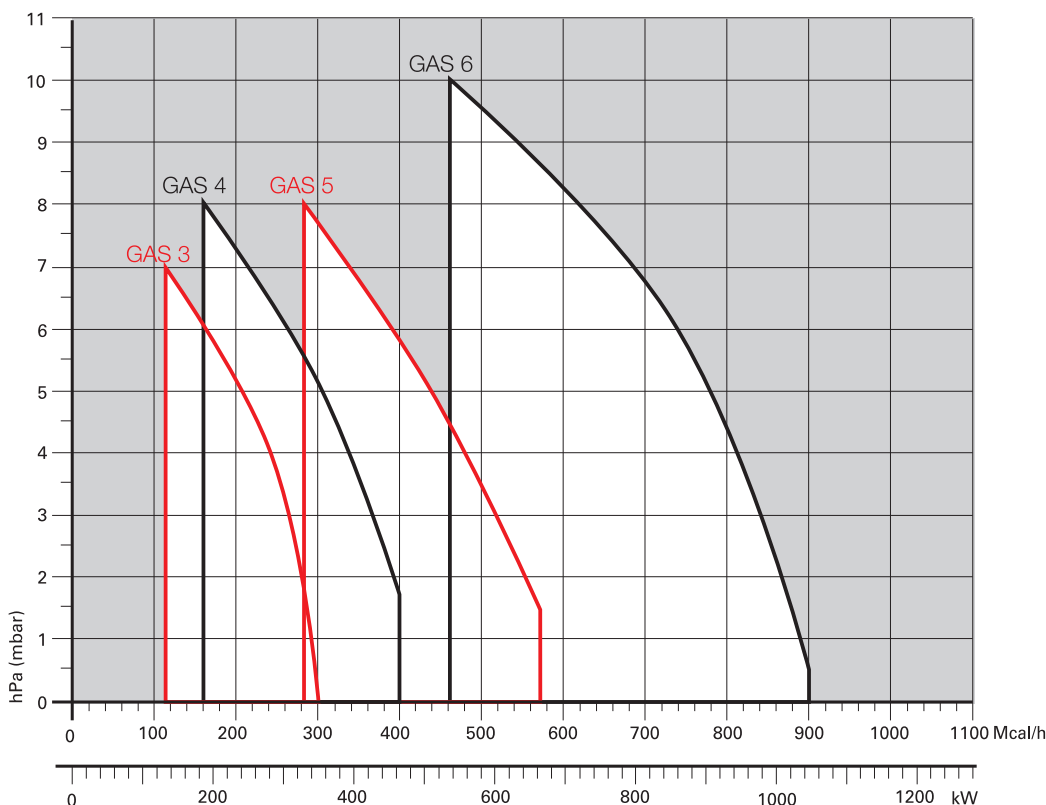
The GAS series are extremely reliable burners, featured by a simple use and an operation without particular maintenance intervention.

Simplified maintenance is achieved by the slide bar system, which allows easy access to all of the essential components of the combustion head. All electrical components are easily accessible only by dismantling a protection panel, thus guaranteeing a quick and simple intervention on components.



| | |
|--------------|---------------|
| GAS 3 | 130 ÷ 350 kW |
| GAS 4 | 185 ÷ 465 kW |
| GAS 5 | 325 ÷ 660 kW |
| GAS 6 | 525 ÷ 1050 kW |

FIRING RATES



Useful working field for choosing the burner

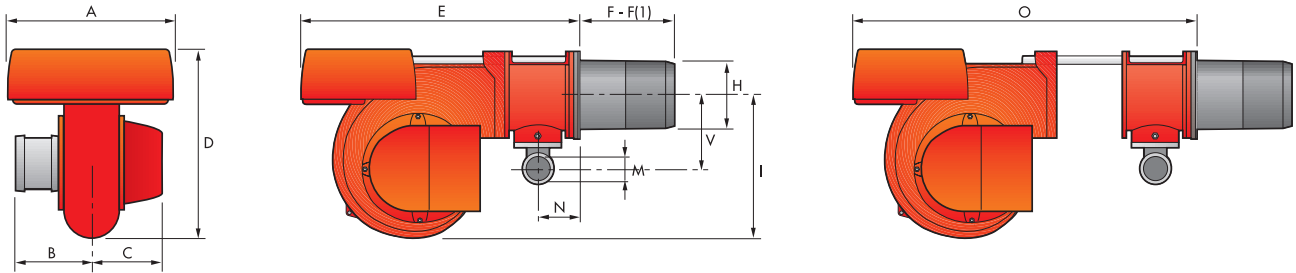
Test conditions conforming to EN676
 Temperature: 20°C
 Pressure: 1013,5 mbar
 Altitude: 0 m a.s.l.

One Stage Gas Burners

GAS SERIES

Overall dimensions (mm)

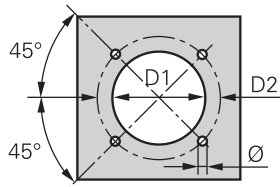
BURNER



| MODEL | A | B | C | D | E | F - F (1) | H | I | M | N | O | V |
|---------|-----|-----|-----|-----|-----|-----------|-----|-----|-------|-----|-----|-----|
| ▶ GAS 3 | 410 | 205 | 205 | 397 | 610 | 185 - 320 | 140 | 292 | 1"1/2 | 97 | 775 | 165 |
| ▶ GAS 4 | 410 | 205 | 205 | 397 | 610 | 187 - 320 | 150 | 292 | 1"1/2 | 97 | 775 | 165 |
| ▶ GAS 5 | 431 | 226 | 205 | 437 | 645 | 207 - 365 | 155 | 332 | 1"1/2 | 97 | 810 | 165 |
| ▶ GAS 6 | 463 | 258 | 205 | 485 | 770 | 227 - 360 | 175 | 370 | 2" | 131 | 966 | 195 |

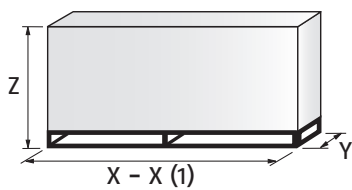
(1) Length with extended combustion head

BURNER - BOILER MOUNTING FLANGE



| MODEL | D1 | D2 | Ø |
|---------|-----|-----|-----|
| ▶ GAS 3 | 155 | 226 | M10 |
| ▶ GAS 4 | 165 | 226 | M10 |
| ▶ GAS 5 | 165 | 226 | M10 |
| ▶ GAS 6 | 185 | 276 | M12 |

PACKAGING

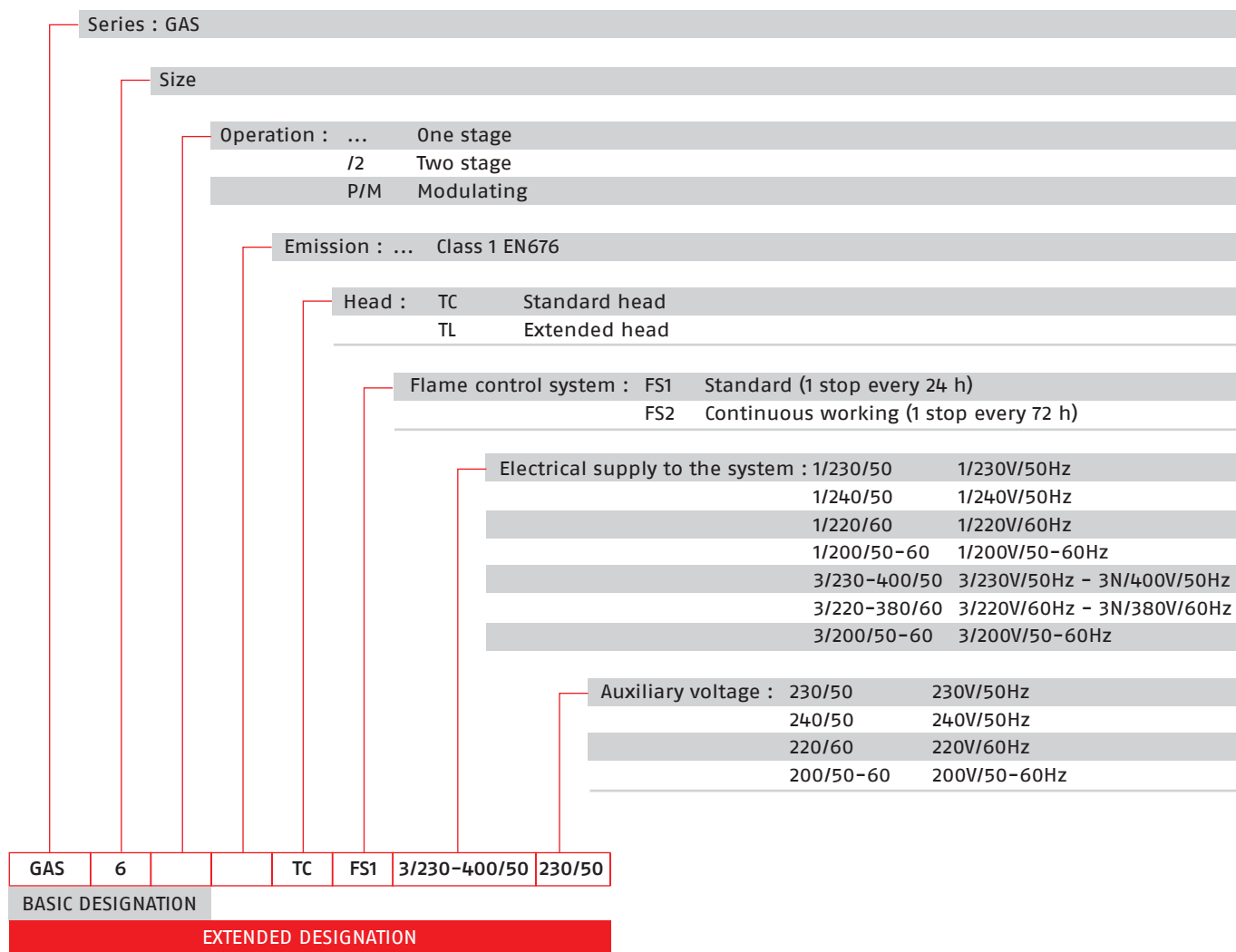


| MODEL | X - X (1) | Y | Z | kg |
|---------|-----------|-----|-----|----|
| ▶ GAS 3 | 850 | 545 | 473 | 32 |
| ▶ GAS 4 | 850 | 545 | 473 | 38 |
| ▶ GAS 5 | 895 | 543 | 520 | 41 |
| ▶ GAS 6 | 1045 | 543 | 555 | 58 |

(1) Length with extended combustion head

Specification

DESIGNATION OF SERIES



One Stage Gas Burners

GAS SERIES

Specification

STATE OF SUPPLY

- Monoblock forced draught gas burner, one stage operation, made up of:
- Air suction circuit
 - Fan with forward curved blades
 - Air damper for air setting
 - Combustion head, that can be set on the basis of required output, fitted with:
 - stainless steel end cone, resistant to corrosion and high temperatures
 - ignition electrodes
 - flame stability disk
 - Minimum air pressure switch
 - Single phase or three phases electrical motor
 - Microprocessor-based burner safety control box, with diagnostic function
 - Flame inspection window
 - Slide bars for easier installation and maintenance
 - Protection filter against radio interference
 - IP X0D (IP 40) protection level.

Standard equipment:

- 1 gas train flange
- 1 flange gasket
- 1 insulating screen
- 8 screws for fixing the burner flange to the boiler
- 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) | | | |
| 3751987 | GAS 3 | TC | FS1 | 1/200/50-60 | 200/50-60 | 130-350 | 13-35 | 0,48-0,6 | - | |
| 3751982 | GAS 3 | TC | FS1 | 1/220/60 | 220/60 | 130-350 | 13-34 | 0,4 | - | |
| 3751918 | GAS 3 | TC | FS1 | 1/230/50 | 230/50 | 130-350 | 13-35 | 0,4 | CE 0085AQ0707 | |
| 3751960 | GAS 3 | TC | FS1 | 1/240/50 | 240/50 | 130-350 | 13-35 | 0,4 | - | |
| 3751961 | GAS 3 | TL | FS1 | 1/240/50 | 240/50 | 130-350 | 13-36 | 0,4 | - | |
| 3751617 | GAS 4 | TC | FS1 | 1/230/50 | 230/50 | 185-465 | 18,5-46,5 | 0,54 | - | |
| 3751687 | GAS 4 | TC | FS1 | 3/200/50-60 | 200/50-60 | 180-470 | 18-47 | 0,6 | - | |
| 3751682 | GAS 4 | TC | FS1 | 3/220-380/60 | 220/60 | 180-470 | 18-47 | 0,6 | - | |
| 3751787 | GAS 5 | TC | FS1 | 3/200/50-60 | 200/50-60 | 320-660 | 32-66 | 0,85 | - | |
| 3751782 | GAS 5 | TC | FS1 | 3/220-380/60 | 220/60 | 320-660 | 32-66 | 1,1 | - | |
| 3751717 | GAS 5 | TC | FS1 | 3/230-400/50 | 230/50 | 325-660 | 32,5-66 | 0,85 | - | |
| 3751887 | GAS 6 | TC | FS1 | 3/200/50-60 | 200/50-60 | 525-1050 | 52-105 | 1,7 | - | |
| 3751882 | GAS 6 | TC | FS1 | 3/220-380/60 | 220/60 | 525-1050 | 52-105 | 1,7 | - | |
| 3751817 | GAS 6 | TC | FS1 | 3/230-400/50 | 230/50 | 525-1050 | 52,5-105 | 1,7 | - | |

Natural gas G20 net calorific value: 10 kWh/Nm³ - Density gas G20: 0,71 kg/Nm³

The burners of GAS series are in according to 2009/142 - 2004/108 - 2006/95 - 2006/42 EC Directive and EN 676 Norm.

Available models

Gas Trains

| CODE | GAS TRAIN | | | VPS CODE | ADAPTER CODE | | | | |
|-----------|----------------------|-----------|------|----------|--------------|-------|---------|---------------------|---|
| | MODEL | Ø | C.T. | | GAS 3 | GAS 4 | GAS 5 | GAS 6 | |
| 3970500* | MB 405/1 - RT 20 | Rp 3/4" | - | 3010123 | 3000824 | | ● | ● | |
| 3970084* | MB 405/2 - RSD 20 | Rp 1/2" | - | 3010123 | 20044756 | | ● | ● | |
| 3970553* | MB 407/1 - RT 20 | Rp 3/4" | - | 3010123 | 3000824 | | ● | ● | |
| 3970599* | MB 407/1 - RT 52 | Rp 3/4" | - | 3010123 | | | ● | ● | |
| 3970229* | MB 407/1 - RSM 20 | Rp 3/4" | - | 3010123 | | | ● | ● | |
| 3970537* | MB 407/2 - RSD 20 | Rp 3/4" | - | 3010123 | | | ● | ● | |
| 3970556* | MB 407/2 - RT 20 | Rp 3/4" | - | 3010123 | | | ● | ● | |
| 3970258* | MB 410/1 - RT 52 | Rp 1" 1/2 | - | 3010123 | | | - | - | - |
| 3970554* | MB 410/1 - RT 20 | Rp 3/4" | - | 3010123 | 3000824 | | ● | 3000824+ 3000843 | |
| 3970600* | MB 410/1 - RT 52 | Rp 3/4" | - | 3010123 | | | ● | | ● |
| 3970230* | MB 410/1 - RSM 20 | Rp 3/4" | - | 3010123 | | | ● | | ● |
| 3970534* | MB 410/2 - RSD 20 | Rp 3/4" | - | 3010123 | | | ● | | ● |
| 3970557* | MB 410/2 - RT 20 | Rp 3/4" | - | 3010123 | | | ● | | ● |
| 3970256* | MB 412/1 - RT 52 | Rp 1" 1/2 | - | 3010123 | | | - | | - |
| 3970144* | MB 412/1 - RT 20 | Rp 1" 1/2 | - | 3010123 | - | - | - | | |
| 3970197** | MB 412/1 CT RT 20 | Rp 1" 1/2 | ◆ | - | - | - | - | | |
| 3970231* | MB 412/1 - RSM 20 | Rp 1" 1/2 | - | 3010123 | - | - | - | | |
| 3970152* | MB 412/2 - RT 20 | Rp 1" 1/2 | - | 3010123 | - | - | - | | |
| 3970180* | MB 415/1 - RT 30 | Rp 1" 1/2 | - | 3010123 | - | - | - | | |
| 3970198** | MB 415/1 CT RT 30 | Rp 1" 1/2 | ◆ | - | - | - | - | | |
| 3970250* | MB 415/1 - RT 52 | Rp 1" 1/2 | - | 3010123 | - | - | - | | |
| 3970253** | MB 415/1 CT RT 52 | Rp 1" 1/2 | ◆ | - | - | - | - | | |
| 3970232* | MB 415/1 - RSM 30 | Rp 1" 1/2 | - | 3010123 | - | - | - | | |
| 3970183* | MB 415/2 - RT 20 | Rp 1" 1/2 | - | 3010123 | - | - | - | | |
| 3970181* | MB 420/1 - RT 30 | Rp 2" | - | 3010123 | 3000822 | | - | - | |
| 3970182** | MB 420/1 CT RT 30 | Rp 2" | ◆ | - | | | - | - | |
| 3970257* | MB 420/1 - RT 52 | Rp 2" | - | 3010123 | | | - | - | |
| 3970252** | MB 420/1 CT RT 52 | Rp 2" | ◆ | - | | | - | - | |
| 3970233* | MB 420/1 - RSM 30 | Rp 2" | - | 3010123 | | | - | - | |
| 3970234** | MB 420/1 CT RSM 30 | Rp 2" | ◆ | - | | | - | - | |
| 3970184* | MB 420/2 - RT 20 | Rp 2" | - | 3010123 | | | - | - | |
| 3970185** | MB 420/2 CT RT 20 | Rp 2" | ◆ | - | | | - | - | |
| 3970221* | MBC 1200/1 - RSM 60 | Rp 2" | - | 3010367 | | | - | - | |
| 3970225** | MBC 1200/1 CT RSM 60 | Rp 2" | ◆ | - | | | - | - | |
| 3970222* | MBC 1900/1 - FSM 40 | DN 65 | - | 3010367 | ● | ● | 3000825 | | |
| 3970226** | MBC 1900/1 CT FSM 40 | DN 65 | ◆ | - | ● | ● | ● | | |
| 3970223* | MBC 3100/1 - FSM 40 | DN 80 | - | 3010367 | ● | ● | ● | 3000826 | |
| 3970227** | MBC 3100/1 CT FSM 40 | DN 80 | ◆ | - | ● | ● | ● | | |
| 3970224* | MBC 5000/1 - FSM 80 | DN 100 | - | 3010367 | ● | ● | ● | ● | |
| 3970228** | MBC 5000/1 CT FSM 80 | DN 100 | ◆ | - | ● | ● | ● | ● | |

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

* 230V/50Hz -220V/60Hz electrical supply.

** 230V/50Hz electrical supply.

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.

C.T. Gas valve leak detection control device:

- gas train not equipped with leak detection control device; this device can be ordered separately - see VPS column - and installed later.

◆ gas train equipped with leak detection control device.

VPS Valve leak detection control device. Supplied separately from the gas train (please see Gas train accessories paragraph for both 50 Hz and 60 Hz codes).

● Not available.

One Stage Gas Burners

GAS SERIES

Available models

Gas Trains

| CODE | GAS TRAIN | | | VPS CODE | ADAPTER CODE | | | | | |
|------------|----------------------|-----------|------|----------|--------------|-------|---------------------|----------|---------|--|
| | MODEL | Ø | C.T. | | GAS 3 | GAS 4 | GAS 5 | GAS 6 | | |
| 3970145* | CB 512/1 - RSM 30 | Rp 1" 1/2 | - | 3010367 | - | - | - | 3000843 | | |
| 20045589** | CB 512/1 CT RSM 30 | Rp 1" 1/2 | ◆ | - | - | - | - | | | |
| 3970153* | CB 512/2 - RT 32 | Rp 1" 1/2 | - | 3010367 | - | - | - | | | |
| 20045590** | CB 512/2 CT RT 32 | Rp 1" 1/2 | ◆ | - | - | - | - | | | |
| 3970146* | CB 520/1 - RSM 30 | Rp 2" | - | 3010367 | 3000822 | | | - | | |
| 3970160** | CB 520/1 CT RSM 30 | Rp 2" | ◆ | - | | | | - | | |
| 3970154* | CB 520/2 - RT 32 | Rp 2" | - | 3010367 | | | | - | | |
| 20045591** | CB 520/2 CT RT 32 | Rp 2" | ◆ | - | | | | - | | |
| 20044659* | CB 525/1 - RSM 30 | Rp 2" | - | 3010367 | | | | - | | |
| 20044660** | CB 525/1 CT RSM 30 | Rp 2" | ◆ | - | | | | - | | |
| 3970147* | CB 5065/1 - FSM 30 | DN 65 | - | 3010367 | | | | ● | 3000825 | |
| 3970161** | CB 5065/1 CT FSM 30 | DN 65 | ◆ | - | | | | ● | | |
| 3970155* | CB 5065/2 - FT 32 | DN 65 | - | 3010367 | ● | | | | | |
| 3970167** | CB 5065/2 CT FT 32 | DN 65 | ◆ | - | ● | | | | | |
| 3970148* | CB 5080/1 - FSM 30 | DN 80 | - | 3010367 | ● | ● | 3000826+ 3000822 | 3000826 | | |
| 3970162** | CB 5080/1 CT FSM 30 | DN 80 | ◆ | - | ● | ● | | | | |
| 3970156* | CB 5080/2 - FT 32 | DN 80 | - | 3010367 | ● | ● | | | | |
| 3970168* | CB 5080/2 CT FT 32 | DN 80 | ◆ | - | ● | ● | | | | |
| 3970149* | CB 50100/1 - FSM 30 | DN 100 | - | 3010367 | ● | ● | ● | 3010370+ | | |
| 3970163** | CB 50100/1 CT FSM 30 | DN 100 | ◆ | - | ● | ● | ● | 3000826 | | |
| 20015871* | CB 50125/1 - FSM 30 | DN 125 | - | 3010367 | ● | ● | ● | ● | | |
| 3970196** | CB 50125/1 CT FSM 30 | DN 125 | ◆ | - | ● | ● | ● | ● | | |

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

* 230V/50Hz -220V/60Hz electrical supply.

** 230V/50Hz electrical supply.

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.

C.T. Gas valve leak detection control device:

- gas train not equipped with leak detection control device; this device can be ordered separately - see VPS column - and installed later.

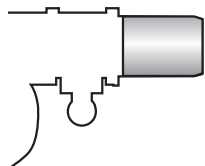
◆ gas train equipped with leak detection control device.

VPS Valve leak detection control device. Supplied separately from the gas train (please see Gas train accessories paragraph for both 50 Hz and 60 Hz codes).

● Not available.

Burner accessories

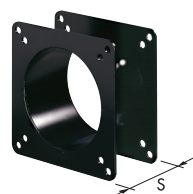
Extended head kit



"Standard head" burners can be transformed into "extended head" versions, by using the special kit.

| BURNER | STANDARD HEAD LENGTH (mm) | EXTENDED HEAD LENGTH (mm) | KIT CODE |
|---------|---------------------------|---------------------------|----------|
| ▶ GAS 3 | 185 | 320 | 3000605 |
| ▶ GAS 4 | 187 | 320 | 3000606 |
| ▶ GAS 5 | 207 | 365 | 3000607 |
| ▶ GAS 6 | 227 | 360 | 3000608 |

Spacer kit



If burner head penetration into the combustion chamber needs reducing, varying thickness spacers are available, as given in the following list.

| BURNER | SPACER THICKNESS S (mm) | KIT CODE |
|---------------------|-------------------------|----------|
| ▶ GAS 3 - 4 - 5 - 6 | 142 | 3000755 |

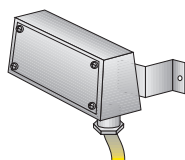
Continuous ventilation kit



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 |
|---------------------|----------|
| ▶ GAS 3 - 4 - 5 - 6 | 3010030 |

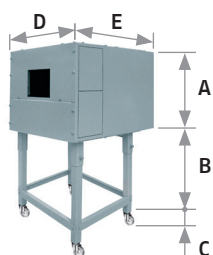
Post-ventilation kit



To prolong ventilation for approximately 5 seconds after opening of thermostats chain, a special kit is available.

| BURNER | KIT CODE |
|---------------------|----------|
| ▶ GAS 3 - 4 - 5 - 6 | 3010004 |

Sound proofing box



If noise emission needs reducing even further, sound-proofing boxes are available. In case of generator heights, where a lower dimension "B" is required, ask for the Box Support Kit code 20065135. The useful dimensions are 40 mm less than the total dimensions indicated in the table (A, D, E). Not suitable for outdoor use.

| BURNER | BOX TYPE | A (mm) | B (mm) min-max | C (mm) | D (mm) | E (mm) | [dB(A)] (*) | BOX CODE |
|---------------------|----------|--------|----------------|--------|--------|--------|-------------|----------|
| ▶ GAS 3 - 4 - 5 - 6 | C1/3 | 650 | 372 - 980 | 110 | 690 | 770 | 10 | 3010403 |

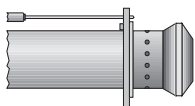
(*) Average noise reduction according to EN 15036-1 standard

One Stage Gas Burners

GAS SERIES

Burner accessories

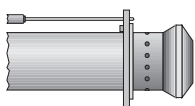
LPG kit



For burning LPG gas, a special kit is available.

| BURNER | KIT CODE FOR STANDARD HEAD | KIT CODE FOR EXTENDED HEAD |
|---------|----------------------------|----------------------------|
| ▶ GAS 3 | 3000657 | 3000807 |
| ▶ GAS 4 | 3000658 | 3000808 |
| ▶ GAS 5 | 3000659 | 3000809 |
| ▶ GAS 6 | 3000753 | 3000810 |

Town Gas kit



For burning Town Gas, a special kit is available.

| BURNER | KIT CODE FOR STANDARD HEAD (*) | KIT CODE FOR EXTENDED HEAD(*) |
|---------|--------------------------------|-------------------------------|
| ▶ GAS 3 | 3000742 | - |
| ▶ GAS 4 | 3000754 | - |
| ▶ GAS 5 | 3000759 | - |
| ▶ GAS 6 | 3000768 | - |

(*) Without CE certification

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 |
|---------------------|----------|
| ▶ GAS 3 - 4 - 5 - 6 | 3002719 |

Protection kit (electromagnetic interferences)









When the burner is installed in a room particularly subject to electromagnetic interference (signals emitted over 10 V/m) due for example to INVERTER presence or in systems where the lengths of the thermostat connections is over 20 meters, this specific protection kit is available as an interface between the thermostatic controls and the burner.

| BURNER | KIT CODE |
|--------------|----------|
| ▶ All models | 3010386 |

Gas train accessories

Adapters

In certain cases, an adapter must be fitted between the gas train and the burner, when the diameter of the gas train is different from the set diameter of the burner. Below are given the available adapters; please see on the Gas Train list the correct adapter codes to select.

| ADAPTER | LENGTH mm | ADAPTER CODE |
|---|--------------|-----------------|
| 2"  1" 1/2 | 70 | 3000822 |
| 3/4"  1" 1/2 | 31 | 3000824 |
| DN 65  2" 1/2  2" | 300 | 3000825 |
| DN 80  2" 1/2  2" | 300 | 3000826 |
| 1" 1/2  2" | 35 | 3000843 |
| 1/2"  1" 1/2 | 31 | 20044756 |

Seal control kit



To test the valve seals on the gas train, a special "seal control kit" is available.

| BURNER | GAS TRAIN | KIT CODE for 50 Hz operation | KIT CODE for 60 Hz operation |
|---------|----------------------------------|---------------------------------|---------------------------------|
| ▶ GAS 3 | MB 407/2 - 410/2 - 412/2 - 415/2 | 3010123 | 20050030 |
| | CB 512/2 | 3010125 | 20050033 |
| ▶ GAS 4 | MB 410/2 - 412/2 - 415/2 - 420/2 | 3010123 | 20050030 |
| | CB 512/2 - 520/2 | 3010125 | 20050033 |
| ▶ GAS 5 | MB 410/2 - 412/2 - 415/2 - 420/2 | 3010123 | 20050030 |
| | CB 512/2 - 520/2 | 3010125 | 20050033 |
| ▶ GAS 6 | MB 410/2 - 412/2 - 415/2 - 420/2 | 3010123 | 20050030 |
| | CB 512/2 - 520/2 - 5065/2 | 3010125 | 20050033 |

Stabiliser spring



Accessory springs are available to vary the pressure range of the gas train stabilisers.

| GAS TRAIN | SPRING COLOUR | SPRING PRESSURE RANGE mbar | SPRING CODE |
|----------------------|------------------|-------------------------------|----------------|
| ▶ CB 512/2 | Red | 25 - 55 | 3010131 |
| | Black | 60 - 110 | 3010157 |
| | Pink | 90 - 150 | 3090486 |
| ▶ CB 520/2 | Red | 25 - 55 | 3010132 |
| | Black | 60 - 110 | 3010158 |
| | Pink | 100 - 150 | 3090487 |
| ▶ CB 5065/2 - 5080/2 | Red | 25 - 55 | 3010133 |
| | Black | 60 - 110 | 3010135 |
| | Pink | 100 - 150 | 3090456 |
| | Grey | 140 - 200 | 3090992 |