



# GAS BURNERS TBG 120 MC-ME



**baltur**  
Energy for People

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АНКАС

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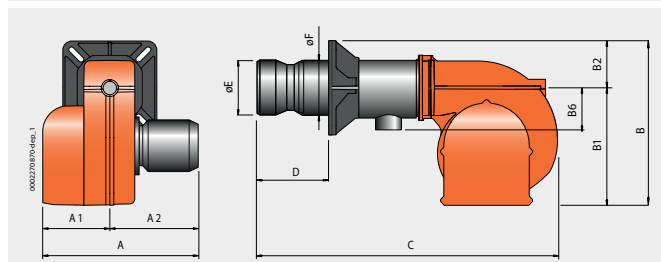
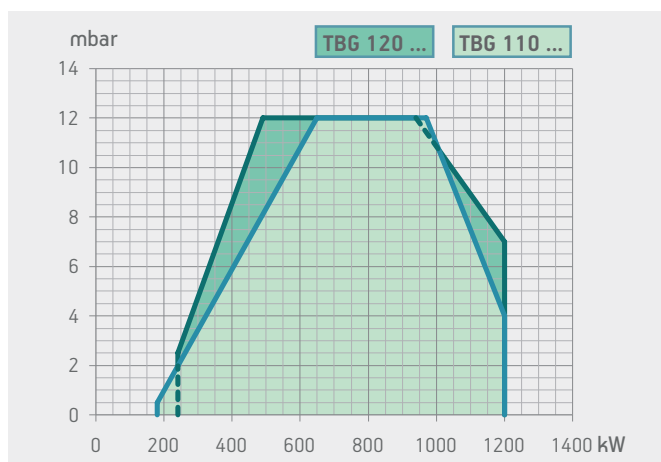
TBG 120 MC



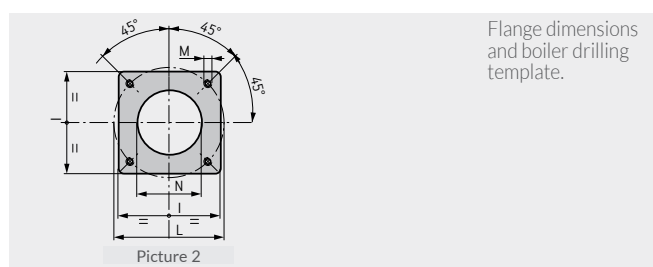
TBG 120 ME

**Gas burner compliant with European standard EN676. Operation:**

|                                                                                                                                                                                                    | TBG 120 MC                       | TBG 120 ME                       | TBG 120 ME V          | TBG 120 ME V O2       | TBG 120 ME V CO       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------------------|-----------------------|-----------------------|-----------------------|
|                                                                                                                                                                                                    | mechanical two-stage progressive | electronic two-stage progressive | modulating electronic | modulating electronic | modulating electronic |
| Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).                                                             | •                                | •                                |                       |                       |                       |
| Modulation ratio:                                                                                                                                                                                  | 1:4                              | 1:5                              | 1:5                   | 1:5                   | 1:5                   |
| Low NOx and CO emissions gas burner according to European standard EN676:                                                                                                                          | class 2                          | class 2                          | class 2               | class 2               | class 2               |
| Adjusting the combustion head.                                                                                                                                                                     | •                                | •                                | •                     | •                     | •                     |
| Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.                                                                        | •                                | •                                | •                     | •                     | •                     |
| High ventilation efficiency, low electrical input, low noise.                                                                                                                                      | •                                | •                                | •                     | •                     | •                     |
| Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.                                                                                                            | •                                | •                                | •                     | •                     | •                     |
| Easy maintenance thanks to the two-sides hinge which allows the removal of the combustion head without having to remove the burner from the boiler.                                                | •                                | •                                | •                     | •                     | •                     |
| Combustion air intake with butterfly valve. Air flow adjustment:                                                                                                                                   | mechanical cam                   | electric servomotor              | electric servomotor   | electric servomotor   | electric servomotor   |
| Fully closing air damper on shutdown to avoid loss of heat through the chimney.                                                                                                                    | •                                | •                                | •                     | •                     | •                     |
| Combustion air intake designed to achieve optimum linearity of the air gate opening.                                                                                                               | •                                | •                                | •                     | •                     | •                     |
| Device made of sound-absorbing material to reduce fan noise.                                                                                                                                       | •                                | •                                | •                     | •                     | •                     |
| Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.                                                      |                                  |                                  | •                     | •                     | •                     |
| Residual oxygen (O <sub>2</sub> ) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.                                                         |                                  |                                  |                       | •                     |                       |
| Residual oxygen (O <sub>2</sub> ) and carbon monoxide (CO) and monitoring of oxidizing components (H <sub>2</sub> ) in fumes to ensure increased performance and less atmospheric pollution.       |                                  |                                  |                       |                       | •                     |
| CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.                          | •                                |                                  |                       |                       |                       |
| CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter. |                                  | •                                | •                     | •                     | •                     |
| Possibility to choose gas train with valve tightness control.                                                                                                                                      | •                                |                                  |                       |                       |                       |
| Fail proof connectors for burner/gas train connection.                                                                                                                                             | •                                | •                                | •                     | •                     | •                     |
| Gas train outlet:                                                                                                                                                                                  | down                             | up/down                          | up/down               | up/down               | up/down               |
| Flame detection by ionisation electrode with connector for microamperometer.                                                                                                                       | •                                | •                                | •                     | •                     | •                     |
| Control panel with display diagram for working mode with indication lights.                                                                                                                        | •                                |                                  |                       |                       |                       |
| Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.                                                                            |                                  | •                                | •                     | •                     | •                     |
| Electric protection rating:                                                                                                                                                                        | IP44                             | IP40                             | IP40                  | IP40                  | IP40                  |



| Model           | Size of packaging |     |     | Weight<br>kg |
|-----------------|-------------------|-----|-----|--------------|
|                 | L                 | P   | H   |              |
|                 | mm                |     |     |              |
| TBG 120 MC      | 1070              | 800 | 700 | 87           |
| TBG 120 ME      | 1070              | 800 | 700 | 87           |
| TBG 120 ME V    | 1530              | 760 | 700 | 101          |
| TBG 120 ME V O2 | 1530              | 760 | 700 | 113          |
| TBG 120 ME V CO | 1530              | 760 | 700 | 125          |



| Model           | A mm | A1 mm | A2 mm | B mm | B1 mm | B2 mm | B6 mm | C mm | D mm      | E mm | F mm | I mm | L mm      | M mm | N mm | Pic. |
|-----------------|------|-------|-------|------|-------|-------|-------|------|-----------|------|------|------|-----------|------|------|------|
| TBG 120 MC      | 690  | 320   | 370   | 550  | 380   | 170   | 200   | 1280 | 200 ÷ 450 | 224  | 219  | 320  | 280 ÷ 370 | M12  | 235  | 2    |
| TBG 120 ME      | 610  | 240   | 370   | 540  | 380   | 160   | 200   | 1315 | 200 ÷ 450 | 224  | 219  | 320  | 280 ÷ 370 | M12  | 235  | 2    |
| TBG 120 ME V    | 670  | 300   | 370   | 540  | 380   | 160   | 200   | 1315 | 200 ÷ 450 | 224  | 219  | 320  | 280 ÷ 370 | M12  | 235  | 2    |
| TBG 120 ME V O2 | 670  | 300   | 370   | 540  | 380   | 160   | 200   | 1315 | 200 ÷ 450 | 224  | 219  | 320  | 280 ÷ 370 | M12  | 235  | 2    |
| TBG 120 ME V CO | 670  | 300   | 370   | 540  | 380   | 160   | 200   | 1315 | 200 ÷ 450 | 224  | 219  | 320  | 280 ÷ 370 | M12  | 235  | 2    |

|                 |  | O <sub>2</sub> | CO | Emissions class | Thermal output kW | Model                  | Part no.        | Electrical supply | Motor kW | Note  |
|-----------------|-------------------------------------------------------------------------------------|----------------|----|-----------------|-------------------|------------------------|-----------------|-------------------|----------|-------|
| Frequency 50 Hz |                                                                                     |                |    |                 |                   |                        |                 |                   |          |       |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 MC</b>      | <b>17610010</b> | 3N AC 50Hz 400V   | 1,5      | 3) 4) |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 ME</b>      | <b>17570020</b> | 3N AC 50Hz 400V   | 1,5      | 3) 4) |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 ME V</b>    | <b>17570025</b> | 3N AC 50Hz 400V   | 1,5      | 3) 4) |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 ME V O2</b> | <b>17570026</b> | 3N AC 50Hz 400V   | 1,5      | 3) 4) |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 ME V CO</b> | <b>17570027</b> | 3N AC 50Hz 400V   | 1,5      | 3) 4) |
| Frequency 60 Hz |                                                                                     |                |    |                 |                   |                        |                 |                   |          |       |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 MC</b>      | <b>17615410</b> | 3N AC 60Hz 380V   | 1,5      | 3) 4) |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 ME</b>      | <b>17575420</b> | 3N AC 60Hz 380V   | 1,5      | 3) 4) |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 ME V</b>    | on request      | 3N AC 60Hz 380V   | 1,5      | 3) 4) |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 ME V O2</b> | on request      | 3N AC 60Hz 380V   | 1,5      | 3) 4) |
|                 |                                                                                     |                |    | class 2         | 240 ÷ 1200        | <b>TBG 120 ME V CO</b> | on request      | 3N AC 60Hz 380V   | 1,5      | 3) 4) |

## TO COMPLETE THE BURNER

### DESCRIPTION

TBG 120 ME V: modulating probe for LCM 100

### MODULATING MODE

| DESCRIPTION                         | PART NO. |
|-------------------------------------|----------|
| TBG 120 MC: modulation kit          | 98000057 |
| TBG 120 ME: modulation kit          | 98000059 |
| TBG 120 MC/120 ME: modulating probe |          |

### NOTES

3 Sound proof lid on burner air intake.

4 Equipped with air closure device.

Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: Hi = 35,80 MJ/m<sup>3</sup> = 8550 kcal/m<sup>3</sup>,

LPG: Hi = 92 MJ/m<sup>3</sup> = 22000 kcal/m<sup>3</sup>.

For different type of gas and pressure values, please get in contact with our commercial department.

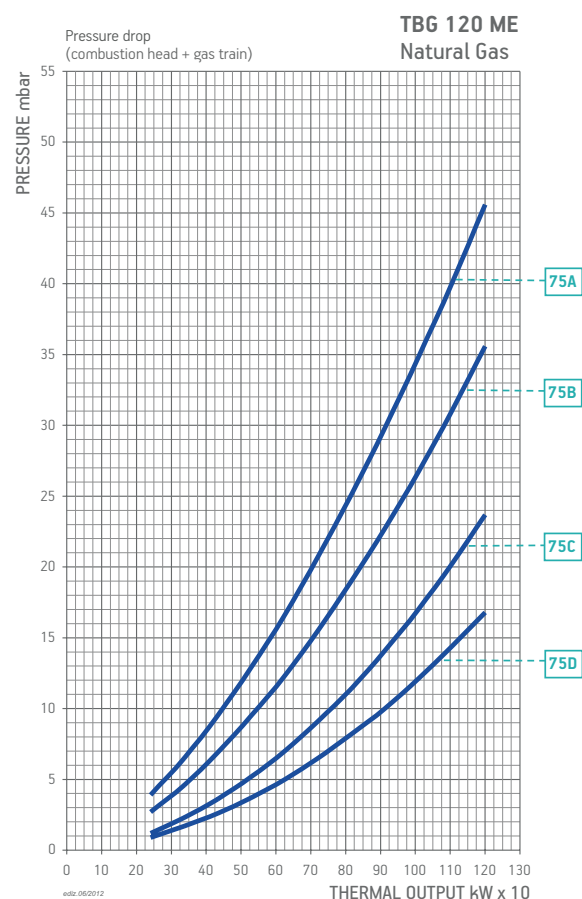
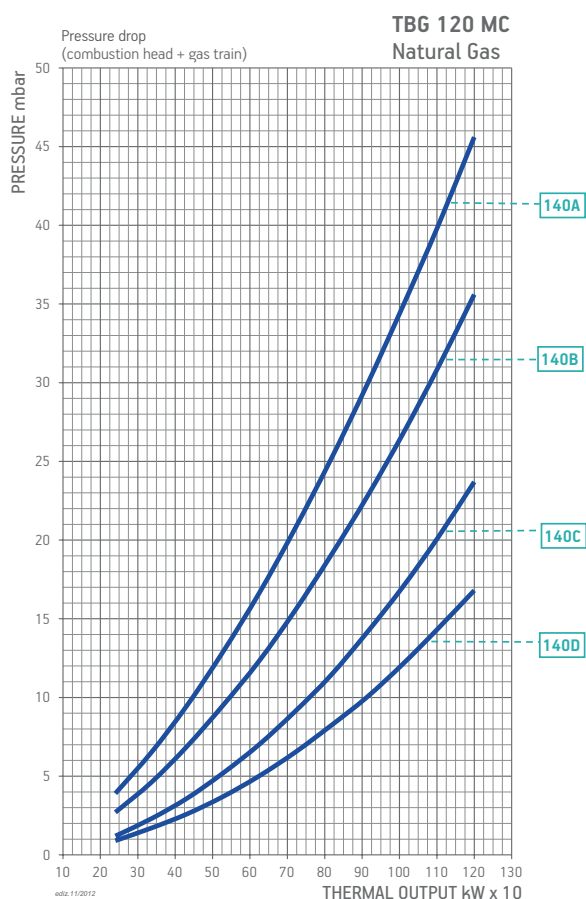
## ACCESSORIES AVAILABLE ON REQUEST

| DESCRIPTION            | PART NO. |
|------------------------|----------|
| Soundproof burner cove | 97980053 |

### GAS BURNERS ACCESSORIES

|                                       |  |
|---------------------------------------|--|
| Boiler coupling kit, plug for wiring. |  |
|---------------------------------------|--|

## BURNER/GAS TRAIN MATCH



CE gas train version complies with EN676, EXP gas train version is for extra-European markets

| Burner model    | Gas type    | Curve on graph | Version | P.Max ** mbar | Execution | Gas train | Regulator with incorporated filter | Burner/gas train adapter | Valve tightness control kit | Pic. | Notes |
|-----------------|-------------|----------------|---------|---------------|-----------|-----------|------------------------------------|--------------------------|-----------------------------|------|-------|
|                 |             |                |         |               |           | Part no.  | Part no.                           | Part no.                 | Part no.                    |      |       |
| TBG 120 MC      | Natural gas | 140A           | CE/EXP  | 360           | CTV       | 19990548  | Included                           | 96000007                 | -                           | B7   |       |
|                 |             |                |         |               |           | 19990548  | Included                           | 96000007                 | 98000101                    | B7   | 12)   |
|                 |             | 140B           | CE/EXP  | 360           | CTV       | 19990549  | Included                           | -                        | -                           | B7   |       |
|                 |             |                |         |               |           | 19990549  | Included                           | -                        | 98000101                    | B7   | 12)   |
|                 |             | 140C           | CE/EXP  | 500           | CTV       | 19990550  | Included                           | -                        | -                           | B7   |       |
|                 |             |                |         |               |           | 19990550  | Included                           | -                        | 98000102                    | B7   | 12)   |
|                 |             | 140D           | CE/EXP  | 500           | CTV       | 19990563  | Included                           | -                        | -                           | B7   |       |
|                 |             |                |         |               |           | 19990563  | Included                           | -                        | 98000101                    | B7   | 12)   |
| TBG 120 ME      | Natural gas | 75A            | CE/EXP  | 360           | CTV       | 19990558  | Included                           | 96000007                 | Included                    | D2   |       |
| TBG 120 ME V    |             | 75B            | CE/EXP  | 360           | CTV       | 19990559  | Included                           | -                        | Included                    | D2   |       |
| TBG 120 ME V O2 |             | 75C            | CE/EXP  | 500           | CTV       | 19990524  | Included                           | -                        | Included                    | D2   |       |
| TBG 120 ME V CO |             | 75D            | CE/EXP  | 500           | CTV       | 19990525  | Included                           | -                        | Included                    | D2   |       |

| Burner model    | Gas type | Version | P.Max ** mbar | Execution | Gas train | Regulator with incorporated filter | Burner/gas train adapter | Valve tightness control kit | Kit LPG  | Pic. | Notes |
|-----------------|----------|---------|---------------|-----------|-----------|------------------------------------|--------------------------|-----------------------------|----------|------|-------|
|                 |          |         |               |           | Part no.  | Part no.                           | Part no.                 | Part no.                    | Part no. |      |       |
| TBG 120 MC      | LPG      | CE/EXP  | 360           | CTV       | 19990548  | Included                           | 96000007                 | -                           | 98000358 | B7   |       |
|                 |          |         |               |           | 19990548  | Included                           | 96000007                 | 98000101                    | 98000358 | B7   | 12)   |
| TBG 120 ME/ME V | LPG      | CE/EXP  | 360           | CTV       | 19990558  | Included                           | 96000007                 | Included                    | 98000358 | D2   |       |
| TBG 120 ME V O2 |          |         |               |           |           |                                    |                          |                             |          |      |       |
| TBG 120 ME V CO |          |         |               |           |           |                                    |                          |                             |          |      |       |

To choose the correct gas train please refer to the information on Burners Catalogue.

## NOTES

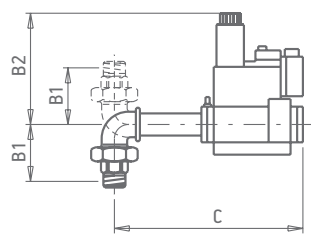
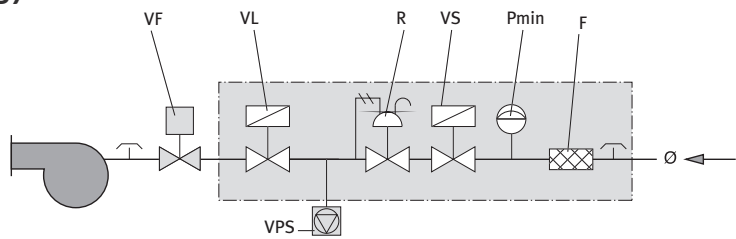
12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

\*\*) Maximum gas inlet pressure at pressure regulator.

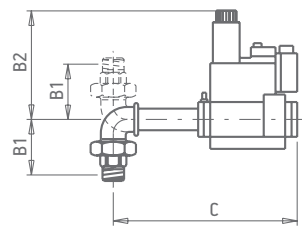
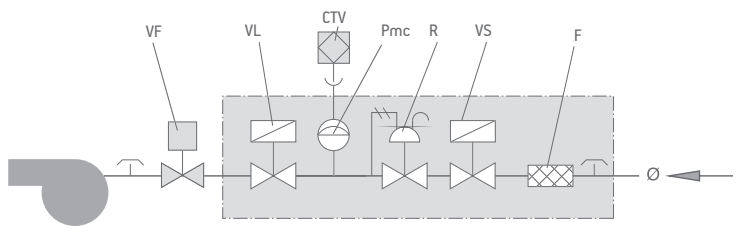
GAS TRAIN STRUCTURE AND COMPOSITION

B7



| Gas train Part no.           |   |      |   |    |    |     |    |       | Gas train dimensions mm |     |      | Size of packaging mm<br>L x P x H | Weight kg |
|------------------------------|---|------|---|----|----|-----|----|-------|-------------------------|-----|------|-----------------------------------|-----------|
|                              | F | Pmin | R | VF | VL | VPS | VS | Ø     | B1                      | B2  | C    |                                   |           |
| 19990548 (MB...415 - 1"1/2)  | ● | ●    | ● | ◆  | ●  | ▲   | ●  | 1"1/2 | 103                     | 170 | 600  | 460 x 250 x 460                   | 11        |
| 19990549 (MB...420 - 2")     | ● | ●    | ● | ◆  | ●  | ▲   | ●  | 2"    | 114                     | 220 | 600  | 460 x 250 x 460                   | 13        |
| 19990550 (VGD20.503 - 2")    | ● | ●    | ● | ◆  | ●  | ▲   | ●  | 2"    | 114                     | 285 | 890  | 990 x 300 x 500                   | 15        |
| 19990563 (VGD40.065 - 2"1/2) | ● | ●    | ● | ◆  | ●  | ▲   | ●  | DN65  | 114                     | 320 | 1120 | 1380 x 430 x 700                  | 26        |

D2



| Gas train Part no.           | Position |   |     |   |    |    |    |       | Gas train dimensions mm |     |      | Size of packaging mm<br>L x P x H | Weight kg |
|------------------------------|----------|---|-----|---|----|----|----|-------|-------------------------|-----|------|-----------------------------------|-----------|
|                              | CTV      | F | Pmc | R | VF | VL | VS | Ø     | B1                      | B2  | C    |                                   |           |
| 19990524 (VGD20.503 - 2")    | ●        | ● | ●   | ● | ◆  | ●  | ●  | 2"    | 114                     | 285 | 890  | 990 x 300 x 500                   | 14        |
| 19990525 (VGD40.065 - 2"1/2) | ●        | ● | ●   | ● | ◆  | ●  | ●  | DN65  | 114                     | 320 | 1120 | 1380 x 430 x 700                  | 26        |
| 19990558 (MB... 415 - 1"1/2) | ●        | ● | ●   | ● | ◆  | ●  | ●  | 1"1/2 | 103                     | 170 | 490  | 460 x 250 x 460                   | 11        |
| 19990559 (MB... 420 - 2")    | ●        | ● | ●   | ● | ◆  | ●  | ●  | 2"    | 114                     | 220 | 520  | 520 x 410 x 410                   | 13        |

CTV Valve tightness control.  
F Filter.  
LDU LDU valve tightness control.  
Pct Pressure switch for gas control.  
Pmax Maximum pressure switch.  
Pmc Minimum and control pressure switch gas leaks.  
Pmin Minimum pressure switch.  
R Pressure regulator.  
RF Pressure regulator with filter.

RFP Pressure regulator with filter for pilot gas train.  
RM Manual flow rate regulator.  
RP Pneumatic regulator.  
VF Regulator throttle valve.  
VL Operating valve.  
VL2 Two-stage operating valve.  
VLP Operating pilot valve.  
VLR Operating valve with pressure regulator.

VP Pilot valve.  
VPS VPS valve tightness control.  
VS Safety valve.  
VSP Safety pilot valve.  
Ø Gas train diameter.  
Ø1 Main gas train diameter.  
Ø2 Pilot gas train diameter.

● As standard.  
▲ As standard for burners with an output of more than 1200 kW, on request for burners with an output of less than 1200 kW.  
■ On request.  
◆ Mounted on burner.