



BURNERS CATALOGUE



baltur



RESEARCH
AND DEVELOPMENT



ADVANCED
TECHNOLOGY



PLANNING
AND DESIGN



DESIGN,
MADE IN ITALY



ENVIRONMENTAL AWARENESS
COMES FIRST

Baltur, smart solutions.

Since 1950 Baltur has been designing and producing smart systems for the climate control of civil and industrial environments. It is a leading company in terms of technological developments in this field and has steadily grown to become one of the major players in the market. Baltur's successes are due to its strengths in the following areas: the quality of its products and its specialised services, its customer relations, its research, development and training, the new technology it employs and its respect for the environment. Baltur is the ideal partner for all those operating in the climate control sector and was indeed one of the first to obtain ISO 9001 certification. The company's products are the result of continuous research, some of which is carried out in collaboration with prestigious research institutes, while the products themselves are built to the highest technological levels. Anti-drip and anti-pollution systems and air-gas premixing are just a few of the ways efficiency is maintained and any environmental impact is minimised. There are five main product lines that provide a wide range that can also be tailored to the particular needs of the customer. The low NOx and CO emission BGN burners, the BTL burners, the GI 1000 burners for industrial boilers, are among the models bearing the mark of Baltur technology.

Baltur, in the world, one mission, one vision, one goal: conscientious energy management.

Designing, manufacturing and selling "intelligent" solutions for heating, climate control, and applications for industry and its processes, managing energy rationally and effectively, while respecting both people and nature: this is how Baltur helps protect the environment.

This means standing out for the excellent quality of our products, and the great attention we pay to our customers.





BALTUR BURNERS

HIGH PERFORMANCE AND EMISSIONS
REDUCTION - A WINNING COMBINATION
FOR BALTUR BURNERS

BALTUR BURNERS ARE GUARANTEED BY THE EXPERIENCE AND KNOW-HOW ACQUIRED DURING 65 YEARS OF PRODUCTION, RESEARCH AND CONTINUOUS INVESTMENT. THE LINE IS TESTED ACCORDING TO ESTABLISHED PROCESSES, WHICH ARE COMPLIANT WITH EU AND EXTRA-EU STANDARDS, AT THE RESEARCH AND TESTING ROOM - A STATE-OF-THE-ART FACILITY FOR THE DEVELOPMENT OF THE BEST TECHNOLOGIES IN THE FIELD OF ENERGY EFFICIENCY.



ENERGY
SAVING



COMFORT
HIGH



RESPECT FOR THE
ENVIRONMENT

FEATURES THAT MAKE A DIFFERENCE



Electronic modulation burners

- Easy to regulate thanks to the user-friendly electronic cam software.
- The regulation of the burner is more precise, reliable and repeatable.
- Higher modulation ratio.
- Highly flexible burner configuration according to customer requirements thanks to the modularity of the components that can be used provided by the electronic cam.
- Possibility of using Combustion Control Systems CCS for combustion optimization and energy saving.



Low emissions gas burners

- The Baltur low emission burners have also been designed to be used in conjunction with combustion control systems.
- The installed electric power of the fan motors is lower than that of most competitors.
- The Baltur low NOx emissions burners can also be used in industrial processing plants.



Burners with INVERTER frequency converter

- During normal operation, these allow a significant reduction in primary electrical energy consumption to be achieved, within the burner's modulation range.
- They guarantee a reduction in the amount of noise produced.
- The Baltur electronic cam burners can also use the inverter to manage combustion optimization in SCC combustion control systems.



Burners with O₂ and CO control

- Our extensive experience in the configuration, management and installation of active SCC combustion control systems comes from having implemented hundreds of systems over the last 20 years.
- High reliability and consistency in the measurement, control and processing of the monitored parameters.
- Possibility of subsequent SCC system installation; its modular design means that the SCC system can be installed even after the burner has been installed and is operational.
- Integration of active O₂ and CO measuring devices for implementing continuous emissions monitoring systems (EMS) according to Legislative Decree No. 152.



Burners with external recirculation of combustion gases FGR (Flue Gas Recirculation)

- The monobloc and dual block burners can be configured to use exhaust gases from the flue, to reduce nitrogen oxide NOx emissions.
- This system makes it possible to obtain a reduction of between 20% and 70% of nitrogen oxide, according to the amount of flue gas recirculated.
- Baltur provides engineering analysis for the FGR systems by providing technical support for the design of the flue gas systems.



BALTUR ACADEMY

EXCELLENCE IS ACHIEVED THROUGH CONTINUOUS TRAINING.

BALTUR ENSURES CUSTOMER SATISFACTION - CORRECT DIAGNOSIS, QUICK AND EFFECTIVE SERVICES - THROUGH THE TRAINING OF ITS TECHNICAL SUPPORT NETWORK TO PROMOTE NEW COMPETENCIES AND PROBLEM SOLVING SKILLS.

THE COURSES - FOCUSED ON THE OPERATING LOGIC OF THE PRODUCTS - ALLOW PERSONNEL TO QUALIFY AS SKILLED TECHNICIANS AND WORK ON BALTUR PRODUCTS - AN ADDITIONAL GUARANTEE OF EXCELLENCE AND THE ABILITY TO SOLVE PROBLEMS.



DISTANCE
EDUCATION



SITE
TRAINING



THERMO
TRAINING

CONTINUOUS INNOVATION THE FUTURE FOR BALTUR IS NOW

We want to grow, we want to tackle new areas as leaders and we want to move even faster. This is why our laboratories are expanding radically and this is the reason why we have developed and installed the largest variable geometry test tube in the world. We control combustion to make it clean, efficient, silent and flexible. We are able to satisfy both “normal” and “special” requirements. We are able to do this because we employ the best specialists, state-of-the-art 3D design and CAE simulation software and have the best facilities, measuring and data acquisition instrumentation.



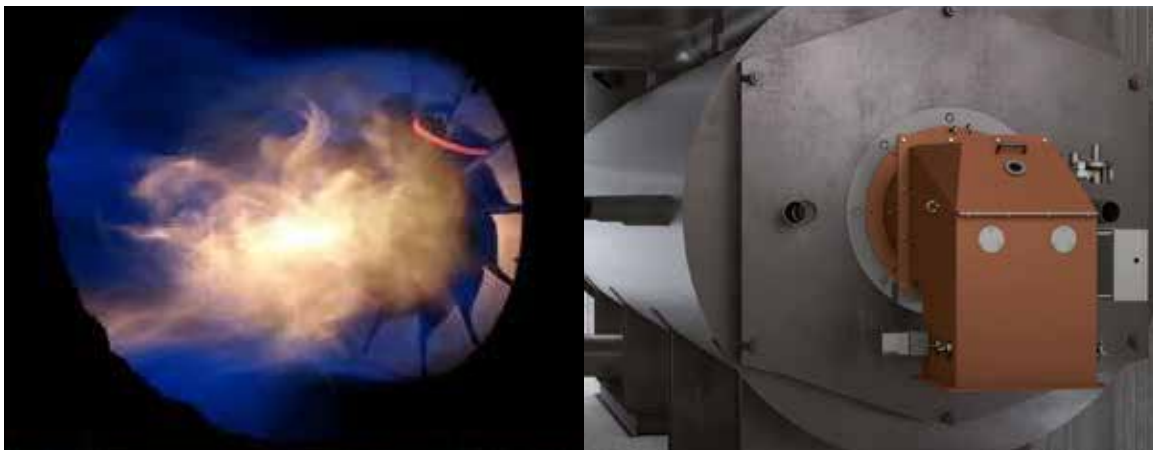
Innovation



**Continuous
research**



**Respect for the
environment**





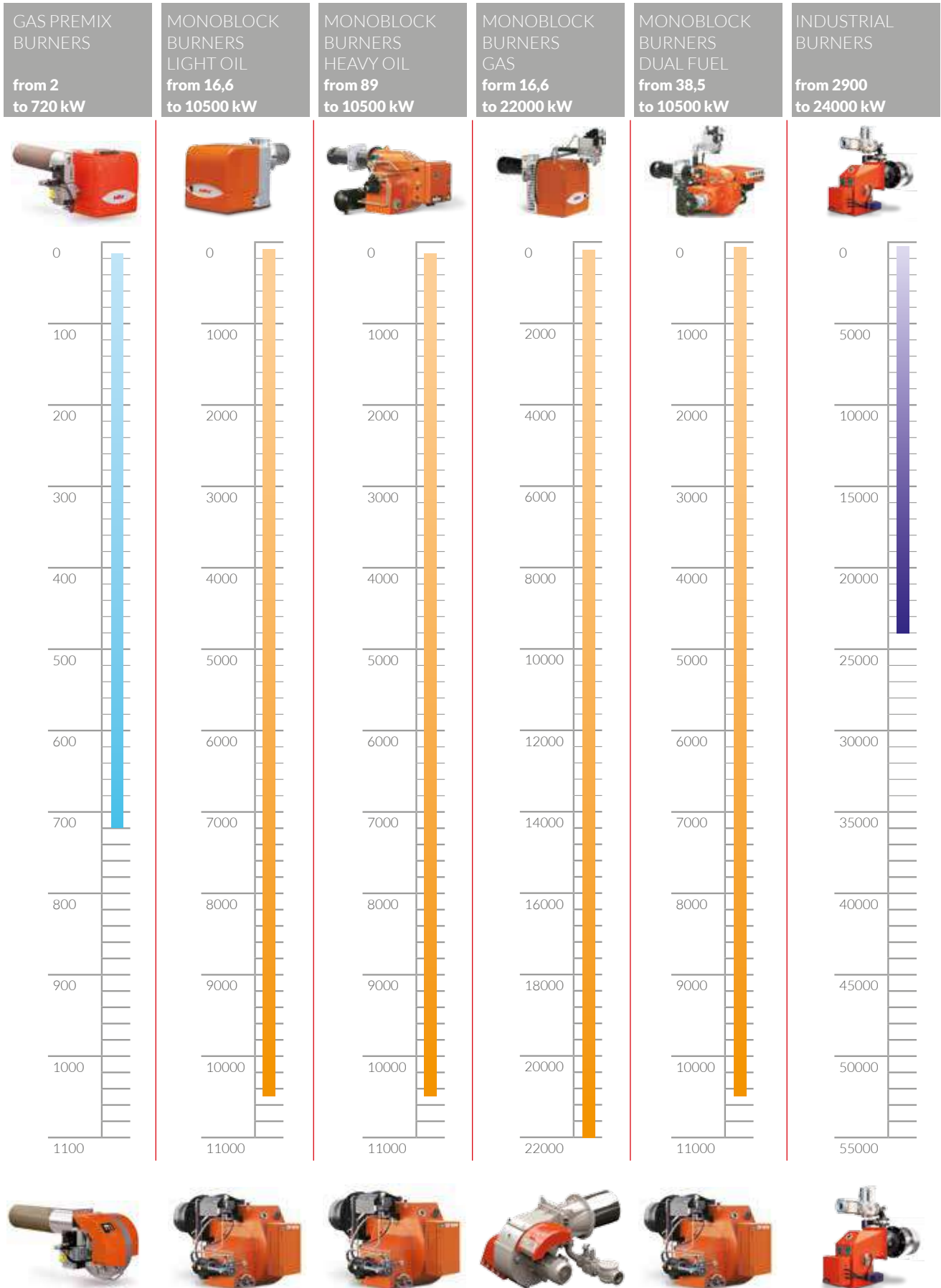
TECHNICAL ASSISTANCE

EXPERT ASSISTANCE THROUGHOUT
THE COUNTRY

TECHNICAL ASSISTANCE IS AN ESSENTIAL ELEMENT FOR BALTUR. THIS IS WHY THE COMPANY HAS AN EXTENSIVE NETWORK OF SERVICE CENTRES ACROSS THE COUNTRY; A WIDESPREAD ORGANISATION OF PEOPLE WHO DEAL EXCLUSIVELY WITH AFTER SALES SERVICES THAT RESOLVE PROBLEMS AS QUICKLY AS POSSIBLE AND PROVIDE TIMELY AND EFFECTIVE SOLUTIONS.



BURNERS RANGE





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baltur

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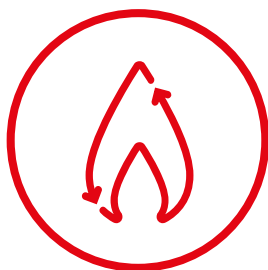
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GAS TRAIN



WARNINGS

The following must be taken into account when choosing a burner:

1- COUPLING FLANGE

1.1- All burners are equipped with a coupling sliding flange which allows the exact positioning of the combustion head inside the combustion chamber in compliance with the boiler manufacturer's rules.

This does not apply BTL 3, BTG 3, TBG 480/600/800/1100/1200/1600, TBML 350/600/800, GI 1000, GI MIST 1000. On request BTL 3 and BTG 3 can be supplied with a long head sliding on the coupling flange.

2 - PRESSURE JET BURNERS

2.1 - Blown air burners capacity is closely linked to the back-pressure in the combustion chamber. To ensure that you choose the right model it is necessary to examine the flow-rate/pressure diagrams given in the brochures and technical documentation.

2.2 - Blown air burners can be used on pressurised or suction pressure boilers without any special adaptation.

3 - MODULATING BURNERS

3.1 - In case modulating burner is required it's necessary to add the PID load controller and related probe modulating KIT to the two stage progressive burner.

4 - GAS AND DUAL FUEL BURNERS

4.1 - Gas and mixed fuel burners comply with Directive 2009/142/EC and are manufactured according to EN676.

This compliance is indicated by the CE mark on the burner itself. The standard EN676 requires the manufacturer to supply the gas pressure regulator (stabilizer) and the filter together with the burner.

4.2 - Gas and mixed fuel burners, excluding COMIST ... DSP and GI MIST..., must always be ordered with a gas train and an adapter, if required. These should be selected according to the gas pressure available at the input of

the regulator, the amount of gas required, as well as the backpressure in the combustion chamber.

ORDERS FOR BURNERS WITHOUT A GAS TRAIN WILL NOT BE ACCEPTED.

4.3 - All gas and mixed burner trains are delivered pre-assembled and pre-wired.

4.4 - In the case of mains pressures different from those indicated, please contact our Sales Office for a quotation that will indicate either an additional charge or a price reduction subject to the exact calculation of the gas train.

4.5 - The gas supply system must comply with current regulations.

5 - DIESEL AND BIOFUEL BURNERS

5.1 - Diesel burners are also compatible with blends of diesel and biofuel only if the biofuel meets the requirements of EN14213 and the blend must be supplied by companies having an UNI-EN-ISO9000 certified quality system. With diesel and biofuel blends having a maximum biofuel content of 10%, all the components of the suction line of the system must be compatible with the type of fuel used and the line must be fitted with a filter (40µm rated) that can be inspected and cleaned periodically.

By following the guidelines described above and replacing the hoses every year (or installing special hoses), diesel burners can also be used with diesel and biofuel blends with a biofuel content of up to 30%.

6 - SERIES LX LIGHT OIL BURNERS

6.1 - Series LX light oil burners are suitable for combustion chambers with flue outlet from the chamber base (e.g. 3-pass boilers). They cannot be installed on reverse flame boilers.

The burner has been assessed on test boilers in compliance with the provisions of European standard EN267.

For combustion chamber dimensions that differ with respect to EN267 consult our



technical service department.

7 - HEAVY OIL BURNERS

7.1 - If you use heavy oil with a viscosity higher than 5° E at 50°C and up to 15°E the system must be equipped with a feed circuit employing an auxiliary pump as per our technical drawings.

The same can be said when fuel viscosity is higher than 15°E at 50°C, yet in this event it is also necessary to install burners from the DSNM-D, DSPN-D and GI DSPN-D series.

8 - "WITHOUT" BURNERS

8.1 - Light oil and gas burners marked with a W (Without) provide the same output and performance as standard models; although they are without a cover, they nevertheless remain compact and stylish.

9 - 60Hz BURNERS

9.1 - The operating range of the burners has been obtained in compliance with EN267 (Light oil burners) and EN676 (Gas burners) with frequency 50Hz.

10 - IMPORTANT NOTES

10.1 - Diagrams are indicative only and refer to test boilers as per the standards in force.

In practice there may be differences, which stem from the following factors:

- a) The capacity/incapacity of the burner to overcome the backpressure on ignition (different from standard operating pressure), which varies from boiler to boiler.
- b) High thermal load in the combustion chamber (relationship between combustion chamber output and relative volume - kW/m³) so the burner fan might not allow utilisation of the entire operating field.

11 - NOTES

11.1 - This catalogue cancels and takes the place of all previous ones.

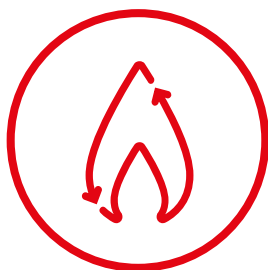
11.2 - Request availability of products while stocks last.

11.3 - For technical datas and special products offers please refer to the local Baltur dealer or contact directly Baltur Head Office attel. +39 0516843711,

fax +39 0516857529, e-mail info@baltur.it

11.4 - For information not contained in this catalogue (terms of delivery - installation instructions - special regulations etc.) refer to the specific materials (brochures - technical instructions etc.) and/or our authorised technical centres.

ALL DATA IS INDICATIVE ONLY; BALTUR RESERVES THE RIGHT TO MODIFY TECHNICAL DATA AND OTHER INFORMATION ON THE CATALOGUE WITHOUT GIVING PRIOR NOTICE.



SYMBOLOLOGY

LIGHT OIL

BTL... • RiNOx...L • SPARK 35
Single-stage light oil burners.

**BTL...P • RiNOx...L2 • SPARK 35 DSG •
SPARK 35 LX • TBL... P • TBL...LX •
BT...DSG 4T • BT 350 DSG 4T**
Two-stage light oil burners.

BT...DSPG • GI...DSPG
Two-stage progressive/modulating light
oil burners with mechanical cam.

HEAVY OIL

BT 17 N
Single-stage heavy oil burners.

BT...SPN
Two-stage pressure drop heavy oil burners
(just one nozzle).

BT...DNS 4T
Two-stage heavy oil burners.

BT...DSNM-D
Two-stage extra heavy oil burners.

BT...DSPN
Two-stage progressive/modulating heavy oil
burners with mechanical cam.

GI...DSPN-D
Two-stage progressive/modulating extra
heavy oil burners with mechanical cam.

GAS

BPM...
Modulating gas premix burners.

BTG... • TBG...
Single-stage gas burners.

BTG...P • TBG...P
Two-stage gas burners.

TBG...MC • BGN...MC • GI...MC
Two-stage progressive/modulating gas
burners with mechanical cam.

**BTG 20 LX • TBG...PN • TBG...LX PN •
BGN...LX**
Two-stage progressive/modulating gas
burners with pneumatic regulation.

**BTG...ME • TBG...ME • TBG...LX ME •
BGN...ME • BGN...LX ME • GI...ME**
Two-stage progressive / modulating gas bur-
ners with electronic cam.

**TBG...ME V • TBG...LX ME V • BGN...ME V •
BGN...LX ME V**
Modulating gas burners with electronic mo-
dulation and frequency converter (inverter).

DUAL FUEL

MINICOMIST... • COMIST 20
Single-stage gas/light oil burners.
Dual operating mode.

COMIST 26 SP
Two-stage pressure-drop gas/light oil bur-
ners.
Dual operating mode.

TBML...P
Two-stage gas/light oil burners.
Dual operating mode.

TBML...MC
Two-stage progressive/modulating gas/light
oil burners with mechanical cam on gas, two-
stage on light oil.
Dual operating mode.

COMIST...DSPGM • GI MIST...DSPGM
Two-stage progressive/modulating gas/light
oil burners with mechanical cam.
Dual operation mode.

TBML 50/80/120/160/200/260/360 ME
Modulating gas/light oil burners with
electronic modulation on gas, two-stage on
light oil. Dual operating mode.

**TBML 350/600/800 ME**

Modulating gas/light oil burners with electronic modulation. Dual operating mode.

COMIST...N • COMIST...NM

Two-stage gas/heavy oil burners. Dual operation mode.

COMIST...DSPNM

Two-stage progressive/modulating gas/heavy oil burners with mechanical cam. Dual operating mode.

GI MIST...DSPNM-D

Two-stage progressive/modulating gas/extra heavy oil burners with mechanical cam. Dual operating mode.

...DACA

Burner equipped with automatic air closure device.

...O2

Burner equipped with control O₂

...CO

Burner equipped with control CO

...H

Burner equipped with preheating.

...W

Burner does not have a fairing.

...V

Burner equipped with a frequency converter (INVERTER).

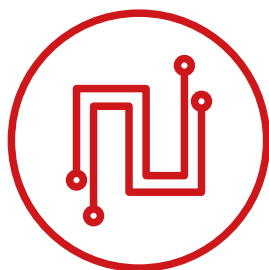
N.B. The letters indicate the model; burner power is indicated in the spaces.

GAS EMISSIONS:
Class defined according to EN676 directive.

Class	NOx Emissions [mg/kWh]	
	methane	GPL
1	≤ 170	≤ 230
2	≤ 120	≤ 180
3	≤ 80	≤ 140

GAS EMISSIONS:
Class defined according to EN676 directive.

Class	NOx Emissions	CO Emissions
	[mg/kWh]	[mg/kWh]
1	≤ 250	≤ 110
2	≤ 185	≤ 110
3	≤ 120	≤ 60



BURNERS WITH ELECTRONIC MODULATION (ME SERIES)

Traditional modulation systems (mechanical modulation) used in standard burners have a mechanical connection between the servomotors and the adjustment parts which use rods, drive levers and joints.

This creates mechanical play and hysteresis in the combustion air/fuel calibration system, which creates imprecision for the combustion adjustment, especially at the minimum loads. This combustion adjustment imprecision translates as loss of efficiency in terms of energy yield.

With electronic modulation, there is absolutely no mechanical play and hysteresis as the servomotors are connected directly to the

adjustment devices, without drive levers or rods.

This guarantees optimal combustion values at all the load points.

The correct position of the servomotors (stepping mode, with precision to one tenth of a degree) is guaranteed by the electronic cam, the new microprocessor “flame control”, which is used to command and monitor all the burner functions.

The electronic cam has a built-in gas seal control. The PID temperature/pressure load adjuster is an optional for the BTG, BGN, TBG series and standard for GI LX ME series. The combustion air/fuel ratio adjustment

BTGME e TBGME series



BURNER OPERATION DISPLAY WITH PROGRAMMING KEYBOARD

Allows to display the running sequence of the position of the air servomotor and the control of the servomotors.

Backlit display for an accurate reading even in difficult lighting conditions. Lamp block and reset button built into the programming keypad.

In case of shut down it is possible to immediately recognize the cause through an error code. Storage of the last 10 block reports.

Allows to display the fuel consumption through a pulse signal coming from the gas flow meter. Simple navigation menu with icons for easy programming.



ELECTRONIC CAM

Modular electronic programmer with microprocessor for control and monitoring of the burner functions.

Version for continuous running on demand. Modulating operation through the use of a thermoregulator (optional).

Gas valves tightness control integrated in the control box. Electrical connection via encoded plug connections to prevent wiring errors. Remote reset.

On demand the following expansion modules are available: PID module for modulating operation, inverter module, O₂/CO control for automatic fuel optimization, Interface Bus (PROFIBUS, MODBUS), remote monitoring Visiocontrol.



SERVOMOTORS FOR AIR AND FUEL ADJUSTMENT

The air and gas flows are adjusted using stepping mode servomotors with precision to one tenth of a degree.

The considerable precision of the adjustments makes it possible to maintain the combustion at optimal values at all the load points.



curve (with configurable working points) is programmed using a programming keypad with display. This curve is password-protected. The display can be used to display a whole series of information. For example, if the burner is blocked, an error code will be displayed for immediate recognition of the cause of the block and rapid solving of the problem. The ME series burners comply with the ever increasingly demanding requirements of a market which requires combustion systems with high energy efficiency, considerable technological content and cost cuts for installation and maintenance.

The creation of these ME series burners is confirmation that the technology used is continuously being developed, with increasing precision, reliability and duration over time. At the same time, costs are continuously being reduced, making use of these burners more convenient.

GI-LXME, e IBME series

1 - BURNER OPERATING DISPLAY WITH PROGRAMMING KEYPAD

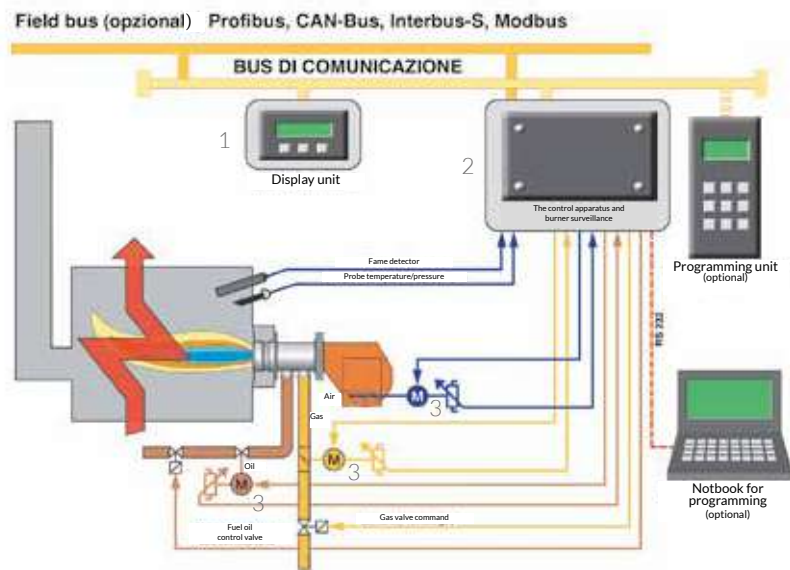
Enables the sequence of the servo motors' working position and the loading value to be viewed.
Burner operating time and number of successful start-ups.
Set point display.
Also indicates the quality of the flame detected.
If the burner is blocked, an error code will be displayed for immediate recognition of the cause of the block.
Log of last ten lock-outs with date and time indicated.
Simple programming keypad for burner calibration.
These functions are password-protected.

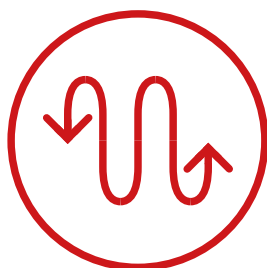
2 - ELECTRONIC CAM

Electronic programmer with double fail safe microprocessor to control and monitor burner functions.
Built-in gas valve seal control.
PID integrated load adjuster.
TRD 604 certification.
Available on request, connections to Modbus, CAN-bus, Profibus and Interbus-s.

3 - SERVOMOTORS FOR AIR AND FUEL ADJUSTMENT

The adjustment of air and gas flow is by means of servo motors with potentiometer feedback. The considerable precision of the adjustments makes it possible to maintain the combustion at optimal values at all the load points.





GAS BURNERS WITH FREQUENCY CONVERTER (INVERTER)

The cost of energy and pollution associated with energy production leads to paying greater care about how much is used.

Systems that are increasingly efficient have to be produced.

Today, non-dissipative control systems that minimise losses are preferred.

It is well-known that a standard configuration burner fan always uses, with negligible differences, the same amount of electrical power when the power output of the burner changes.

The airflow is regulated exclusively by the flow regulation dampers that close when the power decreases, restricting the air inlet section and thereby inducing a higher pressure loss, which in fact only dissipates part of the electrical power supplied by the fan motor.

Additionally, in this configuration, the fan always runs at maximum speed, therefore generating the maximum amount of noise at every power level.

These limitations can be overcome by integrating a static frequency converter into the control panel, which varies the speed of the fan according to the power output of the burner. The frequency converter receives the signal that regulates the fan speed directly from the combustion air actuator and adjusts the flow in function of the actual requirements to provide improved energy management.

The air dampers remain on the burner and fine-tune the air flow and regulate the dynamic air pressure to the combustion head, especially during transitional phases.

Using a frequency converter allows substantial savings to be made on the electricity required to power the fan, even up to 70% at the minimum burner power and an average annual weighted reduction in the order of 30

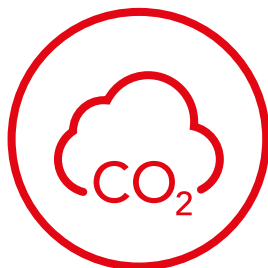
- 40%.

The second great advantage of using an inverter to regulate the fan rpm is that it allows very high reduction in the sound pressure level at partial burner loads, with peaks of 30% at the burner's minimum power with respect to the standard solution with the air flow control relying exclusively on the dampers and fan at the motor nominal rpm.

Other advantages linked with the use of a frequency converter are:

- power factor close to 1 at any speed. Therefore, no power factor regulation is required.
- Reduction of inrush currents: the frequency converter allows the motor to be started up gradually. Y/Δ start-up or soft starters become unnecessary.
- less mechanical stress: the lack of sudden start-ups reduces the system stress considerably, therefore contributing to reducing maintenance interventions on mechanical parts.

Moreover, the excellent price-performance ratio obtained using a frequency converter can't be denied.



BURNERS WITH O₂ AND CO CONTROL

In thermal combustion processes it is best to make sure that all the fuel is completely burnt to prevent the appreciable quantities of unburnt fuel finding its way into the combustion products.

In theory, the complete combustion of fuel could also be obtained by using the stoichiometric amount of combustion air.

In practice, however, one has to use excess combustion air with respect to the minimum stoichiometric amount, to ensure the fuel is completely burnt.

If however, the excess air is higher than a certain amount, there is the risk of excessive flame cooling with a consequent increase in heat loss to the flue and an increase in pollution.

It is therefore evident that the air-fuel ratio has to be maintained within an appropriate range in order to ensure maximum combustion efficiency and minimum air pollution.

The amount of excess air is determined by measuring the percent of oxygen in the exhaust fumes.

The active oxygen control system consists of:

- a zirconium oxide probe, located at the outlet of the combustion chamber or in the flue
- monitoring and control equipment.

The regulator, via the probe, monitors and measures the amount of oxygen in the fumes and by controlling a servomotor, automatically modifies the amount of combustion air, thereby maintaining an optimum air / fuel ratio and ensuring increased performance with less pollution.

The advantage of this system can be better understood with an example:

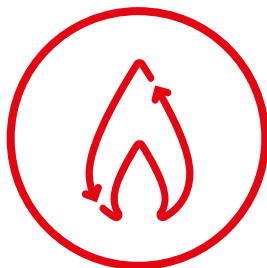
- 6MW methane fuelled power plant.
- use of 50 weeks/year, for 5 days/week, 16 h/day.
- the O₂ monitoring in the system, where the oxygen percent can be reduced up to 2,5%,

you can obtain energy savings of 52TOE (tonne of oil equivalent) and 142 tonnes/year of CO₂, equal to 2%.

The performance that can be obtained using CO₂ monitoring in gas burners becomes even better.

In this case the combustion air is further reduced, (using an inverter, if fitted), by means of an air servomotor until a few dozen of CO₂ ppm are detected at the flue.

With CO monitoring, the minimum air excess on the entire work range can be ensured so as to increase energy efficiency of a further 0.5% with respect to O₂ monitoring.



HOW TO CHOOSE THE RIGHT GAS TRAIN FOR THE BURNER

Using the specific diagrams, it is possible to select the gas train that is most suitable for the burner.

First of all it is necessary to identify:

- Burner's output Q_i [kW], to be identified along the x-coordinate.
- Gas pressure available at the regulator P_g [mbar], to be identified along the y-coordinate.

The available gas pressure is determined by the formula: $P_g = P_a - P_c$ where:

P_a = gas pressure provided by the mains supply;
 P_c = the pressure in the boiler combustion chamber.

The intersection point of the two lines defines the operational parameters of the gas train.

The gas train characterised by the first curve underneath the intersection point must be chosen.

EXAMPLE:

- Burner = TBG 210 P
- $Q_i = 1700$ kW
- $P_a = 45$ mbar
- $P_c = 5$ mbar
- $P_g = 45 - 5 = 40$ mbar

Choose the indicated curve 123C.

To identify the codes for the gas train, pressure regulator and adapter to be ordered refer to the BURNER/GAS train match-up table relative to burner TBG 210 P and curve reference 123C.

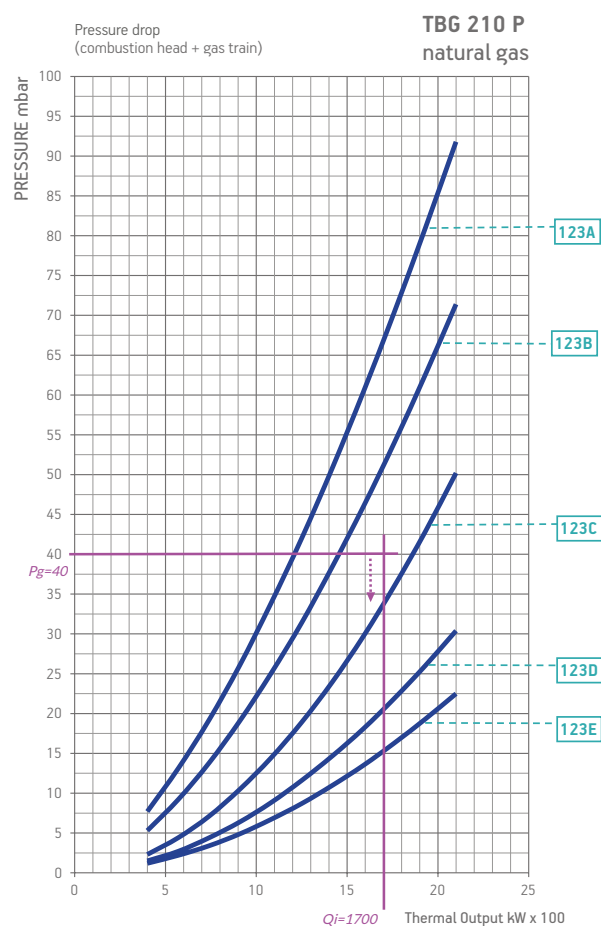
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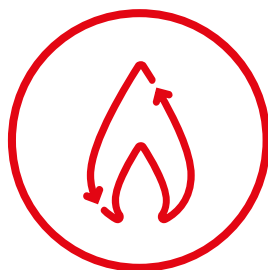
In the graphs the curves of the losses of load have different colors.

The curve shows a single color BLUE ramp with valve block.

The curve shows a single color BLACK ramp to separate valves with pressure regulator.

The pressure regulator is provided with springs in the different setting adjustment. These will replace, possibly, one already installed depending on the pressure of the gas that serves to ramp in that particular flow condition and pressure.





CHECK STANDARD FOR GAS TRAIN BURNER: COMIST DSP... AND GI MIST...

The gas train supply can be checked according to available gas pressure, using the diagram below.

First of all it is necessary to identify:

- Burner's heat input Q_i [kW], to be identified along the x-coordinate.
- Gas pressure available at the regulator P_g [mbar], to be identified along the y-coordinate.

This pressure is obtained from the following formula

$$P_g = P_a - P_c$$

where:

- P_a = gas pressure provided by the mains supply;
- P_c = the pressure in the boiler combustion chamber.

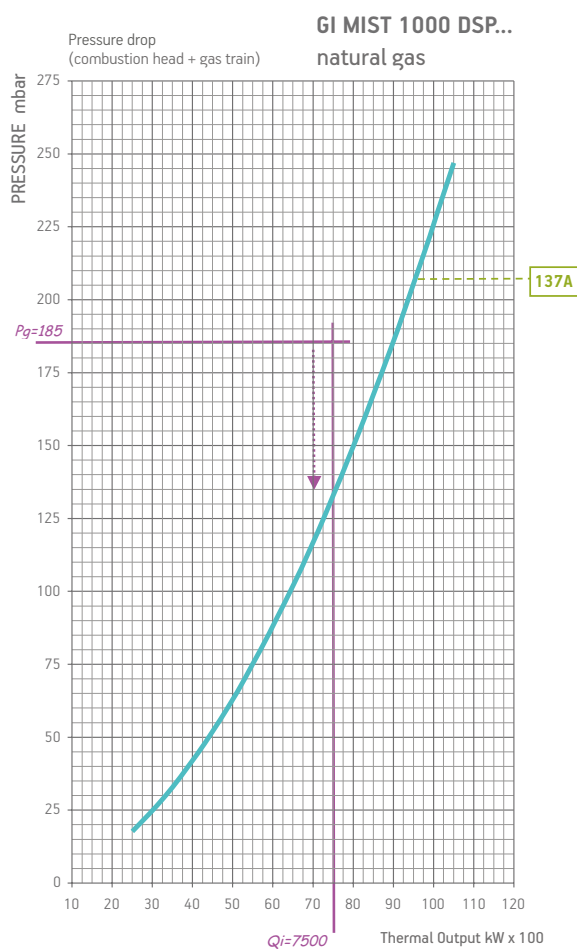
The intersection point of the two lines defines the operational parameters of the gas train.

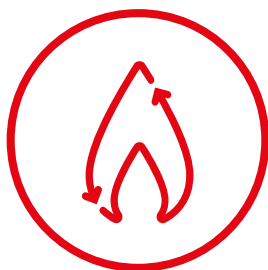
The gas train is correct if the working point is above the curve; if it is below the curve, a non standard gas train needs to be ordered (please consult our sales office).

EXAMPLE:

- Burner = GI MIST 1000 DSPGM
- $Q_i = 7\,500$ kW
- $P_a = 200$ mbar
- $P_c = 15$ mbar
- $P_g = 200 - 15 = 185$ mbar

The standard ramp is suitable for this application.





COMBUSTION AIR FLOW CORRECTION FACTOR IN ACCORDANCE WITH THE TEMPERATURE AND ALTITUDE (ABOVE SEA LEVEL)

The burner operating ranges indicated in the various documentation refer to a temperature of 15°C and an altitude of 0 m above sea level. It may occur that the burner has to operate with air at different temperatures and/or altitudes. Therefore, its operating features must be modified.

Heating of the air and/or increasing of the altitude reduce the density of the air, with a resulting reduction in the oxygen content. Therefore, burning the same quantity of fuel requires the same quantity of oxygen contained in a greater volume of air.

Given that the burner fan is not set up to increase the volume of air, it is necessary to reduce the quantity of the fuel to be burned, with a resulting reduction in the maximum thermal output. This reduction leads to a reduction in the burner operating range obtained by multiplying the maximum thermal output of the burner by a coefficient (see Table) which accounts for the temperature of the combustion air and the altitude.

It is necessary, therefore, to check if the working point is still within the new operating range. If it is, the burner is still suitable for that application. If it is not, you must select a bigger burner.

EXAMPLE:

Combining a light oil burner for a boiler with a combustion chamber power of 1400 kW, pressure of 3.5 mbar, ambient temperature of 50°C and altitude of 1000 m above sea level.

Using the normal operating ranges and under normal conditions, the correct choice is BT 120DSPG. It is necessary, however, to reduce the operating range as the ambient conditions have changed.

Using the formula

$$Q_r = Q_{\max} \times f$$

Where:

Q_r = reduced burner output

Q_{\max} = max thermal output of the burner

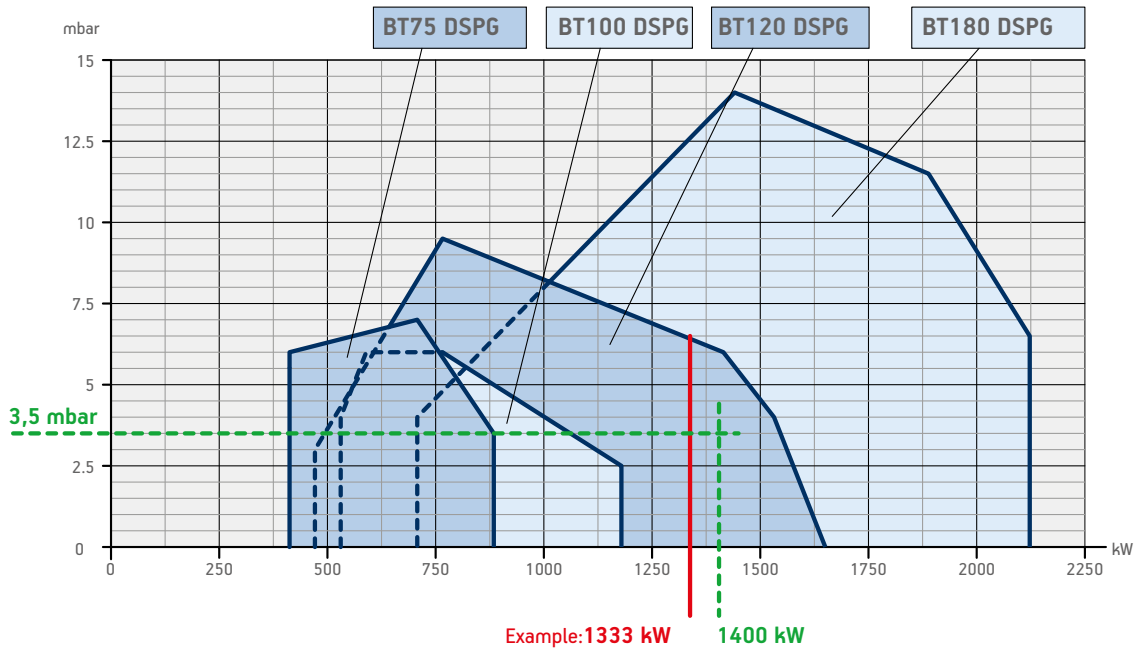
BT 120DSPG = 1660kW

f = correction factor calculated using the table, by combining the 1000 m column with the 50°C = 0,803

$$Q_r = 1660\text{kW} \times 0,803 = 1333\text{kW}$$

Under these ambient conditions, BT 120DSPG has a maximum output of 1333 kW, which is insufficient for this boiler, which requires an output of 1400 kW.

Therefore, BT 180DSPG is the ideal burner for this application.



Air temperature in °C	Height in meters above sea level												
	0	250	500	750	1000	1250	1500	1750	2000	2250	2500	2750	3000
0	1,071	1,040	1,009	0,978	0,950	0,920	0,895	0,867	0,841	0,813	0,791	0,765	0,741
5	1,052	1,021	0,991	0,960	0,933	0,904	0,879	0,851	0,826	0,798	0,776	0,751	0,728
10	1,033	1,033	0,973	0,943	0,916	0,888	0,863	0,836	0,812	0,784	0,763	0,738	0,715
15	1,015	0,986	0,956	0,927	0,900	0,872	0,848	0,822	0,797	0,771	0,749	0,725	0,703
20	0,998	0,969	0,940	0,911	0,885	0,857	0,834	0,807	0,784	0,758	0,737	0,713	0,691
25	0,981	0,953	0,924	0,896	0,870	0,843	0,820	0,794	0,771	0,745	0,724	0,701	0,679
30	0,965	0,937	0,909	0,881	0,856	0,829	0,806	0,781	0,758	0,733	0,712	0,689	0,668
40	0,934	0,907	0,880	0,853	0,828	0,803	0,781	0,756	0,734	0,709	0,690	0,667	0,647
EXAMPLE 50	0,905	0,879	0,853	0,827	0,803	0,778	0,756	0,733	0,711	0,687	0,668	0,647	0,627
60	0,878	0,853	0,827	0,802	0,779	0,754	0,734	0,711	0,690	0,667	0,648	0,627	0,608
80	0,828	0,804	0,780	0,756	0,735	0,712	0,692	0,670	0,651	0,629	0,611	0,592	0,573
100	0,784	0,761	0,739	0,716	0,695	0,674	0,655	0,634	0,616	0,595	0,579	0,560	0,543
150	0,691	0,671	0,651	0,631	0,613	0,594	0,578	0,559	0,543	0,525	0,510	0,494	0,478
200	0,618	0,600	0,582	0,565	0,548	0,531	0,517	0,500	0,486	0,469	0,456	0,442	0,428
250	0,559	0,543	0,527	0,511	0,496	0,480	0,467	0,452	0,439	0,425	0,413	0,400	0,387
300	0,510	0,496	0,481	0,466	0,453	0,439	0,426	0,413	0,401	0,387	0,377	0,365	0,353

f

Symbology

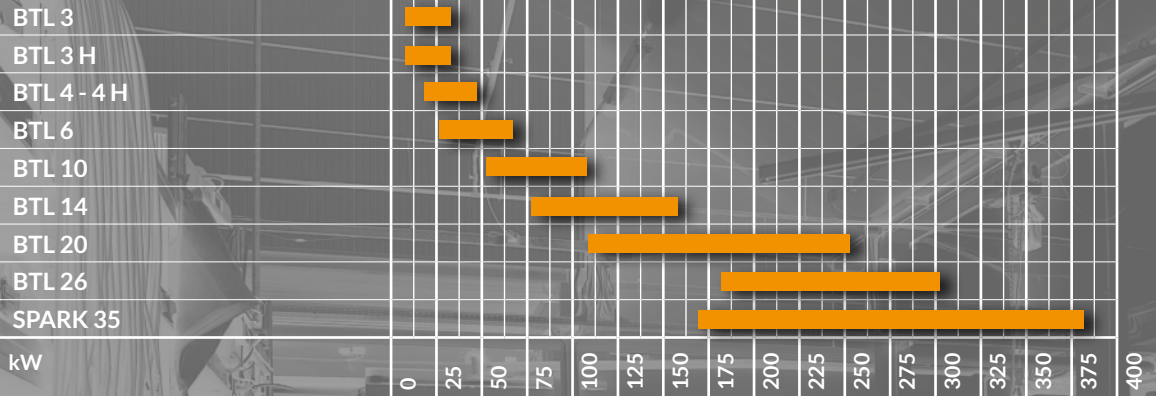
BTL...
RINOX...L
SPARK 35
Single-stage
light oil burners.

BTL...P
RINOX...L2
SPARK 35 DSG
SPARK 35 LX
TBL... P
TBL...LX
BT...DSG 4T
BT 350 DSG 4T
Two-stage light
oil burners.

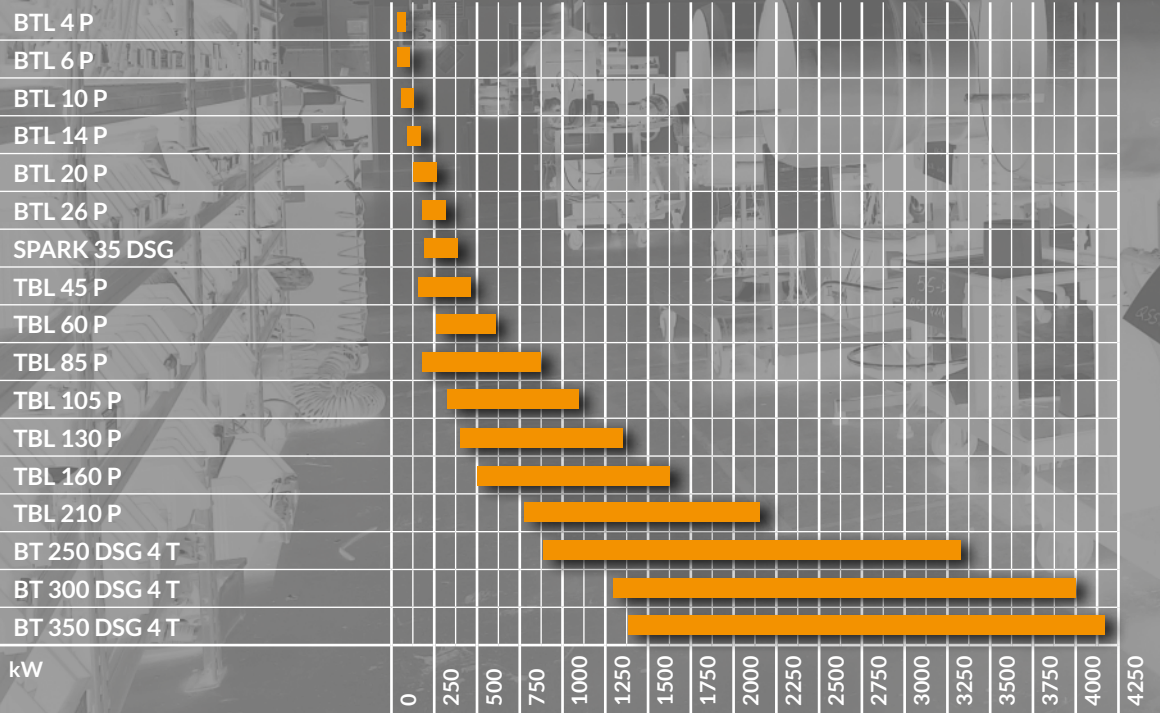
BT... DSPG
GI...DSPG
Two-stage
progressive/
modulating light
oil burners with
mechanical cam.

 Low NOx

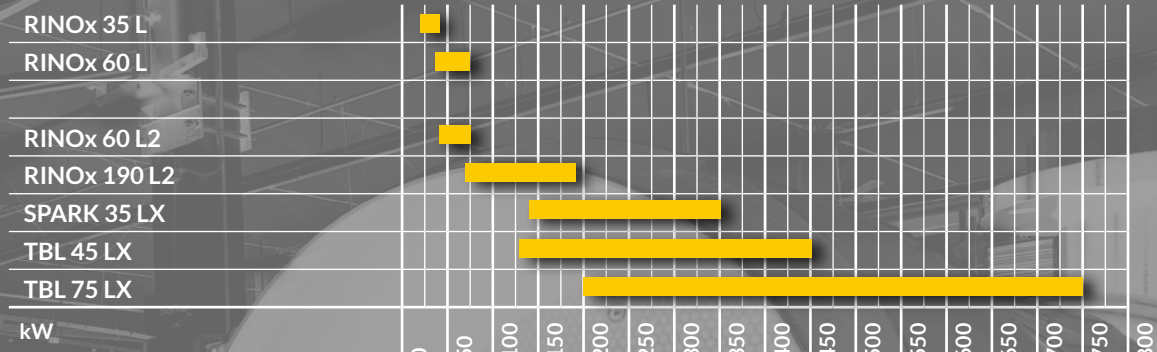
SINGLE-STAGE LIGHT OIL BURNERS



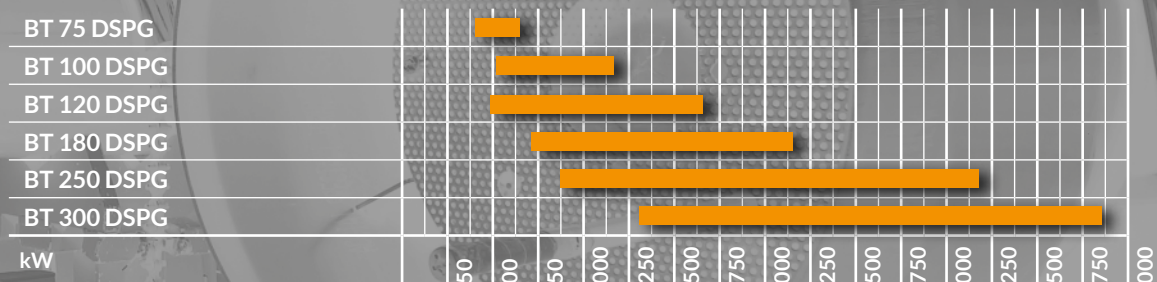
TWO-STAGE LIGHT OIL BURNERS



LOW NOX LIGHT OIL BURNERS



TWO-STAGE PROGRESSIVE LIGHT OIL BURNERS



TWO-STAGE PROGRESSIVE LIGHT OIL INDUSTRIAL BURNERS





Light oil burner. Operation:

Low NOx and CO emissions light oil burner according to European standard EN267:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Fixed boiler coupling flange.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

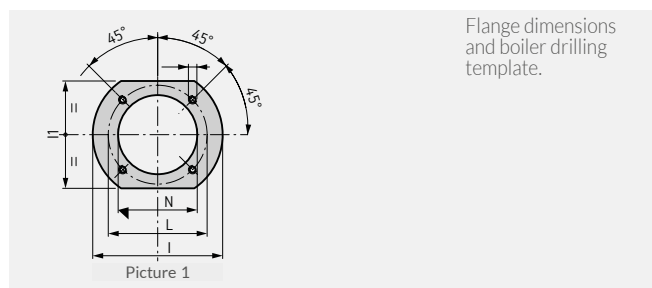
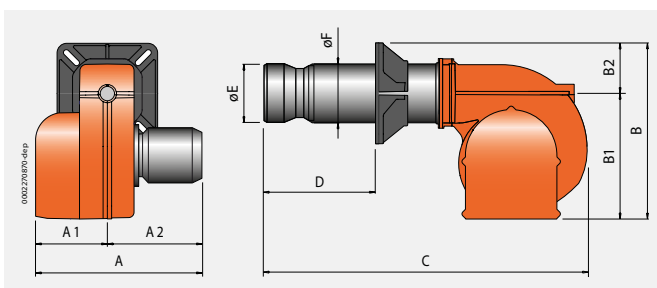
Light oil preheater with variable capacity.

Flame detection by photoresistance.

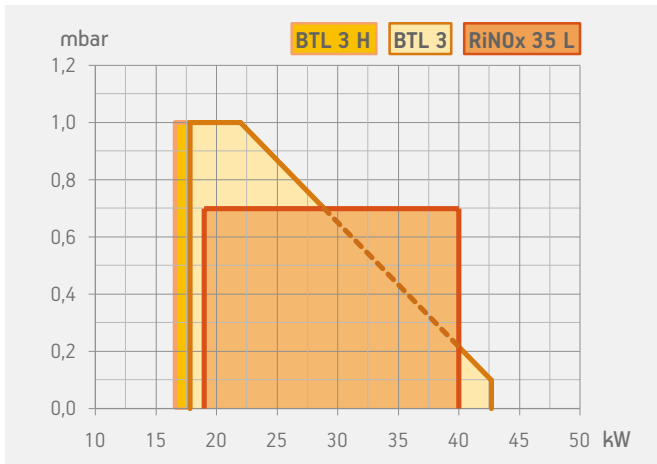
Electric protection rating:

Sound-proof plastic protective cover.

	BTL 3	BTL 3 H	RiNOx 35 L
	single-stage	single-stage	single-stage
Low NOx and CO emissions light oil burner according to European standard EN267:			class 3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Fixed boiler coupling flange.	•	•	
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.			•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual	manual
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•	•
Light oil preheater with variable capacity.		•	•
Flame detection by photoresistance.	•	•	•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	I1 mm	L mm	M mm	N mm	Pic.
BTL 3	250	120	130	242	170	72	330	90	80	80	170	144	135 ÷ 161	M8	85	1
BTL 3 H	250	120	130	242	170	72	330	90	80	80	170	144	135 ÷ 161	M8	85	1
RiNOx 35 L	246	123	123	289	219	70	410	50 ÷ 105	80	80	170	140	130 ÷ 155	M8	85	1



Model	Size of packaging			Weight kg
	L	P mm	H	
BTL 3	400	300	280	9
BTL 3 H	400	300	280	9
RiNOx 35 L	540	300	320	12

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 3	17,8 ÷ 42,7	BTL 3	35450010	1,5	1N AC 50Hz 230V	0,09	1)
		16,6 ÷ 42,7	BTL 3 H	35450011	1,5	1N AC 50Hz 230V	0,09	1) 2)
		19,0 ÷ 40,0	RiNOx 35 L	35470050	1,5	1N AC 50Hz 230V	0,10	1) 2)
Frequency 60 Hz								
	class 3	17,8 ÷ 42,7	BTL 3	35450010	1,5	1N AC 60Hz 220V	0,09	1)
		16,6 ÷ 42,7	BTL 3 H	35450011	1,5	1N AC 60Hz 220V	0,09	1) 2)

OPTIONALS

DESCRIPTION

BTL 3/3 H: 200 mm long combustion head

Biodiesel operation (5)

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.

NOTES

- 1 Equipped with air closure device.
- 2 Equipped with light oil pre-heater with drop-stop device.
- 5 Biodiesel according to european norm EN14213-FAME.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



LIGHT OIL

Light oil burner. Operation:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

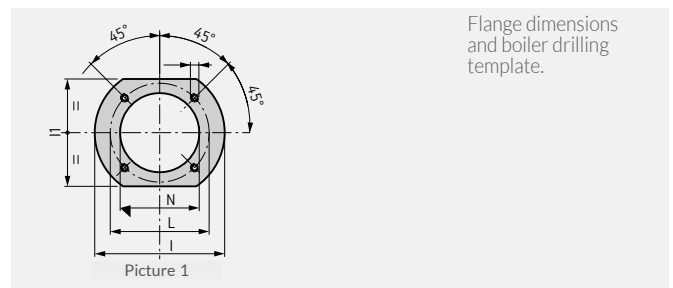
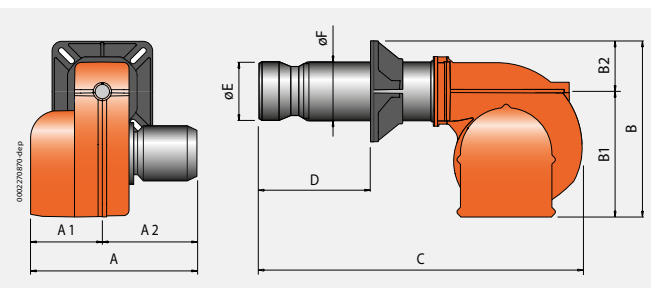
Light oil preheater with variable capacity.

Flame detection by photoresistance.

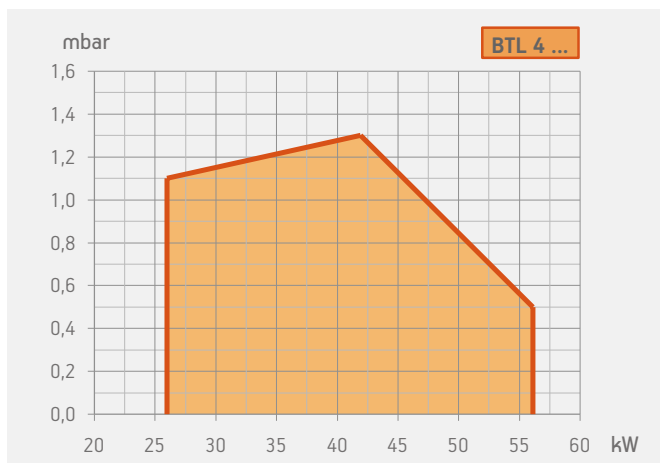
Electric protection rating:

Sound-proof plastic protective cover.

	BTL 4	BTL 4 H	BTL 4 P
	single-stage	single-stage	two-stage
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•	•
Light oil preheater with variable capacity.		•	
Flame detection by photoresistance.	•	•	•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	I1 mm	L mm	M mm	N mm	Pic.
BTL 4	246	123	123	289	219	70	410	50 ÷ 105	80	80	170	140	130 ÷ 155	M8	85	1
BTL 4 H	246	123	123	289	219	70	410	50 ÷ 105	80	80	170	140	130 ÷ 155	M8	85	1
BTL 4 P	246	123	123	289	219	70	410	50 ÷ 105	80	80	170	140	130 ÷ 155	M8	85	1



Model	Size of packaging			Weight kg
	L	P mm	H	
BTL 4	540	300	320	12
BTL 4 H	540	300	320	12
BTL 4 P	540	300	320	12

	Emissions class kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	26,0 ÷ 56,1	BTL 4	35490010	1,5	1N AC 50Hz 230V	0,1	1)
	26,0 ÷ 56,1	BTL 4 H	35490011	1,5	1N AC 50Hz 230V	0,1	1) 2)
	26,0 ÷ 56,1	BTL 4 P	35500010	1,5	1N AC 50Hz 230V	0,1	1)
Frequency 60 Hz							
	26,0 ÷ 56,1	BTL 4	35490010	1,5	1N AC 60Hz 220V	0,1	1)
	26,0 ÷ 56,1	BTL 4 H	35490011	1,5	1N AC 60Hz 220V	0,1	1) 2)
	26,0 ÷ 56,1	BTL 4 P	35500010	1,5	1N AC 60Hz 220V	0,1	1)

OPTIONALS

DESCRIPTION

200 mm long combustion head

Biodiesel operation (5)

LIGHT OIL BURNER ACCESSORIES

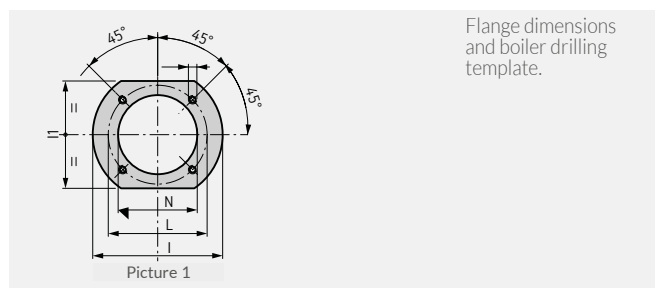
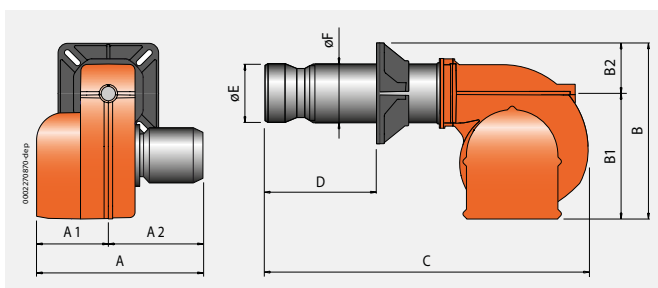
Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.

NOTES

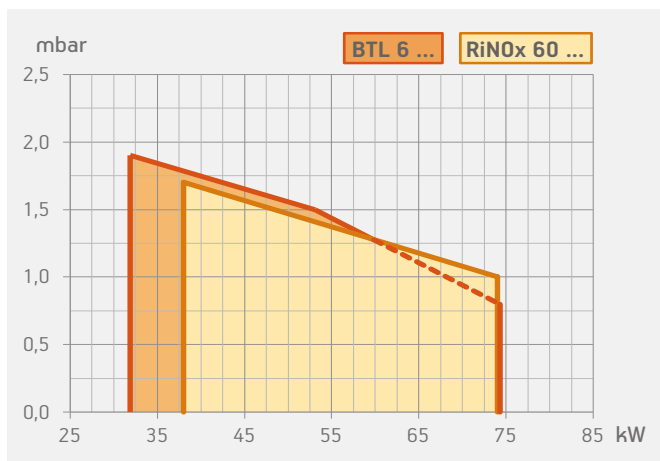
- 1 Equipped with air closure device.
- 2 Equipped with light oil pre-heater with drop-stop device.
- 5 Biodiesel according to european norm EN14213-FAME.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



	BTL 6	BTL 6 H	RiNOx 60 L	BTL 6 P	RiNOx 60 L2
Light oil burner. Operation:	single-stage	single-stage	single-stage	two-stage	two-stage
Low NOx and CO emissions light oil burner according to European standard EN267:			class 3		class 3
Adjusting the combustion head.	•	•	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual	manual	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•	•	•	•
Light oil preheater with variable capacity.		•			
Flame detection by photoresistance.	•	•	•	•	•
Electric protection rating:	IP40	IP40	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•	•	•



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	I1 mm	L mm	M mm	N mm	Pic.
BTL 6	246	123	123	289	219	70	455	50 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1
BTL 6 H	246	123	123	289	219	70	455	50 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1
RiNOx 60 L	246	123	123	289	219	70	455	50 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1
BTL 6 P	246	123	123	289	219	70	455	50 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1
RiNOx 60 L2	246	123	123	289	219	70	455	50 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1



Model	Size of packaging			Weight kg
	L	P mm	H	
BTL 6	540	300	320	12
BTL 6 H	540	300	320	12
RiNOx 60 L	590	300	320	12
BTL 6 P	540	300	320	12
RiNOx 60 L2	540	300	320	12

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 3	31,9 ÷ 74,3	BTL 6	35510010	1,5	1N AC 50Hz 230V	0,1	1)
		31,9 ÷ 74,3	BTL 6 H	35510011	1,5	1N AC 50Hz 230V	0,1	1) 2)
	class 3	38,0 ÷ 74,0	RiNOx 60 L	35510050	1,5	1N AC 50Hz 230V	0,1	1)
		31,9 ÷ 74,3	BTL 6 P	35520010	1,5	1N AC 50Hz 230V	0,1	1)
Frequency 60 Hz								
		31,9 ÷ 74,3	BTL 6	35510010	1,5	1N AC 60Hz 220V	0,1	1)
		31,9 ÷ 74,3	BTL 6 H	35510011	1,5	1N AC 60Hz 220V	0,1	1) 2)
		31,9 ÷ 74,3	BTL 6 P	35520010	1,5	1N AC 60Hz 220V	0,1	1)

OPTIONALS

DESCRIPTION

BTL 6/6 H/6 P: 250 mm long combustion head

Biodiesel operation (5)

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.

NOTES

- 1 Equipped with air closure device.
- 2 Equipped with light oil pre-heater with drop-stop device.
- 5 Biodiesel according to european norm EN14213-FAME.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



LIGHT OIL

Light oil burner. Operation:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

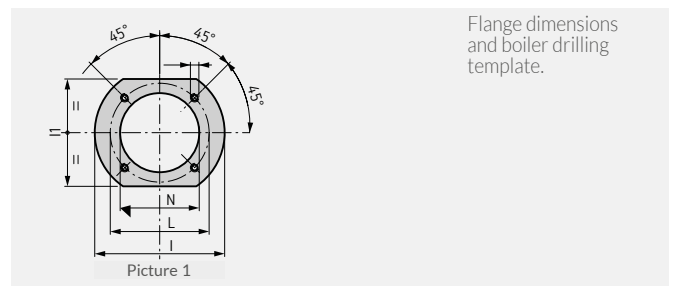
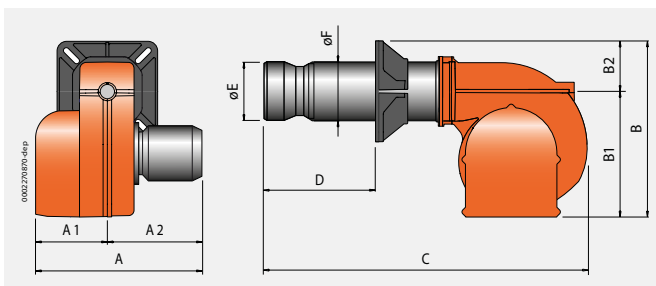
Light oil preheater with variable capacity.

Flame detection by photoresistance.

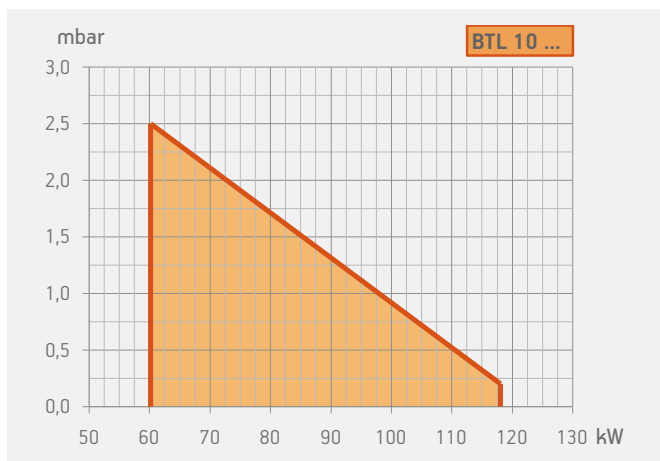
Electric protection rating:

Sound-proof plastic protective cover.

	BTL 10	BTL 10 H	BTL 10 P
	single-stage	single-stage	two-stage
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual	electric servomotr
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•	•
Light oil preheater with variable capacity.		•	
Flame detection by photoresistance.	•	•	•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	I1 mm	L mm	M mm	N mm	Pic.
BTL 10	246	123	123	289	219	70	480	50 ÷ 158	90	90	170	140	130 ÷ 155	M8	95	1
BTL 10 H	246	123	123	289	219	70	480	50 ÷ 158	90	90	170	140	130 ÷ 155	M8	95	1
BTL 10 P	246	123	123	289	219	70	480	50 ÷ 158	90	90	170	140	130 ÷ 155	M8	95	1



Model	Size of packaging			Weight kg
	L	P mm	H	
BTL 10	540	300	320	12
BTL 10 H	540	300	320	12
BTL 10 P	540	300	320	12

LIGHT OIL

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	60,2 ÷ 118,0	BTL 10	35530010	1,5	1N AC 50Hz 230V	0,1	1)
	60,2 ÷ 118,0	BTL 10 H	35530011	1,5	1N AC 50Hz 230V	0,1	1) 2)
	60,2 ÷ 118,0	BTL 10 P	35540010	1,5	1N AC 50Hz 230V	0,1	1)
Frequency 60 Hz							
	60,2 ÷ 118,0	BTL 10	35530010	1,5	1N AC 60Hz 220V	0,1	1)
	60,2 ÷ 118,0	BTL 10 H	35530011	1,5	1N AC 60Hz 220V	0,1	1) 2)
	60,2 ÷ 118,0	BTL 10 P	35540010	1,5	1N AC 60Hz 220V	0,1	1)

OPTIONALS

DESCRIPTION

250 mm long combustion head

Biodiesel operation (5)

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.

NOTES

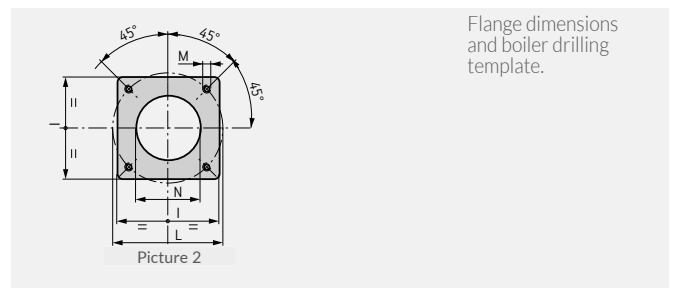
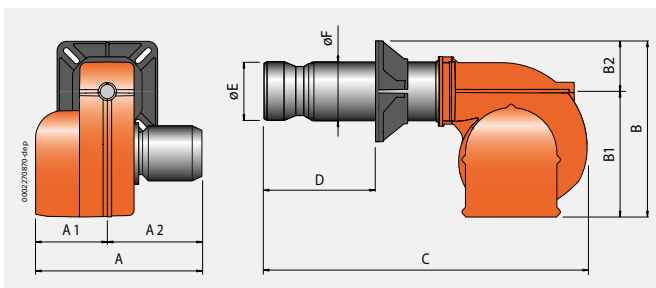
- 1 Equipped with air closure device.
 - 2 Equipped with light oil pre-heater with drop-stop device.
 - 5 Biodiesel according to european norm EN14213-FAME.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



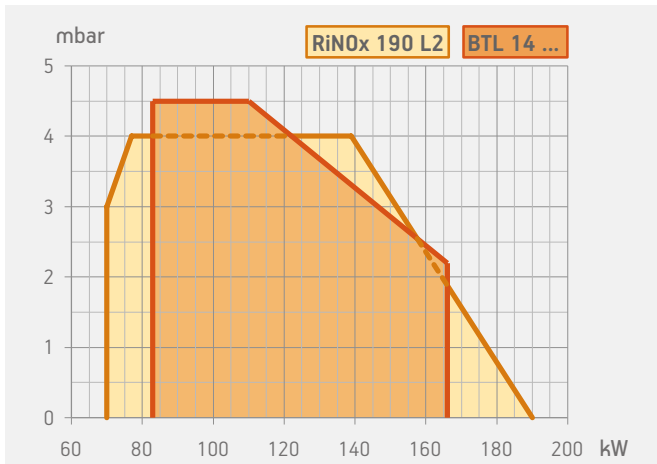
LIGHT OIL

Light oil burner. Operation:

	BTL 14	BTL 14 P	RINOx 190 L2
	single-stage	single-stage	two-stage
Low NOx and CO emissions light oil burner according to European standard EN267:			class 3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Device made of sound-absorbing material to reduce fan noise.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•	•
Flame detection by photoresistance.	•	•	•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BTL 14	303	158	145	358	275	83	620	100 ÷ 250	100	100	166	150 ÷ 200	M10	110	2
BTL 14 P	303	158	145	358	275	83	620	100 ÷ 250	100	100	166	150 ÷ 200	M10	110	2
RINOx 190 L2	303	158	145	358	275	83	620	100 ÷ 250	100	100	166	150 ÷ 200	M10	110	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BTL 14	780	370	410	18
BTL 14 P	780	370	410	18
RiNOx 190 L2	780	370	410	18

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 3	83 ÷ 166	BTL 14	35610010	1,5	1N AC 50Hz 230V	0,18	1) 3)
		83 ÷ 166	BTL 14 P	35620010	1,5	1N AC 50Hz 230V	0,18	1) 3)
		70 ÷ 190	RiNOx 190 L2	35640050	1,5	1N AC 50Hz 230V	0,18	1) 3)
Frequency 60 Hz								
		83 ÷ 166	BTL 14	35615410	1,5	1N AC 60Hz 220V	0,25	1) 3)
		83 ÷ 166	BTL 14 P	35625410	1,5	1N AC 60Hz 220V	0,25	1) 3)

OPTIONALS

DESCRIPTION

BTL 14/14 P: 500 mm long combustion head

Biodiesel operation (5)

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.

NOTES

- 1 Equipped with air closure device.
 - 3 Soundproof lid on burner air intake.
 - 5 Biodiesel according to european norm EN14213-FAME.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



Light oil burner. Operation:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Device made of sound-absorbing material to reduce fan noise.

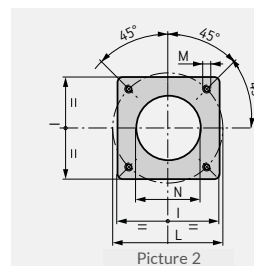
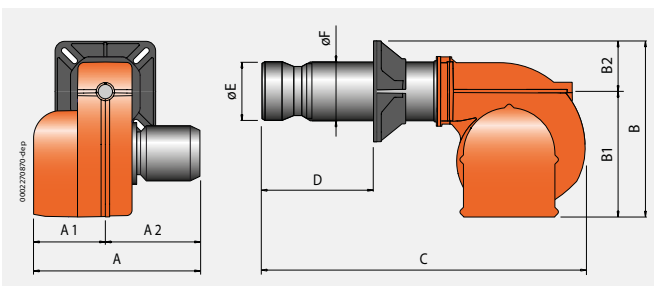
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

Flame detection by photoresistance.

Electric protection rating:

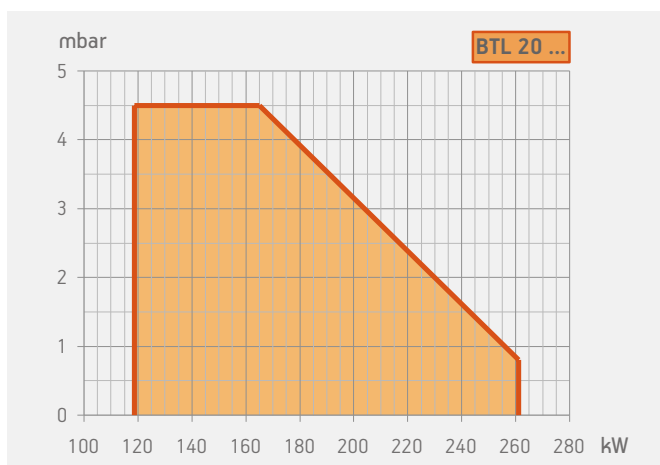
Sound-proof plastic protective cover.

	BTL 20	BTL 20 P
	single-stage	two-stage
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Device made of sound-absorbing material to reduce fan noise.	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•
Flame detection by photoresistance.	•	•
Electric protection rating:	IP40	IP40
Sound-proof plastic protective cover.	•	•



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BTL 20	303	158	145	368	275	93	645	100 ÷ 250	114	114	185	170 ÷ 210	M10	120	2
BTL 20 P	303	158	145	368	275	93	645	100 ÷ 250	114	114	185	170 ÷ 210	M10	120	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BTL 20	780	370	410	18
BTL 20 P	780	370	410	18

LIGHT OIL

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	118,6 ÷ 261,0	BTL 20	35630010	1,5	1N AC 50Hz 230V	0,18	1) 3)
	118,6 ÷ 261,0	BTL 20 P	35640010	1,5	1N AC 50Hz 230V	0,18	1) 3)
Frequency 60 Hz							
	118,6 ÷ 261,0	BTL 20	35635410	1,5	1N AC 60Hz 220V	0,25	1) 3)
	118,6 ÷ 261,0	BTL 20 P	35645410	1,5	1N AC 60Hz 220V	0,25	1) 3)

OPTIONALS

DESCRIPTION

500 mm long combustion head

Biodiesel operation (5)

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.

NOTES

- 1 Equipped with air closure device.
 - 3 Soundproof lid on burner air intake.
 - 5 Biodiesel according to european norm EN14213-FAME.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



Light oil burner. Operation:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Device made of sound-absorbing material to reduce fan noise.

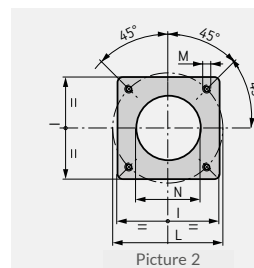
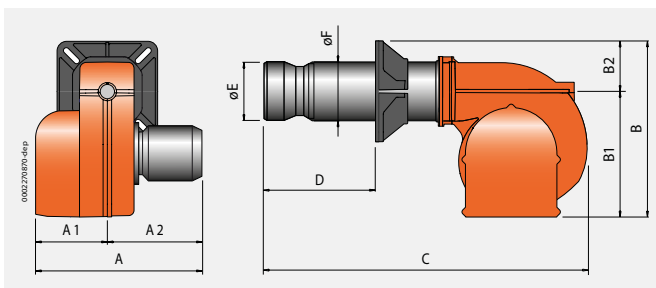
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

Flame detection by photoresistance.

Electric protection rating:

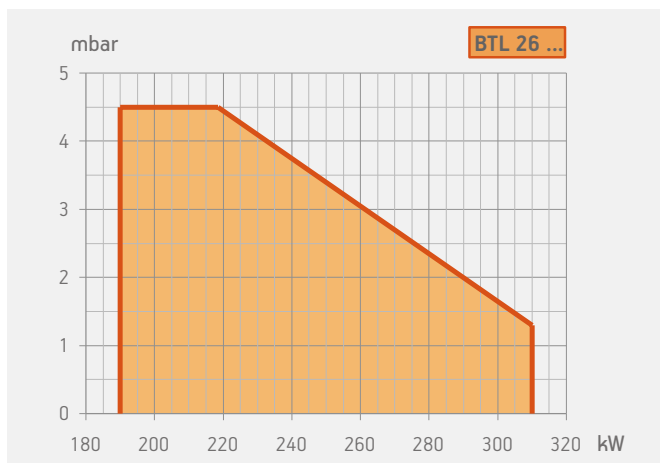
Sound-proof plastic protective cover.

	BTL 26	BTL 26 P
	single-stage	two-stage
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Device made of sound-absorbing material to reduce fan noise.	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•
Flame detection by photoresistance.	•	•
Electric protection rating:	IP40	IP40
Sound-proof plastic protective cover.	•	•



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BTL 26	303	158	145	368	275	93	650	100 ÷ 255	135	135	185	170 ÷ 210	M10	140	2
BTL 26 P	303	158	145	368	275	93	650	100 ÷ 255	135	135	185	170 ÷ 210	M10	140	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BTL 26	780	370	410	18
BTL 26 P	780	370	410	18

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	190 ÷ 310	BTL 26	35650010	1,5	1N AC 50Hz 230V	0,25	3)
	190 ÷ 310	BTL 26 P	35660010	1,5	1N AC 50Hz 230V	0,25	3)
Frequency 60 Hz							
	190 ÷ 310	BTL 26	35655410	1,5	1N AC 60Hz 220V	0,25	3)
	190 ÷ 310	BTL 26 P	35665410	1,5	1N AC 60Hz 220V	0,25	3)

OPTIONALS

DESCRIPTION

500 mm long combustion head

Biodiesel operation (5)

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.

NOTES

3 Soundproof lid on burner air intake.

5 Biodiesel according to european norm EN14213-FAME.

Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



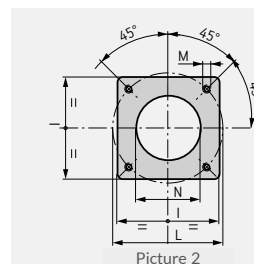
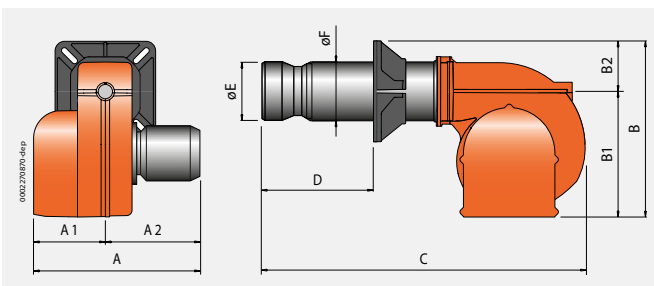
SPARK 35 W - 35 DSG W



SPARK 35 - 35 DSG - 35 LX

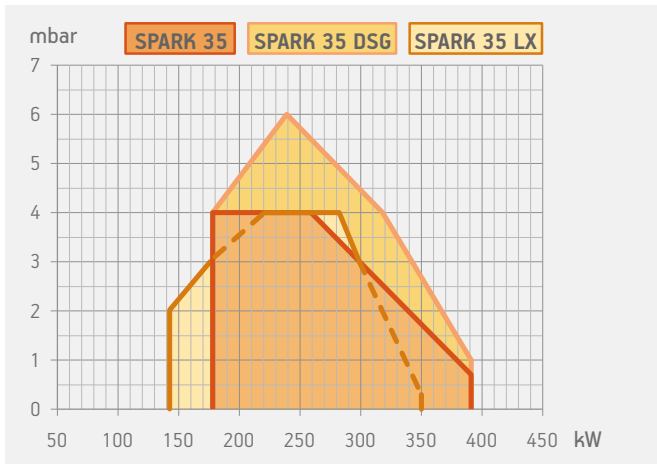
LIGHT OIL

	SPARK 35 W	SPARK 35	SPARK 35 DSG W	SPARK 35 DSG	SPARK 35 LX
Light oil burner. Operation:	single-stage	single-stage	two-stage	two-stage	two-stage
Low NOx and CO emissions light oil burner according to European standard EN267:					class 3
Adjusting the combustion head.	•	•	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual	electric servomotor	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.			•	•	•
Device made of sound-absorbing material to reduce fan noise.	•	•	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•	•	•	•
Flame detection by photoresistance.	•	•	•	•	
Flame detection by IRD photocell.					•
Electric protection rating:	IP40	IP40	IP40	IP40	IP40
Sound-proof plastic protective cover.		•		•	•



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
SPARK 35 W	450	220	230	371	263	108	780	105 ÷ 350	150	135	215	200 ÷ 245	M12	155	2
SPARK 35	490	245	245	383	275	108	810	105 ÷ 350	150	135	215	200 ÷ 245	M12	155	2
SPARK 35 DSG W	450	220	230	371	263	108	780	105 ÷ 350	150	135	215	200 ÷ 245	M12	155	2
SPARK 35 DSG	490	245	245	383	275	108	810	105 ÷ 350	150	135	215	200 ÷ 245	M12	155	2
SPARK 35 LX	490	245	245	383	275	108	835	165 ÷ 305	136	136	215	200 ÷ 245	M12	150	2



Model	Size of packaging			Weight kg
	L	P mm	H	
SPARK 35 W	940	490	390	30
SPARK 35	980	540	480	34
SPARK 35 DSG W	940	490	390	32
SPARK 35 DSG	980	540	480	36
SPARK 35 LX	980	540	480	36

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 3	178 ÷ 391	SPARK 35 W	3070010	1,5	1N AC 50Hz 230V	0,37	3)
		178 ÷ 391	SPARK 35	3071010	1,5	1N AC 50Hz 230V	0,37	3)
		178 ÷ 391	SPARK 35 DSG W	3075010	1,5	1N AC 50Hz 230V	0,37	3) 4)
		178 ÷ 391	SPARK 35 DSG	3076010	1,5	1N AC 50Hz 230V	0,37	3) 4)
		142 ÷ 350	SPARK 35 LX	33960010	1,5	1N AC 50Hz 230V	0,37	3) 4)
Frequency 60 Hz								
		178 ÷ 391	SPARK 35 W	30705410	1,5	1N AC 60Hz 220V	0,37	3)
		178 ÷ 391	SPARK 35	30715410	1,5	1N AC 60Hz 220V	0,37	3)
		178 ÷ 391	SPARK 35 DSG W	30755410	1,5	1N AC 60Hz 220V	0,37	3) 4)
		142 ÷ 350	SPARK 35 DSG	30765410	1,5	1N AC 60Hz 220V	0,37	3) 4)

OPTIONALS

DESCRIPTION
SPARK 35/35 W/35 DSG/35 DSG W: 500 mm long combustion head
SPARK 35/35 W: equipped with air closure device
Biodiesel operation (5)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	Part no.
Soundproof burner cover (see page 293)	97980054

LIGHT OIL BURNER ACCESSORIES

SPARK 35/35W: line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.
 SPARK 35DSG/35DSG W: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.

NOTES

- 3 Soundproof lid on burner air intake.
- 4 Equipped with air closure device.
- 5 Biodiesel according to european norm EN14213-FAME.
 Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



LIGHT OIL

Light oil burner. Operation:

Low NOx and CO emissions light oil burner according to European standard EN267:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

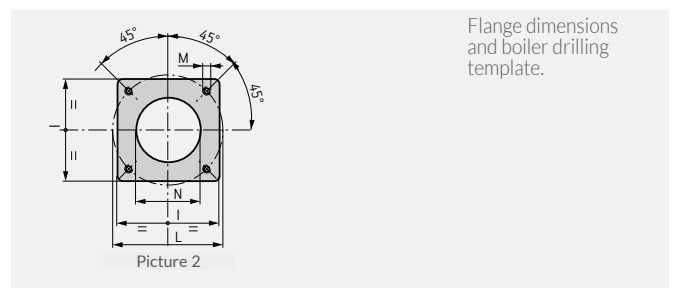
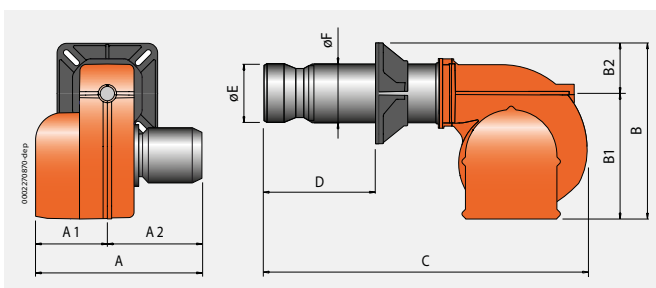
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.

Flame detection by photoresistance.

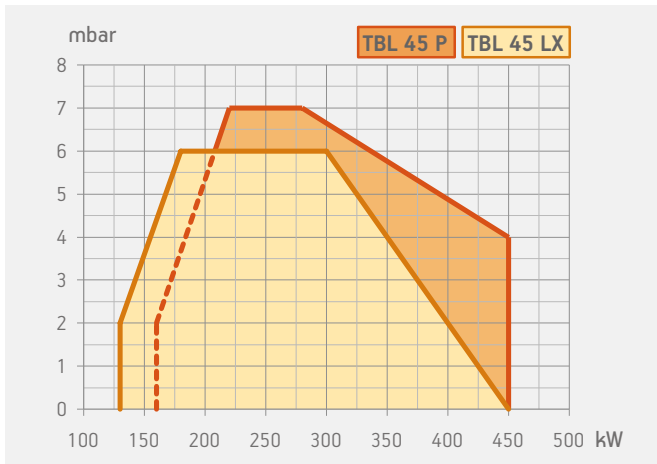
Flame detection by IRD photocell.

Electric protection rating:

	TBL 45 P	TBL 45 P DACA	TBL 45 LX
	two-stage	two-stage	two-stage
	class 2	class 2	class 3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.		•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	•
Flame detection by photoresistance.	•	•	
Flame detection by IRD photocell.			•
Electric protection rating:	IP40	IP40	IP44



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBG 45 P	505	260	245	433	325	108	820	120 ÷ 350	135	133	215	200 ÷ 245	M12	145	2
TBG 45 P DACA	535	260	275	433	325	108	860	120 ÷ 350	135	133	215	200 ÷ 245	M12	145	2
TBG 45 LX	535	260	275	433	325	108	860	120 ÷ 350	135	133	215	200 ÷ 245	M12	145	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBL 45 P	970	570	480	34
TBL 45 P DACA	970	570	480	34
TBL 45 LX	970	570	480	34

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 2	160 ÷ 450	TBL 45 P	35710010	1,5	1N AC 50Hz 230V	0,50	
	class 2	160 ÷ 450	TBL 45 P	35710015	1,5	3N AC 50Hz 400V	0,65	
	class 2	160 ÷ 450	TBL 45 P DACA	35710110	1,5	1N AC 50Hz 230V	0,50	4)
	class 3	130 ÷ 450	TBL 45 LX	35730010	1,5	1N AC 50Hz 230V	0,50	4)
Frequency 60 Hz								
	class 2	160 ÷ 450	TBL 45 P	35715410	1,5	1N AC 60Hz 220V	0,50	
	class 2	160 ÷ 450	TBL 45 P	35715415	1,5	1N AC 60Hz 380V	0,65	
	class 2	160 ÷ 450	TBL 45 P DACA	35715420	1,5	1N AC 60Hz 220V	0,50	4)

OPTIONALS

DESCRIPTION
Biodiesel operation (5)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBL 45 P/45 P DACA: line filter 3/8"	98000370
Soundproof burner cover (see page 293)	97980054

LIGHT OIL BURNER ACCESSORIES

TBL 45 P/45 P DACA: flex hoses, nozzles, boiler coupling kit, plug for wiring.
 TBL 45 LX: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.

NOTES

- 4 Equipped with air closure device.
- 5 Biodiesel according to european norm EN14213-FAME.
 Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



Light oil burner. Operation:

Low NOx and CO emissions light oil burner according to European standard EN267:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

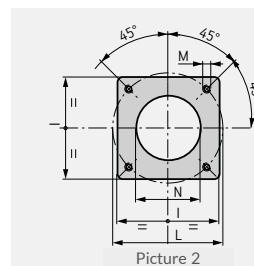
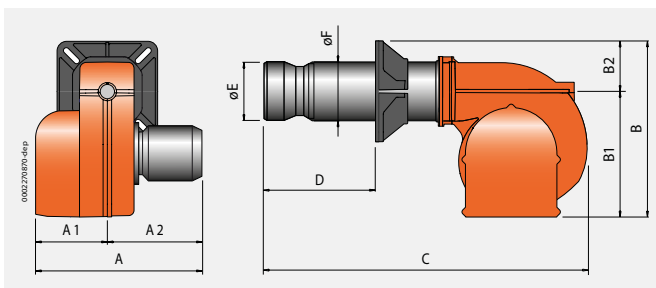
Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.

Flame detection by photoresistance.

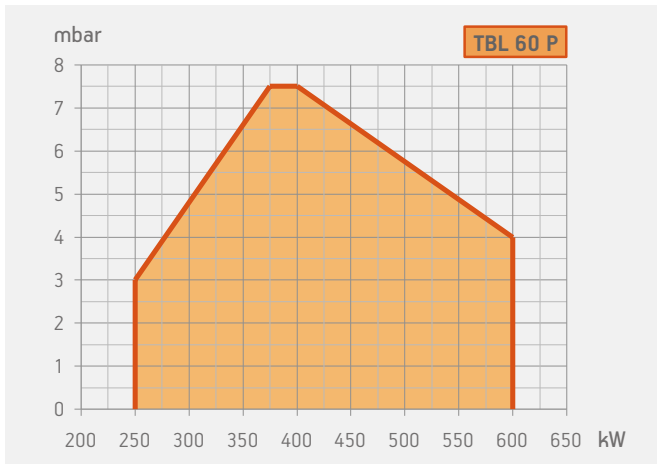
Electric protection rating:

	TBL 60 P	TBL 60 P DACA
	two-stage	two-stage
	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.		•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•
Flame detection by photoresistance.	•	•
Electric protection rating:	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBG 60 P	505	260	245	455	325	130	840	140 ÷ 350	150	152	260	225 ÷ 300	M12	160	2
TBG 60 P DACA	535	260	275	455	325	130	880	140 ÷ 350	150	152	260	225 ÷ 300	M12	160	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBL 60 P	970	570	480	36
TBL 60 P DACA	970	570	480	36

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 2	250 ÷ 600	TBL 60 P	35750010	1,5	3N AC 50Hz 400V	0,65	
	class 2	250 ÷ 600	TBL 60 P DACA	35750110	1,5	3N AC 50Hz 400V	0,65	4)
Frequency 60 Hz								
	class 2	250 ÷ 600	TBL 60 P	35755410	1,5	3N AC 60Hz 380V	0,65	
	class 2	250 ÷ 600	TBL 60 P DACA	35755420	1,5	3N AC 60Hz 380V	0,65	4)

OPTIONALS

DESCRIPTION
Biodiesel operation (5)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Line filter 3/8"	98000370
Soundproof burner cover (see page 293)	97980054

LIGHT OIL BURNER ACCESSORIES

Flex hoses, nozzles, boiler coupling kit, plug for wiring.

NOTES

- 4 Equipped with air closure device.
- 5 Biodiesel according to european norm EN14213-FAME.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



TBL 85 P

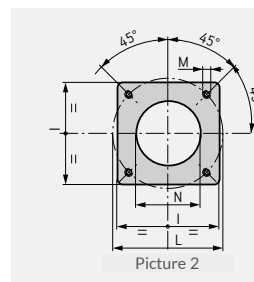
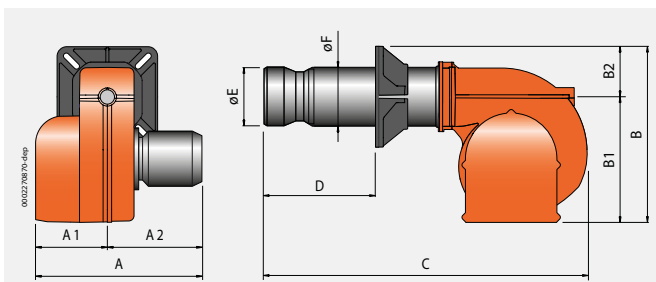


TBL 75 LX



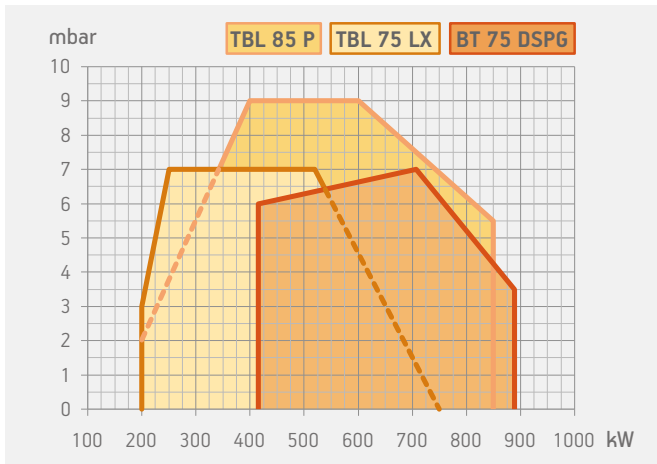
BT 75 DSPG

	TBL 85 P	TBL 85 P DACA	TBL 75 LX	BT 75 DSPG
Light oil burner. Operation:	two-stage	two-stage	two-stage	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).				•
Modulation ratio:				1:2
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2	class 3	
Adjusting the combustion head.	•	•	•	•
Maintenance facilitated by the possibility of removing the combustion head 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.	•	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	electric servomotor	electric servomotor	mechanical cam
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.		•	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.				•
Atomisation unit with magnet to control the outlet/nozzle return pins.				•
Flame detection by photoresistance.	•	•		•
Flame detection by IRD photocell.			•	
Control panel with display diagram for working mode with indication lights.	•	•	•	
Electric protection rating:	IP40	IP40	IP44	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBL 85 P	670	300	370	510	380	130	1250	175 ÷ 400	161	159	260	225 ÷ 300	M12	170	2
TBL 85 P DACA	670	300	370	510	380	130	1250	175 ÷ 400	161	159	260	225 ÷ 300	M12	170	2
TBL 75 LX	670	300	370	510	380	130	1240	220 ÷ 400	152	159	260	225 ÷ 300	M12	170	2
BT 75 DSPG	595	310	385	510	365	145	1215	130 ÷ 450	205	160	260	255 ÷ 300	M12	170	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBL 85 P	1070	800	700	79
TBL 85 P DACA	1070	800	700	79
TBL 75 LX	1070	800	700	82
BT 75 DSPG	1730	1030	880	140

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 2	200 ÷ 850	TBL 85 P	35800010	1,5	3N AC 50Hz 400V	1,10	15)
	class 2	200 ÷ 850	TBL 85 P DACA	35800110	1,5	3N AC 50Hz 400V	1,10	3) 4) 15)
	class 3	200 ÷ 750	TBL 75 LX	35820010	1,5	3N AC 50Hz 400V	1,10	3) 4) 15)
		415 ÷ 889	BT 75 DSPG	3510010	1,5	3N AC 50Hz 400V	1,10	4)
Frequency 60 Hz								
	class 2	200 ÷ 850	TBL 85 P	35805410	1,5	3N AC 60Hz 380V	1,10	15)
	class 2	200 ÷ 850	TBL 85 P DACA	35805420	1,5	3N AC 60Hz 380V	1,10	3) 4) 15)
		415 ÷ 889	BT 75 DSPG	35105410	1,5	3N AC 60Hz 380V	1,5+0,65	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 75 DSPG: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
BT 75 DSPG: modulation kit	98000055
BT 75 DSPG: modulating probe kit (see page 288)	

OPTIONALS

DESCRIPTION
Biodiesel operation (5)

NOTES

- 3 Soundproof lid on burner air intake.
 - 4 Equipped with air closure device.
 - 5 Biodiesel according to european norm EN14213-FAME.
 - 15 Reference standard: EN267.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBL 85 P/85 P DACA - TBL 75 LX: soundproof burner cover (see page 293)	97980053
BT 75 DSPG: soundproof burner cover (see page 293)	97980055

LIGHT OIL BURNER ACCESSORIES

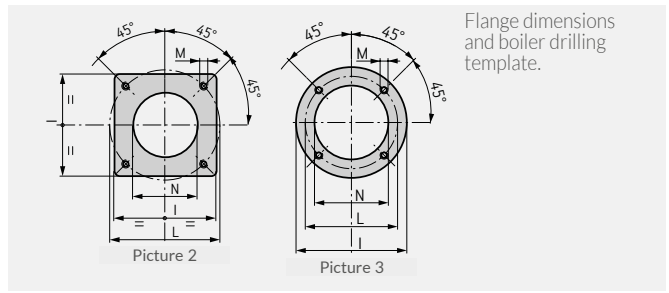
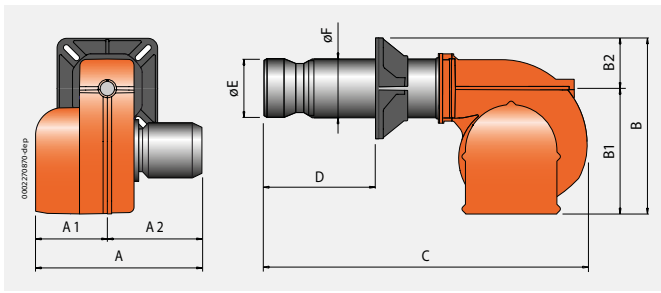
TBL 85 P/85 P DACA - BT 75 LX: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
BT 75 DSPG: line filter, flex hoses, boiler coupling kit.



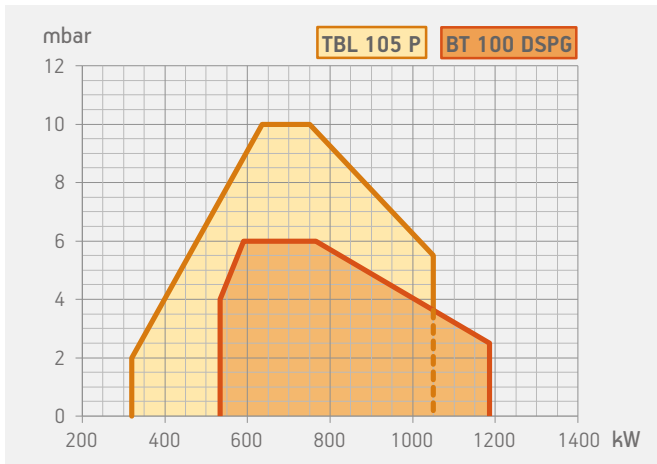
TBL 105 P

BT 100 DSPG

	TBL 105 P	TBL 105 P DACA	BT 100 DSPG
Light oil burner. Operation:	two-stage	two-stage	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).			•
Modulation ratio:			1:2
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2	
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head 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.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	electric servomotor	mechanical cam
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.		•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.			•
Atomisation unit with magnet to control the outlet/nozzle return pins.			•
Flame detection by photoresistance.	•	•	•
Control panel with display diagram for working mode with indication lights.	•	•	
Electric protection rating:	IP40	IP40	IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBL 105 P	680	310	370	520	380	140	1250	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2
TBL 105 P DACA	680	310	370	520	380	140	1250	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2
BT 100 DSPG	670	330	340	525	365	160	1415	210 ÷ 400	230	195	320	276	M16	240	3



Model	Size of packaging			Weight kg
	L	P mm	H	
TBL 105 P	1070	800	700	80
TBL 105 P DACA	1070	800	700	80
BT 100 DSPG	1730	1030	880	150

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 2	320 ÷ 1050	TBL 105 P	35850010	1,5	3N AC 50Hz 400V	1,50	15)
	class 2	320 ÷ 1050	TBL 105 P DACA	35850110	1,5	3N AC 50Hz 400V	1,50	3) 4) 15)
		533 ÷ 1186	BT 100 DSPG	3514010	1,5	3N AC 50Hz 400V	1,50	4)
Frequency 60 Hz								
	class 2	320 ÷ 1050	TBL 105 P	35855410	1,5	3N AC 60Hz 380V	1,50	15)
	class 2	320 ÷ 1050	TBL 105 P DACA	35855420	1,5	3N AC 60Hz 380V	1,50	3) 4) 15)
		533 ÷ 1186	BT 100 DSPG	35145410	1,5	3N AC 60Hz 380V	2,60+0,65	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 100 DSPG: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
BT 100 DSPG: modulation kit	98000055
BT 100 DSPG: modulating probe kit (see page 288)	

OPTIONALS

DESCRIPTION
Biodiesel operation (5)

NOTES

- 3 Soundproof lid on burner air intake.
 - 4 Equipped with air closure device.
 - 5 Biodiesel according to european norm EN14213-FAME.
 - 15 Reference standard: EN267.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBL 105 P/105 P DACA: soundproof burner cover (see page 293)	97980053
BT 100 DSPG: soundproof burner cover (see page 293)	97980055

LIGHT OIL BURNER ACCESSORIES

- TBL 105 P/105 P DACA: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
- BT 100 DSPG: line filter, flex hoses, boiler coupling kit.



LIGHT OIL

Light oil burner. Operation:

Low NOx and CO emissions light oil burner according to European standard EN267:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head 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.

Combustion air intake with butterfly valve. Air flow adjustment:

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.

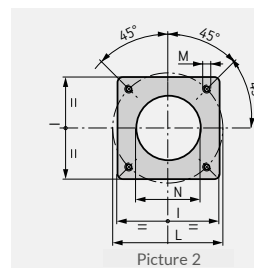
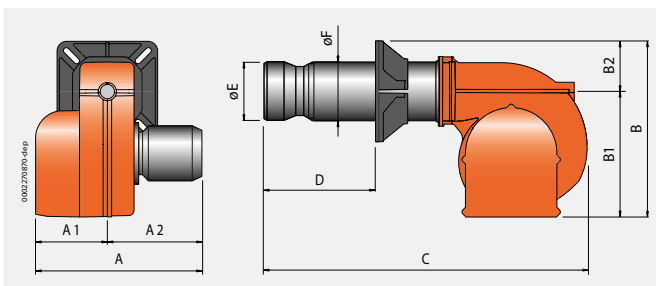
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.

Flame detection by photoresistance.

Control panel with display diagram for working mode with indication lights.

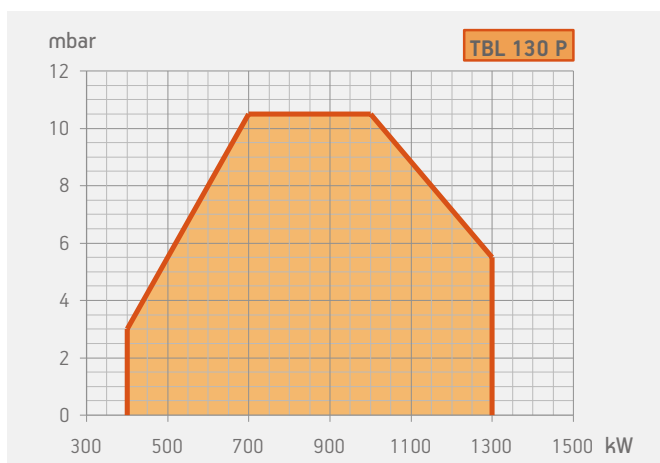
Electric protection rating:

	TBL 130 P	TBL 130 P DACA
	two-stage	two-stage
	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the combustion head 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.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	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.		•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•
Flame detection by photoresistance.	•	•
Control panel with display diagram for working mode with indication lights.	•	•
Electric protection rating:	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBL 130 P	680	310	370	520	380	140	1250	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2
TBL 130 P DACA	680	310	370	520	380	140	1250	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBL 130 P	1070	800	700	85
TBL 130 P DACA	1070	800	700	85

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 2	400 ÷ 1300	TBL 130 P	35900010	1,5	3N AC 50Hz 400V	2,2	
	class 2	400 ÷ 1300	TBL 130 P DACA	35900110	1,5	3N AC 50Hz 400V	2,2	3) 4)
Frequency 60 Hz								
	class 2	400 ÷ 1300	TBL 130 P	35905410	1,5	3N AC 60Hz 380V	2,2	
	class 2	400 ÷ 1300	TBL 130 P DACA	35905420	1,5	3N AC 60Hz 380V	2,2	3) 4)

OPTIONALS

DESCRIPTION
Biodiesel operation (5)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.

NOTES

- 3 Soundproof lid on burner air intake.
 - 4 Equipped with air closure device.
 - 5 Biodiesel according to european norm EN14213-FAME.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

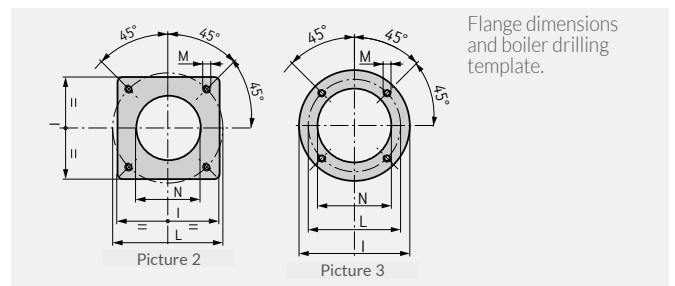
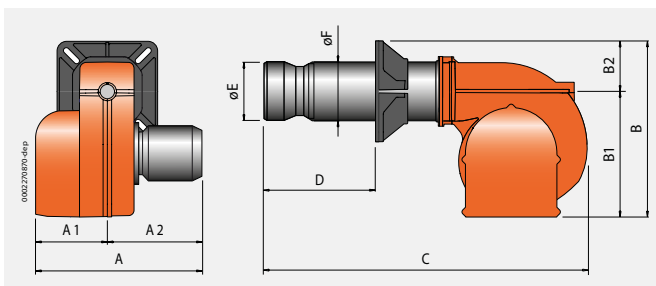


TBL 160 P

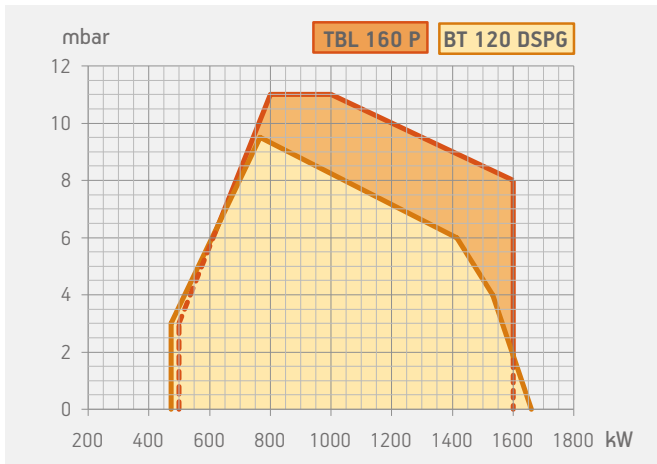


BT 120 DSPG

	TBL 160 P	TBL 160 P DACA	BT 120 DSPG
Light oil burner. Operation:	two-stage	two-stage	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).			•
Modulation ratio:			1:3
Low NOx and CO emissions light oil burner according to European standard EN267:	class 2	class 2	
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head 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.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	hydraulic jack	electric servomotor	mechanical cam
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.		•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.			•
Atomisation unit with magnet to control the outlet/nozzle return pins.			•
Flame detection by photoresistance.	•	•	•
Control panel with display diagram for working mode with indication lights.	•	•	
Electric protection rating:	IP40	IP40	IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBL 160 P	680	310	370	540	380	160	1300	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
TBL 160 P DACA	680	310	370	540	380	160	1300	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
BT 120 DSPG	770	390	380	610	450	160	1415	155 ÷ 500	230	195	320	276	M16	240	3



Model	Size of packaging			Weight kg
	L	P mm	H	
TBL 160 P	1070	800	700	90
TBL 160 P DACA	1070	800	700	90
BT 120 DSPG	1730	1030	880	175

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 2	500 ÷ 1600	TBL 160 P	35950010	1,5	3N AC 50Hz 400V	2,2	15)
	class 2	500 ÷ 1600	TBL 160 P DACA	35950110	1,5	3N AC 50Hz 400V	2,2	3) 4) 15)
		474 ÷ 1660	BT 120 DSPG	3518010	1,5	3N AC 50Hz 400V	2,2	4)
Frequency 60 Hz								
	class 2	500 ÷ 1600	TBL 160 P	35955410	1,5	3N AC 60Hz 380V	2,2	15)
	class 2	500 ÷ 1600	TBL 160 P DACA	35955420	1,5	3N AC 60Hz 380V	2,2	3) 4) 15)
		474 ÷ 1660	BT 120 DSPG	35185410	1,5	3N AC 60Hz 380V	3,5+1,3	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 120 DSPG: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
BT 120 DSPG: modulation kit	98000055
BT 120 DSPG: modulating probe kit (see page 288)	

OPTIONALS

DESCRIPTION
Biodiesel operation (5)

NOTES

- 3 Soundproof lid on burner air intake.
 - 4 Equipped with air closure device.
 - 5 Biodiesel according to european norm EN14213-FAME.
 - 15 Reference standard: EN267.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBL 160 P/160 P DACA: soundproof burner cover (see page 293)	97980053
BT 120 DSPG: soundproof burner cover (see page 293)	97980055

LIGHT OIL BURNER ACCESSORIES

- TBL 160 P/160 P DACA: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
- BT 120 DSPG: line filter, flex hoses, boiler coupling kit.



TBL 210 P



BT 180 DSPG

LIGHT OIL

TBL 210 P

BT 180 DSPG

two-stage

mechanical two-stage progressive

Light oil burner. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

•

Modulation ratio:

1:3

Low NOx and CO emissions light oil burner according to European standard EN267:

class 2

Adjusting the combustion head.

•

•

Maintenance facilitated by the possibility of removing the combustion head 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.

•

•

Combustion air intake with butterfly valve. Air flow adjustment:

electric servomotor

mechanical cam

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.

•

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Atomisation unit with magnet to control the outlet/nozzle return pins.

•

Flame detection by photoresistance.

•

•

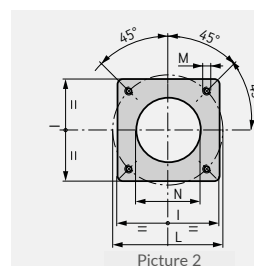
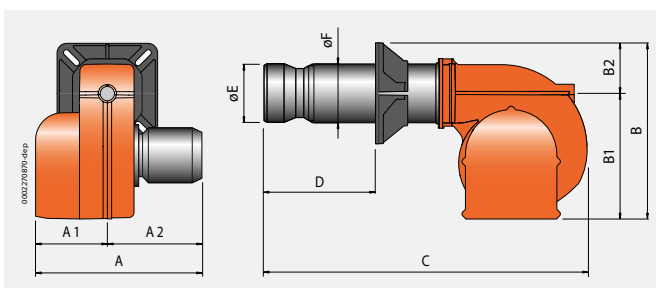
Control panel with display diagram for working mode with indication lights.

•

Electric protection rating:

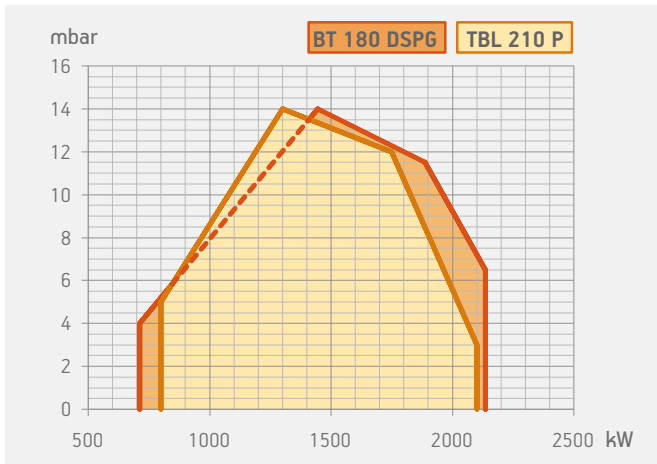
IP40

IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBL 210 P	680	310	370	540	380	160	1300	210 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
BT 180 DSPG	815	390	425	650	450	200	1700	200 ÷ 535	260	220	320	280 ÷ 370	M12	230	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBL 210 P	1070	800	700	94
BT 180 DSPG	1730	1030	880	220

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
	class 2	800 ÷ 2100	TBL 210 P	36000010	1,5	3N AC 50Hz 400V	3,0	3) 4) 15)
		712 ÷ 2135	BT 180 DSPG	3522010	1,5	3N AC 50Hz 400V	3,0	4)
Frequency 60 Hz								
	class 2	800 ÷ 2100	TBL 210 P	36005410	1,5	3N AC 60Hz 380V	3,0	3) 4) 15)
		712 ÷ 2135	BT 180 DSPG	35225410	1,5	3N AC 60Hz 380V	3,5+1,3	4)

TO COMPLETE THE BURNER

DESCRIPTION

BT 180 DSPG: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

BT 180 DSPG: modulation kit

PART NO.

98000055

BT 180 DSPG: modulating probe kit (see page 288)

OPTIONALS

DESCRIPTION

Biodiesel operation (5)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION

TBL 210 P: soundproof burner cover (see page 293)

BT 180 DSPG: soundproof burner cover (see page 293)

PART NO.

97980053

97980057

LIGHT OIL BURNER ACCESSORIES

TBL210 P: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.

BT 180 DSPG: line filter, flex hoses, boiler coupling kit.

NOTES

3 Soundproof lid on burner air intake.

4 Equipped with air closure device.

5 Biodiesel according to european norm EN14213-FAME.

15 Reference standard: EN267.

Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



BT 250 DSG 4T

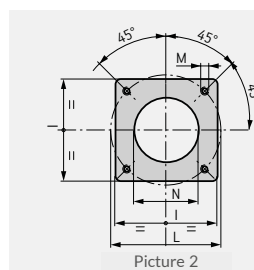
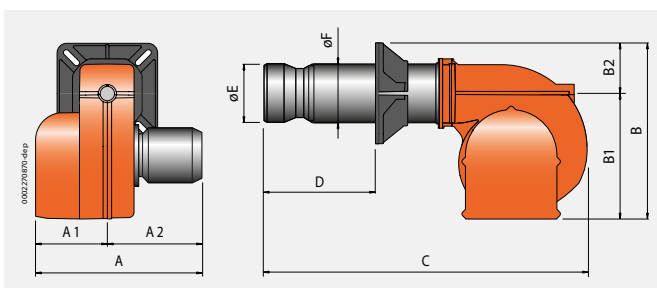


BT 250 DSG 4T HINGED



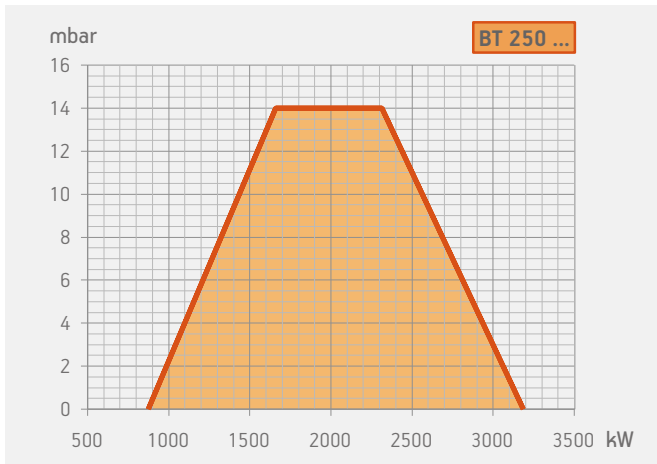
BT 250 DSPG

	BT 250 DSG 4T	BT 250 DSG 4T Hinged	BT 250 DSPG
Light oil burner. Operation:	two-stage	two-stage	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).			•
Modulation ratio:			1:3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Fixed boiler coupling flange.		•	
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:	electric servomotor	electric servomotor	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.			•
Atomisation unit with nozzle-closing pin.	•	•	
Atomisation unit with magnet to control the outlet/nozzle return pins.			•
Flame detection by photoresistance.	•	•	•
Control panel with display diagram for working mode with indication lights.	•	•	
Electric protection rating:	IP40	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 250 DSG 4T	915	435	480	740	580	160	1480	235 ÷ 560	260	220	320	280 ÷ 370	M12	230	2
BT 250 DSG 4T Hinged	915	435	480	750	580	170	1220	290	260	225	340	396	M16	275	2
BT 250 DSPG	1000	520	480	740	580	160	1700	235 ÷ 560	260	220	320	280 ÷ 370	M12	230	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 250 DSG 4T	1730	1030	880	225
BT 250 DSG 4T Hinged	1730	1030	880	225
BT 250 DSPG	2030	1150	1010	256

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	873 ÷ 3186	BT 250 DSG 4T	31310010	1,5	3N AC 50Hz 400V	7,5	4)
	873 ÷ 3186	BT 250 DSG 4T Hinged	31310011	1,5	3N AC 50Hz 400V	7,5	4)
	873 ÷ 3186	BT 250 DSPG	3526010	1,5	3N AC 50Hz 400V	7,5	4)
Frequency 60 Hz							
	873 ÷ 3186	BT 250 DSG 4T	31315410	1,5	3N AC 60Hz 380V	9,0+1,3	4)
	873 ÷ 3186	BT 250 DSG 4T Hinged	31315411	1,5	3N AC 60Hz 380V	9,0+1,3	4)
	873 ÷ 3186	BT 250 DSPG	35265410	1,5	3N AC 60Hz 380V	9,0+1,3	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 250 DSPG: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
BT 250 DSPG: modulation kit	98000055
BT 250 DSPG: modulating probe kit (see page 288)	

OPTIONALS

DESCRIPTION
Biodiesel operation (5)

NOTES

- 4 Equipped with air closure device.
 - 5 Biodiesel according to european norm EN14213-FAME.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980057

LIGHT OIL BURNER ACCESSORIES

- BT 250 DSG 4T: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
- BT 250 DSPG: line filter, flex hoses, boiler coupling kit.



BT 300 DSG 4T

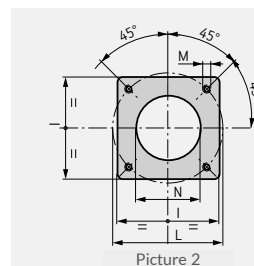
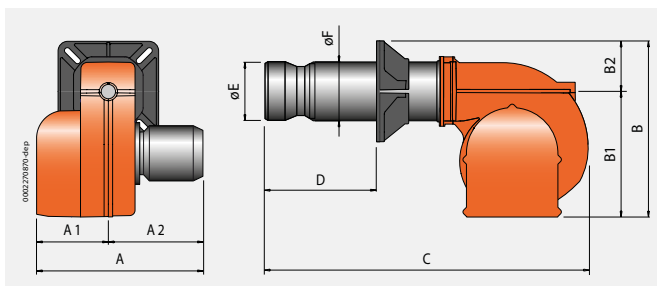


BT 300 DSG 4T HINGED



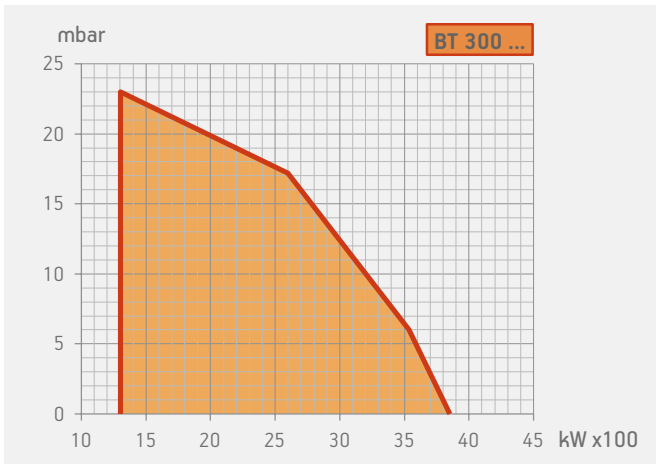
BT 300 DSPG

	BT 300 DSG 4T	BT 250 DSG 4T Hinged	BT 300 DSPG
Light oil burner. Operation:	two-stage	two-stage	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).			•
Modulation ratio:			1:3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Fixed boiler coupling flange.		•	
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:	electric servomotor	electric servomotor	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.			•
Atomisation unit with nozzle-closing pin.	•	•	
Atomisation unit with magnet to control the outlet/nozzle return pins.			•
Flame detection by photoresistance.	•	•	•
Control panel with display diagram for working mode with indication lights.	•	•	
Electric protection rating:	IP40	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 300 DSG 4T	915	435	480	800	580	220	1700	245 ÷ 605	360	275	440	400 ÷ 540	M20	365	2
BT 300 DSG 4T Hinged	915	435	480	800	580	220	1350	420	360	280	430	509	M18	370	2
BT 300 DSPG	1000	520	480	800	580	220	1900	245 ÷ 605	360	275	440	400 ÷ 540	M20	365	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 300 DSG 4T	2030	1150	1010	265
BT 300 DSG 4T Hinged	1730	1030	880	265
BT 300 DSPG	2030	1150	1010	290

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
1304 ÷ 3854		BT 300 DSG 4T	31510010	1,5	3N AC 50Hz 400V	7,5	4)
1304 ÷ 3854		BT 300 DSG 4T Hinged	31510011	1,5	3N AC 50Hz 400V	7,5	4)
1304 ÷ 3854		BT 300 DSPG	3530010	1,5	3N AC 50Hz 400V	7,5	4)
Frequency 60 Hz							
1304 ÷ 3854		BT 300 DSG 4T	31515410	1,5	3N AC 60Hz 380V	9,0+1,3	4)
1304 ÷ 3854		BT 300 DSG 4T Hinged	31515411	1,5	3N AC 60Hz 380V	9,0+1,3	4)
1304 ÷ 3854		BT 300 DSPG	35305410	1,5	3N AC 60Hz 380V	9,0+1,3	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 300 DSPG: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
BT 300 DSPG: modulation kit	98000055
BT 300 DSPG: modulating probe kit (see page 288)	

OPTIONALS

DESCRIPTION
Biodiesel operation (5)

NOTES

- 4 Equipped with air closure device.
 - 5 Biodiesel according to european norm EN14213-FAME.
- Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980057

LIGHT OIL BURNER ACCESSORIES

BT 300 DSG 4T: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
BT 300 DSPG: line filter, flex hoses, boiler coupling kit.



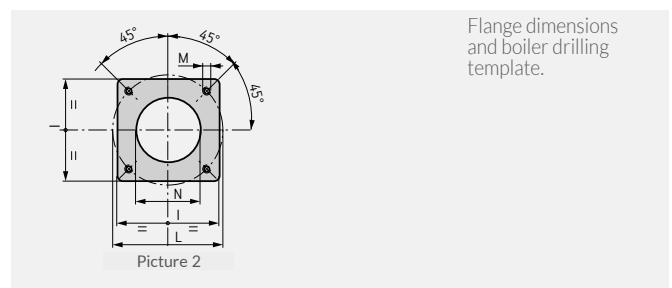
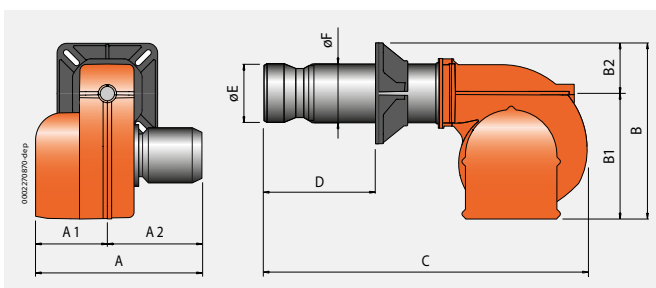
BT 350 DSG



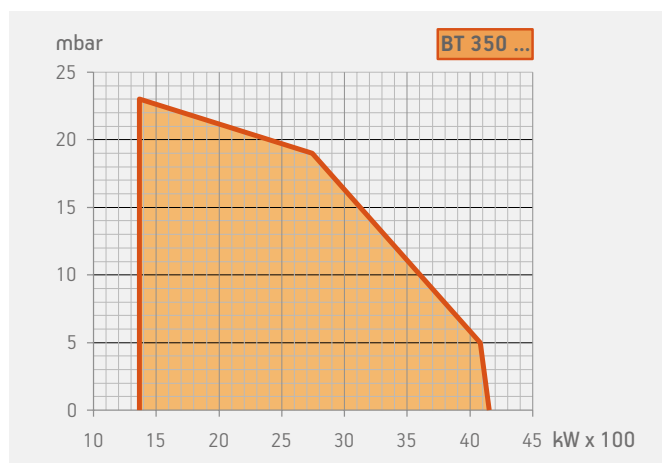
BT 350 DSG HINGED

LIGHT OIL

	BT 350 DSG	BT 350 DSG Hinged
Light oil burner. Operation:		
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•
Fixed boiler coupling flange.		•
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:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•
Atomisation unit with nozzle-closing pin.	•	•
Flame detection by photoresistance.	•	•
Electric protection rating:	IP40	IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 350 DSG 4T	1050	525	525	880	660	220	1960	350 ÷ 560	360	275	440	400 ÷ 540	M20	365	2
BT 350 DSG Hinged	1050	525	525	880	660	220	1440	420	360	280	430	509	M18	370	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 350 DSG	2030	1150	1010	310
BT 350 DSG Hinged	1670	1530	1300	310

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
1364 ÷ 4151		BT 350 DSG	3140010	1,5	3N AC 50Hz 400V	9,0	4)
1364 ÷ 4151		BT 350 DSG Hinged	3140011	1,5	3N AC 50Hz 400V	9,0	4)
Frequency 60 Hz							
1364 ÷ 4151		BT 350 DSG	31405410	1,5	3N AC 60Hz 380V	11,0+1,3	4)
1364 ÷ 4151		BT 350 DSG Hinged	31405411	1,5	3N AC 60Hz 380V	11,0+1,3	4)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980057

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzles, boiler coupling kit.

NOTES

4 Equipped with air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



LIGHT OIL

Light oil burner. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Electric motor for pump drive.

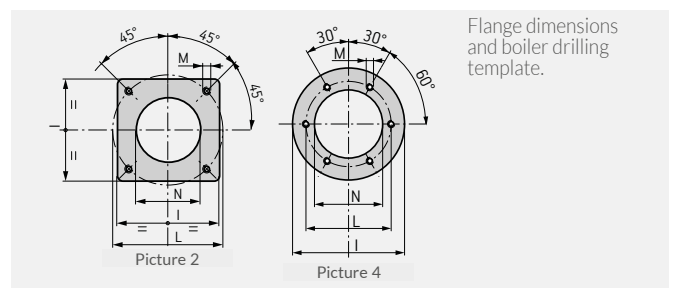
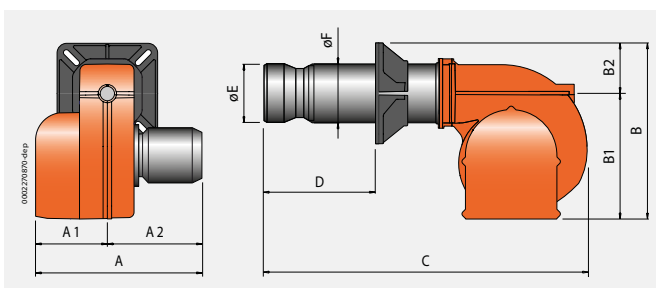
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

Atomisation unit with magnet to control the outlet/nozzle return pins.

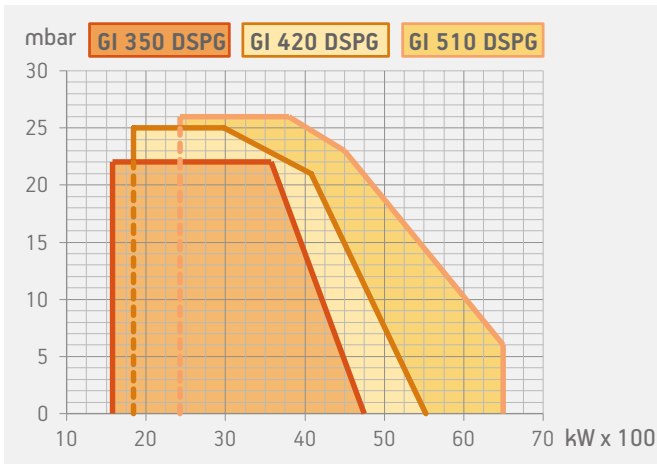
Flame detection by photoresistance.

Electric protection rating:

	GI 350 DSPG	GI 420 DSPG	GI 510 DSPG
	mechanical two-stage progressive	mechanical two-stage progressive	mechanical two-stage progressive
	•	•	•
Modulation ratio:	1:3	1:3	1:3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	mechanical cam	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Electric motor for pump drive.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.	•	•	•
Atomisation unit with magnet to control the outlet/nozzle return pins.	•	•	•
Flame detection by photoresistance.	•	•	•
Electric protection rating:	IP40	IP40	IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
GI 350 DSPG	1345	660	685	970	750	220	1900	275 ÷ 500	360	275	440	400 ÷ 540	M20	365	2
GI 420 DSPG	1345	660	685	1040	750	290	2030	275 ÷ 560	400	355	580	520	M20	420	4
GI 510 DSPG	1345	660	685	1040	750	290	2030	275 ÷ 560	400	355	580	520	M20	420	4



Model	Size of packaging			Weight kg
	L	P mm	H	
GI 350 DSPG	2260	1520	1150	500
GI 420 DSPG	2260	1520	1150	540
GI 510 DSPG	2260	1520	1150	580

Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
Frequency 50 Hz						
1581 ÷ 4743	GI 350 DSPG	6501010	1,5	3N AC 50Hz 400V	15,0+2,2	4)
1840 ÷ 5522	GI 420 DSPG	6506010	1,5	3N AC 50Hz 400V	18,5+2,2	4)
2430 ÷ 6500	GI 510 DSPG	6511010	1,5	3N AC 50Hz 400V	18,5+3,0	4)
Frequency 60 Hz						
1581 ÷ 4743	GI 350 DSPG	65015410	1,5	3N AC 60Hz 380V	11,0+2,6	4)
1840 ÷ 5522	GI 420 DSPG	65065410	1,5	3N AC 60Hz 380V	13,0+2,6	4)
2430 ÷ 6500	GI 510 DSPG	65115410	1,5	3N AC 60Hz 380V	22,0+3,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
Nozzle with 1 ÷ 3 ratio (see page 289)

MODULATION MODE

DESCRIPTION	PART NO.
Modulation kit	98000055
Modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980058

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTES

4 Equipped with air closure device.
Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.



LIGHT OIL

GI 1000 DSPG

mechanical two-stage progressive

Light oil burner. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

1:4

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Fixed boiler coupling flange.

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

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Electric motor for pump drive.

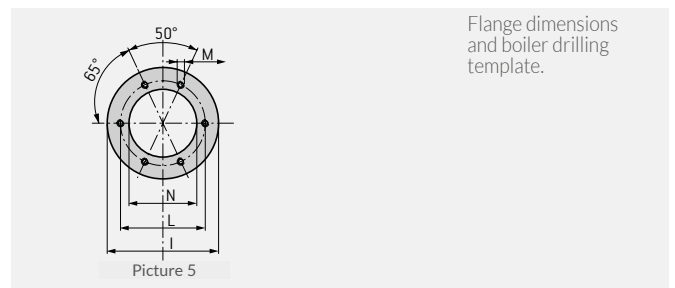
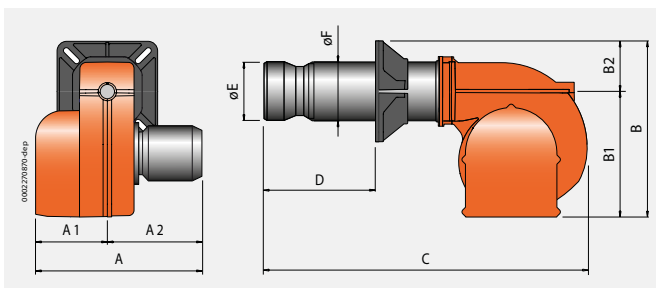
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

Atomisation unit with magnet to control the outlet/nozzle return pins.

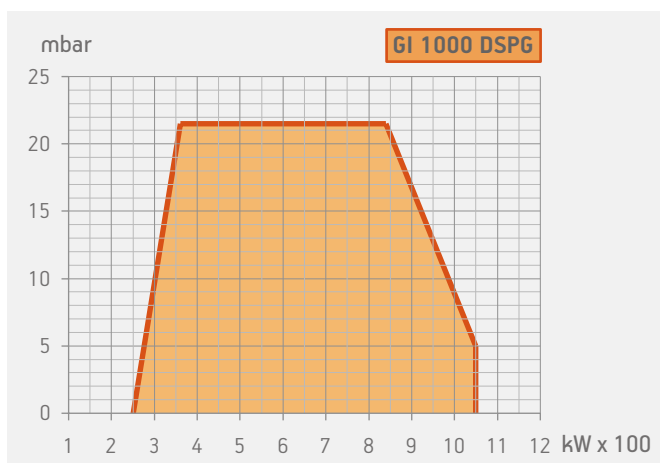
Flame detection by photoresistance.

Electric protection rating:

IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
GI 1000 DSPG	1465	800	665	1260	855	405	1960	430	480	490	800	765	M16	495	5



Model	Size of packaging			Weight kg
	L	P mm	H	
GI 1000 DSPG	2610	1760	1470	900

LIGHT OIL

Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Notes
2500 ÷ 10500	GI 1000 DSPG Frequency 50 Hz	6521010	1,5	3N AC 50Hz 400V	22,0+4,0	4)
	GI 1000 DSPG Frequency 60 Hz	65215410	1,5	3N AC 60Hz 380V	30,0+3,5	4)

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

Modulation kit

PART NO.

98000055

Modulating probe kit (see page 288)

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTES

4 Equipped with air closure device.

Net calorific value of light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

Heavy oil burners series

RANGE

Symbology

BT 17 N

Single-stage heavy oil burners.

BT...SPN

Two-stage pressure drop heavy oil burners (just one nozzle).

BT...DSN 4T

Two-stage heavy oil burners.

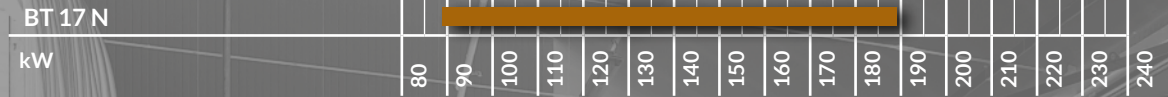
BT...DSNM-D

Two-stage extra heavy oil burners.

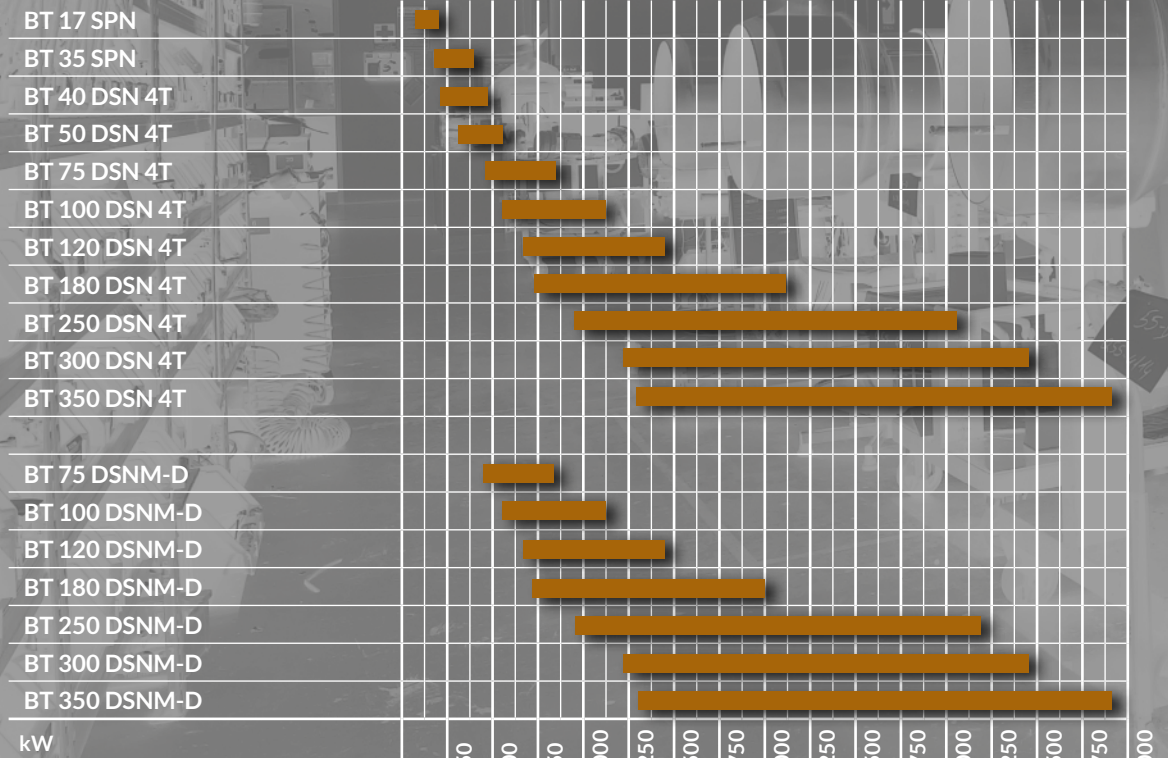
BT...DSPN

Two-stage progressive/modulating heavy oil burners with mechanical cam.

SINGLE-STAGE HEAVY OIL BURNERS



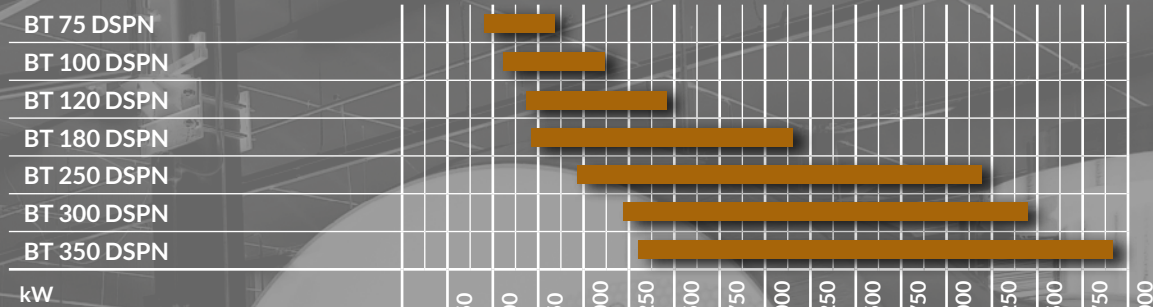
TWO-STAGE HEAVY OIL BURNERS



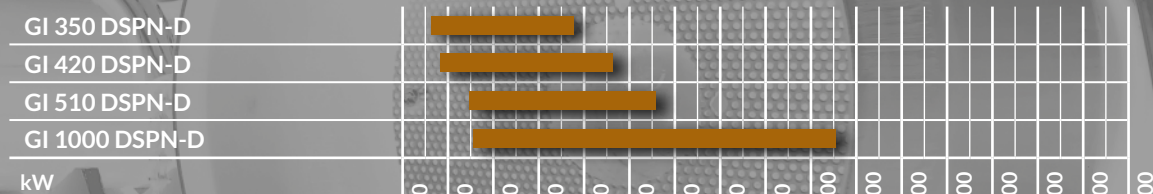
GI...DSPN-D

Two-stage progressive/modulating extra heavy oil burners with mechanical cam.

TWO-STAGE PROGRESSIVE HEAVY OIL BURNERS



TWO-STAGE PROGRESSIVE HEAVY OIL INDUSTRIAL BURNERS





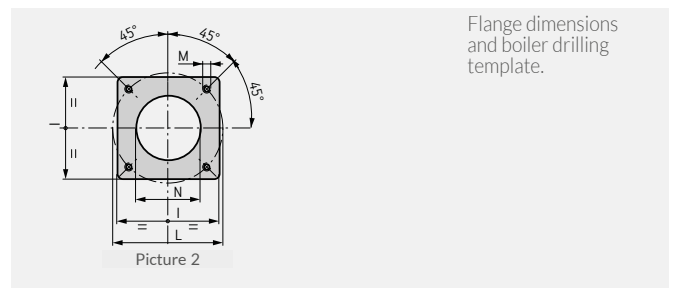
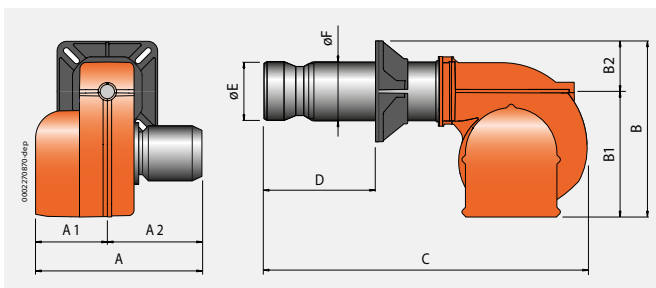
BT 17 N

BT 17 SPN

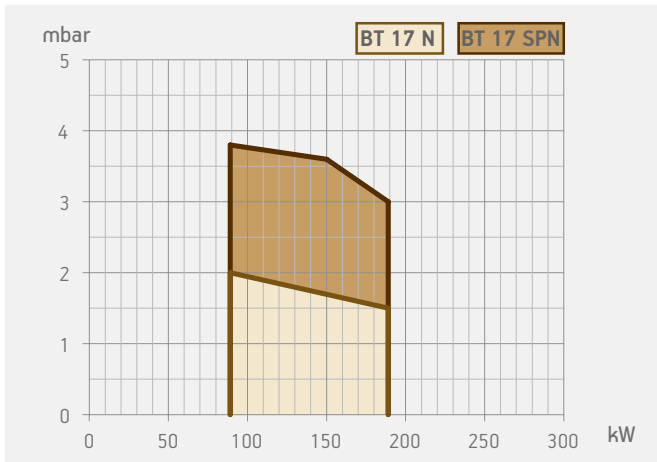
HEAVY OIL

Heavy oil burner. Operation:

	BT 17 N	BT 17 SPN
	single-stage	pressure drop two-stage
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.		•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valve and control flow valve.		•
Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.	•	•
Atomisation unit with nozzle-closing pin.	•	•
Flame detection by photoresistance.	•	•
Electric protection rating:	IP40	IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 17 N	520	260	260	440	305	135	965	118 ÷ 320	135	115	185	170 ÷ 210	M10	145	2
BT 17 SPN	520	260	260	440	305	135	965	118 ÷ 320	135	115	185	170 ÷ 210	M10	145	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 17 N	1070	650	600	83
BT 17 SPN	1070	650	600	85

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Notes
Frequency 50 Hz							
89 ÷ 189	BT 17 N	20080010	7	3N AC 50Hz 400V	0,37	1,8	
89 ÷ 189	BT 17 SPN	2040111	7	3N AC 50Hz 400V	0,37	1,8	4)
Frequency 60 Hz							
89 ÷ 189	BT 17 N	20085410	7	3N AC 60Hz 380V	0,55	1,8	
89 ÷ 189	BT 17 SPN	20405420	7	3N AC 60Hz 380V	0,55	1,8	4)

KIT FOR HEAVY OIL

DESCRIPTION	PART NO.
Kit for heavy oil up 20°E at 50°C	
BT 17 SPN	98000305
Kit for heavy oil with low sulphur content and max viscosity 15°E a 50°C	
BT 17 SPN	98000314

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit.

NOTES

4 Equipped with air closure device.
Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.



HEAVY OIL

Heavy oil burner. Operation:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valve and control flow valve.

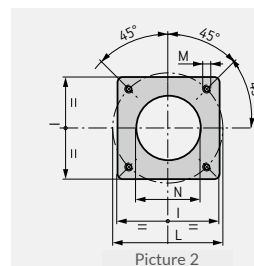
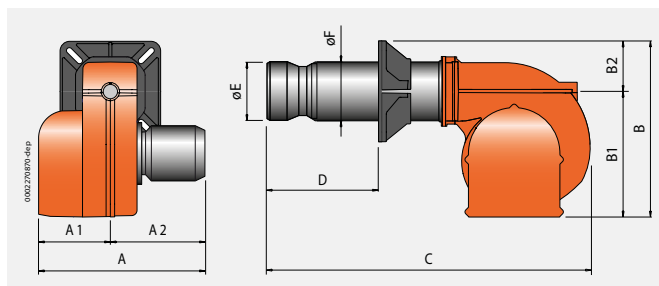
Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.

Atomisation unit with nozzle-closing pin.

Flame detection by photoresistance.

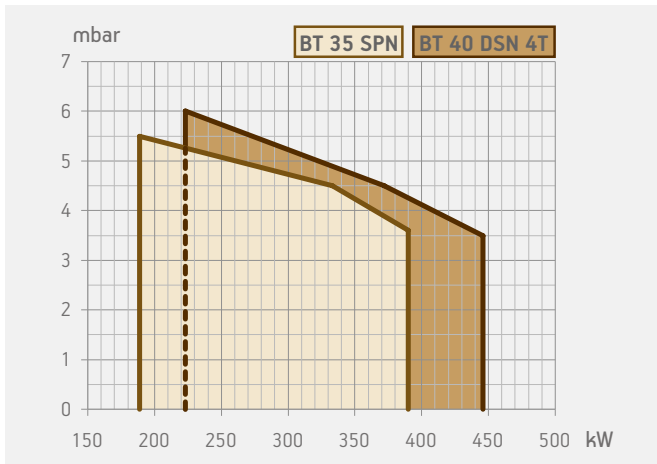
Electric protection rating:

	BT 35 SPN	BT 40 DSN 4T
	pressure drop two-stage	two-stage
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.		•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valve and control flow valve.	•	
Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.	•	•
Atomisation unit with nozzle-closing pin.	•	•
Flame detection by photoresistance.	•	•
Electric protection rating:	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 35 SPN	520	260	260	440	305	135	985	120 ÷ 305	155	135	215	200 ÷ 245	M12	165	2
BT 40 DSN 4T	590	260	330	415	305	110	985	120 ÷ 305	155	135	215	200 ÷ 245	M12	165	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 35 SPN	1070	650	600	85
BT 40 DSN 4T	1070	650	600	85

Thermal output kW	Model	Part no.	Max visc.	Electrical supply	Motor	Tank heating element	Notes
			°E at 50°C		kW	kW	
Frequency 50 Hz							
189 ÷ 390	BT 35 SPN	2052110	7	3N AC 50Hz 400V	0,55	3,5	4)
223 ÷ 446	BT 40 DSN 4T	2058010	7	3N AC 50Hz 400V	0,55	3,5	4)
Frequency 60 Hz							
189 ÷ 390	BT 35 SPN	20525420	7	3N AC 60Hz 380V	0,76	3,5	4)
223 ÷ 446	BT 40 DSN 4T	20585410	7	3N AC 60Hz 380V	0,76	3,5	4)

KIT FOR HEAVY OIL

DESCRIPTION	PART NO.
Kit for heavy oil up 20°E at 50°C	
BT 35 SPN	98000305
BT 40 DSN	98000301
Kit for heavy oil with low sulphur content and max viscosity 15°E at 50°C	
BT 35 SPN	98000314
BT 40 SPN	98000306

LIGHT OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit.

NOTES

4 Equipped with air closure device.
Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.



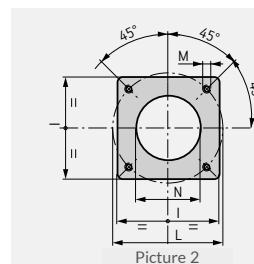
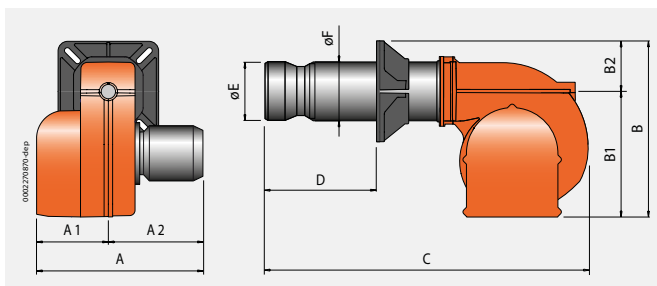
BT 50 DSN 4T

Heavy oil burner. Operation:

two-stage

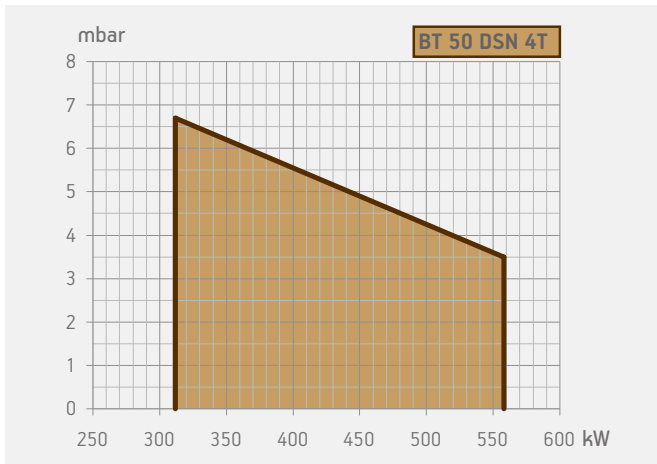
Adjusting the combustion head.	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•
Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.	•
Atomisation unit with nozzle-closing pin.	•
Flame detection by photoresistance.	•
Electric protection rating:	IP40

HEAVY OIL



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 50 DSN 4T	690	340	350	510	400	110	1155	110 ÷ 375	155	135	215	200 ÷ 245	M12	165	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 50 DSN 4T	1530	760	700	110

HEAVY OIL

Thermal output kW	Model	Part no.	Max visc.	Electrical supply	Motor	Tank heating element	Notes
			°E at 50°C		kW	kW	
312 ÷ 558	BT 50 DSN 4T	2061010	7	3N AC 50Hz 400V	1,1	6	4)
	Frequency 50 Hz						
312 ÷ 558	BT 50 DSN 4T	20615410	7	3N AC 60Hz 380V	1,5	6	4)
	Frequency 60 Hz						

KIT FOR HEAVY OIL

DESCRIPTION	PART NO.
Kit for heavy oil up 20°E at 50°C	98000301
Kit for heavy oil with low sulphur content and max viscosity 15°E at 50°C	98000306

HEAVY OIL BURNER ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit.

NOTES

4 Equipped with air closure device.
 Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.



BT 75 DSN 4T



BT 75 DSNM-D



BT 75 DSPN

	BT 75 DSN 4T	BT 75 DSNM-D	BT 75 DSPN
--	--------------	--------------	------------

Heavy oil burner. Operation:

Extra heavy oil burner. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Electric motor for pump drive.

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment and minimum thermostats.

Atomisation unit with nozzle-closing pin.

Atomisation unit with magnet to control the outlet/nozzle return pins.

Heating element for pump, valve and atomisation unit.

Flame detection by photoresistance.

Electric protection rating:

two-stage

two-stage

mechanical
two-stage
progressive

1:2

electric
servomotor

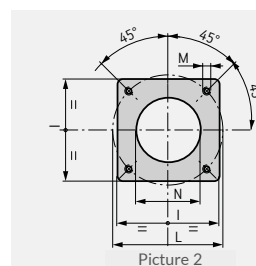
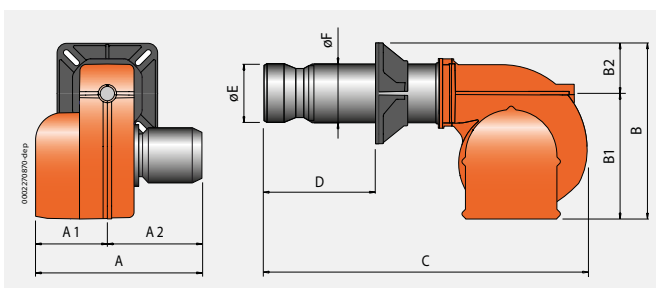
electric
servomotor

mechanical
cam

IP40

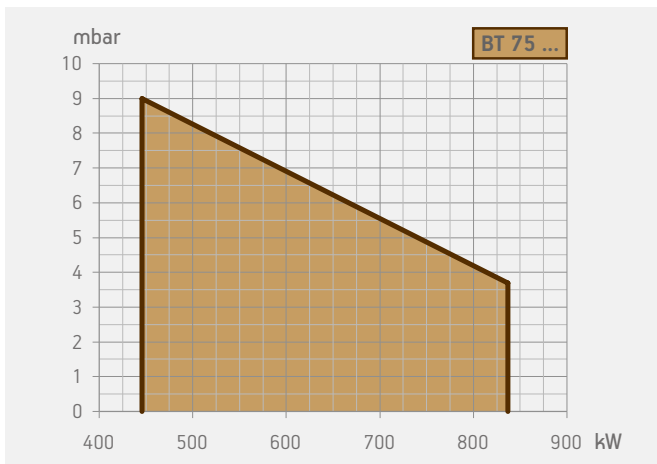
IP40

IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 75 DSN 4T	690	340	350	530	400	130	1385	170 ÷ 430	205	160	260	225 ÷ 300	M12	170	2
BT 75 DSNM-D	860	510	350	545	415	130	1385	170 ÷ 430	205	160	260	225 ÷ 300	M12	170	2
BT 75 DSPN	860	510	350	545	415	130	1385	195 ÷ 515	205	160	260	225 ÷ 300	M12	170	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 75 DSN 4T	1530	760	700	117
BT 75 DSNM-D	1730	1030	880	140
BT 75 DSPN	1730	1030	880	147

	Thermal output kW	Model	Part no.	Max visc.	Electrical supply	Motor	Tank heating element	Notes
				°E at 50°C		kW	kW	
Frequency 50 Hz								
	446 ÷ 837	BT 75 DSN 4T	2071010	7	3N AC 50Hz 400V	1,10	6,0	4)
	446 ÷ 837	BT 75 DSNM-D	2500010	50	3N AC 50Hz 400V	1,10+0,55	10,5	4)
	446 ÷ 837	BT 75 DSPN	2610010	7	3N AC 50Hz 400V	1,10+0,55	10,5	4)
Frequency 60 Hz								
	446 ÷ 837	BT 75 DSN 4T	20715410	7	3N AC 60Hz 380V	1,50	6,0	4)
	446 ÷ 837	BT 75 DSNM-D	25005410	50	3N AC 60Hz 380V	1,50+0,65	10,5	4)
	446 ÷ 837	BT 75 DSPN	26105410	7	3N AC 60Hz 380V	1,50+0,65	10,5	4)

TO COMPLETE THE BURNER

DESCRIPTION

BT 75 DSNM-D/75 DSPN: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

PART NO.

BT 75 DSPN: modulation kit 98000055

BT 75 DSPN: modulating probe kit (see page 288)

KIT FOR HEAVY OIL

DESCRIPTION

PART NO.

Kit for heavy oil up 20°E at 50°C

BT 75 DSN 4T 98000301

Kit for heavy oil up to 50°E at 50°C

BT 75 DSPN 98000315

Kit for heavy oil with low sulphur content and max viscosity 15°E at 50°C

BT 75 DSN 4T 98000306

BT 75 DSPN 98000318

OPTIONALS

DESCRIPTION

BT 75 DSNM-D/75 DSPN: extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

BT 75 DSN 4T: line filter, flex hoses, nozzles, boiler coupling kit.

BT 75 DSNM-D: self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.

BT 75 DSPN: line filter, flex hoses, boiler coupling kit.

NOTES

4 Equipped with air closure device.

Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.



BT 100 DSN 4T



BT 100 DSNM-D



BT 100 DSPN

BT 100 DSN 4T

BT 100 DSNM-D

BT 100 DSPN

Heavy oil burner. Operation:

two-stage

mechanical
two-stage
progressive

Extra heavy oil burner. Operation:

two-stage

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

•

Modulation ratio:

1:2

Adjusting the combustion head.

•

•

•

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

•

•

•

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

•

•

•

Combustion air intake with butterfly valve. Air flow adjustment:

electric
servomotor

electric
servomotor

mechanical
cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

•

•

•

Electric motor for pump drive.

•

•

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

•

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.

•

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment and minimum thermostats.

•

•

Atomisation unit with nozzle-closing pin.

•

Atomisation unit with magnet to control the outlet/nozzle return pins.

•

•

Heating element for pump, valve and atomisation unit.

•

Flame detection by photoresistance.

•

•

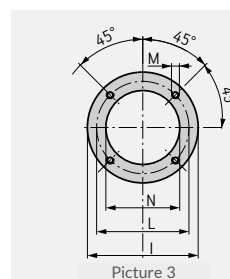
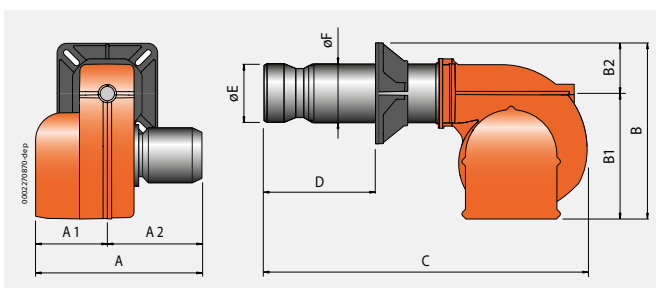
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Electric protection rating:

IP40

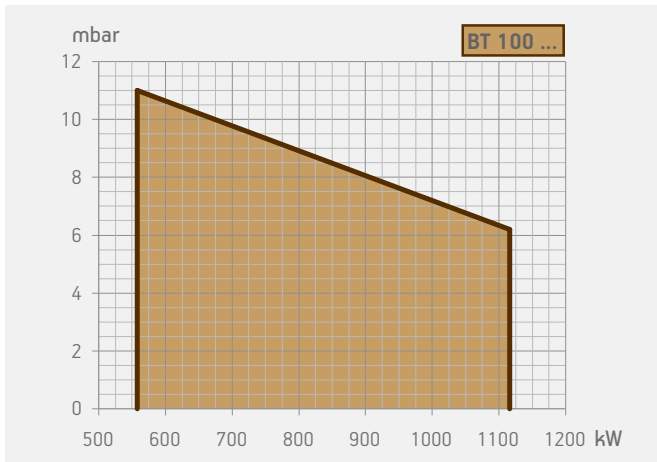
IP40

IP40



Flange dimensions
and boiler drilling
template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 100 DSN 4T	690	340	350	560	400	160	1320	210 ÷ 400	230	195	320	276	M16	240	3
BT 100 DSNM-D	860	510	350	560	400	160	1320	210 ÷ 400	230	195	320	276	M16	240	3
BT 100 DSPN	860	510	350	635	475	160	1320	210 ÷ 400	230	195	320	276	M16	240	3



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 100 DSN 4T	1530	760	700	120
BT 100 DSNM-D	1730	1030	880	145
BT 100 DSPN	1730	1030	880	150

	Thermal output kW	Model	Part no.	Max visc.	Electrical	Motor	Tank heating	Notes
				°E at 50°C	supply	kW	element kW	
Frequency 50 Hz								
	558 ÷ 1116	BT 100 DSN 4T	2076010	7	3N AC 50Hz 400V	1,50	7,5	4)
	558 ÷ 1116	BT 100 DSNM-D	2503010	50	3N AC 50Hz 400V	1,50+0,55	10,5	4)
	558 ÷ 1116	BT 100 DSPN	2615010	7	3N AC 50Hz 400V	1,50+0,55	10,5	4)
Frequency 60 Hz								
	558 ÷ 1116	BT 100 DSN 4T	20765410	7	3N AC 60Hz 380V	2,60	7,5	4)
	558 ÷ 1116	BT 100 DSNM-D	25035410	50	3N AC 60Hz 380V	2,60+0,65	10,5	4)
	558 ÷ 1116	BT 100 DSPN	26155410	7	3N AC 60Hz 380V	2,60+0,65	10,5	4)

TO COMPLETE THE BURNER

DESCRIPTION

BT 100 DSNM-D/100 DSPN: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

PART NO.

BT 100 DSPN: modulation kit 98000055

BT 100 DSPN: modulating probe kit (see page 288)

KIT FOR HEAVY OIL

DESCRIPTION

PART NO.

Kit for heavy oil up 20°E at 50°C
BT 100 DSN 4T 98000301

Kit for heavy oil up to 50°E at 50°C
BT 100 DSPN 98000315

Kit for heavy oil with low sulphur content and max viscosity
15°E at 50°C
BT 100 DSN 4T 98000306
BT 100 DSPN 98000318

NOTES

4 Equipped with air closure device.
Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

OPTIONALS

DESCRIPTION

BT 100 DSNM-D/100 DSPN: extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

BT 100 DSN 4T: line filter, flex hoses, nozzles, boiler coupling kit.

BT 100 DSNM-D: self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.

BT 100 DSPN: line filter, flex hoses, boiler coupling kit.



BT 120 DSN 4T



BT 120 DSN 4T HINGED



BT 120 DSNM-D



BT 120 DSPN

BT 120 DSN 4T	BT 120 DSN 4T Hinged	BT 120 DSNM-D	BT 120 DSPN
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Heavy oil burner. Operation:

two-stage

two-stage

two-stage

mechanical two-stage progressive

Extra heavy oil burner. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

1:2

Adjusting the combustion head.

• • • •

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

• • • •

Fixed boiler coupling flange.

•

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:

electric servomotor electric servomotor electric servomotor mechanical cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

• • • •

Electric motor for pump drive.

•

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

• •

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.

• •

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment and minimum thermostats.

•

Atomisation unit with nozzle-closing pin.

• •

Atomisation unit with magnet to control the outlet/nozzle return pins.

•

Heating element for pump, valve and atomisation unit.

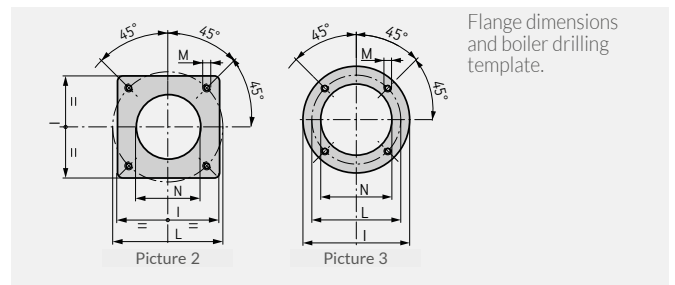
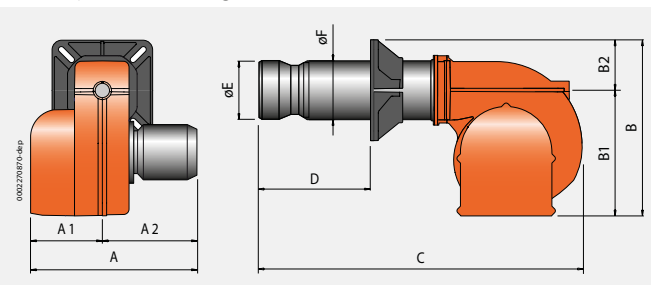
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Flame detection by photoresistance.

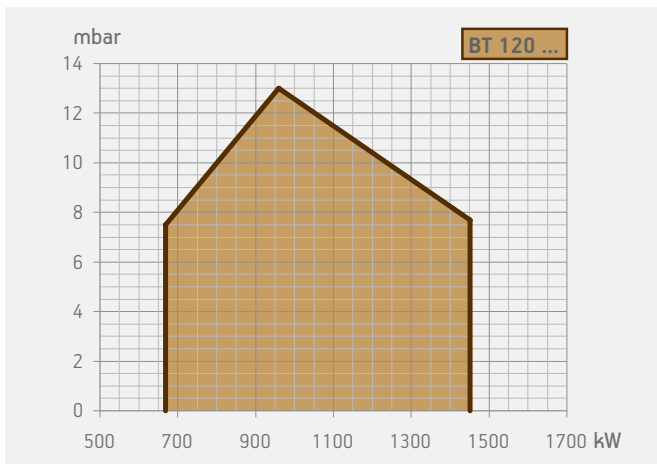
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Electric protection rating:

IP40 IP40 IP40 IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 120 DSN 4T	835	385	450	610	450	160	1400	185 ÷ 450	230	195	320	276	M16	240	3
BT 120 DSN 4T Hinged	690	320	370	825	665	160	1125	265	230	195	300	340	M16	240	2
BT 120 DSNM-D	910	460	450	610	450	160	1400	185 ÷ 450	230	195	320	276	M16	240	3
BT 120 DSPN	910	460	450	680	520	160	1400	185 ÷ 450	230	195	320	276	M16	240	3



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 120 DSN 4T	1730	1030	880	190
BT 120 DSN 4T Hinged	1360	990	1200	190
BT 120 DSNM-D	1730	1030	880	230
BT 120 DSPN	1730	1030	880	224

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Notes
669 ÷ 1451	BT 120 DSN 4T	2081010	7	3N AC 50Hz 400V	2,2	10,5	4)
669 ÷ 1451	BT 120 DSN 4T Hinged	2081011	7	3N AC 50Hz 400V	2,2	10,5	4)
669 ÷ 1451	BT 120 DSNM-D	2505010	50	3N AC 50Hz 400V	2,2+1,1	10,5	4)
669 ÷ 1451	BT 120 DSPN	2620010	7	3N AC 50Hz 400V	2,2+1,1	10,5	4)
Frequency 60 Hz							
669 ÷ 1451	BT 120 DSN 4T	20815410	7	3N AC 60Hz 380V	3,5	10,5	4)
669 ÷ 1451	BT 120 DSN 4T Hinged	20815411	7	3N AC 60Hz 380V	3,5	10,5	4)
669 ÷ 1451	BT 120 DSNM-D	25055410	50	3N AC 60Hz 380V	3,5+1,3	10,5	4)
669 ÷ 1451	BT 120 DSPN	26205410	7	3N AC 60Hz 380V	3,5+1,3	10,5	4)

TO COMPLETE THE BURNER

DESCRIPTION

BT 120 DSNM-D/120 DSPN: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

PART NO.

BT 120 DSPN: modulation kit

98000055

BT 120 DSPN: modulating probe kit (see page 288)

KIT FOR HEAVY OIL

DESCRIPTION

PART NO.

Kit for heavy oil up 20°E at 50°C

BT 120 DSN 4T

98000301

Kit for heavy oil up to 50°E at 50°C

BT 120 DSPN

98000315

Kit for heavy oil with low sulphur content and max viscosity 15°E at 50°C

BT 120 DSN 4T

98000306

BT 120 DSPN

98000318

NOTES

4 Equipped with air closure device.

17 Not including steam regulator.

Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

OPTIONALS

DESCRIPTION

Steam pre-heater (17)

BT 120 DSNM-D/120 DSPN: extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

BT 120 DSN 4T: line filter, flex hoses, nozzles, boiler coupling kit.

BT 120 DSNM-D: self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.

BT 120 DSPN: line filter, flex hoses, boiler coupling kit.



BT 180 DSN 4T



BT 180 DSN 4T HINGED



BT 180 DSNM-D



BT 180 DSPN

BT 180 DSN 4T	BT 180 DSN 4T Hinged	BT 180 DSNM-D	BT 180 DSPN
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Heavy oil burner. Operation:

two-stage

two-stage

two-stage

mechanical two-stage progressive

Extra heavy oil burner. Operation:

two-stage

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

1:3

Adjusting the combustion head.

• • • •

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

• • • •

Fixed boiler coupling flange.

•

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:

electric servomotor electric servomotor electric servomotor mechanical cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

• • • •

Electric motor for pump drive.

• •

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

• •

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Electric fuel preheater with antigas valve, filter, thermometer, adjustment, minimum and safety thermostats.

• •

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment, minimum and safety thermostats.

• •

Atomisation unit with nozzle-closing pin.

• •

Atomisation unit with magnet to control the outlet/nozzle return pins.

• •

Heating element for pump, valve and atomisation unit.

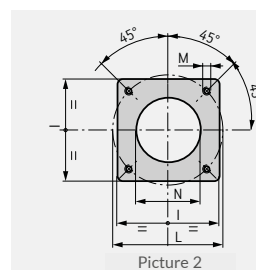
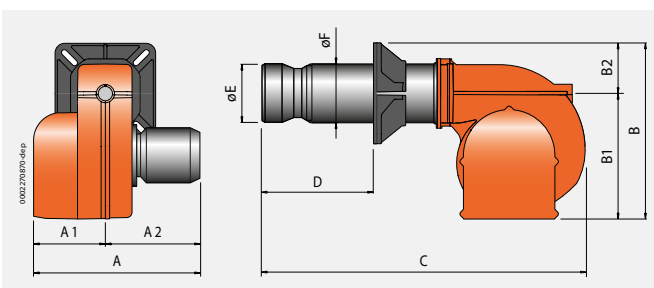
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Flame detection by photoresistance.

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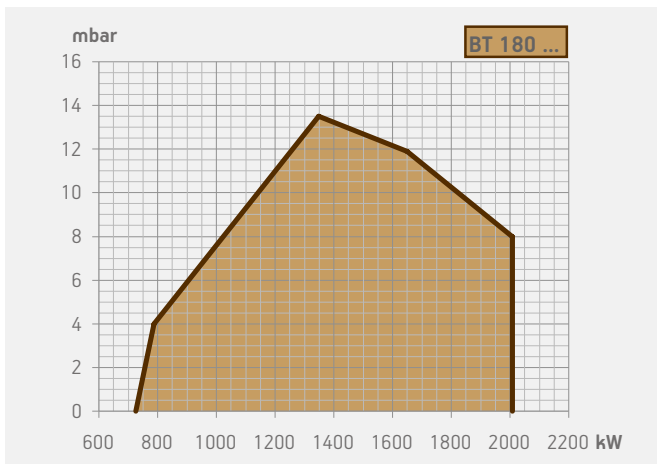
Electric protection rating:

IP40 IP40 IP40 IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 180 DSN 4T	940	450	490	610	450	160	1645	200 ÷ 535	260	220	320	280 ÷ 370	M12	230	2
BT 180 DSN 4T Hinged	755	385	370	890	720	170	1210	280	260	225	340	396	M16	275	2
BT 180 DSNM-D	940	450	490	610	450	160	1645	200 ÷ 535	260	220	320	280 ÷ 370	M12	230	2
BT 180 DSPN	940	450	490	610	450	160	1645	200 ÷ 535	260	220	320	280 ÷ 370	M12	230	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 180 DSN 4T	1730	1030	880	240
BT 180 DSN 4T Hinged	1360	990	1200	240
BT 180 DSNM-D	1730	1030	880	280
BT 180 DSPN	2030	1150	1010	274

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Notes
725 ÷ 2009	BT 180 DSN 4T	2086010	7	3N AC 50Hz 400V	3,0	15	4)
725 ÷ 2009	BT 180 DSN 4T Hinged	2086011	7	3N AC 50Hz 400V	3,0	15	4)
725 ÷ 2009	BT 180 DSNM-D	2507010	50	3N AC 50Hz 400V	3,0+1,1	15	4)
725 ÷ 2009	BT 180 DSPN	2625010	7	3N AC 50Hz 400V	3,0+1,1	15	4)
Frequency 60 Hz							
725 ÷ 2009	BT 180 DSN 4T	20865410	7	3N AC 60Hz 380V	3,5	15	4)
725 ÷ 2009	BT 180 DSN 4T Hinged	20865411	7	3N AC 60Hz 380V	3,5	15	4)
725 ÷ 2009	BT 180 DSNM-D	25075410	50	3N AC 60Hz 380V	3,5+1,3	15	4)
725 ÷ 2009	BT 180 DSPN	26255410	7	3N AC 60Hz 380V	3,5+1,3	15	4)

TO COMPLETE THE BURNER

DESCRIPTION

BT 180 DSNM-D/180 DSPN: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

BT 180 DSPN: modulation kit

PART NO.

98000055

BT 180 DSPN: modulating probe kit (see page 288)

KIT FOR HEAVY OIL

DESCRIPTION

Kit for heavy oil up 20°E at 50°C

BT 180 DSN 4T

PART NO.

98000302

Kit for heavy oil up to 50°E at 50°C

BT 180 DSPN

98000315

Kit for heavy oil with low sulphur content and max viscosity 15°E at 50°C

BT 180 DSN 4T

98000307

BT 180 DSPN

98000318

NOTES

4 Equipped with air closure device.

17 Not including steam regulator.

Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

OPTIONALS

DESCRIPTION

Steam pre-heater (17)

BT 180 DSNM-D/180 DSPN: extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

BT 180 DSN 4T: line filter, flex hoses, nozzles, boiler coupling kit.

BT 180 DSNM-D: self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.

BT 180 DSPN: line filter, flex hoses, boiler coupling kit.



BT 250 DSN 4T



BT 250 DSN 4T HINGED



BT 250 DSNM-D



BT 250 DSPN

BT 250 DSN 4T	BT 250 DSN 4T Hinged	BT 250 DSNM-D	BT 250 DSPN
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Heavy oil burner. Operation:

two-stage

two-stage

two-stage

mechanical two-stage progressive

Extra heavy oil burner. Operation:

two-stage

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

1:3

Adjusting the combustion head.

• • • •

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

• • • •

Fixed boiler coupling flange.

•

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:

electric servomotor electric servomotor electric servomotor mechanical cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

• • • •

Electric motor for pump drive.

• • • •

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

• • • •

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Electric fuel preheater with antigas valve, filter, thermometer, adjustment minimum and safety thermostats.

• • • •

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment, minimum and safety thermostats.

•

•

Atomisation unit with nozzle-closing pin.

• • • •

Atomisation unit with magnet to control the outlet/nozzle return pins.

•

•

Heating element for pump, valve and atomisation unit.

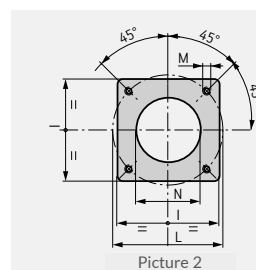
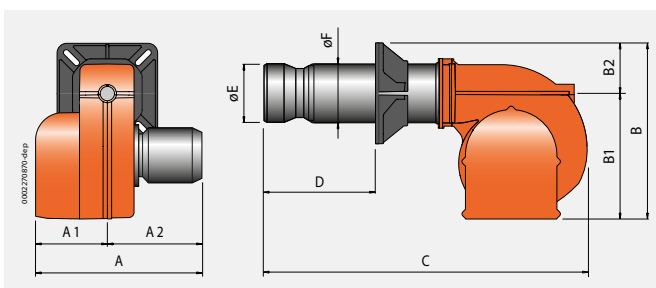
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Flame detection by photoresistance.

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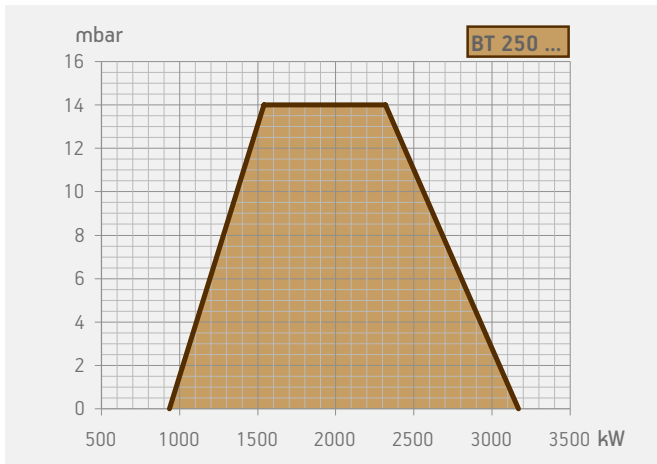
Electric protection rating:

IP40 IP40 IP40 IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 250 DSN 4T	940	450	490	740	580	160	1665	235 ÷ 590	260	220	320	280 ÷ 370	M12	230	2
BT 250 DSN 4T Hinged	890	410	480	1050	870	180	1235	295	260	225	340	396	M16	275	2
BT 250 DSNM-D	1025	535	490	740	580	160	1655	235 ÷ 590	260	220	320	280 ÷ 370	M12	230	2
BT 250 DSPN	1025	535	490	770	580	190	1665	235 ÷ 590	260	220	320	280 ÷ 370	M12	230	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 250 DSN 4T	1730	1030	880	280
BT 250 DSN 4T Hinged	1410	1170	1470	280
BT 250 DSNM-D	2020	1140	1010	320
BT 250 DSPN	2020	1140	1010	314

	Thermal output kW	Model	Part no.	Max visc.	Electrical	Motor	Tank heating	Notes
				°E at 50°C	supply	kW	element kW	
Frequency 50 Hz								
	937 ÷ 3170	BT 250 DSN 4T	2101010	7	3N AC 50Hz 400V	7,5	18	4)
	937 ÷ 3170	BT 250 DSN 4T Hinged	2101011	7	3N AC 50Hz 400V	7,5	18	4)
	937 ÷ 3170	BT 250 DSNM-D	2515010	50	3N AC 50Hz 400V	7,5+1,1	18	4)
	937 ÷ 3170	BT 250 DSPN	2630010	7	3N AC 50Hz 400V	7,5+1,1	18	4)
Frequency 60 Hz								
	937 ÷ 3170	BT 250 DSN 4T	21015410	7	3N AC 60Hz 380V	9,0+1,3	18	4)
	937 ÷ 3170	BT 250 DSN 4T Hinged	21015411	7	3N AC 60Hz 380V	9,0+1,3	18	4)
	937 ÷ 3170	BT 250 DSNM-D	25155410	50	3N AC 60Hz 380V	9,0+1,3	18	4)
	937 ÷ 3170	BT 250 DSPN	26305410	7	3N AC 60Hz 380V	9,0+1,3	18	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 250 DSNM-D/250 DSPN: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
BT 250 DSPN: modulation kit	98000055
BT 250 DSPN: modulating probe kit (see page 288)	

KIT FOR HEAVY OIL

DESCRIPTION	PART NO.
Kit for heavy oil up 20°E at 50°C	
BT 250 DSN 4T	98000302
Kit for heavy oil up to 50°E at 50°C	
BT 250 DSPN	98000315
Kit for heavy oil with low sulphur content and max viscosity 15°E at 50°C	
BT 250 DSN 4T	98000307
BT 250 DSPN	98000318

NOTES

- 4 Equipped with air closure device.
 - 17 Not including steam regulator.
- Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

OPTIONALS

DESCRIPTION
Steam pre-heater (17)
BT 250 DSNM-D/250 DSPN: extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

BT 250 DSN 4T: line filter, flex hoses, nozzles, boiler coupling kit.
BT 250 DSNM-D: self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.
BT 250 DSPN: line filter, flex hoses, boiler coupling kit.



BT 300 DSN 4T



BT 300 DSN 4T HINGED



BT 300 DSNM-D



BT 300 DSPN

BT 300 DSN 4T	BT 300 DSN 4T Hinged	BT 300 DSNM-D	BT 300 DSPN
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Heavy oil burner. Operation:

two-stage

two-stage

mechanical two-stage progressive

Extra heavy oil burner. Operation:

two-stage

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

1:3

Adjusting the combustion head.

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Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

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Fixed boiler coupling flange.

•

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

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•

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:

electric servomotor

electric servomotor

electric servomotor

mechanical cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

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•

Electric motor for pump drive.

•

•

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

•

•

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Electric fuel preheater with antigas valve, filter, thermometer, adjustment, minimum and safety thermostats.

•

•

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment, minimum and safety thermostats.

•

•

Atomisation unit with nozzle-closing pin.

•

•

Atomisation unit with magnet to control the outlet/nozzle return pins.

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Heating element for pump, valve and atomisation unit.

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Flame detection by photoresistance.

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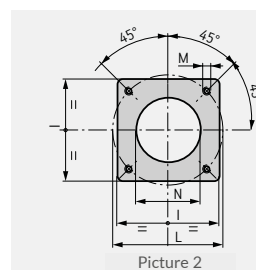
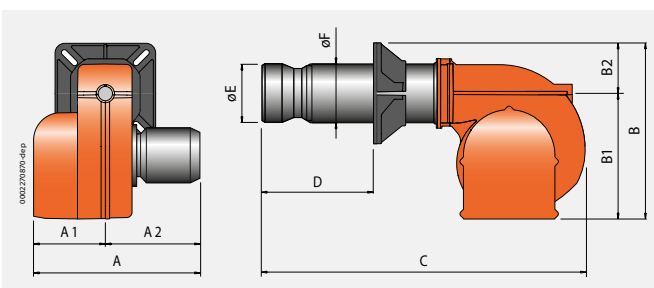
Electric protection rating:

IP40

IP40

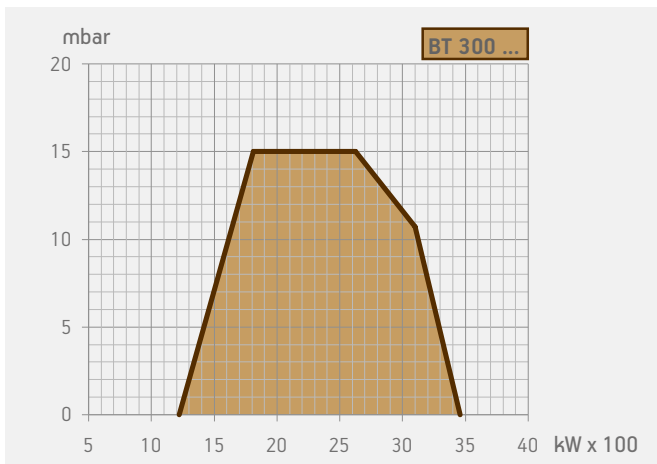
IP40

IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 300 DSN 4T	1155	645	510	840	620	220	1900	245 ÷ 605	360	275	440	400 ÷ 540	M20	365	2
BT 300 DSN 4T Hinged	945	455	490	1170	950	220	1530	420	360	280	430	509	M18	370	2
BT 300 DSNM-D	1135	625	510	800	580	220	1900	245 ÷ 605	360	275	440	400 ÷ 540	M20	365	2
BT 300 DSPN	1135	625	510	800	580	220	1900	245 ÷ 605	360	275	440	400 ÷ 540	M20	365	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 300 DSN 4T	2260	1520	1150	350
BT 300 DSN 4T Hinged	1710	1540	1560	350
BT 300 DSNM-D	2260	1520	1150	405
BT 300 DSPN	2260	1520	1150	396

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Notes
1220 ÷ 3460	BT 300 DSN 4T	2131010	7	3N AC 50Hz 400V	7,5	25,5	4)
1220 ÷ 3460	BT 300 DSN 4T Hinged	2131011	7	3N AC 50Hz 400V	7,5	25,5	4)
1220 ÷ 3460	BT 300 DSNM-D	2520010	50	3N AC 50Hz 400V	7,5+2,2	25,5	4)
1220 ÷ 3460	BT 300 DSPN	2635010	7	3N AC 50Hz 400V	7,5+2,2	25,5	4)
Frequency 60 Hz							
1220 ÷ 3460	BT 300 DSN 4T	21315410	7	3N AC 60Hz 380V	9,0+1,3	25,5	4)
1220 ÷ 3460	BT 300 DSN 4T Hinged	21315411	7	3N AC 60Hz 380V	9,0+1,3	25,5	4)
1220 ÷ 3460	BT 300 DSNM-D	25205410	50	3N AC 60Hz 380V	9,0+2,6	25,5	4)
1220 ÷ 3460	BT 300 DSPN	26355410	7	3N AC 60Hz 380V	9,0+2,6	25,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 300 DSNM-D/300 DSPN: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
BT 300 DSPN: modulation kit	98000055
BT 300 DSPN: modulating probe kit (see page 288)	

KIT FOR HEAVY OIL

DESCRIPTION	PART NO.
Kit for heavy oil up 20°E at 50°C	
BT 300 DSN 4T	98000304
Kit for heavy oil up to 50°E at 50°C	
BT 300 DSPN	98000316
Kit for heavy oil with low sulphur content and max viscosity 15°E at 50°C	
BT 300 DSN 4T	98000309
BT 300 DSPN	98000319

NOTES

- 4 Equipped with air closure device.
 - 17 Not including steam regulator.
- Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

OPTIONALS

DESCRIPTION
Steam pre-heater (17)
BT 300 DSNM-D/300 DSPN: extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

BT 300 DSN 4T: line filter, flex hoses, nozzles, boiler coupling kit.
BT 300 DSNM-D: self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.
BT 300 DSPN: line filter, flex hoses, boiler coupling kit.



BT 350 DSN 4T



BT 350 DSN 4T HINGED



BT 350 DSNM-D



BT 350 DSPN

BT 350 DSN 4T	BT 350 DSN 4T Hinged	BT 350 DSNM-D	BT 350 DSPN
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Heavy oil burner. Operation:

two-stage

two-stage

mechanical two-stage progressive

Extra heavy oil burner. Operation:

two-stage

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

1:3

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Fixed boiler coupling flange.

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:

electric servomotor

electric servomotor

electric servomotor

mechanical cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Electric motor for pump drive.

Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

Electric fuel preheater with antigas valve, filter, thermometer, adjustment, minimum and safety thermostats.

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment, minimum and safety thermostats.

Atomisation unit with nozzle-closing pin.

Atomisation unit with magnet to control the outlet/nozzle return pins.

Heating element for pump, valve and atomisation unit.

Flame detection by photoresistance.

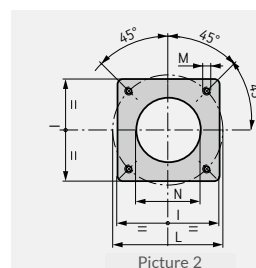
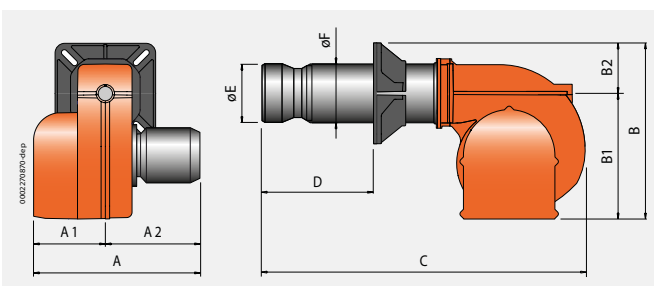
Electric protection rating:

IP40

IP40

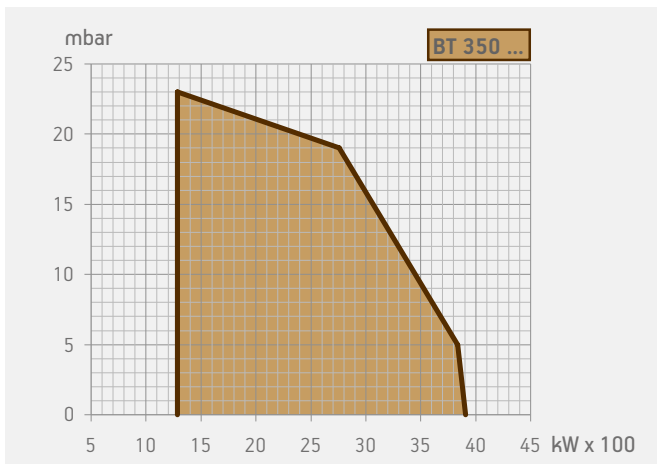
IP40

IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
BT 350 DSN 4T	1170	645	525	880	660	220	1960	350 ÷ 560	360	275	440	400 ÷ 540	M20	365	2
BT 350 DSN 4T Hinged	1085	560	525	1125	1005	220	1530	420	360	280	430	509	M18	370	2
BT 350 DSNM-D	1220	695	525	880	660	220	1960	350 ÷ 560	360	275	440	400 ÷ 540	M20	365	2
BT 350 DSPN	1220	695	525	880	660	220	1960	350 ÷ 560	360	275	440	400 ÷ 540	M20	365	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BT 350 DSN 4T	2260	1520	1150	420
BT 350 DSN 4T Hinged	1710	1540	1560	420
BT 350 DSNM-D	2260	1520	1150	475
BT 350 DSPN	2260	1520	1150	466

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Notes
1284 ÷ 3907	BT 350 DSN 4T	2121010	7	3N AC 50Hz 400V	9,0	28,5	4)
1284 ÷ 3907	BT 350 DSN 4T Hinged	2121011	7	3N AC 50Hz 400V	9,0	28,5	4)
1284 ÷ 3907	BT 350 DSNM-D	2525010	50	3N AC 50Hz 400V	9,0+2,2	28,5	4)
1284 ÷ 3907	BT 350 DSPN	2640010	7	3N AC 50Hz 400V	9,0+2,2	28,5	4)
Frequency 60 Hz							
1284 ÷ 3907	BT 350 DSN 4T	21215410	7	3N AC 60Hz 380V	11,0+1,3	28,5	4)
1284 ÷ 3907	BT 350 DSN 4T Hinged	21215411	7	3N AC 60Hz 380V	11,0+1,3	28,5	4)
1284 ÷ 3907	BT 350 DSNM-D	25255410	50	3N AC 60Hz 380V	11,0+2,6	28,5	4)
1284 ÷ 3907	BT 350 DSPN	26405410	7	3N AC 60Hz 380V	11,0+2,6	28,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
BT 350 DSNM-D/300 DSPN: nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
BT 350 DSPN: modulation kit	98000055
BT 350 DSPN: modulating probe kit (see page 288)	

KIT FOR HEAVY OIL

DESCRIPTION	PART NO.
Kit for heavy oil up 20°E at 50°C	
BT 350 DSN 4T	98000304
Kit for heavy oil up to 50°E at 50°C	
BT 350 DSPN	98000316
Kit for heavy oil with low sulphur content and max viscosity 15°E at 50°C	
BT 350 DSN 4T	98000309
BT 350 DSPN	98000319

NOTES

- 4 Equipped with air closure device.
 - 17 Not including steam regulator.
- Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

OPTIONALS

DESCRIPTION
Steam pre-heater (17)
BT 350 DSNM-D/300 DSPN: extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

BT 350 DSN 4T: line filter, flex hoses, nozzles, boiler coupling kit.
BT 350 DSNM-D: self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.
BT 350 DSPN: line filter, flex hoses, boiler coupling kit.



Extra heavy oil burner. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Electric motor for pump drive.

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment, minimum and safety thermostats.

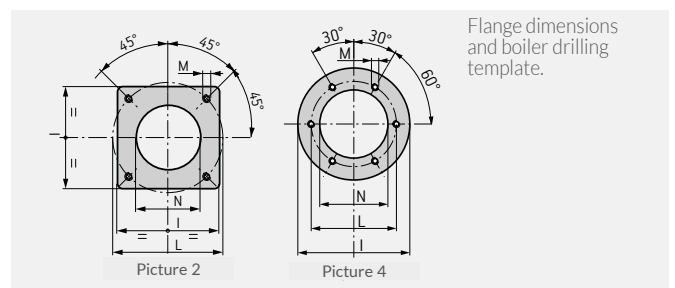
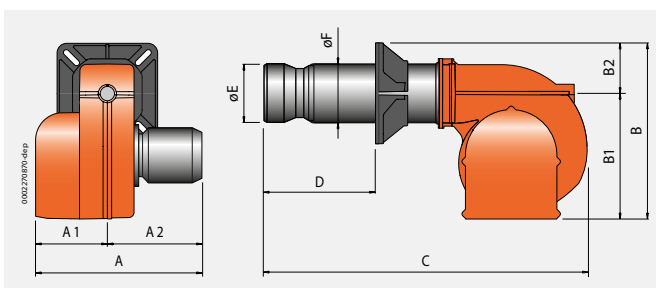
Atomisation unit with magnet to control the outlet/nozzle return pins.

Heating element for pump, valve and atomisation unit.

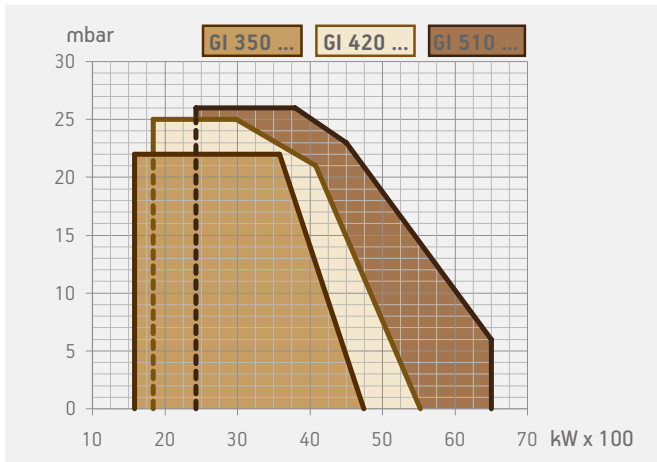
Flame detection by photoresistance.

Electric protection rating:

	GI 350 DSPN-D	GI 420 DSPN-D	GI 510 DSPN-D
	mechanical two-stage progressive	mechanical two-stage progressive	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•	•	•
Modulation ratio:	1:3	1:3	1:3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	mechanical cam	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Electric motor for pump drive.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.	•	•	•
Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment, minimum and safety thermostats.	•	•	•
Atomisation unit with magnet to control the outlet/nozzle return pins.	•	•	•
Heating element for pump, valve and atomisation unit.	•	•	•
Flame detection by photoresistance.	•	•	•
Electric protection rating:	IP40	IP40	IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
GI 350 DSPN-D	1345	660	685	970	750	220	1900	275 ÷ 500	360	275	440	400 ÷ 540	M20	365	2
GI 420 DSPN-D	1345	660	685	1040	750	290	2030	275 ÷ 500	400	355	580	520	M20	420	4
GI 510 DSPN-D	1345	660	685	1040	750	290	2030	275 ÷ 500	400	355	580	520	M20	420	4



Model	Size of packaging			Weight kg
	L	P mm	H	
GI 350 DSPN-D	2260	1520	1150	578
GI 420 DSPN-D	2260	1520	1150	672
GI 510 DSPN-D	2260	1520	1150	704

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Notes
1581 ÷ 4743	GI 350 DSPN-D	6533010	50	3N AC 50Hz 400V	15,0+2,2	28,5	4)
1840 ÷ 5522	GI 420 DSPN-D	6538010	50	3N AC 50Hz 400V	18,5+3,0	28,5	4)
2430 ÷ 6500	GI 510 DSPN-D	6543010	50	3N AC 50Hz 400V	18,5+3,0	28,5	4)
							Frequency 60 Hz
1581 ÷ 4743	GI 350 DSPN-D	65335410	50	3N AC 60Hz 380V	11,0+2,6	28,5	4)
1840 ÷ 5522	GI 420 DSPN-D	65385410	50	3N AC 60Hz 380V	13,0+3,5	28,5	4)
2430 ÷ 6500	GI 510 DSPN-D	65435410	50	3N AC 60Hz 380V	22,0+3,5	28,5	4)

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

PART NO.

Modulation kit

98000055

Modulating probe kit (see page 288)

OPTIONALS

DESCRIPTION

Steam pre-heater (17)

Extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

Self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.

NOTES

4 Equipped with air closure device.

17 Not including steam regulator.

Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.



GI 1000 DSPN-D

Extra heavy oil burner. Operation:

mechanical two-stage progressive

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

•

Modulation ratio:

1:4

Adjusting the combustion head.

•

Maintenance facilitated by the possibility of removing the combustion head without having to remove the burner from the boiler.

•

Fixed boiler coupling flange.

•

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

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

•

Electric motor for pump drive.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, minimum and safety thermostats, electronic temperature regulator.

•

Atomisation unit with magnet to control the outlet/nozzle return pins.

•

Heating element for pump, valve and atomisation unit.

•

Ignition gas train complete with operation and safety valve, min. pressure switch, pressure regulator and gas filter.

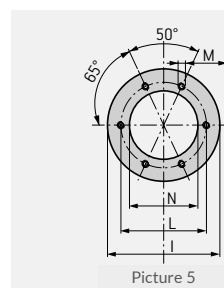
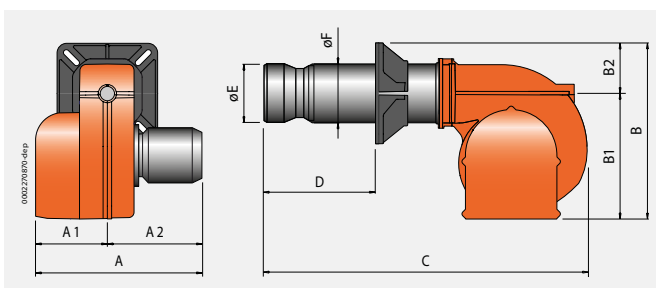
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Flame detection by UV photocell.

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Electric protection rating:

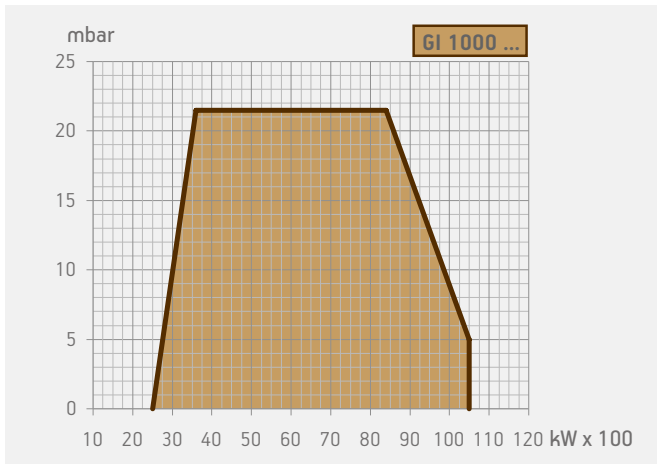
IP40



Flange dimensions and boiler drilling template.

Picture 5

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
GI 1000 DSPN-D	1465	800	665	1260	855	405	1960	430	480	490	800	765	M16	495	5



Model	Size of packaging			Weight kg
	L	P mm	H	
GI 1000 DSPN-D	2610	1760	1470	1040

Thermal output kW	Model	Part no.	Max visc.	Electrical supply	Motor	Tank heating element	Notes
			°E at 50°C		kW	kW	
2500 ÷ 10500	GI 1000 DSPN-D	6553010	50	3N AC 50Hz 400V	22,0+4,0	40	4) 13)
	Frequency 50 Hz						
2500 ÷ 10500	GI 1000 DSPN-D	65535410	50	3N AC 60Hz 380V	30,0+3,5	40	4) 13)
	Frequency 60 Hz						

TO COMPLETE THE BURNER

DESCRIPTION
Nozzle with 1 ÷ 3 ratio (see page 289)

MODULATING MODE

DESCRIPTION	PART NO.
Modulation kit	98000055
Modulating probe kit (see page 288)	

OPTIONALS

DESCRIPTION
Steam pre-heater (17)
Extra heavy oil burner operation max viscosity 100°E at 50°C

HEAVY OIL BURNER ACCESSORIES

Self-cleaning, line filter with heating element and thermostat, flex hoses, boiler coupling kit.

NOTES

- 4 Equipped with air closure device.
 - 13 Electric fuel pre-heater supplied separately, not on board machine.
 - 17 Not including steam regulator.
- Net calorific value of light oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

Symbology

BPM...
Modulating
premix burners.

**BTG...
TBG...**
Single-stage gas
burners.

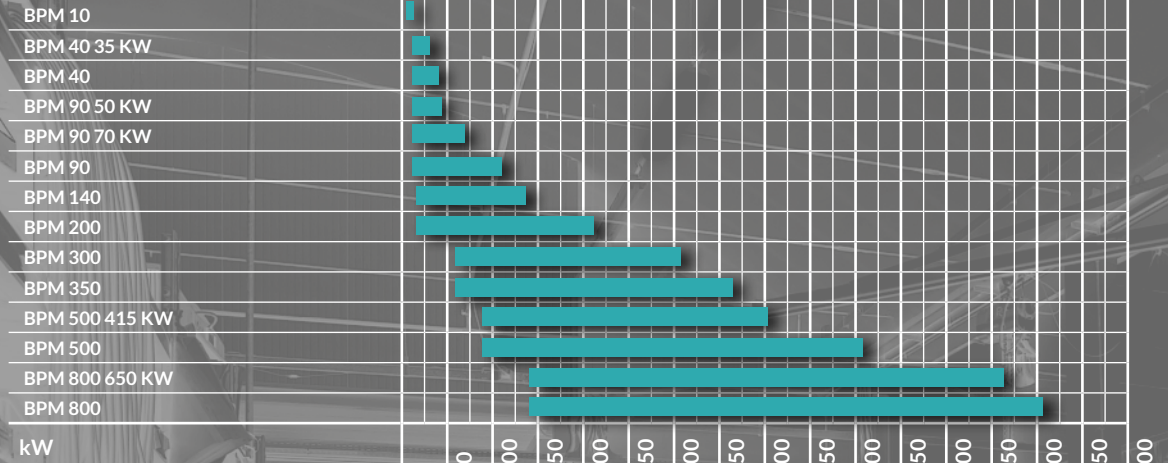
**BTG...P
TBG...P**
Two-stage gas
burners.

**TBG...MC
BGN...MC
GI...MC**
Two-stage
progressive/
modulating gas
burners with
mechanical cam.

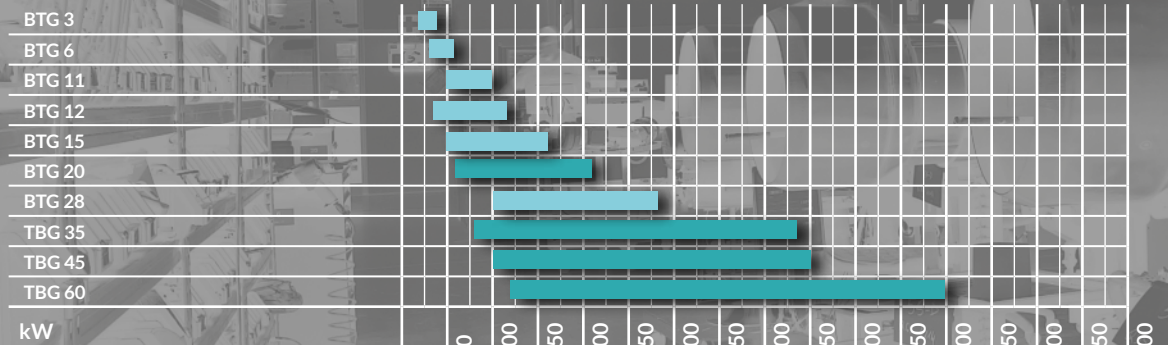
**BTG 20 LX
BGN...LX**
Two-stage
progressive/
modulating
gas burners
with pneumatic
regulation.

Low NOx

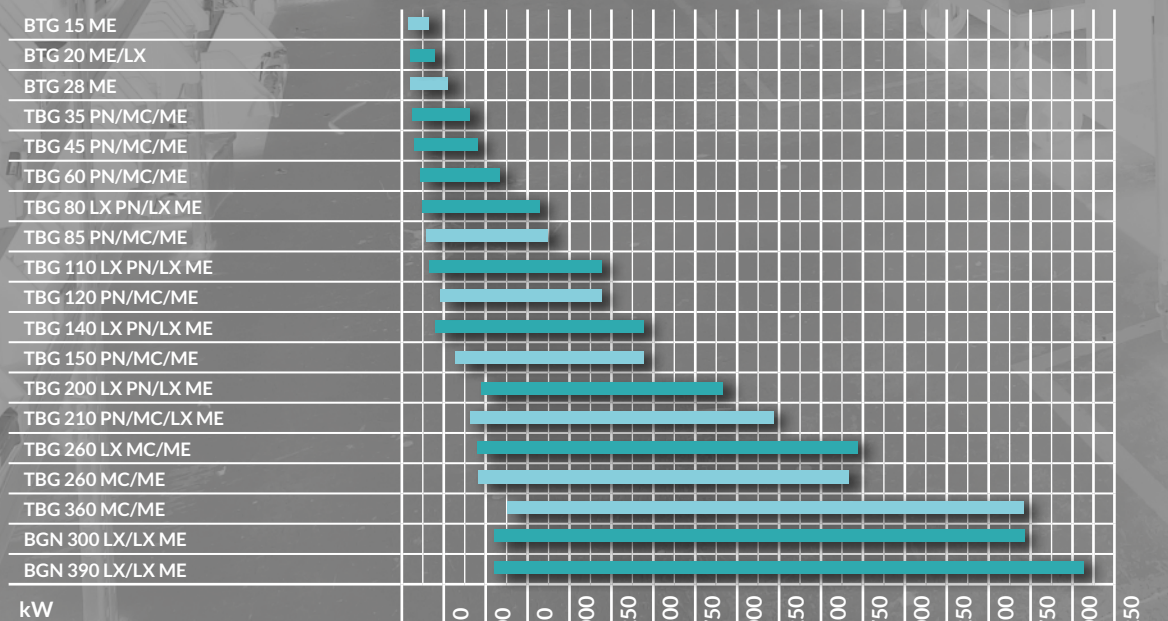
PREMIXED MODULATING



SINGLE - STAGE GAS BURNERS



TWO - STAGE PROGRESSIVE GAS BURNERS



**TBG...PN
TBG LX PN**

Two-stage progressive/
modulating gas burners
with pneumatic
regulation.

**BTG...ME
TBG...ME
TBG LX ME
BGN...ME
BGN...LX ME
GI...ME**

Two-stage progressive/
modulating gas burners
with electronic cam.

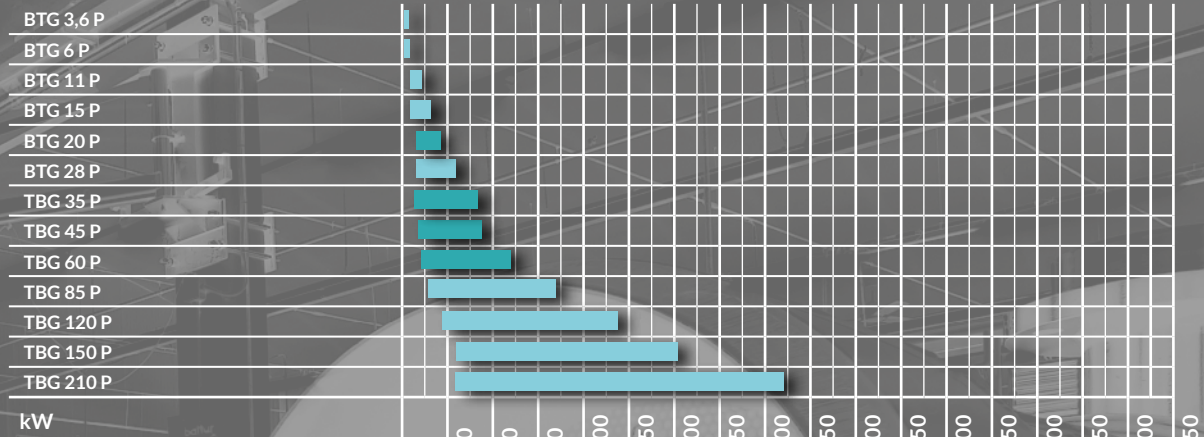
**TBG...ME V
TBG...LX ME V**

Modulating gas
burners with electronic
modulation and with
frequency converter
(inverter).

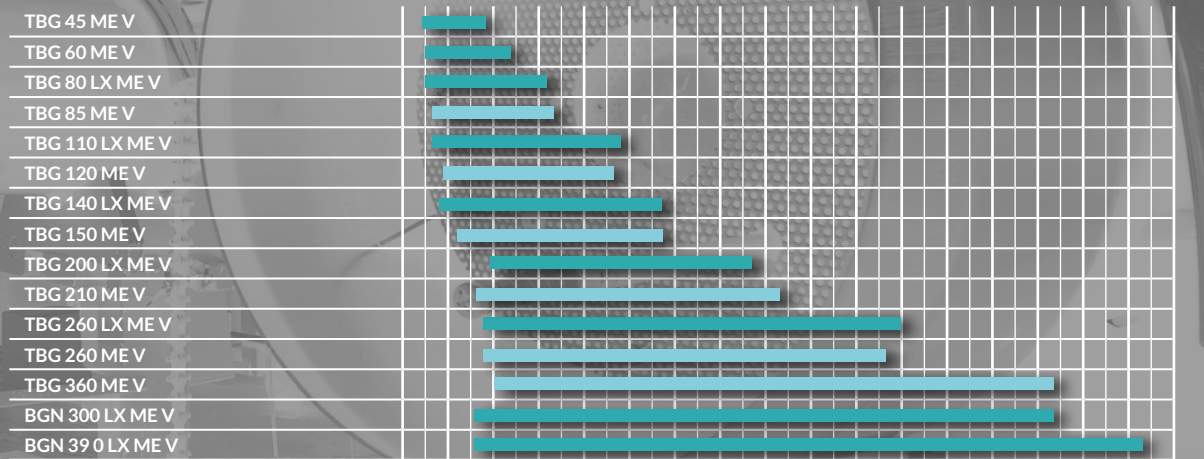
**BGN...ME V
BGN...LX ME V**

Modulating gas
burners with electronic
modulation and with
frequency converter
(inverter).

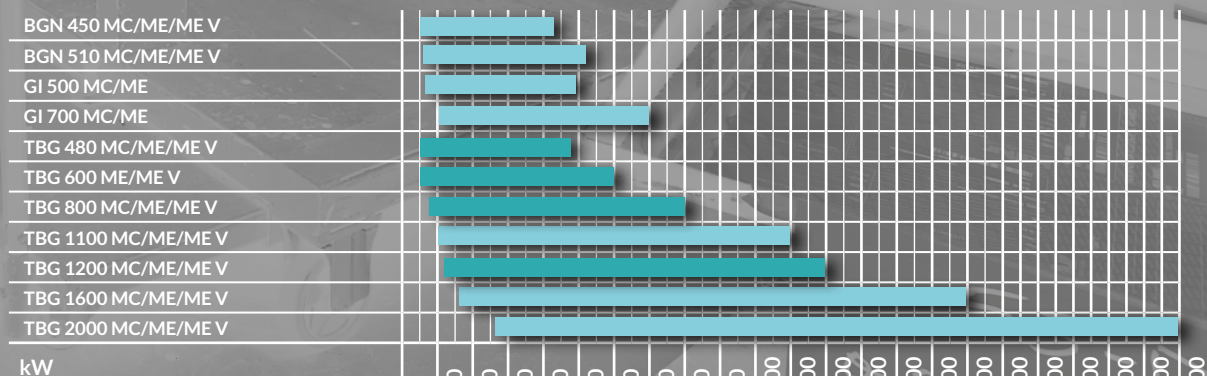
TWO-STAGE GAS BURNERS



MODULATING GAS BURNERS



INDUSTRIAL GAS BURNERS





Features

The **BPM** series burner range makes use of a pre-mixed combustion technology: combustion air and fuel gas are mixed in the right proportions before being introduced into the burner.

BPM range burners consist of two main sections creating several interesting benefits compared to traditional products:

- Modulating blower: with brushless motor and electro-pneumatic gas valve.
This technical solution makes it possible to obtain high modulating ratios (up to 1/6 depending on the model), which mean a better operating efficiency, since the capability to modulate the heat input based on real current needs dramatically reduces the cooling of the generator caused by intermittent operations.
- Combustion head: consisting of a special wire cloth on which a very compact flame (microflame) develops radially, thus allowing the application of these burners on furnaces with contained dimensions and reducing the boiler overall dimensions. Furthermore, it allows reaching low polluting emissions of NOx and CO.
Thanks to this structural solution, burners are extremely compact, energy saving, thanks to the high modulating ratios, and extremely silent.

Plus

- Flexible and adaptable to any type of application in various industrial sectors: heat generators, steam generators, ovens for food applications, spray booths, heat exchangers, special custom applications.
- Ideal for **OEM** applications: burners are designed in partnership with the customer in various forms and dimensions according to the exchanger and application.
- Compact flame with radial development and incandescence burner: reduction of contact between the flame and furnace walls.
- Low nitric oxide (**NOx**) and **CO** polluting emissions.
- Modulating operation. Available upon request in single-stage and two-stage operation.
- Extremely silent operation.
- Compact design.
- Wide available range: 10kW to 720kW.
- Natural gas and **LPG** operation (depending on the model).
- High modulating ratios (up to 1/6).
- Electrical consumptions reduced by up to 40%.
- Easy regulation and maintenance.
- Protection cover made of soundproof plastic material (except W version).

Customized solutions:

we support the customer with the definition and optimisation of the system.

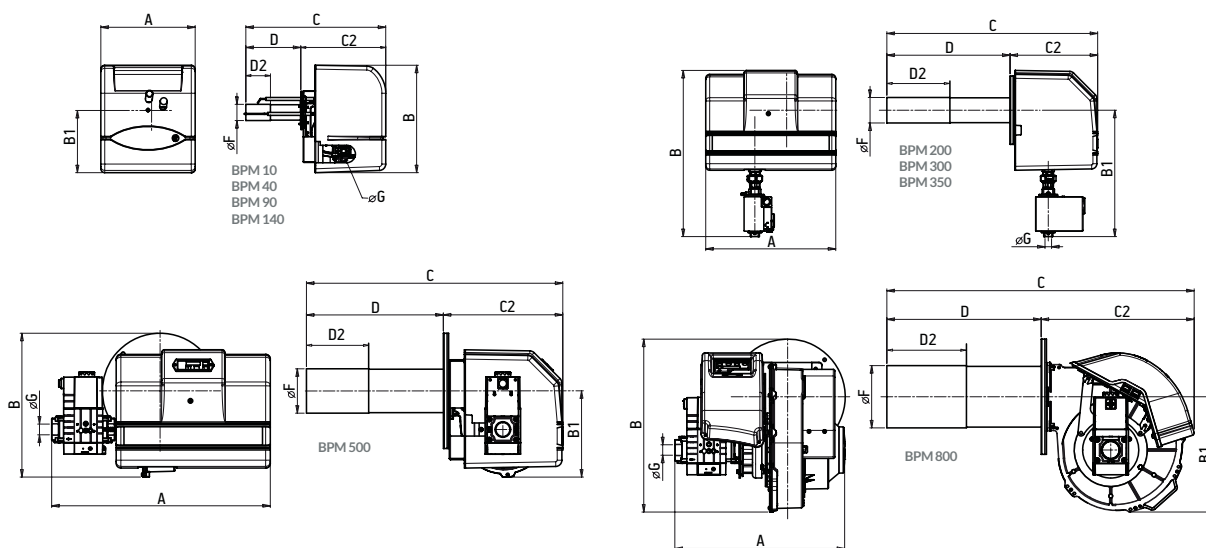


Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Fuel supply	Operation	Minimum size chamber combustion mm		Size of packaging mm			Weight kg
							Diam.	Length	L	P	H	
class 3	2 ÷ 10	BPM 10 W	18000100	1N AC 50Hz 230V	Natural Gas *	Modulating	120	180	540	300	320	7
class 3	2 ÷ 10	BPM 10	18000101	1N AC 50Hz 230V	Natural Gas *	Modulating	120	180	540	300	320	8
class 3	22 ÷ 35	BPM 40 W - 35 kW	18000402	1N AC 50Hz 230V	Natural Gas *	Modulating	180	360	620	480	310	8
class 3	22 ÷ 35	BPM 40 - 35 kW	18000403	1N AC 50Hz 230V	Natural Gas *	Modulating	180	360	620	480	310	9
class 3	22 ÷ 43	BPM 40 W	18000400	1N AC 50Hz 230V	Natural Gas *	Modulating	190	360	620	480	310	8
class 3	22 ÷ 43	BPM 40	18000401	1N AC 50Hz 230V	Natural Gas *	Modulating	190	360	620	480	310	9
class 3	20 ÷ 50	BPM 90 W - 50 kW	18000602	1N AC 50Hz 230V	Natural Gas *	Modulating	200	400	580	340	360	12
class 3	20 ÷ 50	BPM 90 - 50 kW	18000603	1N AC 50Hz 230V	Natural Gas *	Modulating	200	400	580	340	360	13
class 3	20 ÷ 70	BPM 90 W - 70 kW	18000600	1N AC 50Hz 230V	Natural Gas *	Modulating	230	470	580	340	360	12
class 3	20 ÷ 70	BPM 90 - 70 kW	18000601	1N AC 50Hz 230V	Natural Gas *	Modulating	230	470	580	340	360	13
class 3	20 ÷ 103	BPM 90 W	18000700	1N AC 50Hz 230V	Natural Gas *	Modulating	260	570	580	340	360	12
class 3	20 ÷ 103	BPM 90	18000701	1N AC 50Hz 230V	Natural Gas *	Modulating	260	570	580	340	360	13
class 3	30 ÷ 142	BPM 140 W	18000900	1N AC 50Hz 230V	Natural Gas *	Modulating	290	670	580	340	360	14
class 3	30 ÷ 142	BPM 140	18000901	1N AC 50Hz 230V	Natural Gas *	Modulating	290	670	580	340	360	15
class 3	30 ÷ 210	BPM 200 W	18001200	1N AC 50Hz 230V	Natural Gas *	Modulating	330	820	890	560	450	27
class 3	30 ÷ 210	BPM 200	18001201	1N AC 50Hz 230V	Natural Gas *	Modulating	330	820	890	560	450	28
class 3	63 ÷ 310	BPM 300	18001300	1N AC 50Hz 230V	Natural Gas *	Modulating	370	1000	1070	560	440	28
class 3	70 ÷ 350	BPM 350	18001400	1N AC 50Hz 230V	Natural Gas *	Modulating	390	1060	1070	560	440	37
class 3	90 ÷ 415	BPM 500 - 415 kW	18001500	1N AC 50Hz 230V	Natural Gas	Modulating	410	1150	1100	540	480	45
class 3	90 ÷ 520	BPM 500	18001602	1N AC 50Hz 230V	Natural Gas	Modulating	450	1300	1100	540	480	45
class 3	142 ÷ 650	BPM 800 - 650 kW	18001700	1N AC 50Hz 230V	Natural Gas	Modulating	480	1450	1530	760	700	48
class 3	142 ÷ 720	BPM 800	18001800	1N AC 50Hz 230V	Natural Gas	Modulating	500	1500	1530	760	700	48

*) GPL demand

OPTIONALS

DESCRIPTION	PART NO.
Signal decoupler kit	98000379

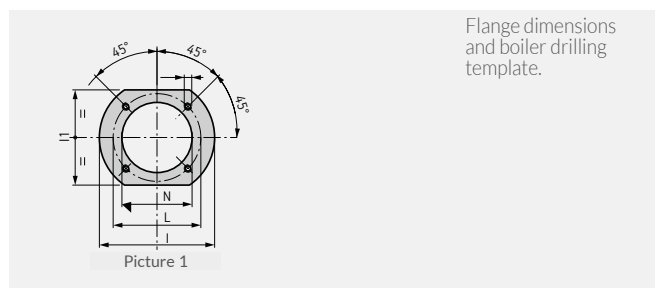
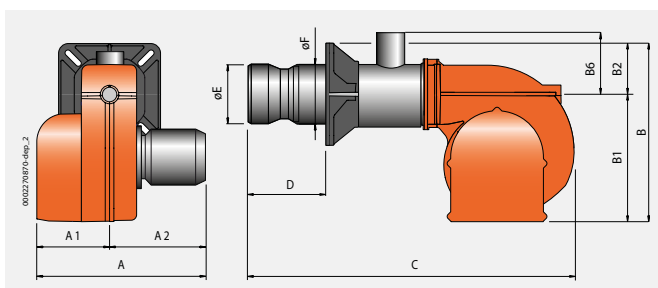


MODEL	A mm	B mm	B1 mm	C mm	C2 mm	D mm	D2 mm	F Ø	G Ø
BPM 10 W	230	300	170	430	255	175	75	53	3/4"
BPM 10	305	345	200	450	274	175	75	53	3/4"
BPM 40 W - 35kW	255	300	180	460	250	175	75	53	3/4"
BPM 40 - 35kW	305	345	200	524	274	175	75	53	3/4"
BPM 40 W	255	300	180	500	250	250	150	35	3/4"
BPM 40	305	345	200	524	274	250	150	35	3/4"
BPM 90 W - 50kW	280	300	180	550	255	295	200	64	3/4"
BPM 90 - 50kW	305	345	191	571	276	295	200	64	3/4"
BPM 90 W - 70kW	280	300	180	550	255	295	200	64	3/4"
BPM 90 - 70kW	305	345	191	571	276	295	200	64	3/4"
BPM 90 W	280	300	180	550	255	295	200	64	3/4"
BPM 90	305	345	191	571	276	295	200	64	3/4"

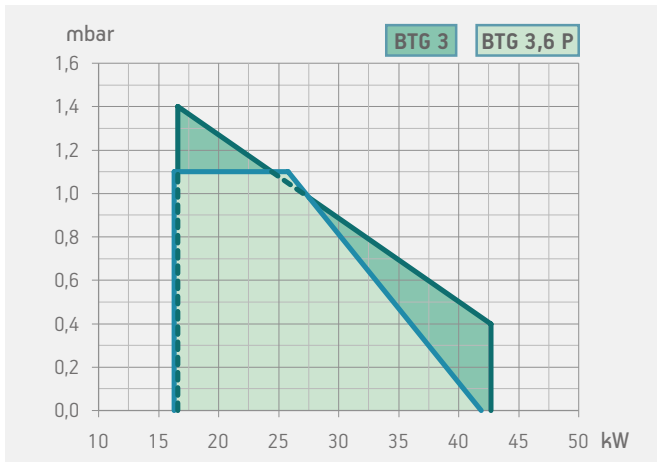
MODEL	A mm	B mm	B1 mm	C mm	C2 mm	D mm	D2 mm	F Ø	G Ø
BPM 140 W	340	310	210	625	270	355	240	84	3/4"
BPM 140	355	345	232	639	284	355	240	84	3/4"
BPM 200 W	370	475	345	785	315	470	240	97	1"
BPM 200	495	642	490	804	334	470	240	97	1"
BPM 300	495	642	490	923	334	590	360	97	1"
BPM 350	495	642	490	1014	334	680	440	143	1"
BPM 500 - 415kW	702	462	277	1063	383	680	440	143	1 1/2"
BPM 500	702	462	277	1063	383	680	440	143	1 1/2"
BPM 800 - 650kW	550	555	370	1081	491	590	350	200	1 1/2"
BPM 800	550	555	370	1181	491	690	450	200	1 1/2"



	BTG 3	BTG 3,6 P
Gas burner compliant with European standard EN676. Operation:	single-stage	two-stage
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•
Fixed boiler coupling flange.	•	
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.		•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, 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:	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•
Electric protection rating:	IP40	IP40
Sound-proof plastic protective cover.	•	•



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	I1 mm	L mm	M mm	N mm	Pic.
BTG 3	250	120	130	242	170	72	48	330	90	90	90	170	144	135 ÷ 161	M8	95	1
BTG 3,6 P	246	123	123	289	219	70	53	410	50 ÷ 105	90	90	170	140	130 ÷ 155	M8	95	1



Model	Size of packaging			Weight kg
	L	P mm	H	
BTG 3	400	300	280	9
BTG 3,6 P	540	300	320	12

Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz					
16,6 ÷ 42,7	BTG 3	17000010	1N AC 50Hz 230V	0,09	1)
16,3 ÷ 41,9	BTG 3,6 P	17030010	1N AC 50Hz 230V	0,10	1)
Frequency 60 Hz					
16,6 ÷ 42,7	BTG 3	17000010	1N AC 60Hz 220V	0,09	1)
16,3 ÷ 41,9	BTG 3,6 P	17030010	1N AC 60Hz 220V	0,10	1)

OPTIONALS

DESCRIPTION

BTG 3: 200 mm long combustion head

BTG 3,6 P: 300 mm long combustion head

GAS BURNER ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

1 Equipped with air closure device.

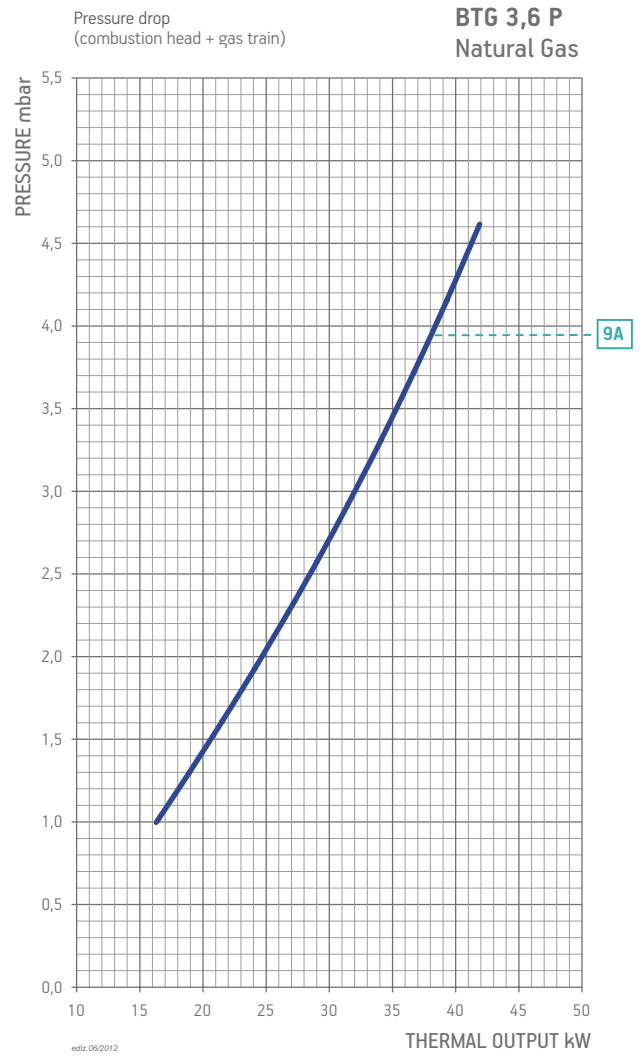
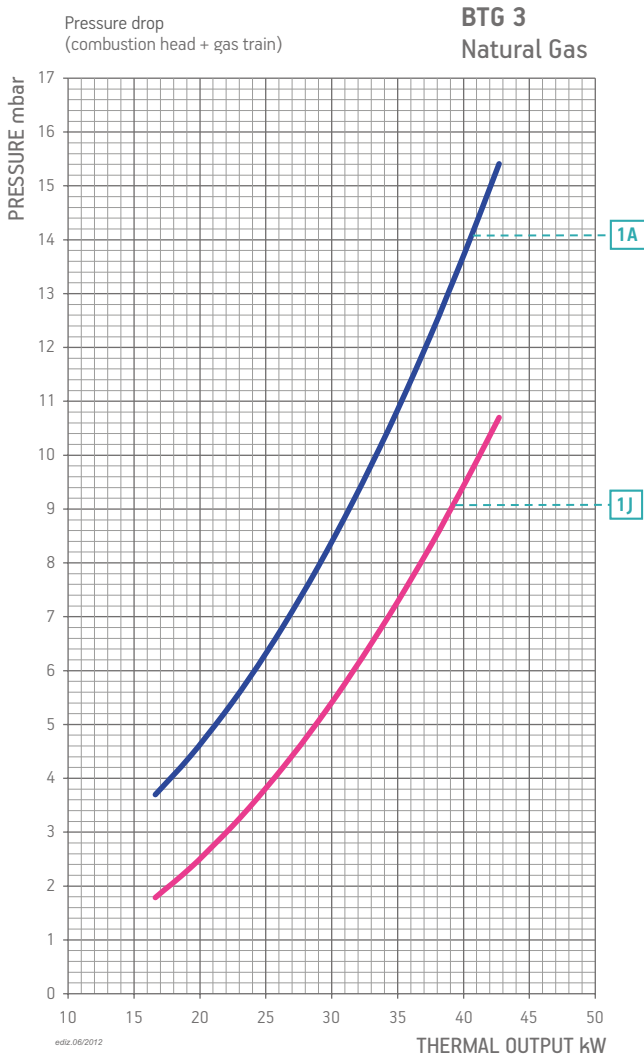
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural Gas: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$.

LPG: $H_i = 92 \text{ MJ/m}^3 = 22000 \text{ kcal/m}^3$.

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

BURNER/GAS TRAIN MATCH



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.		
BTG 3	Natural gas	1A	CE/EXP	65		19990466	Included	-	-	M2	
		1J	EXP	40		19990235	-	96000030	-	ME1	
BTG 3,6 P	Natural gas	9A	CE/EXP	360		19990016	Included	-	-	B2	
					CTV	19990016	Included	-	98000100	B2	12)

Burner model	Gas type	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.		
BTG 3	LGP	CE	65		19990466	Included	-	-	M2	
		EXP	40		19990235	-	96000030	-	ME1	
BTG 3,6 P	LGP	CE/EXP	360		19990016	Included	-	-	B2	
				CTV	19990016	Included	-	98000100	B2	12)

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

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

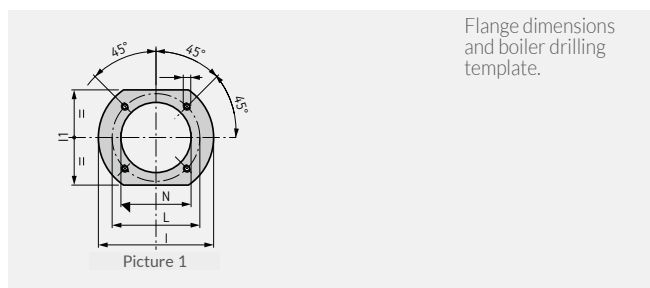
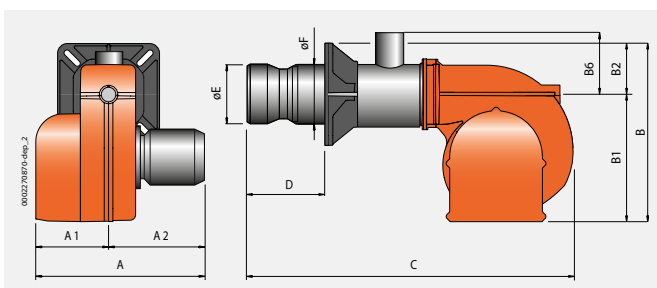


BTG 6	BTG 6 P
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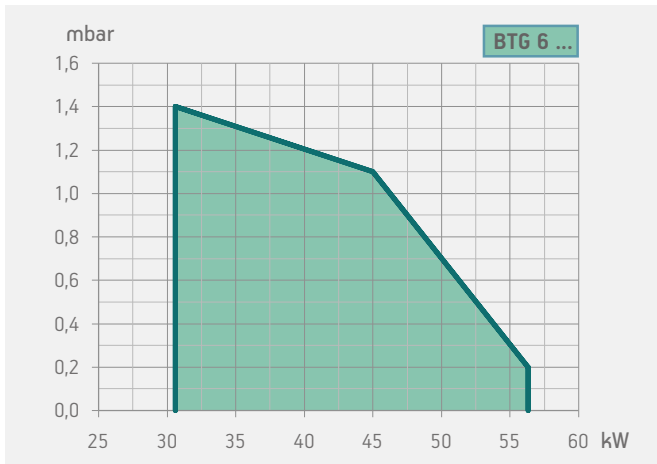
Gas burner compliant with European standard EN676. Operation:

	single-stage	two-stage
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, 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:	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•
Electric protection rating:	IP40	IP40
Sound-proof plastic protective cover.	•	•

GAS



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	I1 mm	L mm	M mm	N mm	Pic.
BTG 6	246	123	123	289	219	70	53	410	50 ÷ 105	90	90	170	140	130 ÷ 155	M8	95	1
BTG 6 P	246	123	123	289	219	70	53	410	50 ÷ 105	90	90	170	140	130 ÷ 155	M8	95	1



Model	Size of packaging			Weight kg
	L	P mm	H	
BTG 6	540	300	320	12
BTG 6 P	540	300	320	12

Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz					
30,6 ÷ 56,3	BTG 6	17040010	1N AC 50Hz 230V	0,1	1)
30,6 ÷ 56,3	BTG 6 P	17050010	1N AC 50Hz 230V	0,1	1)
Frequency 60 Hz					
30,6 ÷ 56,3	BTG 6	17040010	1N AC 60Hz 220V	0,1	1)
30,6 ÷ 56,3	BTG 6 P	17050010	1N AC 60Hz 220V	0,1	1)

OPTIONALS

DESCRIPTION

300 mm long combustion head

GAS BURNER ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

1 Equipped with air closure device.

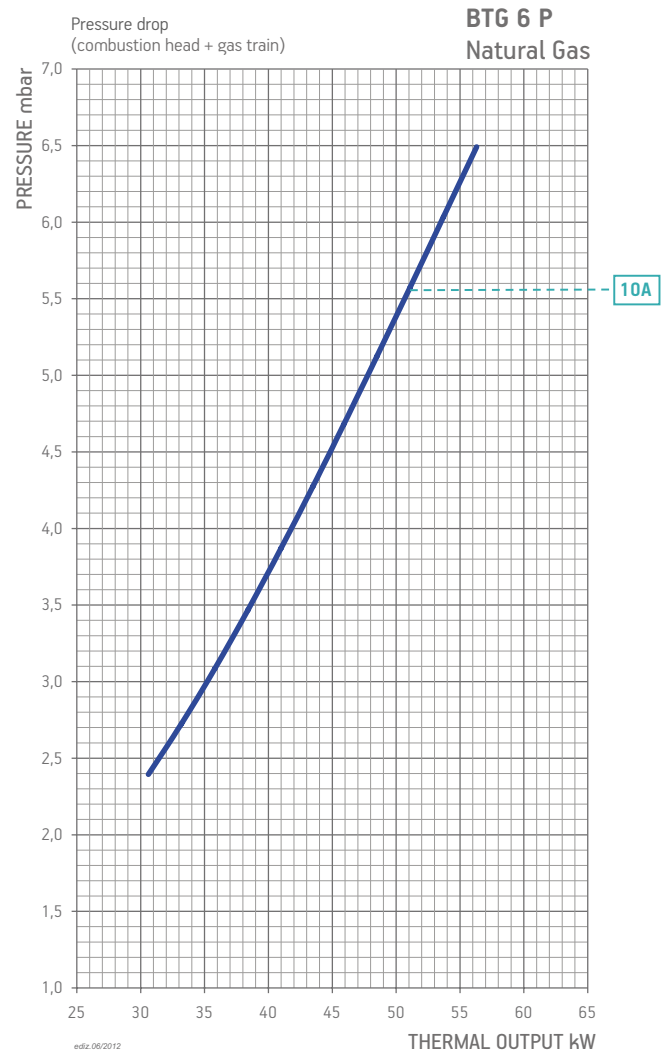
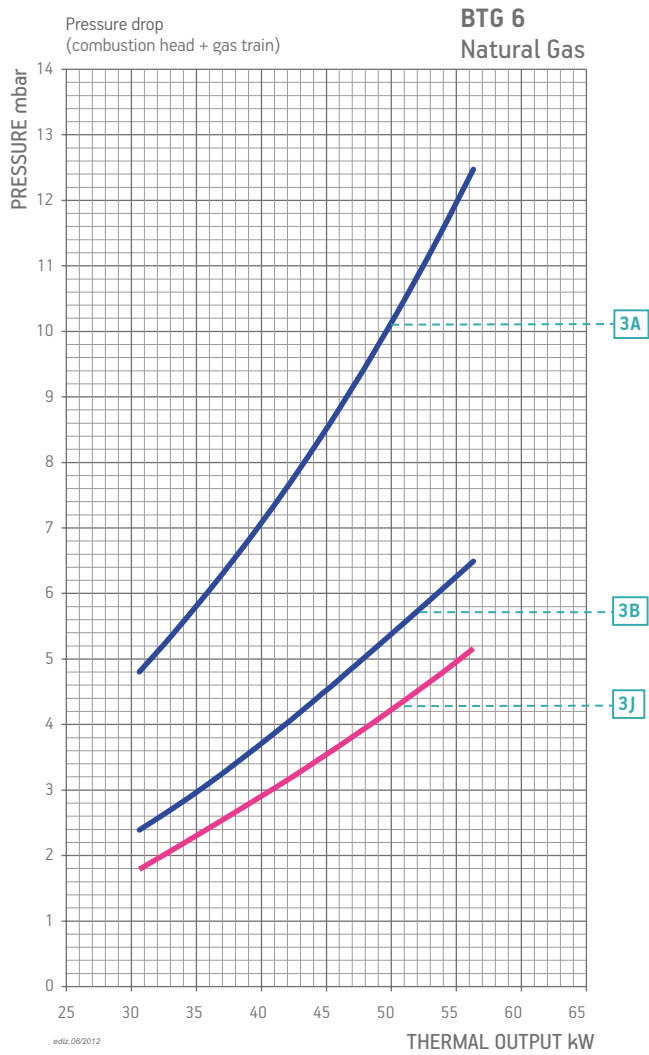
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural Gas: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$.

LPG: $H_i = 92 \text{ MJ/m}^3 = 22000 \text{ kcal/m}^3$.

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

BURNER/GAS TRAIN MATCH



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.		
BTG 6	Natural gas	3A	CE/EXP	65		19990466	Included	96000001	-	M2	
		3B	CE/EXP	360		19990002	Included	-	-	M2	
					CTV	19990002	Included	-	98000100	M2	12)
3J	EXP	40		19990235	-	-	-	-	ME1		
BTG 6 P	Natural gas	10A	CE/EXP	360		19990016	Included	-	-	B2	
					CTV	19990016	Included	-	98000100	B2	12)

Burner model	Gas type	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.		
BTG 6	LPG	CE	65		19990466	Included	96000001	-	M2	
		EXP	40		19990235	-	-	-	ME1	
BTG 6 P	LPG	CE/EXP	360		19990016	Included	-	-	B2	
				CTV	19990016	Included	-	98000100	B2	12)

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

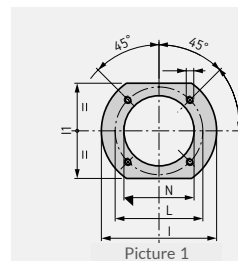
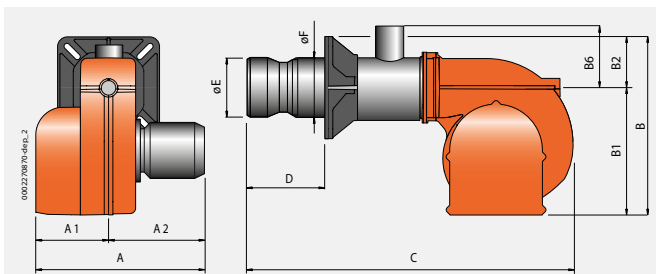
**) Maximum gas inlet pressure at pressure regulator.



	BTG 11	BTG 11 P	BTG 12
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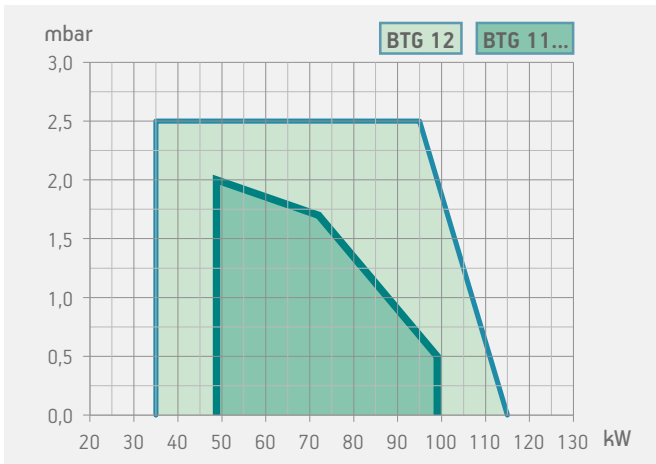
Gas burner compliant with European standard EN676. Operation:

	single-stage	two-stage	single-stage
Low NOx and CO emissions gas burner according to European standard EN676:			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.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	manual
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, 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:	up	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•



Flange dimensions and boiler drilling template.

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	I1 mm	L mm	M mm	N mm	Pic.
BTG 11	246	123	123	289	219	70	53	475	90 ÷ 150	108	90	170	140	130 ÷ 155	M8	95	1
BTG 11 P	246	123	123	289	219	70	53	475	90 ÷ 150	108	90	170	140	130 ÷ 155	M8	95	1
BTG 12	246	123	123	289	219	70	53	450	70 ÷ 150	90	90	170	140	130 ÷ 155	M8	95	1



Model	Size of packaging			Weight kg
	L	P mm	H	
BTG 11	540	300	320	12
BTG 11 P	540	300	320	12
BTG 12	540	300	320	12

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	class 2	48,8 ÷ 99,0	BTG 11	17060010	1N AC 50Hz 230V	0,1	1)
		48,8 ÷ 99,0	BTG 11 P	17070010	1N AC 50Hz 230V	0,1	1)
		35,0 ÷ 115,0	BTG 12	17170010	1N AC 50Hz 230V	0,1	1)
Frequency 60 Hz							
	class 2	48,8 ÷ 99,0	BTG 11	17060010	1N AC 60Hz 220V	0,1	1)
		48,8 ÷ 99,0	BTG 11 P	17070010	1N AC 60Hz 220V	0,1	1)
		35,0 ÷ 115,0	BTG 12	17170010	1N AC 60Hz 220V	0,1	1)

OPTIONALS

DESCRIPTION

300 mm long combustion head

GAS BURNER ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

1 Equipped with air closure device.

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

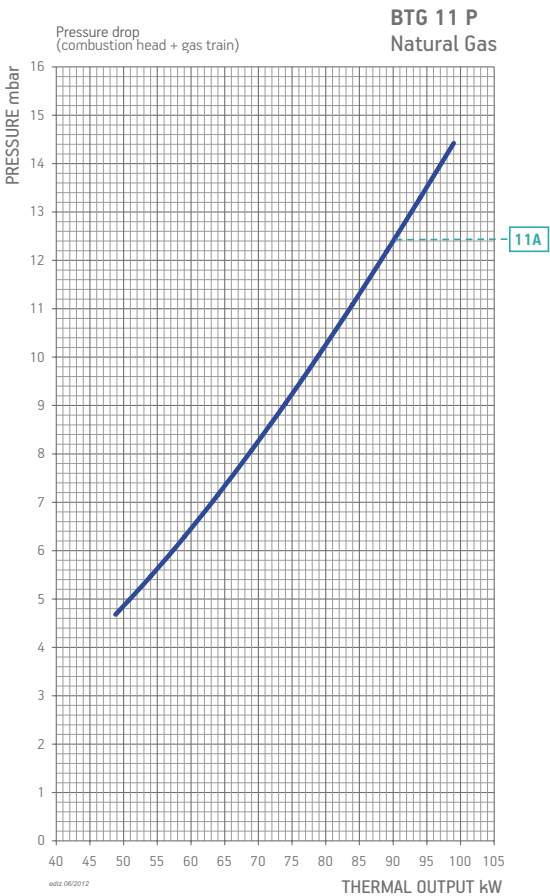
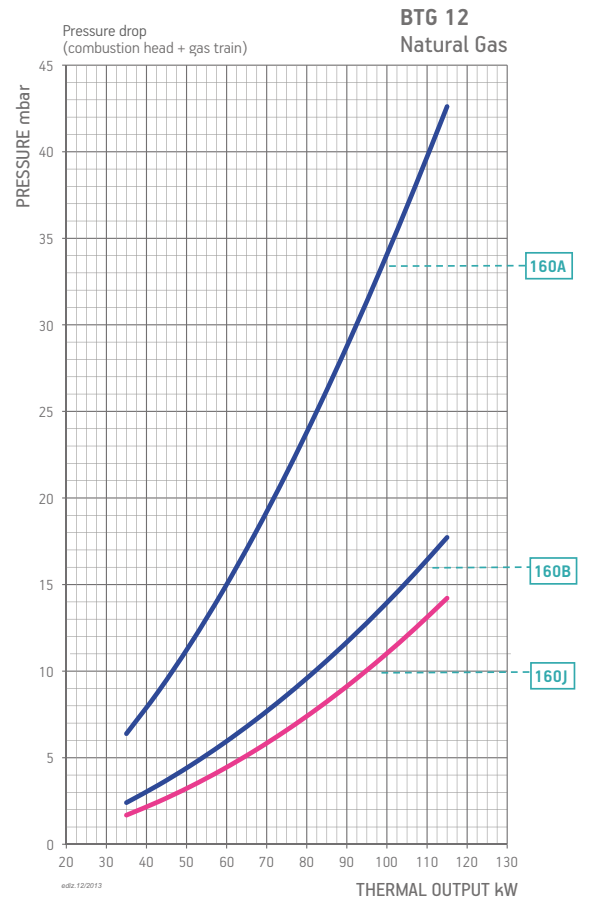
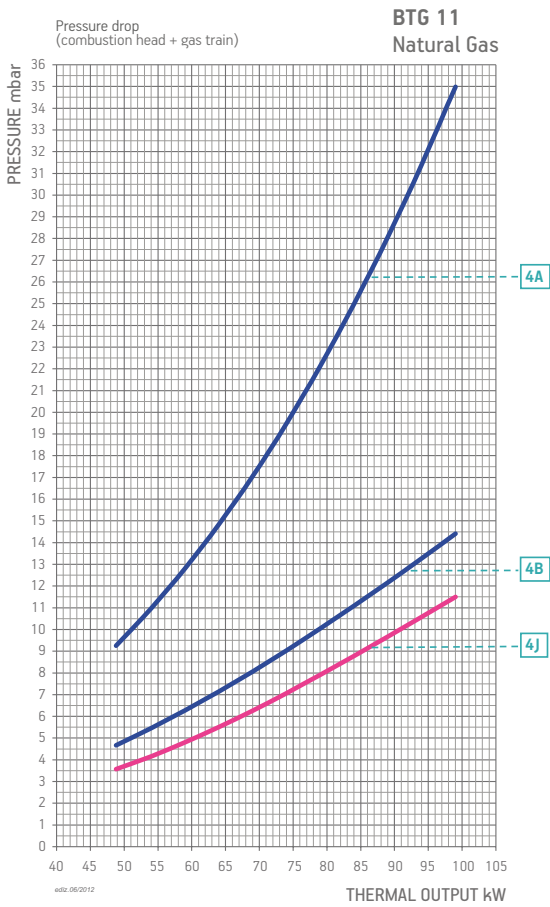
Natural Gas: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$.

LPG: $H_i = 92 \text{ MJ/m}^3 = 22000 \text{ kcal/m}^3$.

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

BURNER/GAS TRAIN MATCH

GAS



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.		
BTG 11	Natural gas	4A	CE/EXP	65		19990466	Included	96000001	-	M2	
		4B	CE/EXP	360		19990002	Included	-	-	M2	
		4J	EXP	40	CTV	19990002	Included	-	98000100	M2	12)
BTG 11 P	Natural gas	11A	CE/EXP	360		19990016	Included	-	-	B2	
					CTV	19990016	Included	-	98000100	B2	12)
		160A	CE/EXP	200		19990338	Included	96000001	-	M2	
BTG 12	Natural gas				CTV	19990338	Included	96000001	98000100	M2	12)
		160B	CE/EXP	360		19990002	Included	-	-	M2	
					CTV	19990002	Included	-	98000100	M2	12)
		160J	EXP	40		19990235	-	-	-	ME1	

Burner model	Gas type	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.		
BTG 11	LPG	CE	65		19990466	Included	96000001	-	M2	
		EXP	40		19990235	-	-	-	ME1	
BTG 11 P	LPG	CE/EXP	360		19990016	Included	-	-	B2	
				CTV	19990016	Included	-	98000100	B2	12)
BTG 12	LPG	CE	65		19990466	Included	96000001	-	M2	
		EXP	40		19990235	-	-	-	ME1	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.

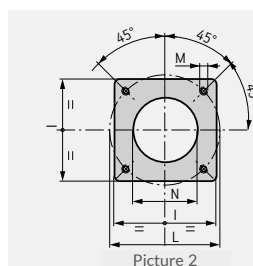
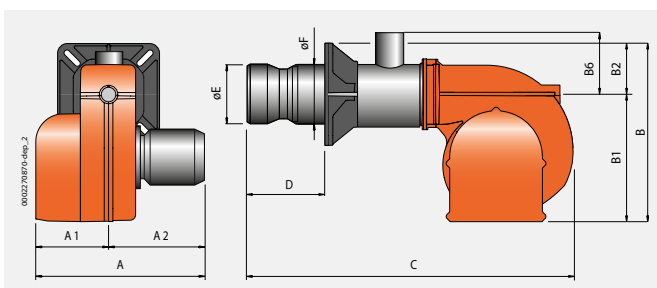


BTG 15 - 15 P



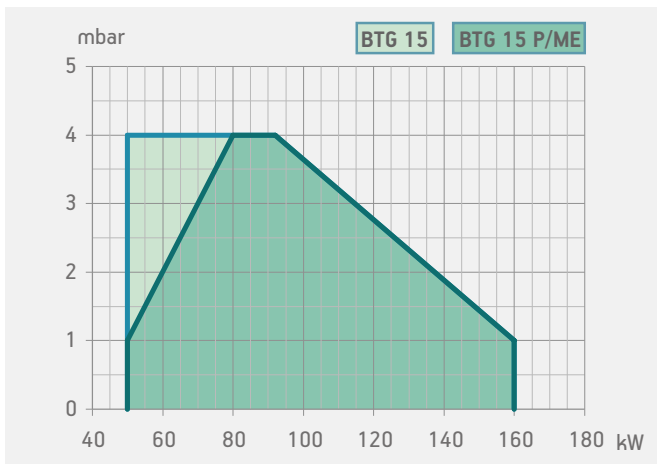
BTG 15 ME

	BTG 15	BTG 15 P	BTG 15 ME
Gas burner compliant with European standard EN676. Operation:	single-stage	two-stage	electronic two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).			•
Modulation ratio:			1:3
Low NOx and CO emissions gas burner according to European standard EN676:	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.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
CE version gas train is complete with 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:	up	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.			•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•



Flange dimensions and boiler drilling template.

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.
BTG 15	303	158	145	368	275	93	70	680	150 ÷ 280	126	114	185	170 ÷ 210	M10	135	2
BTG 15 P	303	158	145	368	275	93	70	680	150 ÷ 280	126	114	185	170 ÷ 210	M10	135	2
BTG 15 ME	303	158	145	368	275	93	70	680	150 ÷ 280	126	114	185	170 ÷ 210	M10	135	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BTG 15	780	370	410	18
BTG 15 P	780	370	410	18
BTG 15 ME	780	370	410	18

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	class 2	50 ÷ 160	BTG 15	17080010	1N AC 50Hz 230V	0,18	1)
	class 2	50 ÷ 160	BTG 15 P	17090010	1N AC 50Hz 230V	0,18	1)
	class 2	50 ÷ 160	BTG 15 ME	17130020	1N AC 50Hz 230V	0,18	4)
Frequency 60 Hz							
	class 2	50 ÷ 160	BTG 15	17080010	1N AC 60Hz 220V	0,18	1)
	class 2	50 ÷ 160	BTG 15 P	17090010	1N AC 60Hz 220V	0,18	1)
	class 2	50 ÷ 160	BTG 15 ME	17130020	1N AC 60Hz 220V	0,18	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
BTG 15 ME: modulation kit	98000059
BTG 15 ME: modulating probe kit (see page 288)	

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

- 1 Equipped with air closure device.
- 4 Equipped with air closure device.

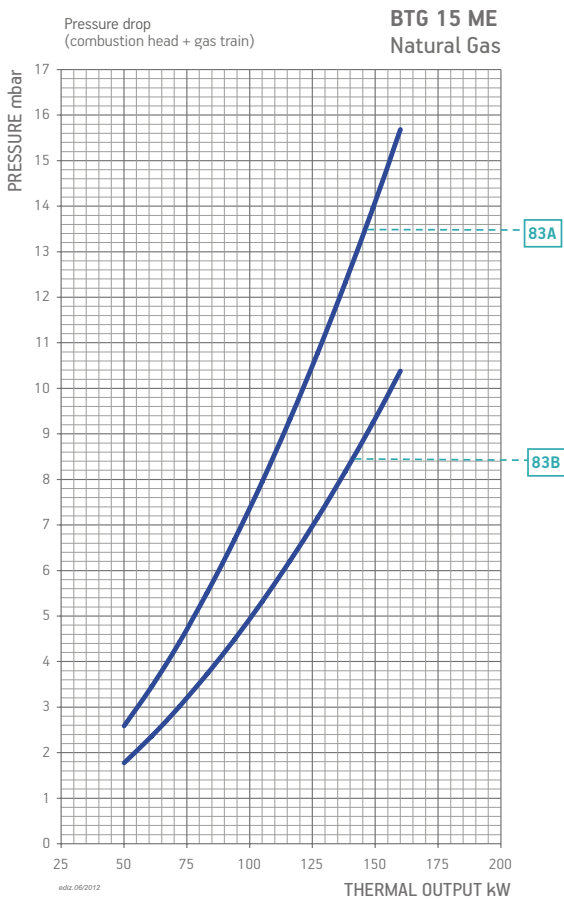
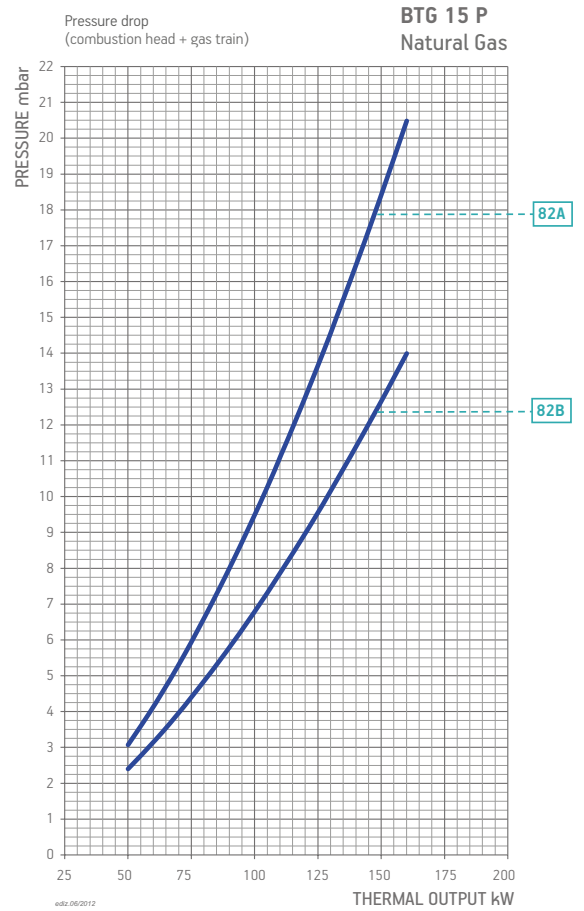
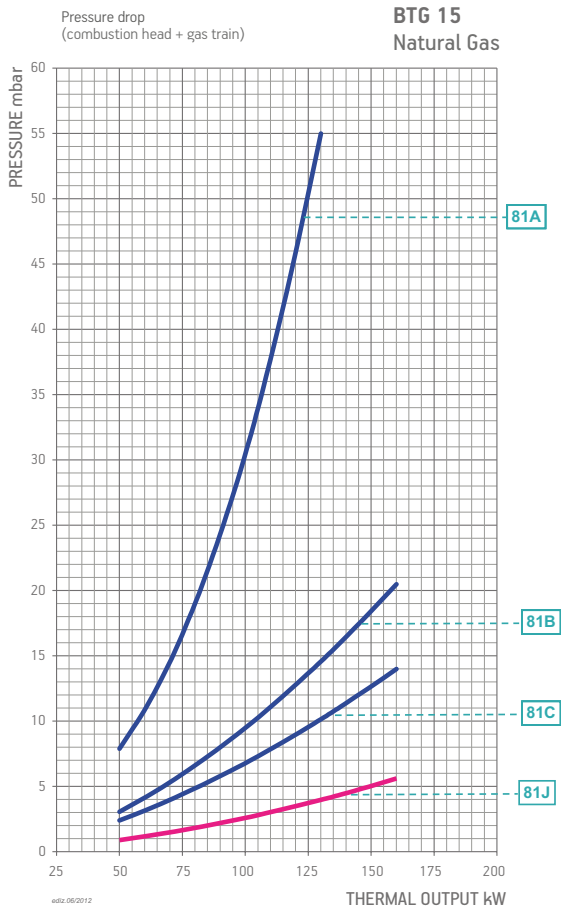
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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

BURNER/GAS TRAIN MATCH



GAS

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.		
BTG 15	Natural gas	81A	CE/EXP	65		19990466	Included	96000001	-	M2	
		81B	CE/EXP	360		19990002	Included	-	-	M2	
					CTV	19990002	Included	-	98000100	M2	12)
		81C	CE/EXP	360		19990005	Included	-	-	M2	
				CTV	19990005	Included	-	98000100	M2	12)	
		81J	EXP	40		19990004	-	-	-	ME1	
BTG 15 P	Natural gas	82A	CE/EXP	360		19990016	Included	-	-	B2	
					CTV	19990016	Included	-	98000100	B2	12)
		82B	CE/EXP	360		19990020	Included	-	-	B2	
				CTV	19990020	Included	-	98000100	B2	12)	
BTG 15 ME	Natural gas	83A	CE/EXP	360	CTV	19990573	Included	-	Included	D2	
		83B	CE/EXP	360	CTV	19990574	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	Pic.	Notes
					Part no.	Part no.	Part no.	Part no.		
BTG 15	LPG	CE/EXP	65		19990466	Included	96000001	-	M2	
					19990016	Included	-	-	B2	
BTG 15 P	LPG	CE/EXP	360	CTV	19990016	Included	-	98000100	B2	12)
BTG 15 ME	LPG	CE/EXP	360	CTV	19990573	Included	-	Included	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

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



BTG 20 - 20 P



BTG 20 LX



BTG 20 ME

Gas burner compliant with European standard EN676.
Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.

CE version gas train is complete with operation and safety valve with pneumatic 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:

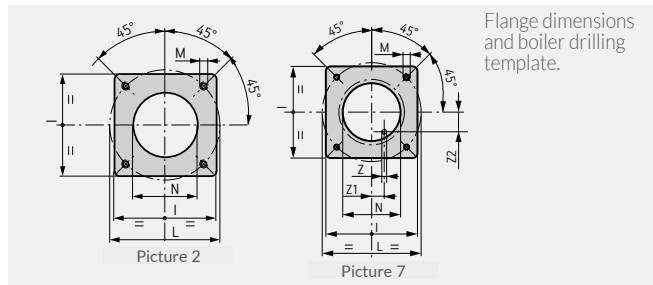
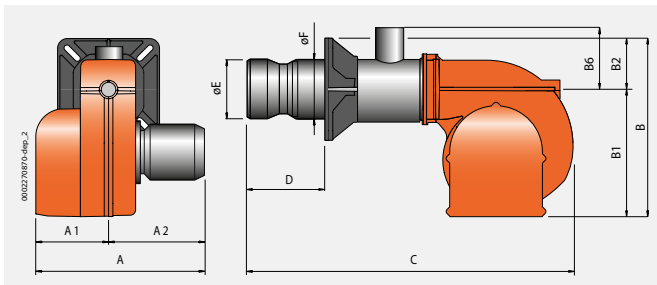
Flame detection by ionisation electrode with connector for microamperometer.

Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.

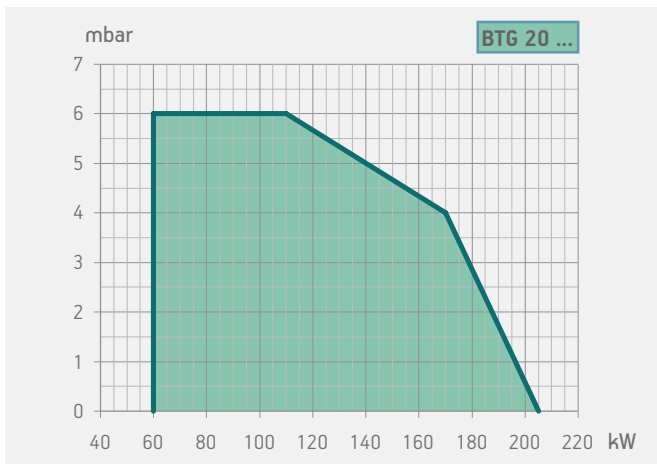
Electric protection rating:

Sound-proof plastic protective cover.

	BTG 20	BTG 20 P	BTG 20 LX	BTG 20 ME
	single-stage	two-stage	pneumatic two-stage progressive	electronic two-stage progressive
Modulation ratio:			1:3	1:3
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3
Adjusting the combustion head.	•	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.	•	•		
CE version gas train is complete with operation and safety valve with pneumatic 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:	up	up	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.				•
Electric protection rating:	IP40	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•	•



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	Z mm	Z1 mm	Z2 mm	Pic.
BTG 20	303	158	145	368	275	93	70	695	150 ÷ 300	127	114	185	170 ÷ 210	M10	135	-	-	-	2
BTG 20 P	303	158	145	368	275	93	70	695	150 ÷ 300	127	114	185	170 ÷ 210	M10	135	-	-	-	2
BTG 20 LX	303	158	145	368	275	93	70	695	150 ÷ 300	127	114	185	170 ÷ 210	M10	135	12	30,2	68,4	7
BTG 20 ME	303	158	145	368	275	93	70	695	150 ÷ 300	127	114	185	170 ÷ 210	M10	135	-	-	-	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BTG 20	780	370	410	18
BTG 20 P	780	370	410	18
BTG 20 LX	780	370	410	18
BTG 20 ME	780	370	410	18

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	class 3	60 ÷ 205	BTG 20	17100010	1N AC 50Hz 230V	0,18	1)
	class 3	60 ÷ 205	BTG 20 P	17110010	1N AC 50Hz 230V	0,18	1)
	class 3	60 ÷ 205	BTG 20 LX	15100010	1N AC 50Hz 230V	0,18	1)
	class 3	60 ÷ 205	BTG 20 ME	17120020	1N AC 50Hz 230V	0,18	4)
Frequency 60 Hz							
	class 3	60 ÷ 205	BTG 20	17100010	1N AC 60Hz 220V	0,18	1)
	class 3	60 ÷ 205	BTG 20 P	17110010	1N AC 60Hz 220V	0,18	1)
	class 3	60 ÷ 205	BTG 20 LX	15100010	1N AC 60Hz 220V	0,18	1)
	class 3	60 ÷ 205	BTG 20 ME	17120020	1N AC 60Hz 220V	0,18	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
BTG 20 LX: modulation kit	98000056
BTG 20 ME: modulation kit	98000059
BTG 20 LX/20 ME: modulating probe kit (see page 288)	

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

- 1 Equipped with air closure device.
- 4 Equipped with air closure device.

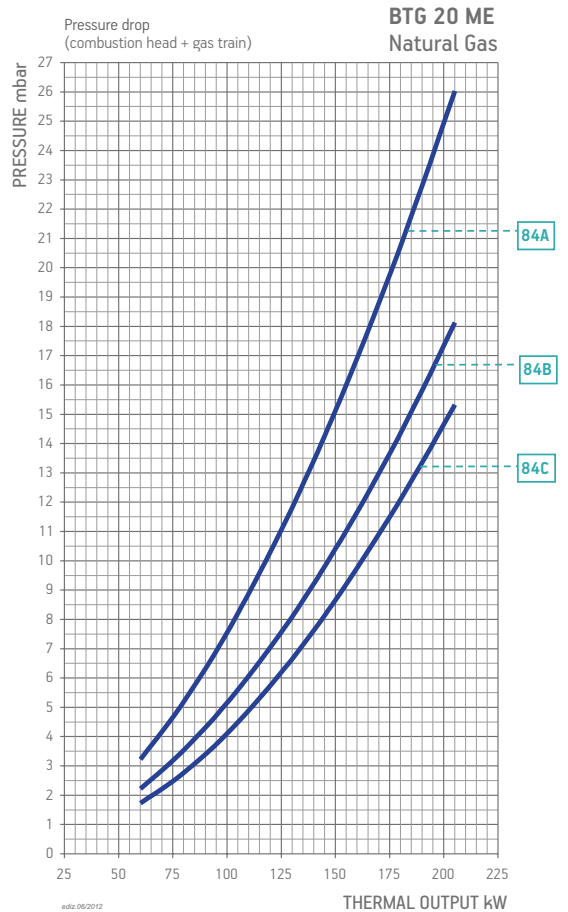
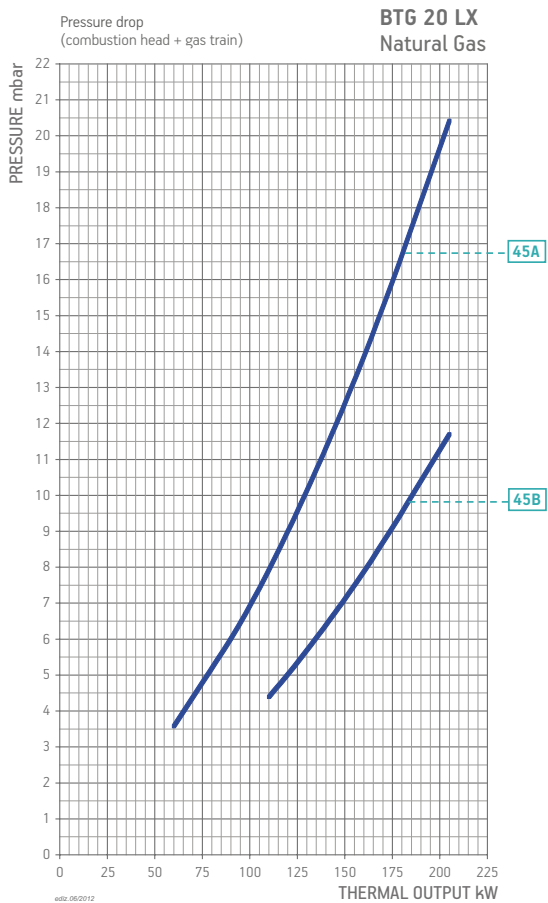
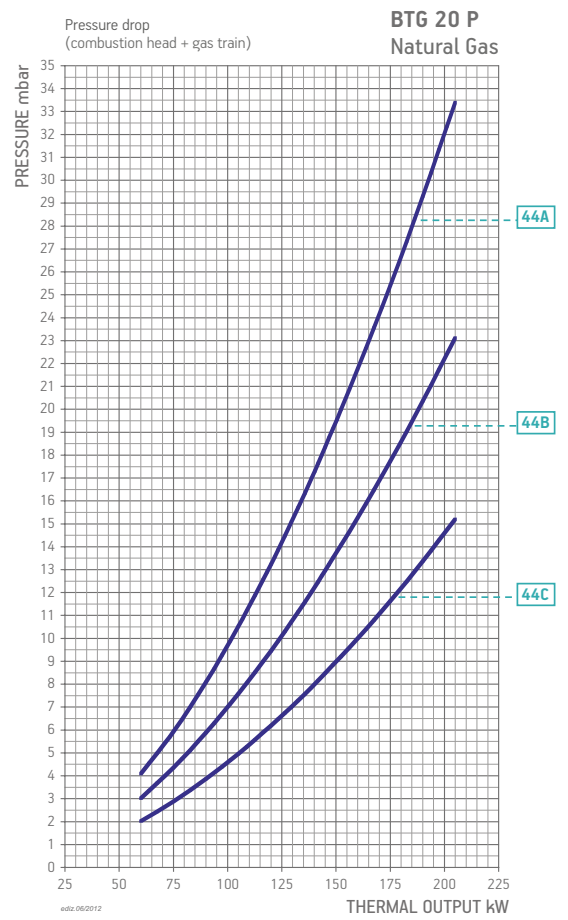
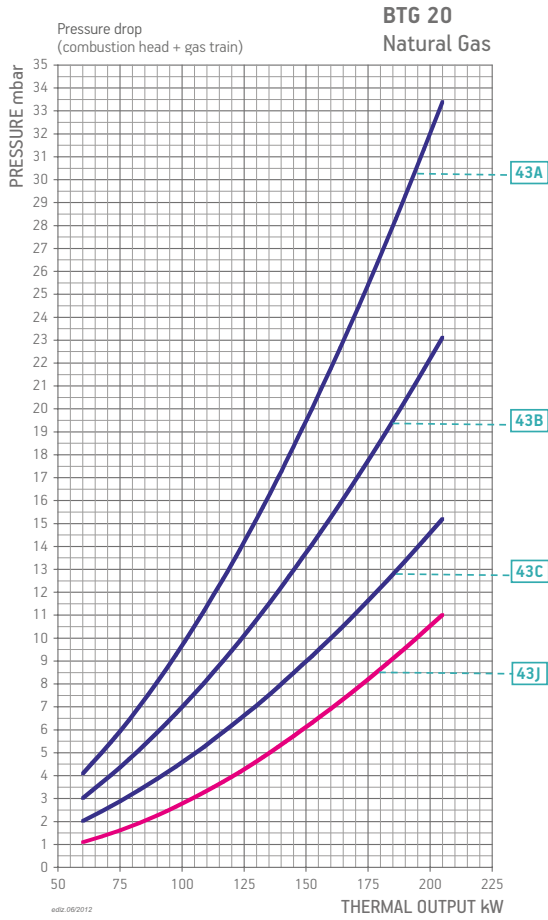
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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

BURNER/GAS TRAIN MATCH



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.		
BTG 20	Natural gas	43A	CE/EXP	360		19990002	Included	-	-	M2	
					CTV	19990002	Included	-	98000100	M2	12)
		43B	CE/EXP	360		19990005	Included	-	-	M2	
					CTV	19990005	Included	-	98000100	M2	12)
		43C	CE/EXP	360		19990008	Included	96000031	-	M2	
CTV	19990008				Included	96000031	98000100	M2	12)		
		43J	EXP	40		19990004	-	-	-	ME1	
BTG 20 P	Natural gas	44A	CE/EXP	360		19990016	Included	-	-	B2	
					CTV	19990016	Included	-	98000100	B2	12)
		44B	CE/EXP	360		19990020	Included	-	-	B2	
					CTV	19990020	Included	-	98000100	B2	12)
44C	CE/EXP	360		19990024	Included	96000031	-	B2			
			CTV	19990024	Included	96000031	98000100	B2	12)		
BTG 20 LX	Natural gas	45A	CE/EXP	100		19990440	Included	-	-	D3	
				CTV	19990440	Included	-	98000100	D3	12)	
		360		19990447	Included	-	-	D3	9)		
			CTV	19990447	Included	-	98000100	D3	9) 12)		
		45B	CE/EXP	100		19990441	Included	96000031	-	D3	
CTV	19990441				Included	96000031	98000100	D3	12)		
BTG 20 ME	Natural gas	84A	CE/EXP	360	CTV	19990573	Included	-	Included	D2	
		84B	CE/EXP	360	CTV	19990574	Included	-	Included	D2	
		84C	CE/EXP	360	CTV	19990575	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	Pic.	Notes
					Part no.	Part no.	Part no.	Part no.		
BTG 20	LPG	CE/EXP	360		19990002	Included	-	-	M2	
				CTV	19990002	Included	-	98000100	M2	12)
BTG 20 P	LPG	CE/EXP	360		19990016	Included	-	-	B2	
				CTV	19990016	Included	-	98000100	B2	12)
BTG 20 ME	LPG	CE/EXP	360	CTV	19990573	Included	-	Included	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

9) The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.

12) Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

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



BTG 28 - 28 P



BTG 28 ME

Gas burner compliant with European standard EN676.

Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

CE version gas train is complete with 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:

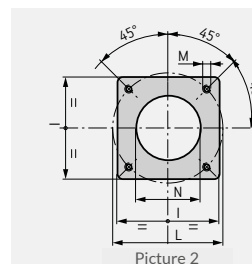
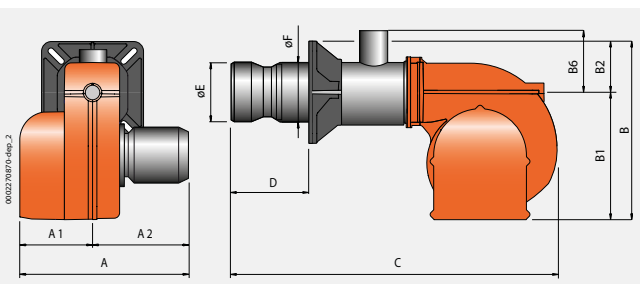
Flame detection by ionisation electrode with connector for microamperometer.

Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.

Electric protection rating:

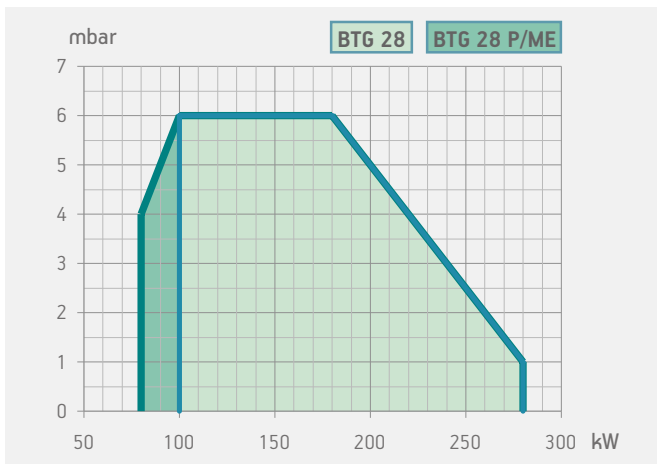
Sound-proof plastic protective cover.

	BTG 28	BTG 28 P	BTG 28 ME
	single-stage	two-stage	electronic two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).			•
Modulation ratio:			1:3
Low NOx and CO emissions gas burner according to European standard EN676:	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.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
CE version gas train is complete with 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:	up	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.			•
Electric protection rating:	IP40	IP40	IP40
Sound-proof plastic protective cover.	•	•	•



Flange dimensions and boiler drilling template.

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.
BTG 28	303	158	145	368	275	93	70	695	150 ÷ 300	135	114	185	170 ÷ 210	M10	145	2
BTG 28 P	303	158	145	368	275	93	70	695	150 ÷ 300	135	114	185	170 ÷ 210	M10	145	2
BTG 28 ME	303	158	145	368	275	93	70	695	150 ÷ 300	135	114	185	170 ÷ 210	M10	145	2



Model	Size of packaging			Weight kg
	L	P mm	H	
BTG 28	780	370	410	18
BTG 28 P	780	370	410	18
BTG 28 ME	780	370	410	18

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	class 2	100 ÷ 280	BTG 28	17140010	1N AC 50Hz 230V	0,18	1)
	class 2	80 ÷ 280	BTG 28 P	17150010	1N AC 50Hz 230V	0,18	1)
	class 2	80 ÷ 280	BTG 28 ME	17160020	1N AC 50Hz 230V	0,18	4)
Frequency 60 Hz							
	class 2	100 ÷ 280	BTG 28	17145410	1N AC 60Hz 220V	0,25	1)
	class 2	80 ÷ 280	BTG 28 P	17155410	1N AC 60Hz 220V	0,25	1)
	class 2	80 ÷ 280	BTG 28 ME	17165420	1N AC 60Hz 220V	0,25	4)

MODULATING MODE

DESCRIPTION	PART NO.
BTG 28 ME: modulation kit	98000059
BTG 28 ME: modulating probe kit (see page 288)	

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

- 1 Equipped with air closure device.
- 4 Equipped with air closure device.

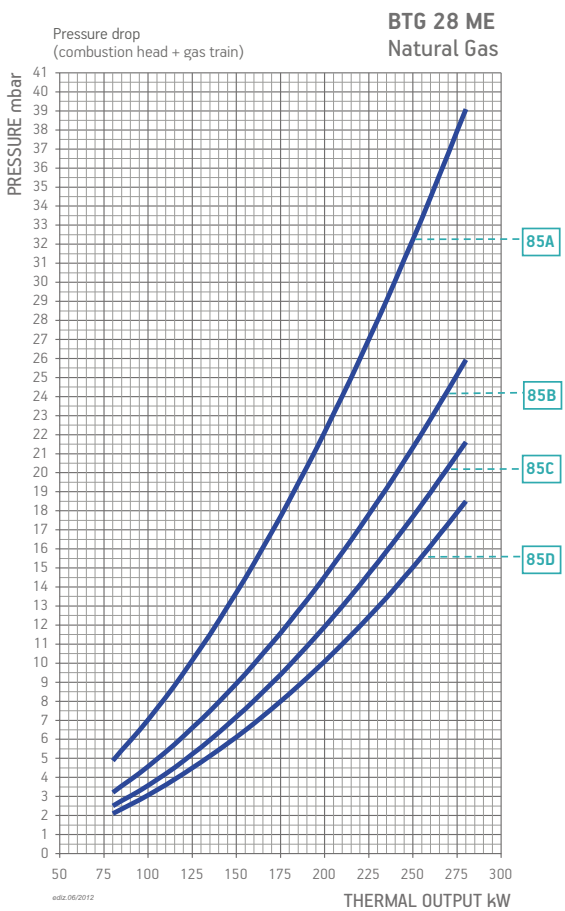
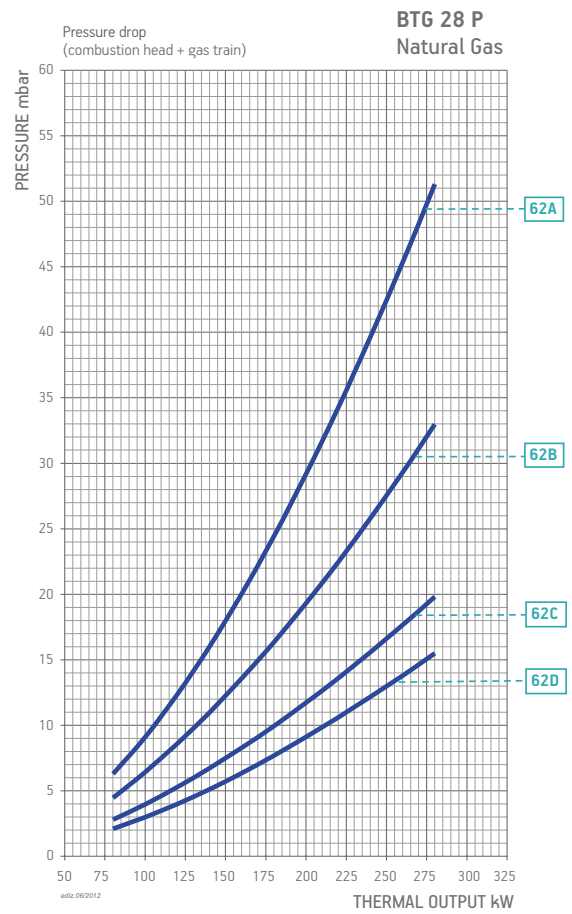
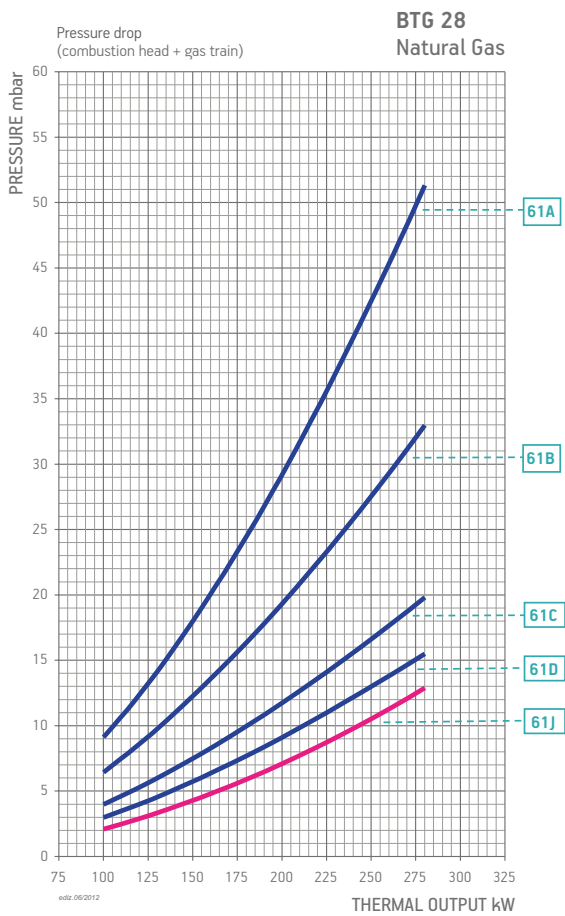
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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

BURNER/GAS TRAIN MATCH



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.		
BTG 28	Natural gas	61A	CE/EXP	360	CTV	19990002	Included	-	-	M2	
						19990002	Included	-	98000100	M2	12)
		61B	CE/EXP	360	CTV	19990005	Included	-	-	M2	
						19990005	Included	-	98000100	M2	12)
		61C	CE/EXP	360	CTV	19990008	Included	96000031	-	M2	
						19990008	Included	96000031	98000100	M2	12)
61D	CE/EXP	360	CTV	19990166	Included	96000031	-	M2			
				19990166	Included	96000031	98000100	M2	12)		
61J	EXP	40		19990134	-	96000028	-	ME1			
BTG 28 P	Natural gas	62A	CE/EXP	360	CTV	19990016	Included	-	-	B2	
						19990016	Included	-	98000100	B2	12)
		62B	CE/EXP	360	CTV	19990020	Included	-	-	B2	
						19990020	Included	-	98000100	B2	12)
		62C	CE/EXP	360	CTV	19990024	Included	96000031	-	B2	
						19990024	Included	96000031	98000100	B2	12)
62D	CE/EXP	360	CTV	19990168	Included	96000031	-	B2			
				19990168	Included	96000031	98000100	B2	12)		
BTG 28 ME	Natural gas	85A	CE/EXP	360	CTV	19990573	Included	-	Included	D2	
		85B	CE/EXP	360	CTV	19990574	Included	-	Included	D2	
		85C	CE/EXP	360	CTV	19990575	Included	-	Included	D2	
		85D	CE/EXP	360	CTV	19990576	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	Pic.	Notes
					Part no.	Part no.	Part no.	Part no.		
BTG 28	LPG	CE/EXP	360	CTV	19990002	Included	-	-	M2	
					19990002	Included	-	98000100	M2	12)
BTG 28 P	LPG	CE/EXP	360	CTV	19990016	Included	-	-	B2	
					19990016	Included	-	98000100	B2	12)
BTG 28 ME	LPG	CE/EXP	360	CTV	19990573	Included	-	Included	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

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



TBG 35

TBG 35 P

TBG 35 PN

TBG 35 MC

TBG 35 ME

Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.

CE version gas train is complete with operation and safety valve with pneumatic 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, 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.

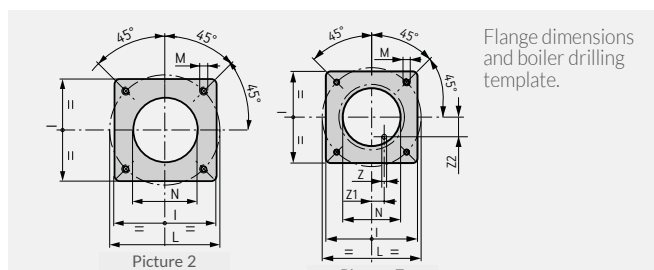
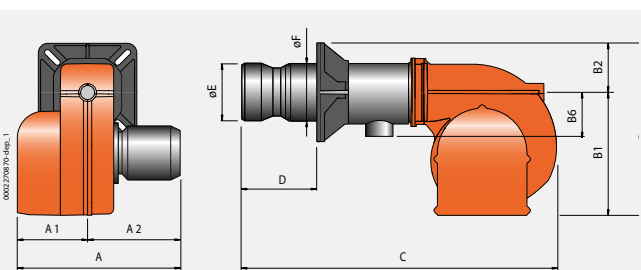
Fail proof connectors for burner/gas train connection.

Gas train outlet:

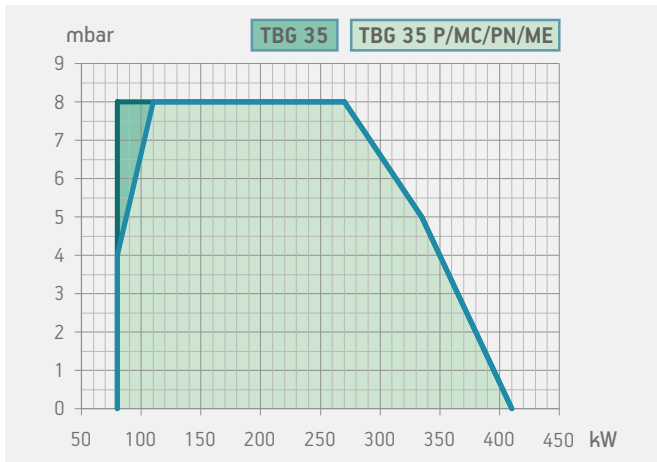
Flame detection by ionisation electrode with connector for microamperometer.

Electric protection rating:

	TBG 35	TBG 35 P	TBG 35 PN	TBG 35 MC	TBG 35 ME
	single-stage	two-stage	pneumatic two-stage progressive	mechanical two-stage progressive	electronic two-stage progressive
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
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
Adjusting the combustion head.	•	•	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	electric servomotor	mechanical cam	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.		•	•	•	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.	•				
CE version gas train is complete with operation and safety valve with pneumatic 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, 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:	up/down	down	up/down	down	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•	•	•
Electric protection rating:	IP40	IP40	IP40	IP40	IP40



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 35	440	210	230	378	270	108	160	860	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 35 P	440	210	230	378	270	108	160	860	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 35 PN	490	260	230	378	270	108	160	860	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	12	42,5	73,6	7
TBG 35 MC	520	290	230	420	270	150	160	860	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 35 ME	465	180	285	377	260	117	160	840	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 35	1030	510	410	38
TBG 35 P	1030	510	410	38
TBG 35 PN	1030	510	410	38
TBG 35 MC	980	540	480	40
TBG 35 ME	980	540	480	40

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	class 3	80 ÷ 410	TBG 35	17320010	1N AC 50Hz 230V	0,37	
	class 3	80 ÷ 410	TBG 35 P	17330010	1N AC 50Hz 230V	0,37	4)
	class 3	80 ÷ 410	TBG 35 PN	17340010	1N AC 50Hz 230V	0,37	4)
	class 3	80 ÷ 410	TBG 35 MC	17360010	1N AC 50Hz 230V	0,37	4)
NEW	class 3	80 ÷ 410	TBG 35 ME	17350010	1N AC 50Hz 230V	0,37	4)
Frequency 60 Hz							
	class 3	80 ÷ 410	TBG 35	17325410	1N AC 60Hz 220V	0,37	
	class 3	80 ÷ 410	TBG 35 P	17335410	1N AC 60Hz 220V	0,37	4)
	class 3	80 ÷ 410	TBG 35 PN	17345410	1N AC 60Hz 220V	0,37	4)
	class 3	80 ÷ 410	TBG 35 MC	17365410	1N AC 60Hz 220V	0,37	4)
NEW	class 3	80 ÷ 410	TBG 35 ME	17355410	1N AC 60Hz 220V	0,37	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
TBG 35 PN/35 MC: modulation kit	98000056
TBG 35 ME: modulation kit	98000059
TBG 35 PN/35 MC/35 ME: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980054

GAS BURNERS ACCESSORIES

TBG 35/35 P/35 PN/35 MC: boiler coupling kit, plug for wiring.
TBG 35 ME: boiler coupling kit.

NOTES

4 Equipped with air closure device.

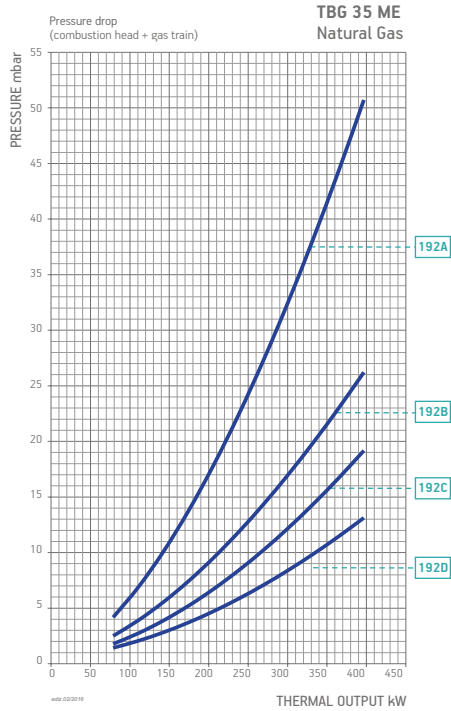
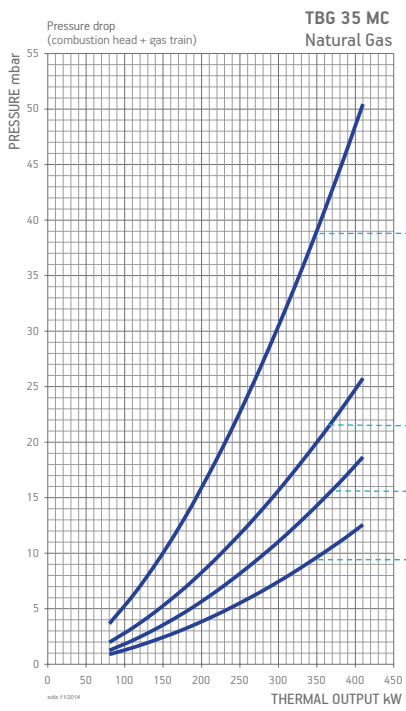
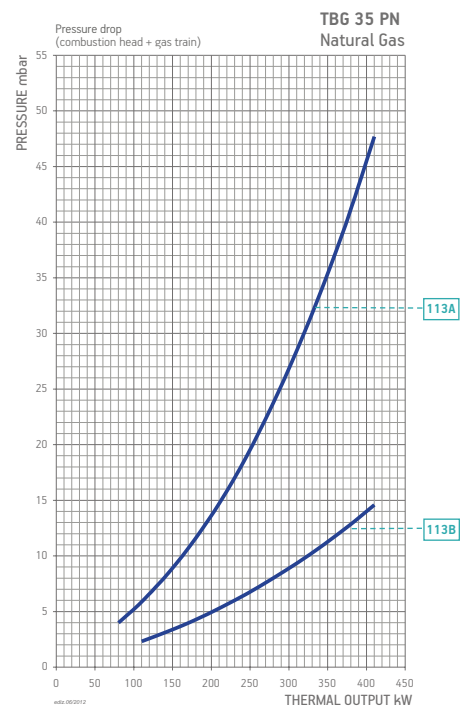
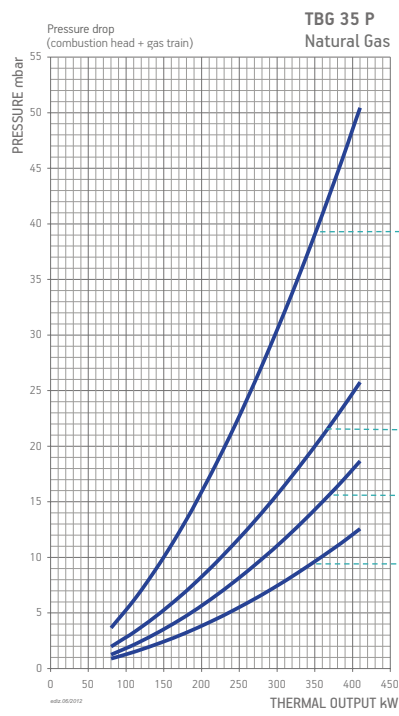
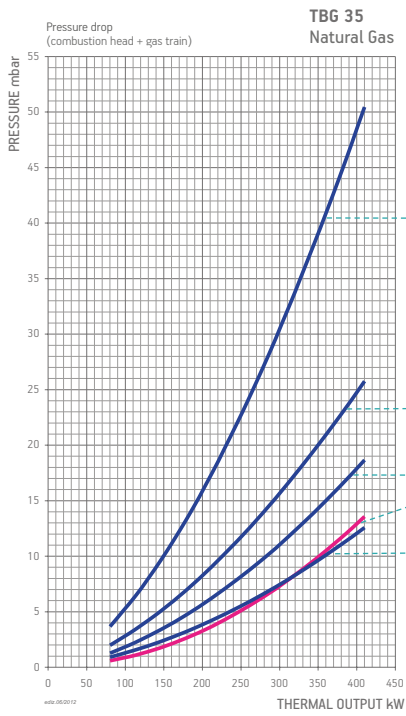
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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

BURNER/GAS TRAIN MATCH



GAS

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 35	Natural gas	111A	CE/EXP	360	CTV	19990545	Included	96000005	-	M2			
						19990545	Included	96000005	98000100	M2	12)		
		111B	CE/EXP	360	CTV	19990546	Included	96000004	-	M2			
						19990546	Included	96000004	98000100	M2	12)		
		111C	CE/EXP	360	CTV	19990547	Included	96000004	-	M2			
						19990547	Included	96000004	98000100	M2	12)		
111D	CE/EXP	360	CTV	19990548	Included	-	-	M2					
				19990548	Included	-	98000100	M2	12)				
111J	EXP	40		19990134	-	96000006	-	ME1					
TBG 35 P	Natural gas	112A	CE/EXP	360	CTV	19990545	Included	96000005	-	B7			
						19990545	Included	96000005	98000100	B7	12)		
		112B	CE/EXP	360	CTV	19990546	Included	96000004	-	B7			
						19990546	Included	96000004	98000100	B7	12)		
		112C	CE/EXP	360	CTV	19990547	Included	96000004	-	B7			
						19990547	Included	96000004	98000100	B7	12)		
112D	CE/EXP	360	CTV	19990548	Included	-	-	B7					
				19990548	Included	-	98000100	B7	12)				
TBG 35 PN	Natural gas	113A	CE/EXP	100	CTV	19990440	Included	96000005	-	D3			
				360	CTV	19990440	Included	96000005	98000100	D3	12)		
		113B	CE/EXP	100	CTV	19990441	Included	96000004	-	D3			
						19990441	Included	96000004	98000100	D3	12)		
		TBG 35 MC	Natural gas	177A	CE/EXP	360	CTV	19990545	Included	96000005	-	B7	
								19990545	Included	96000005	98000101	B7	12)
177B	CE/EXP			360	CTV	19990546	Included	96000004	-	B7			
						19990546	Included	96000004	98000101	B7	12)		
177C	CE/EXP			360	CTV	19990547	Included	96000004	-	B7			
						19990547	Included	96000004	98000101	B7	12)		
177D	CE/EXP	360	CTV	19990548	Included	-	-	B7					
				19990548	Included	-	98000101	B7	12)				
TBG 35 ME	Natural gas	192A	CE/EXP	360	CTV	19990555	Included	96000005	Included	D2			
		192B	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2			
		192C	CE/EXP	360	CTV	19990557	Included	96000004	Included	D2			
		192D	CE/EXP	360	CTV	19990558	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	Pic.	Notes
					Part no.	Part no.	Part no.	Part no.		
TBG 35	LPG	CE/EXP	360	CTV	19990545	Included	96000005	-	M2	
					19990545	Included	96000005	98000100	M2	12)
TBG 35 P	LPG	CE/EXP	360	CTV	19990545	Included	96000005	-	B7	
					19990545	Included	96000005	98000100	B7	12)
TBG 35 PN	LPG	CE/EXP	360	CTV	19990440	Included	96000005	-	D3	
					19990440	Included	96000005	98000100	D3	12)
TBG 35 MC	LPG	CE/EXP	360	CTV	19990545	Included	96000005	-	B7	
					19990545	Included	96000005	98000101	B7	12)
TBG 35 ME	LPG	CE/EXP	360	CTV	19990555	Included	96000005	Included	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



TBG 45

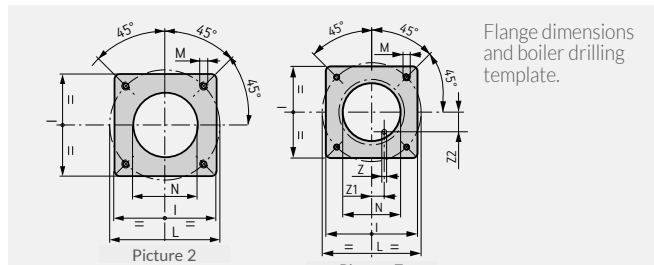
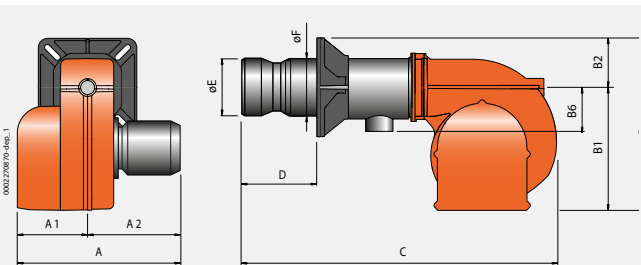


TBG 45 P

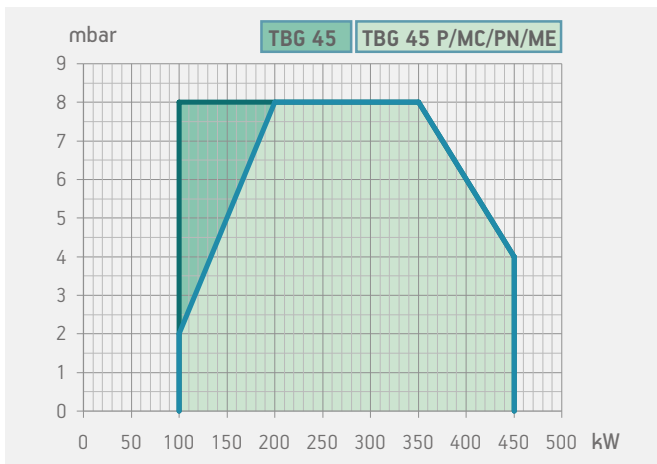


TBG 45 PN

	TBG 45	TBG 45 P	TBG 45 P V	TBG 45 PN
Gas burner compliant with European standard EN676. Operation:	single-stage	two-stage	two-stage	pneumatic two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).				•
Modulation ratio:				1:4
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3
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.	•	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.		•	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.			•	
CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.	•	•		
CE version gas train is complete with operation and safety with pneumatic 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, 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:	up/down	up/down	down	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•	•
Electric protection rating:	IP44	IP44	IP44	IP44



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 45	480	200	280	433	325	108	160	880	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 45 P	550	270	280	433	325	108	160	920	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 45 P V	550	270	280	433	325	108	160	920	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	-	-	-	2
TBG 45 PN	500	220	280	433	325	108	160	920	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	12	42,5	73,6	7



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 45	970	570	480	40
TBG 45 P	970	570	480	40
TBG 45 PV	970	570	480	42
TBG 45 PN	970	570	480	40

		Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
•		class 3	100 ÷ 450	TBG 45	17200010	1N AC 50Hz 230V	0,5	
		class 3	100 ÷ 450	TBG 45 P	17210010	1N AC 50Hz 230V	0,5	4)
		class 3	100 ÷ 450	TBG 45 P V	17210020	1N AC 50Hz 230V	0,5	4)
		class 3	100 ÷ 450	TBG 45 PN	17220010	1N AC 50Hz 230V	0,5	4)
Frequency 60 Hz								
•		class 3	100 ÷ 450	TBG 45	17205410	1N AC 60Hz 220V	0,5	
		class 3	100 ÷ 450	TBG 45 P	17215410	1N AC 60Hz 220V	0,5	4)
		class 3	100 ÷ 450	TBG 45 P V	17210020	1N AC 60Hz 220V	0,5	4)
		class 3	100 ÷ 450	TBG 45 PN	17225410	1N AC 60Hz 220V	0,5	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
TBG 45 PN: modulation kit	98000058
TBG 45 PN: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980054

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

- 4 Equipped with air closure device.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
- For different type of gas and pressure values, please get in contact with our commercial department.

CONFORM TO: GAS DIRECTIVE 2009/142/CE | E.M.C. DIRECTIVE 2014/30/UE | L.V. DIRECTIVE 2014/35/UE | MACHINERY DIRECTIVE 2006/42/CE | COMMISSION REGULATION ErP 2013/811/UE AND ErP 2013/813/UE | REFERENCE STANDARD EN676. 0085

**TBG 45 MC****TBG 45 ME**

Gas burner compliant with European standard EN676.

Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

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.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.

Residual oxygen (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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.

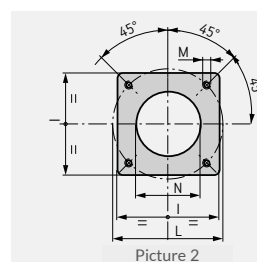
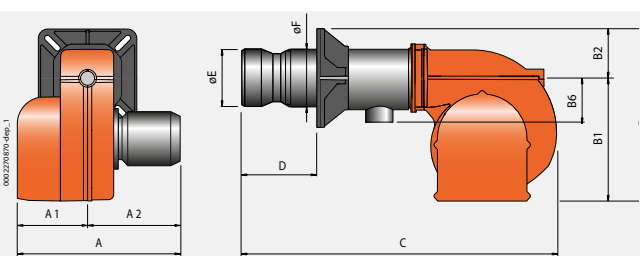
Gas train outlet:

Flame detection by ionisation electrode with connector for microamperometer.

Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.

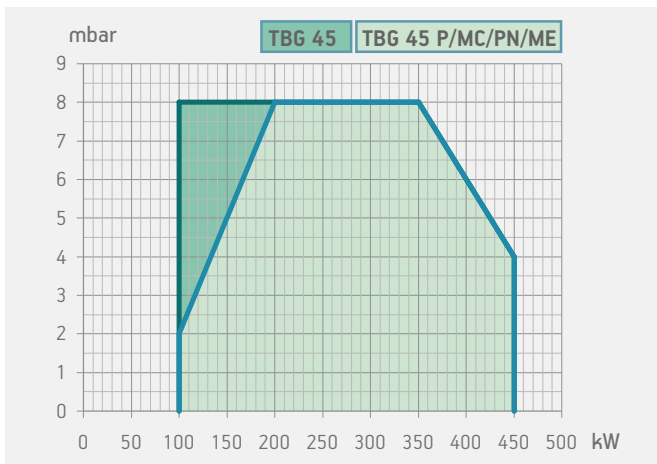
Electric protection rating:

	TBG 45 MC	TBG 45 ME	TBG 45 ME V	TBG 45 ME V O2	TBG 45 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	1:4	1:4	1:4	1:4
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
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.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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 equipped either with display showing the working process and with the keyboard for the burner adjustment.		•	•	•	•
Electric protection rating:	IP44	IP40	IP40	IP40	IP40



Flange dimensions and boiler drilling template.

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 45 MC	610	330	280	455	325	130	160	880	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	2
TBG 45 ME	480	200	280	433	325	108	160	920	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	2
TBG 45 ME V	480	200	280	433	325	108	160	920	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	2
TBG 45 ME V O2	480	200	280	433	325	108	160	920	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	2
TBG 45 ME V CO	480	200	280	433	325	108	160	920	140 ÷ 300	137	133	215	200 ÷ 245	M12	145	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 45 MC	1070	800	700	49
TBG 45 ME	970	570	480	40
TBG 45 ME V	1050	750	480	43
TBG 45 ME V O2	1070	800	610	78
TBG 45 ME V CO	1070	800	610	91

	O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz									
			class 3	100 ÷ 450	TBG 45 MC	17240010	1N AC 50Hz 230V	0,5	4)
			class 3	100 ÷ 450	TBG 45 ME	17230020	1N AC 50Hz 230V	0,5	4)
			class 3	100 ÷ 450	TBG 45 ME V	17230025	1N AC 50Hz 230V	0,5	4)
			class 3	100 ÷ 450	TBG 45 ME V O2	17230026	1N AC 50Hz 230V	0,5	4)
			class 3	100 ÷ 450	TBG 45 ME V CO	17230027	1N AC 50Hz 230V	0,5	4)
Frequency 60 Hz									
			class 3	100 ÷ 450	TBG 45 MC	17245410	1N AC 60Hz 220V	0,5	4)
			class 3	100 ÷ 450	TBG 45 ME	17235420	1N AC 60Hz 220V	0,5	4)
			class 3	100 ÷ 450	TBG 45 ME V	on request	1N AC 60Hz 220V	0,5	4)
			class 3	100 ÷ 450	TBG 45 ME V O2	on request	1N AC 60Hz 220V	0,5	4)
			class 3	100 ÷ 450	TBG 45 ME V CO	on request	1N AC 60Hz 220V	0,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 45 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 45 MC: modulation kit	98000058
TBG 45 ME: modulation kit	98000059
TBG 45 MC/45 ME: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980054

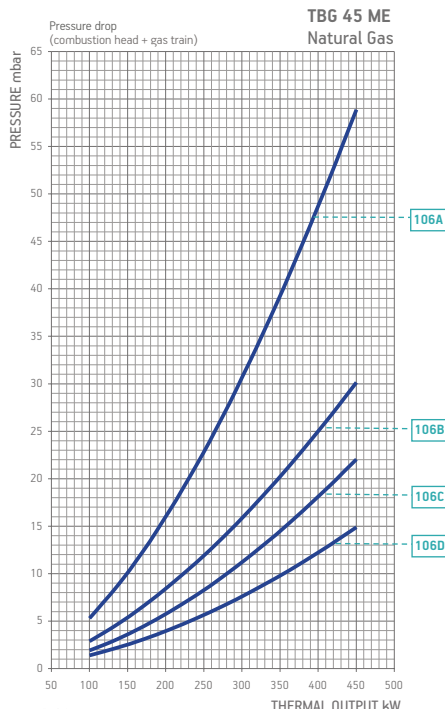
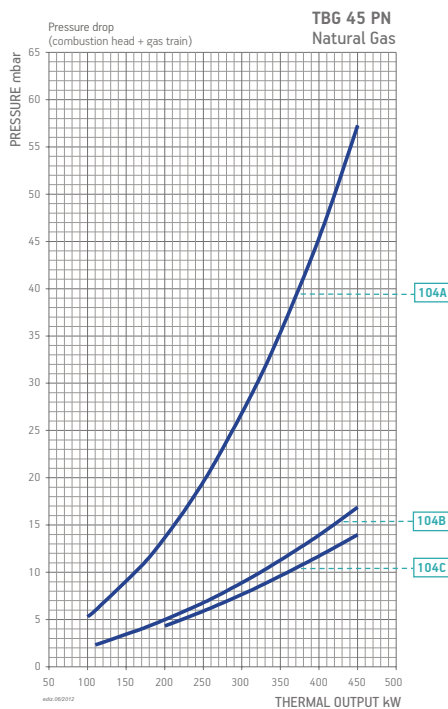
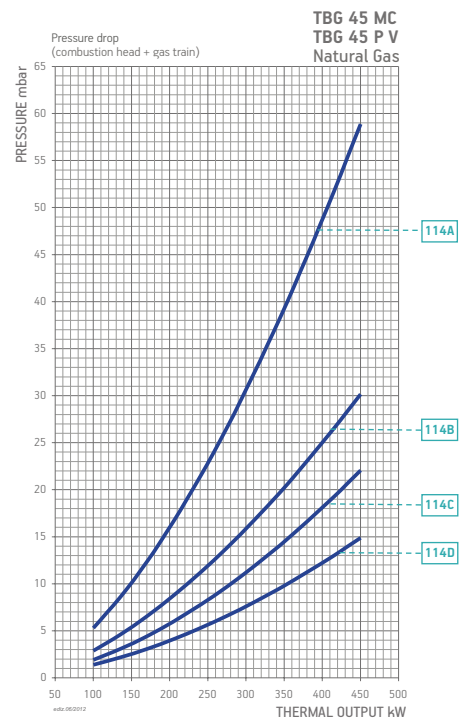
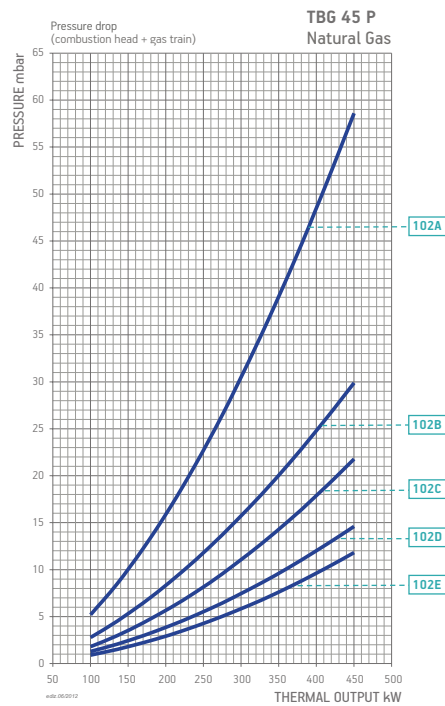
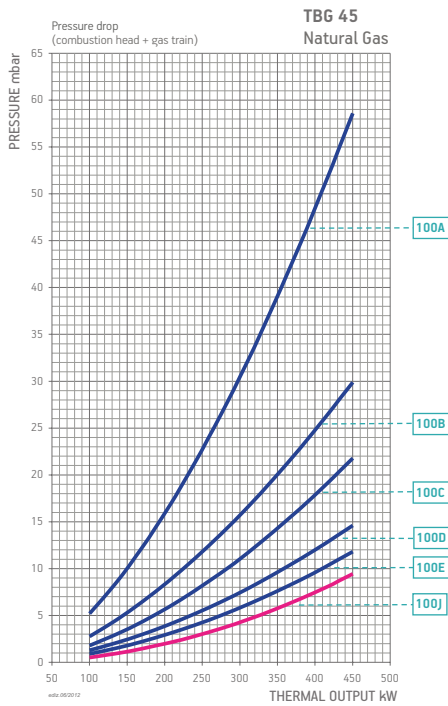
GAS BURNERS ACCESSORIES

TBG 45 MC: boiler coupling kit, plug for wiring.
TBG 45 ME/45 ME V: boiler coupling kit.

NOTES

4 Equipped with air closure device.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH



To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

- 9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.
- 12 Valve tightness control not required by EN676.
- CTV Gas train with Valve Tightness Control.
- ** Maximum gas inlet pressure at pressure regulator.

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 45	Natural gas	100A	CE/EXP	360	CTV	19990510	Included	96000005	-	B2			
						19990510	Included	96000005	98000101	B2	12)		
			EXP	360	CTV	19990545	Included	96000005	-	M2			
						19990545	Included	96000005	98000101	M2			
			100B	CE/EXP	360	CTV	19990511	Included	96000004	-	B2		
							19990511	Included	96000004	98000101	B2	12)	
		EXP		360	CTV	19990546	Included	96000004	-	M2			
						19990546	Included	96000004	98000101	M2			
		100C	CE/EXP	360	CTV	19990512	Included	96000004	-	B2			
						19990512	Included	96000004	98000101	B2	12)		
			EXP	360	CTV	19990547	Included	96000004	-	M2			
						19990547	Included	96000004	98000101	M2			
		100D	CE/EXP	360	CTV	19990513	Included	-	-	B2			
						19990513	Included	-	98000101	B2	12)		
			EXP	360	CTV	19990548	Included	-	-	M2			
						19990548	Included	-	98000101	M2			
		100E	CE/EXP	360	CTV	19990514	Included	96000013	-	B2			
						19990514	Included	96000013	98000101	B2	12)		
			EXP	360	CTV	19990549	Included	96000013	-	M2			
						19990549	Included	96000013	98000101	M2			
100J	EXP	140		CTV	19990471	-	-	-	ME4				
TBG 45 P	Natural gas	102A	CE/EXP	360	CTV	19990510	Included	96000005	-	B2			
						19990510	Included	96000005	98000101	B2	12)		
		102B	CE/EXP	360	CTV	19990511	Included	96000004	-	B2			
						19990511	Included	96000004	98000101	B2	12)		
		102C	CE/EXP	360	CTV	19990512	Included	96000004	-	B2			
						19990512	Included	96000004	98000101	B2	12)		
		102D	CE/EXP	360	CTV	19990513	Included	-	-	B2			
						19990513	Included	-	98000101	B2	12)		
102E	CE/EXP	360	CTV	19990514	Included	96000013	-	B2					
				19990514	Included	96000013	98000101	B2	12)				
TBG 45 P V TBG 45 MC	Natural gas	114A	CE/EXP	360	CTV	19990545	Included	96000005	-	B7			
						19990545	Included	96000005	98000101	B7	12)		
		114B	CE/EXP	360	CTV	19990546	Included	96000004	-	B7			
						19990546	Included	96000004	98000101	B7	12)		
		114C	CE/EXP	360	CTV	19990547	Included	96000004	-	B7			
						19990547	Included	96000004	98000101	B7	12)		
114D	CE/EXP	360	CTV	19990548	Included	-	-	B7					
				19990548	Included	-	98000101	B7	12)				
TBG 45 PN	Natural gas	104A	CE/EXP	100	CTV	19990440	Included	96000005	-	D3			
						19990440	Included	96000005	98000101	D3	12)		
		360	CTV	19990447	Included	96000005	-	D3	9)				
				19990447	Included	96000005	98000101	D3	9) 12)				
		104B	CE/EXP	100	CTV	19990441	Included	96000004	-	D3			
						19990441	Included	96000004	98000101	D3	12)		
104C	CE/EXP	100	CTV	19990442	Included	-	-	D3					
				19990442	Included	-	98000101	D3	12)				
TBG 45 ME TBG 45 ME V TBG 45 ME V O2 TBG 45 ME V CO	Natural gas	106A	CE/EXP	360	CTV	19990555	Included	96000005	Included	D2			
		106B	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2			
		106C	CE/EXP	360	CTV	19990557	Included	96000004	Included	D2			
		106D	CE/EXP	360	CTV	19990558	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	Pic.	Notes	
					Part no.	Part no.	Part no.	Part no.			
TBG 45	LPG	CE/EXP	360	CTV	19990510	Included	96000005	-	B2		
					19990510	Included	96000005	98000101	B2	12)	
		EXP	360	CTV	19990545	Included	96000005	-	M2		
					19990545	Included	96000005	98000101	M2		
TBG 45 P	LPG	CE/EXP	360	CTV	19990510	Included	96000005	-	B2		
					19990510	Included	96000005	98000101	B2	12)	
TBG 45 PV TBG 45 MC	LPG	CE/EXP	360	CTV	19990545	Included	96000005	-	B7		
TBG 45 PN	LPG	CE/EXP	360	CTV	19990440	Included	96000005	-	D3		
					19990440	Included	96000005	98000101	D3	12)	
TBG 45 ME/ME V TBG 45 ME V O2 TBG 45 ME V CO	LPG	CE/EXP	360	CTV	19990555	Included	96000005	Included	D2		



TBG 60

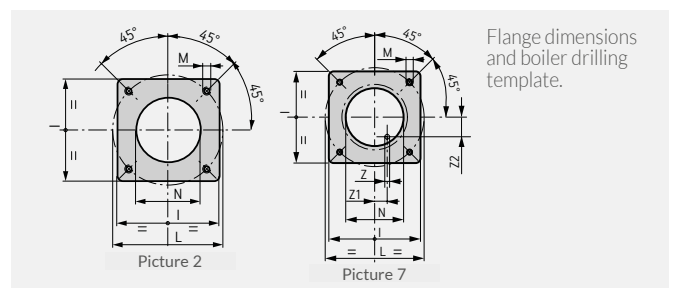
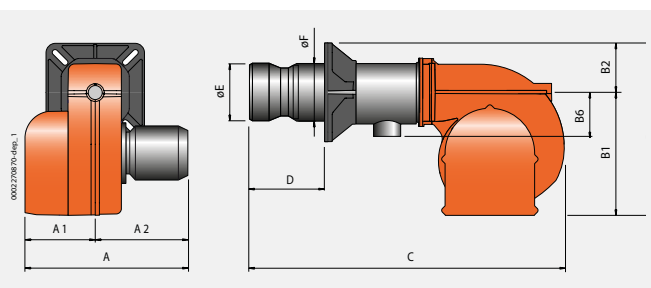


TBG 60 P

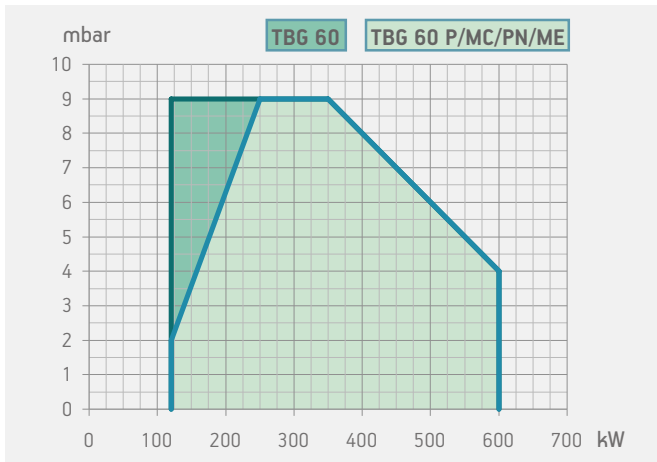


TBG 60 PN

	TBG 60	TBG 60 P	TBG 60 P V	TBG 60 PN
Gas burner compliant with European standard EN676. Operation:	single-stage	two-stage	two-stage	pneumatic two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).				•
Modulation ratio:				1:4
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3
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.	•	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.		•	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.			•	
CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.	•	•		
CE version gas train is complete with operation and safety valve with pneumatic 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, 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:	up/down	up/down	down	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•	•
Electric protection rating:	IP44	IP44	IP44	IP44



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 60	480	200	280	455	325	130	160	880	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	-	-	-	2
TBG 60 P	550	270	280	455	325	130	160	920	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	-	-	-	2
TBG 60 P V	550	270	280	455	325	130	160	920	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	-	-	-	2
TBG 60 PN	500	220	280	455	325	130	160	920	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	12	79	45,5	7



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 60	970	570	480	42
TBG 60 P	970	570	480	42
TBG 60 PV	970	570	480	44
TBG 60 PN	970	570	480	42

		Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz								
•		class 3	120 ÷ 600	TBG 60	17270010	3N AC 50Hz 400V	0,74	
		class 3	120 ÷ 600	TBG 60 P	17280010	3N AC 50Hz 400V	0,74	4)
		class 3	120 ÷ 600	TBG 60 P V	17280020	1N AC 50Hz 230V	0,74	4)
		class 3	120 ÷ 600	TBG 60 PN	17290010	3N AC 50Hz 400V	0,74	4)
Frequency 60 Hz								
•		class 3	120 ÷ 600	TBG 60	17275410	3N AC 60Hz 380V	0,65	
		class 3	120 ÷ 600	TBG 60 P	17285410	3N AC 60Hz 380V	0,65	4)
		class 3	120 ÷ 600	TBG 60 P V	17280020	1N AC 60Hz 220V	0,74	4)
		class 3	120 ÷ 600	TBG 60 PN	17295410	3N AC 60Hz 380V	0,65	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
TBG 60 PN: modulation kit	98000058
TBG 60 PN: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980054

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

4 Equipped with air closure device.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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



TBG 60 MC



TBG 60 ME

Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

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.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.

Residual oxygen (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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.

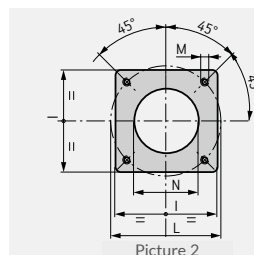
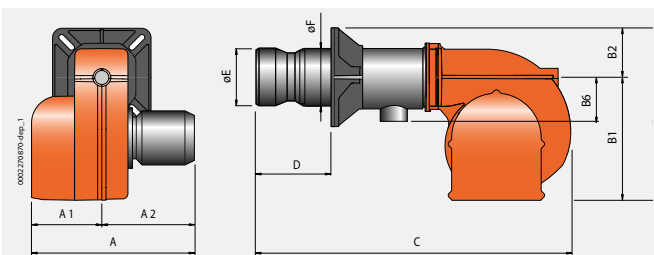
Gas train outlet:

Flame detection by ionisation electrode with connector for microamperometer.

Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.

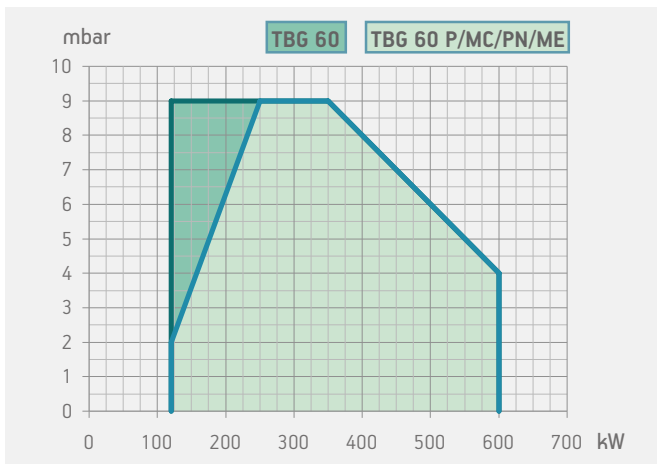
Electric protection rating:

	TBG 60 MC	TBG 60 ME	TBG 60 ME V	TBG 60 ME V O2	TBG 60 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:	1:5	1:5	1:5	1:5	1:5
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
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.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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 equipped either with display showing the working process and with the keyboard for the burner adjustment.		•	•	•	•
Electric protection rating:	IP44	IP40	IP40	IP40	IP40



Flange dimensions and boiler drilling template.

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 60 MC	610	330	280	455	325	130	160	880	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	2
TBG 60 ME	480	200	280	455	325	130	160	920	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	2
TBG 60 ME V	480	200	280	455	325	130	160	920	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	2
TBG 60 ME V O2	480	200	280	455	325	130	160	920	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	2
TBG 60 ME V CO	480	200	280	455	325	130	160	920	140 ÷ 300	156	152	260	225 ÷ 300	M12	160	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 60 MC	1070	800	700	51
TBG 60 ME	970	570	480	42
TBG 60 ME V	1050	750	480	44
TBG 60 ME V O2	1070	800	610	79
TBG 60 ME V CO	1070	800	610	93

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz										
				class 3	120 ÷ 600	TBG 60 MC	17310010	3N AC 50Hz 400V	0,74	4)
				class 3	120 ÷ 600	TBG 60 ME	17300020	3N AC 50Hz 400V	0,74	4)
NEW	•			class 3	120 ÷ 600	TBG 60 ME V	17300025	1N AC 50Hz 230V	0,74	4)
NEW	•	•		class 3	120 ÷ 600	TBG 60 ME V O2	17300026	1N AC 50Hz 230V	0,74	4)
NEW	•	•	•	class 3	120 ÷ 600	TBG 60 ME V CO	17300027	1N AC 50Hz 230V	0,74	4)
Frequency 60 Hz										
				class 3	120 ÷ 600	TBG 60 MC	17315410	3N AC 60Hz 380V	0,65	4)
				class 3	120 ÷ 600	TBG 60 ME	17315420	3N AC 60Hz 380V	0,65	4)
NEW	•			class 3	120 ÷ 600	TBG 60 ME V	on request	1N AC 60Hz 220V	0,65	4)
NEW	•	•		class 3	120 ÷ 600	TBG 60 ME V O2	on request	1N AC 60Hz 220V	0,65	4)
NEW	•	•	•	class 3	120 ÷ 600	TBG 60 ME V CO	on request	1N AC 60Hz 220V	0,65	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 60 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 60 MC: modulation kit	98000058
TBG 60 ME: modulation kit	98000059
TBG 60 MC/60 ME: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980054

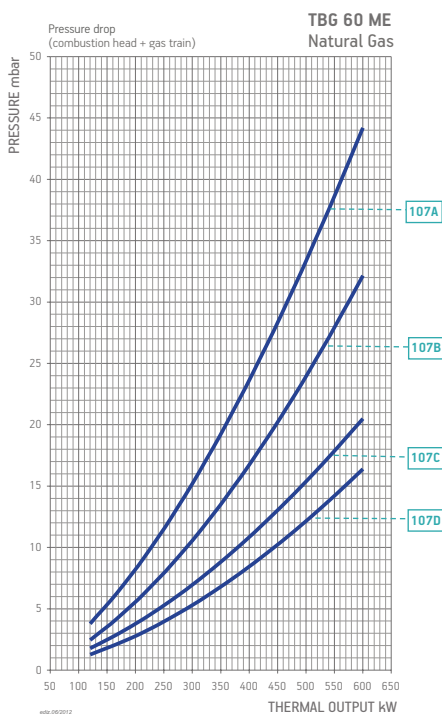
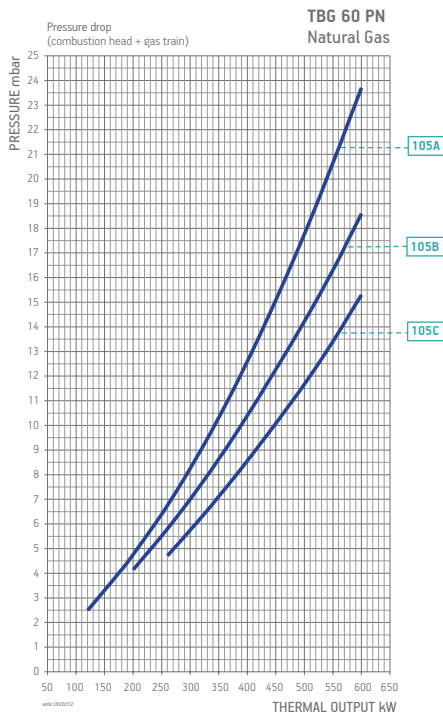
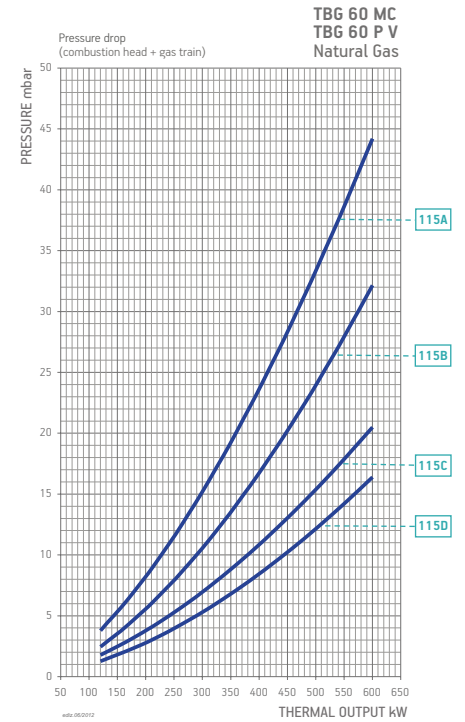
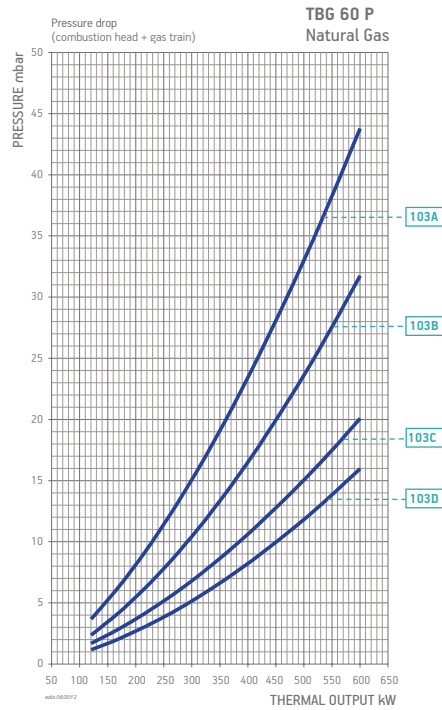
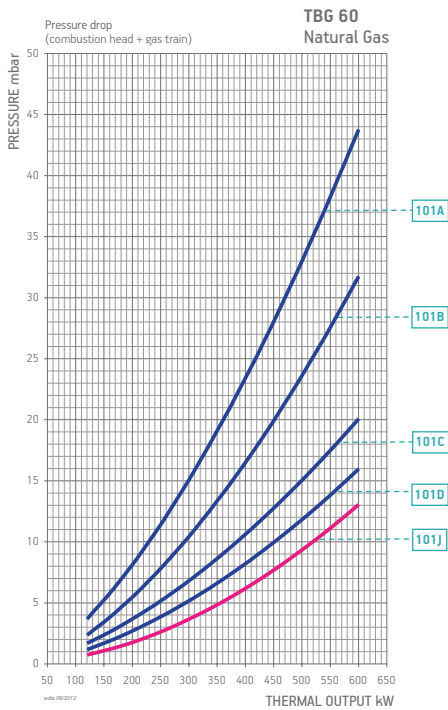
GAS BURNERS ACCESSORIES

TBG 60 MC: boiler coupling kit, plug for wiring.
TBG 60 ME/60 ME V: boiler coupling kit.

NOTES

- 4 Equipped with air closure device.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH



To choose the correct gas train please refer to the information on page 20.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

- 9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.
- 12 Valve tightness control not required by EN676. CTV Gas train with Valve Tightness Control.
- **) Maximum gas inlet pressure at pressure regulator.

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 60	Natural gas	101A	CE/EXP	360	CTV	19990511	Included	96000004	-	B2			
						19990511	Included	96000004	98000101	B2	12)		
		101B	EXP	360	CTV	19990546	Included	96000004	-	M2			
						19990546	Included	96000004	98000101	M2			
		101C	CE/EXP	360	CTV	19990512	Included	96000004	-	B2			
						19990512	Included	96000004	98000101	B2	12)		
		101D	EXP	360	CTV	19990547	Included	96000004	-	M2			
						19990547	Included	96000004	98000101	M2			
		101J	EXP	140	CTV	19990513	Included	-	-	B2			
						19990513	Included	-	98000101	B2	12)		
		103A	CE/EXP	360	CTV	19990514	Included	96000013	-	B2			
						19990514	Included	96000013	98000101	B2	12)		
		TBG 60 P	Natural gas	103B	CE/EXP	360	CTV	19990512	Included	96000004	-	B2	
								19990512	Included	96000004	98000101	B2	12)
103C	CE/EXP			360	CTV	19990513	Included	-	-	B2			
						19990513	Included	-	98000101	B2	12)		
103D	CE/EXP	360	CTV	19990514	Included	96000013	-	B2					
				19990514	Included	96000013	98000101	B2	12)				
TBG 60 P V TBG 60 MC	Natural gas	115A	CE/EXP	360	CTV	19990546	Included	96000004	-	B7			
						19990546	Included	96000004	98000101	B7	12)		
		115B	CE/EXP	360	CTV	19990547	Included	96000004	-	B7			
						19990547	Included	96000004	98000101	B7	12)		
		115C	CE/EXP	360	CTV	19990548	Included	-	-	B7			
19990548	Included					-	98000101	B7	12)				
115D	CE/EXP	360	CTV	19990549	Included	96000013	-	B7					
				19990549	Included	96000013	98000101	B7	12)				
TBG 60 PN	Natural gas	105A	CE/EXP	100	CTV	19990441	Included	96000004	-	D3			
						19990441	Included	96000004	98000101	D3	12)		
		105B	CE/EXP	100	CTV	19990448	Included	96000004	-	D3	9)		
						19990448	Included	96000004	98000101	D3	9) 12)		
		105C	CE/EXP	100	CTV	19990442	Included	-	-	D3			
19990442	Included					-	98000101	D3	12)				
TBG 60 ME TBG 60 ME V TBG 60 ME V O2 TBG 60 ME V CO	Natural gas	107A	CE/EXP	360	CTV	19990443	Included	96000013	-	D3			
						19990443	Included	96000013	98000101	D3	12)		
		107B	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2			
						19990556	Included	96000004	Included	D2			
107C	CE/EXP	360	CTV	19990558	Included	-	Included	D2					
				19990558	Included	-	Included	D2					
107D	CE/EXP	360	CTV	19990559	Included	96000013	Included	D2					
				19990559	Included	96000013	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	Pic.	Notes
					Part no.	Part no.	Part no.	Part no.		
TBG 60	LPG	CE/EXP	360	CTV	19990511	Included	96000004	-	B2	
					19990511	Included	96000004	98000101	B2	12)
TBG 60 P	LPG	CE/EXP	360	CTV	19990546	Included	96000004	-	M2	
					19990546	Included	96000004	98000101	M2	
TBG 60 PV TBG 60 MC	LPG	CE/EXP	360	CTV	19990511	Included	96000004	-	B2	
					19990511	Included	96000004	98000101	B2	12)
TBG 60 PN	LPG	CE/EXP	100	CTV	19990546	Included	96000004	-	B7	
					19990546	Included	96000004	98000101	B7	
TBG 60 ME/ME V TBG 60 ME V O2 TBG 60 ME V CO	LPG	CE/EXP	360	CTV	19990441	Included	96000004	-	D3	
					19990441	Included	96000004	98000101	D3	12)
TBG 60 ME/ME V TBG 60 ME V O2 TBG 60 ME V CO	LPG	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2	
					19990556	Included	96000004	Included	D2	

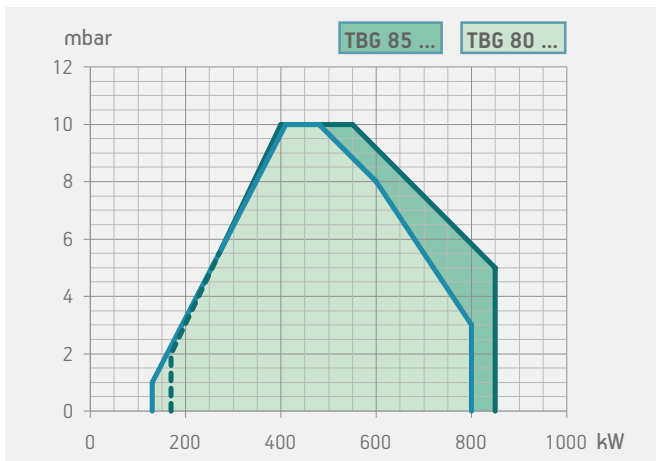


TBG 80 LX PN

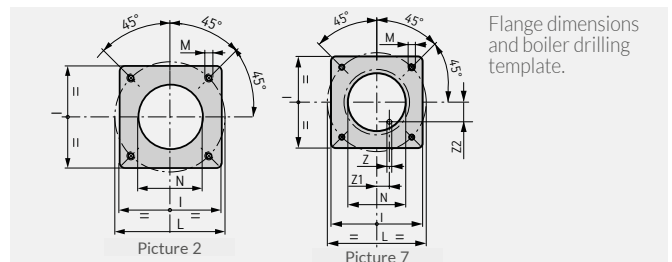
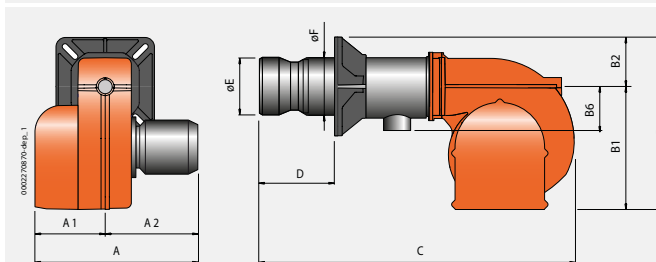


TBG 80 LX ME

	TBG 80 LX PN	TBG 80 LX ME	TBG 80 LX ME V	TBG 80 LX ME V O ₂	TBG 80 LX ME V CO
Gas burner compliant with European standard EN676. Operation:	pneumatic 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:	1:6	1:6	1:6	1:6	1:6
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
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:	electric servomotor	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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) in fumes to ensure increased performance and less atmospheric pollution.					•
CE version gas train is complete with operation and safety valve with pneumatic 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:	up/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 kg
	L	P	H	
TBG 80 LX PN	1070	800	700	78
TBG 80 LX ME	1070	800	700	78
TBG 80 LX ME V	1070	800	700	81
TBG 80 LX ME V O2	1530	760	720	103
TBG 80 LX ME V CO	1530	760	720	115



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 80 LX PN	645	275	370	520	380	140	160	1230	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	12	92	50	7
TBG 80 LX ME	610	240	370	520	380	140	200	1265	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	-	-	-	2
TBG 80 LX ME V	670	300	370	520	380	140	200	1265	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	-	-	-	2
TBG 80 LX ME V O2	670	300	370	520	380	140	200	1265	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	-	-	-	2
TBG 80 LX ME V CO	670	300	370	520	380	140	200	1265	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	-	-	-	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz										
				class 3	130 ÷ 800	TBG 80 LX PN	17520010	3N AC 50Hz 400V	1,1	3) 4)
				class 3	130 ÷ 800	TBG 80 LX ME	17530020	3N AC 50Hz 400V	1,1	3) 4)
NEW	•			class 3	130 ÷ 800	TBG 80 LX ME V	17530025	1N AC 50Hz 230V	1,1	3) 4)
NEW	•	•		class 3	130 ÷ 800	TBG 80 LX ME V O2	17530026	1N AC 50Hz 230V	1,1	3) 4)
NEW	•	•	•	class 3	130 ÷ 800	TBG 80 LX ME V CO	17530027	1N AC 50Hz 230V	1,1	3) 4)
Frequency 60 Hz										
				class 3	130 ÷ 800	TBG 80 LX PN	17525410	3N AC 60Hz 380V	1,1	3) 4)
				class 3	130 ÷ 800	TBG 80 LX ME	17525420	3N AC 60Hz 380V	1,1	3) 4)
NEW	•			class 3	130 ÷ 800	TBG 80 LX ME V	on request	1N AC 60Hz 380V	1,1	3) 4)
NEW	•	•		class 3	130 ÷ 800	TBG 80 LX ME V O2	on request	1N AC 60Hz 380V	1,1	3) 4)
NEW	•	•	•	class 3	130 ÷ 800	TBG 80 LX ME V CO	on request	1N AC 60Hz 380V	1,1	3) 4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
TBG 80 LX ME V: modulating probe kit LCM 100 (see page 288)	

MODULATING MODE

DESCRIPTION	PART NO.
TBG 80 LX PN: modulation kit	98000057
TBG 80 LX ME: modulation kit	98000059
TBG 80 LX PN/80 LX ME: modulating probe kit (see page 288)	

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/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 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 cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

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



TBG 85 P



TBG 85 PN

Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

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:

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.

CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.

CE version gas train is complete with operation and safety valve with pneumatic 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, 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.

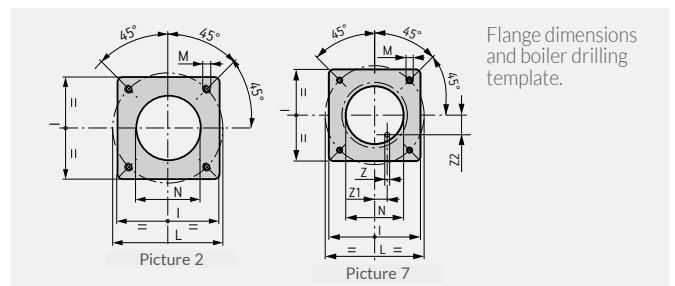
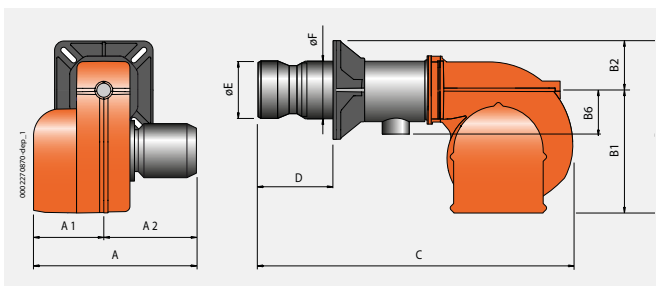
Gas train outlet:

Flame detection by ionisation electrode with connector for microamperometer.

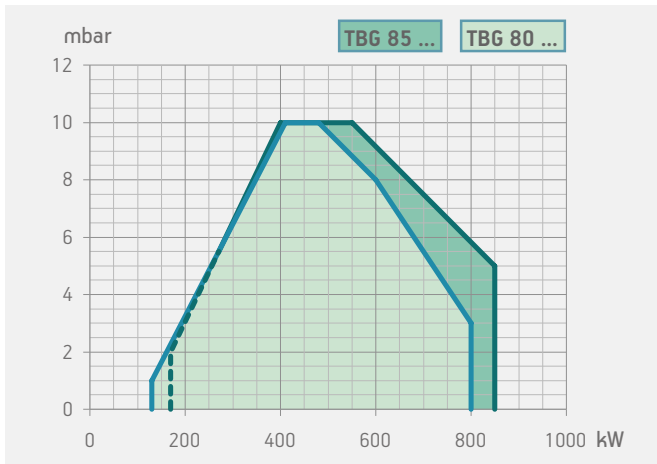
Control panel with display diagram for working mode with indication lights.

Electric protection rating:

	TBG 85 P	TBG 85 P V	TBG 85 PN
	two-stage	two-stage	pneumatic two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).			•
Modulation ratio:			1:4
Low NOx and CO emissions gas burner according to European standard EN676:	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:	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.		•	
CE version gas train is complete with operation and safety valve with electromagnetic drive, minimum pressure switch, pressure regulator and gas filter.	•		
CE version gas train is complete with operation and safety valve with pneumatic 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, 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:	up/down	down	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•
Control panel with display diagram for working mode with indication lights.	•	•	•
Electric protection rating:	IP44	IP44	IP44



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 85 P	645	275	370	520	380	140	160	1230	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	-	-	-	2
TBG 85 P V	645	275	370	520	380	140	200	1230	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	-	-	-	2
TBG 85 PN	645	275	370	520	380	140	160	1230	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	12	92	50	7



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 85 P	1070	800	700	78
TBG 85 PV	1070	800	700	80
TBG 85 PN	1070	800	700	78

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
•	class 2	170 ÷ 850	TBG 85 P	17480010	3N AC 50Hz 400V	1,1	3) 4)
	class 2	170 ÷ 850	TBG 85 P V	17480020	1N AC 50Hz 230V	1,1	3) 4)
	class 2	170 ÷ 850	TBG 85 PN	17490010	3N AC 50Hz 400V	1,1	3) 4)
Frequency 60 Hz							
•	class 2	170 ÷ 850	TBG 85 P	17485410	3N AC 50Hz 380V	1,1	3) 4)
	class 2	170 ÷ 850	TBG 85 P V	17480020	1N AC 50Hz 220V	1,1	3) 4)
	class 2	170 ÷ 850	TBG 85 PN	17495410	3N AC 50Hz 220V	1,1	3) 4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
TBG 85 PN: modulation kit	98000057
TBG 85 PN: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

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/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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

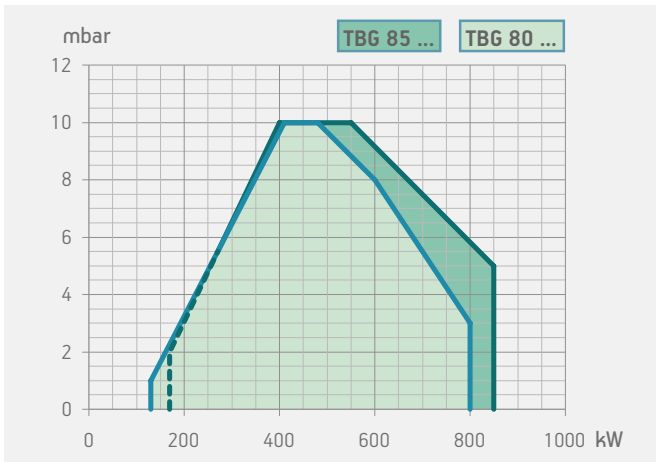


TBG 85 MC

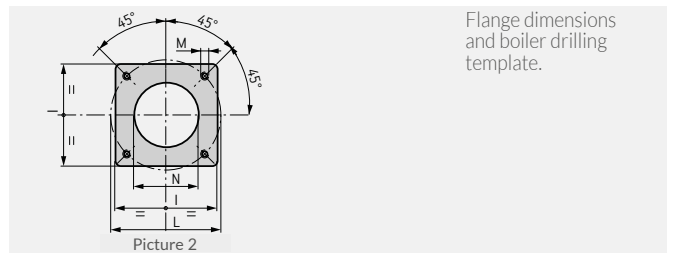
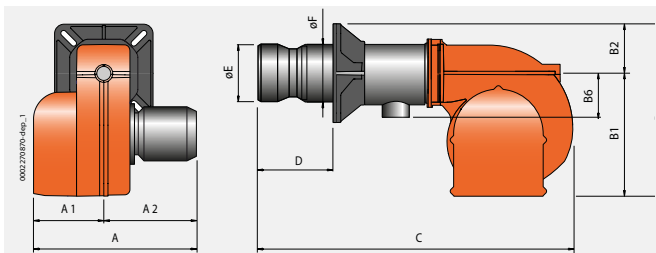


TBG 85 ME

	TBG 85 MC	TBG 85 ME	TBG 85 ME V	TBG 85 ME V O2	TBG 85 ME V CO
Gas burner compliant with European standard EN676. Operation:	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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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 kg
	L	P mm	H	
TBG 85 MC	1070	800	700	78
TBG 85 ME	1070	800	700	78
TBG 85 ME V	1070	800	700	81
TBG 85 ME V O2	1530	760	700	103
TBG 85 ME V CO	1530	760	700	115



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 85 MC	690	320	370	550	380	170	200	1230	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2
TBG 85 ME	610	240	370	520	380	140	200	1265	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2
TBG 85 ME V	670	300	370	520	380	140	200	1265	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2
TBG 85 ME V O2	670	300	370	520	380	140	200	1265	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2
TBG 85 ME V CO	670	300	370	520	380	140	200	1265	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2

	Inverter	O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
				class 2	170 ÷ 850	TBG 85 MC	17540010	3N AC 50Hz 400V	1,1	3) 4)
				class 2	170 ÷ 850	TBG 85 ME	17500020	3N AC 50Hz 400V	1,1	3) 4)
NEW				class 2	170 ÷ 850	TBG 85 ME V	17500025	1N AC 50Hz 230V	1,1	3) 4)
NEW				class 2	170 ÷ 850	TBG 85 ME V O2	17500026	1N AC 50Hz 230V	1,1	3) 4)
NEW				class 2	170 ÷ 850	TBG 85 ME V CO	17500027	1N AC 50Hz 230V	1,1	3) 4)
				class 2	170 ÷ 850	TBG 85 MC	17545410	3N AC 60Hz 380V	1,1	3) 4)
				class 2	170 ÷ 850	TBG 85 ME	17545420	3N AC 60Hz 380V	1,1	3) 4)
NEW				class 2	170 ÷ 850	TBG 85 ME V	on request	1N AC 60Hz 220V	1,1	3) 4)
NEW				class 2	170 ÷ 850	TBG 85 ME V O2	on request	1N AC 60Hz 220V	1,1	3) 4)
NEW				class 2	170 ÷ 850	TBG 85 ME V CO	on request	1N AC 60Hz 220V	1,1	3) 4)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 85 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 85 MC: modulation kit	98000057
TBG 85 ME: modulation kit	98000059
TBG 85 MC/85 ME: modulating probe kit (see page 288)	

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/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
- For different type of gas and pressure values, please get in contact with our commercial department.

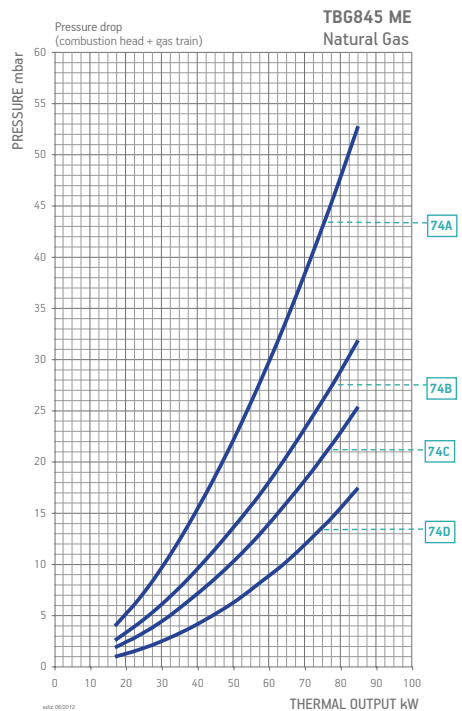
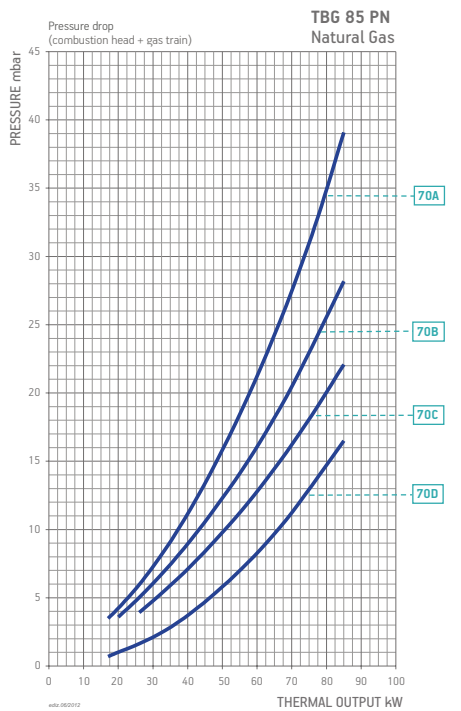
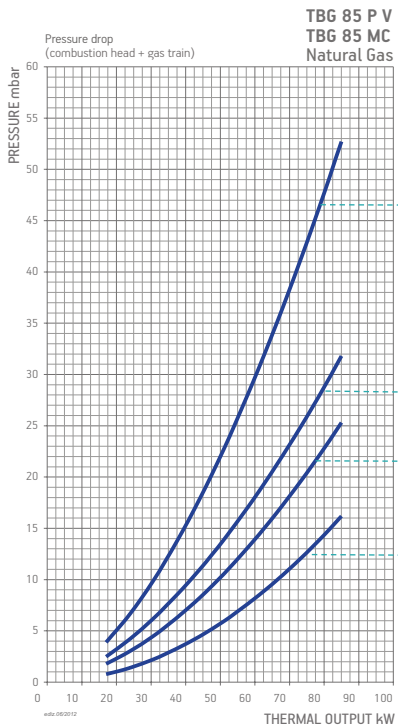
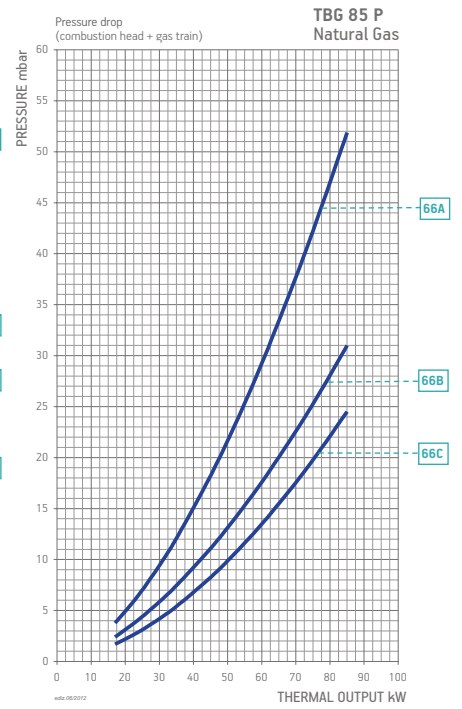
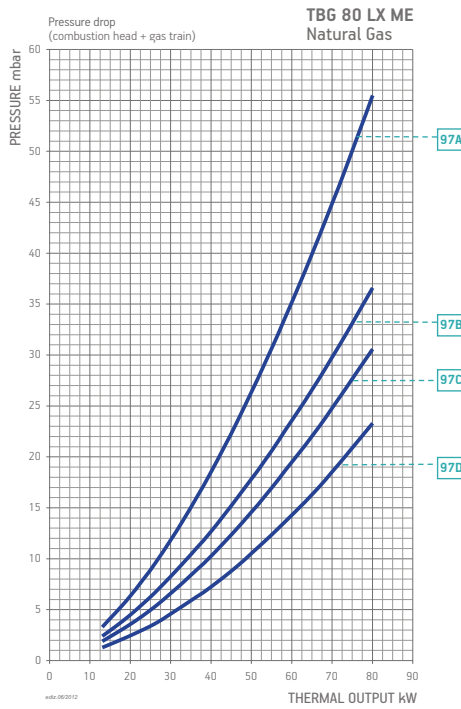
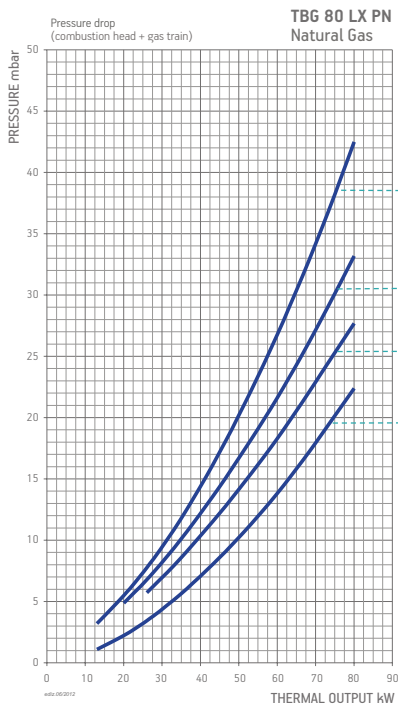
ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

BURNER/GAS TRAIN MATCH



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 80 LX PN	Natural gas	93A	CE/EXP	100	CTV	19990441	Included	96000032	-	D3			
						19990441	Included	96000032	98000101	D3	12)		
		93B	CE/EXP	100	CTV	19990448	Included	96000032	98000101	D3	9) 12)		
						19990442	Included	96000007	-	D3			
		93C	CE/EXP	100	CTV	19990443	Included	-	-	D3			
						19990443	Included	-	98000101	D3	12)		
		93D	CE/EXP	500	CTV	19990530	Included	-	-	D3			
						19990530	Included	-	98000102	D3	12)		
		TBG 80 LX ME TBG 80 LX ME V TBG 80 LX ME V O2 TBG 80 LX ME V CO	Natural gas	97A	CE/EXP	360	CTV	19990557	Included	96000032	Included	D2	
				97B	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	
97C	CE/EXP			360	CTV	19990559	Included	-	Included	D2			
97D	CE/EXP			500	CTV	19990524	Included	-	Included	D2			
TBG 85 P	Natural gas	66A	CE/EXP	360	CTV	19990512	Included	96000032	-	B2			
						19990512	Included	96000032	98000101	B2	12)		
		66B	CE/EXP	360	CTV	19990513	Included	96000007	-	B2			
						19990513	Included	96000007	98000101	B2	12)		
		66C	CE/EXP	360	CTV	19990514	Included	-	-	B2			
						19990514	Included	-	98000101	B2	12)		
TBG 85 P V TBG 85 MC	Natural gas	116A	CE/EXP	360	CTV	19990547	Included	96000032	-	B7			
						19990547	Included	96000032	98000101	B7	12)		
		116B	CE/EXP	360	CTV	19990548	Included	96000007	-	B7			
						19990548	Included	96000007	98000101	B7	12)		
		116C	CE/EXP	360	CTV	19990549	Included	-	-	B7			
						19990549	Included	-	98000101	B7	12)		
		116D	CE/EXP	500	CTV	19990550	Included	-	-	B7			
						19990550	Included	-	98000102	B7	12)		
TBG 85 PN	Natural gas	70A	CE/EXP	100	CTV	19990441	Included	96000032	-	D3			
						19990441	Included	96000032	98000101	D3	12)		
		70B	CE/EXP	100	CTV	19990448	Included	96000032	-	D3	9)		
						19990448	Included	96000032	98000101	D3	9) 12)		
		70C	CE/EXP	100	CTV	19990442	Included	96000007	-	D3			
						19990442	Included	96000007	98000101	D3	12)		
		70D	CE/EXP	500	CTV	19990443	Included	-	-	D3			
						19990443	Included	-	98000101	D3	12)		
		TBG 85 ME TBG 85 ME V TBG 85 ME V O2 TBG 85 ME V CO	Natural gas	74A	CE/EXP	360	CTV	19990557	Included	96000032	Included	D2	
				74B	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	
74C	CE/EXP			360	CTV	19990559	Included	-	Included	D2			
74D	CE/EXP			500	CTV	19990524	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 85 P	LPG	CE/EXP	360	CTV	19990513	Included	96000007	-	98000357	B2	
					19990513	Included	96000007	98000101	98000357	B2	12)
TBG 85 PV TBG 85 MC	LPG	CE/EXP	360	CTV	19990548	Included	96000007	-	98000357	B7	
					19990548	Included	96000007	98000101	98000357	B7	12)
TBG 85 PN	LPG	CE/EXP	360	CTV	19990441	Included	96000032	-	98000357	D3	
					19990441	Included	96000032	98000101	98000357	D3	12)
TBG 85 ME/ME V TBG 85 ME V O2 TBG 85 ME V CO	LPG	CE/EXP	360	CTV	19990558	Included	96000007	Included	98000357	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

** Maximum gas inlet pressure at pressure regulator.

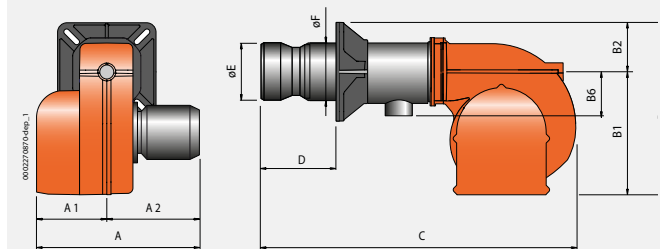
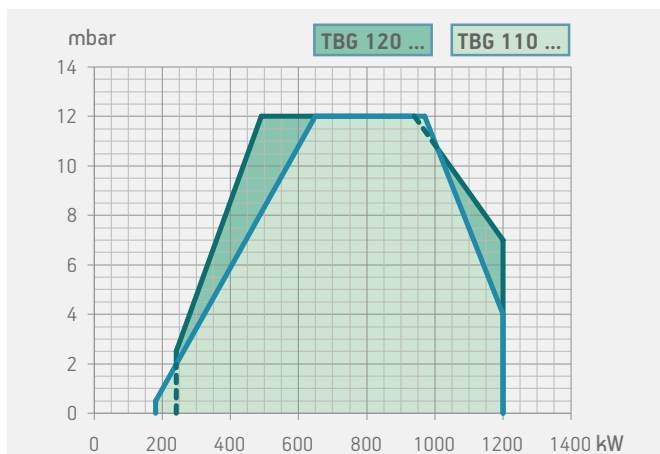


TBG 110 LX PN

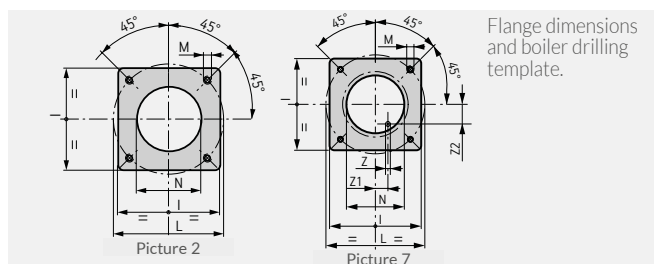


TBG 110 LX ME

	TBG 110 LX PN	TBG 110 LX ME	TBG 110 LX ME V	TBG 110 LX ME VO2	TBG 110 LX ME VCO
Gas burner compliant with European standard EN676. Operation:	pneumatic 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:	1:6	1:6	1:6	1:6	1:6
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
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:	electric servomotor	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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) in fumes to ensure increased performance and less atmospheric pollution.					•
CE version gas train is complete with operation and safety pneumatic 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:	up/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 kg
	L	P	H	
TBG 110 LX PN	1070	800	700	87
TBG 110 LX ME	1070	800	700	87
TBG 110 LX ME V	1530	760	700	101
TBG 110 LX ME V O2	1530	760	700	113
TBG 110 LX 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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 110 LX PN	645	275	370	540	380	160	160	1280	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	12	112,5	54	7
TBG 110 LX ME	610	240	370	540	380	160	200	1315	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	-	-	-	2
TBG 110 LX ME V	670	300	370	540	380	160	200	1315	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	-	-	-	2
TBG 110 LX ME V O2	670	300	370	540	380	160	200	1315	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	-	-	-	2
TBG 110 LX ME V CO	670	300	370	540	380	160	200	1315	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	-	-	-	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 3	180 ÷ 1200	TBG 110 LX PN	17590010	3N AC 50Hz 400V	1,5	3) 4)
				class 3	180 ÷ 1200	TBG 110 LX ME	17600020	3N AC 50Hz 400V	1,5	3) 4)
NEW	•			class 3	180 ÷ 1200	TBG 110 LX ME V	17600025	3N AC 50Hz 400V	1,5	3) 4)
NEW	•	•		class 3	180 ÷ 1200	TBG 110 LX ME V O2	17600026	3N AC 50Hz 400V	1,5	3) 4)
NEW	•	•	•	class 3	180 ÷ 1200	TBG 110 LX ME V CO	17600027	3N AC 50Hz 400V	1,5	3) 4)
Frequency 60 Hz										
				class 3	180 ÷ 1200	TBG 110 LX PN	17595410	3N AC 60Hz 380V	1,5	3) 4)
				class 3	180 ÷ 1200	TBG 110 LX ME	17605420	3N AC 60Hz 380V	1,5	3) 4)
NEW	•			class 3	180 ÷ 1200	TBG 110 LX ME V	on request	3N AC 60Hz 380V	1,5	3) 4)
NEW	•	•		class 3	180 ÷ 1200	TBG 110 LX ME V O2	on request	3N AC 60Hz 380V	1,5	3) 4)
NEW	•	•	•	class 3	180 ÷ 1200	TBG 110 LX ME V CO	on request	3N AC 50Hz 400V	1,5	3) 4)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 110 LX ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 110 LX PN: modulation kit	98000057
TBG 110 LX ME: modulation kit	98000059
TBG 110 LX PN/110 LX ME: modulating probe kit (see page 288)	

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/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 For different type of gas and pressure values, please get in contact with our commercial department.

ON REQUEST

DESCRIPTION
TBG 110 LX PN V: burner equipped with motor speed controller (Inverter).

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.



TBG 120 P



TBG 120 PN

TBG 120 P

TBG 120 PN

Gas burner compliant with European standard EN676. Operation:

two-stage

pneumatic two-stage progressive

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

•

Modulation ratio:

1:4

Low NOx and CO emissions gas burner according to European standard EN676:

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

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.

•

•

CE version gas train is complete with operation and safety valve with pneumatic 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, 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

Flame detection by ionisation electrode with connector for microamperometer.

•

•

Control panel with display diagram for working mode with indication lights.

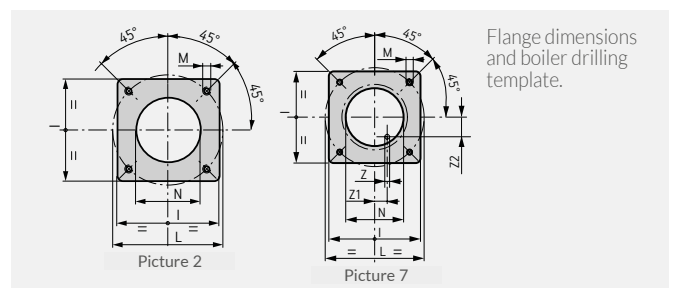
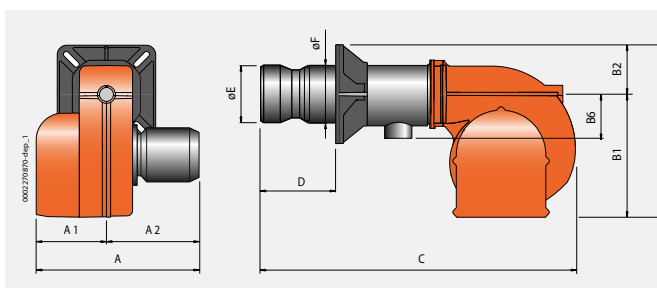
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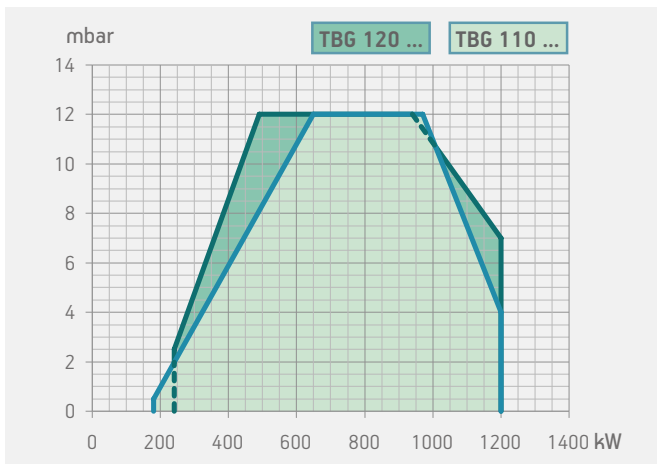
Electric protection rating:

IP44

IP44



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 120 P	690	320	370	550	380	170	200	1280	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	-	-	-	2
TBG 120 PN	645	275	370	540	380	160	160	1280	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	12	112,5	54	7



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 120 P	1070	800	700	87
TBG 120 PN	1070	800	700	87

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply	Motor kW	Notes
Frequency 50 Hz							
	class 2	240 ÷ 1200	TBG 120 P	17550030	3N AC 50Hz 400V	1,5	3) 4)
	class 2	240 ÷ 1200	TBG 120 PN	17560010	3N AC 50Hz 400V	1,5	3) 4)
Frequency 60 Hz							
	class 2	240 ÷ 1200	TBG 120 P	17555430	3N AC 60Hz 380V	1,5	3) 4)
	class 2	240 ÷ 1200	TBG 120 PN	17565410	3N AC 60Hz 380V	1,5	3) 4)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 120 PN: modulation kit	98000057
TBG 120 PN: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

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: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$,

LPG: $H_i = 92 \text{ MJ/m}^3 = 22000 \text{ kcal/m}^3$.

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

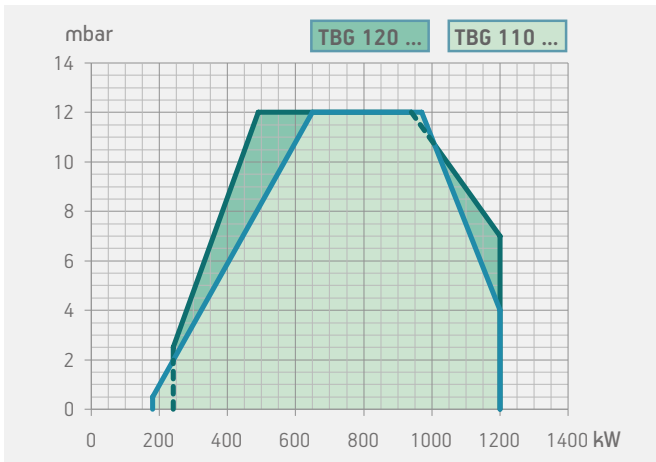


TBG 120 MC

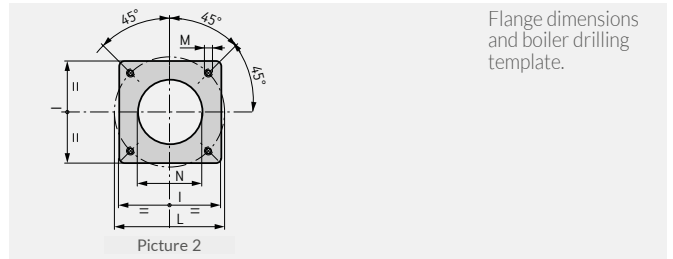
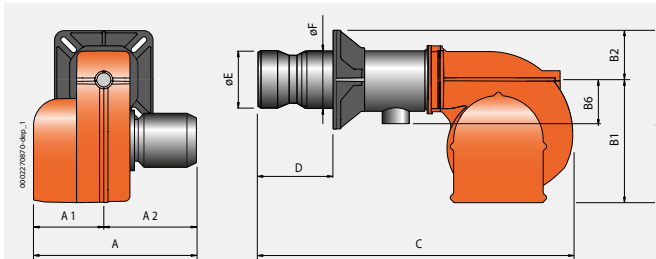


TBG 120 ME

	TBG 120 MC	TBG 120 ME	TBG 120 ME V	TBG 120 ME V O2	TBG 120 ME V CO
Gas burner compliant with European standard EN676. Operation:	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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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 kg
	L	P mm	H	
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

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

TO COMPLETE THE BURNER

DESCRIPTION
TBG 120 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 120 MC: modulation kit	98000057
TBG 120 ME: modulation kit	98000059
TBG 120 MC/120 ME: modulating probe kit (see page 288)	

NOTES

- Sound proof lid on burner air intake.
 - Equipped with air closure device.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
- For different type of gas and pressure values, please get in contact with our commercial department.

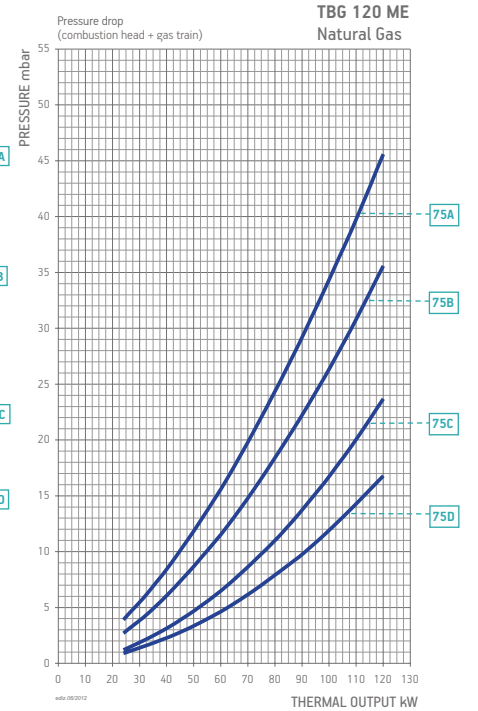
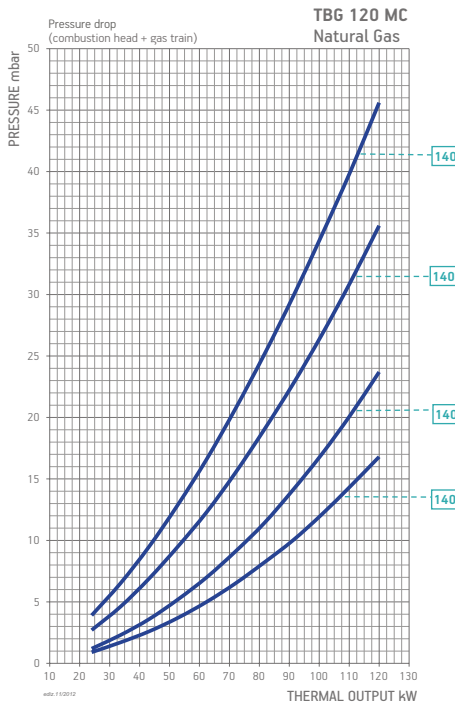
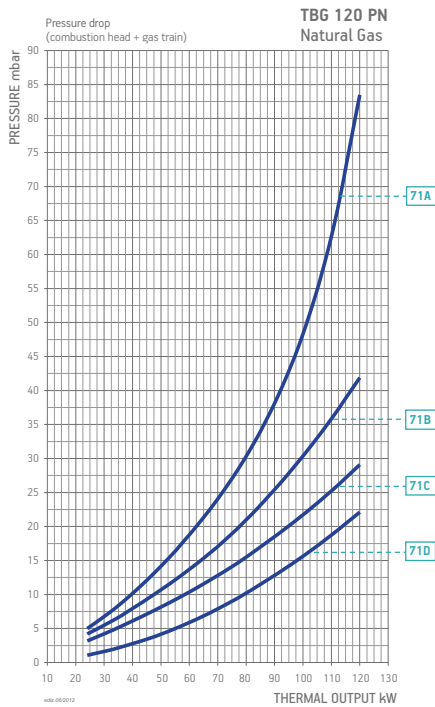
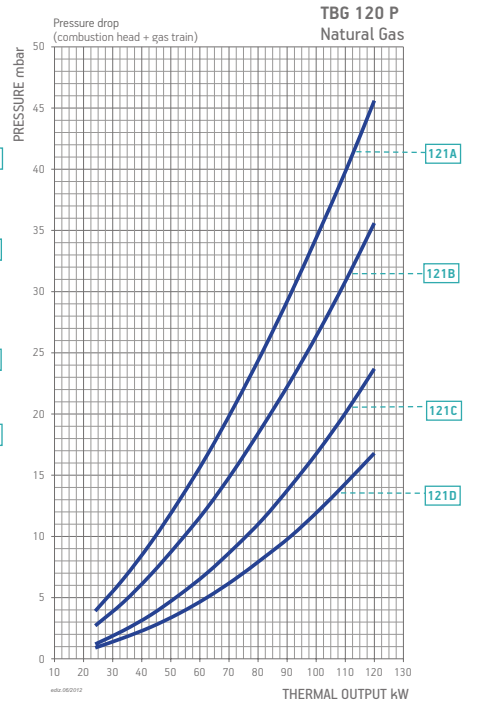
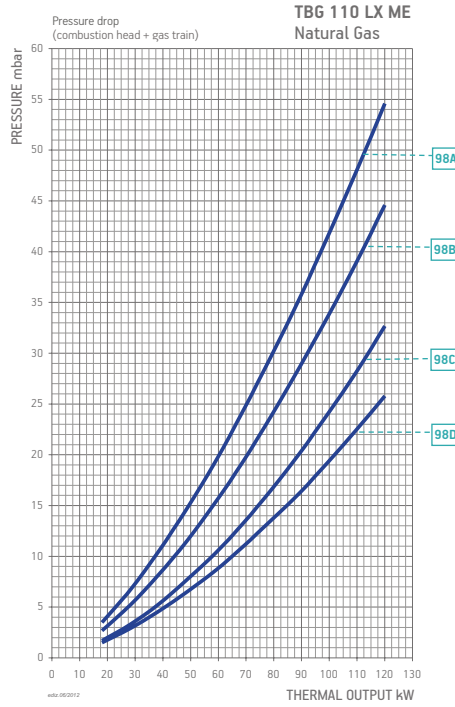
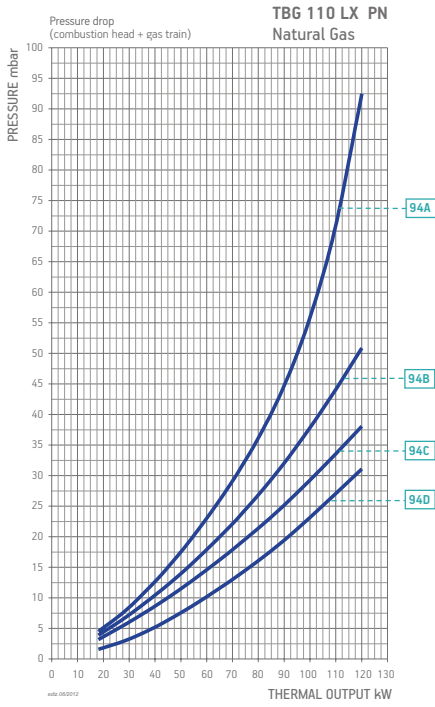
ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

BURNER/GAS TRAIN MATCH



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 110 LX PN	Natural gas	94A	CE/EXP	100	CTV	19990441	Included	96000032	-	D3									
						19990441	Included	96000032	98000101	D3	12)								
						19990448	Included	96000032	-	D3	9)								
						19990448	Included	96000032	98000101	D3	9)12)								
						19990442	Included	96000007	-	D3									
		94B	CE/EXP	100	CTV	19990442	Included	96000007	98000101	D3	12)								
						19990443	Included	-	-	D3									
						19990443	Included	-	98000101	D3	12)								
						19990530	Included	-	-	D3									
						19990530	Included	-	98000102	D3	12)								
TBG 110 LX ME TBG 110 LX ME V TBG 110 LX ME V O2 TBG 110 LX ME V CO	Natural gas	98A	CE/EXP	360	CTV	19990561	Included	96000007	Included	D2									
						19990562	Included	-	Included	D2									
						19990524	Included	-	Included	D2									
						19990525	Included	-	Included	D2									
TBG 120 P	Natural gas	121A	CE/EXP	360	CTV	19990548	Included	96000007	-	B7									
						19990548	Included	96000007	98000101	B7	12)								
						19990549	Included	-	-	B7									
		121B	CE/EXP	360	CTV	19990549	Included	19990549	Included	-	98000101	B7	12)						
														19990550	Included	-	-	B7	
														19990550	Included	-	98000102	B7	12)
121D	CE/EXP	500	CTV	19990563	Included	19990563	Included	-	-	B7									
												19990563	Included	-	98000101	B7	12)		
												19990441	Included	96000032	-	D3			
TBG 120 PN	Natural gas	71A	CE/EXP	100	CTV	19990441	Included	96000032	98000101	D3	12)								
						19990448	Included	96000032	-	D3	9)								
						19990448	Included	96000032	98000101	D3	9)12)								
						19990442	Included	96000007	-	D3									
						19990442	Included	96000007	98000101	D3	12)								
		71B	CE/EXP	100	CTV	19990443	Included	19990443	Included	-	-	D3							
														19990443	Included	-	98000101	D3	12)
														19990530	Included	-	-	D3	
														19990530	Included	-	98000102	D3	12)
														19990548	Included	96000007	-	B7	
TBG 120 MC	Natural gas	140A	CE/EXP	360	CTV	19990548	Included	96000007	98000101	B7	12)								
						19990549	Included	-	-	B7									
						19990549	Included	-	98000101	B7	12)								
						19990550	Included	-	-	B7									
						19990550	Included	-	98000102	B7	12)								
TBG 120 ME TBG 120 ME V TBG 120 ME V O2 TBG 120 ME V CO	Natural gas	75A	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2									
						19990559	Included	-	Included	D2									
						19990524	Included	-	Included	D2									
						19990525	Included	-	Included	D2									
						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 P	LPG	CE/EXP	360	CTV	19990548	Included	96000007	-	98000358	B7	
					19990548	Included	96000007	98000101	98000358	B7	12)
TBG 120 PN	LPG	CE/EXP	100	CTV	19990442	Included	96000007	-	98000358	D3	
					19990442	Included	96000007	98000101	98000358	D3	12)
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 TBG 120 ME V O2 TBG 120 ME V CO	LPG	CE/EXP	360	CTV	19990558	Included	96000007	Included	98000358	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.

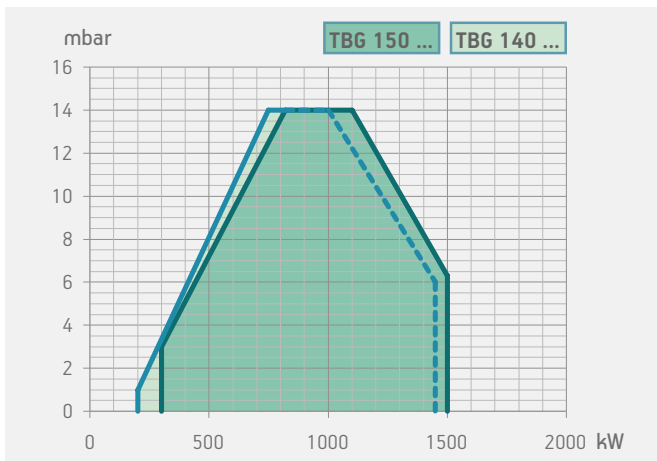


TBG 140 LX PN

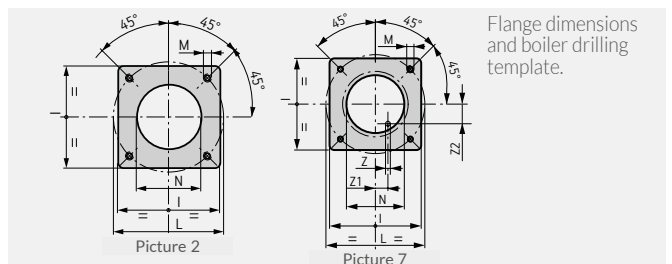
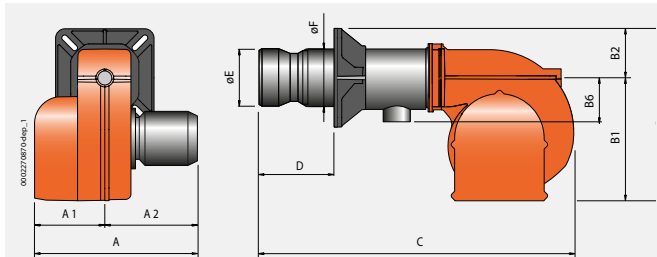


TBG 140 LX ME

	TBG 140 LX PN	TBG 140 LX ME	TBG 140 LX ME V	TBG 140 LX ME VO2	TBG 140 LX ME VCO
Gas burner compliant with European standard EN676. Operation:	pneumatic 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:	1:7	1:7	1:7	1:7	1:7
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
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:	electric servomotor	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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) in fumes to ensure increased performance and less atmospheric pollution.					•
CE version gas train is complete with operation and safety valve with pneumatic drive, valve tightness control, 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.		•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•	•
Gas train outlet:	up/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 kg
	L	P	H	
TBG 140 LX PN	1070	800	700	91
TBG 140 LX ME	1070	800	700	91
TBG 140 LX ME V	1530	760	700	107
TBG 140 LX ME V O2	1530	760	700	119
TBG 140 LX ME V CO	1530	760	720	131



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 140 LX PN	645	275	370	540	380	160	160	1280	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	12	112,5	54	7
TBG 140 LX ME	610	240	370	540	380	160	200	1315	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	-	-	-	2
TBG 140 LX ME V	670	300	370	540	380	160	200	1315	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	-	-	-	2
TBG 140 LX ME V O2	670	300	370	540	380	160	200	1315	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	-	-	-	2
TBG 140 LX ME V CO	670	300	370	540	380	160	200	1315	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	-	-	-	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 3	200 ÷ 1450	TBG 140 LX PN	17660010	3N AC 50Hz 400V	2,2	3) 4)
				class 3	200 ÷ 1450	TBG 140 LX ME	17670020	3N AC 50Hz 400V	2,2	3) 4)
NEW	•			class 3	200 ÷ 1450	TBG 140 LX ME V	17670025	3N AC 50Hz 400V	2,2	3) 4)
NEW	•	•		class 3	200 ÷ 1450	TBG 140 LX ME V O2	17670026	3N AC 50Hz 400V	2,2	3) 4)
NEW	•	•	•	class 3	200 ÷ 1450	TBG 140 LX ME V CO	17670027	3N AC 50Hz 400V	2,2	3) 4)
Frequency 60 Hz										
				class 3	200 ÷ 1450	TBG 140 LX PN	17665410	3N AC 60Hz 380V	2,6	3) 4)
				class 3	200 ÷ 1450	TBG 140 LX ME	17675420	3N AC 60Hz 380V	2,6	3) 4)
NEW	•			class 3	200 ÷ 1450	TBG 140 LX ME V	on request	3N AC 60Hz 380V	2,6	3) 4)
NEW	•	•		class 3	200 ÷ 1450	TBG 140 LX ME V O2	on request	3N AC 60Hz 380V	2,6	3) 4)
NEW	•	•	•	class 3	200 ÷ 1450	TBG 140 LX ME V CO	on request	3N AC 60Hz 380V	2,6	3) 4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION
TBG 140 LX ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 140 LX PN: modulation kit	98000057
TBG 140 LX ME: modulation kit	98000059
TBG 140 LX PN/140 LX ME: modulating probe kit (see page 288)	

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/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 For different type of gas and pressure values, please get in contact with our commercial department.

ON REQUEST

DESCRIPTION
TBG 140 LX PN V: burner equipped with motor speed controller (Inverter).

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.



TBG 150 P



TBG 150 PN

TBG 150 P

TBG 150 PN

Gas burner compliant with European standard EN676. Operation:

two-stage

pneumatic two-stage progressive

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

•

Modulation ratio:

1:4

Low NOx and CO emissions gas burner according to European standard EN676:

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

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.

•

•

CE version gas train is complete with operation and safety valve with pneumatic drive, valve tightness control, 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.

•

Fail proof connectors for burner/gas train connection.

•

•

Gas train outlet:

down

up/down

Flame detection by ionisation electrode with connector for microamperometer.

•

•

Control panel with display diagram for working mode with indication lights.

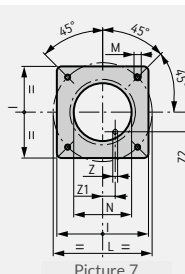
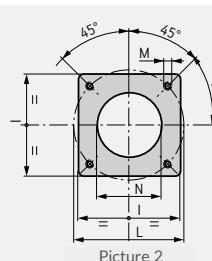
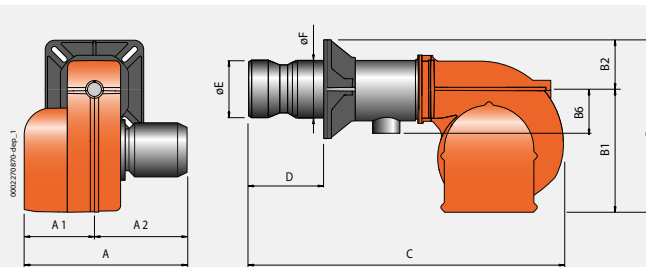
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Electric protection rating:

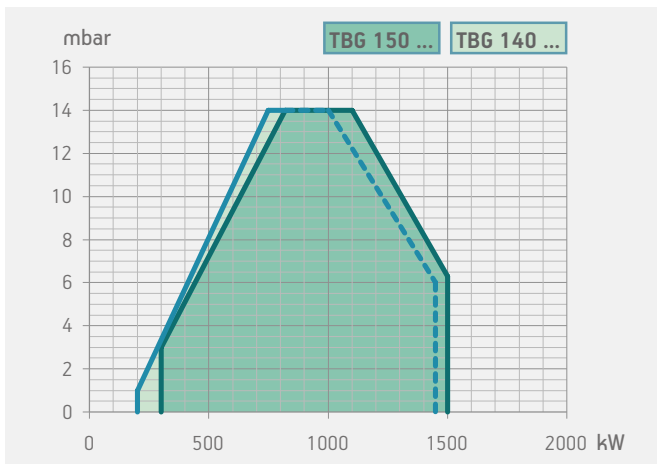
IP44

IP44



Flange dimensions and boiler drilling template.

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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 150 P	690	320	370	550	380	170	200	1280	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	-	-	-	2
TBG 150 PN	645	275	370	540	380	160	160	1280	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	12	112,5	54	7



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 150 P	1070	800	700	91
TBG 150 PN	1070	800	700	91

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz							
	class 2	300 ÷ 1500	TBG 150 P	17620030	3N AC 50Hz 400V	2,2	3) 4)
	class 2	300 ÷ 1500	TBG 150 PN	17630010	3N AC 50Hz 400V	2,2	3) 4)
Frequency 60 Hz							
	class 2	300 ÷ 1500	TBG 150 P	17625430	3N AC 60Hz 380V	2,6	3) 4)
	class 2	300 ÷ 1500	TBG 150 PN	17635410	3N AC 60Hz 380V	2,6	3) 4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
TBG 150 PN: modulation kit	98000057
TBG 150 PN: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIZIONE	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

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: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$,

LPG: $H_i = 92 \text{ MJ/m}^3 = 22000 \text{ kcal/m}^3$.

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

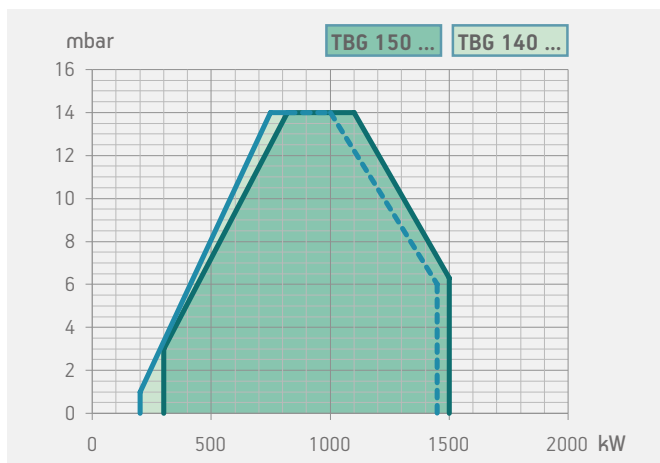


TBG 150 MC

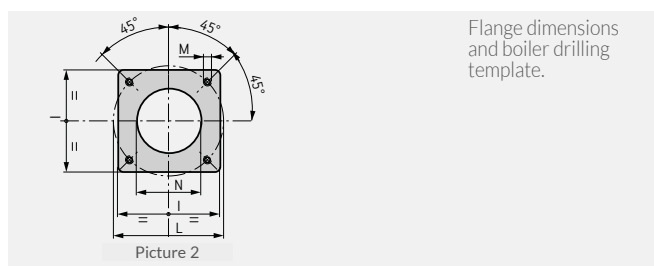
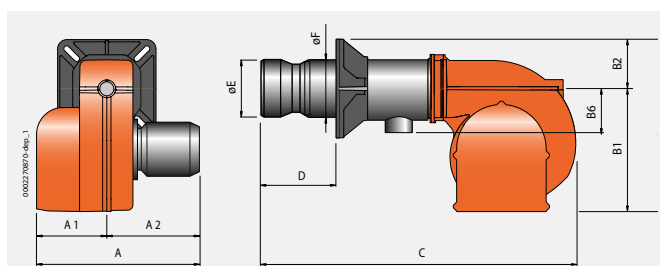


TBG 150 ME

	TBG 150 MC	TBG 150 ME	TBG 150 ME V	TBG 150 ME V O ₂	TBG 150 ME V CO
Gas burner compliant with European standard EN676. Operation:	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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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 kg
	L	P	H	
TBG 150 MC	1070	800	700	91
TBG 150 ME	1070	800	700	91
TBG 150 ME V	1530	760	700	107
TBG 150 ME V O2	1530	760	700	119
TBG 150 ME V CO	1530	760	700	131



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 150 MC	690	320	370	550	380	170	200	1280	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	2
TBG 150 ME	610	240	370	540	380	160	200	1315	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	2
TBG 150 ME V	670	300	370	540	380	160	200	1315	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	2
TBG 150 ME V O2	670	300	370	540	380	160	200	1315	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	2
TBG 150 ME V CO	670	300	370	540	380	160	200	1315	200 ÷ 450	240	219	320	280 ÷ 370	M12	250	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 2	300 ÷ 1500	TBG 150 MC	17680010	3N AC 50Hz 400V	2,2	3) 4)
				class 2	300 ÷ 1500	TBG 150 ME	17640020	3N AC 50Hz 400V	2,2	3) 4)
NEW	•			class 2	300 ÷ 1500	TBG 150 ME V	17640025	3N AC 50Hz 400V	2,2	3) 4)
NEW	•	•		class 2	300 ÷ 1500	TBG 150 ME V O2	17640026	3N AC 50Hz 400V	2,2	3) 4)
NEW	•	•	•	class 2	300 ÷ 1500	TBG 150 ME V CO	17640027	3N AC 50Hz 400V	2,2	3) 4)
Frequency 60 Hz										
				class 2	300 ÷ 1500	TBG 150 MC	17685410	3N AC 60Hz 380V	2,6	3) 4)
				class 2	300 ÷ 1500	TBG 150 ME	17645420	3N AC 60Hz 380V	2,6	3) 4)
NEW	•			class 2	300 ÷ 1500	TBG 150 ME V	on request	3N AC 60Hz 380V	2,6	3) 4)
NEW	•	•		class 2	300 ÷ 1500	TBG 150 ME V O2	on request	3N AC 60Hz 380V	2,6	3) 4)
NEW	•	•	•	class 2	300 ÷ 1500	TBG 150 ME V CO	on request	3N AC 60Hz 380V	2,6	3) 4)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 150 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 150 MC: modulation kit	98000057
TBG 150 ME: modulation kit	98000059
TBG 150 MC/150 ME: modulating probe kit (see page 288)	

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/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 For different type of gas and pressure values, please get in contact with our commercial department.

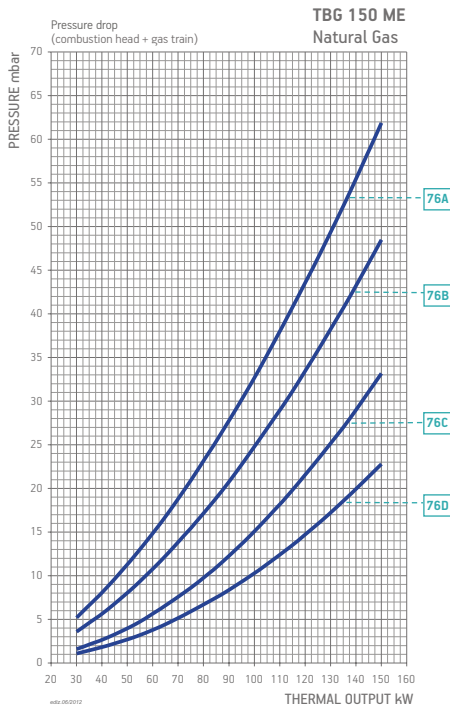
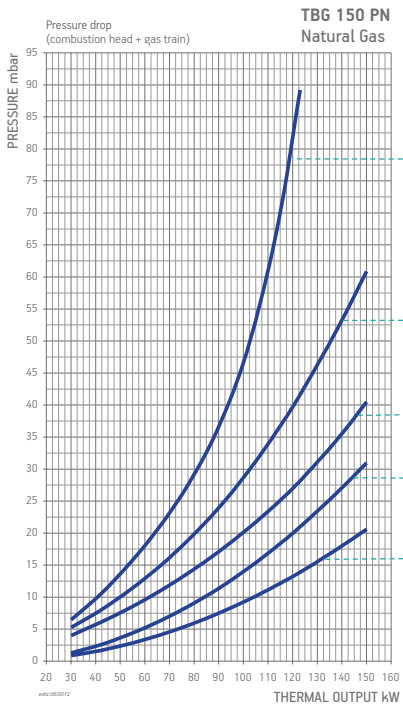
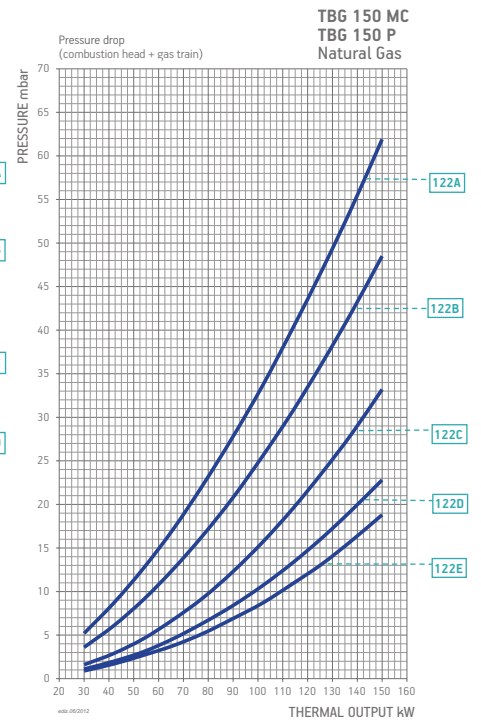
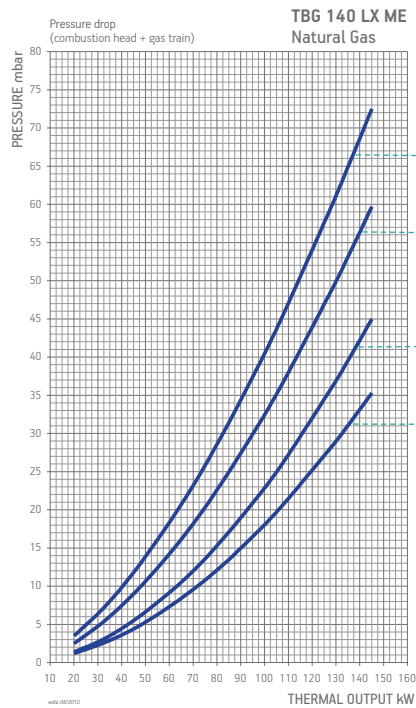
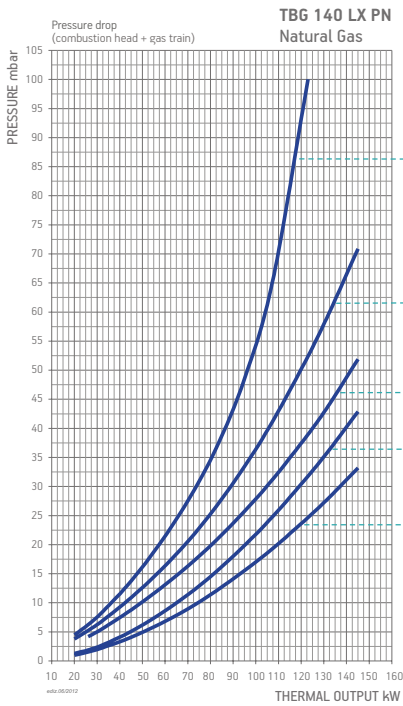
ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

BURNER/GAS TRAIN MATCH



To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

- 9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.
 - 11 The train must be always completed with the VPS kit to comply with the EN676 regulations.
- CTV Gas train with Valve Tightness Control.
**) Maximum gas inlet pressure at pressure regulator.

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 140 LX PN	Natural gas	95A	CE	100	CTV	19990441	Included	96000032	98000101	D3	11)
				360	CTV	19990448	Included	96000032	98000101	D3	9) 11)
			EXP	100	CTV	19990441	Included	96000032	-	DE3	
				360	CTV	19990448	Included	96000032	98000101	DE3	
				100	CTV	19990442	Included	96000007	98000101	D3	11)
				360	CTV	19990442	Included	96000007	-	DE3	
		95B	CE	100	CTV	19990442	Included	96000007	98000101	D3	11)
			EXP	100	CTV	19990442	Included	96000007	-	DE3	
			CE	100	CTV	19990443	Included	-	98000101	D3	11)
		95C	EXP	100	CTV	19990443	Included	-	-	DE3	
			CE	500	CTV	19990530	Included	-	98000102	D3	11)
		95D	EXP	500	CTV	19990530	Included	-	-	DE3	
			CE	500	CTV	19990531	Included	-	98000101	D3	11)
		95E	EXP	500	CTV	19990531	Included	-	-	DE3	
			CE	500	CTV	19990531	Included	-	98000101	D3	11)
TBG 140 LX ME TBG 140 LX ME V TBG 140 LX ME V O2 TBG 140 LX ME V CO	Natural gas		CE/EXP	360	CTV	19990561	Included	96000007	Compris	D2	
				360	CTV	19990562	Included	-	Included	D2	
				500	CTV	19990524	Included	-	Included	D2	
				500	CTV	19990525	Included	-	Included	D2	
TBG 150 P TBG 150 MC	Natural gas	122A	CE	360	CTV	19990548	Included	96000007	98000101	B7	11)
				360	CTV	19990548	Included	96000007	-	BE7	
			EXP	360	CTV	19990548	Included	96000007	98000101	BE7	
				360	CTV	19990549	Included	-	98000101	B7	11)
				500	CTV	19990550	Included	-	98000102	B7	11)
				500	CTV	19990550	Included	-	-	BE7	
		122B	CE	360	CTV	19990549	Included	-	98000101	BE7	
			EXP	360	CTV	19990549	Included	-	98000101	BE7	
		122C	CE	500	CTV	19990550	Included	-	98000102	B7	11)
			EXP	500	CTV	19990550	Included	-	-	BE7	
		122D	CE	500	CTV	19990563	Included	-	98000101	B7	11)
			EXP	500	CTV	19990563	Included	-	-	BE7	
122E	CE	500	CTV	19990564	Included	-	98000101	B7	11)		
	EXP	500	CTV	19990564	Included	-	-	BE7			
TBG 150 PN	Natural gas	72A	CE	100	CTV	19990441	Included	96000032	98000101	D3	11)
				360	CTV	19990448	Included	96000032	98000101	D3	9) 11)
			EXP	100	CTV	19990441	Included	96000032	-	DE3	
				360	CTV	19990448	Included	96000032	-	DE3	9)
				100	CTV	19990442	Included	96000007	98000101	D3	11)
				360	CTV	19990442	Included	96000007	-	DE3	
		72B	CE	100	CTV	19990442	Included	96000007	98000101	D3	11)
			EXP	100	CTV	19990442	Included	96000007	-	DE3	
			CE	100	CTV	19990443	Included	-	98000101	D3	11)
		72C	EXP	100	CTV	19990443	Included	-	-	DE3	
			CE	500	CTV	19990530	Included	-	98000101	DE3	
		72D	EXP	500	CTV	19990530	Included	-	98000102	D3	11)
			CE	500	CTV	19990530	Included	-	-	DE3	
		72E	CE	500	CTV	19990531	Included	-	98000101	D3	11)
			EXP	500	CTV	19990531	Included	-	-	DE3	
TBG 150 ME TBG 150 ME V TBG 150 ME V O2 TBG 150 ME V CO	Natural gas		CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	
				360	CTV	19990559	Included	-	Included	D2	
				500	CTV	19990524	Included	-	Included	D2	
				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 150 P TBG 150 MC	LPG	CE	360	CTV	19990548	Included	96000007	98000101	-	B7	11)
					19990548	Included	96000007	-	BE7		
TBG 150 PN	LPG	EXP	360	CTV	19990548	Included	96000007	98000101	-	BE7	
					19990442	Included	96000007	98000101	-	D3	11)
					19990442	Included	96000007	-	DE3		
TBG 150 ME/ME V TBG 150 ME V O2 TBG 150 ME V CO	LPG	CE/EXP	360	CTV	19990558	Included	96000007	Included	-	D2	
					19990558	Included	96000007	Included	-	D2	

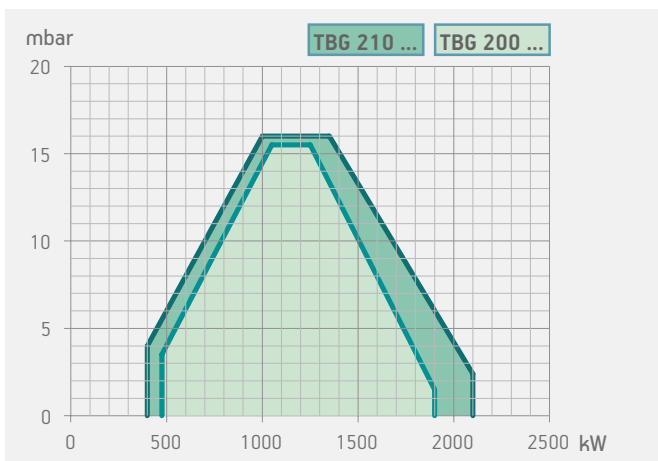


TBG 200 LX PN

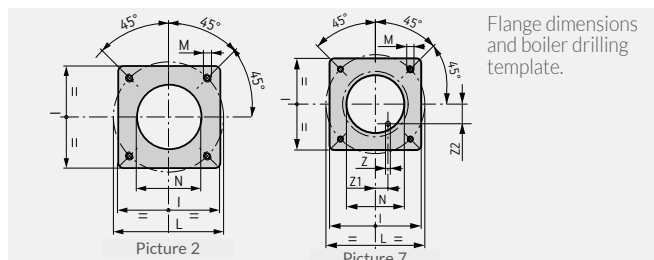
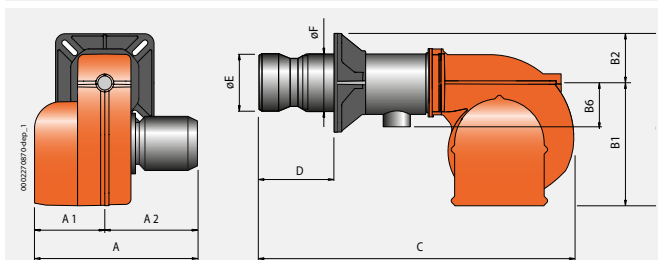


TBG 200 LX ME

	TBG 200 LX PN	TBG 200 LX ME	TBG 200 LX ME V	TBG 200 LX ME V O2	TBG 200 LX ME V CO
Gas burner compliant with European standard EN676. Operation:	pneumatic 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	1:4	1:4	1:4	1:4
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
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:	electric servomotor	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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) in fumes to ensure increased performance and less atmospheric pollution.					•
CE version gas train is complete with operation and safety valve with pneumatic 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.		•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•	•
Gas train outlet:	up/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 kg
	L	P	H	
TBG 200 LX PN	1070	800	700	94
TBG 200 LX ME	1070	800	700	94
TBG 200 LX ME V	1530	760	700	110
TBG 200 LX ME V O2	1530	760	700	122
TBG 200 LX ME V CO	1530	760	700	134



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 200 LX PN	645	275	370	540	380	160	160	1280	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	12	112,5	54	7
TBG 200 LX ME	610	240	370	540	380	160	200	1315	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	-	-	-	2
TBG 200 LX ME V	670	300	370	540	380	160	200	1315	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	-	-	-	2
TBG 200 LX ME V O2	670	300	370	540	380	160	200	1315	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	-	-	-	2
TBG 200 LX ME V CO	670	300	370	540	380	160	200	1315	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	-	-	-	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 3	475 ÷ 1900	TBG 200 LX PN	17730010	3N AC 50Hz 400V	3,0	3) 4)
				class 3	475 ÷ 1900	TBG 200 LX ME	17740020	3N AC 50Hz 400V	3,0	3) 4)
NEW	•			class 3	475 ÷ 1900	TBG 200 LX ME V	17740025	3N AC 50Hz 400V	3,0	3) 4)
NEW	•	•		class 3	475 ÷ 1900	TBG 200 LX ME V O2	17740026	3N AC 50Hz 400V	3,0	3) 4)
NEW	•	•	•	class 3	475 ÷ 1900	TBG 200 LX ME V CO	17740027	3N AC 50Hz 400V	3,0	3) 4)
Frequency 60 Hz										
				class 3	475 ÷ 1900	TBG 200 LX PN	17735410	3N AC 60Hz 380V	3,5	3) 4)
				class 3	475 ÷ 1900	TBG 200 LX ME	17745420	3N AC 60Hz 380V	3,5	3) 4)
NEW	•			class 3	475 ÷ 1900	TBG 200 LX ME V	on request	3N AC 60Hz 380V	3,5	3) 4)
NEW	•	•		class 3	475 ÷ 1900	TBG 200 LX ME V O2	on request	3N AC 60Hz 380V	3,5	3) 4)
NEW	•	•	•	class 3	475 ÷ 1900	TBG 200 LX ME V CO	on request	3N AC 60Hz 380V	3,5	3) 4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION

TBG 200 LX ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 200 LX PN: modulation kit	98000057
TBG 200 LX ME: modulation kit	98000059
TBG 200 LX PN/200 LX ME: modulating probe kit (see page 288)	

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/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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

ON REQUEST

DESCRIPTION

TBG 200 LX PN V: burner equipped with motor speed controller (Inverter).

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.



TBG 210 P



TBG 210 PN

TBG 210 P

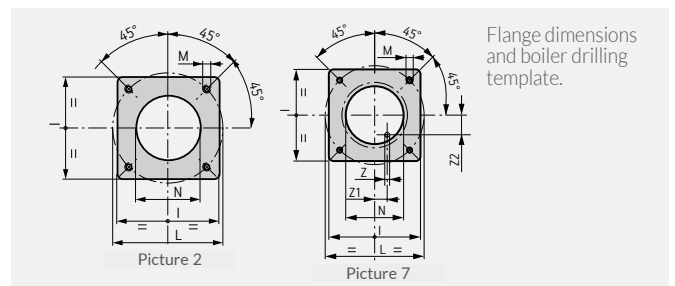
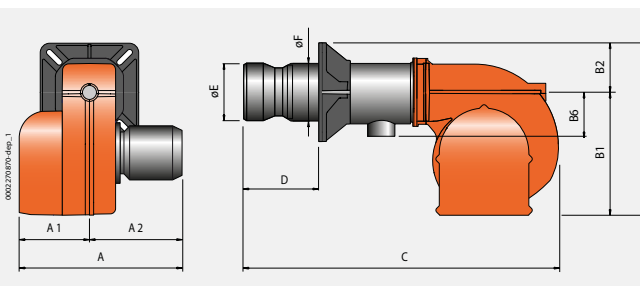
TBG 210 PN

Gas burner compliant with European standard EN676. Operation:

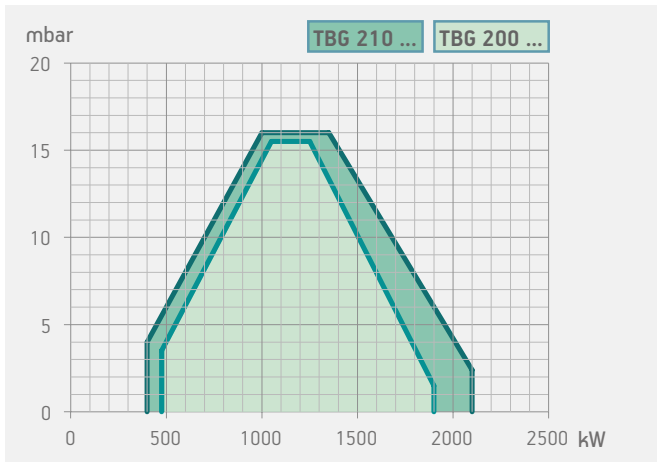
two-stage

pneumatic two-stage progressive

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).		•
Modulation ratio:		1:4
Low NOx and CO emissions gas burner according to European standard EN676:	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
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.	•	•
CE version gas train is complete with operation and safety valve with pneumatic drive, valve tightness control, 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.	•	
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	down	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•
Control panel with display diagram for working mode with indication lights.	•	•
Electric protection rating:	IP44	IP44



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	Z mm	Z1 mm	Z2 mm	Pic.
TBG 210 P	690	320	370	550	380	170	200	1280	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	-	-	-	2
TBG 210 PN	645	275	370	540	380	160	160	1280	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	12	112,5	54	7



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 210 P	1070	800	700	94
TBG 210 PN	1070	800	700	94

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz							
	class 2	400 ÷ 2100	TBG 210 P	17690030	3N AC 50Hz 400V	3,0	3) 4)
	class 2	400 ÷ 2100	TBG 210 PN	17700010	3N AC 50Hz 400V	3,0	3) 4)
Frequency 60 Hz							
	class 2	400 ÷ 2100	TBG 210 P	17695430	3N AC 60Hz 380V	3,5	3) 4)
	class 2	400 ÷ 2100	TBG 210 PN	17705410	3N AC 60Hz 380V	3,5	3) 4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
TBG 210 PN: modulation kit	98000057
TBG 210 PN: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

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/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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

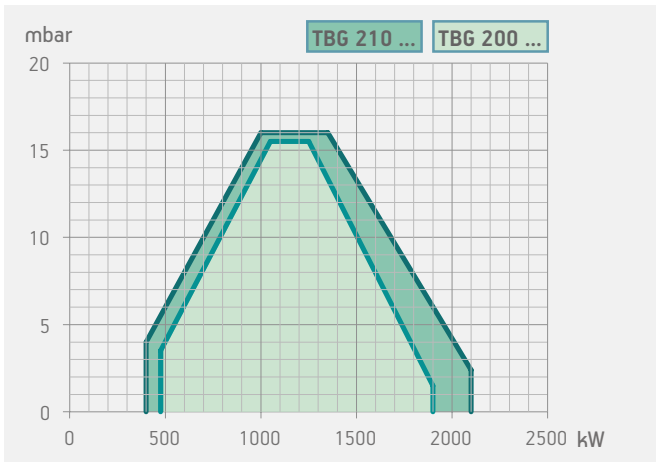


TBG 210 MC

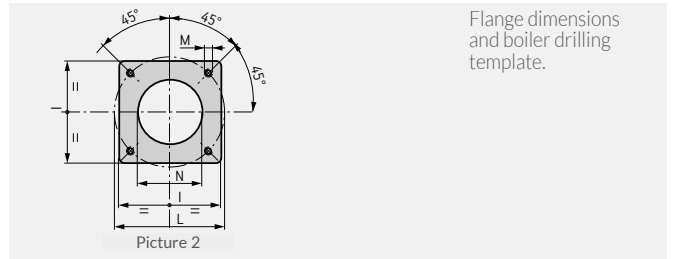
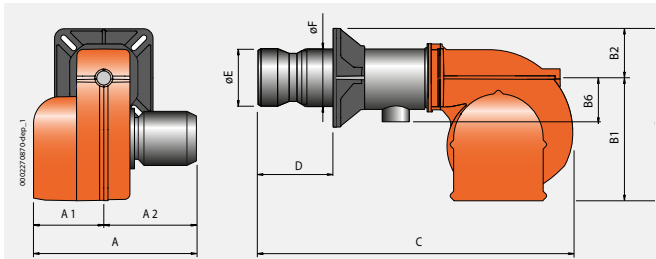


TBG 210 ME

	TBG 210 MC	TBG 210 ME	TBG 210 ME V	TBG 210 ME V O2	TBG 210 ME V CO
Gas burner compliant with European standard EN676. Operation:	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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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 kg
	L	P mm	H	
TBG 210 MC	1070	800	700	94
TBG 210 ME	1070	800	700	94
TBG 210 ME V	1530	760	700	110
TBG 210 ME V O2	1530	760	700	122
TBG 210 ME V CO	1530	760	700	134



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 210 MC	690	320	370	550	380	170	200	1280	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 210 ME	610	240	370	540	380	160	200	1315	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 210 ME V	670	300	370	540	380	160	200	1315	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 210 ME V O2	670	300	370	540	380	160	200	1315	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 210 ME V CO	670	300	370	540	380	160	200	1315	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2

	O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz									
			class 2	400 ÷ 2100	TBG 210 MC	17750010	3N AC 50Hz 400V	3,0	3) 4)
			class 2	400 ÷ 2100	TBG 210 ME	17710020	3N AC 50Hz 400V	3,0	3) 4)
NEW	•		class 2	400 ÷ 2100	TBG 210 ME V	17710025	3N AC 50Hz 400V	3,0	3) 4)
NEW	•	•	class 2	400 ÷ 2100	TBG 210 ME V O2	17710026	3N AC 50Hz 400V	3,0	3) 4)
NEW	•	•	class 2	400 ÷ 2100	TBG 210 ME V CO	17710027	3N AC 50Hz 400V	3,0	3) 4)
Frequency 60 Hz									
			class 2	400 ÷ 2100	TBG 210 MC	17755410	3N AC 60Hz 380V	3,5	3) 4)
			class 2	400 ÷ 2100	TBG 210 ME	17715420	3N AC 60Hz 380V	3,5	3) 4)
NEW	•		class 2	400 ÷ 2100	TBG 210 ME V	on request	3N AC 60Hz 380V	3,5	3) 4)
NEW	•	•	class 2	400 ÷ 2100	TBG 210 ME V O2	on request	3N AC 60Hz 380V	3,5	3) 4)
NEW	•	•	class 2	400 ÷ 2100	TBG 210 ME V CO	on request	3N AC 60Hz 380V	3,5	3) 4)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 210 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 210 MC: modulation kit	98000057
TBG 210 ME: modulation kit	98000059
TBG 210 MC/210 ME: modulating probe kit (see page 288)	

NOTES

- Sound proof lid on burner air intake.
 - Equipped with air closure device.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
- For different type of gas and pressure values, please get in contact with our commercial department.

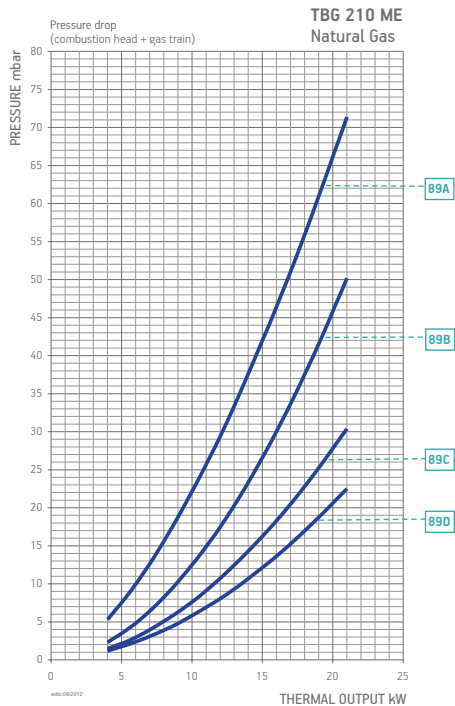
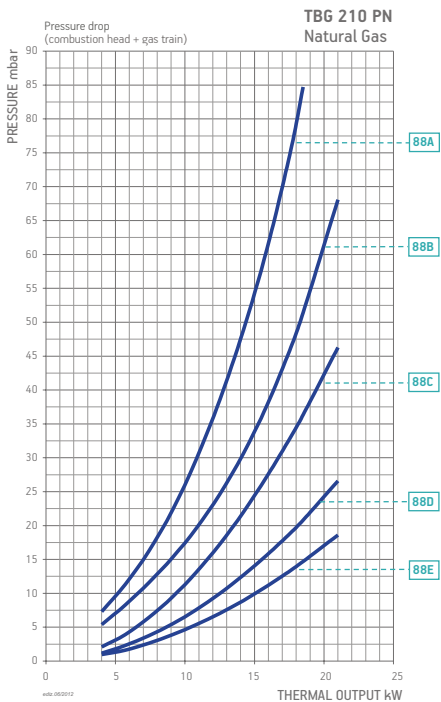
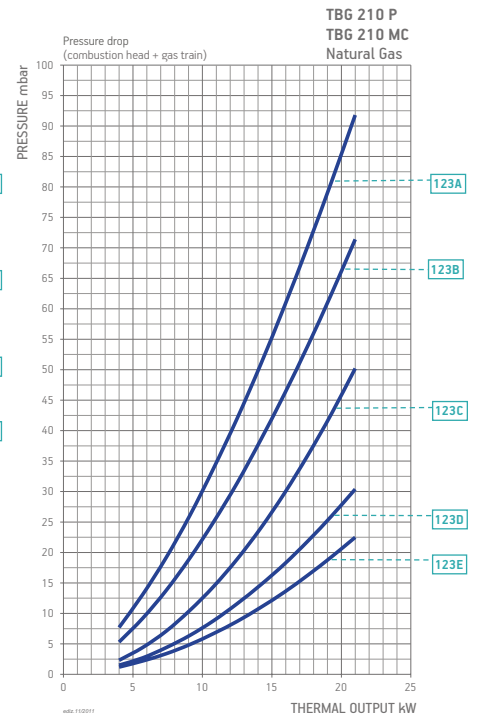
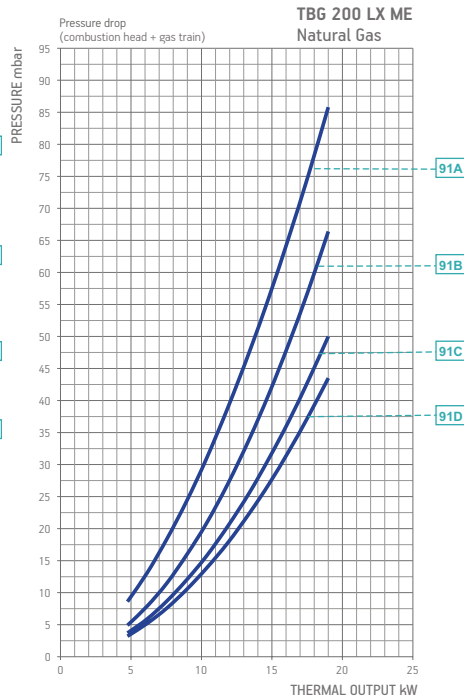
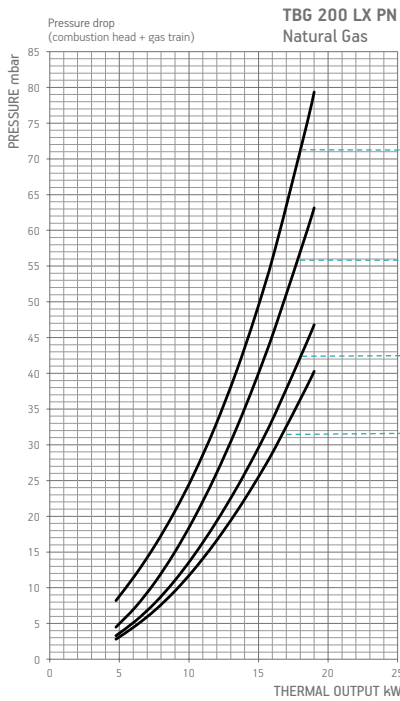
ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

BURNER/GAS TRAIN MATCH



To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

- 9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.
 - 11 The train must be always completed with the VPS kit to comply with the EN676 regulations.
- CTV Gas train with Valve Tightness Control.
 **) Maximum gas inlet pressure at pressure regulator.

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 200 LX PN			90A	CE	100	CTV	19990443	Included	-	98000101	D3	11)			
				EXP	100	CTV	19990443	Included	-	-	98000101	DE3			
			90B	CE	500	CTV	19990530	Included	-	-	98000102	D3	11)		
				EXP	500	CTV	19990530	Included	-	-	98000102	DE3			
			90C	CE	500	CTV	19990531	Included	-	-	98000101	D3	11)		
				EXP	500	CTV	19990531	Included	-	-	98000101	DE3			
			90D	CE	500	CTV	19990537	Included	-	-	98000101	D3	11)		
				EXP	500	CTV	19990537	Included	-	-	98000101	DE3			
			TBG 200 LX ME TBG 200 LX ME V TBG 200 LX ME V O2 TBG 200 LX ME V CO	Natural gas		91A	CE/EXP	360	CTV	19990562	Included	-	Included	D2	
						91B	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
						91C	CE/EXP	500	CTV	19990525	Included	-	Included	D2	
						91D	CE/EXP	500	CTV	19990526	Included	-	Included	D2	
TBG 210 P TBG 210 MC	Natural gas		123A	CE	360	CTV	19990548	Included	96000007	98000101	B7	11)			
				EXP	360	CTV	19990548	Included	96000007	-	BE7				
			123B	CE	360	CTV	19990549	Included	-	-	98000101	B7	11)		
				EXP	360	CTV	19990549	Included	-	-	98000101	BE7			
			123C	CE	500	CTV	19990550	Included	-	-	98000102	B7	11)		
				EXP	500	CTV	19990550	Included	-	-	98000102	BE7			
			123D	CE	500	CTV	19990563	Included	-	-	98000101	B7	11)		
				EXP	500	CTV	19990563	Included	-	-	98000101	BE7			
			123E	CE	500	CTV	19990564	Included	-	-	98000101	B7	11)		
				EXP	500	CTV	19990564	Included	-	-	98000101	BE7			
			TBG 210 PN	Natural gas		88A	CE	100	CTV	19990442	Included	96000007	98000101	D3	11)
							EXP	100	CTV	19990442	Included	96000007	-	DE3	
88B	CE	100				CTV	19990443	Included	-	-	98000101	D3	11)		
	EXP	100				CTV	19990443	Included	-	-	98000101	DE3			
88C	CE	500				CTV	19990530	Included	-	-	98000102	D3	11)		
	EXP	500				CTV	19990530	Included	-	-	98000102	DE3			
88D	CE	500				CTV	19990531	Included	-	-	98000101	D3	11)		
	EXP	500				CTV	19990531	Included	-	-	98000101	DE3			
88E	CE	500				CTV	19990537	Included	-	-	98000101	D3	11)		
	EXP	500				CTV	19990537	Included	-	-	98000101	DE3			
TBG 210 ME TBG 210 ME V TBG 210 ME V O2 TBG 210 ME V CO	Natural gas					89A	CE/EXP	360	CTV	19990559	Included	-	Included	D2	
						89B	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
			89C	CE/EXP	500	CTV	19990525	Included	-	Included	D2				
			89D	CE/EXP	500	CTV	19990526	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.			
TBG 210 P TBG 210 MC	LPG	CE	360	CTV	19990549	Included	-	98000101	98000359	B7	11)
		EXP	360	CTV	19990549	Included	-	-	98000359	BE7	
TBG 210 PN	LPG	CE	100	CTV	19990443	Included	-	98000101	98000359	D3	11)
		EXP	100	CTV	19990443	Included	-	-	98000359	DE3	
TBG 210 ME/ME V TBG 210 ME V O2 TBG 210 ME V CO	LPG	CE/EXP	360	CTV	19990559	Included	-	Included	98000359	D2	

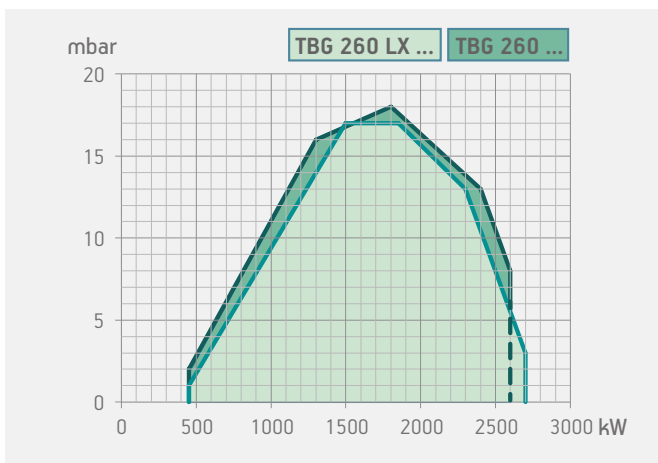


TBG 260 LX MC

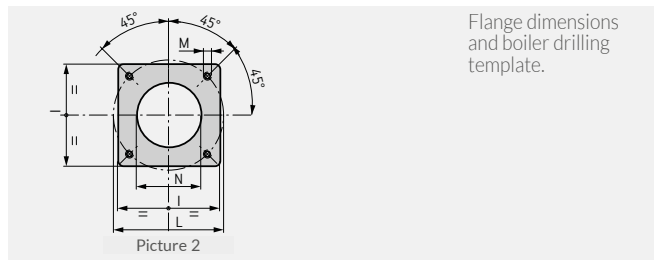
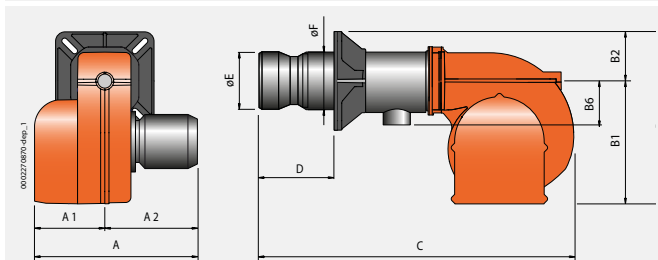


TBG 260 LX ME

	TBG 260 LX MC	TBG 260 LX ME	TBG 260 LX ME V	TBG 260 LX ME V O2	TBG 260 LX ME V CO
Gas burner compliant with European standard EN676. Operation:	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:	1:6	1:6	1:6	1:6	1:6
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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 kg
	L	P	H	
TBG 260 LX MC	1070	870	720	108
TBG 260 LX ME	1070	870	720	108
TBG 260 LX ME V	1730	1030	880	125
TBG 260 LX ME V O2	1730	1030	880	137
TBG 260 LX ME V CO	1730	1030	880	149



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 260 LX MC	795	375	420	570	400	170	200	1250	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 260 LX ME	700	280	420	560	400	160	200	1320	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 260 LX ME V	730	280	450	560	400	160	200	1320	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 260 LX ME V O2	730	280	450	560	400	160	200	1320	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 260 LX ME V CO	730	280	450	560	400	160	200	1320	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
NEW				class 3	450 ÷ 2700	TBG 260 LX MC	17810010	3N AC 50Hz 400V	5,5	4)
NEW				class 3	450 ÷ 2700	TBG 260 LX ME	17780010	3N AC 50Hz 400V	5,5	4)
NEW	•			class 3	450 ÷ 2700	TBG 260 LX ME V	17780015	3N AC 50Hz 400V	5,5	4)
NEW	•	•		class 3	450 ÷ 2700	TBG 260 LX ME V O2	17780016	3N AC 50Hz 400V	5,5	4)
NEW	•	•	•	class 3	450 ÷ 2700	TBG 260 LX ME V CO	17780017	3N AC 50Hz 400V	5,5	4)
Frequency 60 Hz										
NEW				class 3	450 ÷ 2700	TBG 260 LX MC	17815410	3N AC 60Hz 380V	5,5	4)
NEW				class 3	450 ÷ 2700	TBG 260 LX ME	17785410	3N AC 60Hz 380V	5,5	4)
NEW	•			class 3	450 ÷ 2700	TBG 260 LX ME V	on request	3N AC 60Hz 380V	5,5	4)
NEW	•	•		class 3	450 ÷ 2700	TBG 260 LX ME V O2	on request	3N AC 60Hz 380V	5,5	4)
NEW	•	•	•	class 3	450 ÷ 2700	TBG 260 LX ME V CO	on request	3N AC 60Hz 380V	5,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 260 LX ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 260 LX MC: modulation kit	98000057
TBG 260 LX ME: modulation kit	98000059
TBG 260 LX MC/260 LX ME: modulating probe kit (see page 288)	

NOTES

4 Equipped with air closure device.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 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 cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

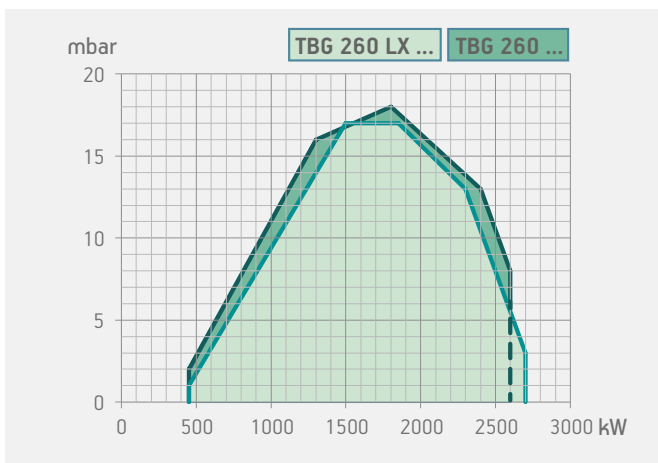


TBG 260 MC

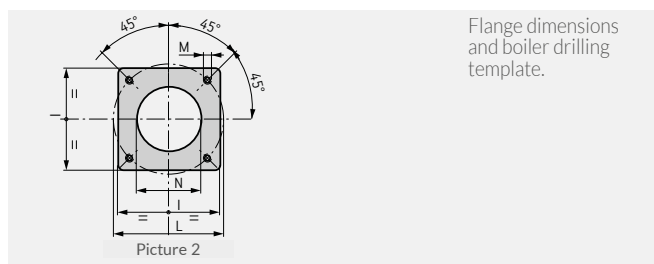
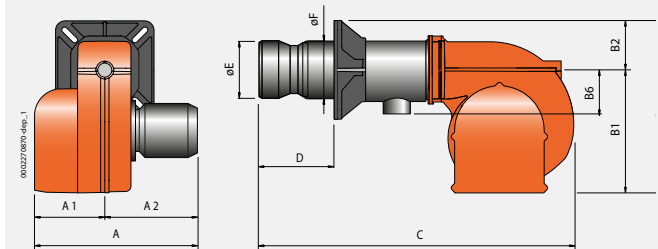


TBG 260 ME

	TBG 260 MC	TBG 260 ME	TBG 260 ME V	TBG 260 ME V O2	TBG 260 ME V CO
Gas burner compliant with European standard EN676. Operation:	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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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 kg
	L	P	H	
TBG 260 MC	1070	870	720	108
TBG 260 ME	1070	870	720	108
TBG 260 ME V	1730	1030	880	125
TBG 260 ME V O2	1730	1030	880	137
TBG 260 ME V CO	1730	1030	880	149



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 260 MC	795	375	420	570	400	170	200	1250	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 260 ME	700	280	420	560	400	160	200	1320	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 260 ME V	730	280	450	560	400	160	200	1320	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 260 ME V O2	730	280	450	560	400	160	200	1320	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2
TBG 260 ME V CO	730	280	450	560	400	160	200	1320	200 ÷ 450	250	219	320	280 ÷ 370	M12	255	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 2	450 ÷ 2600	TBG 260 MC	17760010	3N AC 50Hz 400V	5,5	4)
				class 2	450 ÷ 2600	TBG 260 ME	17770010	3N AC 50Hz 400V	5,5	4)
NEW	•			class 2	450 ÷ 2600	TBG 260 ME V	17770015	3N AC 50Hz 400V	5,5	4)
NEW	•	•		class 2	450 ÷ 2600	TBG 260 ME V O2	17770016	3N AC 50Hz 400V	5,5	4)
NEW	•	•	•	class 2	450 ÷ 2600	TBG 260 ME V CO	17770017	3N AC 50Hz 400V	5,5	4)
Frequency 60 Hz										
				class 2	450 ÷ 2600	TBG 260 MC	17765410	3N AC 60Hz 380V	5,5	4)
				class 2	450 ÷ 2600	TBG 260 ME	17775410	3N AC 60Hz 380V	5,5	4)
NEW	•			class 2	450 ÷ 2600	TBG 260 ME V	on request	3N AC 60Hz 380V	5,5	4)
NEW	•	•		class 2	450 ÷ 2600	TBG 260 ME V O2	on request	3N AC 60Hz 380V	5,5	4)
NEW	•	•	•	class 2	450 ÷ 2600	TBG 260 ME V CO	on request	3N AC 60Hz 380V	5,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 260 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 260 MC: modulation kit	98000057
TBG 260 ME: modulation kit	98000059
TBG 260 MC/260 ME: modulating probe kit (see page 288)	

NOTES

- 4 Equipped with air closure device.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
- For different type of gas and pressure values, please get in contact with our commercial department.

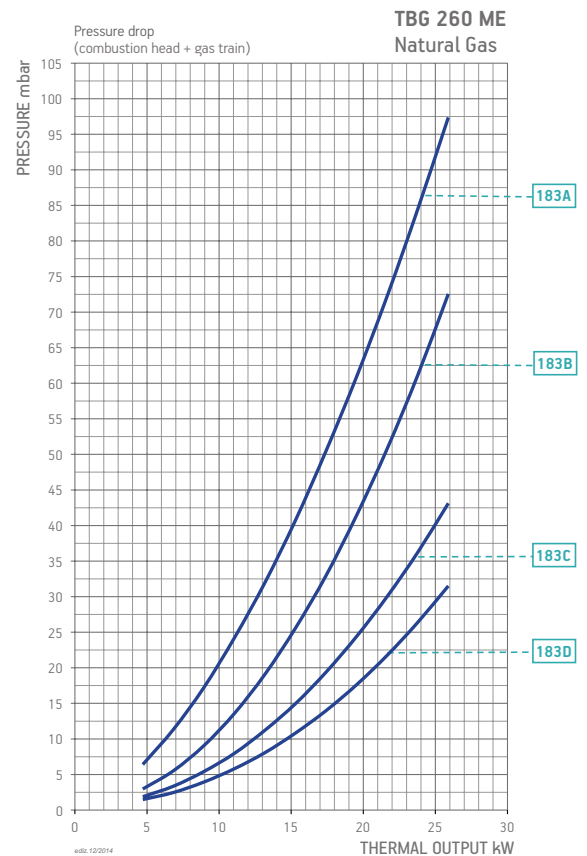
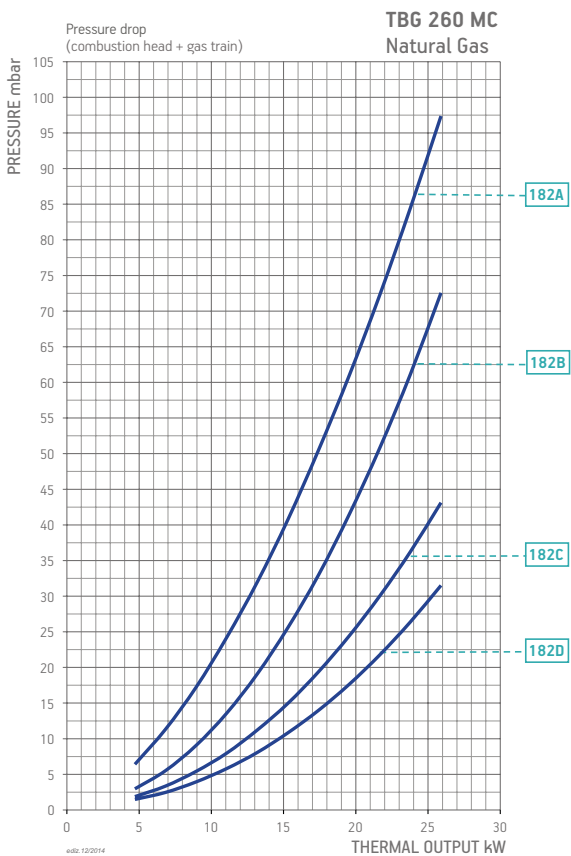
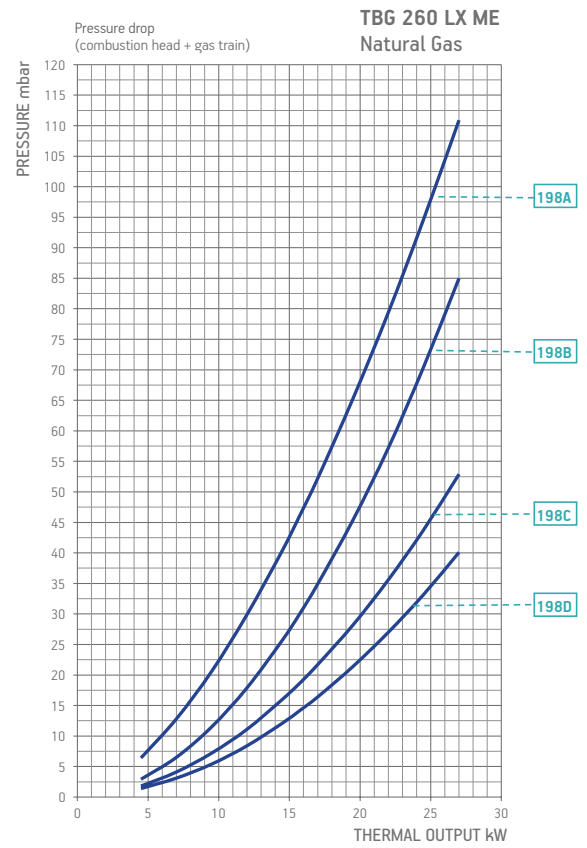
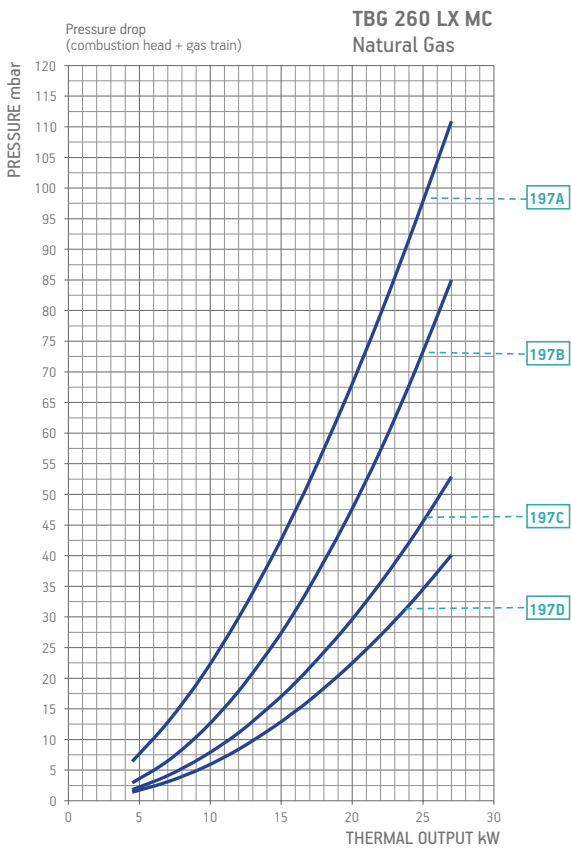
ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

BURNER/GAS TRAIN MATCH



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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 LX 260 MC	Natural gas	197A	CE	360	CTV	19990609	Included	-	98000101	B7	11)		
			EXP	360	CTV	19990609	Included	-	-	BE7			
		197B	CE	500	CTV	19990550	Included	-	98000102	B7	11)		
			EXP	500	CTV	19990550	Included	-	-	BE7			
		197C	CE	500	CTV	19990563	Included	-	98000101	B7	11)		
			EXP	500	CTV	19990563	Included	-	-	BE7			
		197D	CE	500	CTV	19990564	Included	-	98000101	B7	11)		
			EXP	500	CTV	19990564	Included	-	-	BE7			
		TBG 260 LX ME TBG 260 LX ME V TBG 260 LX ME V O2 TBG 260 LX ME V CO	Natural gas	198A	CE/EXP	360	CTV	19990562	Included	-	Included	D2	
				198B	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
				198C	CE/EXP	500	CTV	19990525	Included	-	Included	D2	
				198D	CE/EXP	500	CTV	19990526	Included	-	Included	D2	
TBG 260 MC	Natural gas	182A	CE	360	CTV	19990609	Included	-	98000101	B7	11)		
			EXP	360	CTV	19990609	Included	-	-	BE7			
		182B	CE	500	CTV	19990550	Included	-	98000102	B7	11)		
			EXP	500	CTV	19990550	Included	-	-	BE7			
		182C	CE	500	CTV	19990563	Included	-	98000101	B7	11)		
			EXP	500	CTV	19990563	Included	-	-	BE7			
		182D	CE	500	CTV	19990564	Included	-	98000101	B7	11)		
			EXP	500	CTV	19990564	Included	-	-	BE7			
		TBG 260 ME TBG 260 ME V TBG 260 ME V O2 TBG 260 ME V CO	Natural gas	183A	CE/EXP	360	CTV	19990562	Included	-	Included	D2	
				183B	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
				183C	CE/EXP	500	CTV	19990525	Included	-	Included	D2	
				183D	CE/EXP	500	CTV	19990526	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 260 LX MC	LPG	CE	500	CTV	19990550	Included	-	98000102	98000380	B7	11)
		EXP	500	CTV	19990550	Included	-	-	98000380	BE7	
		EXP	500	CTV	19990550	Included	-	98000102	98000380	BE7	
TBG 260 LX ME/ME V TBG 260 LX ME V O2 TBG 260 LX ME CO	LPG	CE/EXP	500	CTV	19990524	Included	-	Included	98000380	D2	
TBG 260 MC	LPG	CE	500	CTV	19990550	Included	-	98000102	98000366	B7	11)
		EXP	500	CTV	19990550	Included	-	-	98000366	BE7	
TBG 260 ME/ME V TBG 260 ME V O2 TBG 260 ME CO	LPG	CE/EXP	500	CTV	19990524	Included	-	Included	98000366	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

11 The train must be always completed with the VPS kit to comply with the EN676 regulations.

CTV Gas train with Valve Tightness Control.

** Maximum gas inlet pressure at pressure regulator.



BGN 300 LX

Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.

CE version gas train is complete with operation and safety valve with pneumatic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

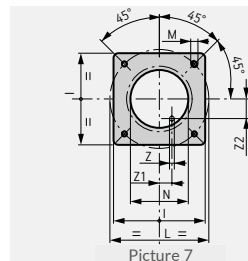
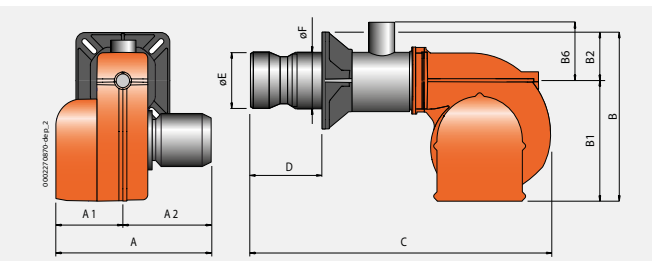
Gas train outlet:

Flame detection by ionisation electrode with connector for microamperometer.

Control panel with display diagram for working mode with indication lights.

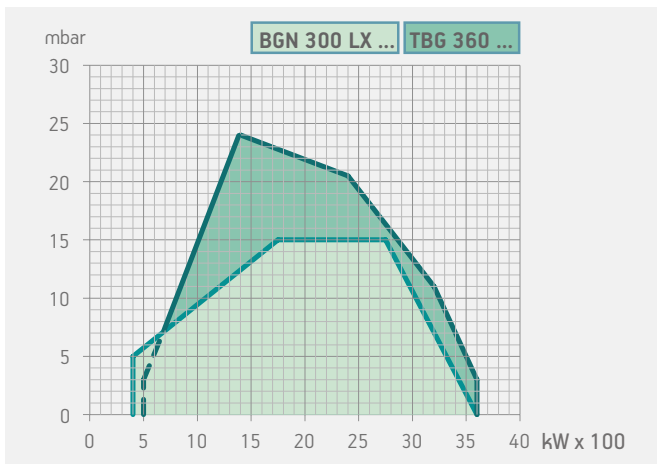
Electric protection rating:

	BGN 300 LX	BGN 300 LX V
	pneumatic two-stage progressive	pneumatic two-stage progressive
	•	•
Modulation ratio:	1:8	1:8
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•
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:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.		•
CE version gas train is complete with operation and safety valve with pneumatic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•
Control panel with display diagram for working mode with indication lights.	•	•
Electric protection rating:	IP44	IP40



Flange dimensions and boiler drilling template.

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	Z mm	Z1 mm	Z2 mm	Pic.
BGN 300 LX	880	400	480	800	580	220	200	1630	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	12	150	87	7
BGN 300 LX V	880	400	480	800	580	220	200	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	12	150	87	7



Model	Size of packaging			Weight kg
	L	P mm	H	
BGN 300 LX	1250	1150	960	305
BGN 300 LX V	2030	1150	1010	317

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
			Frequency 50 Hz				
●	class 3	400 ÷ 3600	BGN 300 LX	15270010	3N AC 50Hz 400V	7,5	4)
	class 3	400 ÷ 3600	BGN 300 LX V	15270015	3N AC 50Hz 400V	7,5	4)
			Frequency 60 Hz				
●	class 3	400 ÷ 3600	BGN 300 LX	15275410	3N AC 60Hz 380V	9,0	4)
	class 3	400 ÷ 3600	BGN 300 LX V	15275415	3N AC 60Hz 380V	7,5	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

MODULATING MODE

DESCRIPTION	PART NO.
Modulation kit	98000057
Modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980057

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

NOTES

4 Equipped with air closure device.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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



BGN 300 LX ME

Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.

Residual oxygen (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

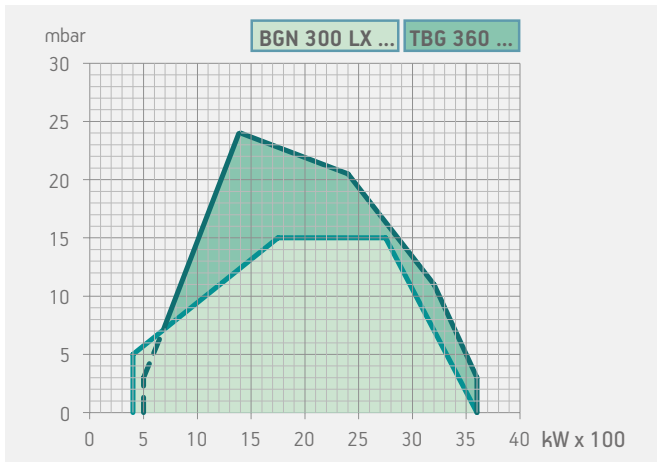
Gas train outlet:

Flame detection by ionisation electrode with connector for microamperometer.

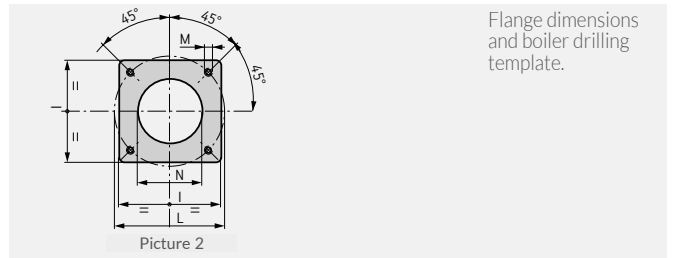
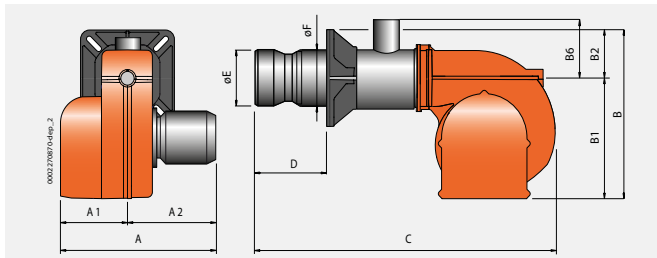
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.

Electric protection rating:

	BGN 300 LX ME	BGN 300 LX ME V	BGN 300 LX ME V O2	BGN 300 LX ME V CO
	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:	1:8	1:8	1:8	1:8
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3
Adjusting the combustion head.	•	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•
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:	electric servomotor	electric servomotor	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.			•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•
Gas train outlet:	up/down	up/down	up/down	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.	•	•	•	•
Electric protection rating:	IP40	IP40	IP40	IP40



Model	Size of packaging			Weight kg
	L	P mm	H	
BGN 300 LX ME	1250	1150	960	242
BGN 300 LX ME V	2030	1150	1010	261
BGN 300 LX ME V O2	2030	1150	1010	273
BGN 300 LX ME V CO	2030	1150	1010	285



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.
BGN 300 LX	880	400	480	800	580	220	310	1630	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 300 LX ME V	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 300 LX ME V O2	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 300 LX ME V CO	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
NEW				class 3	400 ÷ 3600	BGN 300 LX ME	15300010	3N AC 50Hz 400V	7,5	4)
NEW				class 3	400 ÷ 3600	BGN 300 LX ME V	15300015	3N AC 50Hz 400V	7,5	4)
NEW				class 3	400 ÷ 3600	BGN 300 LX ME V O2	15300016	3N AC 50Hz 400V	7,5	4)
NEW				class 3	400 ÷ 3600	BGN 300 LX ME V CO	15300017	3N AC 50Hz 400V	7,5	4)
Frequency 60 Hz										
NEW				class 3	400 ÷ 3600	BGN 300 LX ME	15305410	3N AC 60Hz 380V	9,0	4)
NEW				class 3	400 ÷ 3600	BGN 300 LX ME V	on request	3N AC 60Hz 380V	7,5	4)
NEW				class 3	400 ÷ 3600	BGN 300 LX ME V O2	on request	3N AC 60Hz 380V	7,5	4)
NEW				class 3	400 ÷ 3600	BGN 300 LX ME V CO	on request	3N AC 60Hz 380V	7,5	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
BGN 300 LX ME V: modulating probe kit LCM 100 (see page 288)	

MODULATING MODE

DESCRIPTION	PART NO.
BGN 300 LX ME: modulation kit	98000059
BGN 300 LX ME: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980057

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.	
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NOTES

- 4 Equipped with air closure device.
- Net calorific value at reference conditions of 0°C, 1013mbar:
Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
- For different type of gas and pressure values, please get in contact with our commercial department.

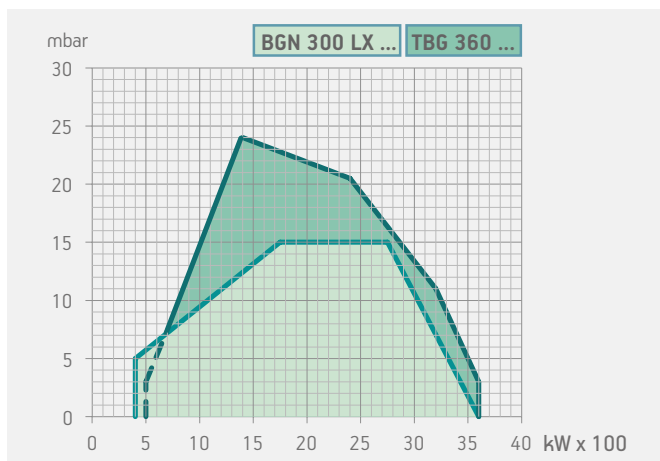


TBG 360 MC

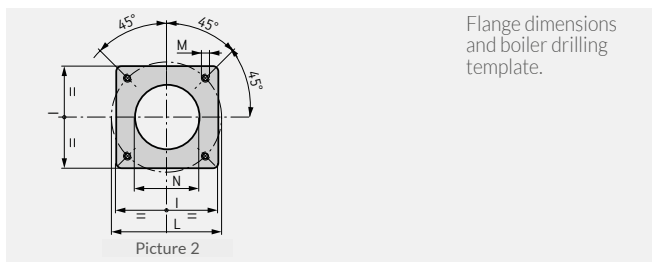
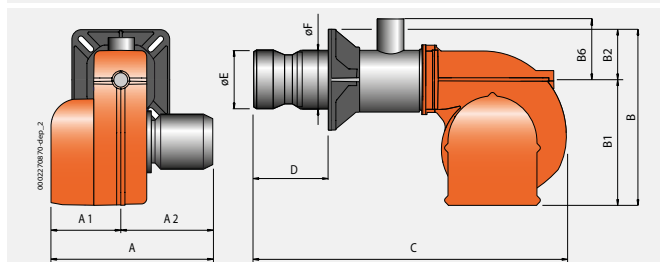


TBG 360 ME

	TBG 360 MC	TBG 360 ME	TBG 360 ME V	TBG 360 ME V O2	TBG 360 ME V CO
Gas burner compliant with European standard EN676. Operation:	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:	1:7	1:7	1:7	1:7	1:7
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•	•
Gas train outlet:	up	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 kg
	L	P mm	H	
TBG 360 MC	1070	870	810	118
TBG 360 ME	1070	870	810	118
TBG 360 ME V	1730	1030	880	135
TBG 360 ME V O2	1730	1030	880	147
TBG 360 ME V CO	1730	1030	880	159



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 360 MC	820	400	420	610	390	220	200	1250	200 ÷ 450	270	219	320	310 ÷ 370	M12	275	2
TBG 360 ME	820	400	420	590	390	160	200	1350	200 ÷ 450	270	219	320	310 ÷ 370	M12	275	2
TBG 360 ME V	850	400	450	590	390	160	200	1350	200 ÷ 450	270	219	320	310 ÷ 370	M12	275	2
TBG 360 ME V O2	850	400	450	590	390	160	200	1350	200 ÷ 450	270	219	320	310 ÷ 370	M12	275	2
TBG 360 ME V CO	850	400	450	590	390	160	200	1350	200 ÷ 450	270	219	320	310 ÷ 370	M12	275	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
NEW				class 2	500 ÷ 3600	TBG 360 MC	17790010	3N AC 50Hz 400V	7,5	3) 4)
NEW				class 2	500 ÷ 3600	TBG 360 ME	17800010	3N AC 50Hz 400V	7,5	3) 4)
NEW	•			class 2	500 ÷ 3600	TBG 360 ME V	17800015	3N AC 50Hz 400V	7,5	3) 4)
NEW	•	•		class 2	500 ÷ 3600	TBG 360 ME V O2	17800016	3N AC 50Hz 400V	7,5	3) 4)
NEW	•	•	•	class 2	500 ÷ 3600	TBG 360 ME V CO	17800017	3N AC 50Hz 400V	7,5	3) 4)
Frequency 60 Hz										
NEW				class 2	500 ÷ 3600	TBG 360 MC	17795410	3N AC 60Hz 380V	9,0	3) 4)
NEW				class 2	500 ÷ 3600	TBG 360 ME	17805410	3N AC 60Hz 380V	9,0	3) 4)
NEW	•			class 2	500 ÷ 3600	TBG 360 ME V	on request	3N AC 60Hz 380V	9,0	3) 4)
NEW	•	•		class 2	500 ÷ 3600	TBG 360 ME V O2	on request	3N AC 60Hz 380V	9,0	3) 4)
NEW	•	•	•	class 2	500 ÷ 3600	TBG 360 ME V CO	on request	3N AC 60Hz 380V	9,0	3) 4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
TBG 360 ME V: modulating probe kit LCM 100 (see page 288)	

MODULATING MODE

DESCRIPTION	PART NO.
TBG 360 MC: modulation kit	98000057
TBG 360 ME: modulation kit	98000059
TBG 360 MC/360 ME: modulating probe kit (see page 288)	

NOTES

- Sound proof lid on burner air intake.
 - Equipped with air closure device.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
- For different type of gas and pressure values, please get in contact with our commercial department.

ACCESSORIES AVAILABLE ON REQUEST

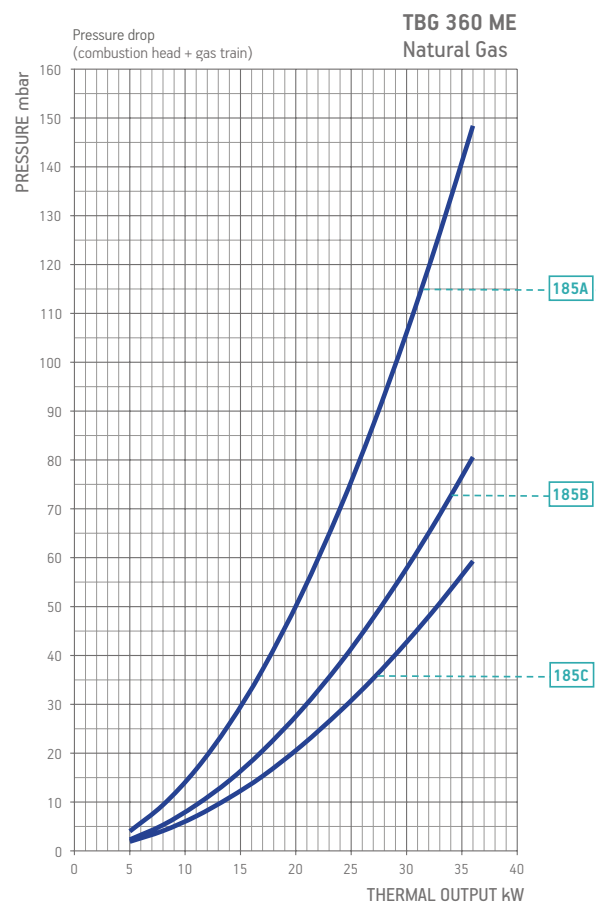
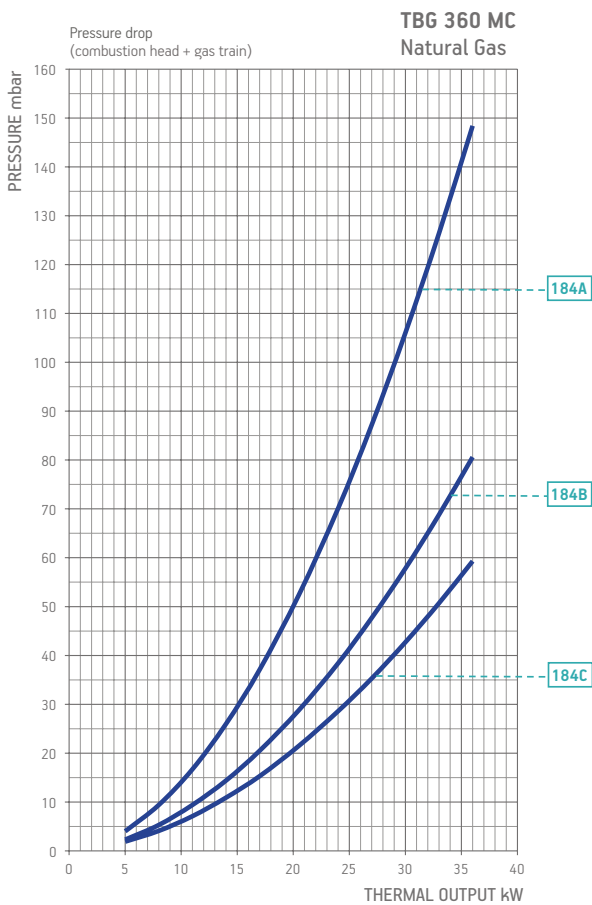
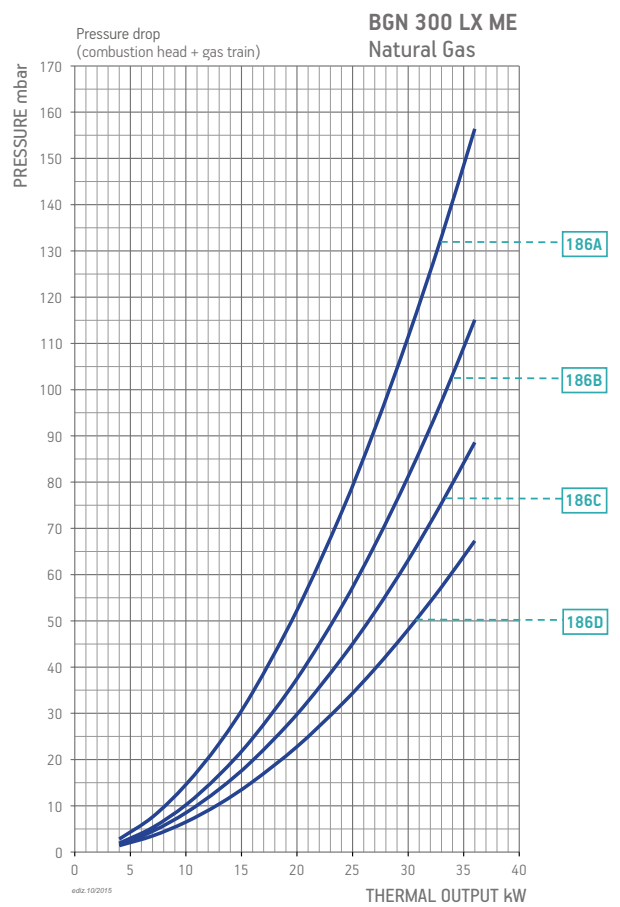
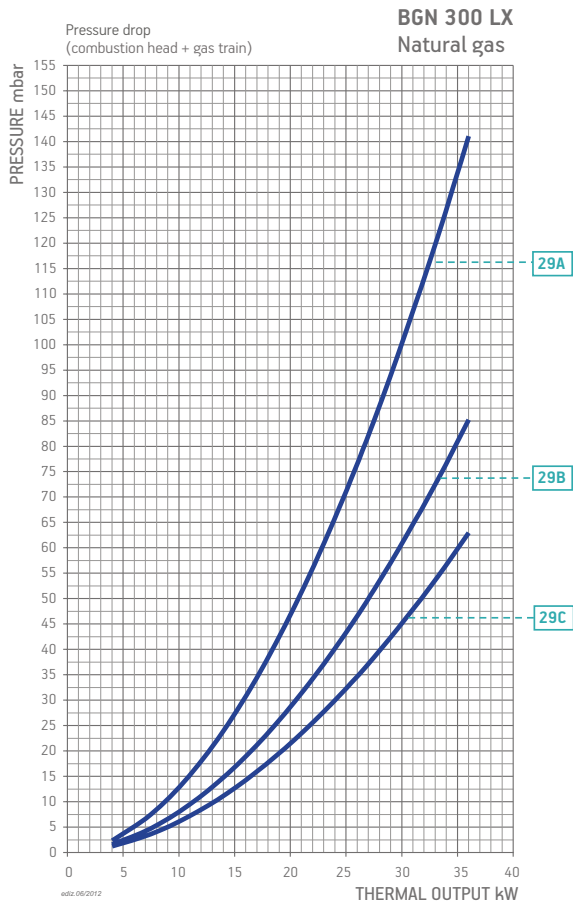
DESCRIPTION	PART NO.
Soundproof burner cover (see page. 293)	97980053

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.	
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BURNER/GAS TRAIN MATCH

GAS



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 **	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.				
BGN 300 LX BGN 300 LX V	Natural gas	29A	CE	500	CTV	19990530	Included	96000012	98000102	D3	11)		
			EXP	500	CTV	19990530	Included	96000012	-	DE3			
		29B	CE	500	CTV	19990539	Included	96005003	98000101	D3	11)		
			EXP	500	CTV	19990539	Included	96005003	-	DE3			
		29C	CE	500	CTV	19990485	Included	96005004	98000101	D3	11)		
			EXP	500	CTV	19990485	Included	96005004	-	DE3			
	BGN 300 LX ME BGN 300 LX ME V BGN 300 LX ME V O2 BGN 300 LX ME V CO	Natural gas	186A	CE/EXP	500	CTV	19990524	Included	96000035	Included	D2		
			186B	CE/EXP	500	CTV	19990614	Included	-	Included	D2		
			186C	CE/EXP	500	CTV	19990577	Included	-	Included	D2		
			186D	CE/EXP	500	CTV	19990578	Included	-	Included	D2		
	TBG 360 MC	Natural gas	184A	CE	500	CTV	19990550	Included	-	98000102	B7	11)	
				EXP	500	CTV	19990550	Included	-	-	BE7		
184B			CE	500	CTV	19990563	Included	-	98000101	B7	11)		
			EXP	500	CTV	19990563	Included	-	-	BE7			
184C			CE	500	CTV	19990564	Included	-	98000101	B7	11)		
			EXP	500	CTV	19990564	Included	-	-	BE7			
TBG 360 ME/ME V TBG 360 ME V O2 TBG 360 ME V CO			Natural gas	185A	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
				185B	CE/EXP	500	CTV	19990525	Included	-	Included	D2	
	185C	CE/EXP		500	CTV	19990526	Included	-	Included	D2			

Burner model	Gas type	Version	P.Max **	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 360 MC	LPG	CE	500	CTV	19990550	Included	-	98000102	98000366	B7	11)
		EXP	500	CTV	19990550	Included	-	-	98000366	BE7	
					19990550	Included	-	98000102	98000366	BE7	
TBG 360 ME/ME V TBG 360 ME V O2 TBG 360 ME V CO	LPG	CE/EXP	500	CTV	19990524	Included	-	Included	98000366	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

9 The min feeding gas pressure at the inlet of the gas train can not be lower than 100 mbar.

11 The train must be always completed with the VPS kit to comply with the EN676 regulations.

CTV Gas train with Valve Tightness Control.

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



BGN 390 LX

Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.

CE version gas train is complete with operation and safety valve with pneumatic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

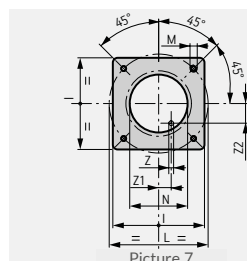
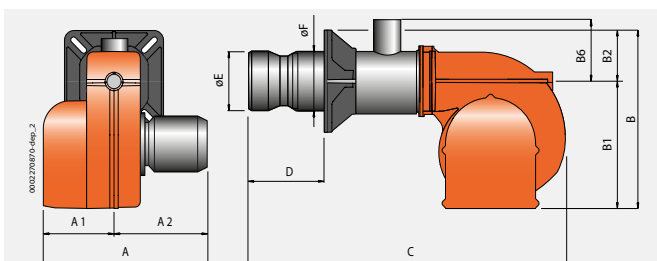
Gas train outlet:

Flame detection by ionisation electrode with connector for microamperometer.

Control panel with display diagram for working mode with indication lights.

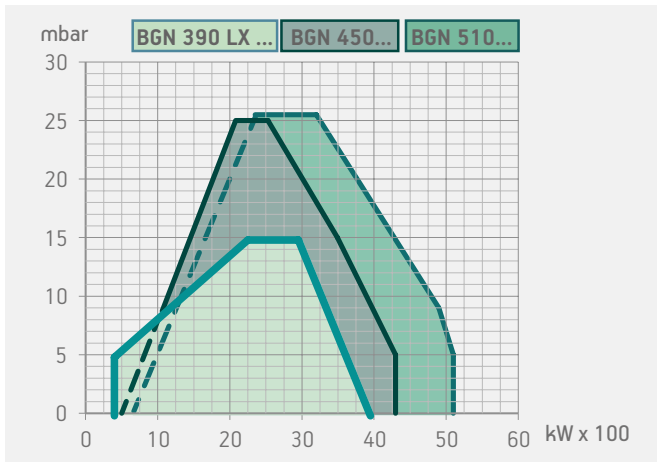
Electric protection rating:

	BGN 390 LX	BGN 390 LX V
	pneumatic two-stage progressive	pneumatic two-stage progressive
	•	•
Modulation ratio:	1:8	1:8
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•
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:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.		•
CE version gas train is complete with operation and safety valve with pneumatic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	up	up
Flame detection by ionisation electrode with connector for microamperometer.	•	•
Control panel with display diagram for working mode with indication lights.	•	•
Electric protection rating:	IP44	IP40



Flange dimensions and boiler drilling template.

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	Z mm	Z1 mm	Z2 mm	Pic.
BGN 390 LX	880	400	480	800	580	220	200	1630	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	12	150	87	7
BGN 390 LX V	880	400	480	800	580	220	200	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	12	150	87	7



Model	Size of packaging			Weight kg
	L	P mm	H	
BGN 390 LX	1250	1150	960	310
BGN 390 LX V	2030	1150	1010	322

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz							
●	class 3	400 ÷ 3950	BGN 390 LX	15290010	3N AC 50Hz 400V	7,5	4)
	class 3	400 ÷ 3950	BGN 390 LX V	15290015	3N AC 50Hz 400V	7,5	4)
Frequency 60 Hz							
●	class 3	400 ÷ 3950	BGN 390 LX	15295410	3N AC 60Hz 380V	9,0	4)
	class 3	400 ÷ 3950	BGN 390 LX V	15295415	3N AC 60Hz 380V	7,5	4)

MODULATING MODE

DESCRIPTION	PART NO.
Modulation kit	98000057
Modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980057

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

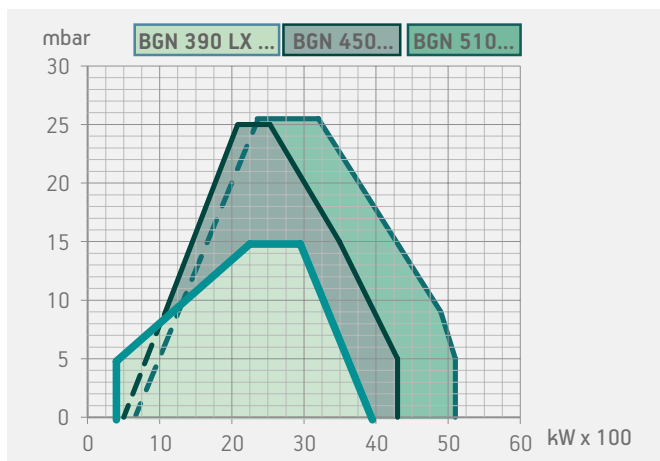
NOTES

4) Equipped with air closure device.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 For different type of gas and pressure values, please get in contact with our commercial department.

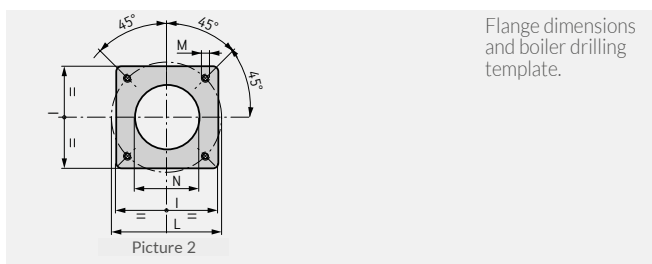
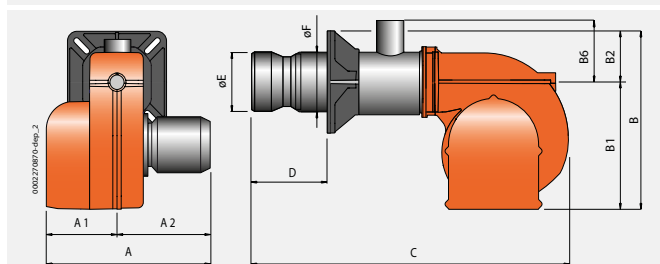


BGN 390 LX ME

	BGN 390 LX ME	BGN 390 LX ME V	BGN 390 LX ME VO2	BGN 390 LX ME VCO
Gas burner compliant with European standard EN676. Operation:	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:	1:8	1:8	1:8	1:8
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3
Adjusting the combustion head.	•	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•
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:	electric servomotor	electric servomotor	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.			•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•
Gas train outlet:	up/down	up/down	up/down	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.	•	•	•	•
Electric protection rating:	IP40	IP40	IP40	IP40



Model	Size of packaging			Weight kg
	L	P mm	H	
BGN 390 LX ME	1250	1150	960	242
BGN 390 LX ME V	2030	1150	1010	261
BGN 390 LX ME V O2	2030	1150	1010	273
BGN 390 LX ME V CO	2030	1150	1010	285



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.
BGN 390 LX ME	880	400	480	800	580	220	310	1630	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 390 LX ME V	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 390 LX ME V O2	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 390 LX ME V CO	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
						Frequency 50 Hz				
NEW				class 3	400 ÷ 3950	BGN 390 LX ME	15310010	3N AC 50Hz 400V	7,5	4)
NEW	•			class 3	400 ÷ 3950	BGN 390 LX ME V	15310015	3N AC 50Hz 400V	7,5	4)
NEW	•	•		class 3	400 ÷ 3950	BGN 390 LX ME V O2	15310016	3N AC 50Hz 400V	7,5	4)
NEW	•	•	•	class 3	400 ÷ 3950	BGN 390 LX ME V CO	15310017	3N AC 50Hz 400V	7,5	4)
						Frequency 60 Hz				
NEW				class 3	400 ÷ 3950	BGN 390 LX ME	15315410	3N AC 60Hz 380V	9,0	4)
NEW	•			class 3	400 ÷ 3950	BGN 390 LX ME V	on request	3N AC 60Hz 380V	7,5	4)
NEW	•	•		class 3	400 ÷ 3950	BGN 390 LX ME V O2	on request	3N AC 60Hz 380V	7,5	4)
NEW	•	•	•	class 3	400 ÷ 3950	BGN 390 LX ME V CO	on request	3N AC 60Hz 380V	7,5	4)

TO COMPLETE THE BURNER

DESCRIPTION

BGN 390 LX ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION

BGN 390 LX ME: modulation kit **PART NO.** 98000059

BGN 390 LX ME: modulating probe kit (see page 288)

NOTES

4) Equipped with air closure device.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

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

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION

Soundproof burner cover (see page 293)

PART NO.

97980057

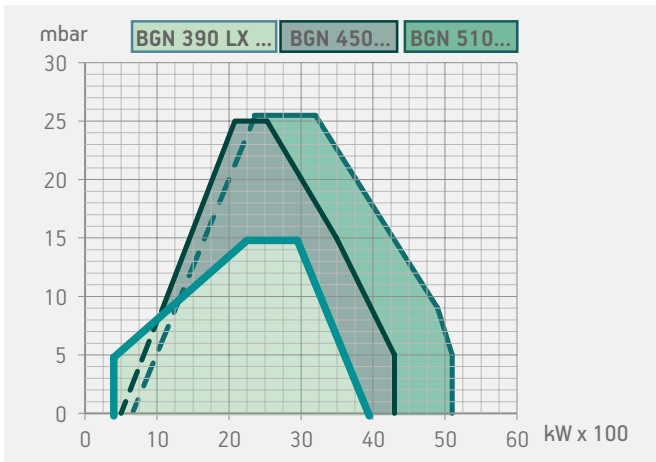
GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

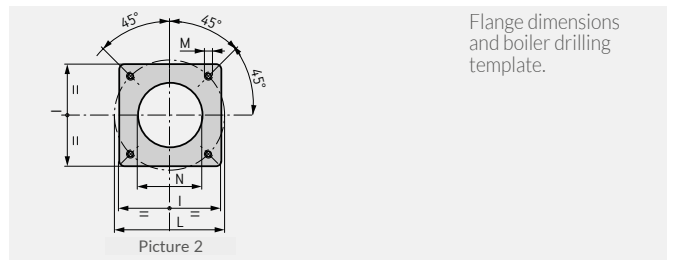
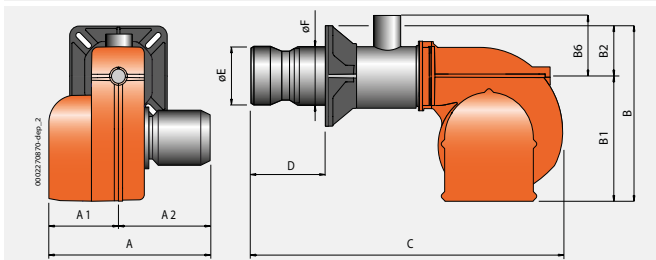


Gas burner compliant with European standard EN676. Operation:

	BGN 450 MC	BGN 450 ME	BGN 450 ME V	BGN 450 ME V O2	BGN 450 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:	1:8	1:8	1:8	1:8	1:8
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.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•	•
Gas train outlet:	up	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	IP44	IP40	IP40	IP40



Model	Size of packaging			Weight kg
	L	P mm	H	
BGN 450 MC	1250	1150	960	254
BGN 450 ME	1250	1150	960	254
BGN 450 ME V	2030	1150	1010	261
BGN 450 ME V O2	2030	1150	1010	273
BGN 450 ME V CO	2030	1150	1010	285



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.
BGN 450 MC	880	400	480	890	580	310	310	1660	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 450 ME	880	400	480	800	580	220	310	1660	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 450 ME V	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 450 ME V O2	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 450 ME V CO	880	400	480	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 2	500 ÷ 4300	BGN 450 MC	16940010	3N AC 50Hz 400V	7,5	4)
				class 2	500 ÷ 4300	BGN 450 ME	16950010	3N AC 50Hz 400V	7,5	4)
NEW	•			class 2	500 ÷ 4300	BGN 450 ME V	16950015	3N AC 50Hz 400V	7,5	4)
NEW	•	•		class 2	500 ÷ 4300	BGN 450 ME V O2	16950016	3N AC 50Hz 400V	7,5	4)
NEW	•	•	•	class 2	500 ÷ 4300	BGN 450 ME V CO	16950017	3N AC 50Hz 400V	7,5	4)
Frequency 60 Hz										
				class 2	500 ÷ 4300	BGN 450 MC	16945410	3N AC 60Hz 380V	11,0	4)
				class 2	500 ÷ 4300	BGN 450 ME	16955410	3N AC 60Hz 380V	11,0	4)
NEW	•			class 2	500 ÷ 4300	BGN 450 ME V	on request	3N AC 60Hz 380V	11,0	4)
NEW	•	•		class 2	500 ÷ 4300	BGN 450 ME V O2	on request	3N AC 60Hz 380V	11,0	4)
NEW	•	•	•	class 2	500 ÷ 4300	BGN 450 ME V CO	on request	3N AC 60Hz 380V	11,0	4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
BGN 450 ME V: modulating probe kit LCM 100 (see page 288)	

MODULATING MODE

DESCRIPTION	PART NO.
BGN 450 MC: modulation kit	98000057
BGN 450 ME: modulation kit	98000059
BGN 450 MC/450 ME: modulating probe kit (see page 288)	

NOTES

4) Equipped with air closure device.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 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 cover (see page 293)	97980057

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.	
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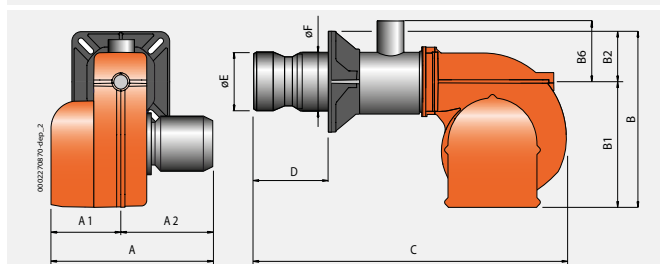
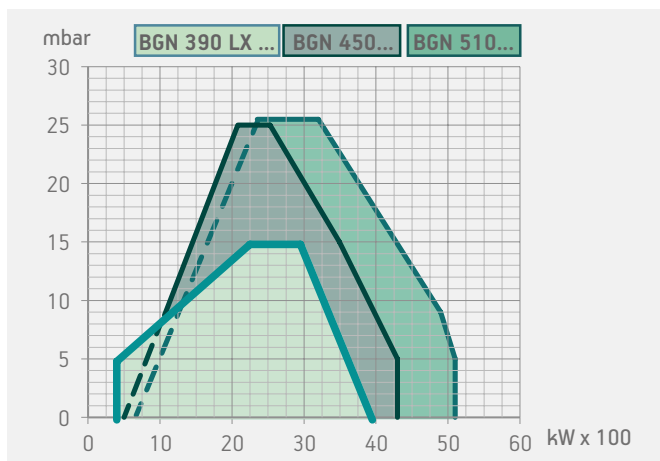


BGN 510 MC

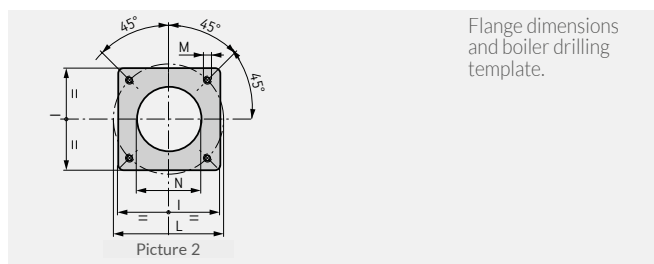


BGN 510 ME

	BGN 510 MC	BGN 510 ME	BGN 510 ME V	BGN 510 ME V O2	BGN 510 ME V CO
Gas burner compliant with European standard EN676. Operation:	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:	1:8	1:8	1:8	1:8	1:8
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.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•	•
Gas train outlet:	up	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	IP44	IP40	IP40	IP40



Model	Size of packaging			Weight kg
	L	P mm	H	
BGN 510 MC	1250	1150	960	265
BGN 510 ME	1250	1150	960	265
BGN 510 ME V	2030	1150	1010	275
BGN 510 ME V O2	2030	1150	1010	287
BGN 510 ME V CO	2030	1150	1010	299



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.
BGN 510 MC	920	400	520	890	580	310	310	1660	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 510 ME	920	400	520	800	580	220	310	1660	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 510 ME V	920	400	520	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 510 ME V O2	920	400	520	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2
BGN 510 ME V CO	920	400	520	800	580	220	310	1870	280 ÷ 480	316	275	440	400 ÷ 540	M20	360	2

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 2	650 ÷ 5100	BGN 510 MC	16970010	3N AC 50Hz 400V	11	4)
				class 2	650 ÷ 5100	BGN 510 ME	16980010	3N AC 50Hz 400V	11	4)
NEW	•			class 2	650 ÷ 5100	BGN 510 ME V	16980015	3N AC 50Hz 400V	11	4)
NEW	•	•		class 2	650 ÷ 5100	BGN 510 ME V O2	16980016	3N AC 50Hz 400V	11	4)
NEW	•	•	•	class 2	650 ÷ 5100	BGN 510 ME V CO	16980017	3N AC 50Hz 400V	11	4)
Frequency 60 Hz										
				class 2	650 ÷ 5100	BGN 510 MC	16975410	3N AC 60Hz 380V	11	4)
				class 2	650 ÷ 5100	BGN 510 ME	16985410	3N AC 60Hz 380V	11	4)
NEW	•			class 2	650 ÷ 5100	BGN 510 ME V	on request	3N AC 60Hz 380V	11	4)
NEW	•	•		class 2	650 ÷ 5100	BGN 510 ME V O2	on request	3N AC 60Hz 380V	11	4)
NEW	•	•	•	class 2	650 ÷ 5100	BGN 510 ME V CO	on request	3N AC 60Hz 380V	11	4)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
BGN 510 ME V: modulating probe kit LCM 100 (see page 288)	

MODULATING MODE

DESCRIPTION	PART NO.
BGN 510 MC: modulation kit	98000057
BGN 510 ME: modulation kit	98000059
BGN 510 MC/510 ME: modulating probe kit (see page 288)	

NOTES

4) Equipped with air closure device.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 For different type of gas and pressure values, please get in contact with our commercial department.

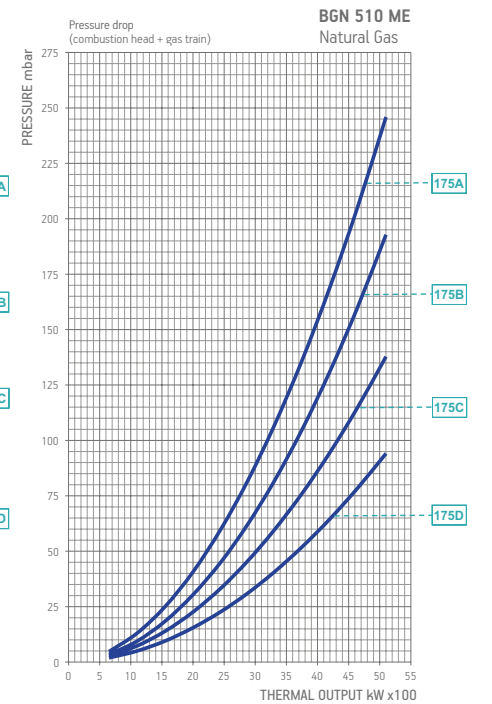
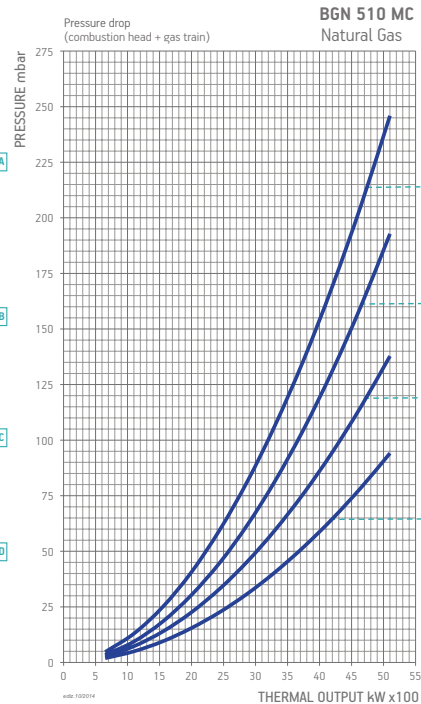
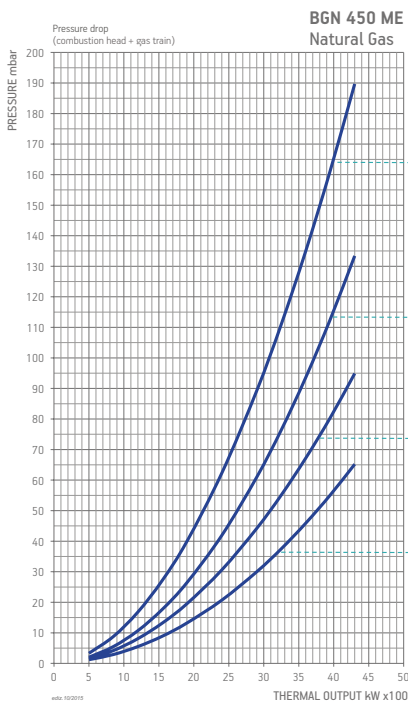
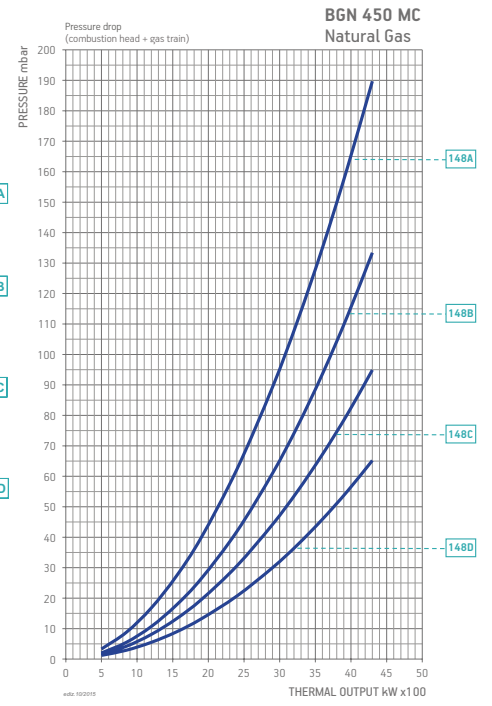
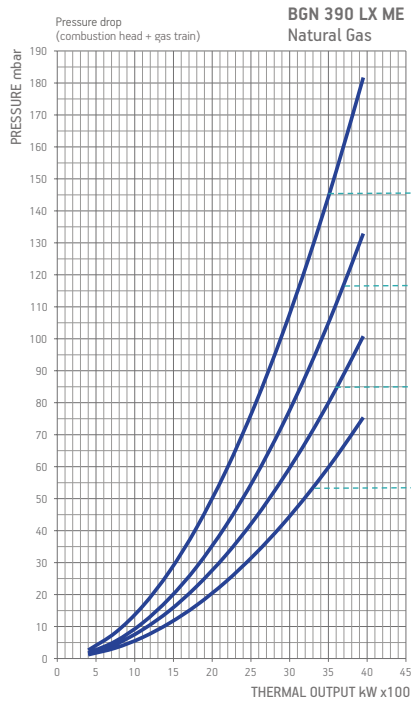
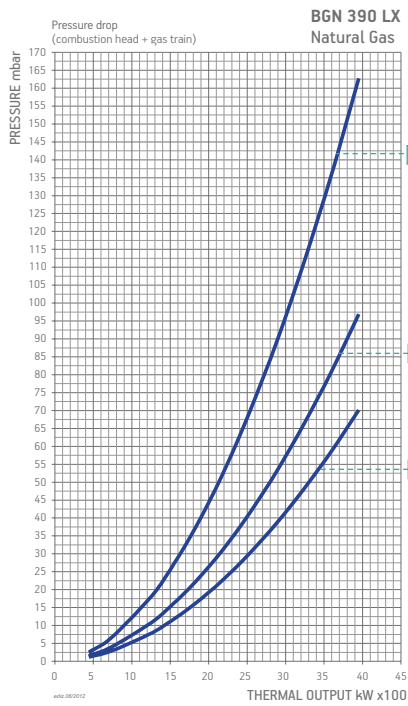
ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980057

GAS BURNERS ACCESSORIES

Boiler coupling kit, plug for wiring.

BURNER/GAS TRAIN MATCH



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.			
BGN 390 LX BGN 390 LX V	Natural gas	30A	CE	500	CTV	19990530	Included	96000012	98000102	D3	11)	
			EXP	500	CTV	19990530	Included	96000012	-	DE3		
		30B	CE	500	CTV	19990539	Included	96005003	98000101	D3	11)	
			EXP	500	CTV	19990539	Included	96005003	-	DE3		
		30C	CE	500	CTV	19990485	Included	96005004	98000101	D3	11)	
			EXP	500	CTV	19990485	Included	96005004	-	DE3		
	BGN 390 LX ME BGN 390 LX ME V BGN 390 LX ME V O2 BGN 390 LX ME V CO	Natural gas	187A	CE/EXP	500	CTV	19990524	Included	96000035	Included	D2	
			187B	CE/EXP	500	CTV	19990614	Included	-	Included	D2	
			187C	CE/EXP	500	CTV	19990577	Included	-	Included	D2	
			187D	CE/EXP	500	CTV	19990578	Included	-	Included	D2	
	BGN 450 MC	Natural gas	148A	CE/EXP	500	CTV	19990566	Included	-	Included	B7	
			148B	CE/EXP	500	CTV	19990613	Included	-	Included	B7	
148C			CE/EXP	500	CTV	19990567	Included	-	Included	B7		
148D			CE/EXP	500	CTV	19990568	Included	-	Included	B7		
BGN 450 ME BGN 450 ME V BGN 450 ME V O2 BGN 450 ME V CO	Natural gas	153A	CE/EXP	500	CTV	19990524	Included	96000035	Included	D2		
		153B	CE/EXP	500	CTV	19990614	Included	-	Included	D2		
		153C	CE/EXP	500	CTV	19990577	Included	-	Included	D2		
		153D	CE/EXP	500	CTV	19990578	Included	-	Included	D2		
BGN 510 MC	Natural gas	174A	CE/EXP	500	CTV	19990566	Included	-	Included	B7		
		174B	CE/EXP	500	CTV	19990613	Included	-	Included	B7		
		174C	CE/EXP	500	CTV	19990567	Included	-	Included	B7		
		174D	CE/EXP	500	CTV	19990568	Included	-	Included	B7		
BGN 510 ME BGN 510 ME V BGN 510 ME V O2 BGN 510 ME V CO	Natural gas	175A	CE/EXP	500	CTV	19990524	Included	96000035	Included	D2		
		175B	CE/EXP	500	CTV	19990614	Included	-	Included	D2		
		175C	CE/EXP	500	CTV	19990577	Included	-	Included	D2		
		175D	CE/EXP	500	CTV	19990578	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.		
BGN 450 MC	LPG	500	CE/EXP	CTV	19990567	Included	-	Included	98000364	B7	
BGN 450 ME/ME V BGN 450 ME V O2 BGN 450 ME V CO	LPG	500	CE/EXP	CTV	19990577	Included	-	Included	98000364	D2	
BGN 510 MC	LPG	500	CE/EXP	CTV	19990567	Included	-	Included	98000365	B7	
BGN 510 ME/ME V BGN 510 ME V O2 BGN 510 ME V CO	LPG	500	CE/EXP	CTV	19990577	Included	-	Included	98000365	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

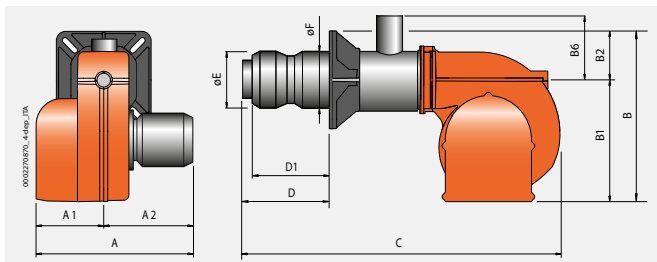
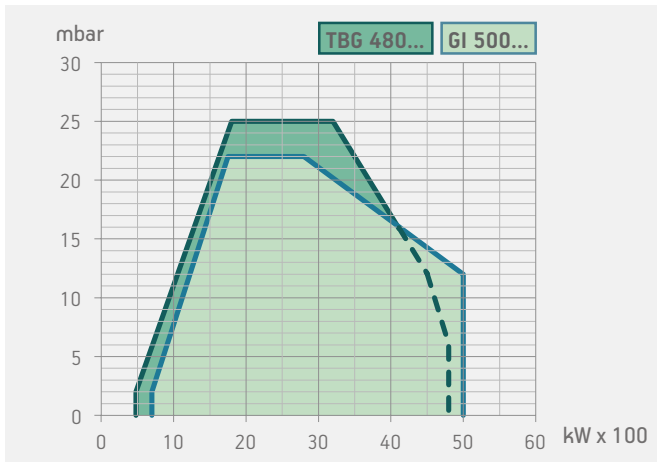
11 The train must be always completed with the VPS kit to comply with the EN676 regulations.

CTV Gas train with Valve Tightness Control.

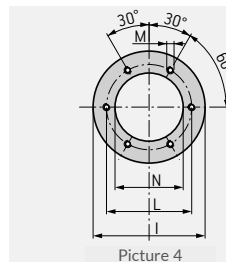
**) Maximum gas inlet pressure at pressure regulator.



	TBG 480 MC	TBG 480 ME	TBG 480 ME V	TBG 480 ME V O2	TBG 480 ME V CO
Gas burner compliant with European standard EN676. Operation:	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:	1:10	1:10	1:10	1:10	1:10
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
Adjusting the combustion head.	•	•	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•	•
Fixed boiler coupling flange.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•	•
Gas train outlet:	up	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:	IP54	IP54	IP54	IP54	IP54



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 480 MC	1530	1150	960	380
TBG 480 ME	1530	1150	960	380
TBG 480 ME V	1530	1150	960	345
TBG 480 ME V O2	1530	1150	960	357
TBG 480 ME V CO	1530	1150	960	369



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBG 480 MC	985	385	600	870	580	290	285	1940	620	500 ÷ 540	366	322	580	520	M20	380	4
TBG 480 ME	985	385	600	870	580	290	285	1940	620	500 ÷ 540	366	322	580	520	M20	380	4
TBG 480 ME V	985	385	600	870	580	290	285	1940	620	500 ÷ 540	366	322	580	520	M20	380	4
TBG 480 ME V O2	985	385	600	870	580	290	285	1940	620	500 ÷ 540	366	322	580	520	M20	380	4
TBG 480 ME V CO	985	385	600	870	580	290	285	1940	620	500 ÷ 540	366	322	580	520	M20	380	4

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 3	480 ÷ 4800	TBG 480 MC	67190010	3N AC 50Hz 400V	11	4)
				class 3	480 ÷ 4800	TBG 480 ME	67180010	3N AC 50Hz 400V	11	4)
NEW	•			class 3	480 ÷ 4800	TBG 480 ME V	67180015	3N AC 50Hz 400V	11	4) 10)
NEW	•	•		class 3	480 ÷ 4800	TBG 480 ME V O2	67180016	3N AC 50Hz 400V	11	4) 10)
NEW	•	•	•	class 3	480 ÷ 4800	TBG 480 ME V CO	67180017	3N AC 50Hz 400V	11	4) 10)
Frequency 60 Hz										
				class 3	480 ÷ 4800	TBG 480 MC	67195410	3N AC 60Hz 380V	13	4)
				class 3	480 ÷ 4800	TBG 480 ME	67185410	3N AC 60Hz 380V	13	4)
NEW	•			class 3	480 ÷ 4800	TBG 480 ME V	on request	3N AC 60Hz 380V	13	4) 10)
NEW	•	•		class 3	480 ÷ 4800	TBG 480 ME V O2	on request	3N AC 60Hz 380V	13	4) 10)
NEW	•	•	•	class 3	480 ÷ 4800	TBG 480 ME V CO	on request	3N AC 60Hz 380V	13	4) 10)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
TBG 480 ME V: modulating probe kit LCM 100 (see page 288)	

MODULATING MODE

DESCRIPTION	PART NO.
TBG 480 MC: modulation kit	98000055
TBG 480 ME: modulation kit	98000059
TBG 480 MC/480 ME: modulating probe kit (see page 288)	

NOTES

- 4 Equipped with air closure device.
 - 10 Inverter supplied separately, not included on the machine.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 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 cover (see page 293)	97980058
Nozzle kit for boiler at reverse flame.	98000362

GAS BURNERS ACCESSORIES

Boiler coupling kit.	
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GI 500 MC



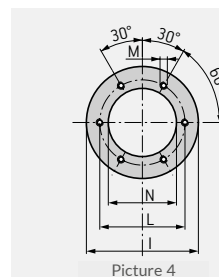
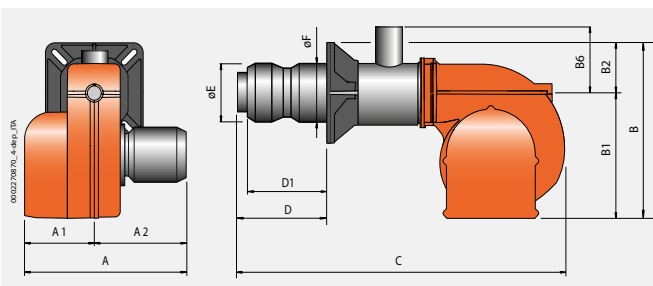
GI 500 ME

Gas burner compliant with European standard EN676. Operation:

	GI 500 MC	GI 500 ME
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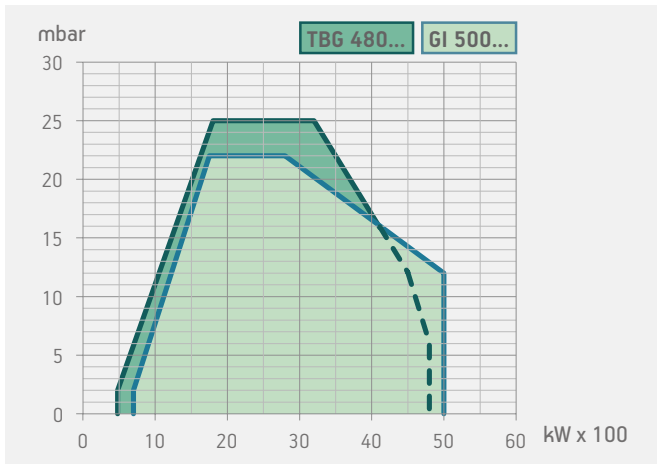
	mechanical two-stage progressive	electronic two-stage progressive
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Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•	•
Modulation ratio:	1:7	1:7
Low NOx and CO emissions gas burner according to European standard EN676:	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.	•	•
Fixed boiler coupling flange.	•	•
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
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	up	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.		•
Electric protection rating:	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B1 mm	B2 mm	B5 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
GI 500 MC	1040	415	625	580	320	290	1830	500	366	325	580	520	M20	380	4
GI 500 ME	1025	400	625	580	320	290	1830	500	366	325	580	520	M20	380	4



Model	Size of packaging			Weight kg
	L	P mm	H	
GI 500 MC	1530	1150	960	320
GI 500 ME	1530	1150	960	320

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz							
	class 2	700 ÷ 5000	GI 500 MC	66420010	3N AC 50Hz 400V	15	4)
	class 2	700 ÷ 5000	GI 500 ME	66410020	3N AC 50Hz 400V	15	4)
Frequency 60 Hz							
	class 2	700 ÷ 5000	GI 500 MC	66425410	3N AC 60Hz 380V	15	4)
	class 2	700 ÷ 5000	GI 500 ME	66415420	3N AC 60Hz 380V	15	4)

MODULATING MODE

DESCRIPTION	PART NO.
Modulation kit	98000055
Modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980058

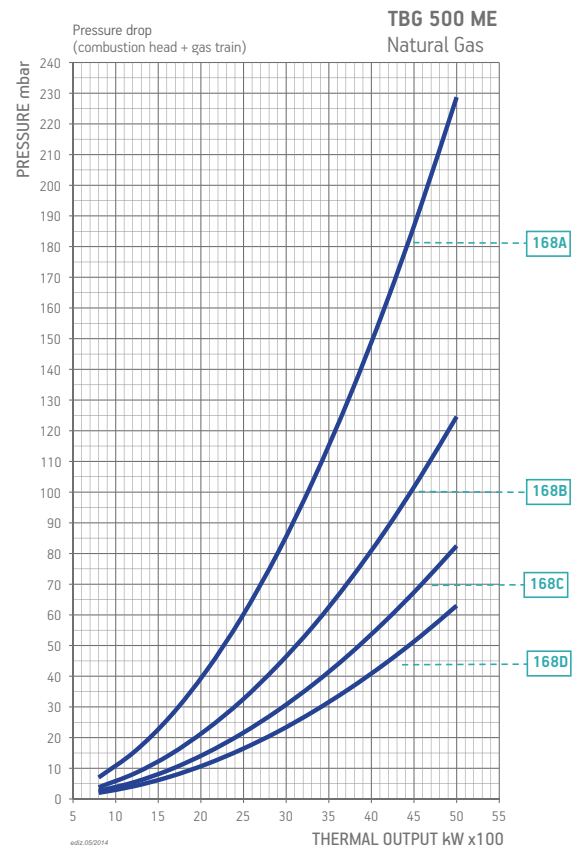
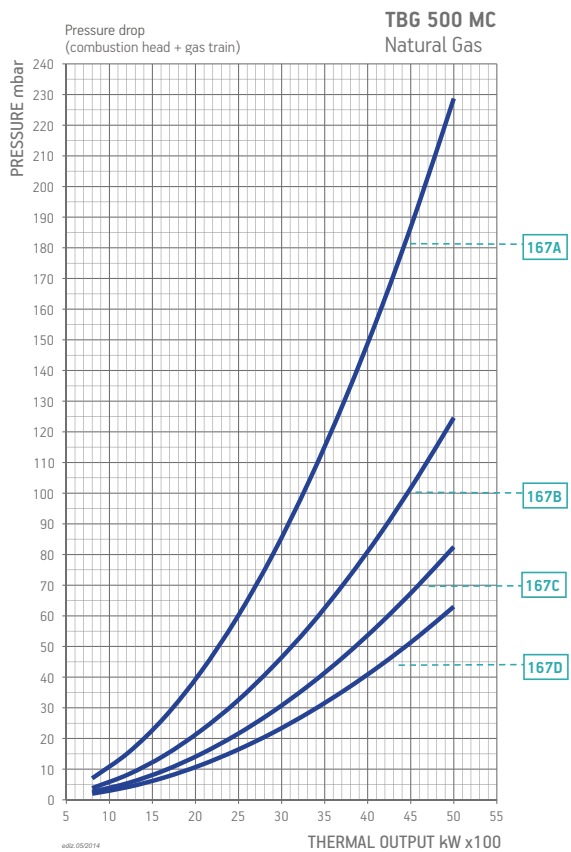
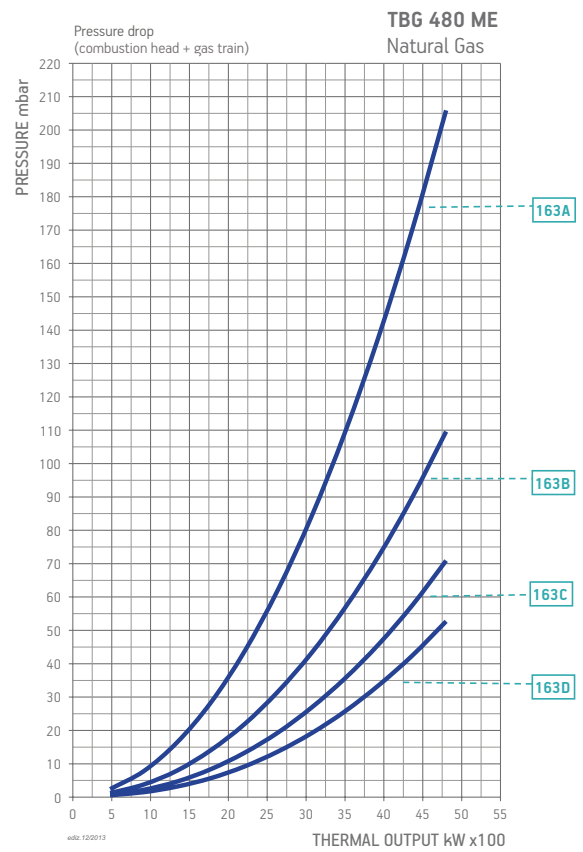
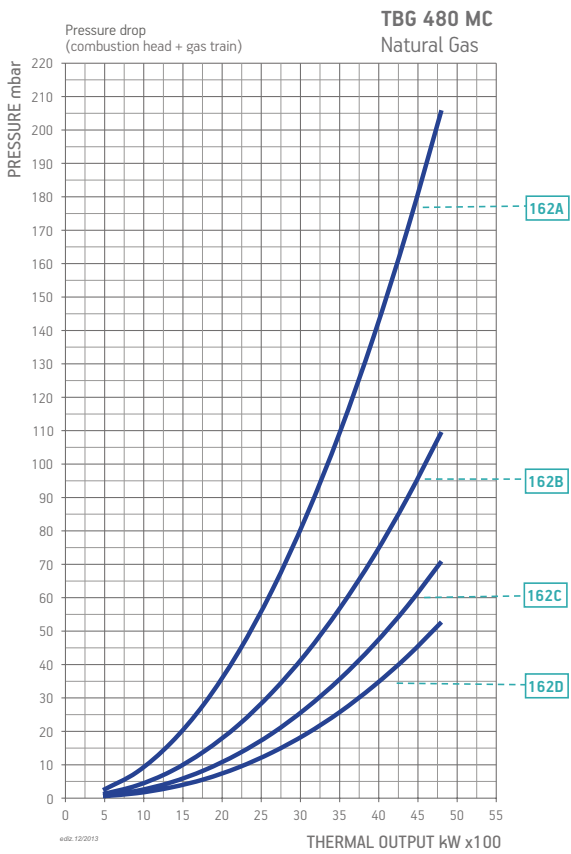
GAS BURNERS ACCESSORIES

Boiler coupling kit.

NOTES

4 Equipped with air closure device.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH



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} **	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 480 MC	Natural gas	162A	CE/EXP	500	CTV	19990599	Included	-	Included	D8			
		162B	CE/EXP	500	CTV	19990600	Included	-	Included	D8			
		162C	CE/EXP	500	CTV	19990601	Included	-	Included	D8			
		162D	CE/EXP	500	CTV	19990602	Included	-	Included	D8			
TBG 480 ME TBG 480 ME V TBG 480 ME V O2 TBG 480 ME V CO	Natural gas	163A	CE/EXP	500	CTV	19990541	Included	-	Included	D4			
		163B	CE/EXP	500	CTV	19990542	Included	-	Included	D4			
		163C	CE/EXP	500	CTV	19990543	Included	-	Included	D4			
		163D	CE/EXP	500	CTV	19990544	Included	-	Included	D4			
GI 500 MC	Natural gas	167A	CE	500	CTV	19990595	Included	-	98000102	D8	11)		
			EXP	500	CTV	19990595	Included	-	-	DE8			
		167B	CE	500	CTV	19990596	Included	-	98000101	D8	11)		
			EXP	500	CTV	19990596	Included	-	-	DE8			
		167C	CE	500	CTV	19990597	Included	-	98000101	D8	11)		
			EXP	500	CTV	19990597	Included	-	-	DE8			
		167D	CE	500	CTV	19990598	Included	-	98000101	D8	11)		
			EXP	500	CTV	19990598	Included	-	-	DE8			
		GI 500 ME	Natural gas	168A	CE/EXP	500	CTV	19990541	Included	-	Included	D4	
				168B	CE/EXP	500	CTV	19990542	Included	-	Included	D4	
				168C	CE/EXP	500	CTV	19990543	Included	-	Included	D4	
				168D	CE/EXP	500	CTV	19990544	Included	-	Included	D4	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

11 The train must be always completed with the VPS kit to comply with the EN676 regulations.
CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Fixed boiler coupling flange.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

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 (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

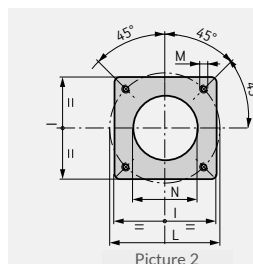
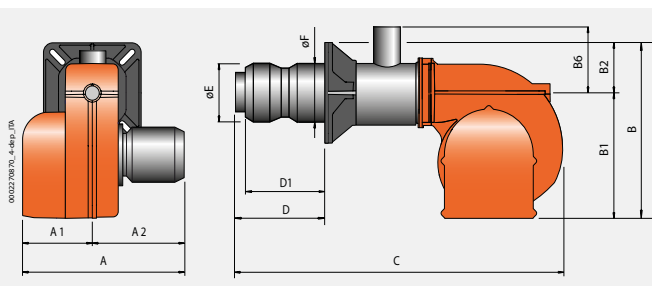
Gas train outlet:

Flame detection by ionisation electrode with connector for microamperometer.

Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.

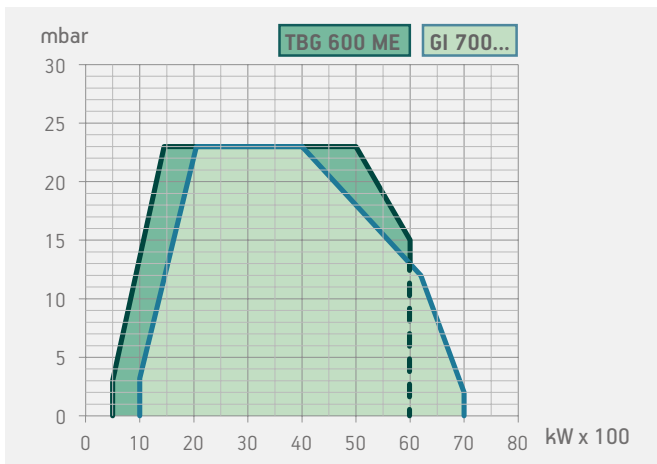
Electric protection rating:

	TBG 600 ME	TBG 600 ME V	TBG 600 ME V O ₂	TBG 600 ME V CO
	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:	1:12	1:12	1:12	1:12
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•
Fixed boiler coupling flange.	•	•	•	•
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:	electric servomotor	electric servomotor	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.			•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•	•
Gas train outlet:	up/down	up/down	up/down	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.	•	•	•	•
Electric protection rating:	IP54	IP54	IP54	IP54



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBG 600 ME	1230	570	660	1000	740	260	310	2000	700	590	418	432	520	594	M20	440	2
TBG 600 ME V	1230	570	660	1000	740	260	310	2000	700	590	418	432	520	594	M20	440	2
TBG 600 ME V O ₂	1230	570	660	1000	740	260	310	2000	700	590	418	432	520	594	M20	440	2
TBG 600 ME V CO	1230	570	660	1000	740	260	310	2000	700	590	418	432	520	594	M20	440	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 600 ME	1950	1510	1320	455
TBG 600 ME V	1950	1510	1320	470
TBG 600 ME V O2	1950	1510	1320	482
TBG 600 ME V CO	1950	1510	1320	494

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 3	500 ÷ 6000	TBG 600 ME	67200010	3N AC 50Hz 400V	11	4)
NEW	•			class 3	500 ÷ 6000	TBG 600 ME V	67200015	3N AC 50Hz 400V	11	4) 10)
NEW	•	•		class 3	500 ÷ 6000	TBG 600 ME V O2	67200016	3N AC 50Hz 400V	11	4) 10)
NEW	•	•	•	class 3	500 ÷ 6000	TBG 600 ME V CO	67200017	3N AC 50Hz 400V	11	4) 10)
Frequency 60 Hz										
				class 3	500 ÷ 6000	TBG 600 ME	67205410	3N AC 60Hz 380V	15	4)
NEW	•			class 3	500 ÷ 6000	TBG 600 ME V	on request	3N AC 60Hz 380V	15	4) 10)
NEW	•	•		class 3	500 ÷ 6000	TBG 600 ME V O2	on request	3N AC 60Hz 380V	15	4) 10)
NEW	•	•	•	class 3	500 ÷ 6000	TBG 600 ME V CO	on request	3N AC 60Hz 380V	15	4) 10)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION

TBG 600 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION

TBG 600 ME: modulation kit

PART NO.

98000059

TBG 600 ME: modulating probe kit (see page 288)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION

Soundproof burner cover (see page 293)

PART NO.

97980058

Nozzle kit for boiler at reverse flame.

98000360

GAS BURNERS ACCESSORIES

Boiler coupling kit.

NOTES

4 Equipped with air closure device.

10 Inverter supplied separately, not included on the machine.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³.

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

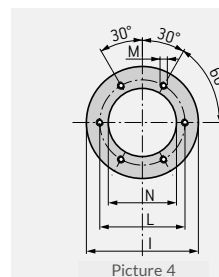
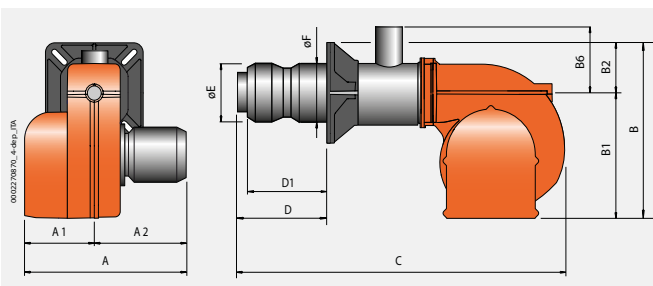


GI 700 MC



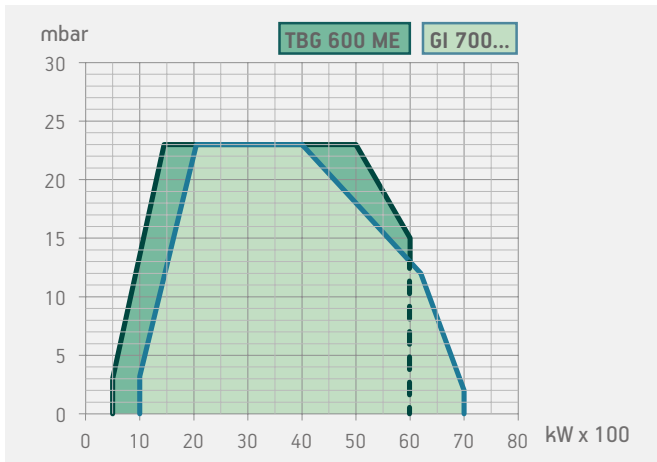
GI 700 ME

	GI 700 MC	GI 700 ME
	mechanical two-stage progressive	electronic two-stage progressive
Gas burner compliant with European standard EN676. Operation:		
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•	•
Modulation ratio:	1:7	1:7
Low NOx and CO emissions gas burner according to European standard EN676:	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.	•	•
Fixed boiler coupling flange.	•	•
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
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	up	up/down
Flame detection by ionisation electrode with connector for microamperometer.	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.		•
Electric protection rating:	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B1 mm	B2 mm	B5 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
GI 700 MC	1080	415	665	580	320	290	1830	500	390	325	580	520	M20	400	4
GI 700 ME	1065	400	665	580	320	290	1830	500	390	325	580	520	M20	400	4



Model	Size of packaging			Weight kg
	L	P mm	H	
GI 700 MC	1530	1150	960	320
GI 700 ME	1530	1150	960	320

	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz							
	class 2	1000 ÷ 7000	GI 700 MC	66440030	3N AC 50Hz 400V	18,5	4)
	class 2	1000 ÷ 7000	GI 700 ME	66430030	3N AC 50Hz 400V	18,5	4)
Frequency 60 Hz							
	class 2	1000 ÷ 7000	GI 700 MC	66445410	3N AC 60Hz 380V	22,0	4)
	class 2	1000 ÷ 7000	GI 700 ME	66435420	3N AC 60Hz 380V	22,0	4)

MODULATING MODE

DESCRIPTION	PART NO.
Modulation kit	98000055
Modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980058

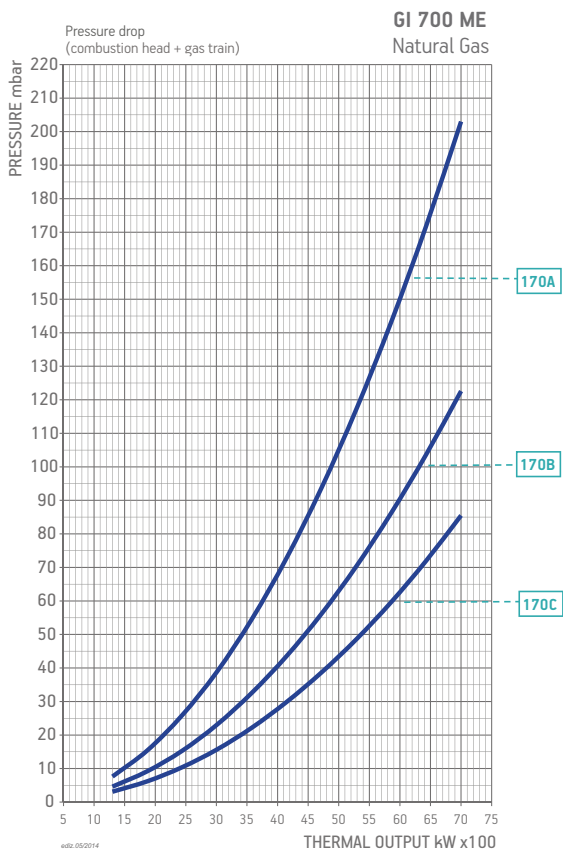
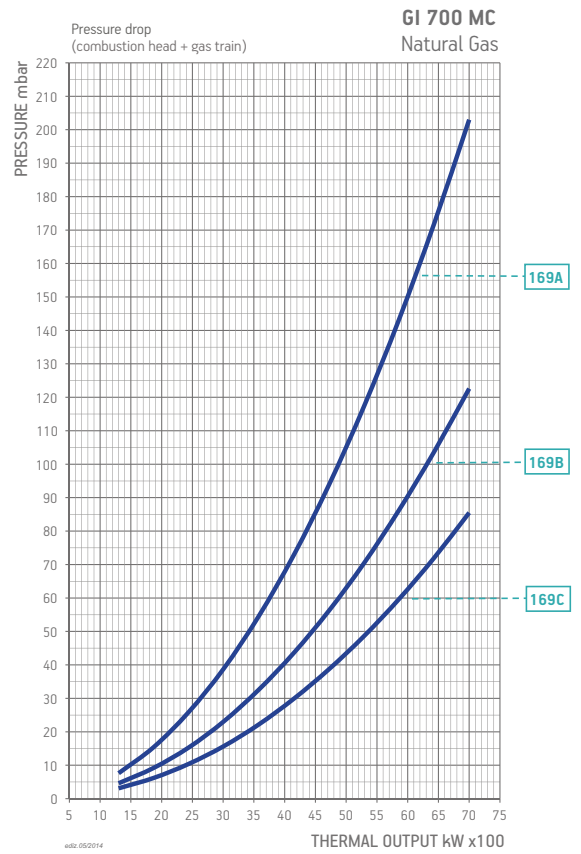
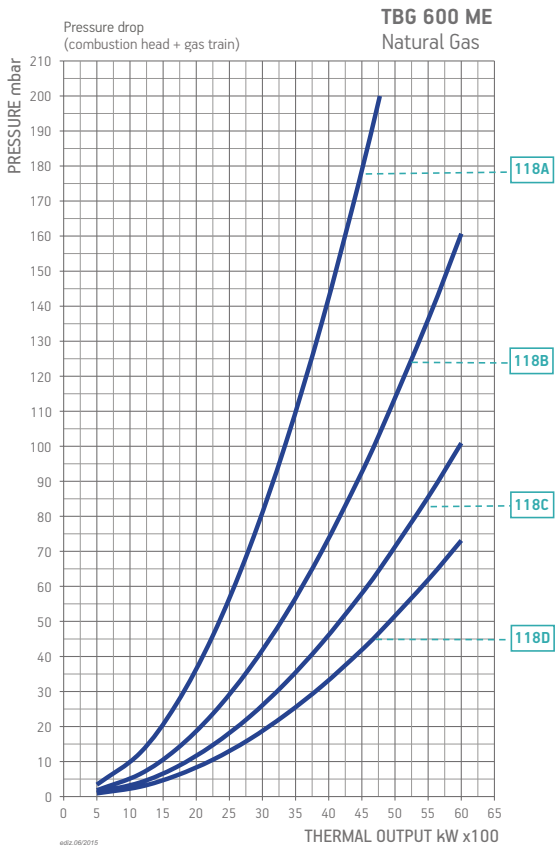
GAS BURNERS ACCESSORIES

Boiler coupling kit.

NOTES

4 Equipped with air closure device.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH



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 **	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 600 ME TBG 600 ME V TBG 600 ME V O2 TBG 600 ME V CO	Natural gas	118A	CE/EXP	500	CTV	19990541	Included	-	Included	D4			
		118B	CE/EXP	500	CTV	19990542	Included	-	Included	D4			
		118C	CE/EXP	500	CTV	19990543	Included	-	Included	D4			
		118D	CE/EXP	500	CTV	19990544	Included	-	Included	D4			
GI 700 MC	Natural gas	169A	CE	500	CTV	19990596	Included	-	98000101	D8	11)		
			EXP	500	CTV	19990596	Included	-	-	DE8			
		169B	CE	500	CTV	19990597	Included	-	98000101	D8	11)		
			EXP	500	CTV	19990597	Included	-	-	DE8			
		169C	CE	500	CTV	19990598	Included	-	98000101	D8	11)		
			EXP	500	CTV	19990598	Included	-	-	DE8			
		GI 700 ME	Natural gas	170A	CE/EXP	500	CTV	19990542	Included	-	Included	D4	
				170B	CE/EXP	500	CTV	19990543	Included	-	Included	D4	
170C	CE/EXP			500	CTV	19990544	Included	-	Included	D4			

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

11 The train must be always completed with the VPS kit to comply with the EN676 regulations.

CTV Gas train with Valve Tightness Control.

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



Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Fixed boiler coupling flange.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

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 (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

Gas train outlet:

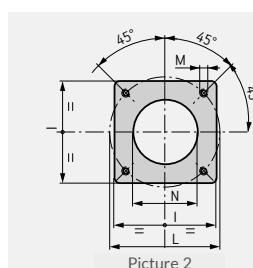
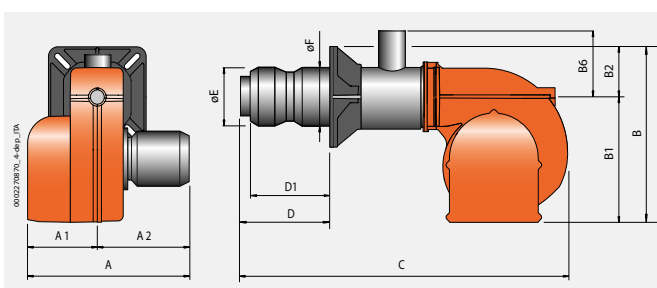
Flame detection by ionisation electrode with connector for microamperometer.

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.

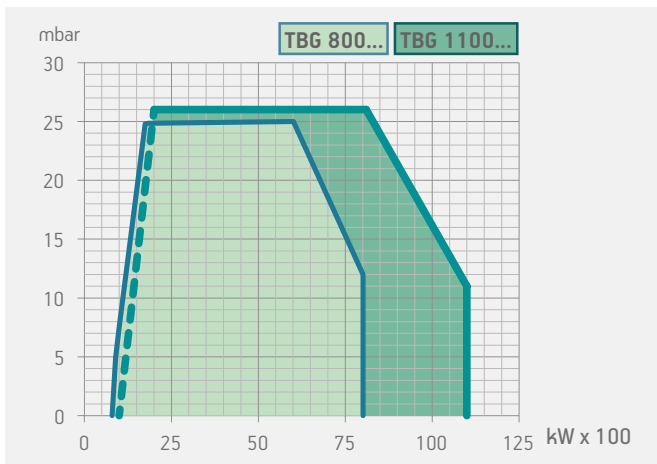
Electric protection rating:

	TBG 800 MC	TBG 800 ME	TBG 800 ME V	TBG 800 ME V O2	TBG 800 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:	1:10	1:10	1:10	1:10	1:10
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•	•
Fixed boiler coupling flange.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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:	IP54	IP54	IP54	IP54	IP54



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBG 800 MC	1230	570	660	1000	740	260	310	2020	720	570	418	432	520	594	M20	440	2
TBG 800 ME	1230	570	660	1000	740	260	310	2020	720	570	418	432	520	594	M20	440	2
TBG 800 ME V	1230	570	660	1000	740	260	310	2020	720	570	418	432	520	594	M20	440	2
TBG 800 ME V O2	1230	570	660	1000	740	260	310	2020	720	570	418	432	520	594	M20	440	2
TBG 800 ME V CO	1230	570	660	1000	740	260	310	2020	720	570	418	432	520	594	M20	440	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 800 MC	1950	1510	1320	460
TBG 800 ME	1950	1510	1320	460
TBG 800 ME V	1950	1510	1320	480
TBG 800 ME V O2	1950	1510	1320	492
TBG 800 ME V CO	1950	1510	1320	504

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 3	800 ÷ 8000	TBG 800 MC	67230020	3N AC 50Hz 400V	15	4)
				class 3	800 ÷ 8000	TBG 800 ME	67220010	3N AC 50Hz 400V	15	4)
NEW	•			class 3	800 ÷ 8000	TBG 800 ME V	67220015	3N AC 50Hz 400V	15	4) 10)
NEW	•	•		class 3	800 ÷ 8000	TBG 800 ME V O2	67220016	3N AC 50Hz 400V	15	4) 10)
NEW	•	•	•	class 3	800 ÷ 8000	TBG 800 ME V CO	67220017	3N AC 50Hz 400V	15	4) 10)
Frequency 60 Hz										
				class 3	800 ÷ 8000	TBG 800 MC	67235420	3N AC 60Hz 380V	15	4)
				class 3	800 ÷ 8000	TBG 800 ME	67225410	3N AC 60Hz 380V	15	4)
NEW	•			class 3	800 ÷ 8000	TBG 800 ME V	on request	3N AC 60Hz 380V	15	4) 10)
NEW	•	•		class 3	800 ÷ 8000	TBG 800 ME V O2	on request	3N AC 60Hz 380V	15	4) 10)
NEW	•	•	•	class 3	800 ÷ 8000	TBG 800 ME V CO	on request	3N AC 60Hz 380V	15	4) 10)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 800 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 800 MC: modulation kit	98000055
TBG 800 ME: modulation kit	98000059
TBG 800 MC/800 ME: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980058
Nozzle kit for boiler at reverse flame.	98000361

GAS BURNERS ACCESSORIES

Boiler coupling kit.

NOTES

- 4 Equipped with air closure device.
 - 10 Inverter supplied separately, not included on the machine.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 For different type of gas and pressure values, please get in contact with our commercial department.



Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Fixed boiler coupling flange.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

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 (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

Gas train outlet:

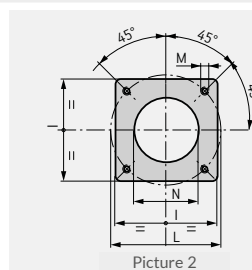
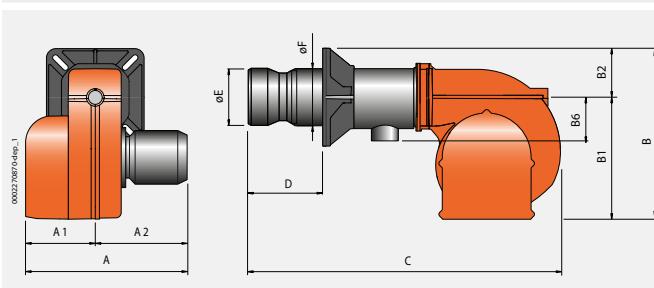
Flame detection by ionisation electrode with connector for microamperometer.

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.

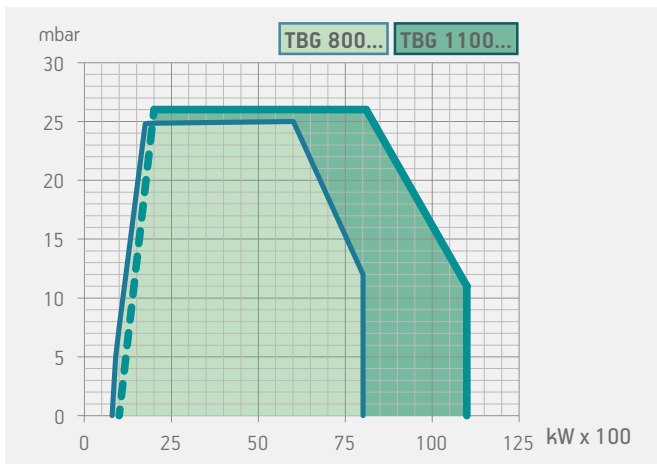
Electric protection rating:

	TBG 1100 MC	TBG 1100 ME	TBG 1100 ME V	TBG 1100 ME V O2	TBG 1100 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:	1:11	1:11	1:11	1:11	1:11
Low NOx and CO emissions gas burner according to European standard EN676:	class 2	class 2	class 2	class 2	class 2
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•	•
Fixed boiler coupling flange.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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:	IP54	IP54	IP54	IP54	IP54



Flange dimensions and boiler drilling template.

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 1100 MC	1230	570	660	1000	740	260	310	2030	720	451	418	520	594	M20	460	2
TBG 1100 ME	1230	570	660	1000	740	260	310	2030	720	451	418	520	594	M20	460	2
TBG 1100 ME V	1230	570	660	1000	740	260	310	2030	720	451	418	520	594	M20	460	2
TBG 1100 ME V O2	1230	570	660	1000	740	260	310	2030	720	451	418	520	594	M20	460	2
TBG 1100 ME V CO	1230	570	660	1000	740	260	310	2030	720	451	418	520	594	M20	460	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 1100 MC	1950	1510	1320	490
TBG 1100 ME	1950	1510	1320	490
TBG 1100 ME V	1950	1510	1320	500
TBG 1100 ME V O2	1950	1510	1320	512
TBG 1100 ME V CO	1950	1510	1320	524

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 2	1000 ÷ 11000	TBG 1100 MC	67450020	3N AC 50Hz 400V	22	4)
				class 2	1000 ÷ 11000	TBG 1100 ME	67440010	3N AC 50Hz 400V	22	4)
NEW	•			class 2	1000 ÷ 11000	TBG 1100 ME V	67440015	3N AC 50Hz 400V	22	4) 10)
NEW	•	•		class 2	1000 ÷ 11000	TBG 1100 ME V O2	67440016	3N AC 50Hz 400V	22	4) 10)
NEW	•	•	•	class 2	1000 ÷ 11000	TBG 1100 ME V CO	67440017	3N AC 50Hz 400V	22	4) 10)
Frequency 60 Hz										
				class 2	1000 ÷ 11000	TBG 1100 MC	67455420	3N AC 60Hz 380V	30	4)
				class 2	1000 ÷ 11000	TBG 1100 ME	67445410	3N AC 60Hz 380V	30	4)
NEW	•			class 2	1000 ÷ 11000	TBG 1100 ME V	on request	3N AC 60Hz 380V	30	4) 10)
NEW	•	•		class 2	1000 ÷ 11000	TBG 1100 ME V O2	on request	3N AC 60Hz 380V	30	4) 10)
NEW	•	•	•	class 2	1000 ÷ 11000	TBG 1100 ME V CO	on request	3N AC 60Hz 380V	30	4) 10)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 1100 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 1100 MC: modulation kit	98000055
TBG 1100 ME: modulation kit	98000059
TBG 1100 MC/1100 ME: modulating probe kit (see page 288)	

NOTES

- 4 Equipped with air closure device.
 - 10 Inverter supplied separately, not included on the machine.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 For different type of gas and pressure values, please get in contact with our commercial department.

ACCESSORIES AVAILABLE ON REQUEST

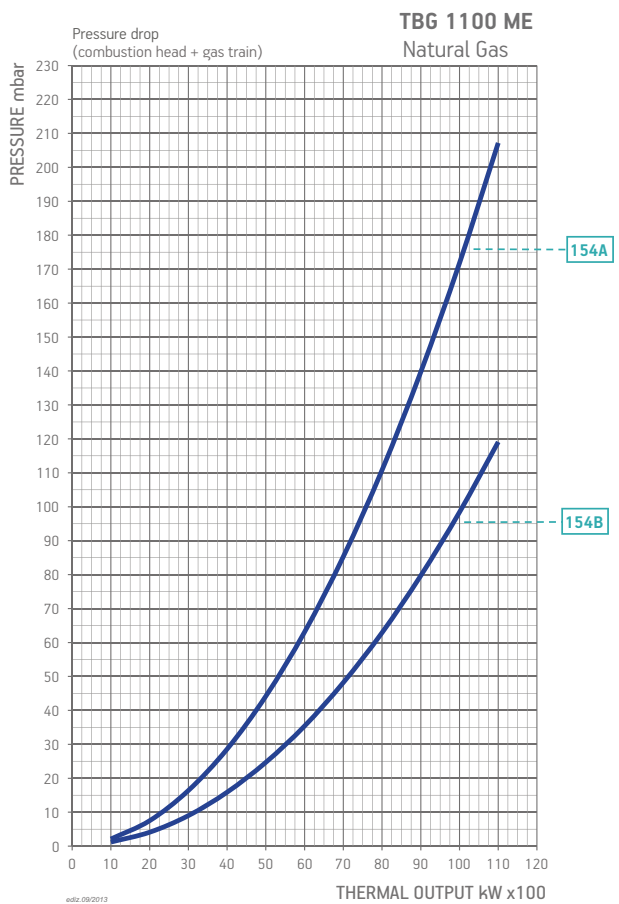
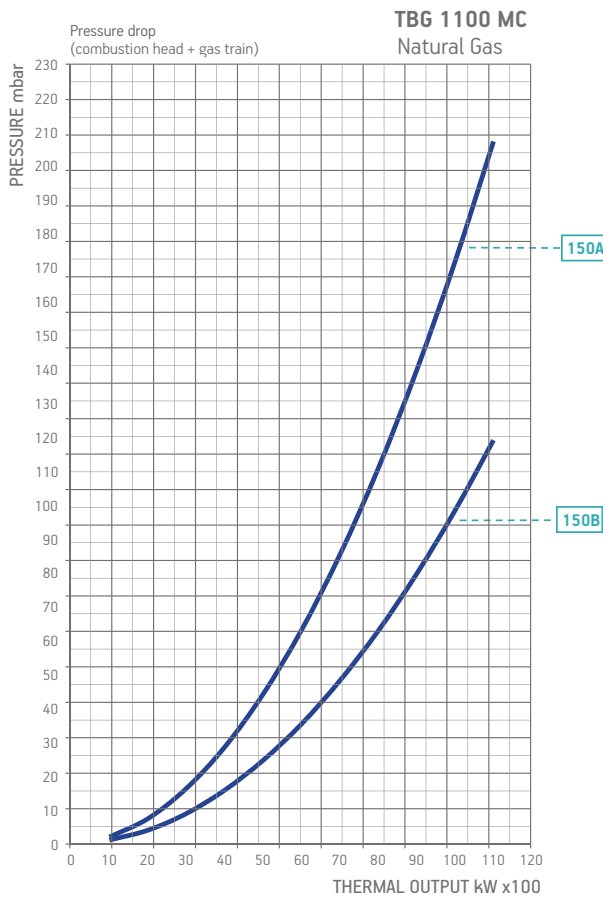
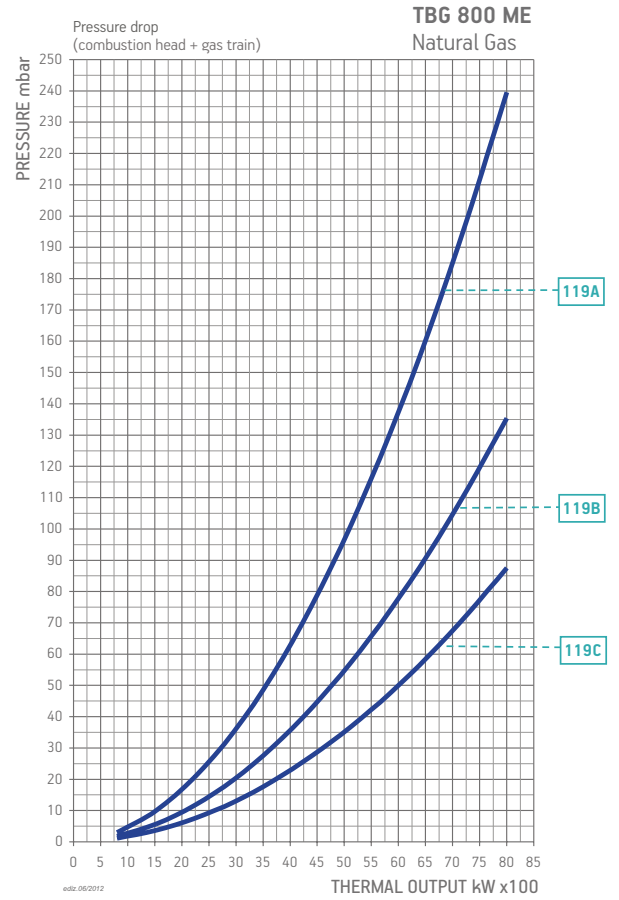
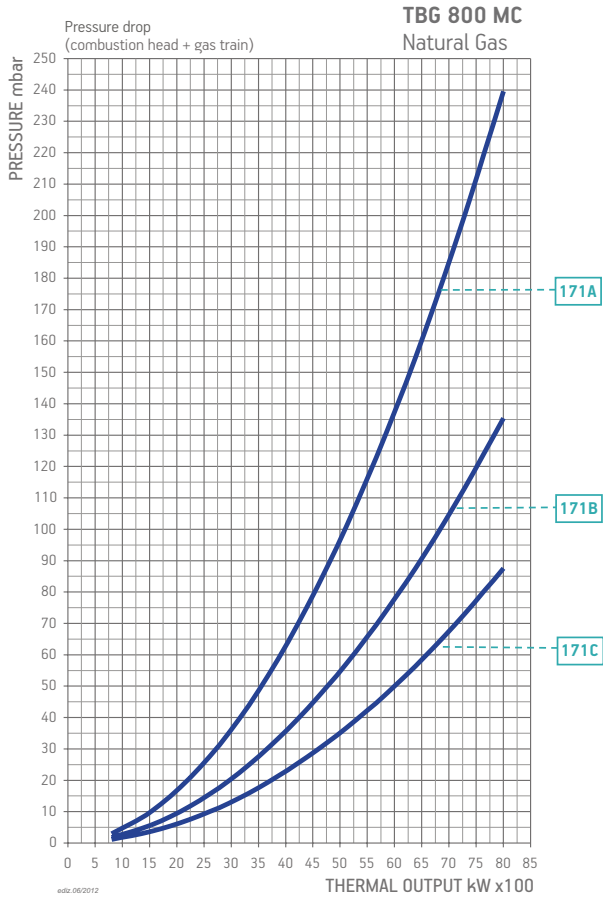
DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980058

GAS BURNERS ACCESSORIES

Boiler coupling kit.

BURNER/GAS TRAIN MATCH

GAS



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 800 MC	Natural gas	171A	CE/EXP	500	CTV	19990600	Included	-	Included	D8	
		171B	CE/EXP	500	CTV	19990601	Included	-	Included	D8	
		171C	CE/EXP	500	CTV	19990602	Included	-	Included	D8	
TBG 800 ME/ME V TBG 800 ME V O2 TBG 800 ME V CO	Natural gas	119A	CE/EXP	500	CTV	19990542	Included	-	Included	D4	
		119B	CE/EXP	500	CTV	19990543	Included	-	Included	D4	
		119C	CE/EXP	500	CTV	19990544	Included	-	Included	D4	
TBG 1100 MC	Natural gas	150A	CE/EXP	500	CTV	19990601	Included	-	Included	D8	
		150B	CE/EXP	500	CTV	19990602	Included	-	Included	D8	
TBG 1100 ME TBG 1100 ME V TBG 1100 ME V O2 TBG 1100 ME V CO	Natural gas	154A	CE/EXP	500	CTV	19990543	Included	-	Included	D4	
		154B	CE/EXP	500	CTV	19990544	Included	-	Included	D4	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

CTV Gas train with Valve Tightness Control.

** Maximum gas inlet pressure at pressure regulator.



Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Fixed boiler coupling flange.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.

Residual oxygen (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

Gas train outlet:

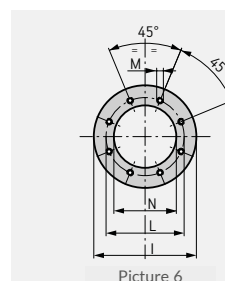
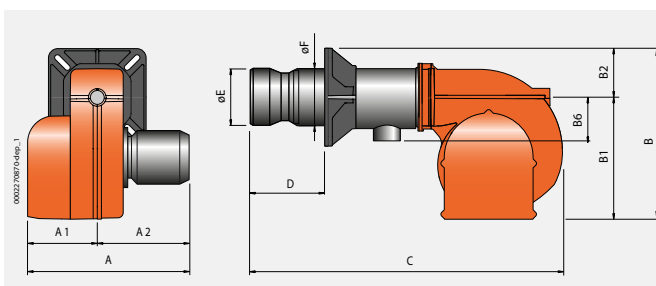
Flame detection by ionisation electrode with connector for microamperometer.

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.

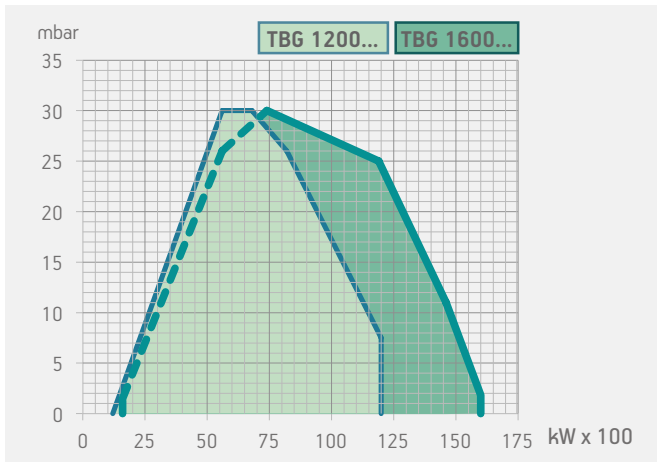
Electric protection rating:

	TBG 1200 MC	TBG 1200 ME	TBG 1200 ME V	TBG 1200 ME V O2	TBG 1200 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:	1:10	1:10	1:10	1:10	1:10
Low NOx and CO emissions gas burner according to European standard EN676:	class 3	class 3	class 3	class 3	class 3
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•	•
Fixed boiler coupling flange.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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:	IP54	IP54	IP54	IP54	IP54



Flange dimensions and boiler drilling template.

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 1200 MC	1470	700	770	1130	780	350	360	2290	745	485	503	685	630	M20	515	6
TBG 1200 ME	1470	700	770	1130	780	350	360	2290	745	485	503	685	630	M20	515	6
TBG 1200 ME V	1470	700	770	1130	780	350	360	2290	745	485	503	685	630	M20	515	6
TBG 1200 ME V O2	1470	700	770	1130	780	350	360	2290	745	485	503	685	630	M20	515	6
TBG 1200 ME V CO	1470	700	770	1130	780	350	360	2290	745	485	503	685	630	M20	515	6



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 1200 MC	1950	1680	1280	650
TBG 1200 ME	1950	1680	1280	650
TBG 1200 ME V	1950	1680	1280	665
TBG 1200 ME V O2	1950	1680	1280	677
TBG 1200 ME V CO	1950	1680	1280	689

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
NEW				class 3	1200 ÷ 12000	TBG 1200 MC	67270020	3N AC 50Hz 400V	22	4)
NEW				class 3	1200 ÷ 12000	TBG 1200 ME	67260010	3N AC 50Hz 400V	22	4)
NEW	•			class 3	1200 ÷ 12000	TBG 1200 ME V	67260015	3N AC 50Hz 400V	22	4) 10)
NEW	•	•		class 3	1200 ÷ 12000	TBG 1200 ME V O2	67260016	3N AC 50Hz 400V	22	4) 10)
NEW	•	•	•	class 3	1200 ÷ 12000	TBG 1200 ME V CO	67260017	3N AC 50Hz 400V	22	4) 10)
Frequency 60 Hz										
NEW				class 3	1200 ÷ 12000	TBG 1200 MC	67275420	3N AC 60Hz 380V	30	4)
NEW				class 3	1200 ÷ 12000	TBG 1200 ME	67265410	3N AC 60Hz 380V	30	4)
NEW	•			class 3	1200 ÷ 12000	TBG 1200 ME V	on request	3N AC 60Hz 380V	30	4) 10)
NEW	•	•		class 3	1200 ÷ 12000	TBG 1200 ME V O2	on request	3N AC 60Hz 380V	30	4) 10)
NEW	•	•	•	class 3	1200 ÷ 12000	TBG 1200 ME V CO	on request	3N AC 60Hz 380V	30	4) 10)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 1200 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 1200 MC: modulation kit	98000055
TBG 1200 ME: modulation kit	98000059
TBG 1200 MC/1200 ME: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980061

GAS BURNERS ACCESSORIES

Boiler coupling kit.

NOTES

- 4 Equipped with air closure device.
 - 10 Inverter supplied separately, not included on the machine.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 For different type of gas and pressure values, please get in contact with our commercial department.



Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Fixed boiler coupling flange.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

Adjustment of fan revolutions according to working stage by means of a frequency converter in order to reduce noise and electric consumption.

Residual oxygen (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

Gas train outlet:

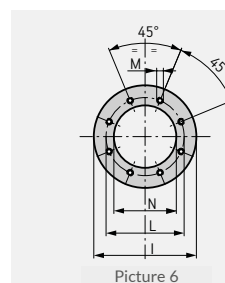
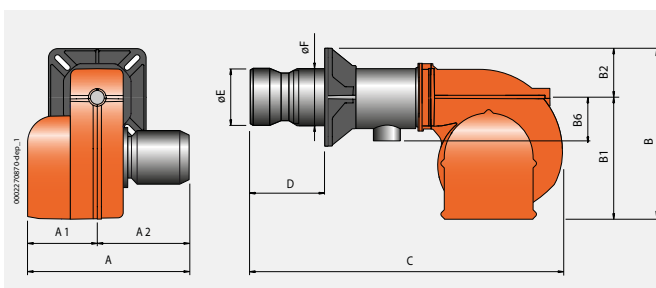
Flame detection by ionisation electrode with connector for microamperometer.

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.

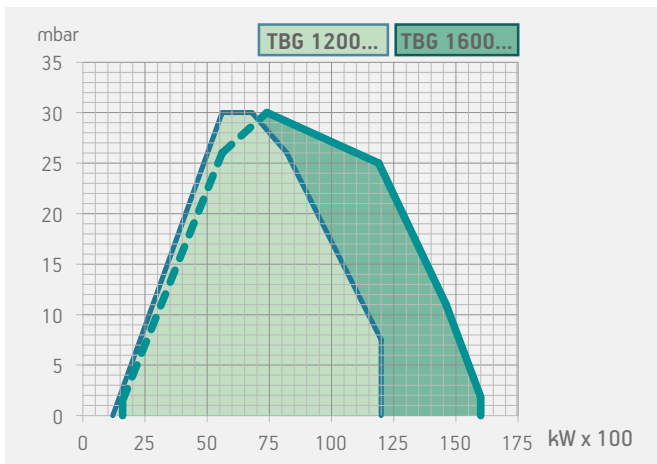
Electric protection rating:

	TBG 1600 MC	TBG 1600 ME	TBG 1600 ME V	TBG 1600 ME V O2	TBG 1600 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:	1:10	1:10	1:10	1:10	1:10
Low NOx and CO emissions gas burner according to European standard EN676:	class 2	class 2	class 2	class 2	class 2
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•	•
Fixed boiler coupling flange.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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:	IP54	IP54	IP54	IP54	IP54



Flange dimensions and boiler drilling template.

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 1600 MC	1470	700	770	1130	780	350	360	2290	735	545	503	685	630	M20	555	6
TBG 1600 ME	1470	700	770	1130	780	350	360	2290	735	545	503	685	630	M20	555	6
TBG 1600 ME V	1470	700	770	1130	780	350	360	2290	735	545	503	685	630	M20	555	6
TBG 1600 ME V O2	1470	700	770	1130	780	350	360	2290	735	545	503	685	630	M20	555	6
TBG 1600 ME V CO	1470	700	770	1130	780	350	360	2290	735	545	503	685	630	M20	555	6



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 1600 MC	1950	1680	1280	704
TBG 1600 ME	1950	1680	1280	704
TBG 1600 ME V	1950	1680	1280	730
TBG 1600 ME V O2	1950	1680	1280	742
TBG 1600 ME V CO	1950	1680	1280	754

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
				class 2	1600 ÷ 16000	TBG 1600 MC	67490020	3N AC 50Hz 400V	30	4)
				class 2	1600 ÷ 16000	TBG 1600 ME	67480010	3N AC 50Hz 400V	30	4)
NEW	•			class 2	1600 ÷ 16000	TBG 1600 ME V	67480015	3N AC 50Hz 400V	30	4) 10)
NEW	•	•		class 2	1600 ÷ 16000	TBG 1600 ME V O2	67480016	3N AC 50Hz 400V	30	4) 10)
NEW	•	•	•	class 2	1600 ÷ 16000	TBG 1600 ME V CO	67480017	3N AC 50Hz 400V	30	4) 10)
Frequency 60 Hz										
				class 2	1600 ÷ 16000	TBG 1600 MC	67495420	3N AC 50Hz 400V	30	4)
				class 2	1600 ÷ 16000	TBG 1600 ME	67485410	3N AC 50Hz 400V	30	4)
NEW	•			class 2	1600 ÷ 16000	TBG 1600 ME V	on request	3N AC 50Hz 400V	30	4) 10)
NEW	•	•		class 2	1600 ÷ 16000	TBG 1600 ME V O2	on request	3N AC 50Hz 400V	30	4) 10)
NEW	•	•	•	class 2	1600 ÷ 16000	TBG 1600 ME V CO	on request	3N AC 50Hz 400V	30	4) 10)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 1600 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 1600 MC: modulation kit	98000055
TBG 1600 ME: modulation kit	98000059
TBG 1600 MC/1600 ME: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980061

GAS BURNERS ACCESSORIES

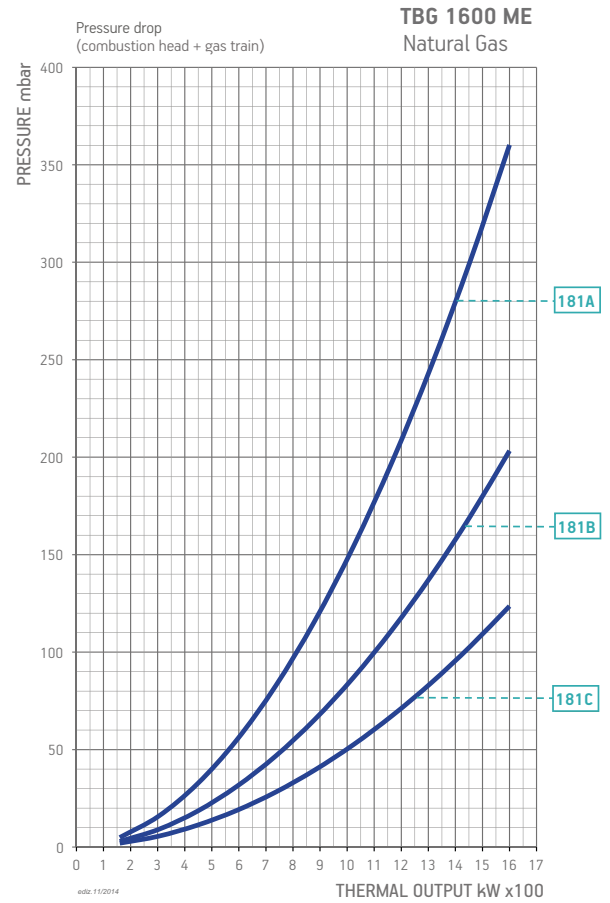
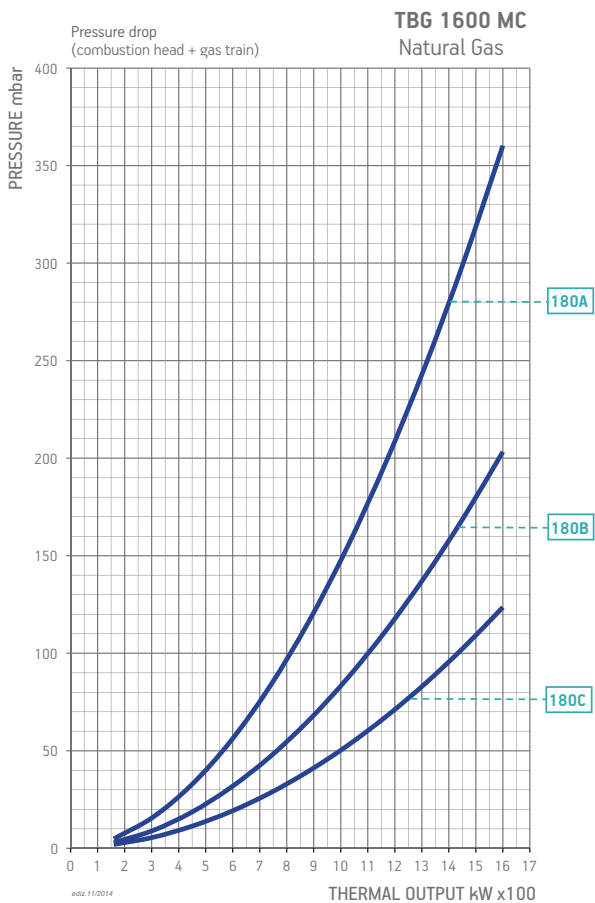
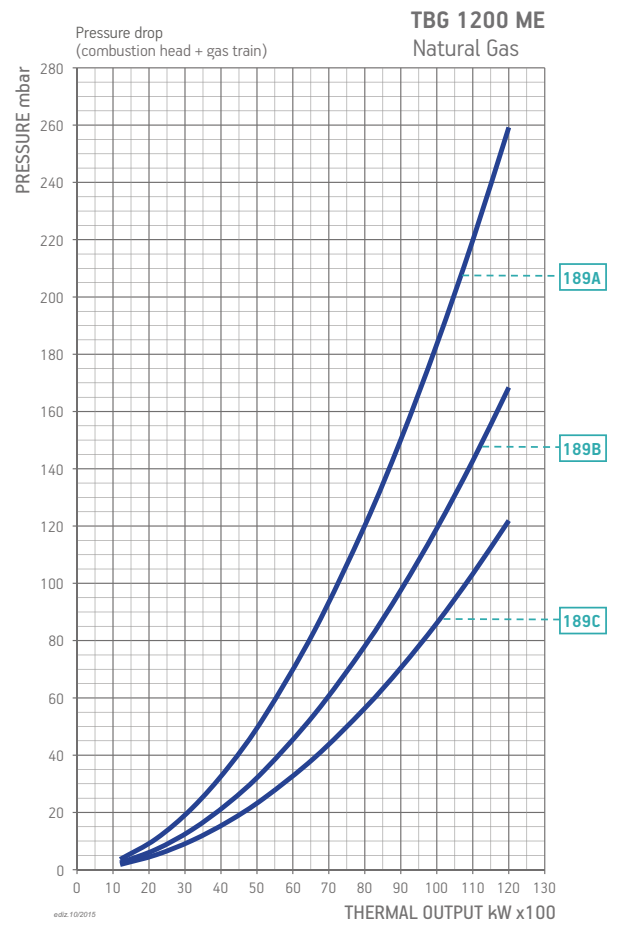
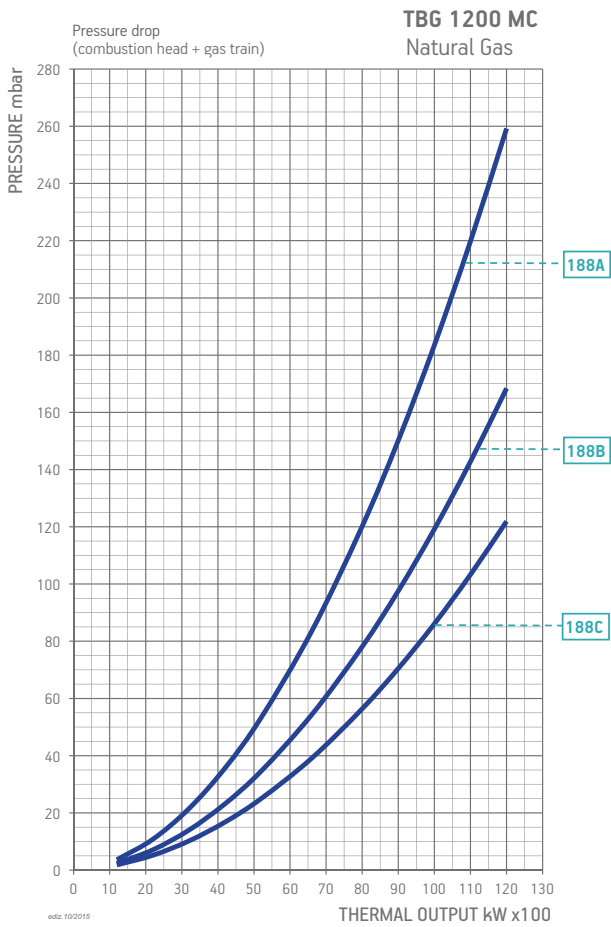
Boiler coupling kit.

NOTES

- 4 Equipped with air closure device.
 - 10 Inverter supplied separately, not included on the machine.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH

GAS



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 **	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 1200 MC	Natural gas	188A	CE/EXP	500	CTV	19990615	Included	-	Included	D8	
		188B	CE/EXP	500	CTV	19990616	Included	-	Included	D8	
		188C	CE/EXP	500	CTV	19990617	Included	-	Included	D8	
TBG 1200 ME/ME V	Natural gas	189A	CE/EXP	500	CTV	19990606	Included	-	Included	D4	
TBG 1200 ME V O2		189B	CE/EXP	500	CTV	19990607	Included	-	Included	D4	
TBG 1200 ME V CO		189C	CE/EXP	500	CTV	19990608	Included	-	Included	D4	
TBG 1600 MC	Natural gas	180A	CE/EXP	500	CTV	19990615	Included	-	Included	D8	
		180B	CE/EXP	500	CTV	19990616	Included	-	Included	D8	
		180C	CE/EXP	500	CTV	19990617	Included	-	Included	D8	
TBG 1600 ME/ME V	Natural gas	181A	CE/EXP	500	CTV	19990606	Included	-	Included	D4	
TBG 1600 ME V O2		181B	CE/EXP	500	CTV	19990607	Included	-	Included	D4	
TBG 1600 ME V CO		181C	CE/EXP	500	CTV	19990608	Included	-	Included	D4	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



Gas burner compliant with European standard EN676. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Low NOx and CO emissions gas burner according to European standard EN676:

Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.

Fixed boiler coupling flange.

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:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

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 (O₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.

Residual oxygen (O₂) and carbon monoxide (CO) and monitoring of oxidizing components (H₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.

Fail proof connectors for burner/gas train connection.

Gas train outlet:

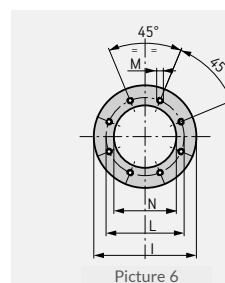
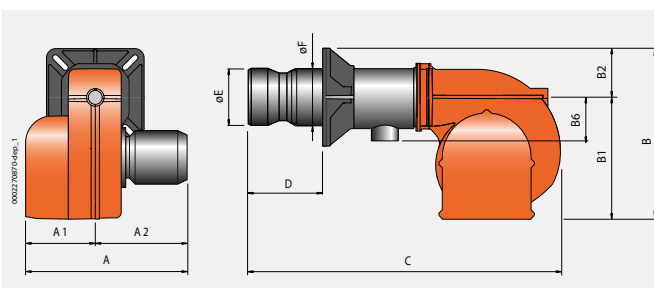
Flame detection by ionisation electrode with connector for microamperometer.

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.

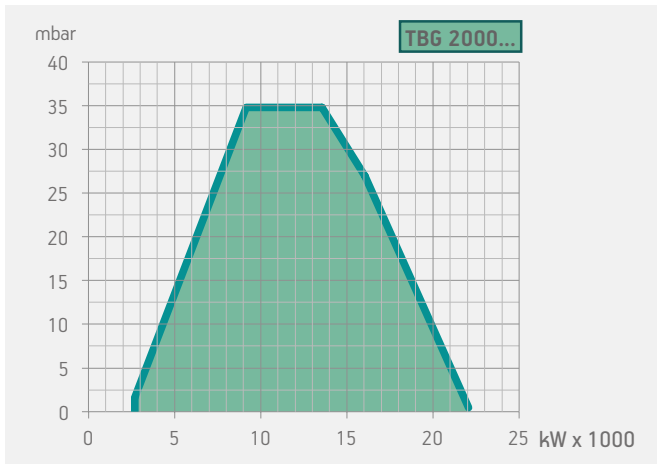
Electric protection rating:

	TBG 2000 MC	TBG 2000 ME	TBG 2000 ME V	TBG 2000 ME V O2	TBG 2000 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:	1:8	1:8	1:8	1:8	1:8
Low NOx and CO emissions gas burner according to European standard EN676:	class 2	class 2	class 2	class 2	class 2
Maintenance facilitated by the possibility of removing the mixing unit without having to remove the burner from the boiler.	•	•	•	•	•
Fixed boiler coupling flange.	•	•	•	•	•
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.	•	•	•	•	•
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 ₂) monitoring in the fumes in order to maintain an optimal air/fuel ratio and ensure increased performance.				•	
Residual oxygen (O ₂) and carbon monoxide (CO) and monitoring of oxidizing components (H ₂) 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, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•	•	•
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:	IP54	IP54	IP54	IP54	IP54



Flange dimensions and boiler drilling template.

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 2000 MC	1860	915	945	1270	870	400	440	2340	700	600	630	790	730	M20	640	6
TBG 2000 ME	1860	915	945	1270	870	400	440	2340	700	600	630	790	730	M20	640	6
TBG 2000 ME V	1860	915	945	1270	870	400	440	2340	700	600	630	790	730	M20	640	6
TBG 2000 ME V O2	1860	915	945	1270	870	400	440	2340	700	600	630	790	730	M20	640	6
TBG 2000 ME V CO	1860	915	945	1270	870	400	440	2340	700	600	630	790	730	M20	640	6



Model	Size of packaging			Weight kg
	L	P mm	H	
TBG 2000 MC	2100	2040	1380	1150
TBG 2000 ME	2100	2040	1380	1150
TBG 2000 ME V	2100	2040	1380	1176
TBG 2000 ME V O2	2100	2040	1380	1188
TBG 2000 ME V CO	2100	2040	1380	1200

		O ₂	CO	Emissions class	Thermal output kW	Model	Part no.	Electrical supply kW	Motor	Note
Frequency 50 Hz										
NEW				class 2	2700 ÷ 22000	TBG 2000 MC	67510010	3N AC 50Hz 400V	45	4)
NEW				class 2	2700 ÷ 22000	TBG 2000 ME	67500010	3N AC 50Hz 400V	45	4)
NEW	•			class 2	2700 ÷ 22000	TBG 2000 ME V	67500015	3N AC 50Hz 400V	45	4) 10)
NEW	•	•		class 2	2700 ÷ 22000	TBG 2000 ME V O2	67500016	3N AC 50Hz 400V	45	4) 10)
NEW	•	•	•	class 2	2700 ÷ 22000	TBG 2000 ME V CO	67500017	3N AC 50Hz 400V	45	4) 10)
Frequency 60 Hz										
NEW				class 2	2700 ÷ 22000	TBG 2000 MC	67515410	3N AC 60Hz 380V	45	4)
NEW				class 2	2700 ÷ 22000	TBG 2000 ME	67505410	3N AC 60Hz 380V	45	4)
NEW	•			class 2	2700 ÷ 22000	TBG 2000 ME V	on request	3N AC 60Hz 380V	45	4) 10)
NEW	•	•		class 2	2700 ÷ 22000	TBG 2000 ME V O2	on request	3N AC 60Hz 380V	45	4) 10)
NEW	•	•	•	class 2	2700 ÷ 22000	TBG 2000 ME V CO	on request	3N AC 60Hz 380V	45	4) 10)

TO COMPLETE THE BURNER

DESCRIPTION
TBG 2000 ME V: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBG 2000 MC: modulation kit	98000055
TBG 2000 ME: modulation kit	98000059
TBG 2000 MC/2000 ME: modulating probe kit (see page 288)	

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980063

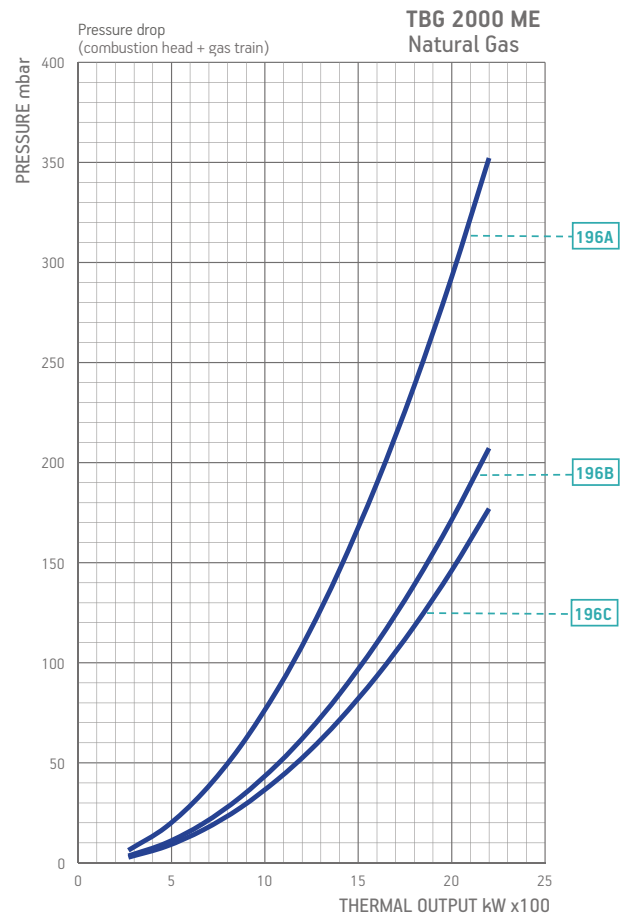
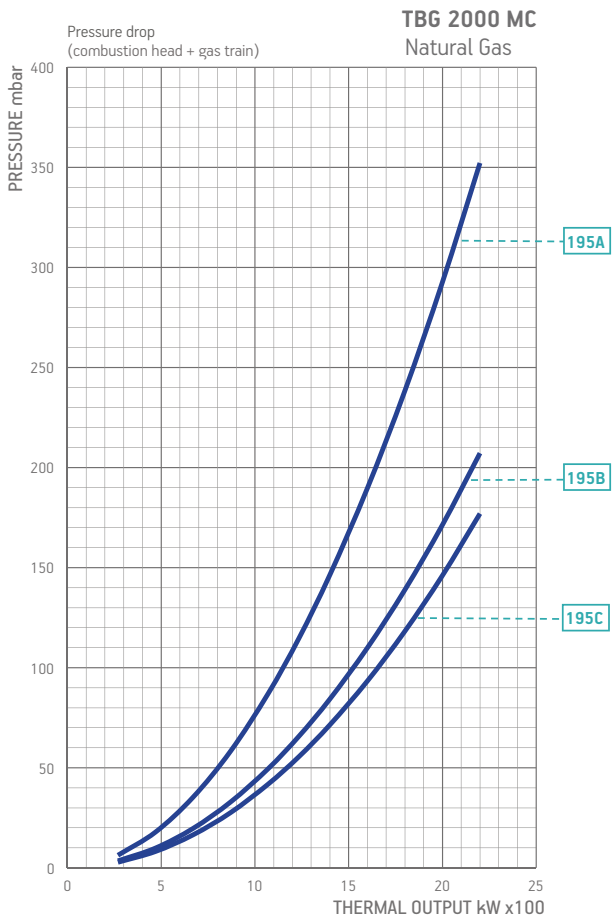
GAS BURNERS ACCESSORIES

Boiler coupling kit.

NOTES

- 4 Equipped with air closure device.
 - 10 Inverter supplied separately, not included on the machine.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 For different type of gas and pressure values, please get in contact with our commercial department.

BURNER/GAS TRAIN MATCH



BURNER/GAS TRAIN MATCH

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 2000 MC	Natural gas	195A	CE/EXP	500	CTV	19990616	Included	-	Included	D8	
		195B	CE/EXP	500	CTV	19990617	Included	-	Included	D8	
		195C	CE/EXP	500	CTV	19990627	Included	-	Included	D8	
TBG 2000 ME/ME V	Natural gas	196A	CE/EXP	500	CTV	19990607	Included	-	Included	D4	
TBG 2000 ME V O2		196B	CE/EXP	500	CTV	19990608	Included	-	Included	D4	
TBG 2000 ME V CO		196C	CE/EXP	500	CTV	19990626	Included	-	Included	D4	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.

Dual fuel burners series

RANGE

Simbology

**MINICOMIST...
COMIST 20**

Single-stage gas/light oil burners. Dual operating mode.

COMIST 26 SP

Two-stage pressure drop gas/light oil burners. Dual operating mode.

TBML...P

Two-stage gas/light oil burners. Dual operating mode.

TBML...MC

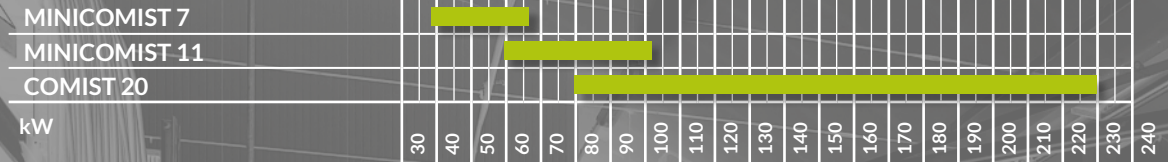
Two-stage progressive / modulating gas/light oil burners with mechanical cam on gas, two-stage on light oil. Dual operation mode.

**COMIST...DSPGM
GI MIST...DSPGM**

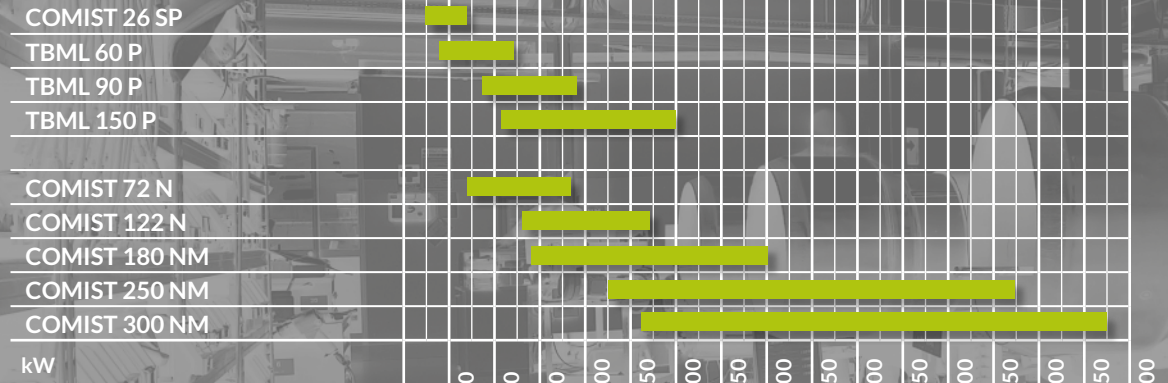
Two-stage progressive/modulating gas/light oil burners with mechanical cam. Dual operation mode.

Low NOx

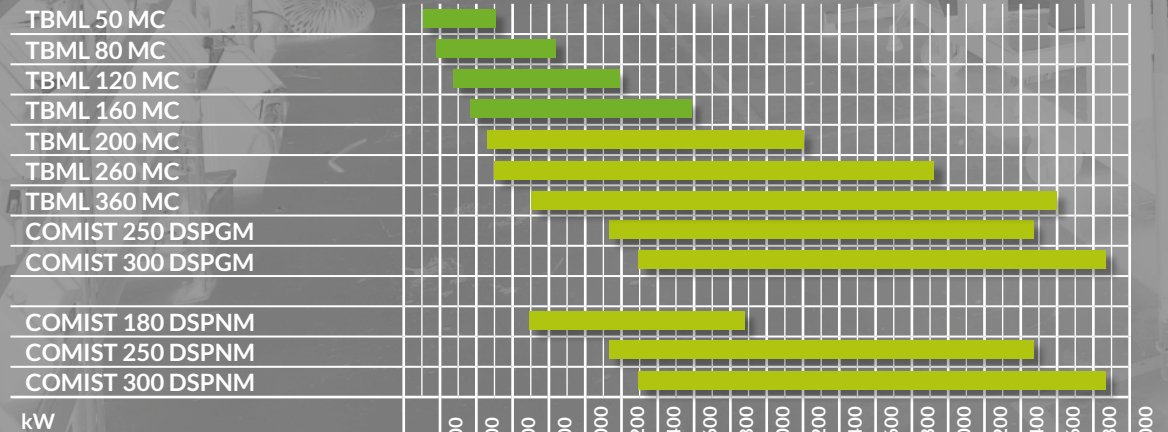
SINGLE-STAGE DUAL FUEL BURNERS



TWO-STAGE DUAL FUEL BURNERS



TWO-STAGE PROGRESSIVE DUAL FUEL BURNERS



TBML 50/80 ME
TBML 120/160 ME
TBML 200/260 ME
TBML 360 ME
 Modulating gas/light oil burners with electronic modulation on gas, two-stage on light oil.
 Dual operation mode.

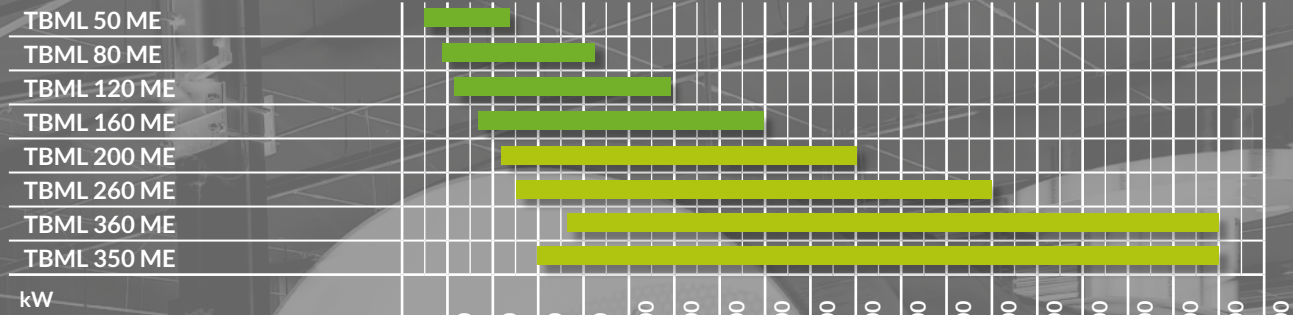
TBML 350/600/800 ME
 Modulating gas/light oil burners with electronic modulation.
 Dual operation mode.

COMIST...N
COMIST...NM
 Two-stage gas/heavy oil burners.
 Dual operation mode.

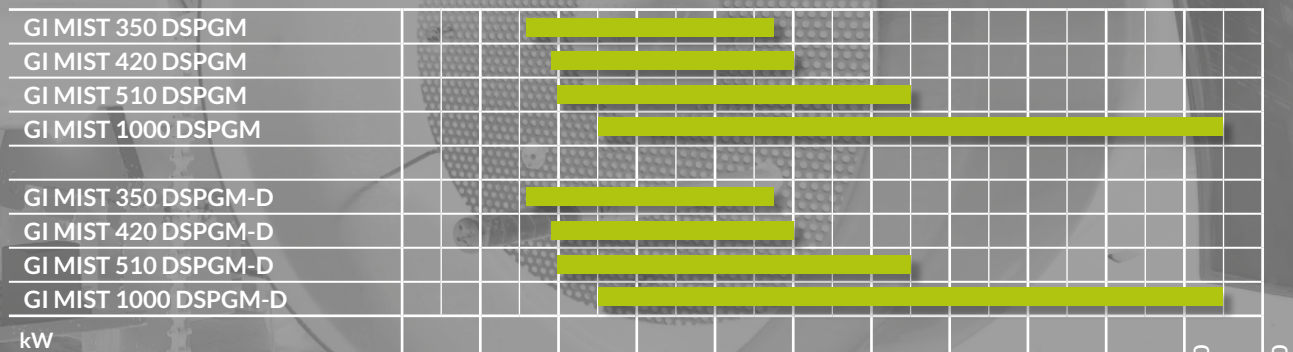
COMIST...DSPNM
 Two-stage progressive/modulating gas/heavy oil burners with mechanical cam.
 Dual operating mode.

GI MIST...DSPNM-D
 Two-stage progressive/modulating gas/extra heavy oil burners with mechanical cam.
 Dual operating mode.

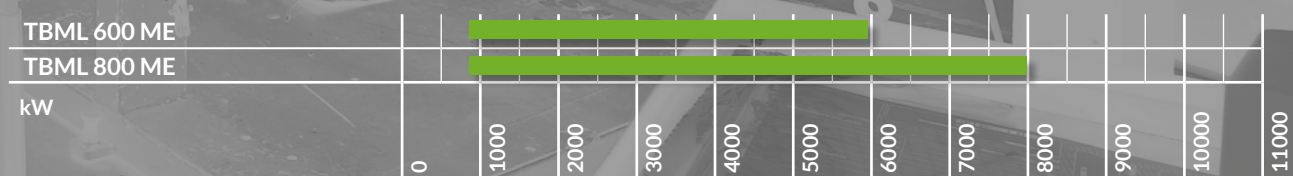
MODULATING DUAL FUEL BURNERS



TWO-STAGE PROGRESSIVE DUAL FUEL INDUSTRIAL BURNERS

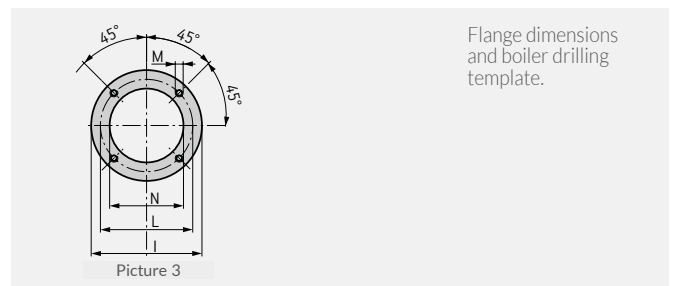
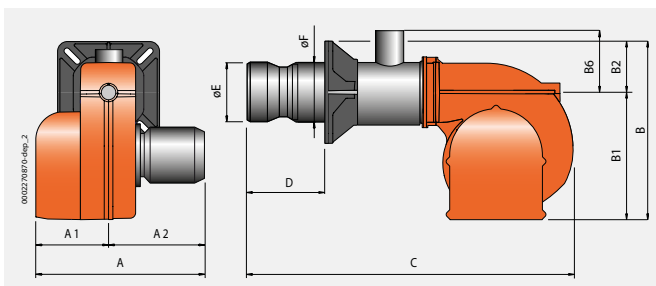


MODULATING DUAL FUEL INDUSTRIAL BURNERS

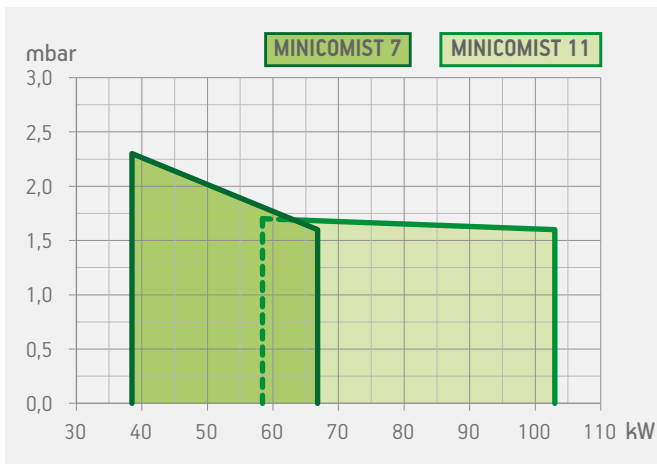




	MINICOMIST 7	MINICOMIST 11
Alternating natural gas/light oil burner according to european regulation EN676 and EN267.	single-stage	single-stage
Operation:		
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	manual
CE version gas train is complete with operation and safety valve with electromagnetic drive, 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:	up	up
Electric motor for pump drive.	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell.	•	•
Electric protection rating:	IP40	IP40



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.
MINICOMIST 7	575	300	275	290	205	85	80	510	40 ÷ 156	95	95	170	130 ÷ 155	M8	115	3
MINICOMIST 11	575	300	275	290	205	85	80	510	40 ÷ 156	95	95	170	130 ÷ 155	M8	115	3



Model	Size of packaging			Weight kg
	L	P mm	H	
MINICOMIST 7	1070	650	600	45
MINICOMIST 11	1070	650	600	45

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
Frequency 50 Hz							
	38,5 ÷ 66,8	MINICOMIST 7	54700010	1,5	1N AC 50Hz 230V 0,14+0,10		
	58,4 ÷ 103,0	MINICOMIST 11	54730010	1,5	1N AC 50Hz 230V 0,14+0,10		
Frequency 60 Hz							
	38,5 ÷ 66,8	MINICOMIST 7	54700010	1,5	1N AC 60Hz 220V 0,14+0,10		
	58,4 ÷ 103,0	MINICOMIST 11	54730010	1,5	1N AC 60Hz 220V 0,14+0,10		

OPTIONALS

DESCRIPTION

300 mm long combustion head.

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit.

NOTES

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

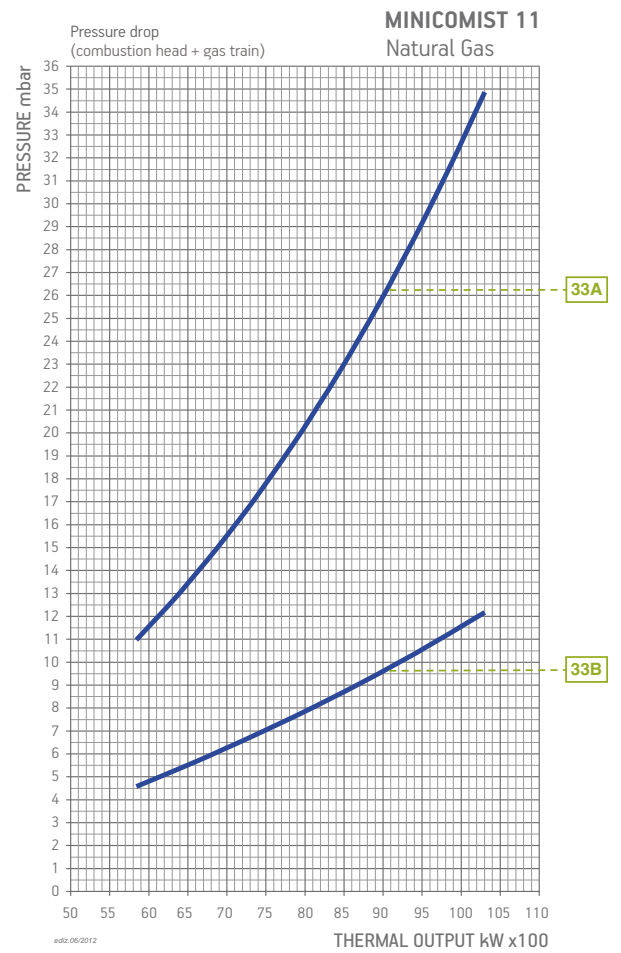
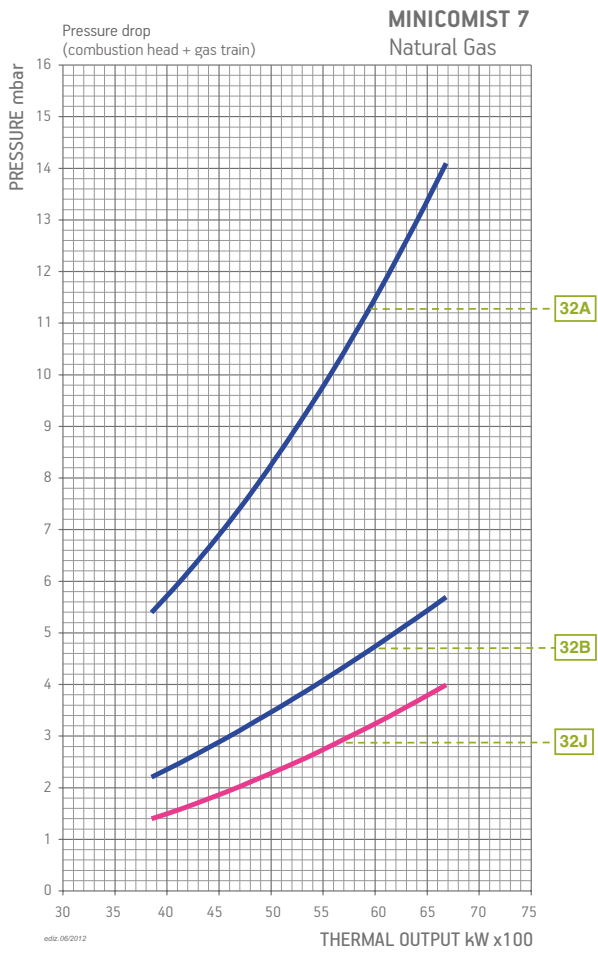
Natural gas: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$,

LPG: $H_i = 92 \text{ MJ/m}^3 = 22000 \text{ kcal/m}^3$.

Light Oil: $H_i = 42,70 \text{ MJ/kg} = 10200 \text{ kcal/kg}$.

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

BURNER/GAS TRAIN MATCH



DUAL FUEL
GAS/LIGHT OIL

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.		
MINICOMIST 7	Natural gas	32A	CE/EXP	65	CTV	19990466	Included	96000001	-	M2	
		32B	CE/EXP	360		19990002	Included	-	-	M2	
						19990002	Included	-	98000101	M2	12)
		32J	EXP	40		19990235	-	-	-	ME1	
MINICOMIST 11	Natural gas	33A	CE/EXP	65	CTV	19990466	Included	96000001	-	M2	
		33B	CE/EXP	360		19990002	Included	-	-	M2	
						19990002	Included	-	98000101	M2	12)

Burner model	Gas type	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.		
MINICOMIST 7	LGP	CE	65	CTV	19990466	Included	96000001	-	M2	
		EXP	40		19990235	-	-	-	ME1	
MINICOMIST 11	LGP	CE/EXP	65	CTV	19990466	Included	96000001	-	M2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



COMIST 20



COMIST 26 SP

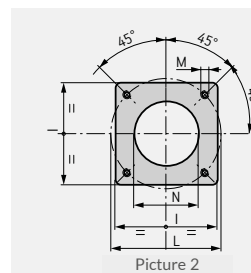
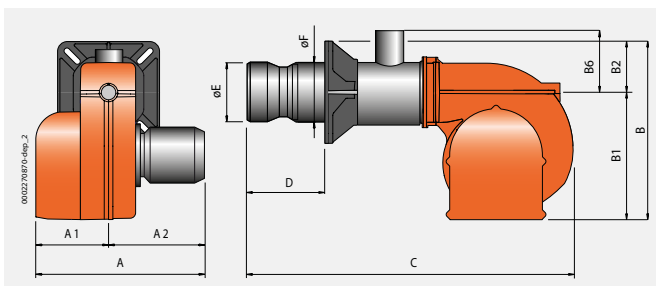
COMIST 20

COMIST 26 SP

Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:

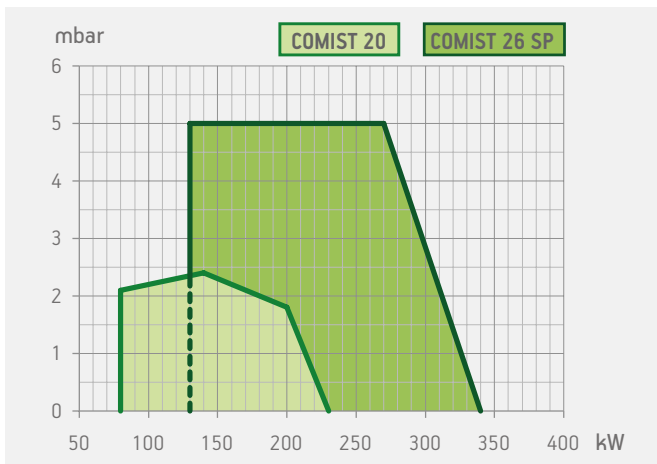
	single-stage	pressure jump two-stage
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	manual	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.		•
CE version gas train is complete with operation and safety valve with electromagnetic drive, 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:	up	up
Electric motor for pump drive.	•	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell.	•	•
Electric protection rating:	IP40	IP40

DUAL FUEL
GAS/LIGHT OIL



Flange dimensions and boiler drilling template.

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.
COMIST 20	620	330	290	365	270	95	127	820	120 ÷ 290	117	114	185	170 ÷ 210	M10	120	2
COMIST 26 SP	620	330	290	365	270	95	127	800	120 ÷ 290	135	114	185	170 ÷ 210	M10	140	2



Model	Size of packaging			Weight kg
	L	P mm	H	
COMIST 20	1080	770	700	61
COMIST 26 SP	1080	770	700	62

Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
Frequency 50 Hz						
80 ÷ 230	COMIST 20	54770010	1,5	1N AC 50Hz 230V	0,25+0,10	
130 ÷ 340	COMIST 26 SP	54800010	1,5	1N AC 50Hz 230V	0,37+0,10	4)
Frequency 60 Hz						
80 ÷ 230	COMIST 20	54775410	1,5	1N AC 60Hz 220V	0,25+0,10	
130 ÷ 340	COMIST 26 SP	54805410	1,5	1N AC 60Hz 220V	0,37+0,10	4)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
Soundproof burner cover (see page 293)	97980054

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, nozzle, boiler coupling kit, plug for wiring.

NOTES

4 Equipped with air closure device.

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

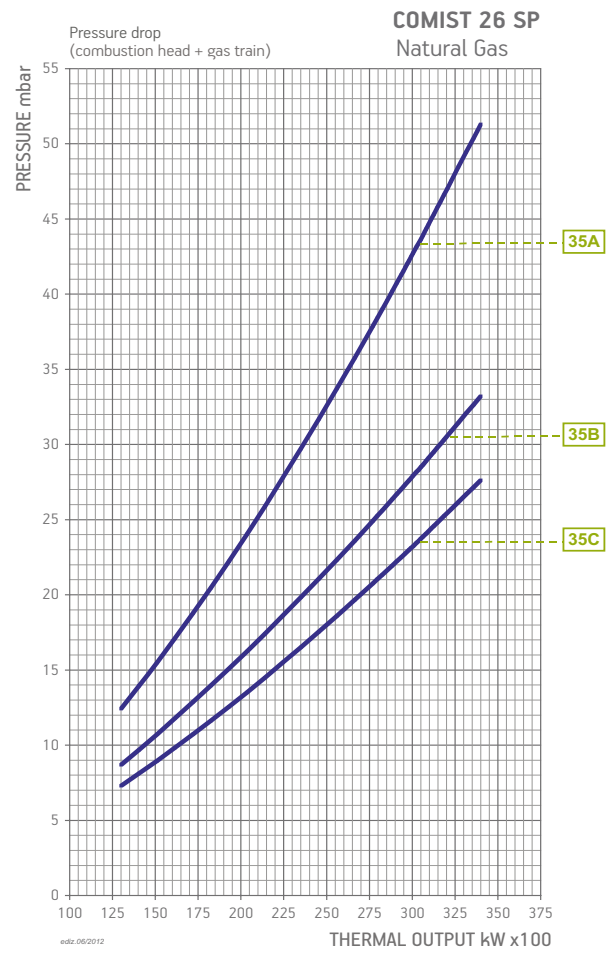
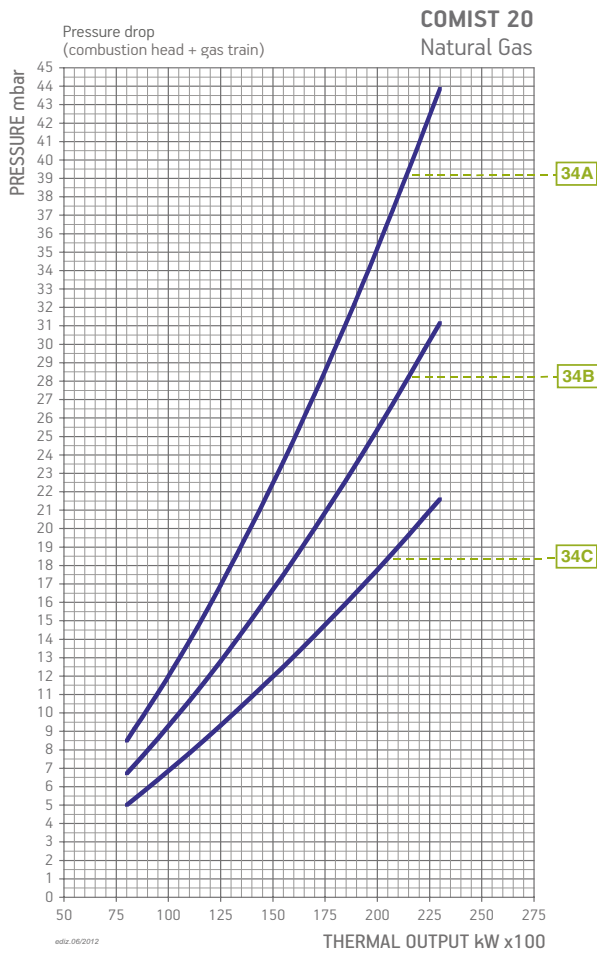
Natural gas: $Hi = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$,

LPG: $Hi = 92 \text{ MJ/m}^3 = 22000 \text{ kcal/m}^3$.

Light Oil: $Hi = 42,70 \text{ MJ/kg} = 10200 \text{ kcal/kg}$.

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

BURNER/GAS TRAIN MATCH



DUAL FUEL
GAS/LIGHT OIL

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.		
COMIST 20	Natural gas	34A	CE/EXP	360	CTV	19990002	Included	96000003	-	M2	
						19990002	Included	96000003	98000101	M2	12)
		34B	CE/EXP	360	CTV	19990005	Included	96000003	-	M2	
						19990005	Included	96000003	98000101	M2	12)
34C	CE/EXP	360	CTV	19990008	Included	-	-	M2			
				19990008	Included	-	98000101	M2	12)		
COMIST 26 SP	Natural gas	35A	CE/EXP	360	CTV	19990020	Included	96000003	-	B2	
						19990020	Included	96000003	98000101	B2	12)
		35B	CE/EXP	360	CTV	19990024	Included	-	-	B2	
						19990024	Included	-	98000101	B2	12)
35C	CE/EXP	360	CTV	19990168	Included	-	-	B2			
				19990168	Included	-	98000101	B2	12)		

Burner model	Gas type	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.		
COMIST 20	LGP	CE/EXP	360	CTV	19990002	Included	96000003	-	M2	
					19990002	Included	96000003	98000101	M2	12)
COMIST 26 SP	LGP	CE/EXP	360	CTV	19990020	Included	96000003	-	B2	
					19990020	Included	96000003	98000101	B2	12)

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



TBML 50 MC



TBML 50 ME



TBML 60 P

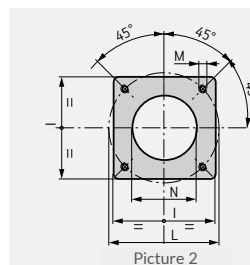
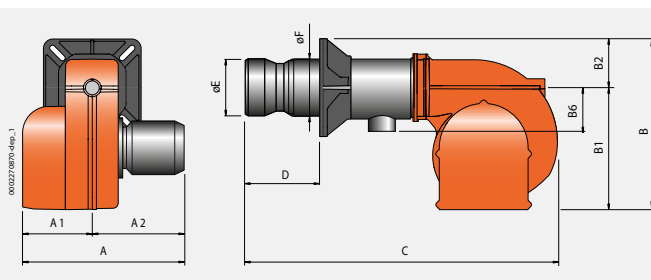
TBML 50 MC	TBML 50 ME	TBML 60 P
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Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:

Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil.

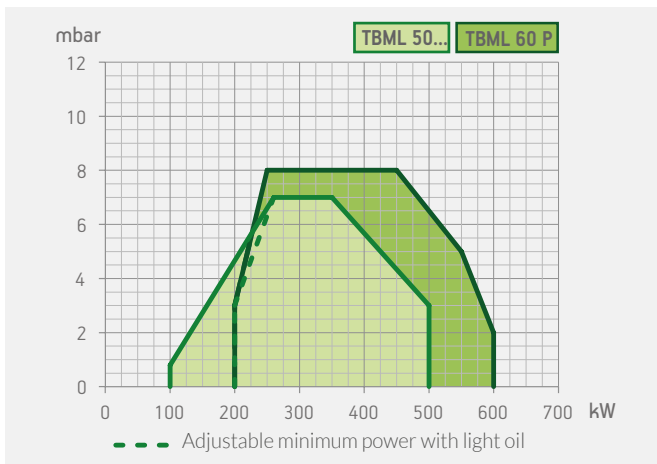
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil.

	TBML 50 MC	TBML 50 ME	TBML 60 P
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•		
Modulation ratio:	1:5	1:5	
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2	class 2
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head 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.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	electric servomotor	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
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	down	down
Electric motor for pump drive.			•
Pump connected to fan motor through electromagnetic clutch.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	•
Fuel switch device:	manual	manual	manual
Flame detection by UV photocell.	•	•	•
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:	IP40	IP40	IP40



Flange dimensions and boiler drilling template.

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.
TBML 50 MC	770	400	370	455	325	130	160	1020	170 ÷ 340	156	152	260	225 ÷ 300	M12	160	2
TBML 50 ME	640	270	370	455	325	130	160	1020	170 ÷ 340	156	152	260	225 ÷ 300	M12	160	2
TBML 60 P	680	400	280	455	325	130	160	980	140 ÷ 350	150	152	260	225 ÷ 300	M12	160	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBML 50 MC	1130	900	540	57
TBML 50 ME	1130	900	540	57
TBML 60 P	1070	800	610	49

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
Frequency 50 Hz								
	see page 230	100(200)* ÷ 500	TBML 50 MC	56450010	1,5	3N AC 50Hz 400V	0,65	4)
	see page 230	100(200)* ÷ 500	TBML 50 ME	56460010	1,5	3N AC 50Hz 400V	0,65	4)
	class 2	200÷600	TBML 60 P	56470010	1,5	3N AC 50Hz 400V	0,65+0,10	4)
Frequency 60 Hz								
	see page 230	100(200)* ÷ 500	TBML 50 MC	56455410	1,5	3N AC 60Hz 380V	0,65	4)
	see page 230	100(200)* ÷ 500	TBML 50 ME	56465410	1,5	3N AC 60Hz 380V	0,65	4)
	class 2	200÷600	TBML 60 P	56475410	1,5	3N AC 60Hz 380V	0,65+0,10	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 50 ME: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 50 MC: modulation kit	98000057
TBML 50 MC: modulating probe kit (see page 288)	

NOTES

- 4 Equipped with air closure device.
- *) Min thermal capacity with light oil operation.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
- For different type of gas and pressure values, please get in contact with our commercial department.

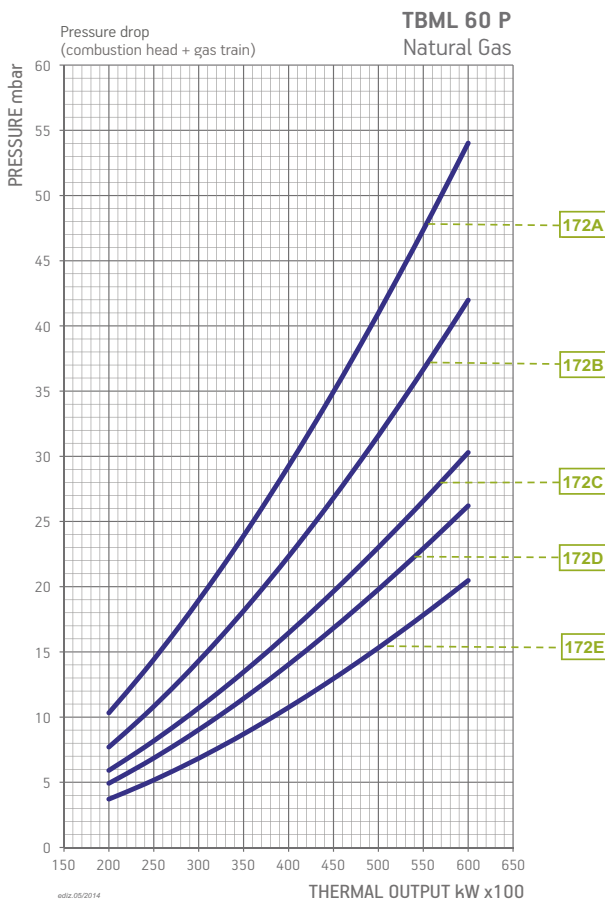
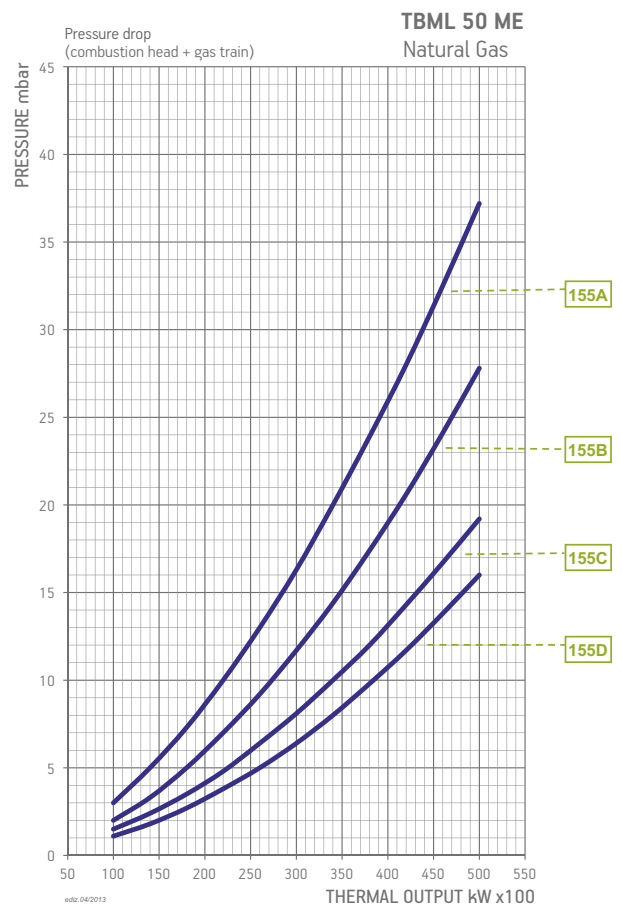
ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBML 60 P: line filter 3/8"	98000370
Soundproof burner cover (see page 293)	97980053

DUAL FUEL BURNERS ACCESSORIES

TBML 50 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
TBML 50 ME: line filter, flex hoses, nozzles, boiler couplin kit.
TBML 60 P: flex hoses, nozzles, boiler coupling kit, plug for wiring.

BURNER/GAS TRAIN MATCH



DUAL FUEL
GAS/LIGHT OIL

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.		
TBML 50 MC	Natural gas	149A	CE/EXP	360	CTV	19990580	Included	96000004	Included	D7	
		149B	CE/EXP	360	CTV	19990581	Included	96000004	Included	D7	
		149C	CE/EXP	360	CTV	19990582	Included	-	Included	D7	
		149D	CE/EXP	360	CTV	19990583	Included	96000013	Included	D7	
TBML 50 ME	Natural gas	155A	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2	
		155B	CE/EXP	360	CTV	19990557	Included	96000004	Included	D2	
		155C	CE/EXP	360	CTV	19990558	Included	-	Included	D2	
		155C	CE/EXP	360	CTV	19990559	Included	96000013	Included	D2	
TBML 60 P	Natural gas	172A	CE/EXP	360	CTV	19990546	Included	98000004	-	B7	
						19990546	Included	98000004	98000101	B7	12)
		172B	CE/EXP	360	CTV	19990547	Included	98000004	-	B7	
						19990547	Included	98000004	98000101	B7	12)
		172C	CE/EXP	360	CTV	19990548	Included	-	-	B7	
						19990548	Included	-	98000101	B7	12)
172D	CE/EXP	360	CTV	19990549	Included	96000013	-	B7			
				19990549	Included	96000013	98000101	B7	12)		
172E	CE/EXP	500	CTV	19990550	Included	96000013	-	B7			
					CTV	19990550	Included	96000013	98000102	B7	12)

Burner model	Gas type	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.		
TBML 50 MC	LPG	CE/EXP	360	CTV	19990580	Included	96000004	Included	D7	
TBML 50 ME	LPG	CE/EXP	360	CTV	19990556	Included	96000004	Included	D2	
TBML 60 P	LPG	CE/EXP	360	CTV	19990547	Included	98000004	-	B7	
					19990547	Included	98000004	98000101	B7	12)

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



TBML 80 MC



TBML 80 ME



TBML 90 P

TBML 80 MC	TBML 80 ME	TBML 90 P
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Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:

Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil.

Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil.

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Burner with Low NOx and CO emissions on gas according to European standard EN676:

Burner with Low NOx and CO emissions on light oil according to European standard EN267:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit and combustion head 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:

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.

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.

Fail proof connectors for burner/gas train connection.

Gas train outlet:

Pump connected to fan motor through electromagnetic clutch.

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve

Fuel switch device:

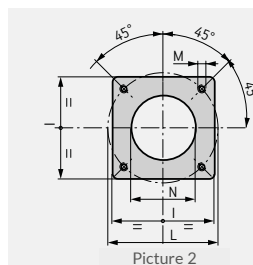
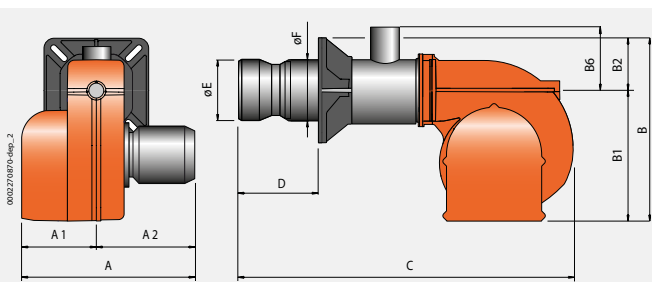
Flame detection by UV photocell.

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.

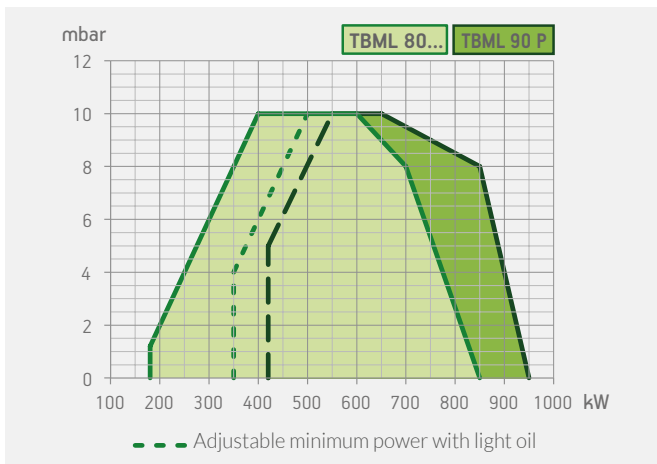
Electric protection rating:

	TBML 80 MC	TBML 80 ME	TBML 90 P
			two-stage
	mechanical two-stage progressive/two-stage		modulating electronic/two-stage
•	•	•	•
Modulation ratio:	1:4	1:4	
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2	class 2
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head 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	mechanical cam
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.	•	•	•
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.	•	•	•
Fail proof connectors for burner/gas train connection.	•	•	•
Gas train outlet:	up	up	up
Pump connected to fan motor through electromagnetic clutch.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve	•	•	•
Fuel switch device:	manual	manual	manual
Flame detection by UV photocell.	•	•	•
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:	IP40	IP40	IP40



Flange dimensions and boiler drilling template.

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.
TBML 80 MC	700	330	370	520	380	140	200	1230	270 ÷ 440	180	178	280	250 ÷ 325	M12	190	2
TBML 80 ME	700	330	370	520	380	140	200	1250	270 ÷ 440	180	178	280	250 ÷ 325	M12	190	2
TBML 90 P	700	330	370	520	380	140	200	1250	175 ÷ 400	180	178	280	250 ÷ 325	M12	190	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBML 80 MC	1070	800	700	84
TBML 80 ME	1070	800	700	81
TBML 90 P	1070	800	700	85

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
Frequency 50 Hz								
	see page 234	180(350)* ÷ 850	TBML 80 MC	56490010	1,5	3N AC 50Hz 400V	1,1	4)
	see page 234	180(350)* ÷ 850	TBML 80 ME	56500010	1,5	3N AC 50Hz 400V	1,1	4)
	class 2	420÷950	TBML 90 P	56510010	1,5	3N AC 50Hz 400V	1,1	4)
Frequency 60 Hz								
	see page 234	180(350)* ÷ 850	TBML 80 MC	56495410	1,5	3N AC 60Hz 380V	1,1	4)
	see page 234	180(350)* ÷ 850	TBML 80 ME	56505410	1,5	3N AC 60Hz 380V	1,1	4)
	class 2	420÷950	TBML 90 P	56515410	1,5	3N AC 60Hz 380V	1,1	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION
TBML 80 ME: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 80 MC: modulation kit	98000057
TBML 80 MC: modulating probe kit (see page 288)	

NOTES

4 Equipped with air closure device.

*) Min thermal capacity with light oil operation.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

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

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBML 90 P: line filter 3/8"	98000370
Soundproof burner cover (see page 293)	97980053

DUAL FUEL BURNERS ACCESSORIES

TBML 80 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
TBML 80 ME: line filter, flex hoses, nozzles, boiler coupling kit.
TBML 90 P: flex hoses, nozzles, boiler coupling kit, plug for wiring.



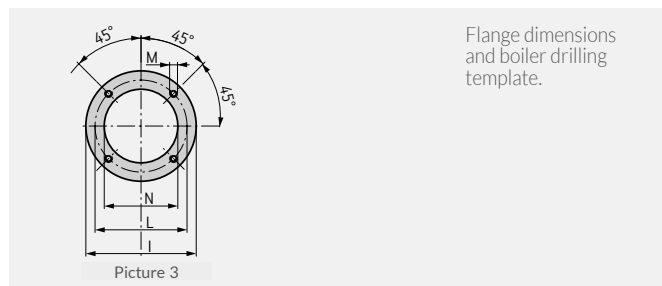
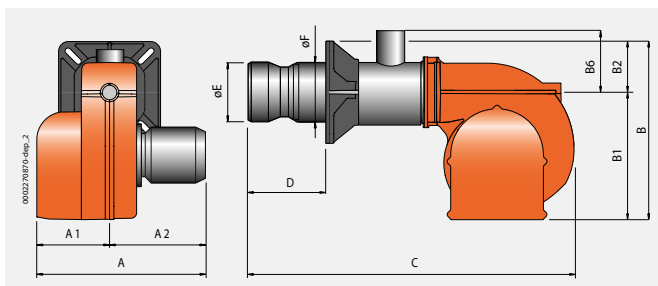
COMIST 72 N

Alternating natural gas/heavy oil burner. Operation:

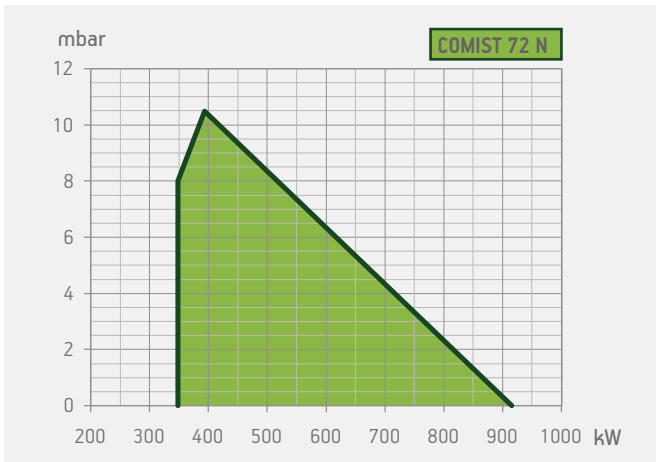
two-stage

Adjusting the combustion head.	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, 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:	up
Electric motor for pump drive.	•
Fuel supply circuit made of gear pump with pressure adjustment and shut-off valves.	•
Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.	•
Atomisation unit with nozzle-closing pin.	•
Fuel switch device:	automatic
Flame detection by UV photocell.	•
Electric protection rating:	IP40

DUAL FUEL
GAS/HEAVY OIL



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.
COMIST 72 N	575	235	340	540	380	160	135	1310	175 ÷ 345	191	187	320	276	M16	215	3



Model	Size of packaging			Weight kg
	L	P mm	H	
COMIST 72 N	1730	1030	880	180

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Note
348 ÷ 916	Frequency 50 Hz COMIST 72 N	55380010	7	3N AC 50Hz 400V	1,10+0,75	7	4) 8)
	Frequency 60 Hz COMIST 72 N						
348 ÷ 916	COMIST 72 N	55385410	7	3N AC 60Hz 380V	1,10+0,75	7	4) 8)

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, nozzles, boiler coupling kit.

NOTES

4 Equipped with air closure device.

8 Can be used for automatic fuel switching.

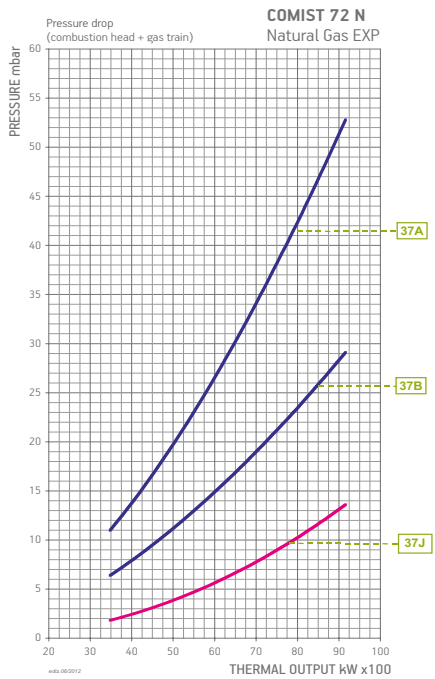
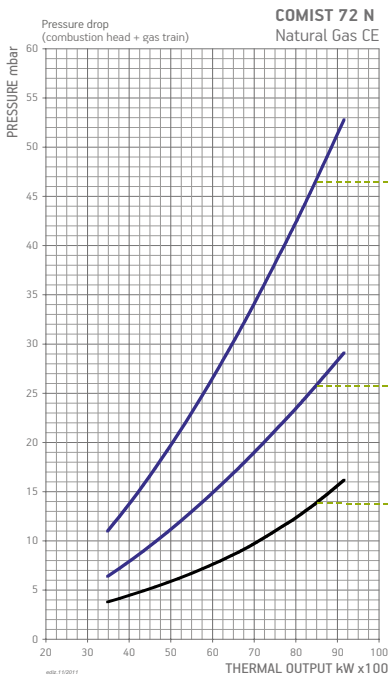
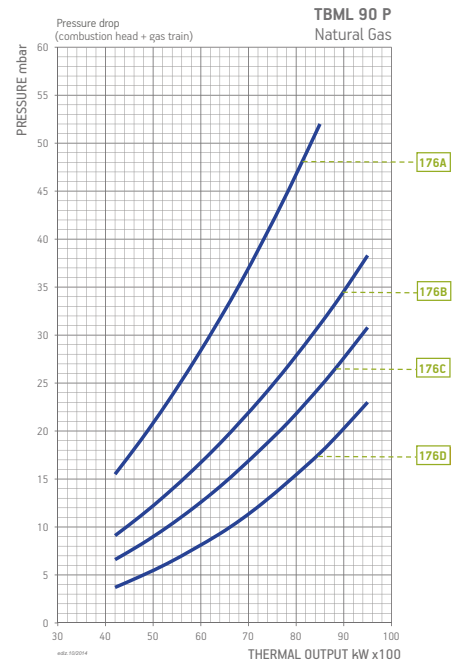
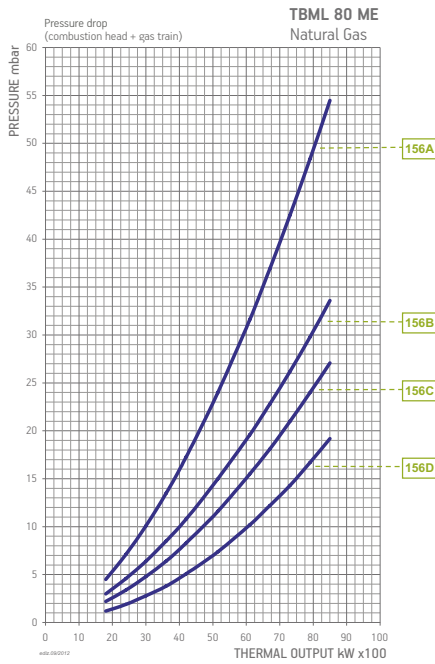
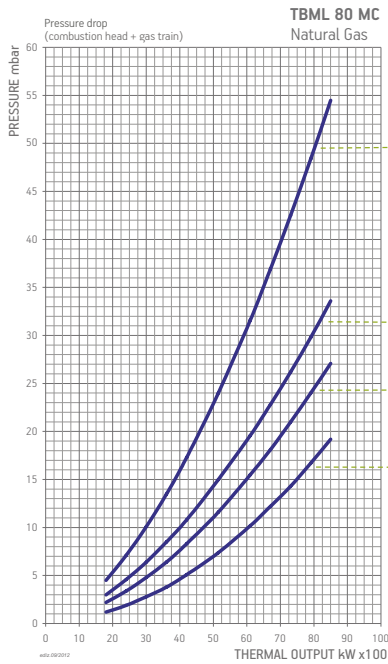
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$,

Heavy Oil: $H_i = 40,19 \text{ MJ/kg} = 9600 \text{ kcal/kg}$.

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

BURNER/GAS TRAIN MATCH



DUAL FUEL

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.		
TBML 80 MC	Natural gas	138A	CE/EXP	360	CTV	19990581	Included	96000032	Included	D7	
		138B	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
		138C	CE/EXP	360	CTV	19990583	Included	-	Included	D7	
		138D	CE/EXP	360	CTV	19990584	Included	-	Included	D7	
TBML 80 ME	Natural gas	156A	CE/EXP	360	CTV	19990557	Included	96000032	Included	D2	
		156B	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	
		156C	CE/EXP	360	CTV	19990559	Included	-	Included	D2	
TBML 90 P	Natural gas	176A	CE/EXP	360	CTV	19990547	Included	96000032	-	B7	
						19990547	Included	96000032	98000101	B7	12)
		176B	CE/EXP	360	CTV	19990548	Included	96000007	-	B7	
						19990548	Included	96000007	98000101	B7	12)
		176C	CE/EXP	360	CTV	19990549	Included	-	-	B7	
						19990549	Included	-	98000101	B7	12)
176D	CE/EXP	500	CTV	19990550	Included	-	-	B7			
					CTV	19990550	Included	-	98000102	B7	12)

Burner model	Gas type	Version	Curve on graph	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Pic.	Notes
						Part no.	Part no.	Part no.		
COMIST 72 N	Natural gas	CE	37A	360	CTV	19990410	Included	96000007	B2	
						19990404	Included	96000007	B2	12)
						19990456	97392410	-	B4	6)
		37C	500	CTV	19990457	97392410	-	B4	6) 12)	
					19990410	Included	96000007	B2		
		EXP	37B	360	CTV	19990404	Included	96000007	B2	
						19990454	Included	96000007	B2	
19990456	-					-	BE4	6)		
					CTV	19990457	-	-	BE4	6)

Burner model	Gas type	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.		
TBML 80 MC	LPG	CE/EXP	360	CTV	19990581	Included	96000032	Included	D7	
TBML 80 ME	LPG	CE/EXP	360	CTV	19990557	Included	96000032	Included	D2	
TBML 90 P	LPG	CE/EXP	360	CTV	19990547	Included	96000032	-	B7	
					19990547	Included	96000032	98000101	B7	12)

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

6 Should be the gas pressure at the safety valve lower than 12 bar, please replace the min pressure switch with GW50.

12 Valve tightness control not required by EN676.

CTV Gas train with Valve Tightness Control.

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



TBML 120 MC



TBML 120 ME

	TBML 120 MC	TBML 120 ME
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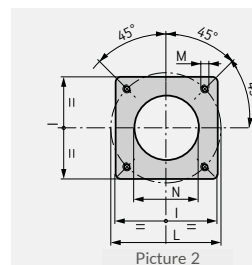
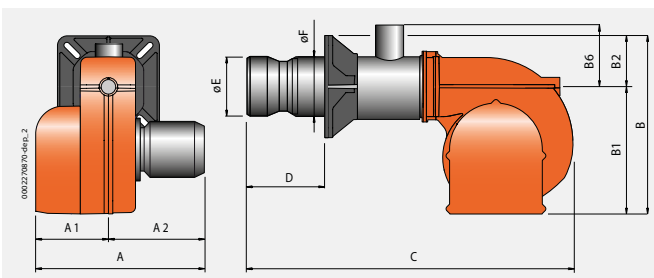
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil.

Mechanical two-stage progressive/two-stage

Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil.

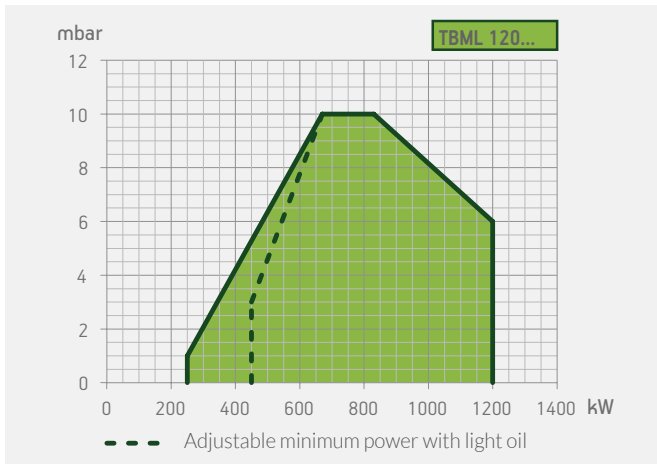
Modulating electronic/two-stage

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•	
Modulation ratio:	1:4	1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head 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
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.	•	•
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.	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	up	up
Pump connected to fan motor through electromagnetic clutch.	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell.	•	•
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:	IP40	IP40



Flange dimensions and boiler drilling template.

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.
TBML 120 MC	700	330	370	540	380	160	200	1250	285 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
TBML 120 ME	700	330	370	540	380	160	200	1250	285 ÷ 450	224	219	320	280 ÷ 370	M12	235	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBML 120 MC	1070	800	700	98
TBML 120 ME	1070	800	700	95

Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
Frequency 50 Hz							
see page 240	250(450)* ÷ 1200	TBML 120 MC	56530010	1,5	3N AC 50Hz 400V	1,5	4)
see page 240	250(450)* ÷ 1200	TBML 120 ME	56540010	1,5	3N AC 50Hz 400V	1,5	4)
Frequency 60 Hz							
see page 240	250(450)* ÷ 1200	TBML 120 MC	56535410	1,5	3N AC 60Hz 380V	1,5	4)
see page 240	250(450)* ÷ 1200	TBML 120 ME	56545410	1,5	3N AC 60Hz 380V	1,5	4)

TO COMPLETE THE BURNER

DESCRIPTION

TBML 120 ME: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION

PART NO.

TBML 120 MC: modulation kit

98000057

TBML 120 MC: modulating probe kit (see page 288)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION

PART NO.

Soundproof burner cover (see page 293)

97980053

DUAL FUEL BURNERS ACCESSORIES

TBML 120 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.

TBML 120 ME: line filter, flex hoses, nozzles, boiler coupling kit.

NOTES

4 Equipped with air closure device.

*) Min thermal capacity with light oil operation.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

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



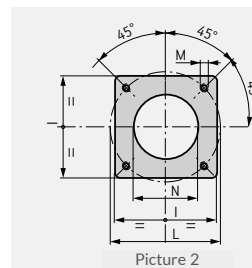
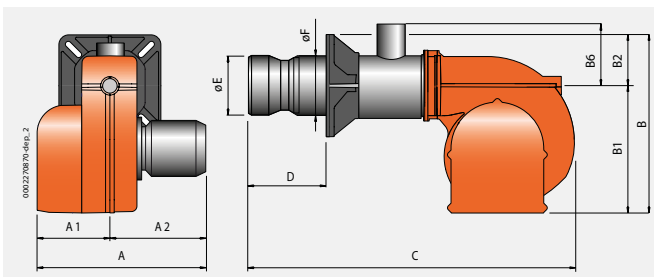
COMIST 122 N

Alternating natural gas/heavy oil burner. Operation:

two-stage

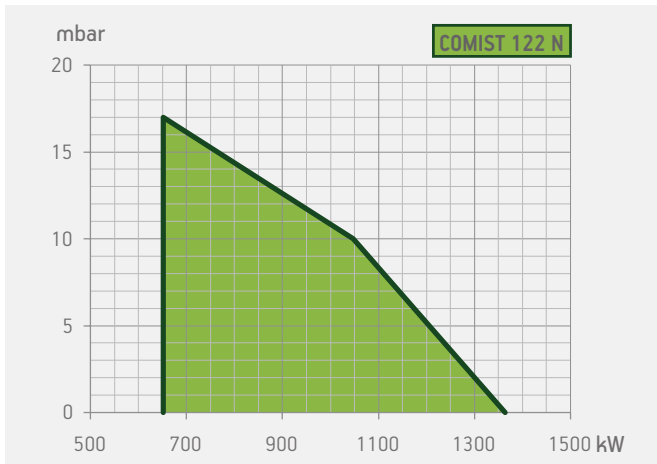
Adjusting the combustion head.	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•
Combustion air intake with butterfly valve. Air flow adjustment:	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•
CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, minimum pressure switch, pressure regulator and gas filter.	•
Fail proof connectors for burner/gas train connection.	•
Gas train outlet:	up
Electric motor for pump drive.	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valve and control flow valve.	•
Electric fuel preheater with antigas valve, filter, thermometer, adjustment and minimum thermostats.	•
Atomisation unit with nozzle-closing pin.	•
Fuel switch device:	automatic
Flame detection by UV photocell.	•
Electric protection rating:	IP40

DUAL FUEL
GAS/HEAVY OIL



Flange dimensions
and boiler drilling
template.

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.
COMIST 122 N	940	460	480	650	490	160	152	1490	195 ÷ 445	227	220	320	280 ÷ 370	M12	230	2



Model	Size of packaging			Weight kg
	L	P mm	H	
COMIST 122 N	1730	1030	880	267

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Note
652 ÷ 1364	Frequency 50 Hz COMIST 122 N	55410010	7	3N AC 50Hz 400V	2,20+0,55	10,5	4) 8)
	Frequency 60 Hz COMIST 122 N						
652 ÷ 1364	COMIST 122 N	55415410	7	3N AC 60Hz 380V	3,50+0,65	10,5	4) 8)

OPTIONALS

DESCRIPTION

Steam pre-heater (17)

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, nozzles, boiler coupling kit.

NOTES

4 Equipped with air closure device.

8 Can be used for automatic fuel switching.

17 Steam regulator not included.

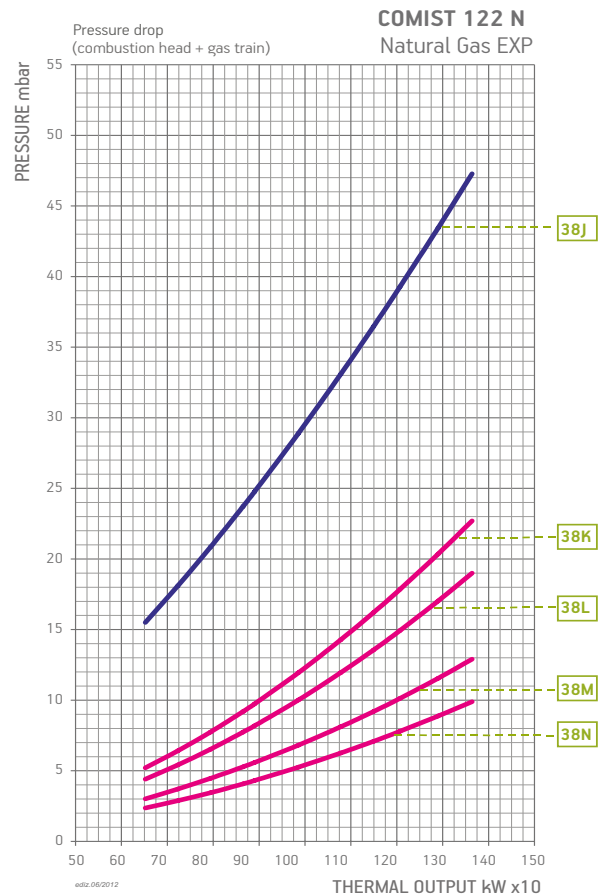
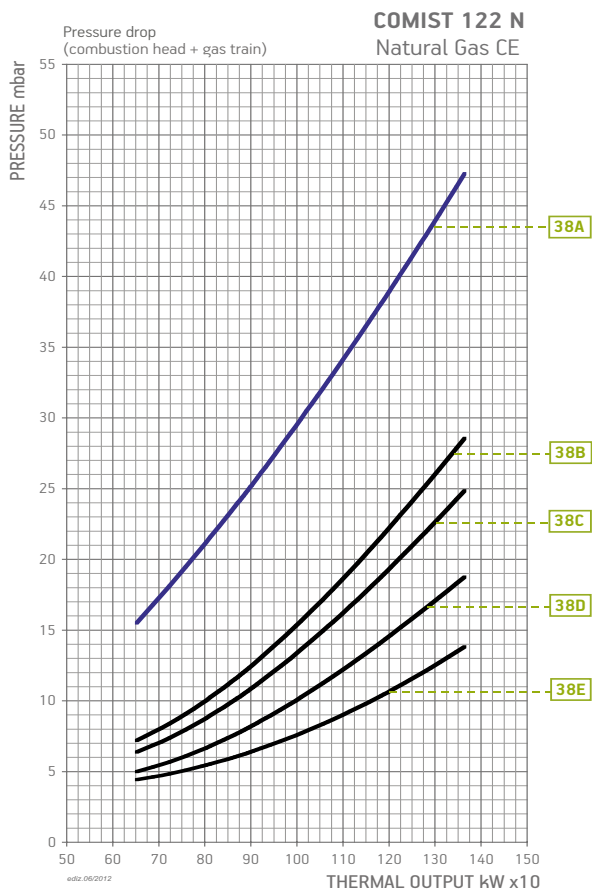
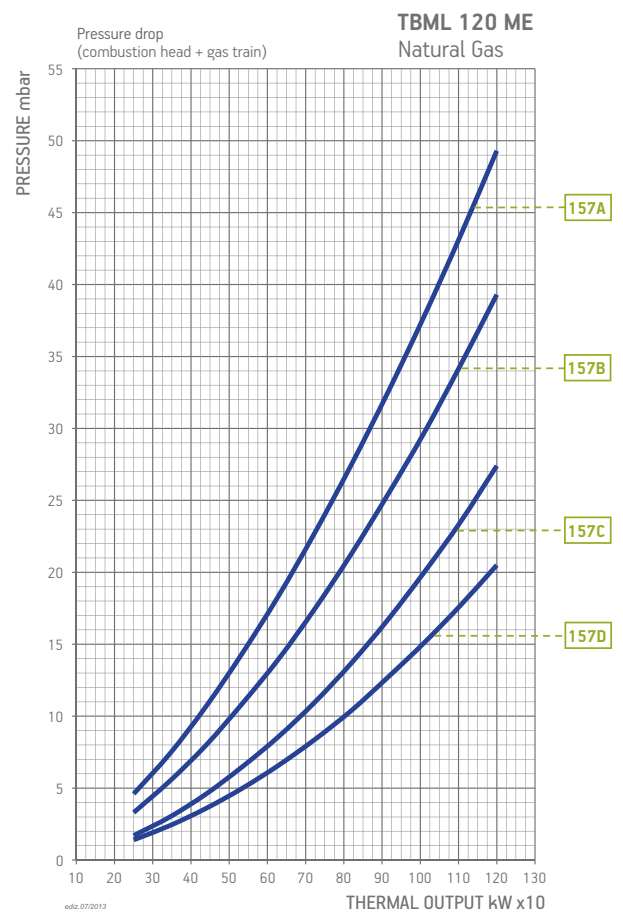
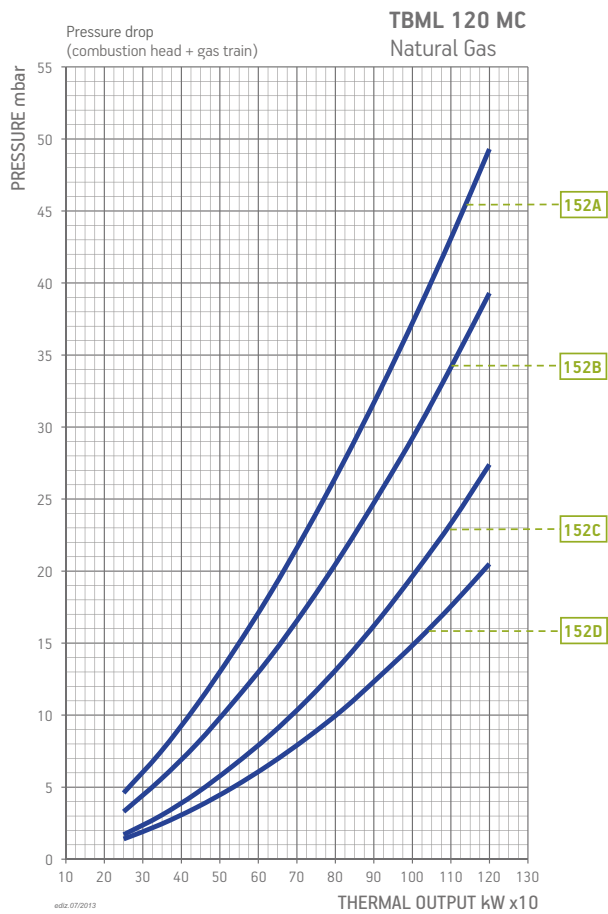
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: $H_i = 35,80 \text{ MJ/m}^3 = 8550 \text{ kcal/m}^3$,

Heavy oil: $H_i = 40,19 \text{ MJ/kg} = 9600 \text{ kcal/kg}$.

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

BURNER/GAS TRAIN MATCH



DUAL FUEL

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.		
TBML 120 MC	Natural gas	152A	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
		152B	CE/EXP	360	CTV	19990583	Included	-	Included	D7	
		152C	CE/EXP	500	CTV	19990584	Included	-	Included	D7	
		152D	CE/EXP	500	CTV	19990585	Included	-	Included	D7	
TBML 120 ME	Natural gas	157A	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	
		157B	CE/EXP	360	CTV	19990559	Included	-	Included	D2	
		157C	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
		157D	CE/EXP	500	CTV	19990525	Included	-	Included	D2	

Burner model	Gas type	Version	Curve on graph	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Pic.	Notes
						Part no.	Part no.	Part no.		
COMIST 122 N	Natural gas	CE	38A	360	CTV	19990454	Included	96000009	B2	
			38B	500	CTV	19990457	97392410	-	B4	6) 14)
			38C	500	CTV	19990459	97392410	-	B4	6) 14)
			38D	500	CTV	19990461	97392410	96005002	B5	6) 14)
			38E	500	CTV	19990463	97392420	96005007	B5	14)
		EXP	38J	360	CTV	19990404	Included	96000009	B2	
			38K	140	CTV	19990454	Included	96000009	B2	
						19990456	-	-	BE4	6)
						19990457	-	-	BE4	6)
			38L	140	CTV	19990458	-	-	BE4	6)
						19990459	-	-	BE4	6)
						19990460	-	96005002	BE5	6)
			38M	140	CTV	19990461	-	96005002	BE5	6)
						19990462	-	96005007	BE5	
38N	140	CTV	19990463	-	96005007	BE5				

Burner model	Gas type	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.		
TBML 120 MC	LPG	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
TBML 120 ME	LPG	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

6 Should be the gas pressure at the safety valve lower than 12 bar, please replace the min pressure switch with GW50.

14 The burner must be completed with the pressure regulator to comply to Norm EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



TBML 150 P



TBML 160 MC



TBML 160 ME

TBML 150 P	TBML 160 MC	TBML 160 ME
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Alternating natural gas/light oil burner according to european regulation EN676 and EN267.
Operation:

Alternating natural gas/light oil burner according to european regulation EN676 and EN267.
Two-stage progressive operation on gas, two-stage on light oil.

Alternating natural gas/light oil burner according to european regulation EN676 and EN267.
Modulating operation on gas, two-stage on light oil.

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Burner with Low NOx and CO emissions on gas according to European standard EN676:

Burner with Low NOx and CO emissions on light oil according to European standard EN267:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit and combustion head 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:

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.

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.

Fail proof connectors for burner/gas train connection.

Gas train outlet:

Pump connected to fan motor through electromagnetic clutch.

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.

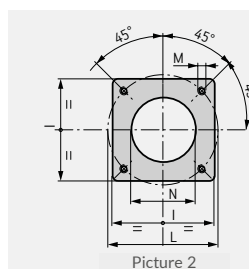
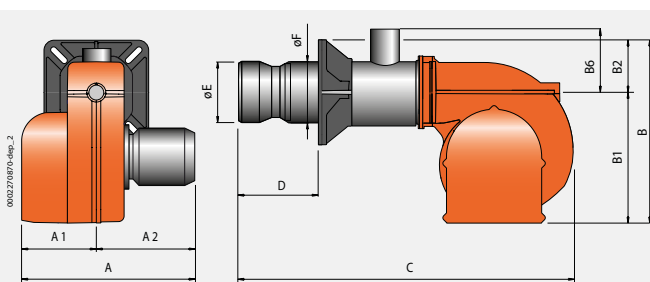
Fuel switch device:

Flame detection by UV photocell.

Control panel with display diagram for working mode with indication lights.

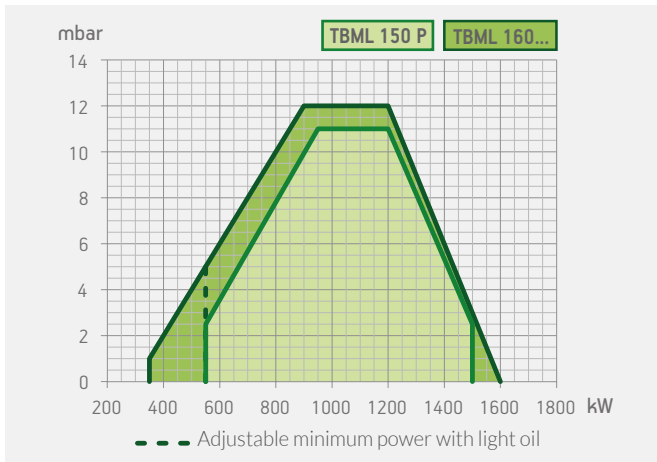
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.

Electric protection rating:



Flange dimensions and boiler drilling template.

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.
TBML 150 P	700	330	370	540	380	160	200	1280	200 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
TBML 160 MC	700	330	370	540	380	160	200	1250	285 ÷ 450	224	219	320	280 ÷ 370	M12	235	2
TBML 160 ME	700	330	370	540	380	160	200	1250	285 ÷ 450	224	219	320	280 ÷ 370	M12	235	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBML 150 P	1070	800	700	90
TBML 160 MC	1070	800	700	100
TBML 160 ME	1070	800	700	97

Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note	
Frequency 50 Hz								
class 2 see page 246 see page 246	550 ÷ 1500	TBML 150 P	56550010	1,5	3N AC 50Hz 400V	2,2	4)	
	350(550)* ÷ 1600	TBML 160 MC	56570010	1,5	3N AC 50Hz 400V	3,0	4)	
	350(550)* ÷ 1600	TBML 160 ME	56580010	1,5	3N AC 50Hz 400V	3,0	4)	
Frequency 60 Hz								
class 2 see page 246 see page 246	550 ÷ 1500	TBML 150 P	56555410	1,5	3N AC 60Hz 380V	2,6	4)	
	350(550)* ÷ 1600	TBML 160 MC	56575410	1,5	3N AC 60Hz 380V	3,5	4)	
	350(550)* ÷ 1600	TBML 160 ME	56585410	1,5	3N AC 60Hz 380V	3,5	4)	

TO COMPLETE THE BURNER

DESCRIPTION
TBML 160 ME: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 160 MC: modulation kit	98000057
TBML 160 MC: modulating probe kit (see page 288)	

NOTES

- 4 Equipped with air closure device.
 *) Min thermal capacity with light oil operation.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
 For different type of gas and pressure values, please get in contact with our commercial department.

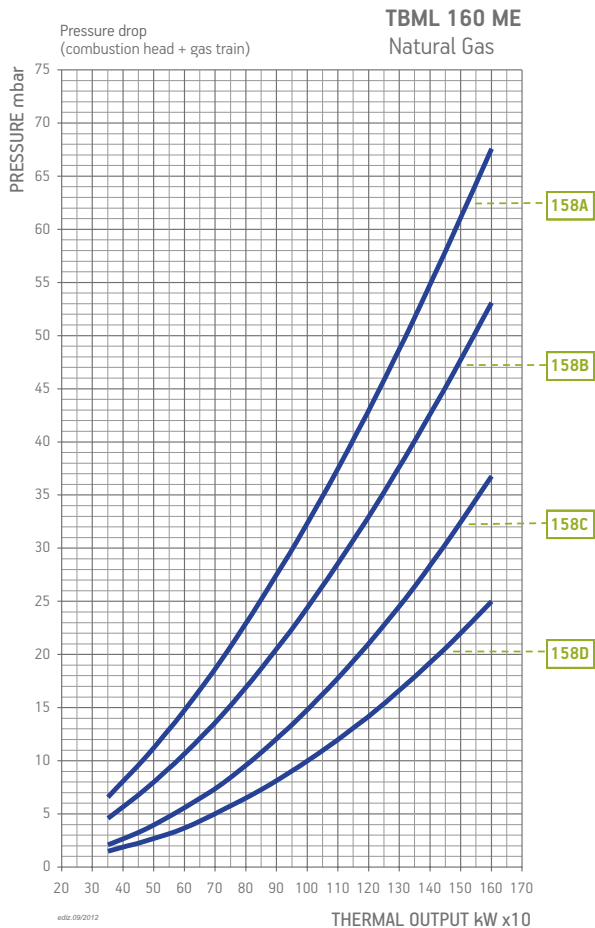
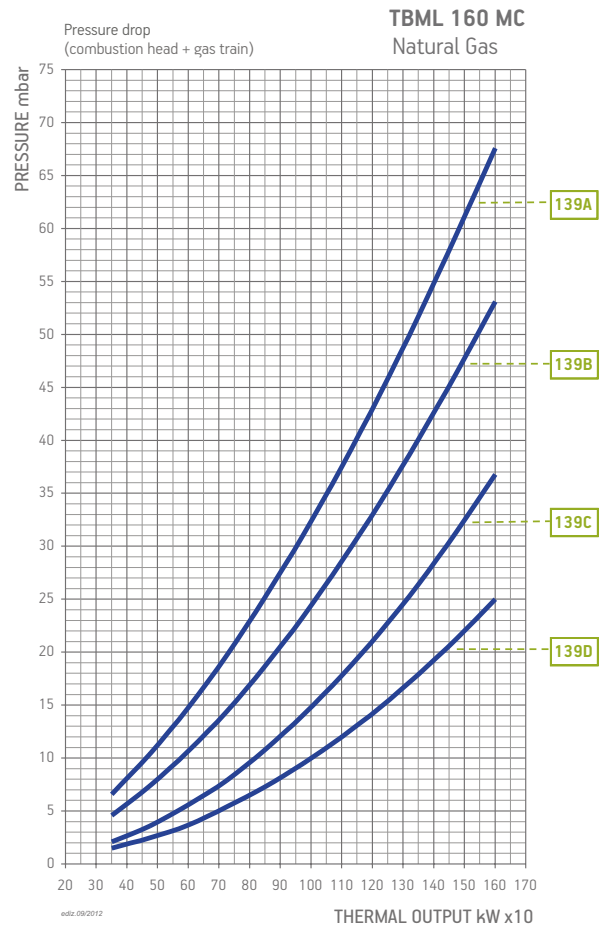
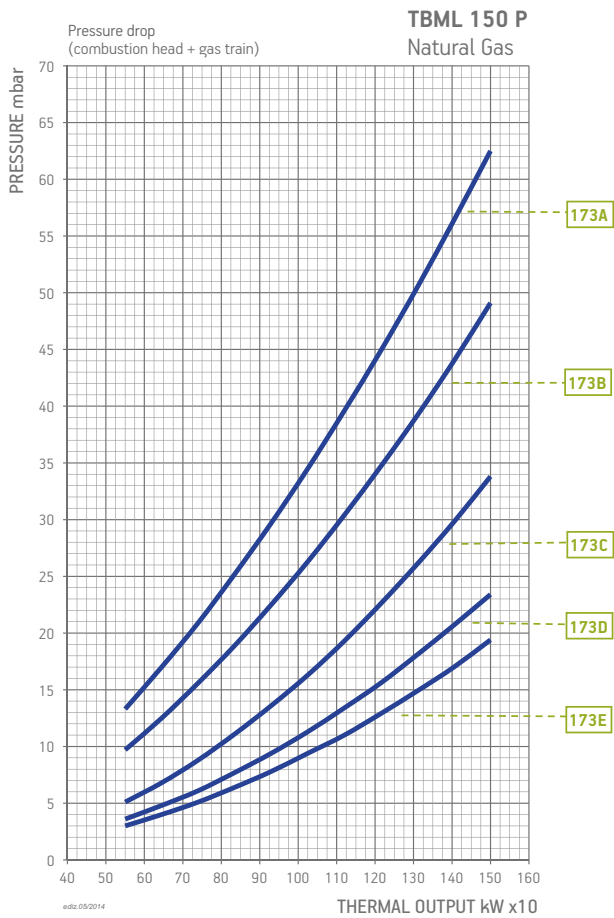
ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBML 150 P: line filter 3/8"	98000370
Soundproof burner cover (see page 293)	97980053

DUAL FUEL BURNERS ACCESSORIES

TBML 150 P: flex hoses, nozzles, boiler coupling kit, plug for wiring.
TBML 160 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
TBML 160 ME: line filter, flex hoses, nozzles, boiler coupling kit.

BURNER/GAS TRAIN MATCH



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.			
TBML 150 P	Natural gas	173A	CE	360	CTV	19990548	Included	96000007	98000101	B7	11)	
			EXP	360		19990548	Included	96000007	-	BE7		
		173B	CE	360	CTV	19990549	Included	-	98000101	B7	11)	
			EXP	360	CTV	19990549	Included	-	-	BE7		
		173C	CE	500	CTV	19990550	Included	-	98000102	B7	11)	
			EXP	500	CTV	19990550	Included	-	-	BE7		
		173D	CE	500	CTV	19990563	Included	-	98000101	B7	11)	
			EXP	500	CTV	19990563	Included	-	-	BE7		
		173E	CE	500	CTV	19990564	Included	-	98000101	B7	11)	
			EXP	500	CTV	19990564	Included	-	-	BE7		
		TBML 160 MC	Natural gas	139A	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7
				139B	CE/EXP	360	CTV	19990583	Included	-	Included	D7
				139C	CE/EXP	500	CTV	19990584	Included	-	Included	D7
				139D	CE/EXP	500	CTV	19990585	Included	-	Included	D7
158A	CE/EXP			360	CTV	19990558	Included	96000007	Included	D2		
TBML 160 ME	Natural gas	158B	CE/EXP	360	CTV	19990559	Included	-	Included	D2		
		158C	CE/EXP	500	CTV	19990524	Included	-	Included	D2		
		158D	CE/EXP	500	CTV	19990525	Included	-	Included	D2		

Burner model	Gas type	Version	P.Max ** mbar	Execution	Gas train Part no.	Regulator with incorporated filter Part no.	Burner/gas train adapter Part no.	Valve tightness control kit Part no.	Pic.	Notes
TBML 150 P	LPG	CE	360	CTV	19990548	Included	96000007	98000101	B7	11)
		EXP	360		19990548	Included	96000007	-	BE7	
TBML 160 MC	LPG	CE/EXP	360	CTV	19990582	Included	96000007	Included	D7	
TBML 160 ME	LPG	CE/EXP	360	CTV	19990558	Included	96000007	Included	D2	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

11 The train must be always completed with the VPS kit to comply with the EN676 regulations.
CTV Gas train with Valve Tightness Control.

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



TBML 200 MC



TBML 200 ME

TBML 200 MC

TBML 200 ME

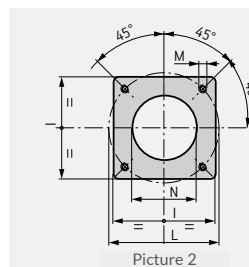
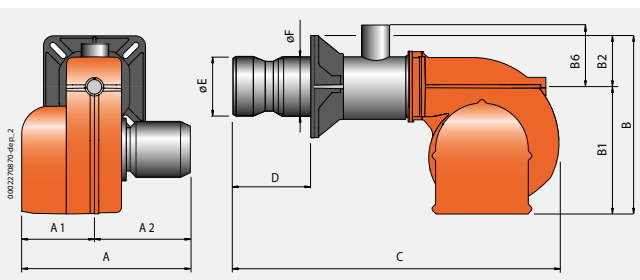
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil.

mechanical two-stage progressive/two-stage

Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil.

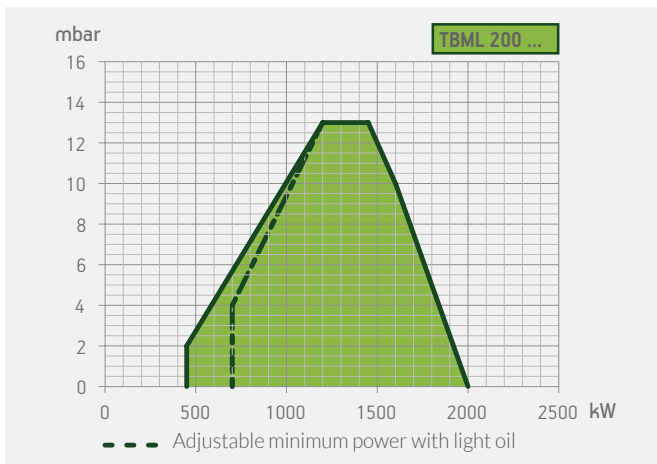
modulating electronic/two-stage

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•	
Modulation ratio:	1:4	1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Adjusting the combustion head.	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head 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
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.	•	•
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.	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	up	up
Pump connected to fan motor through electromagnetic clutch.	•	•
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell.	•	•
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:	IP40	IP40



Flange dimensions and boiler drilling template.

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.
TBML 200 MC	700	330	370	540	380	160	200	1270	300 ÷ 470	250	219	320	300 ÷ 370	M12	255	2
TBML 200 ME	700	330	370	540	380	160	200	1270	300 ÷ 470	250	219	320	300 ÷ 370	M12	255	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBML 200 MC	1070	800	700	98
TBML 200 ME	1070	800	700	95

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
Frequency 50 Hz								
	class 2	450(700)* ÷ 2000	TBML 200 MC	56610010	1,5	3N AC 50Hz 400V	3,0	4)
	class 2	450(700)* ÷ 2000	TBML 200 ME	56620010	1,5	3N AC 50Hz 400V	3,0	4)
Frequency 60 Hz								
	class 2	450(700)* ÷ 2000	TBML 200 MC	56615410	1,5	3N AC 60Hz 380V	3,5	4)
	class 2	450(700)* ÷ 2000	TBML 200 ME	56625410	1,5	3N AC 60Hz 380V	3,5	4)

TO COMPLETE THE BURNER

DESCRIPTION
TBML 200 ME: modulating probe kit LCM 100 (see page 288)

MODULATING MODE

DESCRIPTION	PART NO.
TBML 200 MC: modulation kit	98000057
TBML 200 MC: modulating probe kit (see page 288)	

NOTES

- 4 Equipped with air closure device.
 *) Min thermal capacity with light oil operation.
 Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
 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 cover (see page 293)	97980053

DUAL FUEL GAS BURNERS ACCESSORIES

TBML 200 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
TBML 200 ME: line filter, flex hoses, nozzles, boiler coupling kit.



COMIST 180 NM



COMIST 180 DSPNM

COMIST 180 NM

COMIST 180 DSPNM

Alternating natural gas/heavy oil burner. Operation:

two-stage

mechanical two-stage progressive

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

•

Modulation ratio:

1:3

Adjusting the combustion head.

•

•

Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.

•

•

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

•

•

Combustion air intake with butterfly valve. Air flow adjustment:

electric servomotor

mechanical cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

•

•

CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, 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 and maximum pressure switch, pressure regulator and gas filter.

•

Fail proof connectors for burner/gas train connection.

•

Gas train outlet:

up

up

Electric motor for pump drive.

•

•

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Electric fuel preheater with antigas valve, filter, thermometer, adjustment, minimum and safety thermostats.

•

•

Atomisation unit with magnet to control the outlet/nozzle return pins.

•

•

Fuel switch device:

automatic

automatic

Flame detection by UV photocell.

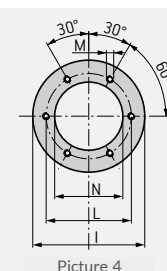
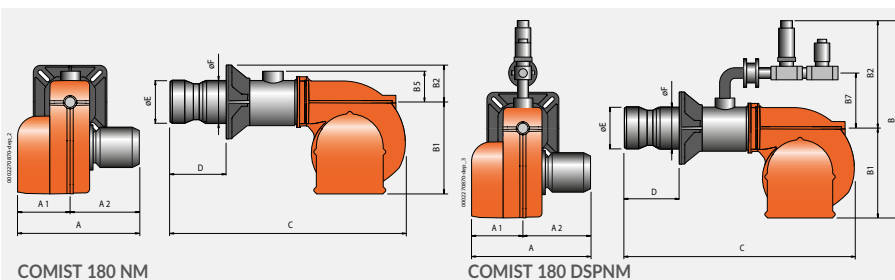
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•

Electric protection rating:

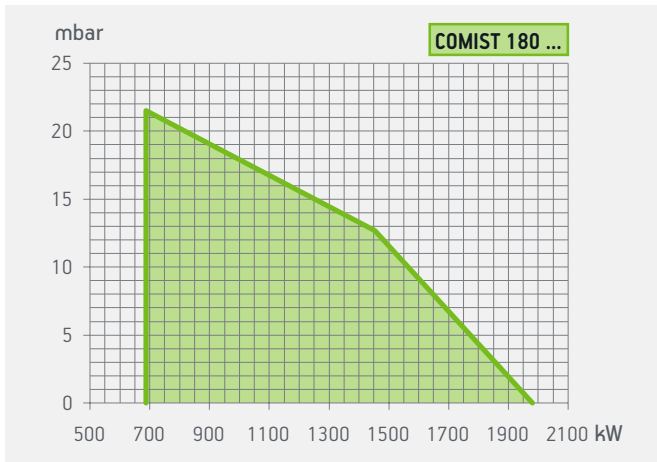
IP40

IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	B7 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
COMIST 180 NM	915	465	450	680	450	230	151	-	1700	330 ÷ 540	260	245	460	400	M20	300	4
COMIST 180 DSPNM	915	465	450	1230	450	780	-	485	1700	330 ÷ 540	260	245	460	400	M20	300	4



Model	Size of packaging			Weight kg
	L	P mm	H	
COMIST 180 NM	2030	1150	1010	387
COMIST 180 DSPNM	2030	1150	1010	405

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Note
Frequency 50 Hz							
688 ÷ 1981	COMIST 180 NM	55460010	7	3N AC 50Hz 400V	3,0 + 1,1	15	4) 8)
688 ÷ 1981	COMIST 180 DSPNM	5428010	7	3N AC 50Hz 400V	3,0 + 1,1	15	4) 8)
Frequency 60 Hz							
688 ÷ 1981	COMIST 180 NM	55465410	7	3N AC 60Hz 380V	3,5 + 1,3	15	4) 8)
688 ÷ 1981	COMIST 180 DSPNM	54285410	7	3N AC 60Hz 380V	3,5 + 1,3	15	4) 8)

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

COMIST 180 DSPNM: modulation kit

PART NO.

98000055

COMIST 180 DSPNM: modulating probe kit (see page 288)

OPTIONAL

DESCRIPTION

Steam pre-heater (17)

Working with extra heavy oil with viscosity till 100°E at 50°C

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTES

4 Equipped with air closure device.

8 Can be used for automatic fuel switching.

17 Steam regulator not included.

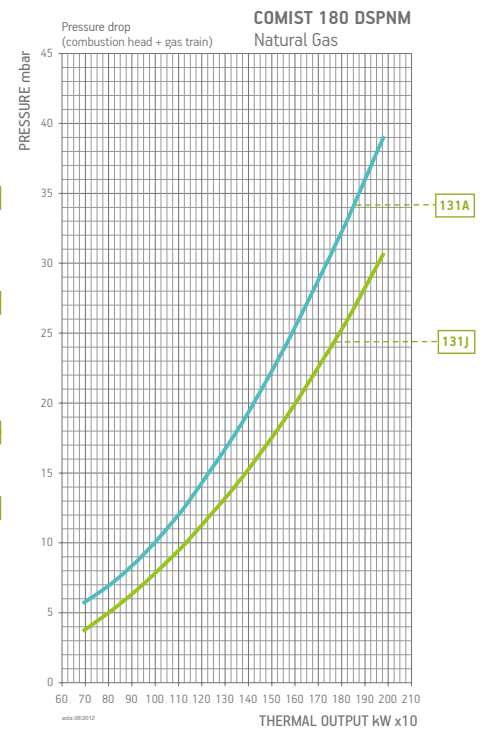
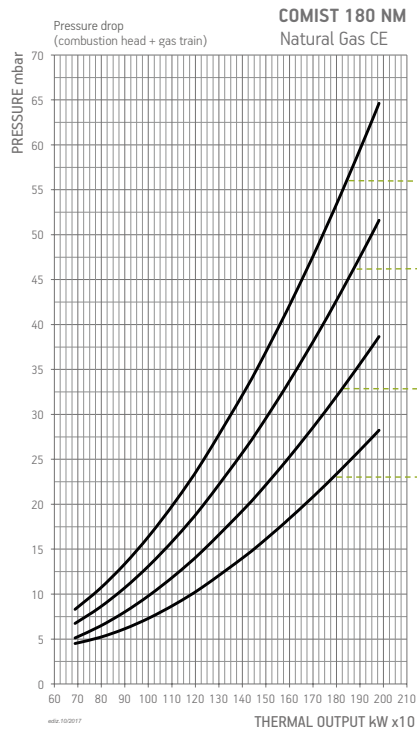
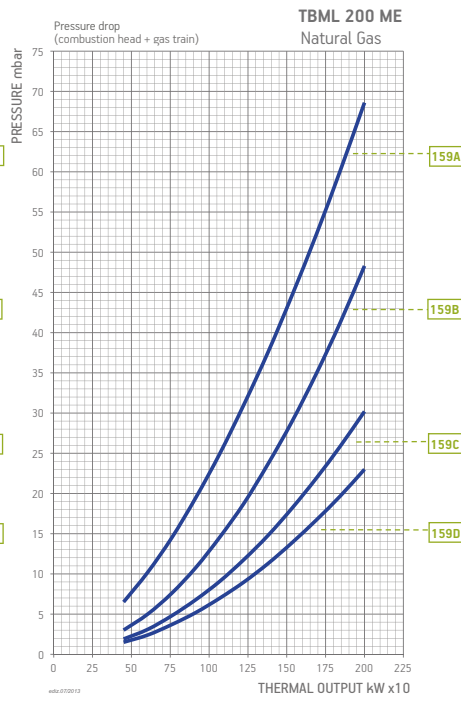
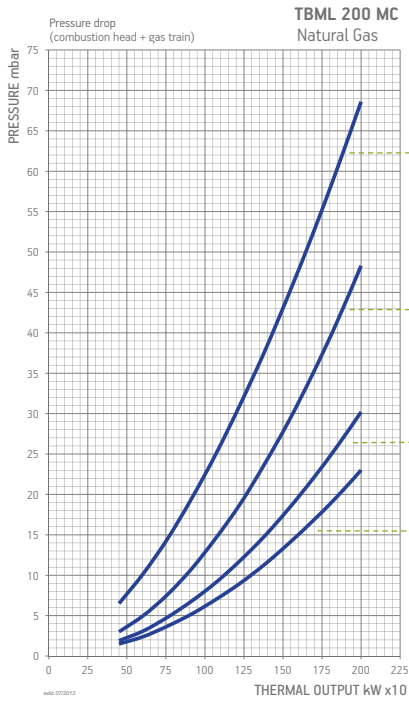
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

Heavy Oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

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

BURNER/GAS TRAIN MATCH



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.		
TBML 200 MC	Natural gas	151A	CE/EXP	360	CTV	19990583	Included	-	Included	D7	
		151B	CE/EXP	500	CTV	19990584	Included	-	Included	D7	
		151C	CE/EXP	500	CTV	19990585	Included	-	Included	D7	
		151D	CE/EXP	500	CTV	19990586	Included	-	Included	D7	
TBML 200 ME	Natural gas	159A	CE/EXP	360	CTV	19990559	Included	-	Included	D2	
		159B	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
		159C	CE/EXP	500	CTV	19990525	Included	-	Included	D2	
		159D	CE/EXP	500	CTV	19990526	Included	-	Included	D2	
COMIST 180 DSPNM	Natural gas	131A	CE	500	CTV	Included	97392420	-	Included	D5	14)
		131J	EXP	140	CTV	Included	-	-	Included	DE5	

Burner model	Gas type	Curve on graph	Version	P.Max ** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Pic.	Notes
						Part no.	Part no.	Part no.		
COMIST 180 NM	Natural gas	CE	39A	500	CTV	19990457	97392410	96000012	B2	
			39B	500	CTV	19990459	97392410	96000012	B4	6) 14)
			39C	500	CTV	19990461	97392410	-	B5	6) 14)
			39D	500	CTV	19990463	97392420	96005004	B5	14)
			39J	140	CTV	19990456	-	96000012	BE4	6)
			39K	140	CTV	19990457	-	96000012	BE4	6)
			39L	140	CTV	19990458	-	96000012	BE4	6)
			39M	140	CTV	19990459	-	96000012	BE4	6)
			39N	140	CTV	19990460	-	-	BE5	6)
			39O	140	CTV	19990461	-	-	BE5	6)
39P	140	CTV	19990462	-	96005004	BE5				
39Q	140	CTV	19990463	-	96005004	BE5				

Burner model	Gas type	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.		
TBML 200 MC	LPG	CE/EXP	360	CTV	19990583	Included	-	Included	D7	
TBML 200 ME	LPG	CE/EXP	360	CTV	19990559	Included	-	Included	D2	

To choose the correct gas train please refer to the information on page 20 and page 21.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

6 Should be the gas pressure at the safety valve lower than 12 bar, please replace the min pressure switch with GW50.

14 The burner must be completed with the pressure regulator to comply to Norm EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



TBML 260 MC



TBML 260 ME



COMIST 250 DSPGM

TBML 260 MC	TBML 260 ME	COMIST 250 DSPGM
-------------	-------------	------------------

Alternating natural gas/light oil burner according to european regulation EN676 and EN267.
Two-stage progressive operation on gas, two-stage on light oil.

mechanical
two-stage
progressive/
two-stage

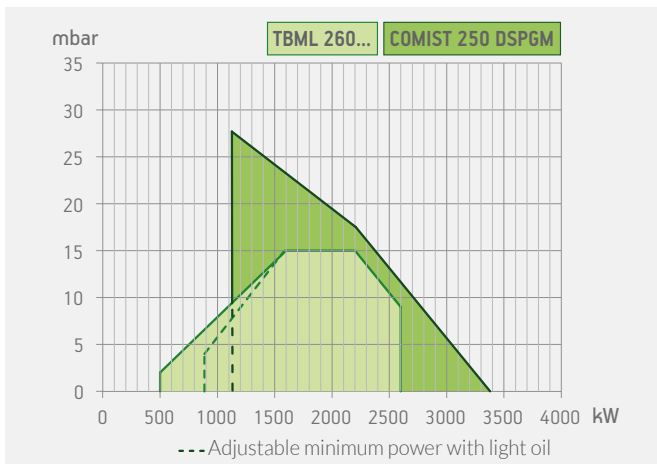
Alternating natural gas/light oil burner according to european regulation EN676 and EN267.
Modulating operation on gas, two-stage on light oil.

modulating
electronic/
two-stage

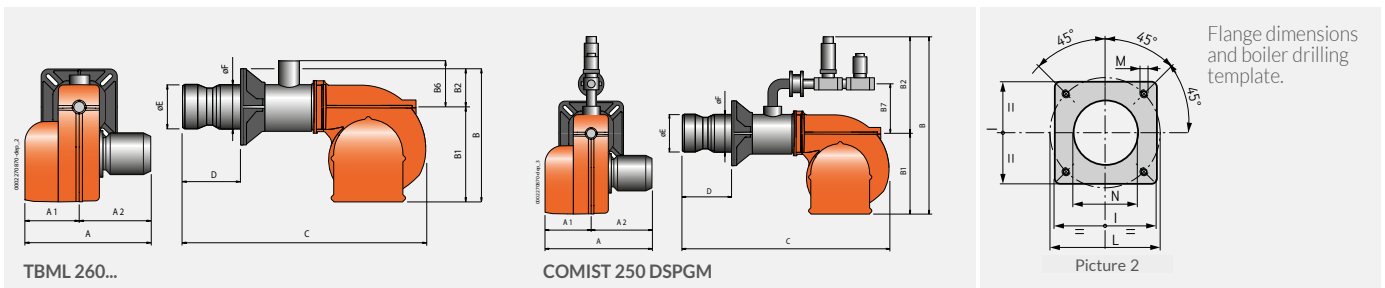
Alternating natural gas/light oil burner. Operation:

mechanical
two-stage
progressive

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•		•
Modulation ratio:	1:5	1:5	1:3
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2	
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2	
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head 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	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
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.	•	•	
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.			•
Fail proof connectors for burner/gas train connection.	•	•	
Gas train outlet:	up	up	up
Electric motor for pump drive.			•
Pump connected to fan motor through electromagnetic clutch.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.			•
Atomisation unit with magnet to control the outlet/nozzle return pins.			•
Fuel switch device:	manual	manual	automatic
Flame detection by UV photocell.	•	•	•
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:	IP40	IP40	IP40



Model	Size of packaging			Weight kg
	L	P	H	
TBML 260 MC	1070	870	720	127
TBML 260 ME	1070	870	720	124
COMIST 250 DSPGM	2020	1140	1010	348



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	B7 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBML 260 MC	765	345	420	560	400	160	200	-	1280	300 ÷ 470	270	219	320	310 ÷ 370	M12	275	2
TBML 260 ME	765	345	420	560	400	160	200	-	1280	300 ÷ 470	270	219	320	310 ÷ 370	M12	275	2
COMIST 250 DSPGM	1035	555	480	1260	580	680	-	385	1750	320 ÷ 500	320	273	440	400 ÷ 540	M20	330	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
NEW	class 2	500(900)* ÷ 2600	TBML 260 MC	56640010	1,5	3N AC 50Hz 400V	5,5	4) 16)
NEW	class 2	500(900)* ÷ 2600	TBML 260 ME	56650010	1,5	3N AC 50Hz 400V	5,5	4) 16)
		1127 ÷ 3380	COMIST 250 DSPGM	5358050	1,5	3N AC 50Hz 400V	7,5+1,5	4) 8)
			Frequency 60 Hz					
NEW	class 2	500(900)* ÷ 2600	TBML 260 MC	56645410	1,5	3N AC 60Hz 380V	5,5	4) 16)
NEW	class 2	500(900)* ÷ 2600	TBML 260 ME	56655410	1,5	3N AC 60Hz 380V	5,5	4) 16)
		1127 ÷ 3380	COMIST 250 DSPGM	53585410	1,5	3N AC 60Hz 380V	9,0+1,3	4) 8)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
TBML 260 ME: modulating probe kit LCM 100 (see page 288)	
COMIST 250 DSPGM: nozzle with 1:3 ratio (see page 289)	

MODULATING MODE

DESCRIPTION	PART NO.
TBML 260 MC: modulation kit	98000057
COMIST 250 DSPGM: modulation kit	98000055
TBML 260 MC/ COMIST 250 DSPGM: modulating probe kit (see page 288)	

NOTES

- 4 Equipped with air closure device.
 - 8 Can be used for automatic fuel switching.
 - 16 CE approved according to the Gas Directive 2009/142/EC and European standard EN267.
 - *) Min thermal capacity with light oil operation.
 - Net calorific value at reference conditions of 0°C, 1013mbar:
 - Natural Gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³.
 - LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 - Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
- For different type of gas and pressure values, please get in contact with our commercial department.

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION	PART NO.
TBML 260 MC/260 ME: Soundproof burner cover (see page 293)	97980053
COMIST 250 DSPGM: Soundproof burner cover (see page 293)	97980057

DUAL FUEL BURNERS ACCESSORIES

TBML 260 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
TBML 260 ME: line filter, flex hoses, nozzles, boiler coupling kit.
COMIST 250 DSPGM: line filter, flex hoses, boiler coupling kit.



COMIST 250 NM



COMIST 250 DSPNM

COMIST 250 NM

COMIST 250 DSPNM

Alternating natural gas/heavy oil burner. Operation:

two-stage

mechanical two-stage progressive

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

•

Modulation ratio:

1:3

Adjusting the combustion head.

•

•

Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.

•

•

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

•

•

Combustion air intake with butterfly valve. Air flow adjustment:

electric servomotor

mechanical cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

•

•

CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, 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 and maximum pressure switch, pressure regulator and gas filter.

•

Fail proof connectors for burner/gas train connection.

•

Gas train outlet:

up

up

Electric motor for pump drive.

•

•

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

•

Fuel supply circuit made of gear pump with pressure adjustment, and control flow valve.

•

Electric fuel preheater with antigas valve, filter, thermometer, adjustment, minimum and safety thermostats.

•

•

Atomisation unit with magnet to control the outlet/nozzle return pins.

•

•

Fuel switch device:

automatic

automatic

Flame detection by UV photocell.

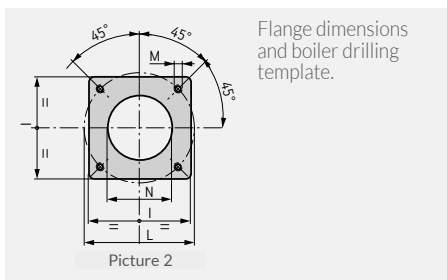
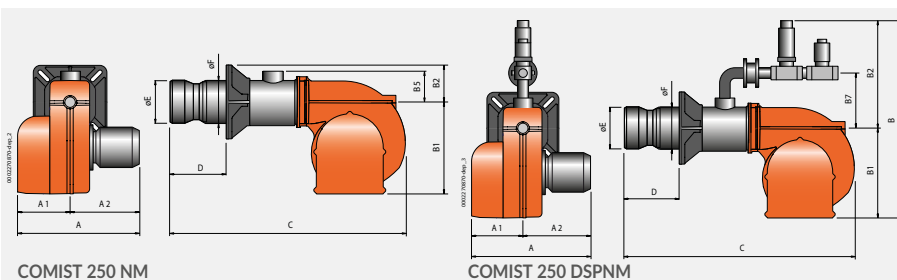
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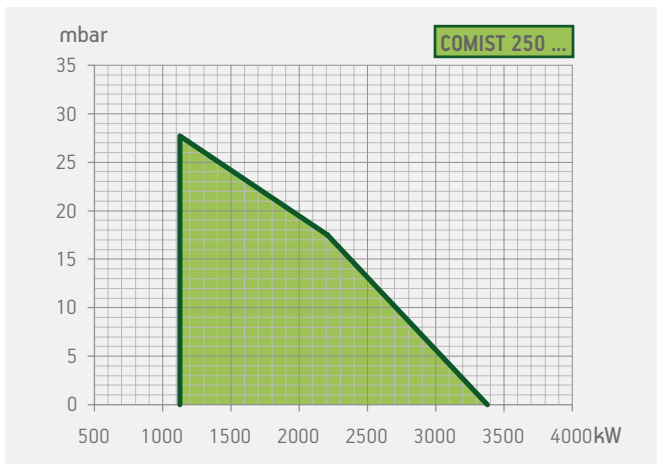
Electric protection rating:

IP40

IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	B7 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
COMIST 250 NM	1025	545	480	800	580	220	166	-	1750	320 ÷ 500	320	273	440	400 ÷ 540	M20	330	2
COMIST 250 DSPNM	1035	555	480	1260	580	680	-	385	1750	320 ÷ 500	320	273	440	400 ÷ 540	M20	330	2



Model	Size of packaging			Weight kg
	L	P mm	H	
COMIST 250 NM	2030	1150	1010	410
COMIST 250 DSPNM	2030	1150	1010	428

	Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Note
Frequency 50 Hz								
	1127 ÷ 3380	COMIST 250 NM	55510010	7	3N AC 50Hz 400V	7,5 + 1,1	18	4) 8)
	1127 ÷ 3380	COMIST 250 DSPNM	5430050	7	3N AC 50Hz 400V	7,5 + 1,1	18	4) 8)
Frequency 60 Hz								
	1127 ÷ 3380	COMIST 250 NM	55515410	7	3N AC 60Hz 380V	9,0 + 1,3	18	4) 8)
	1127 ÷ 3380	COMIST 250 DSPNM	53305410	7	3N AC 60Hz 380V	9,0 + 1,3	18	4) 8)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

COMIST 250 DSPNM: modulation kit

PART NO.

98000055

COMIST 250 DSPNM: modulating probe kit (see page 288)

OPTIONAL

DESCRIPTION

Steam pre-heater (17)

Working with extra heavy oil with viscosity till 100°E at 50°C

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTES

4 Equipped with air closure device.

8 Can be used for automatic fuel switching.

17 Steam regulator not included.

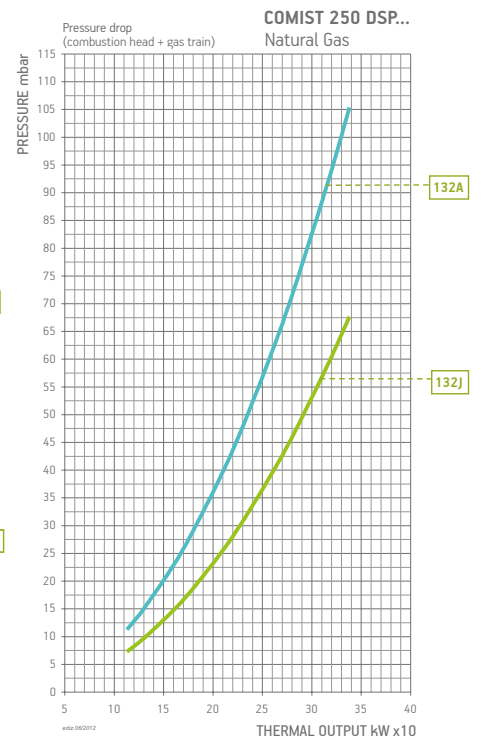
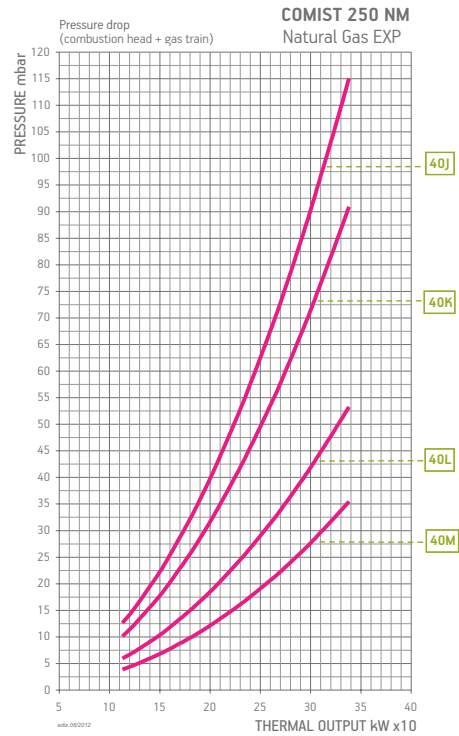
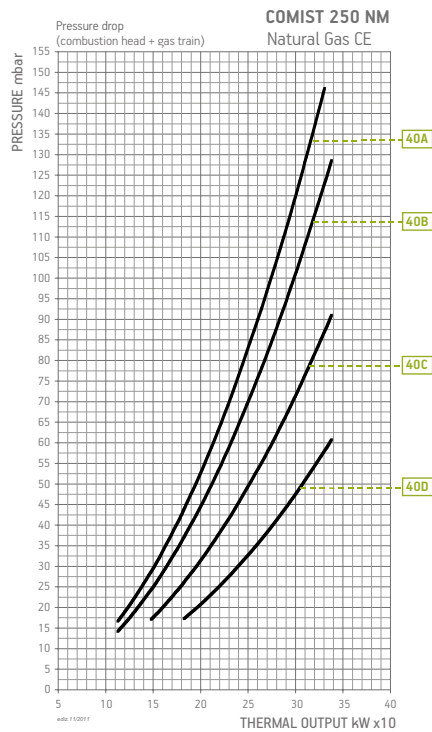
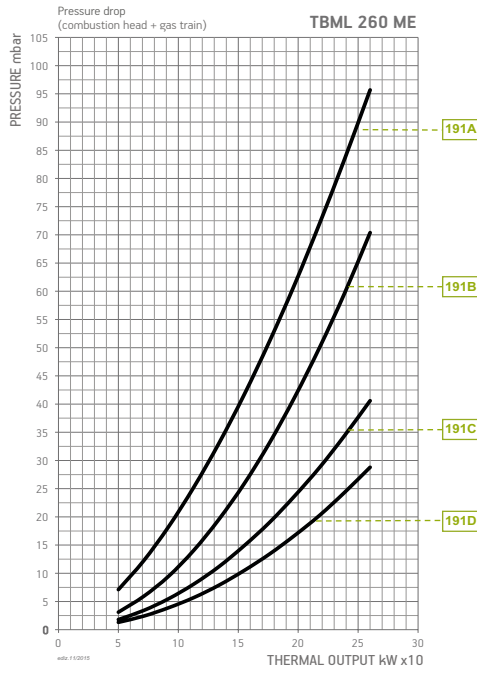
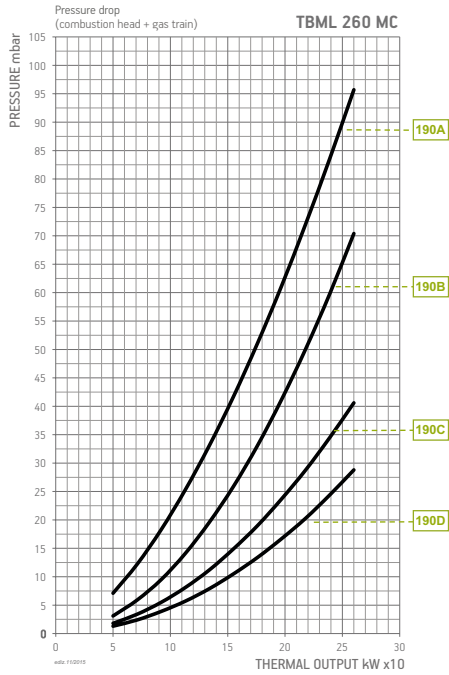
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

Heavy Oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

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

BURNER/GAS TRAIN MATCH



DUAL FUEL

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.		
TBML 260 MC	Natural gas	190A	CE/EXP	360	CTV	19990624	Included	-	Included	D7	
		190B	CE/EXP	500	CTV	19990584	Included	-	Included	D7	
		190C	CE/EXP	500	CTV	19990585	Included	-	Included	D7	
		190D	CE/EXP	500	CTV	19990586	Included	-	Included	D7	
TBML 260 ME	Natural gas	191A	CE/EXP	360	CTV	19990562	Included	-	Included	D2	
		191B	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
		191C	CE/EXP	500	CTV	19990525	Included	-	Included	D2	
		191D	CE/EXP	500	CTV	19990526	Included	-	Included	D2	
COMIST 250 DSPGM	Natural gas	132A	CE	500	CTV	Included	97392410	-	Included	D5	14)
COMIST 250 DSPNM		132J	EXP	140	CTV	Included	-	-	Included	DE5	

Burner model	Gas type	Version	Curve on graph	P.Max** mbar	Execution	Gas train	Regulator with incorporated filter	Burner/gas train adapter	Pic.	Notes
						Part no.	Part no.	Part no.		
COMIST 250 NM	Natural gas	CE	40A	500	CTV	19990457	97392410	-	B4	6) 14)
			40B	500	CTV	19990459	97392410	-	B4	6) 14)
			40C	500	CTV	19990461	97392410	96005003	B5	6) 14)
			40D	500	CTV	19990463	97392420	96005004	B5	14)
		EXP	40J	140	CTV	19990456	-	-	BE4	6)
			40K	140	CTV	19990457	-	-	BE4	6)
					CTV	19990458	-	-	BE4	6)
			40L	140	CTV	19990459	-	-	BE4	6)
					CTV	19990460	-	96005003	BE5	6)
			40M	140	CTV	19990461	-	96005003	BE5	6)
			CTV	19990462	-	96005004	BE5			
			CTV	19990463	-	96005004	BE5			

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.		
TBML 260 MC	LPG	CE/EXP	360	CTV	19990624	Included	-	Included	98000368	D7	
TBML 260 ME	LPG	CE/EXP	360	CTV	19990562	Included	-	Included	98000368	D2	

To choose the correct gas train please refer to the information on page 20 and page 21.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

6 Should be the gas pressure at the safety valve lower than 12 bar, please replace the min pressure switch with GW50.

14 The burner must be completed with the pressure regulator to comply to Norm EN676.

CTV Gas train with Valve Tightness Control.

** Maximum gas inlet pressure at pressure regulator.



TBML 360 MC

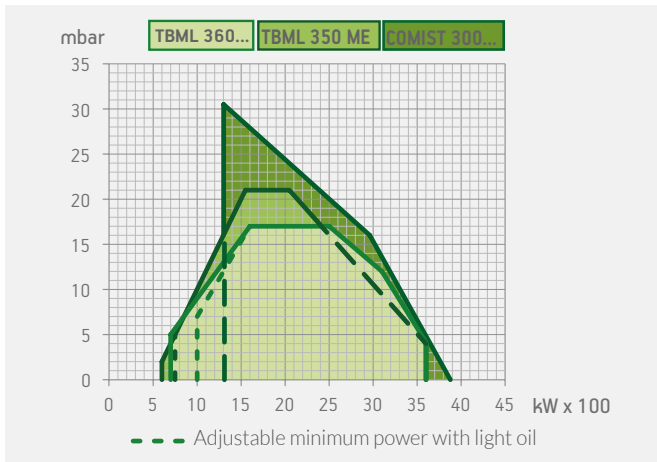


TBML 360 ME

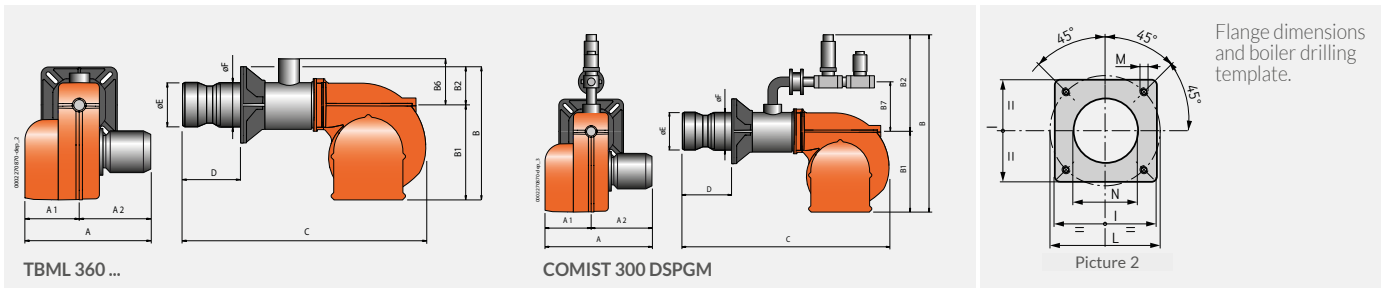


COMIST 300 DSPGM

	TBML 360 MC	TBML 360 ME	COMIST 300 DSPGM
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Two-stage progressive operation on gas, two-stage on light oil.	mechanical two-stage progressive/ two-stage		
Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Modulating operation on gas, two-stage on light oil.		modulating electronic/ two-stage	
Alternating natural gas/light oil burner. Operation:			mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•		•
Modulation ratio:	1:5	1:5	1:3
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 2	class 2	
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2	
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head 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	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
Device made of sound-absorbing material to reduce fan noise.	•	•	
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.	•	•	
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.			•
Fail proof connectors for burner/gas train connection.	•	•	
Gas train outlet:	up	up	up
Electric motor for pump drive.			•
Pump connected to fan motor through electromagnetic clutch.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and safety valve.	•	•	
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.			•
Atomisation unit with magnet to control the outlet/nozzle return pins.			•
Fuel switch device:	manual	manual	automatic
Flame detection by UV photocell.	•	•	•
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:	IP40	IP40	IP40



Model	Size of packaging			Weight kg
	L	P	H	
TBML 360 MC	1070	980	810	120
TBML 360 ME	1070	980	810	117
COMIST 300 DSPGM	2030	1150	1010	348



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	B7 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
TBML 360 MC	910	490	420	560	400	160	200	-	1360	300 ÷ 470	270	219	320	310 ÷ 370	M12	275	2
TBML 360 ME	910	490	420	620	400	220	200	-	1280	300 ÷ 470	270	219	320	310 ÷ 370	M12	275	2
COMIST 300 DSPGM	1035	555	480	1260	580	680	-	385	1750	320 ÷ 500	320	273	440	400 ÷ 540	M20	330	2

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
NEW	class 2	700(1000)* ÷ 3600	TBML 360 MC	56670010	1,5	3N AC 50Hz 400V	7,5	3) 4) 16)
NEW	class 2	700(1000)* ÷ 3600	TBML 360 ME	56680010	1,5	3N AC 50Hz 400V	7,5	3) 4) 16)
		1304 ÷ 3878	COMIST 300 DSPGM	53600050	1,5	3N AC 50Hz 400V	7,5+1,5	4) 8)
			Frequency 60 Hz					
NEW	class 2	700(1000)* ÷ 3600	TBML 360 MC	56675410	1,5	3N AC 60Hz 380V	9,0	3) 4) 16)
NEW	class 2	700(1000)* ÷ 3600	TBML 360 ME	56685410	1,5	3N AC 60Hz 380V	9,0	3) 4) 16)
		1304 ÷ 3878	COMIST 300 DSPGM	53605410	1,5	3N AC 60Hz 380V	9,0+1,3	4) 8)

TO COMPLETE THE BURNER

DESCRIPTION	PART NO.
TBML 360 ME: modulating probe kit LCM 100 (see page 288)	
COMIST 300 DSPGM: nozzle with 1:3 ratio (see page 289)	

MODULATING MODE

DESCRIPTION	PART NO.
TBML 360 MC: modulation kit	98000057
COMIST 300 DSPGM: modulation kit	98000055
TBML 360 MC/COMIST 300 DSPGM: modulating probe kit (see page 288)	

NOTES

- 3 Soundproof lid on burner air intake.
 - 4 Equipped with air closure device.
 - 8 Can be used for automatic fuel switching.
 - 16 CE approved according to the Gas Directive 2009/142/EC and European standard EN267.
 - *) Min thermal capacity with light oil operation.
- Net calorific value at reference conditions of 0°C, 1013mbar:
 Natural Gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³.
 LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.
 Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.
- 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 cover (see page 293)	97980057

DUAL FUEL BURNERS ACCESSORIES

TBML 360 MC: line filter, flex hoses, nozzles, boiler coupling kit, plug for wiring.
TBML 360 ME: line filter, flex hoses, nozzles, boiler coupling kit.
COMIST 300 DSPGM: line filter, flex hoses, boiler coupling kit.



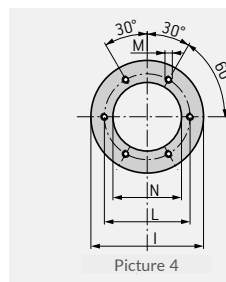
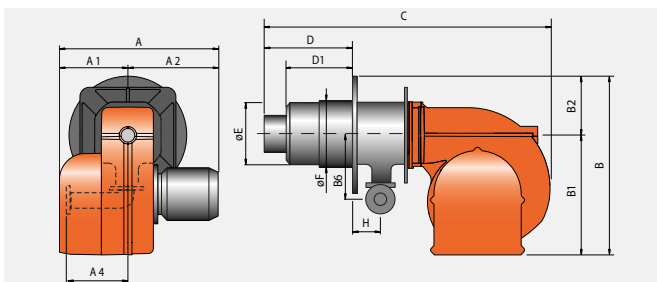
TBML 350 ME

Alternating natural gas/light oil burner according to european regulation EN676and EN267.
Operation:

modulating electronic

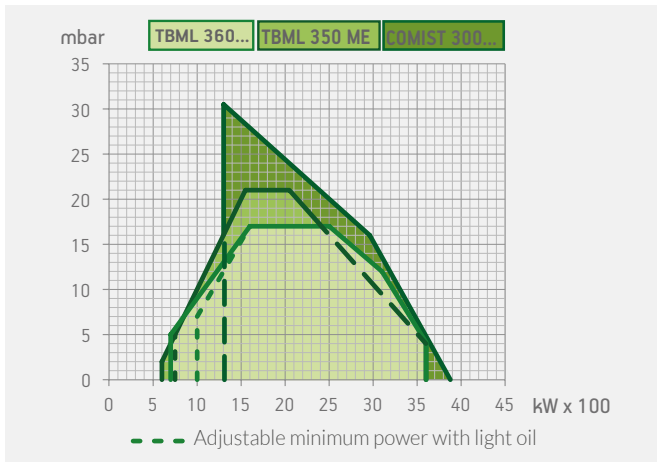
Modulation ratio:	natural gas: 1:6 - light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2
Adjusting the combustion head.	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•
Fixed boiler coupling flange.	•
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:	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•
Fail proof connectors for burner/gas train connection.	•
Gas train outlet:	right down / left dow
Electric motor for pump drive.	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch.	•
Fuel switch device:	manual
Flame detection by UV photocell.	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.	•
Electric protection rating:	IP54

DUAL FUEL
GAS/LIGHT OIL



Flange dimensions and boiler drilling template.

Modell	A mm	A1 mm	A2 mm	A4 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	H mm	I mm	L mm	M mm	N mm	Pic.
TBML 350 ME	1130	530	600	400	875	585	290	450	1855	585	497	344	355	246	580	520	M20	360	4



Model	Size of packaging			Weight kg
	L	P mm	H	
TBML 350 ME	1970	1280	1150	390

Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
see page 264	600(750)* ÷ 3600	TBML 350 ME Frequency 50 Hz	56710010	1,5	3N AC 50Hz 400V	7,5+1,5	4)
see page 264	600(750)* ÷ 3600	TBML 350 ME Frequency 60 Hz	56715410	1,5	3N AC 60Hz 380V	9,0+1,7	4)

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:5 ratio (see page 289)

Modulating probe kit LCM 100 (see page 288)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION

Soundproof burner cover (see page 293)

PART NO.

97980057

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTES

4 Equipped with air closure device.

*) Min thermal capacity with light oil operation.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

LPG: Hi = 92 MJ/m³ = 22000 kcal/m³.

Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

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



COMIST 300 NM



COMIST 300 DSPNM

COMIST 300 NM

COMIST 300 DSPNM

Alternating natural gas/heavy oil burner. Operation:

two-stage

mechanical two-stage progressive

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

•

Modulation ratio:

1:3

Adjusting the combustion head.

•

•

Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.

•

•

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

•

•

Combustion air intake with butterfly valve. Air flow adjustment:

electric servomotor

mechanical cam

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

•

•

CE version gas train is complete with operation and safety valve with electromagnetic drive, valve tightness control, 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 and maximum pressure switch, pressure regulator and gas filter.

•

Fail proof connectors for burner/gas train connection.

•

Gas train outlet:

up

up

Electric motor for pump drive.

•

•

Fuel supply circuit made of gear pump with pressure adjustment, shut-off valves and control flow valve.

•

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

•

Electric fuel preheater with antigas valve, filter, thermometer, adjustment, minimum and safety thermostats.

•

•

Atomisation unit with magnet to control the outlet/nozzle return pins.

•

•

Fuel switch device:

automatic

automatic

Flame detection by UV photocell.

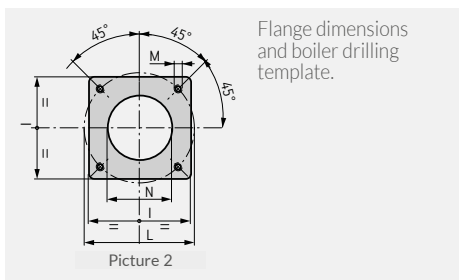
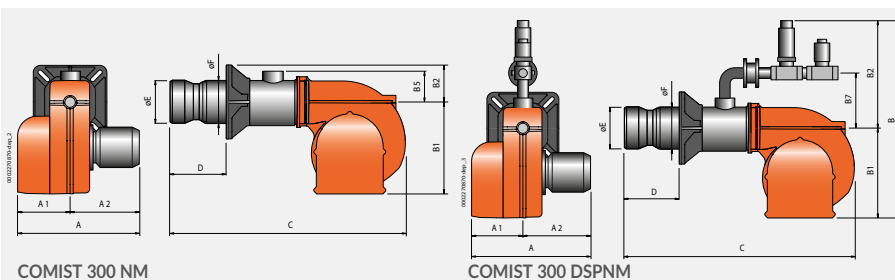
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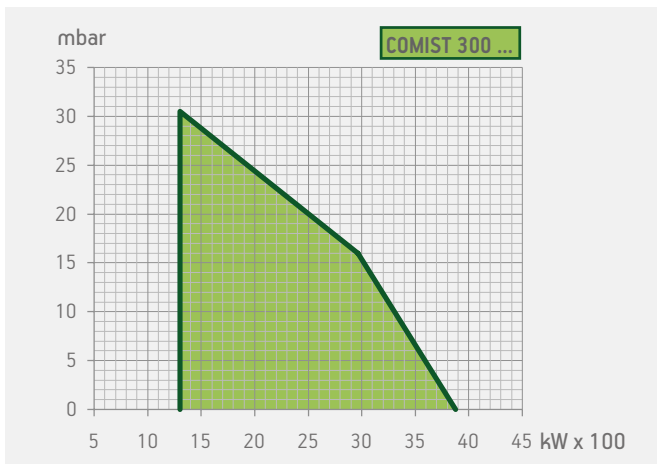
Electric protection rating:

IP40

IP40



Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B6 mm	B7 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
COMIST 300 NM	1025	545	480	800	580	220	166	-	1750	320 ÷ 500	320	273	440	400 ÷ 540	M20	330	2
COMIST 300 DSPNM	1035	555	480	1260	580	680	-	385	1750	320 ÷ 500	320	273	440	400 ÷ 540	M20	330	2



Model	Size of packaging			Weight kg
	L	P mm	H	
COMIST 300 NM	1970	1280	1150	430
COMIST 300 DSPNM	1970	1280	1150	448

	Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Note
Frequency 50 Hz								
	1304 ÷ 3878	COMIST 300 NM	55560010	7	3N AC 50Hz 400V	7,5+2,2	25	4) 8)
	1304 ÷ 3878	COMIST 300 DSPNM	5432050	7	3N AC 50Hz 400V	7,5+2,2	25	4) 8)
Frequency 60 Hz								
	1304 ÷ 3878	COMIST 300 NM	55565410	7	3N AC 60Hz 380V	9,0+2,6	25	4) 8)
	1304 ÷ 3878	COMIST 300 DSPNM	53325410	7	3N AC 60Hz 380V	9,0+2,6	25	4) 8)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

COMIST 300 DSPNM: modulation kit

PART NO.

98000055

COMIST 300 DSPNM: modulating probe kit (see page 288)

NOTES

4 Equipped with air closure device.

8 Can be used for automatic fuel switching.

17 Steam regulator not included.

*) Min thermal capacity with light oil operation.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

Heavy Oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

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

OPTIONAL

DESCRIPTION

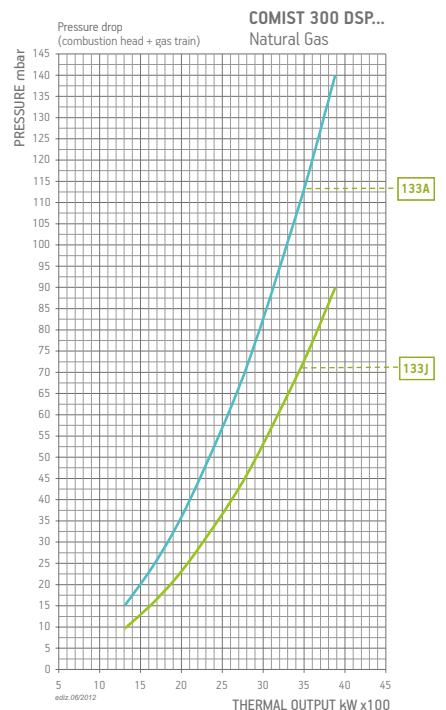
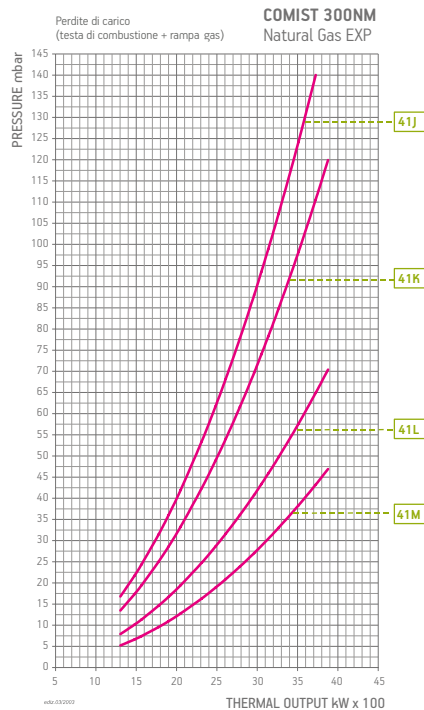
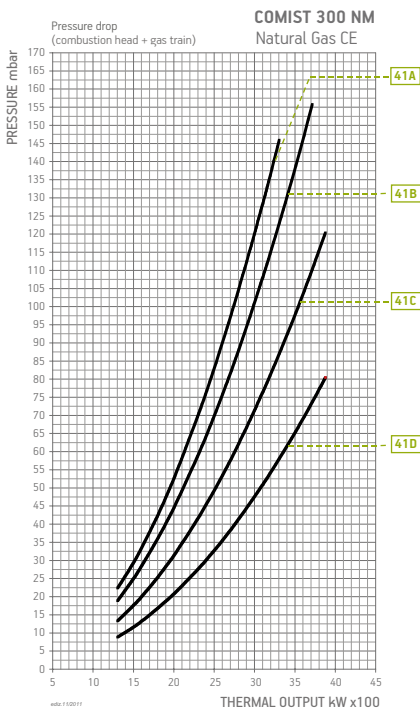
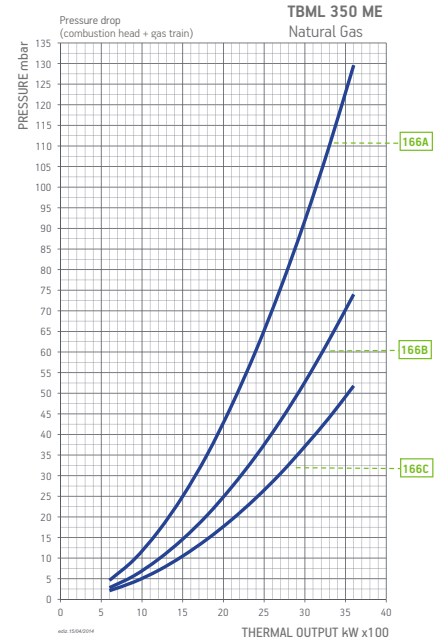
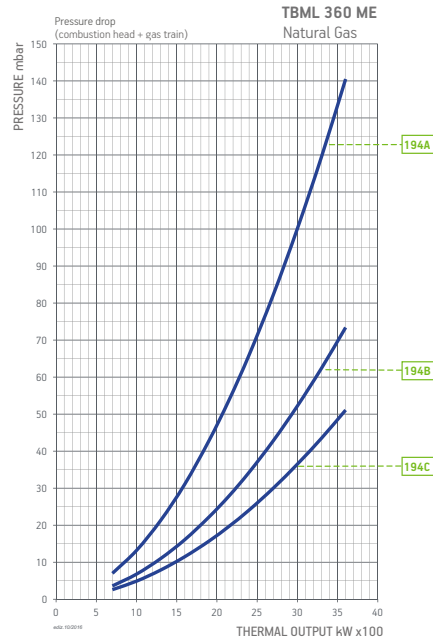
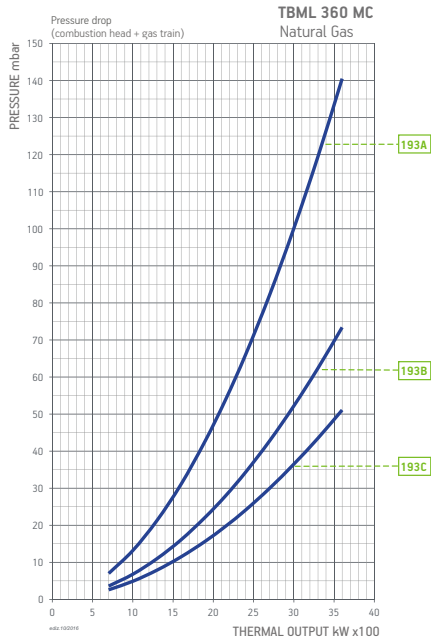
Steam pre-heater (17)

Working with extra heavy oil with viscosity till 100°E at 50°C

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

BURNER/GAS TRAIN MATCH



DUAL FUEL

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.		
TBML 360 MC	Natural gas	193A	CE/EXP	500	CTV	19990584	Included	-	Included	D7	
		193B	CE/EXP	500	CTV	19990585	Included	-	Included	D7	
		193C	CE/EXP	500	CTV	19990586	Included	-	Included	D7	
TBML 360 ME	Natural gas	194A	CE/EXP	500	CTV	19990524	Included	-	Included	D2	
		194B	CE/EXP	500	CTV	19990525	Included	-	Included	D2	
		194C	CE/EXP	500	CTV	19990526	Included	-	Included	D2	
TBML 350 ME	Natural gas	166A	CE/EXP	500	CTV	19990587	Included	96005006	Included	D4	
		166B	CE/EXP	500	CTV	19990588	Included	-	Included	D4	
		166C	CE/EXP	500	CTV	19990589	Included	96005005	Included	D4	
COMIST 300 DSPGM COMIST 300 DSPNM	Natural gas	133A	CE	500	CTV	Included	97392410	-	Included	D5	14)
		133J	EXP	140	CTV	Included	-	-	Included	DE5	

Burner model	Gas type	Version	Curve on graph	P.Max** mbar	Execution	Gas train	Burner/gas train adapter	Valve tightness control kit	Pic.	Notes
						Part no.	Part no.	Part no.		
COMIST 300 NM	Natural gas	CE	41A	500	CTV	19990457	97392410	96000012	B4	6) 14)
			41B	500	CTV	19990459	97392410	96000012	B4	6) 14)
			41C	500	CTV	19990461	97392410	-	B5	6) 14)
			41D	500	CTV	19990463	97392410	96005004	B5	14)
		EXP	41J	140	CTV	19990456	-	96000012	BE4	6)
			41K	140	CTV	19990457	-	96000012	BE4	6)
			41L	140	CTV	19990458	-	96000012	BE4	6)
			41M	140	CTV	19990459	-	96000012	BE4	6)
			41N	140	CTV	19990460	-	-	BE5	6)
			41O	140	CTV	19990461	-	-	BE5	6)
			41P	140	CTV	19990462	-	96005004	BE5	
41Q	140	CTV	19990463	-	96005004	BE5				

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.			
TBML 360 MC	LPG	CE/EXP	500	CTV	19990584	Included	-	Included	98000369	D7	
TBML 360 ME	LPG	CE/EXP	500	CTV	19990524	Included	-	Included	98000369	D2	
TBML 350 ME	LPG	CE/EXP	500	CTV	19990587	Included	96005006	Included	-	D4	

To choose the correct gas train please refer to the information on page 20 and page 21.
For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

6 Should be the gas pressure at the safety valve lower than 12 bar, please replace the min pressure switch with GW50.

14 The burner must be completed with the pressure regulator to comply to Norm EN676.

CTV Gas train with Valve Tightness Control.

**) Maximum gas inlet pressure at pressure regulator.



Alternating natural gas/light oil burner. Operation:

Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).

Modulation ratio:

Adjusting the combustion head.

Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.

Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.

Combustion air intake with butterfly valve. Air flow adjustment:

Fully closing air damper on shutdown to avoid loss of heat through the chimney.

CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.

Gas train outlet:

Electric motor for pump drive.

Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.

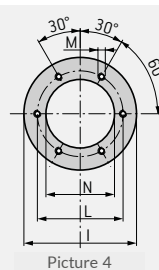
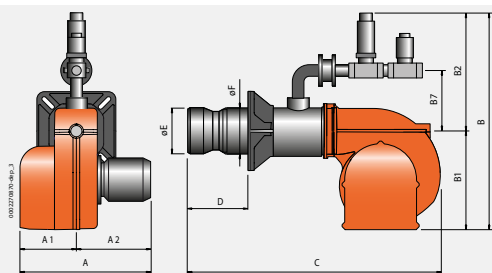
Atomisation unit with magnet to control the outlet/nozzle return pins.

Fuel switch device:

Flame detection by UV photocell.

Electric protection rating:

	GI MIST 350 DSPGM	GI MIST 420 DSPGM	GI MIST 510 DSPGM
	mechanical two-stage progressive	mechanical two-stage progressive	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•	•	•
Modulation ratio:	1:3	1:3	1:3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	mechanical cam	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•
Gas train outlet:	up	up	up
Electric motor for pump drive.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.	•	•	•
Atomisation unit with magnet to control the outlet/nozzle return pins.	•	•	•
Fuel switch device:	automatic	automatic	automatic
Flame detection by UV photocell.	•	•	•
Electric protection rating:	IP40	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B7 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
GI MIST 350 DSPGM	1345	660	685	1590	750	840	545	1970	230 ÷ 600	355	325	540	480	M20	375	4
GI MIST 420 DSPGM	1345	660	685	1530	750	780	490	2030	320 ÷ 625	400	355	580	520	M20	420	4
GI MIST 510 DSPGM	1345	660	685	1540	750	790	495	2030	320 ÷ 625	400	355	580	520	M20	420	4



Model	Size of packaging			Weight kg
	L	P mm	H	
GI MIST 350 DSPGM	2260	1520	1150	640
GI MIST 420 DSPGM	2260	1520	1150	680
GI MIST 510 DSPGM	2260	1520	1150	700

	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
		Frequency 50 Hz					
	1581 ÷ 4743	GI MIST 350 DSPGM	6675050	1,5	3N AC 50Hz 400V	15,0+2,2	4) 8)
	1840 ÷ 5522	GI MIST 420 DSPGM	6678050	1,5	3N AC 50Hz 400V	18,5+2,2	4) 8)
	2430 ÷ 6500	GI MIST 510 DSPGM	6681050	1,5	3N AC 50Hz 400V	18,5+3,0	4) 8)
		Frequency 60 Hz					
	1581 ÷ 4743	GI MIST 350 DSPGM	66755410	1,5	3N AC 60Hz 380V	11,0+2,6	4) 8)
	1840 ÷ 5522	GI MIST 420 DSPGM	66785410	1,5	3N AC 60Hz 380V	13,0+2,6	4) 8)
	2430 ÷ 6500	GI MIST 510 DSPGM	66815410	1,5	3N AC 60Hz 380V	22,0+3,5	4) 8)

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

PART NO.

Modulation kit

98000055

Modulating probe kit (see page 288)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION

PART NO.

Soundproof burner cover (see page 293)

97980058

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

NOTES

4 Equipped with air closure device.

8 Can be used for automatic fuel switching.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

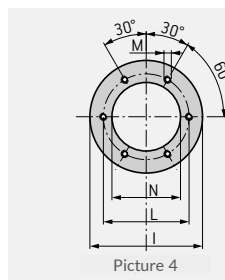
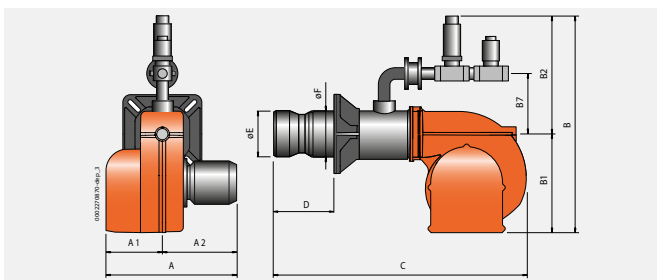
Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

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



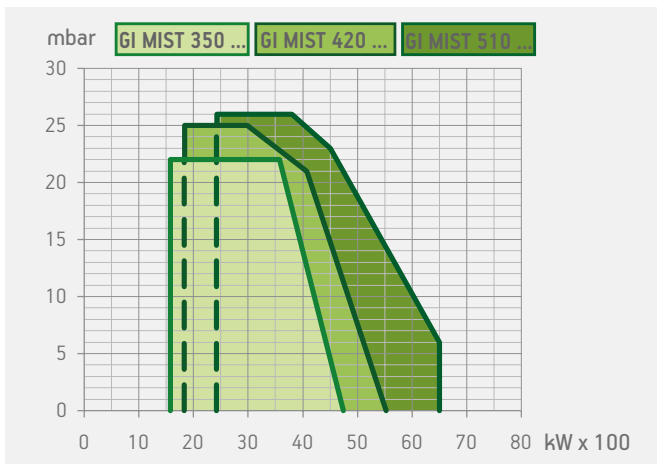
Alternating natural gas/extra heavy oil burner. Operation:

	GI MIST 350 DSPNM-D	GI MIST 420 DSPNM-D	GI MIST 510 DSPNM-D
	mechanical two-stage progressive	mechanical two-stage progressive	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•	•	•
Modulation ratio:	1:3	1:3	1:3
Adjusting the combustion head.	•	•	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•	•	•
Sliding boiler coupling flange to adapt the blast-pipe to the various types of boilers.	•	•	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam	mechanical cam	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•	•
Gas train outlet:	up	up	up
Electric motor for pump drive.	•	•	•
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.	•	•	•
Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, adjustment, minimum and safety thermostats.	•	•	•
Atomisation unit with magnet to control the outlet/nozzle return pins.	•	•	•
Heating element for pump, valve and atomisation unit.	•	•	•
Fuel switch device:	automatic	automatic	automatic
Flame detection by UV photocell.	•	•	•
Electric protection rating:	IP40	IP40	IP40



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B7 mm	C mm	D mm	E mm	F mm	I mm	L mm	M mm	N mm	Pic.
GI MIST 350 DSPNM-D	1345	660	685	1590	750	840	545	1970	230 ÷ 600	355	325	540	480	M20	375	4
GI MIST 420 DSPNM-D	1345	660	685	1530	750	780	490	2030	320 ÷ 625	400	355	580	520	M20	420	4
GI MIST 510 DSPNM-D	1345	660	685	1540	750	790	495	2030	320 ÷ 625	400	355	580	520	M20	420	4



Model	Size of packaging			Weight kg
	L	P mm	H	
GI MIST 350 DSPNM-D	2260	1520	1150	802
GI MIST 420 DSPNM-D	2260	1520	1150	847
GI MIST 510 DSPNM-D	2260	1520	1150	870

	Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Note
		Frequency 50 Hz						
	1581 ÷ 4743	GI MIST 350 DSPNM-D	6705050	50	3N AC 50Hz 400V	15,0+2,2	28,5	4) 8)
	1840 ÷ 5522	GI MIST 420 DSPNM-D	6708050	50	3N AC 50Hz 400V	18,5+2,2	28,5	4) 8)
	2430 ÷ 6500	GI MIST 510 DSPNM-D	6711050	50	3N AC 50Hz 400V	18,5+3,0	28,5	4) 8)
		Frequency 60 Hz						
	1581 ÷ 4743	GI MIST 350 DSPNM-D	67055410	50	3N AC 60Hz 380V	11,0+2,6	28,5	4) 8)
	1840 ÷ 5522	GI MIST 420 DSPNM-D	67085410	50	3N AC 60Hz 380V	13,0+ ,3,5	28,5	4) 8)
	2430 ÷ 6500	GI MIST 510 DSPNM-D	67115410	50	3N AC 60Hz 380V	22,0+3,5	28,5	4) 8)

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:3 ratio (see page 289)

MODULATING MODE

DESCRIPTION

Modulation kit

PART NO.

98000055

Modulating probe kit (see page 288)

NOTES

4 Equipped with air closure device.

8 Can be used for automatic fuel switching.

17 Steam regulator not included.

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

Natural Gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³.

Heavy Oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

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

OPTIONAL

DESCRIPTION

Steam pre-heater (17)

Working with extra heavy oil with viscosity till 100°E at 50°C

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION

Soundproof burner cover (see page 293)

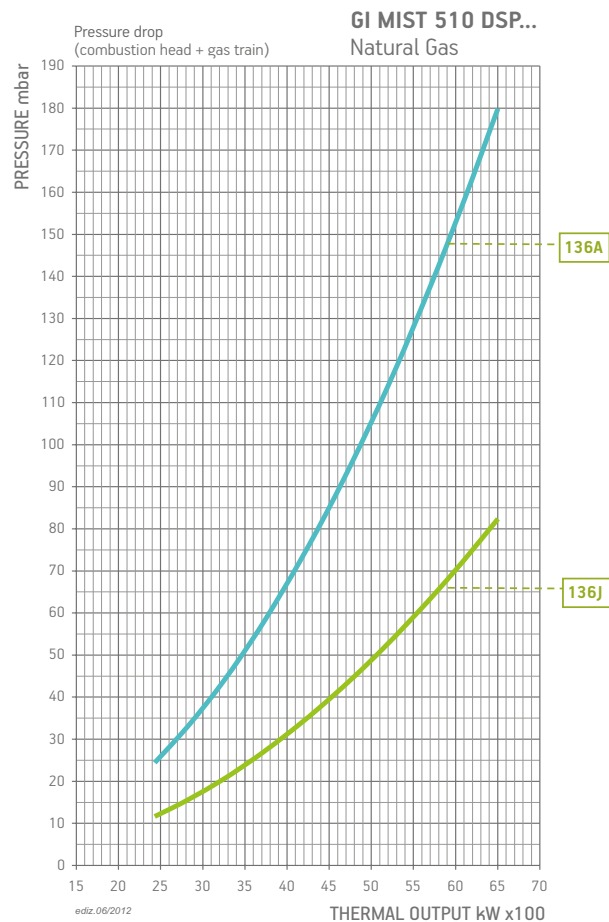
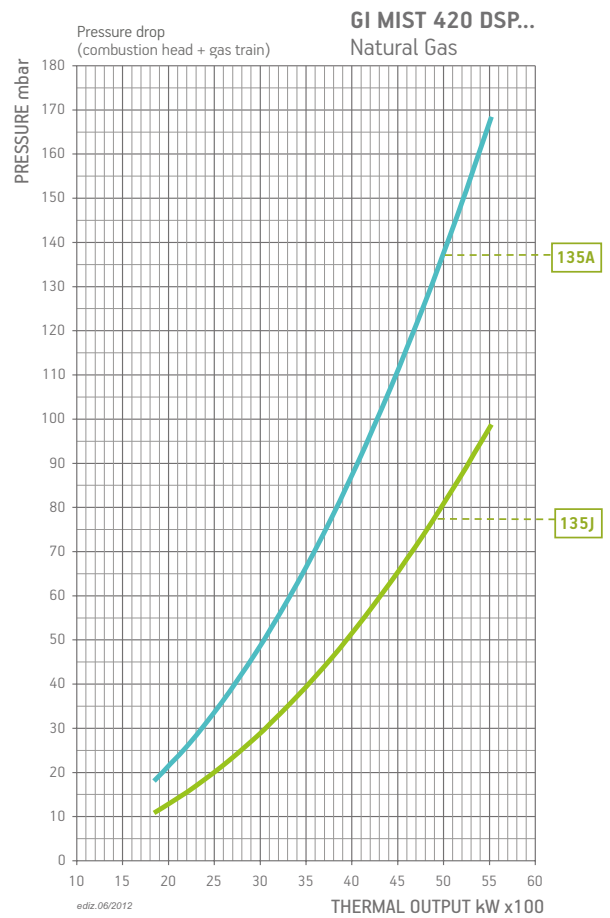
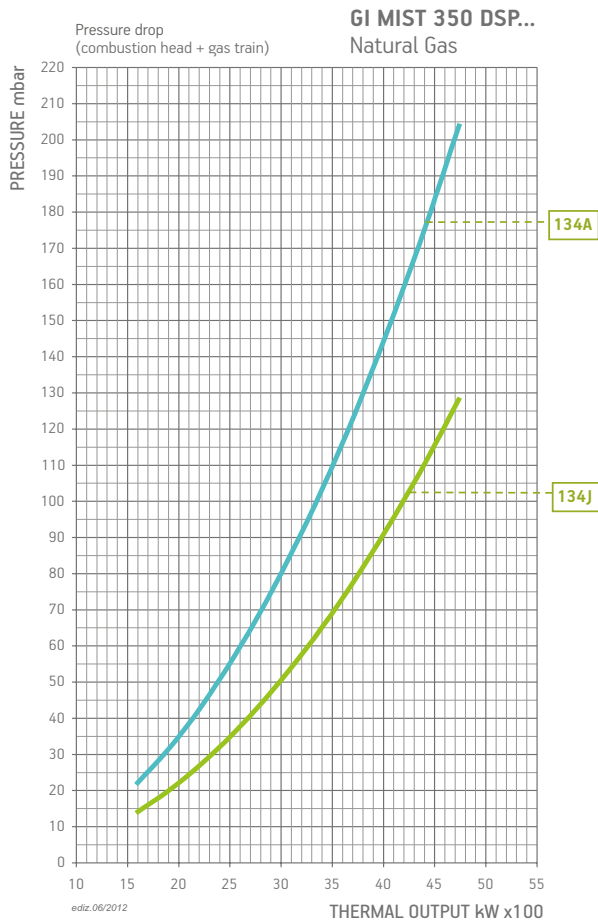
PART NO.

97980058

DUAL FUEL BURNERS ACCESSORIES

Self-cleaning line filter with heating element and thermostat, flex hoses, boiler coupling, kit

BURNER/GAS TRAIN MATCH



DUAL FUEL

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	Valve tightness control kit	Pic.	Notes
						Part no.	Part no.	Part no.		
GI MIST 350 DSPGM	Natural gas	134A	CE	500	CTV	Included	97392430	Included	D5	14)
GI MIST 350 DSPNM-D		134J	EXP	140	CTV	Included	-	Included	DE5	
GI MIST 420 DSPGM	Natural gas	135A	CE	500	CTV	Included	97392440	Included	D5	14)
GI MIST 420 DSPNM-D		135J	EXP	140	CTV	Included	-	Included	DE5	
GI MIST 510 DSPGM	Natural gas	136A	CE	500	CTV	Included	97392440	Included	D5	14)
GI MIST 510 DSPNM-D		136J	EXP	140	CTV	Included	-	Included	DE5	

To choose the correct gas train please refer to the information on page 21.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

14 The burner must be completed with the pressure regulator to comply to Norm EN676.
CTV Gas train with Valve Tightness Control.

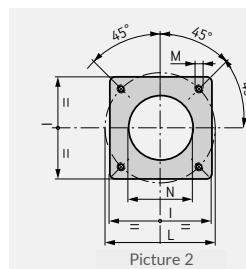
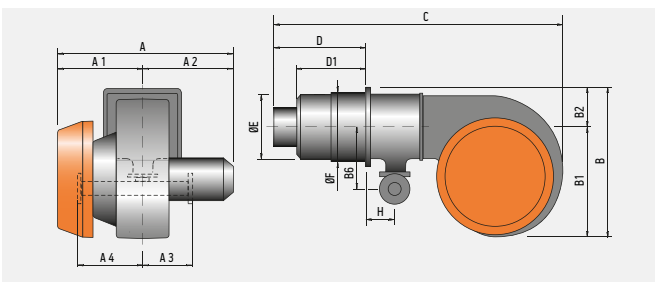
**) Maximum gas inlet pressure at pressure regulator.



Alternating natural gas/light oil burner according to european regulation EN676 and EN267. Operation:

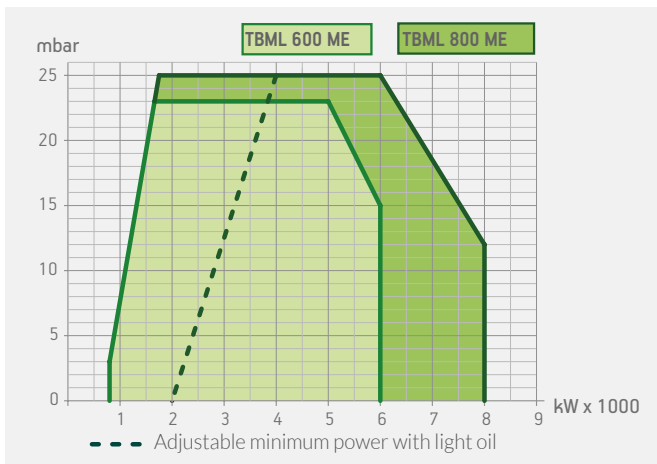
	TBML 600 ME	TBML 800 ME
	modulating electronic	modulating electronic
Modulation ratio:	gas: 1:7 - light oil: 1:3	gas: 1:10 - light oil: 1:4
Burner with Low NOx and CO emissions on gas according to European standard EN676:	class 3	class 3
Burner with Low NOx and CO emissions on light oil according to European standard EN267:	class 2	class 2
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•	•
Fixed boiler coupling flange.	•	•
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:	electric servomotor	electric servomotor
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•	•
Device made of sound-absorbing material to reduce fan noise.	•	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•	•
Fail proof connectors for burner/gas train connection.	•	•
Gas train outlet:	right down / left down	right down / left down
Electric motor for pump drive.	•	•
Fuel supply circuit made of gear pump with pressure adjustment, control flow valve, shut-off valves and safety valve, safety pressure switch.	•	•
Fuel switch device:	manual	manual
Flame detection by UV photocell.	•	•
Control panel equipped either with display showing the working process and with the keyboard for the burner adjustment.	•	•
Electric protection rating:	IP54	IP54

DUAL FUEL GAS/LIGHT OIL



Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	A3 mm	A4 mm	B mm	B1 mm	B2 mm	B6 mm	C mm	D mm	D1 mm	E mm	F mm	H mm	I mm	L mm	M mm	N mm	Pic.
TBML 600 ME	1230	570	660	335	425	1000	740	260	410	2020	715	570	418	432	190	520	594	M20	440	2
TBML 800 ME	1230	570	660	335	425	1000	740	260	410	2020	715	570	418	432	190	520	594	M20	440	2



Model	Size of packaging			Weight kg
	L	P mm	H	
TBML 600 ME	2200	1460	1200	515
TBML 800 ME	2200	1460	1200	515

	Emissions class	Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
			Frequency 50 Hz					
	see page 276	800(2000)* ÷ 6000	TBML 600 ME	67300010	1,5	3N AC 50Hz 400V	11,0+2,2	4)
	see page 276	800(2000)* ÷ 8000	TBML 800 ME	67320010	1,5	3N AC 50Hz 400V	15,0+2,2	4)
			Frequency 60 Hz					
	see page 276	800(2000)* ÷ 6000	TBML 600 ME	67305410	1,5	3N AC 60Hz 380V	15,0+2,6	4)
	see page 276	800(2000)* ÷ 8000	TBML 800 ME	67325410	1,5	3N AC 60Hz 380V	18,5+2,6	4)

The working field of the burner, as expressed in the "Thermal output kW" column, depends on the characteristics of the gas train it works with (see burner/train match diagram).

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:5 ratio (see page 289).

Modulating probe kit LCM 100 (see page 288)

ACCESSORIES AVAILABLE ON REQUEST

DESCRIPTION

PART NO.

Soundproof burner cover (see page 293)

97980058

Nozzle kit for boiler at reverse flame

98000361

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, boiler coupling kit

NOTES

4 Equipped with air closure device.

*) Min thermal capacity with light oil operation.

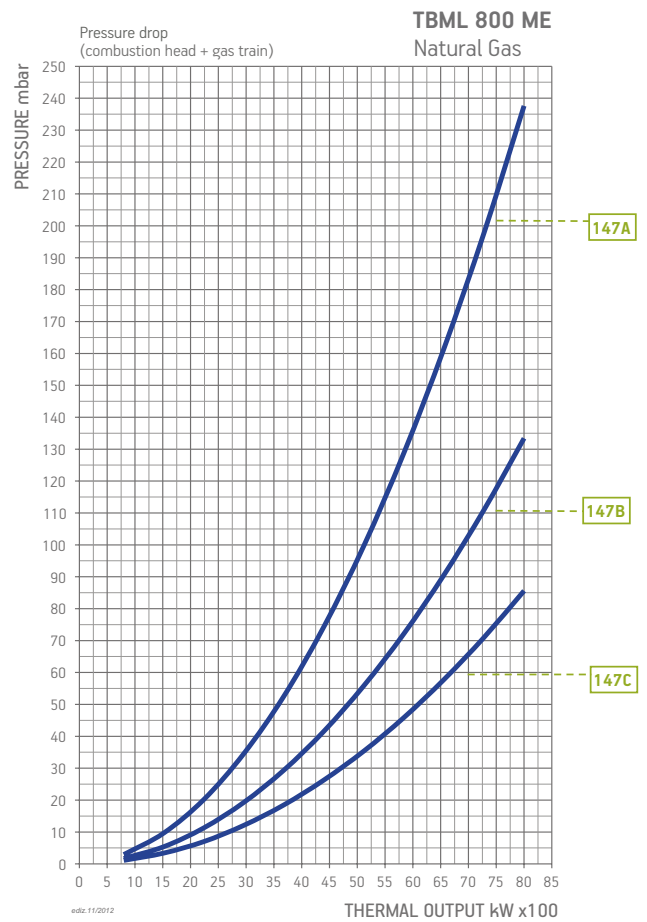
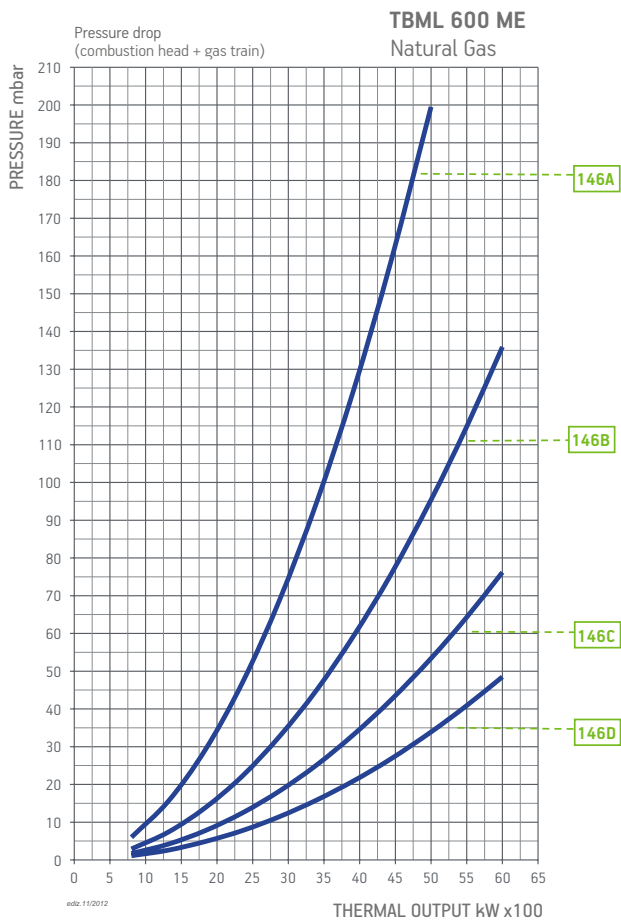
Net calorific value at reference conditions of 0°C, 1013mbar:

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

Light Oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

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

BURNER/GAS TRAIN MATCH



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	Regulator with incorporated filter	Valve tightness control kit	Pic.	Notes
						Part no.	Part no.	Part no.	Part no.		
TBML 600 ME	Natural gas	146A	CE/EXP	500	CTV	19990587	Included	96005005	Included	D4	
		146B	CE/EXP	500	CTV	19990588	Included	96005008	Included	D4	
		146C	CE/EXP	500	CTV	19990589	Included	-	Included	D4	
		146D	CE/EXP	500	CTV	19990590	Included	96005009	Included	D4	
TBML 800 ME	Natural gas	147A	CE/EXP	500	CTV	19990588	Included	96005008	Included	D4	
		147B	CE/EXP	500	CTV	19990589	Included	-	Included	D4	
		147C	CE/EXP	500	CTV	19990590	Included	96005009	Included	D4	

To choose the correct gas train please refer to the information on page 20.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

CTV Gas train with Valve Tightness Control.

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

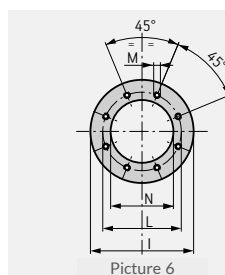
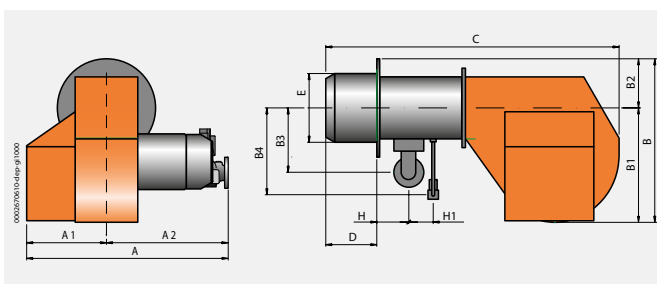


GI MIST 1000 DSPGM

Alternating natural gas/light oil burner. Operation:

	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•
Modulation ratio:	1:4
Adjusting the combustion head.	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•
Fixed boiler coupling flange.	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•
Ignition gas train complete with operation and safety valve, min. pressure switch, pressure regulator and gas filter.	•
Gas train outlet:	up
Electric motor for pump drive.	•
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.	•
Atomisation unit with magnet to control the outlet/nozzle return pins.	•
Fuel switch device:	automatic
Flame detection by UV photocell.	•
Electric protection rating:	IP40

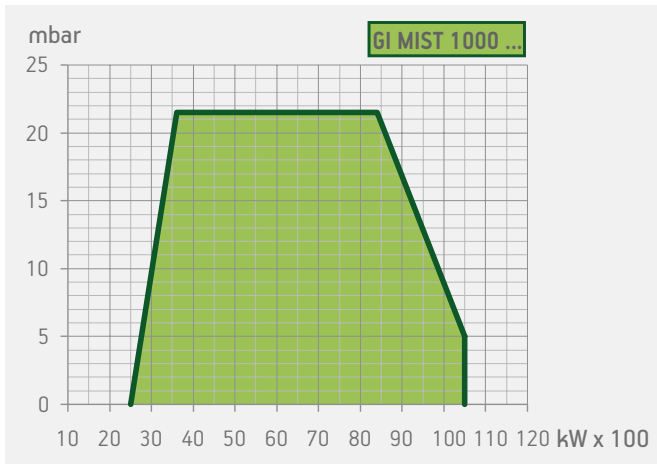
DUAL FUEL
GAS/LIGHT OIL



Picture 6

Flange dimensions and boiler drilling template.

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B3 mm	B4 mm	C mm	D mm	E mm	F mm	H mm	H1 mm	I mm	L mm	M mm	N mm	Pic.
GI MIST 1000 DSPGM	1600	800	800	1260	855	405	450	575	2350	440	480	685	175	163	685	630	M16	495	6



Model	Size of packaging			Weight kg
	L	P mm	H	
GI MIST 1000 DSPGM	2610	1760	1470	980

Thermal output kW	Model	Part no.	Max visc. °E at 20°C	Electrical supply	Motor kW	Note
Frequency 50 Hz						
2500 ÷ 10500	GI MIST 1000 DSPGM	6687010	1,5	3N AC 50Hz 400V	22,0+4,0	4) 8)
Frequency 60 Hz						
2500 ÷ 10500	GI MIST 1000 DSPGM	66875410	1,5	3N AC 60Hz 380V	30,0+3,5	4) 8)

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:5 ratio (see page 289)

MODULATING MODE

DESCRIPTION

PART NO.

Modulation kit

98000055

Modulating probe kit (see page 288)

NOTES

4 Equipped with air closure device.

8 Can be used for automatic fuel switching.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

Light oil: Hi = 42,70 MJ/kg = 10200 kcal/kg.

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

DUAL FUEL BURNERS ACCESSORIES

Line filter, flex hoses, boiler coupling kit.

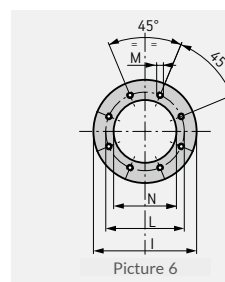
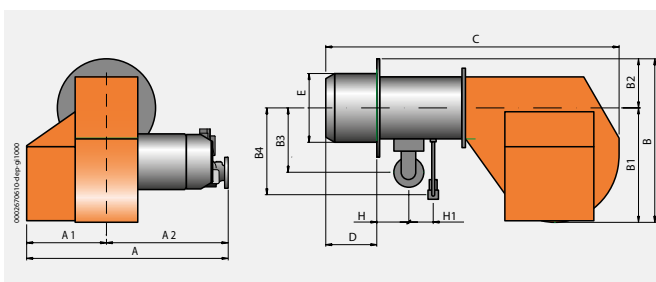


GI MIST 1000 DSPNM-D

Alternating natural gas/extra heavy oil burner. Operation:

	mechanical two-stage progressive
Continuous modulation operation by installing P.I.D. controller in the control panel (to be ordered separately with modulation probe).	•
Modulation ratio:	1:4
Adjusting the combustion head.	•
Maintenance facilitated by the possibility of removing the mixing unit and combustion head without having to remove the burner from the boiler.	•
Fixed boiler coupling flange.	•
Combustion air intake with butterfly valve. Air flow adjustment:	mechanical cam
Fully closing air damper on shutdown to avoid loss of heat through the chimney.	•
CE version gas train is complete with butterfly valve, operation and safety valve with electromagnetic drive, valve tightness control, minimum and maximum pressure switch, pressure regulator and gas filter.	•
Ignition gas train complete with operation and safety valve, min. pressure switch, pressure regulator and gas filter.	•
Gas train outlet:	up
Electric motor for pump drive.	•
Fuel supply circuit made of gear pump with pressure adjustment and control flow valve.	•
Electric fuel preheater with antigas valve, self-cleaning filter, thermometer, minimum and safety thermostats, electronic temperature regulator.	•
Atomisation unit with magnet to control the outlet/nozzle return pins.	•
Heating element for pump, valve and atomisation unit.	•
Fuel switch device:	automatic
Flame detection by UV photocell.	•
Electric protection rating:	IP40

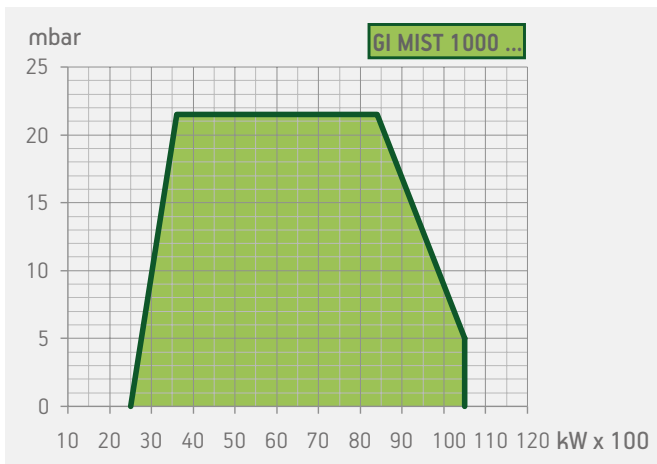
DUAL FUEL
GAS/HEAVY OIL



Flange dimensions and boiler drilling template.

Picture 6

Model	A mm	A1 mm	A2 mm	B mm	B1 mm	B2 mm	B3 mm	B4 mm	C mm	D mm	E mm	F mm	H mm	H1 mm	I mm	L mm	M mm	N mm	Pic.
GI MIST 1000 DSPNM-D	1600	800	800	1260	855	405	450	575	2350	440	480	685	175	163	685	630	M16	495	6



Model	Size of packaging			Weight kg
	L	P mm	H	
GI MIST 1000 DSPNM-D	2610	1760	1470	1120

Thermal output kW	Model	Part no.	Max visc. °E at 50°C	Electrical supply	Motor kW	Tank heating element kW	Note
Frequency 50 Hz							
2500 ÷ 10500	GI MIST 1000 DSPNM-D	6717010	50	3N AC 50Hz 400V	22,0+4,0	40	4) 8) 13)
Frequency 60 Hz							
2500 ÷ 10500	GI MIST 1000 DSPNM-D	67175410	50	3N AC 60Hz 380V	30,0+3,5	40	4) 8) 13)

TO COMPLETE THE BURNER

DESCRIPTION

Nozzle with 1:5 ratio (see page 289)

MODULATING MODE

DESCRIPTION

Modulation kit

PART NO.

98000055

Modulating probe kit (see page 288)

NOTES

- 4) Equipped with air closure device.
- 8) Can be used for automatic fuel switching.
- 13) Electrical fuel preheater provided separately, not on the machine.
- 17) Steam regulator not included.

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

Natural gas: Hi = 35,80 MJ/m³ = 8550 kcal/m³,

Heavy oil: Hi = 40,19 MJ/kg = 9600 kcal/kg.

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

OPTIONAL

DESCRIPTION

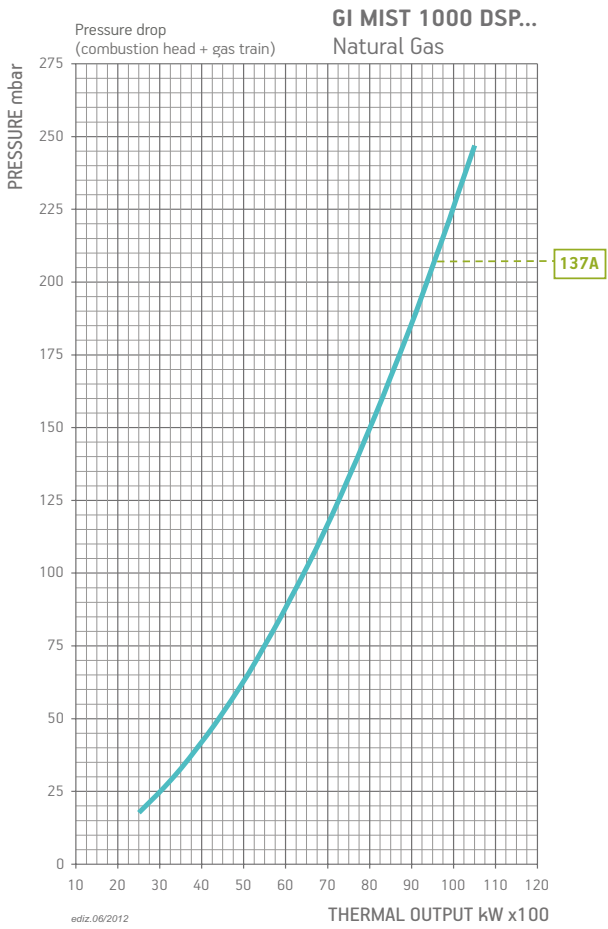
Steam pre-heater (17)

Working with extra heavy oil with viscosity till 100°E at 50°C

DUAL FUEL BURNERS ACCESSORIES

Self-cleaning line filter with heating element and thermostat, flex hoses, boiler coupling, kit.

BURNER/GAS TRAIN MATCH



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	Valve tightness control kit	Pic.	Notes
						Part no.	Part no.	Part no.		
GI MIST 1000 DSPGM GI MIST 1000 DSPNM-D	Natural gas	137A	CE/EXP	500	CTV	Included	Included	Included	D6	

To choose the correct gas train please refer to the information on page 21.

For information on the structure, composition, and size of the gas train please refer to the diagrams on page 294.

NOTES

CTV Gas train with Valve Tightness Control.

** Maximum gas inlet pressure at pressure regulator.



Characteristics

Burners made up from separate components such as combustion heads, fan units, electrical panels, pumping units and gas valves to be placed and connected on site according to the technical specifications required by the plant.

Such technical solution grants the highest flexibility so as to satisfy all the installing needs requested by an industrial market which keeps on developing.

The most usual applications are big plants with water pipe boilers, smoke passes boilers, diathermic boilers, drying plants, melting ovens and, generally speaking, industrial process.

IB series is available either with mechanical or electronic cam.

The whole series is made up of 8 models whose working field ranges from 0,5 MW to 24 MW.

Symbols

IB..G

Modulating gas burner with separate fan.

Plus

LOW NO_x AND CO EMISSIONS

The new combustion head drawing grant to recirculate part of the exhausts. This new design and technology enable, while running with natural gas, to respect the Class III Low No_x according to EN676.

ENERGY SAVING

The electronic version, keeping on controlling the unburnt level (CO) in the combustion, enables to sensibly increase the efficiency.

Using such technology in addition to the inverter to optimize the necessary quantity of combusting air, grant to reduce either the electrical consumption of the fan motor and the noisy level, too.

EASY MAINTENANCE

Maintenance is easy and takes short time. By taking out the cover, the access to the mixing head and to the internal components is fully granted.

COMBUSTION AIR TEMPERATURE

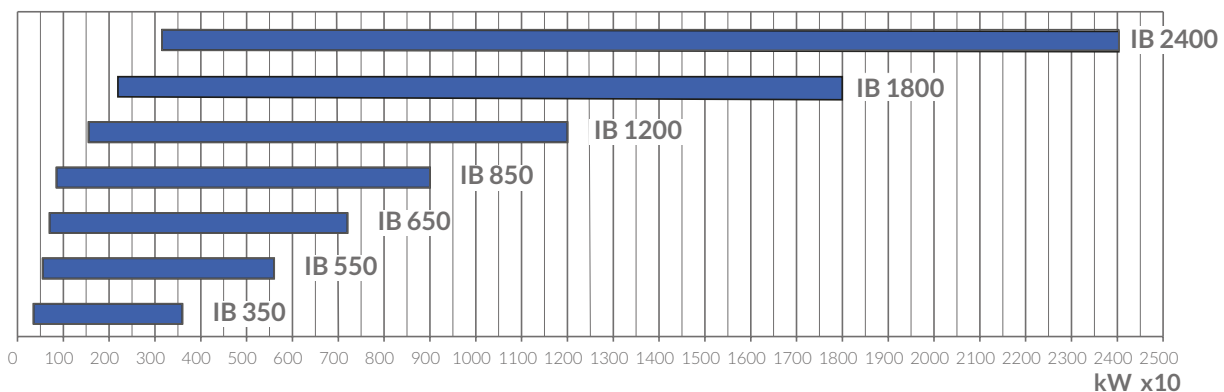
Standard version is up to 100°C.

Special version is up to 250°C.

AIR INTAKE POINT

The air intake point can be from the top, from the bottom, from right or from left side.

IB gas operating range



Test conditions conform to EN 267 and EN 676: Temperature: 20°C; Barometric pressure: 1013.5 mbar.

For further information see the specific manuals.

Estimates may be obtained from Baltur's sales or assistance networks or directly from the sales office.



Characteristics

Burners made up from separate components such as combustion heads, fan units, electrical panels, pumping units and gas valves to be placed and connected on site according to the technical specifications required by the plant.

Symbols

TS... L
Modulating light oil burner with separate fan.

TS...GL
Dual fuel gas/light oil modulating burner with separate fan.

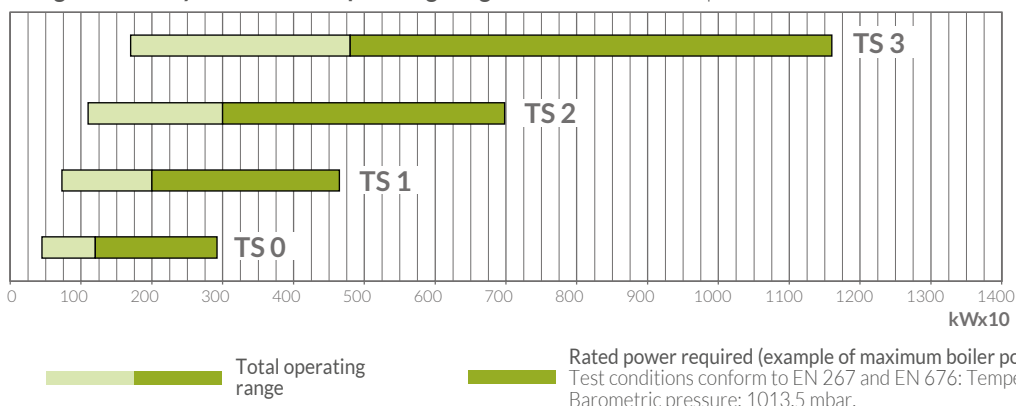
Fuels

- Light oil, maximum viscosity 6,2 cSt (1.5°E) at 20°C.
- Heavy oil, maximum viscosity 460 cSt (60°E) at 50°C.
- Dual fuel gas/light oil, light oil with maximum viscosity of 6,2 cSt (1.5°E) at 20°C and natural gas (G20) at 150 to 450 mbar pressure. Please contact our sales offices for different types of gas and pressures.
- Dual fuel gas/heavy oil, heavy oil with maximum viscosity of 460 cSt (60°E) at 50°C and natural gas (G20) at 150 to 450 mbar pressure. Please contact our sales offices for different types of gas and pressures.

Combustion air temperature

- Combustion air temperature up to 60°C. Special execution for temperatures up to 200°C (version ...AC).

TS light oil/heavy oil/dual fuel operating range combustion air temperature 20°C



For further information see the specific manuals.
Estimates may be obtained from Baltur's sales or assistance networks or directly from the sales office.

MODULATION KITS

The two stage progressive burners, by installing the PID load controller and related modulating kit, can operate as modulating burners with the ability to adjust the thermic load according to boiler needs.

The load adjustment is possible between the minimum and maximum burner's operating point.

How to choose the modulating kit components:

According to the parameter that it's necessary to control: temperature (°C) or pressure (bar) it's necessary to choose the range kit according to boiler operating

range.

In case the value is included in two ranges it's necessary to select the lower range.

Example:

In case the required hot water boiler set point is 100°C it's necessary to select the temperature probe kit with operating range between 0 ÷ 130°C.

In case the steam boiler must operate with 8bar outlet steam pressure it's necessary to select the pressure probe kit with operating range between 0 ÷ 10 bar.



Automatic proportional modulation regulator PID

Part no.	Model
98000055	Modulation kit LC3
98000056	Modulation kit LC3
98000057	Modulation kit LC3
98000058	Modulation kit LC3
98000059	Modulation kit LCM 100

Temperature probe for LC3 modulation

Part no.	Temperature	Type robe	Probe length	Male coupling
98000023	0 °C ÷ 130 °C	PT 1000	85 ¹⁾	R 1/2"
98000021	0 °C ÷ 500 °C	PT 1000	200 ¹⁾	G 1/2"
98000022	0 °C ÷ 1100 °C	Thermocouple	425 ¹⁾	R 1/2"

Temperature probe for LCM 100 modulation

Part no.	Temperature	Type robe	Probe length	Male coupling
98000023	0 °C ÷ 130 °C	PT 1000	85 ¹⁾	R 1/2"
98000021	0 °C ÷ 500 °C	PT 1000	200 ¹⁾	G 1/2"

Temperature probe for ETAMATIC OEM control box

Part no.	Temperature	Type robe	Probe length	Male coupling
98000035	0 °C ÷ 500 °C	PT 100	100 ¹⁾	G 1/2"

Steam pressure probe (for all types of automatic regulator)*

Part no.	Pressure steam	Signal output	Male coupling
98000045	0 ÷ 1 bar	4 ÷ 20 mA	G 1/2"
98000046	0 ÷ 10 bar	4 ÷ 20 mA	G 1/2"
98000047	0 ÷ 16 bar	4 ÷ 20 mA	G 1/2"
98000048	0 ÷ 25 bar	4 ÷ 20 mA	G 1/2"
98000049	0 ÷ 40 bar	4 ÷ 20 mA	G 1/2"

*) In the case of using pressure applications where temperatures exceed 90 ° you need to match the curl kit codes : 98000062

External climate regulation

Part no.	Description	Temperature
85060070	Temperature probe PT100	-50 °C ÷ 90 °C
98000061	Interface module for LC3	

Power signal converter (version ...MC and ...PN)

Part no.	Description
98000063	Converter kit

NOTES: For different modulation values please contact our Technical Assistance Service. 1) Different lengths on request.

RETURN NOZZLES

Nozzle with fuel return for diesel and mixed series two-stage progressive / modulating and modulating burners. This kind of nozzle, while keeping the pump pressure constant, varies the amount of fuel supplied according to the return pressure of the nozzle. To be ordered together with the burner when placing the order according to the power required by the application.

Nozzles for light oil and heavy oil (ratio 1÷3)

excluded burners: TBML 350-600-800, GI 1000 and GI MIST 1000.



Part no.	Rated flow-rate kg/h	Flow-rate angle	Codice	Rated flow-rate kg/h	Flow-rate angle
98000201	50	45°	98000218	400	45°
98000202	60	45°	98000219	425	45°
98000203	70	45°	98000220	450	45°
98000204	80	45°	98000221	475	45°
98000205	90	45°	98000222	500	45°
98000206	100	45°	98000223	525	45°
98000207	125	45°	98000224	550	45°
98000208	150	45°	98000225	575	45°
98000209	175	45°	98000226	600	45°
98000210	200	45°	98000227	650	45°
98000211	225	45°	98000228	700	45°
98000212	250	45°	98000229	750	45°
98000213	275	45°	98000230	800	45°
98000214	300	45°	98000231	850	45°
98000215	325	45°	98000232	900	45°
98000216	350	45°	98000233	1000	45°
98000217	375	45°			

Nozzles for light oil and heavy oil (ratio 1÷5)

for burners TBML 350/600/800.



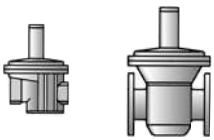
Part no.	Rated flow-rate kg/h	Flow-rate angle	Part no.	Rated flow-rate kg/h	Flow-rate angle
98000238	200	45°	98000249	475	45°
98000239	225	45°	98000250	500	45°
98000240	250	45°	98000251	525	45°
98000241	275	45°	98000252	550	45°
98000242	300	45°	98000253	575	45°
98000243	325	45°	98000254	600	45°
98000244	350	45°	98000255	650	45°
98000245	375	45°	98000256	700	45°
98000246	400	45°	98000257	750	45°
98000247	425	45°	98000258	800	45°
98000248	450	45°			

for burners GI 1000 e GI MIST 1000

Part no.	Rated flow-rate kg/h	Flow-rate angle	Part no.	Rated flow-rate kg/h	Flow-rate angle
98000280	700	45°	98000283	850	45°
98000281	750	45°	98000284	900	45°
98000282	800	45°	98000285	1000	45°

Gas pressure regulator with incorporated filter approved CE*

Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 1 bar.



Part no.	Model	Outlet pressure mbar	Gas connection
97392010	BTFR/1	40 ÷ 110	1/2"
97392020	BTFR/1	40 ÷ 110	3/4"
97392030	BTFR/1	40 ÷ 110	1"
97392040	BTFR/1	90 ÷ 190	1"1/4
97392050	BTFR/1	90 ÷ 190	1"1/2
97392060	BTFR/1	90 ÷ 190	2"
97392070	BTFR/1	110 ÷ 200	DN65 - PN16
97392080	BTFR/1	110 ÷ 200	DN80 - PN16
97392090	BTFR/1	130 ÷ 200	DN100 - PN16

CE gas pressure regulator CE*

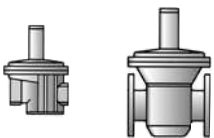
Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 1 bar.



Part no.	Model	Outlet pressure mbar	Gas connection
97392100	BTR/1	100 ÷ 250	DN125 - PN16
97392110	BTR/1	100 ÷ 250	DN150 - PN16

Gas pressure regulator with incorporated filter approved CE*

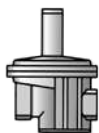
Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 2 bar.



Part no.	Model	Outlet pressure mbar	Gas connection
97392210	BTFR/2	40 ÷ 110	1/2"
97392220	BTFR/2	40 ÷ 110	3/4"
97392230	BTFR/2	40 ÷ 110	1"
97392240	BTFR/2	90 ÷ 190	1"1/4
97392250	BTFR/2	90 ÷ 190	1"1/2
97392260	BTFR/2	90 ÷ 190	2"
97392270	BTFR/2	110 ÷ 200	DN65 - PN16
97392280	BTFR/2	110 ÷ 200	DN80 - PN16
97392290	BTFR/2	130 ÷ 200	DN100 - PN16

Gas pressure regulator with incorporated filter approved CE*

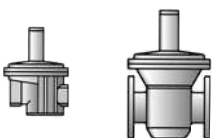
Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 5 bar.



Part no.	Model	Outlet pressure mbar	Gas connection
97392310	BTFR/5	30 ÷ 90	1/2"
97392320	BTFR/5	30 ÷ 90	3/4"
97392330	BTFR/5	30 ÷ 90	1"

CE gas pressure regulator CE*

Control closing , pressure taps upstream side - the side valley , safety diaphragm.
Max inlet pressure : 5 bar.



Part no.	Model	Outlet pressure mbar	Gas connection
97392340	BTR/5	85 ÷ 180	1"1/4
97392350	BTR/5	85 ÷ 180	1"1/2
97392360	BTR/5	85 ÷ 180	2"
97392370	BTR/5	110 ÷ 200	DN65 - PN16
97392380	BTR/5	110 ÷ 200	DN80 - PN16
97392390	BTR/5	110 ÷ 200	DN100 - PN16

*) All the pressure regulators in these pages have a standard spring with its own adjustment field For different delivery pressures, the able below shows the regulation field that must be used, as well as the corresponding spring to replace the standard one with.

ACCESSORIES FOR CONNECTION OF BURNERS TO GAS MAINS

PRESSURE REGULATOR SPRINGS

		1/2"	3/4"	1"	1"1/4	1"1/2	2"	DN 65	DN 80	DN 100	DN 125	DN 150	
PRESSURE INPUT 1bar	regulator code	97392010	97392020	97392030	97392040	97392050	97392060	97392070	97392080	97392090	97392100	97392110	
	code spring	97399002	97399005	97399007	97399008	97399009	97399010	97399011	97399012	97399013	97399014	97399015	
		97399016	97399017	97399018	97399019	97399020	97399021	97399022					
		97399001	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	
		97399019	97399020	97399021	97399022								
		97399002	97399005	97399007	97399008	97399009	97399010	97399011	97399012	97399013	97399014	97399015	97399016
		97399017	97399018	97399019	97399020	97399021	97399022						
		97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	97399020
		97399021	97399022										
		97399001	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019
		97399021	97399022										
		97399002	97399005	97399007	97399008	97399009	97399010	97399011	97399012	97399013	97399014	97399015	97399016
		97399017	97399018	97399019	97399020	97399021	97399022						
		97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	97399020
		97399021	97399022										
	97399001	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	
	97399021	97399022											
	97399002	97399005	97399007	97399008	97399009	97399010	97399011	97399012	97399013	97399014	97399015	97399016	
	97399017	97399018	97399019	97399020	97399021	97399022							
	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	97399020	
	97399021	97399022											
	97399001	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	
	97399021	97399022											
	97399002	97399005	97399007	97399008	97399009	97399010	97399011	97399012	97399013	97399014	97399015	97399016	
	97399017	97399018	97399019	97399020	97399021	97399022							
	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	97399020	
	97399021	97399022											
	97399001	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	
	97399021	97399022											
	97399002	97399005	97399007	97399008	97399009	97399010	97399011	97399012	97399013	97399014	97399015	97399016	
	97399017	97399018	97399019	97399020	97399021	97399022							
	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	97399020	
	97399021	97399022											
	97399001	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	
	97399021	97399022											
	97399002	97399005	97399007	97399008	97399009	97399010	97399011	97399012	97399013	97399014	97399015	97399016	
	97399017	97399018	97399019	97399020	97399021	97399022							
	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	97399020	
	97399021	97399022											
	97399001	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	
	97399021	97399022											
	97399002	97399005	97399007	97399008	97399009	97399010	97399011	97399012	97399013	97399014	97399015	97399016	
	97399017	97399018	97399019	97399020	97399021	97399022							
	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	97399020	
	97399021	97399022											
	97399001	97399003	97399004	97399006	97399009	97399011	97399012	97399013	97399014	97399016	97399017	97399019	
	97399021	97399022											

*) of series.

SPRINGS FOR PRESSURE REGULATOR

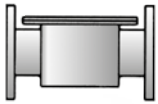
Part no.	Type
97399001	Regulator spring M0-0400
97399002	Regulator spring M0-0402
97399003	Regulator spring M0-0410
97399004	Regulator spring M0-0440
97399005	Regulator spring M0-0500
97399006	Regulator spring M0-0520
97399007	Regulator spring M0-0800
97399008	Regulator spring M0-0825
97399009	Regulator spring M0-0850
97399010	Regulator spring M0-0900
97399011	Regulator spring M0-0970

Part no.	Type
97399012	Regulator spring M0-1000
97399013	Regulator spring M0-1100
97399014	Regulator spring M0-1200
97399015	Regulator spring M0-1305
97399016	Regulator spring M0-1370
97399017	Regulator spring M0-1400
97399018	Regulator spring M0-1400/1800
97399019	Regulator spring M0-8400
97399020	Regulator spring M0-8500
97399021	Regulator spring M0-8600
97399022	Regulator spring M0-8700

Gas filters approved CE

With pressure.

Max inlet pressure: 2 bar.

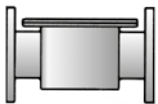


Part no.	Model	Gas connection
97410001	BTF	1/2" FF
97410002	BTF	3/4" FF
97410003	BTF	1" FF
97410004	BTF	1" 1/4 FF
97410005	BTF	1" 1/2 FF
97410006	BTF	2" FF
97419999	BTF	DN65 - PN16
97429999	BTF	DN80 - PN16
97439999	BTF	DN100 - PN16
97459999	BTF	DN125 - PN16
97449999	BTF	DN150 - PN16

Gas filters approved CE

With pressure.

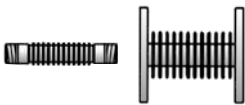
Max inlet pressure: 6 bar.



Part no.	Model	Gas connection
97410010	BTF/6	1" 1/4" FF
97410011	BTF/6	1" 1/2" FF
97410012	BTF/6	2" FF
97410013	BTF/6	DN65 - PN16
97410014	BTF/6	DN80 - PN16
97410015	BTF/6	DN100 - PN16

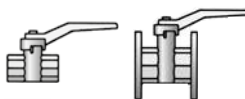
Anti-vibration and compensation joints approved CE

DIN 30681 stainless steel.



Part no.	Model	Gas connection
97029999	BTGA	1/2" MM
97039999	BTGA	3/4" MM
97049999	BTGA	1" MM
97059999	BTGA	1" 1/4" MM
97069999	BTGA	1" 1/2" MM
97079999	BTGA	2" MM
97089999	BTGA	DN65 - PN16
97099999	BTGA	DN80 - PN16
97109999	BTGA	DN100 - PN16
97119999	BTGA	DN125 - PN16
97129999	BTGA	DN150 - PN16

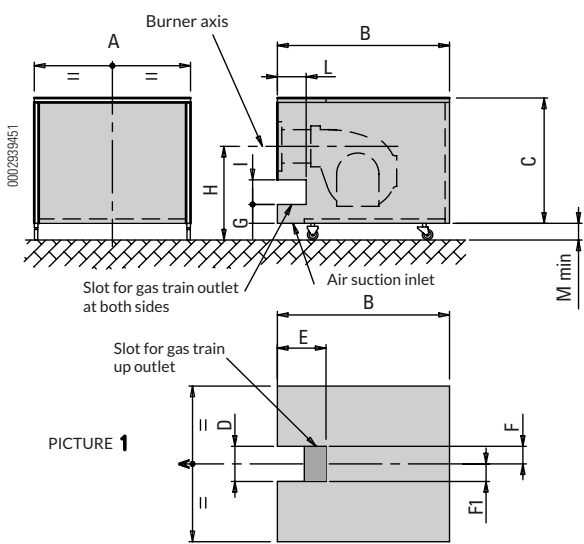
Ball valves approved CE



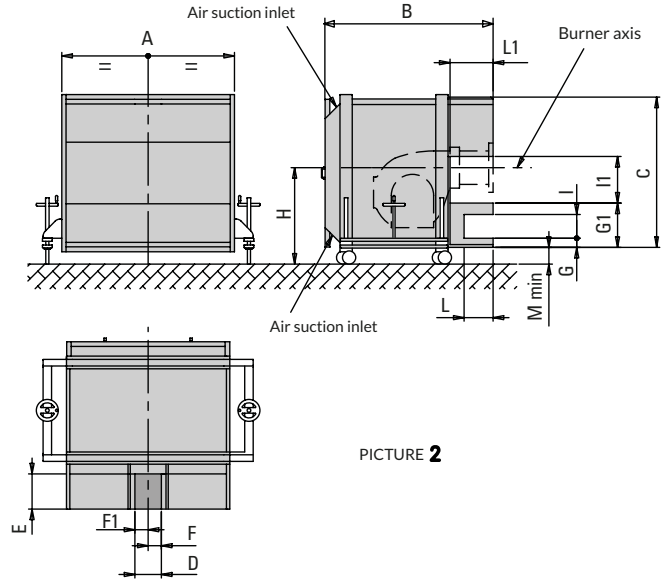
Part no.	Model	Gas connection
97679999	BTVS	3/8" FF
97689999	BTVS	1/2" FF
97699999	BTVS	3/4" FF
97709999	BTVS	1" FF
97719999	BTVS	1" 1/4" FF
97729999	BTVS	1" 1/2" FF
97739999	BTVS	2" FF
97749999	BTVS	DN65 - PN16
97759999	BTVS	DN80 - PN16
97769999	BTVS	DN100 - PN16
97179999	BTVS	DN125 - PN16
97189999	BTVS	DN150 - PN16

SOUNDPROOF BURNER

Average sound pressure reduction of about 10 dB(A) measured in a laboratory with 1 meter microphone from the burner.



PICTURE 1



PICTURE 2

Model	Sound pressure	Pic.	A	B	C	D	E	F	F1	G	G1	H mm		I	I1	L	L1	M min	P
			mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	min	max	mm	mm	mm	mm
97980053*	-10 dB(A)	1	1100	1340	860	85	500	42,5	42,5	207	-	660	1350	85	-	500	-	190	-
97980054	-10 dB(A)	1	750	1080	650	85	380	42,5	42,5	157	-	560	1060	85	-	355	-	190	-
97980055	-10 dB(A)	1	1100	1340	860	85	440	42,5	42,5	-	-	650	1300	-	-	-	-	190	-
97980057	-10 dB(A)	1	1335	1655	1130	210	495	47,5	162,5	-	-	900	1700	-	-	-	-	190	-
97980058*	-10 dB(A)	1	1610	1740	1190	500	380	37,5	462,5	24,5	-	950	1700	210	-	380	-	190	-
97980061	-20 dB(A)	2	1956	1945	1740	300	400	150	150	104	504	1450	1700	270	530	330	490	180	2540
97980063	-20 dB(A)	2	2180	2000	1830	300	400	150	150	100	500	1450	1700	270	530	330	490	195	2700

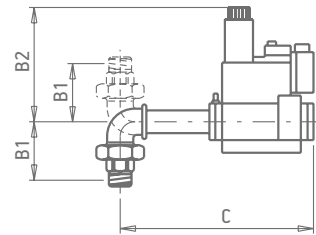
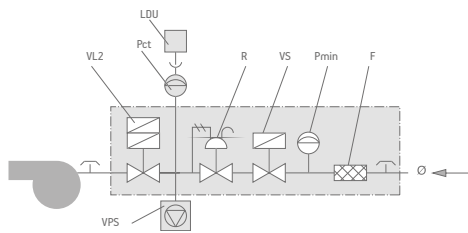
NOTES:

For gas burners in case of gas train up outlet it is necessary to install a 200 mm long cilindric extension.

*) To decrease the sound pressure by 20 dB(A) please contact our sales office.

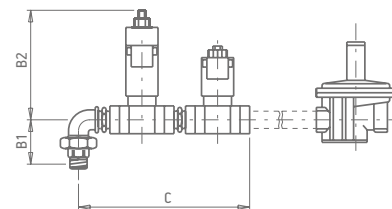
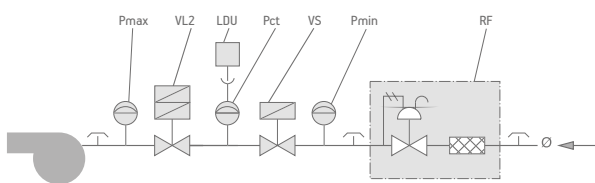
GAS TRAIN STRUCTURE AND COMPOSITION

B2



Gas train Part no.	Position								Ø	Gas train dimensions mm			Size of packaging mm L x P x H	Weight kg
	F	LDU	Pct	Pmin	R	VL2	VPS	VS		B1	B2	C		
19990016 (MB... 405 - 1/2")	●			●	●	●	■	●	3/4"	72	210	204	300 x 210 x 300	5
19990020 (MB... 407 - 3/4")	●			●	●	●	■	●	3/4"	72	210	204	300 x 210 x 300	5
19990024 (MB... 410 - 1")	●			●	●	●	■	●	1"1/4	95	260	249	300 x 210 x 300	8
19990168 (MB... 412 - 1"1/4)	●			●	●	●	■	●	1"1/4	95	260	249	300 x 210 x 300	8
19990404 (MB... 415 - 1"1/2)	●			●	●	●		●	1"1/2	103	270	311	520 x 410 x 410	11
19990410 (MB... 412 - 1"1/4)	●			●	●	●		●	1"1/4	103	260	255	300 x 210 x 300	9
19990454 (MB... 415 - 1"1/2)	●	●	●	●	●	●		●	1"1/2	103	270	311	520 x 410 x 410	12
19990510 (MB... 407 - 3/4")	●			●	●	●	■	●	3/4"	72	210	365	300 x 210 x 300	5
19990511 (MB... 410 - 1")	●			●	●	●	■	●	1"1/4	95	260	410	300 x 210 x 300	8
19990512 (MB... 412 - 1"1/4)	●			●	●	●	■	●	1"1/4	95	260	410	300 x 210 x 300	8
19990513 (MB... 415 - 1"1/2)	●			●	●	●	■	●	1"1/2	103	270	500	460 x 250 x 460	11
19990514 (MB... 420 - 2")	●			●	●	●	■	●	2"	114	330	500	520 x 410 x 410	13

B4



Gas train Part no.	Position							Ø	Gas train dimensions mm			Size of packaging mm L x P x H	Weight kg
	LDU	Pct	Pmax	Pmin	RF	VL2	VS		B1	B2	C		
19990456			●	●	DN65	2"	2"	DN65	114	305	454	520 x 410 x 410	20
19990457	●	●	●	●	DN65	2"	2"	DN65	114	305	454	650 x 500 x 380	21
19990459	●	●	●	●	DN65	2"		DN65	114	305	682	830 x 430 x 640	37

- 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.

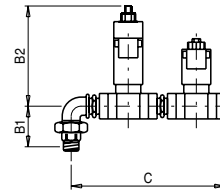
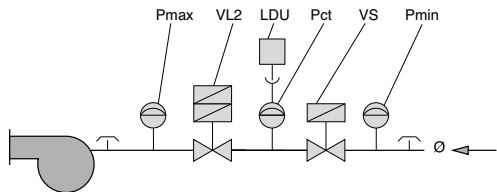
- RFP Pressure regulator with filter for pilot gas train.
- RM Manual flow rate regulator.
- RP Pneumatic regulator.
- VF Regulator throttle valve.
- VL Operating valve.
- VL2 Two-stage operating valve.
- VLP Operating pilot valve.
- VLR Operating valve with pressure regulator.

- 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.

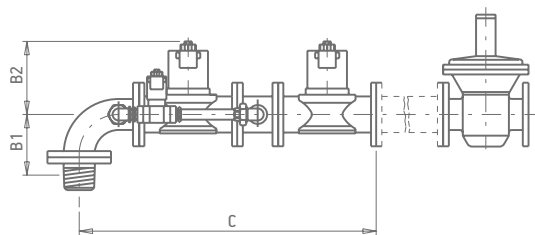
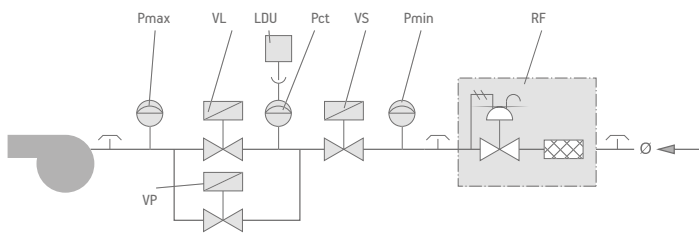
GAS TRAIN STRUCTURE AND COMPOSITION

BE4



Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight
	LDU	Pct	Pmax	Pmin	VL2	VS	Ø	B1	B2	C	L x P x H	kg
19990456			●	●	2"	2"	DN65	114	305	454	520 x 410 x 410	20
19990457	●	●	●	●	2"	2"	DN65	114	305	454	650 x 500 x 380	21
19990458			●	●	2"	DN65	DN65	114	305	682	830 x 430 x 640	36
19990459	●	●	●	●	2"	DN65	DN65	114	305	682	830 x 430 x 640	37

B5



Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm	Weight
	LDU	Pct	Pmax	Pmin	RF	VL	VP	Ø	B1	B2	C	L x P x H	kg
19990461	●	●	●	●	DN65	DN65	DN65	DN65	207	295	969	1260 x 650 x 670	64
19990463	●	●	●	●	DN80	DN80	DN65	DN80	210	320	1016	1260 x 650 x 670	98

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.

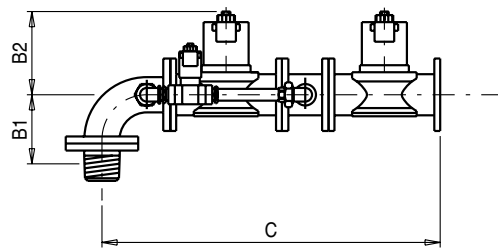
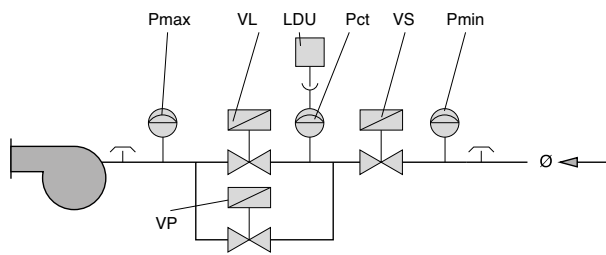
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regulator.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.

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.

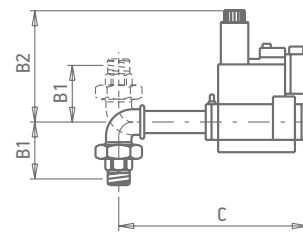
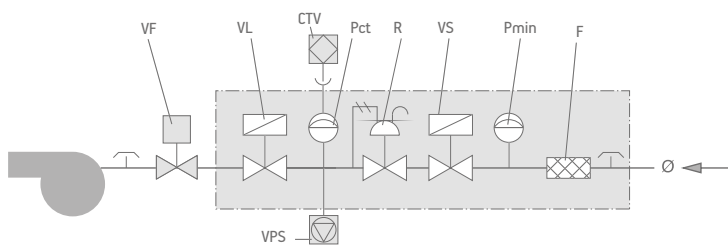
GAS TRAIN STRUCTURE AND COMPOSITION

BE5



Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm L x P x H	Weight kg	
	LDU	Pct	Pmax	Pmin	VL	VP	VS	Ø	B1	B2			C
19990460			●	●	DN65	1"1/2"	DN65	DN65	207	295	969	1260 x 650 x 600	63
19990461	●	●	●	●	DN65	1"1/2"	DN65	DN65	207	295	969	1260 x 650 x 600	64
19990462			●	●	DN80	1"1/2"	DN80	DN80	210	320	1016	1260 x 650 x 600	97
19990463	●	●	●	●	DN80	1"1/2"	DN80	DN80	210	320	1016	1260 x 650 x 600	98

B7



Gas train Part no.	Position										Gas train dimensions mm			Size of packaging mm L x P x H	Weight kg
	CTV	F	Pct	Pmin	R	VF	VL	VPS	VS	Ø	B1	B2	C		
19990545 (MB...407 - 3/4")		●		●	●	◆	●	■	●	3/4"	72	210	465	300 x 210 x 300	5
19990546 (MB...410 - 1")		●		●	●	◆	●	■	●	1"1/4	95	260	510	400 x 300 x 280	8
19990547 (MB...412 - 1"1/4)		●		●	●	◆	●	■	●	1"1/4	95	260	510	400 x 300 x 280	8
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	1090	1380 x 430 x 700	26
19990564 (VGD40.080 - 3")		●		●	●	◆	●	▲	●	DN80	114	325	1175	1380 x 430 x 700	28
19990566 (VGD20.503 - 2")	●	●	●	●	●	◆	●	●	●	2"	176	285	890	990 x 300 x 500	18
19990567 (VGD40.065 - 2"1/2)	●	●	●	●	●	◆	●	●	●	DN65	125	320	760	1030 x 430 x 650	35
19990568 (VGD40.080 - 3")	●	●	●	●	●	◆	●	●	●	DN80	175	325	860	1030 x 430 x 650	37
19990609 (MB...420 - 2")		●		●	●	◆	●	▲	●	2"	114	220	600	460 x 250 x 460	13
19990613 (VGD20.065 - 2 1/2")	●	●	●	●	●	◆	●	●	●	DN65	125	285	915	1380 x 430 x 700	43

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.

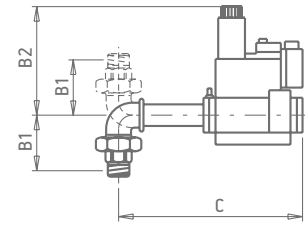
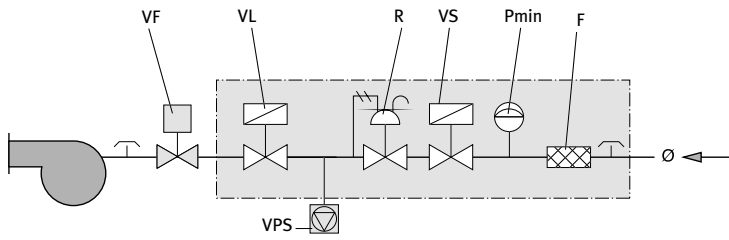
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regulator.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.

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.

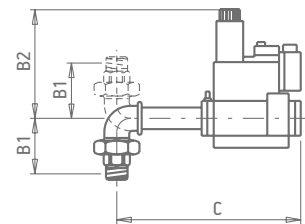
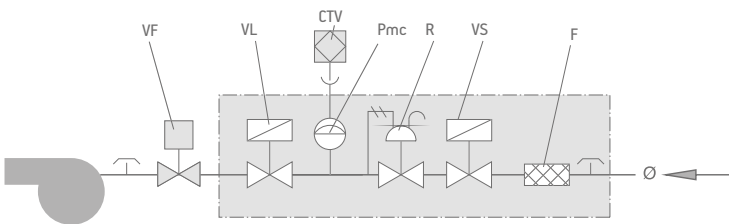
GAS TRAIN STRUCTURE AND COMPOSITION

BE7



Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm 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	1090	1380 x 430 x 700	26
19990564 (VGD40.080 - 3")	●	●	●	◆	●	■	●	DN80	114	325	1175	1380 x 430 x 700	28
19990609 (MB...420 - 2")	●	●	●	◆	●	■	●	2"	114	220	600	460 x 250 x 460	13

D2



Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm 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	1090	1380 x 430 x 700	26
19990526 (VGD40.080 - 3")	●	●	●	●	◆	●	●	DN80	114	325	1175	1380 x 430 x 700	28
19990555 (MB... 407 - 3/4")	●	●	●	●	◆	●	●	3/4"	72	140	365	300 x 210 x 300	5
19990556 (MB... 410 - 1")	●	●	●	●	◆	●	●	1"1/4	95	160	410	300 x 210 x 300	8
19990557 (MB... 412 - 1"1/4)	●	●	●	●	◆	●	●	1"1/4	95	160	410	300 x 210 x 300	8
19990558 (MB... 415 - 1"1/2)	●	●	●	●	◆	●	●	1"1/2	103	170	500	460 x 250 x 460	11
19990559 (MB... 420 - 2")	●	●	●	●	◆	●	●	2"	114	220	500	520 x 410 x 410	13
19990561 (MB... 415 - 1"1/2)	●	●	●	●	◆	●	●	1"1/2	103	170	500	520 x 410 x 410	11
19990562 (MB... 420 - 2")	●	●	●	●	◆	●	●	2"	114	220	500	520 x 410 x 410	13
19990573 (MB... 407 - 3/4")	●	●	●	●	◆	●	●	3/4"	72	140	305	400 x 300 x 280	12
19990574 (MB... 410 - 1")	●	●	●	●	◆	●	●	1"1/4	95	160	355	400 x 300 x 280	15
19990575 (MB... 412 - 1"1/4)	●	●	●	●	◆	●	●	1"1/4	95	160	355	400 x 300 x 280	15
19990576 (MB... 415 - 1"1/2)	●	●	●	●	◆	●	●	1"1/2	103	170	547	520 x 410 x 410	18
19990577 (VGD40.065 - 2"1/2)	●	●	●	●	◆	●	●	DN65	125	291	1225	1030 x 430 x 650	50
19990578 (VGD40.080 - 3")	●	●	●	●	◆	●	●	DN80	210	298	1350	1030 x 430 x 650	57
19990614 (VGD20.065 - 2"1/2)	●	●	●	●	◆	●	●	DN65	125	285	915	1380 x 430 x 700	43

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.

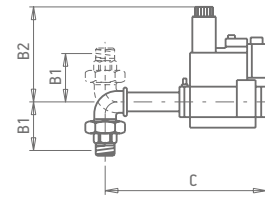
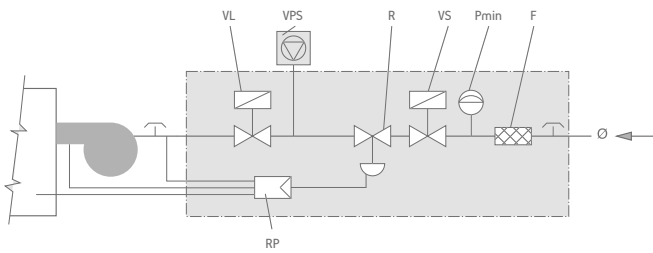
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regulator.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.

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.

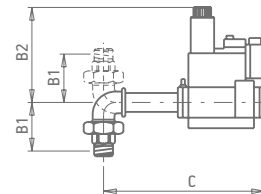
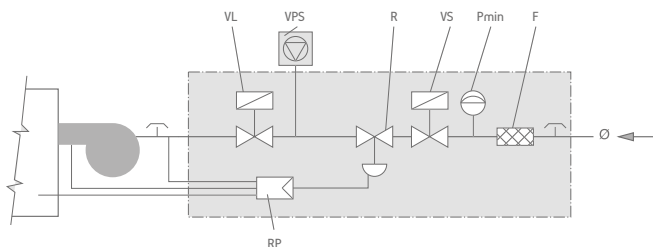
GAS TRAIN STRUCTURE AND COMPOSITION

D3



Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm L x P x H	Weight kg
	F	Pmin	R	RP	VL	VPS	VS	Ø	B1	B2	C		
19990440 (MB... 407 - 3/4")	●	●	●	●	●	■	●	3/4"	72	160	455	540 x 300 x 320	6
19990441 (MB... 412 - 1"1/4)	●	●	●	●	●	▲	●	1"1/4	95	175	500	520 x 410 x 410	9
19990442 (MB... 415 - 1"1/2)	●	●	●	●	●	▲	●	1"1/2	103	185	643	650 x 500 x 380	12
19990443 (MB... 420 - 2")	●	●	●	●	●	▲	●	2"	114	225	711	650 x 500 x 380	13
19990447 (MB... 407 - 3/4")	●	●	●	●	●	■	●	3/4"	72	160	455	540 x 300 x 320	6
19990448 (MB... 412 - 1"1/4)	●	●	●	●	●	▲	●	1"1/4	95	175	500	520 x 410 x 410	9
19990485 (VGD40.080 - 3")	●	●	●	●	●	▲	●	DN80	210	375	1300	1380 x 430 x 700	55
19990530 (VGD20.503 - 2")	●	●	●	●	●	▲	●	2"	114	331	890	990 x 300 x 500	15
19990531 (VGD40.065 - 2"1/2)	●	●	●	●	●	▲	●	DN65	114	367	1090	1380 x 430 x 700	26
19990537 (VGD40.080 - 3")	●	●	●	●	●	▲	●	DN80	114	375	1175	1380 x 430 x 700	28
19990539 (VGD40.065 - 2"1/2)	●	●	●	●	●	▲	●	DN65	207	367	1175	1380 x 430 x 700	48

DE3



Gas train Part no.	Position								Gas train dimensions mm			Size of packaging mm L x P x H	Weight kg
	F	Pmin	R	RP	VL	VPS	VS	Ø	B1	B2	C		
19990441 (MB... 412 - 1"1/4)	●	●	●	●	●	■	●	1"1/4	95	175	500	520 x 410 x 410	9
19990442 (MB... 415 - 1"1/2)	●	●	●	●	●	■	●	1"1/2	103	185	643	650 x 500 x 380	12
19990443 (MB... 420 - 2")	●	●	●	●	●	■	●	2"	114	225	711	650 x 500 x 380	13
19990448 (MB... 412 - 1"1/4)	●	●	●	●	●	■	●	1"1/4	95	175	500	520 x 410 x 410	9
19990485 (VGD40.080 - 3")	●	●	●	●	●	■	●	DN80	210	375	1300	1380 x 430 x 700	55
19990530 (VGD20.503 - 2")	●	●	●	●	●	■	●	2"	114	331	890	990 x 300 x 500	15
19990531 (VGD40.065 - 2"1/2)	●	●	●	●	●	■	●	DN65	114	367	1090	1380 x 430 x 700	26
19990537 (VGD40.080 - 3")	●	●	●	●	●	■	●	DN80	114	375	1175	1380 x 430 x 700	28
19990539 (VGD40.065 - 2"1/2)	●	●	●	●	●	■	●	DN65	207	367	1175	1380 x 430 x 700	48

- 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.

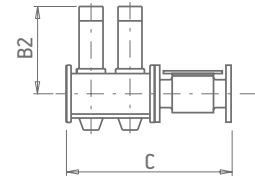
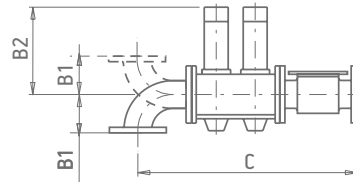
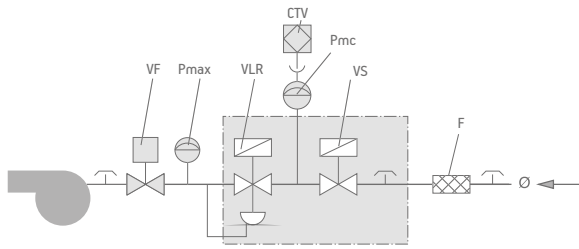
- RFP** Pressure regulator with filter for pilot gas train.
- RM** Manual flow rate regulator.
- RP** Pneumatic regulator.
- VF** Regulator throttle valve.
- VL** Operating valve.
- VL2** Two-stage operating valve.
- VLP** Operating pilot valve.
- VLR** Operating valve with pressure regulator.

- 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.

GAS TRAIN STRUCTURE AND COMPOSITION

D4

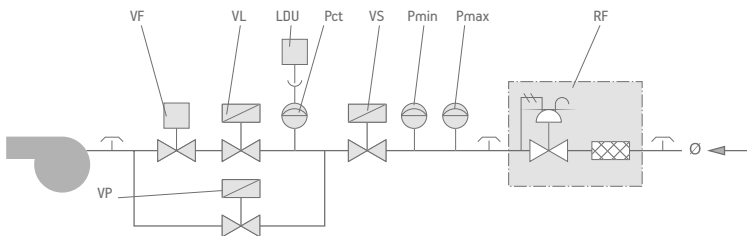


Pic. 1

Pic. 2

Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm L x P x H	Weight kg	Pic.	
	CTV	F	Pmax	Pmc	VF	VLR	VS	Ø	B1	B2				C
19990541 (VGD20.503 - 2")	●	2"	●	●	◆	●	●	2"	145	285	890	990 x 300 x 500	23	1
19990542 (VGD40.065 - 2"1/2)	●	DN65	●	●	◆	●	●	DN65	135	315	970	1380 x 430 x 700	36	1
19990543 (VGD40.080 - 3")	●	DN80	●	●	◆	●	●	DN80	165	315	1015	1380 x 430 x 700	38	1
19990544 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	175	330	1100	1380 x 430 x 700	44	1
19990587 (VGD20.503 - 2")	●	2"	●	●	◆	●	●	2"	-	285	470	650 x 500 x 380	19	2
19990588 (VGD40.065 - 2"1/2)	●	DN65	●	●	◆	●	●	DN65	-	315	580	830 x 430 x 640	26	2
19990589 (VGD40.080 - 3")	●	DN80	●	●	◆	●	●	DN80	-	315	630	830 x 430 x 640	29	2
19990590 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	-	330	730	830 x 430 x 640	40	2
19990606 (VGD40.080 - 3")	●	DN80	●	●	◆	●	●	DN80	165	315	1015	1380 x 430 x 700	38	1
19990607 (VGD40.100 - 4")	●	DN100	●	●	◆	●	●	DN100	175	330	1100	1380 x 430 x 700	44	1
19990608 (VGD40.125 - 5")	●	DN125	●	●	◆	●	●	DN125	170	350	1275	1580 x 430 x 720	60	1
19990626 (VGD40.150 - 6")	●	DN150	●	●	◆	●	●	DN150	190	370	1280	1580 x 430 x 720	70	1

D5



Burner model	Position									
	LDU	Pct	Pmax	Pmin	RF	VF	VL	VP	VS	Ø
COMIST 180 DSPNM	●	●	●	●	DN80	DN50	2"	1"1/2	DN65	DN80
COMIST 250 DSPGM	●	●	●	●	DN65	DN50	2"	1"1/2	DN65	DN65
COMIST 250 DSPNM	●	●	●	●	DN65	DN50	2"	1"1/2	DN65	DN65
COMIST 300 DSPGM	●	●	●	●	DN65	DN50	2"	1"1/2	DN65	DN65
COMIST 300 DSPNM	●	●	●	●	DN65	DN50	2"	1"1/2	DN65	DN65
GI MIST 350 DSPGM	●	●	●	●	DN65	DN50	2"	1"1/2	DN65	DN65
GI MIST 350 DSPNM-D	●	●	●	●	DN65	DN50	2"	1"1/2	DN65	DN65
GI MIST 420 DSPGM	●	●	●	●	DN80	DN65	DN65	1"1/2	DN65	DN80
GI MIST 420 DSPNM-D	●	●	●	●	DN80	DN65	DN65	1"1/2	DN65	DN80
GI MIST 510 DSPGM	●	●	●	●	DN80	DN80	DN80	1"1/2	DN80	DN80
GI MIST 510 DSPNM-D	●	●	●	●	DN80	DN80	DN80	1"1/2	DN80	DN80

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.

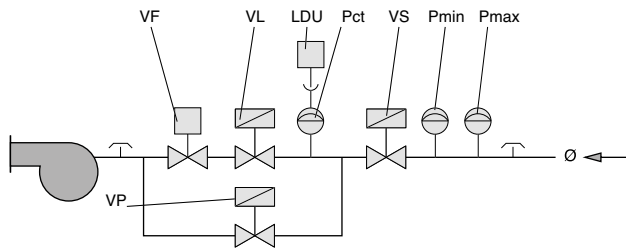
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regulator.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.

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.

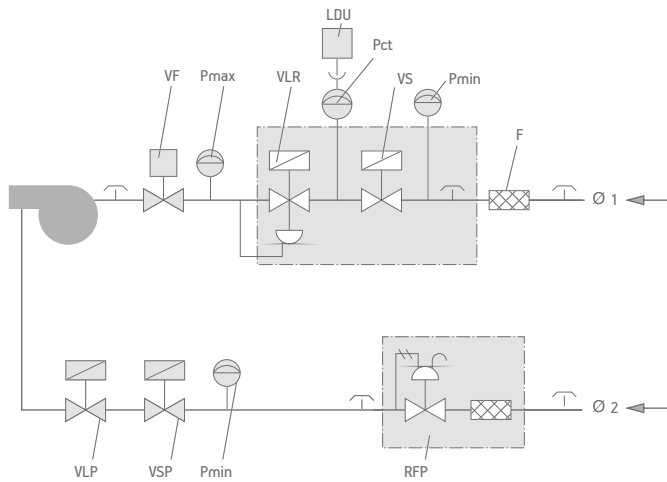
GAS TRAIN STRUCTURE AND COMPOSITION

DE5



Burner model	LDU	Pct	Pmax	Pmin	Position				
					VF	VL	VP	VS	Ø
COMIST 180DSPNM	●	●	●	●	DN50	2"	1"1/2	DN65	DN65
COMIST 250DSPGM	●	●	●	●	DN50	2"	1"1/2	DN65	DN65
COMIST 250DSPNM	●	●	●	●	DN50	2"	1"1/2	DN65	DN65
COMIST 300DSPGM	●	●	●	●	DN50	2"	1"1/2	DN65	DN65
COMIST 300DSPNM	●	●	●	●	DN50	2"	1"1/2	DN65	DN65
GI MIST 350DSPGM	●	●	●	●	DN50	2"	1"1/2	DN65	DN65
GI MIST 350DSPNM-D	●	●	●	●	DN50	2"	1"1/2	DN65	DN65
GI MIST 420DSPGM	●	●	●	●	DN65	DN65	1"1/2	DN65	DN80
GI MIST 420DSPNM-D	●	●	●	●	DN65	DN65	1"1/2	DN65	DN80
GI MIST 510DSPGM	●	●	●	●	DN80	DN80	1"1/2	DN80	DN80
GI MIST 510DSPNM-D	●	●	●	●	DN80	DN80	1"1/2	DN80	DN80

D6



Burner model	Position													
	F	LDU	Pct	Pmax	Pmin	RFP	VF	VLP	VLR	VS	VSP	Ø1	Ø2	
GI MIST 1000 DSPGM (VGD40-80 3")	DN80	●	●	●	●	1/2"	DN80	1/2"	●	●	1/2"	DN80	1/2"	
GI MIST 1000 DSPNM-D (VGD40-80 3")	DN80	●	●	●	●	1/2"	DN80	1/2"	●	●	1/2"	DN80	1/2"	

- 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.

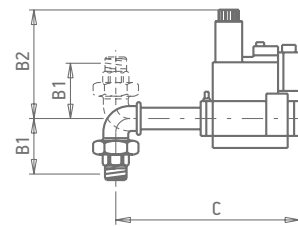
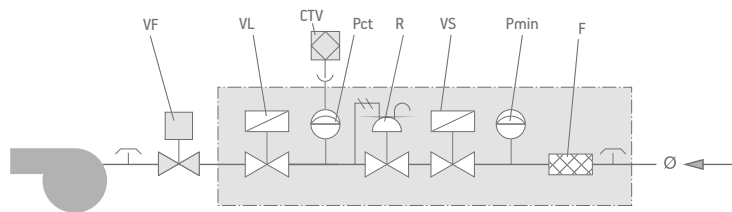
- RFP** Pressure regulator with filter for pilot gas train.
- RM** Manual flow rate regulator.
- RP** Pneumatic regulator.
- VF** Regulator throttle valve.
- VL** Operating valve.
- VL2** Two-stage operating valve.
- VLP** Operating pilot valve.
- VLR** Operating valve with pressure regulator.

- 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.

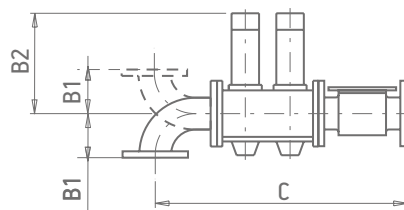
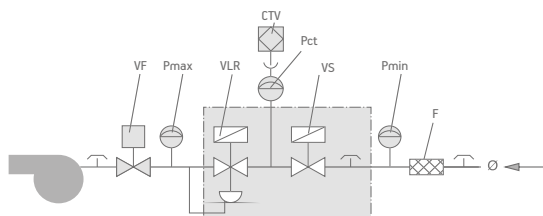
GAS TRAIN STRUCTURE AND COMPOSITION

D7



Gas train Part no.	Position									Gas train dimensions mm			Size of packaging mm	Weight kg
	CTV	F	Pct	Pmin	R	VF	VL	VS	Ø	B1	B2	C	L x P x H	
19990580 (MB...410 - 1")	●	●	●	●	●	◆	●	●	1"1/4	95	260	410	300 x 210 x 300	8
19990581 (MB...412 - 1"1/4)	●	●	●	●	●	◆	●	●	1"1/4	95	260	410	300 x 210 x 300	8
19990582 (MB...415 - 1"1/2)	●	●	●	●	●	◆	●	●	1"1/2	103	270	500	460 x 250 x 460	11
19990583 (MB...420 - 2")	●	●	●	●	●	◆	●	●	2"	114	220	500	520 x 410 x 410	13
19990584 (VGD20.503 - 2")	●	●	●	●	●	◆	●	●	2"	114	285	890	990 x 300 x 500	15
19990585 (VGD40.065 - 2"1/2)	●	●	●	●	●	◆	●	●	DN65	114	320	1090	1380 x 430 x 700	26
19990586 (VGD40.080 - 3")	●	●	●	●	●	◆	●	●	DN80	114	325	1175	1380 x 430 x 700	28
19990624 (MB...420 - 2")	●	●	●	●	●	◆	●	●	2"	114	220	500	520 x 410 x 410	13

D8



Gas train Part no.	Position										Gas train dimensions mm			Size of packaging mm	Weight kg
	CTV	F	Pct	Pmax	Pmin	VF	VLR	VPS	VS	Ø	B1	B2	C	L x P x H	
19990595 (VGD20.503 - 2")		2"		●	●	◆	●	●	●	2"	145	285	890	990 x 300 x 500	23
19990596 (VGD40.065 - 2"1/2)		DN65		●	●	◆	●	●	●	DN65	135	315	970	1380 x 430 x 700	36
19990597 (VGD40.080 - 3")		DN80		●	●	◆	●	●	●	DN80	165	315	1015	1380 x 430 x 700	38
19990598 (VGD40.100 - 4")		DN100		●	●	◆	●	●	●	DN100	175	330	1100	1380 x 430 x 700	44
19990599 (VGD20.503 - 2")	●	2"	●	●	●	◆	●		●	2"	145	285	890	990 x 300 x 500	23
19990600 (VGD40.065 - 2"1/2)	●	DN65	●	●	●	◆	●		●	DN65	135	315	970	1380 x 430 x 700	36
19990601 (VGD40.080 - 3")	●	DN80	●	●	●	◆	●		●	DN80	165	315	1015	1380 x 430 x 700	38
19990602 (VGD40.100 - 4")	●	DN100	●	●	●	◆	●		●	DN100	175	330	1100	1380 x 430 x 700	44
19990615 (VGD40.080 - 3")	●	DN80	●	●	●	◆	●		●	DN80	165	315	1015	1380 x 430 x 700	38
19990616 (VGD40.100 - 4")	●	DN100	●	●	●	◆	●		●	DN100	175	330	1100	1380 x 430 x 700	44
19990617 (VGD40.125 - 5")	●	DN125	●	●	●	◆	●		●	DN125	170	350	1275	1580 x 430 x 720	60
19990627 (VGD40.150 - 6")	●	DN150	●	●	●	◆	●		●	DN150	190	370	1280	1580 x 430 x 720	70

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.

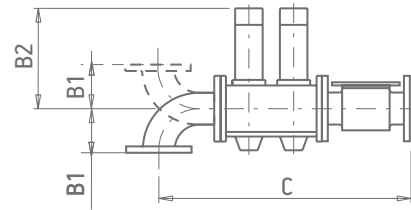
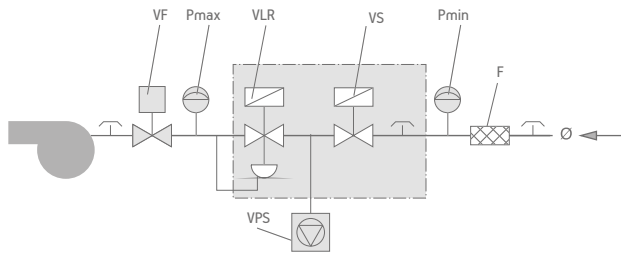
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regulator.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.

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.

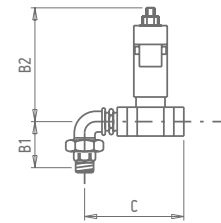
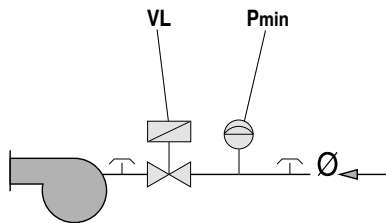
GAS TRAIN STRUCTURE AND COMPOSITION

DE8



Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight	
	F	Pmax	Pmin	VF	VLR	VPS	VS	Ø	B1	B2	C	L x P x H	kg
19990595 (VGD20.503 - 2")	2"	●	●	◆	●	■	●	2"	145	285	890	990 x 300 x 500	23
19990596 (VGD40.065 - 2" 1/2)	DN65	●	●	◆	●	■	●	DN65	135	315	970	1380 x 430 x 700	36
19990597 (VGD40.080 - 3")	DN80	●	●	◆	●	■	●	DN80	165	315	1015	1380 x 430 x 700	38
19990598 (VGD40.100 - 4")	DN100	●	●	◆	●	■	●	DN100	175	330	1100	1380 x 430 x 700	44

ME1



Gas train Part no.	Position			Gas train dimensions mm			Size of packaging mm	Weight
	Pmin	VL	Ø	B1	B2	C	L x P x H	kg
19990004	●	3/4"	3/4"	72	177	114	240 x 220 x 210	3
19990134	●	1"	1"	83	177	160	240 x 220 x 210	4
19990235	●	1/2"	1/2"	72	151	110	240 x 220 x 210	2

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.

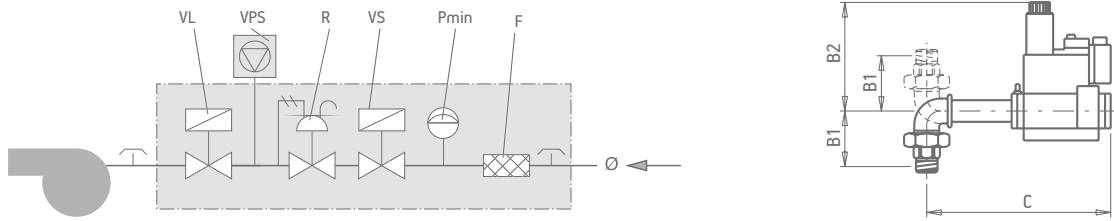
RFP Pressure regulator with filter for pilot gas train.
RM Manual flow rate regulator.
RP Pneumatic regulator.
VF Regulator throttle valve.
VL Operating valve.
VL2 Two-stage operating valve.
VLP Operating pilot valve.
VLR Operating valve with pressure regulator.

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.

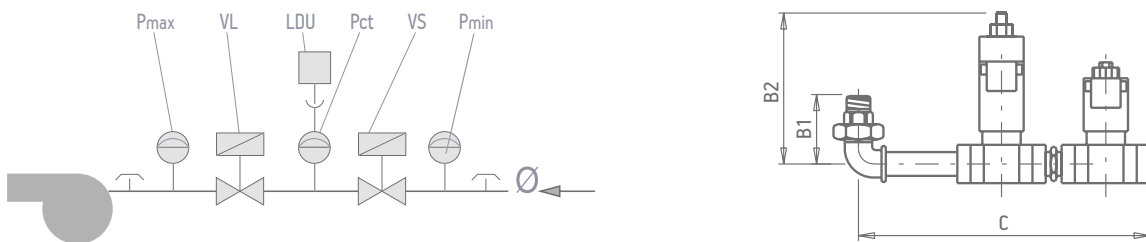
GAS TRAIN STRUCTURE AND COMPOSITION

M2



Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight
	F	Pmin	R	VL	VPS	VS	Ø	B1	B2	C	L x P x H	kg
19990002 (MB... 405 - 1/2")	●	●	●	●	■	●	3/4"	72	140	204	310 x 210 x 250	4
19990005 (MB... 407 - 3/4")	●	●	●	●	■	●	3/4"	72	140	204	310 x 210 x 250	4
19990008 (MB... 410 - 1")	●	●	●	●	■	●	1" 1/4	95	160	249	310 x 210 x 250	7
19990166 (MB... 412 - 1" 1/4)	●	●	●	●	■	●	1" 1/4	95	160	249	310 x 210 x 250	7
19990338 (MB... 403 - 3/8")	●	●	●	●	■	●	1/2"	67	150	198	210 x 150 x 160	3
19990466 (MBC... 65 - 1/2")	●	●	●	●		●	1/2"	67	150	198	240 x 220 x 210	2
19990545 (MB... 407 - 3/4")	●	●	●	●	■	●	3/4"	72	140	465	300 x 210 x 300	5
19990546 (MB... 410 - 1")	●	●	●	●	■	●	1" 1/4	95	160	510	400 x 300 x 280	8
19990547 (MB... 412 - 1" 1/4)	●	●	●	●	■	●	1" 1/4	95	160	510	400 x 300 x 280	8
19990548 (MB... 415 - 1" 1/2)	●	●	●	●	■	●	1" 1/2	103	270	600	460 x 250 x 460	11
19990549 (MB... 420 - 2")	●	●	●	●	■	●	2"	114	330	600	650 x 500 x 380	13

ME4



Gas train Part no.	Position							Gas train dimensions mm			Size of packaging mm	Weight
	LDU	Pct	Pmax	Pmin	VL	VS	Ø	B1	B2	C	L x P x H	kg
19990471			●	●	1" 1/2	1" 1/2	1" 1/2	103	205	540	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.



CERTIFICATO n. **0202/7**
 CERTIFICATE No.

SI CERTIFICA CHE IL SISTEMA DI GESTIONE PER LA QUALITÀ DI
 WE HEREBY CERTIFY THAT THE QUALITY MANAGEMENT SYSTEM OPERATED BY

BALTUR S.p.A.

UNISA OPERATIVE
 OPERATIVE UNITS

Via Ferrarese, 10 - 44042 Cento (FE)
 Italia

E' CONFORME ALLA NORMA
 IS IN COMPLIANCE WITH THE STANDARD

UNI EN ISO 9001:2008

PER LE SEGUENTI ATTIVITÀ/
 FOR THE FOLLOWING ACTIVITIES

EA: 18 - 29

Progettazione, produzione e assistenza di bruciatori e caldaie.
 Commercializzazione di gruppi termici, generatori di aria calda,
 climatizzatori, refrigeratori e unità di rinnovo aria, ventilconvettori,
 scaldabagno, bollitori e sistemi a energia solare.

Design, production and service of burners and boilers.
 Trading of heating systems, hot air generators, air-conditioners,
 chillers and air renewal units, fan coil units, water heaters,
 boilers and thermal solar systems.

Modello di Mercato della Qualità per l'applicazione dei requisiti della norma di riferimento.

Modello di Qualità Standard for application to reference standard requirements.

Il presente certificato è soggetto al rispetto dei requisiti del sistema di gestione per la qualità della attività.
 The use and the validity of this certificate shall satisfy the requirements of the rules for the certification of company quality management systems.

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ICIM S.p.A.

Via Cini 10 - Cento (FE) - 44042 Cento (FE) - Italia



Modello di Qualità Standard per l'applicazione dei requisiti della norma di riferimento.
 Modello di Qualità Standard for application to reference standard requirements.

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THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

IQNET and CISQ/ICIM

hereby certify that the organization

BALTUR S.p.A.

Via Ferrarese, 10 - I-44042 Cento (FE)

for the following field of activities

**Design, production and service of burners and boilers.
 Trading of heating systems, hot air generators, air-conditioners,
 chillers and air renewal units, fan coil units, water heaters,
 boilers and thermal solar systems.**

has implemented and maintains a

Quality Management System

which fulfils the requirements of the following standard

ISO 9001:2008

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Michael Drechsel
 President of IQNET



Ing. Claudio Proveti
 President of CISQ

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Note



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Quality System Certified
UNI-EN ISO 9001 I.C.I.M. n° 202

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