Ecoflam

PRODUCT RANGE



www.ecoflam-burners.com

Ecoflam





Thanks to more than **50 years of experience** in the design and production of burners, Ecoflam offers a full range of blown air pressure jet burners covering an extremely wide range of power, from small products for residential heating applications to high power burners dedicated to the industrial segment.

CUSTOMIZED

Ecoflam burners are renowned worldwide for providing high efficiency products with reliable operation, significant energy savings and extreme ease of installation, maintenance and flexible boiler-burner matching.



Following a philosophy of **continuous improving**, the R&D Laboratory is constantly working to produce better results.

The development of new advanced combustion technologies allows to offer solutions in respect of the most stringent environmental regulations and to create the perfect condition to face the new upcoming market requests, such as Ultra Low NOx burners or products suitable to work with alternative fuels.



Handle demands of products for specific applications, designing highly configurated products and providing immediate problem-solving are characteristics that set Ecoflam's talented **technicians and engineers** apart.

Additionally, Ecoflam can rely on a global network of service technicians to assist with burner installation, commissioning, and periodic maintenance, all of which are critical to ensuring end user satisfaction, Ecoflam's top priority.



Ecoflam is part of Ariston Group Burners Division.



One of the company's most valuable assets is the synergy amongst the various brands of the Division, which enables the sharing of technologies and expertise that drive innovation and enable continuous improvement of products and services.

OUR COMMERCIAL AND TECHNICAL NETWORK Ecoflam is part of **Ariston Group Burners Division**. Manufacturing is carried out in the factory of Resana (Treviso, Italy) and products are distributed worldwide thanks to a wide and highly qualified network of partners.

In 50 years, Ecoflam has been capable to build loyal partnerships and today can count on reliable partners in **more than 100 Countries**. They distribute Ecoflam products in their Countries of competence, they have excellent knowledge on the products and can carry out commissioning and service by keeping constantly in touch with our Headquarters.



Headquarters in Italy, subsidiary in UK,

Sales Representative Offices in Europe, Dubai and China,

Commercial network of distributors/importers and direct customers reaching more than 100 Countries



Throughout its history, Ecoflam has always been engaged in continuous research and development in order to improve its products.

Today, in a period in which the issue of environmental sustainability has acquired fundamental importance. Ecoflam is even more focused on the development of:

- Low NOx and Ultra Low NOx combustion technologies
- Burners suitable to work with alternative fuels
- Sustainable and efficient products solutions and processes



Ecoflam developed a performant range of products equipped with the external FGR technology (Flue Gas Recirculation): this technology enables to guarantee emissions of less than 30 mg/kWh, a value which is hard to obtain with conventional combustion systems.







The development of burners suitable for work also with alternative fuels (such as biogas, biofuel, HVO, syngas, etc.), allows Ecoflam to offer highly efficient products with extremely low polluting emissions values, in order to satisfy even the most demanding regulations.

CUSTOMIZED

Ecoflam is renowned for its ability to conceive and build flexible products and to propose customized solutions for any type of applications.

Successful and satisfied customers, both from OEM or distribution fields, demonstrate throughout the years that Ecoflam is able to meet their requests offering a wide range of special products capable to satisfy even the most difficult ones.







Thanks to its strong expertise in customization, Ecoflam boasts many different solutions for an extremely wide range of applications. The flexibility of the Ecoflam range allows to grant quick response to each customer request, even the most demanding in term of technical specifications.





AGRICULTURE









ENGINEERING





PLANT MODERNIZATION



To promptly deal with the requests of an ever changing market, Ecoflam has adopted a finished products and spare parts warehouse of over 8000 square meters.

Quick response to customer requests and consistent warehouse availability allow to reduce the delivery time and give a better support to the end user.



The burner is a crucial part of the installation. For a safe and efficient operation of the system it is very important that the burner is commissioned by an expert: the combustion will be optimally adjusted over the whole power range of the burner, and all the safeties will be tested. To keep the installation in good conditions, it is also important to maintain the burner periodically and to inspect all the safeties to ensure that the system operates safely. **Ecoflam Service technicians** are able, like no other, to perform these tasks perfectly, in order to ensure that the system operates without problems.



In order to respond to the needs of the customers, Ecoflam created the **Burner Academy**, a real school where the knowhow of the internal technicians is diffused to partners and customers.

It's an opportunity for boiler room personnel, operators and engineers to attend a series of training sessions carried out on test bench by highly qualified instructors.

The Burner Academy uses various training locations where boilers are installed and where people can be trained in theory and in practice.

ORIGINAL SPARE PARTS



Spare parts have always had a great importance inside the Ecoflam world. Considering the high amount of parts involved in every single product, some of these parts might naturally need to be substituted. Ecoflam can count on a international network offering original spare parts in order to guarantee the highest quality, reliability and safe continued operation of the appliance.

The flexibility of the Ecoflam technologies allows the manufacturing of highly customized products suitable to work with any fuel or combination of fuels, covering a range from 17 kW to 42 MW:

GAS RANGE

MAX GAS

MONOBLOCK BURNERS FROM 17 TO 700 kW



BLU

MONOBLOCK BURNERS FROM 200 TO 17000 kW



LIGHT OIL RANGE

MAX

MONOBLOCK BURNERS FROM 18 TO 735 kW



MAIOR

MONOBLOCK BURNERS FROM 415 TO 17000 kW



HEAVY OIL RANGE

MAXFLAM

MONOBLOCK BURNERS FROM 68 TO 570 kW



OILFLAM

MONOBLOCK BURNERS FROM 464 TO 17000 kW



DUAL FUEL RANGE

MULTICALOR

MULTIFLAM

MONOBLOCK BURNERS FROM 190 TO 17000 kW





DUOBLOCK RANGE

TS RANGE

DUOBLOCK BURNERS FROM 230 TO 42000 kW



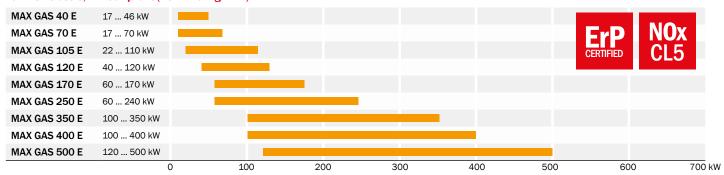
SPECIAL VERSIONS

OUT OF STANDARD

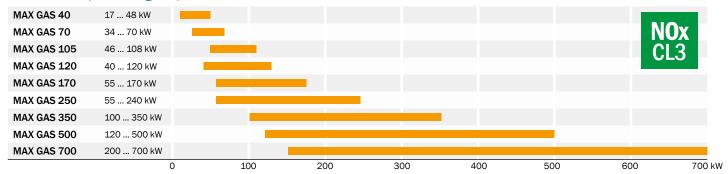
MONOBLOCK AND DUOBLOCK BURNERS FROM 230 TO 42000 kW



Low NOx Class 5, ErP compliant (NOx ≤ 56 mg/kWh)



Low NOx Class 3 (NOx ≤ 80 mg/kWh)



CONFIGURATIONS

MAX GAS range is available in the following operation modes:



MAX GAS 40 ... 700

One stage

Low NOx class 5, ErP compliant (up to MAX GAS 500) and Low NOx Class 3



MAX GAS 70 ... 700

Two stages

Low NOx class 5, ErP compliant (up to MAX GAS 500) and Low NOx Class 3



MAX GAS 70 ... 700

Two stage progressive/modulating mechanical

Low NOx class 5, ErP compliant (up to MAX GAS 500) and Low NOx Class 3



MAX GAS 350 ... 700

Two stage progressive/modulating electronic

Low NOx class 5, ErP compliant (up to MAX GAS 500) and Low NOx Class 3

- Progressive versions are available starting from MAX GAS 350 and can be transformed into modulating with an optional kit
- · LPG versions
- Continuous ventilation versions
- · High temperature versions
- OEM and other special versions on request according to feasibility

- All models are available in Low NOx class 3 configuration according to the EN676 Directive; models up to MAX GAS 500 are also available with ErP certified versions and are Low NOx class 5
- Different burner controllers available for each burner; two-stage models are also available with or without digital informative display
- All models are available to work with 50 and 60 Hz electrical frequency
- High efficiency fan ventilation system (HPV) allowing easy burner-boiler matching even with high combustion chamber pressure
- The hinge flange allows easy access to the combustion head without losing the original settings (starting from MAX GAS 350)

FUEL

 Natural gas (G20, G25 according to EN676)

LPG

Class NOx mg/kWh 3 80

5

All models are in compliance with EN 676 European Standard

56

All "E" models are in compliance with **ErP Directive** (NOx \leq 56 mg/kWh, based on GCV)

DIRECTIVES

All products are in accordance with the following directives:

- 2014/35/EU Low Voltage Directive
- 2014/30/EU EMC Directive
- 2016/426/EU Gas Appliance Regulation
- 2006/42/EC Machine Directive
- 2011/65/EU RoHS2 Directive

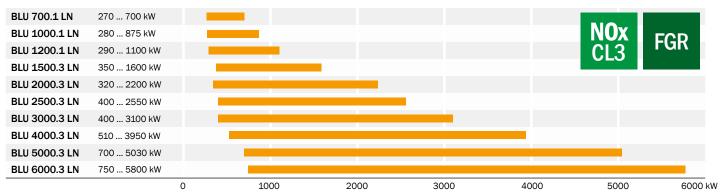




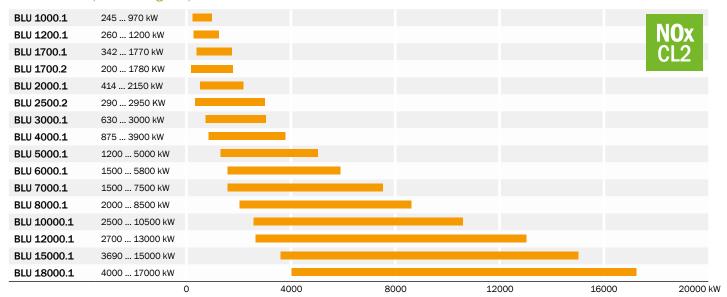




Low NOx Classe 3 (NOx \leq 80 mg/kWh)



Low NOx Classe 2 (NOx \leq 120 mg/kWh)



CONFIGURATIONS

BLU range is available in the following operation modes:



BLU 700 ... 2000

Two stages

Low NOx Class 2 and class 3



BLU 700 ... 18000

Two stage progressive/modulating mechanical Low NOx Class 2 and class 3



BLU 700 ... 18000

Two stage progressive/modulating electronic Low NOx Class 2 and class 3

- LPG versions up to BLU 6000
- Continuous ventilation versions
- Swirl system for flame geometry customization
- Version with FGR System to reach Ultra Low NOx emissions (NOx ≤ 30 mg/kWh)
- OEM and other special versions on request according to feasibility

- · Adjustable combustion head for easy regulation and matching with different combustion chambers
- · Modulating version with PID controller with digital set-point display and real-time values
- Version with fully electronic Burner Management System available for all models
- The range includes burners Low NOx class 2 and Low NOx class 3 up to 6 MW; versions with FGR System (Flue Gas Recirculation) are also available on request and allow to reach NOx emissions below 30 mg/kWh
- The new BLU.3 series has been designed with a new air/gas control system: the servomotor operates directly on the butterfly gas valve and the air damper is controlled through a mechanical leverage connected to the cam; this system allows a more precise regulation of the air damper following the gas valve setting made through the servomotor

FUEL

- Natural gas (G20, G25 according to EN676)
- LPG

EMISSIONS

Class	NOx mg/kWh
2	120
3	80

All models are in compliance with EN 676 European Standard

DIRECTIVES

All products are in accordance with the following directives:

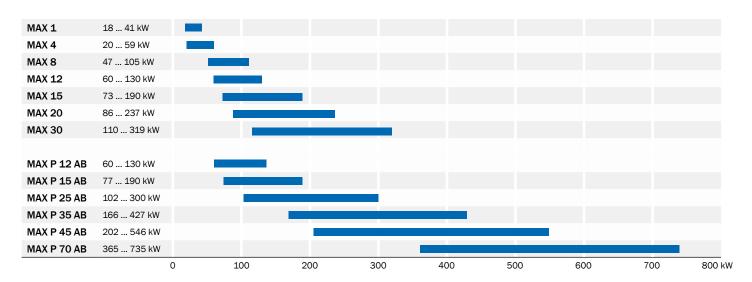
- 2014/35/EU Low Voltage Directive
- 2014/30/EU EMC Directive
- 2016/426/EU Gas Appliance Regulation
- 2006/42/EC Machine Directive
- 2011/65/EU RoHS2 Directive





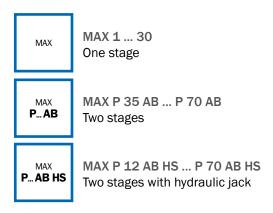






CONFIGURATIONS

MAX range is available in the following operation modes:



- · Continuous ventilation versions
- · High temperature versions
- Versions with specific pump for light oil with maximum viscosity 5°E at 20°C
- OEM and other special versions on request according to feasibility

- High efficiency fan ventilation system (HPV) allowing easy matching with boilers having high combustion chamber back pressure
- Electrical wiring simple to disassemble for easy maintenance
- · Combustion head easy to assemble and adjust
- The hinge flange allows easy access to burner head without losing burner settings (MAX 35, MAX 45 and MAX 70)
- Models from MAX 1 to MAX 12 work with 50-60 Hz electrical frequency

FUEL

• Light oil (viscosity from 1,6 cSt to 6 cSt at 20 °C)

Class NOx mg/kWh

All models are in compliance with EN 267 European Standard

DIRECTIVES

All products are in accordance with the following directives:

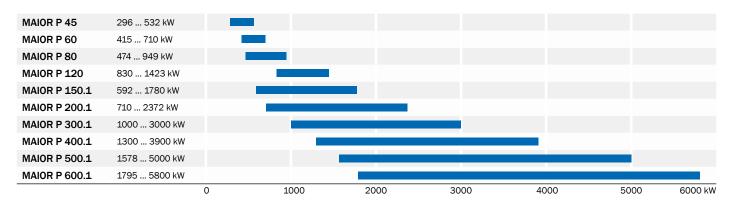
- 2006/42/EC Machinery Directive
- 2014/30/UE EMC Directive
- 2014/35/UE Low Voltage Directive

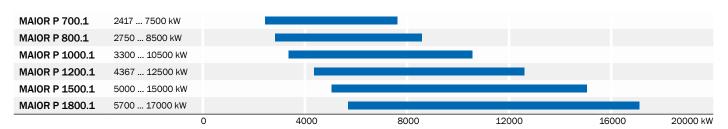












CONFIGURATIONS

MAIOR range is available in the following operation modes:

MAIOR P 60 AB ... P 400.1 AB
Two stages

MAIOR P 60 ... P 400.1 AB HS
Two stages with hydraulic jack

MAIOR P 45 ... P 1800.1 PR
Two stages progressive/modulating mechanical

MAIOR P 45 ... P 1800.1 PRE
Two stages progressive/modulating electronic

Other available configurations:

MAIOR

P... PR

- · Continuous ventilation versions
- Versions with specific pump for light oil with maximum viscosity 5°E at 20°C
- . OEM and other special versions on request according to feasibility

- Two stage version with hydraulic jack or electric servomotor up to MAIOR P 400.1
- · Progressive mechanical version with flow return nozzle
- Modulating version with PID system controller with digital set point display and real time value
- Version with sliding bars standard for models from MAIOR 700.1 to MAIOR 1200.1
- · Adjustable combustion head for easy regulation and matching with different combustion chambers
- · Version with fully electronic Burner Management System available for all models on request

FUEL

 Light oil (viscosity from 1,6 cSt to 6 cSt at 20°C)

DIRECTIVES

All products are in accordance with the following directives:

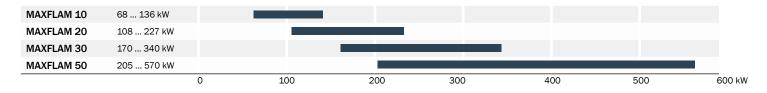
- 2006/42/EC Machinery Directive
- 2014/30/UE EMC Directive
- 2014/35/UE Low Voltage Directive

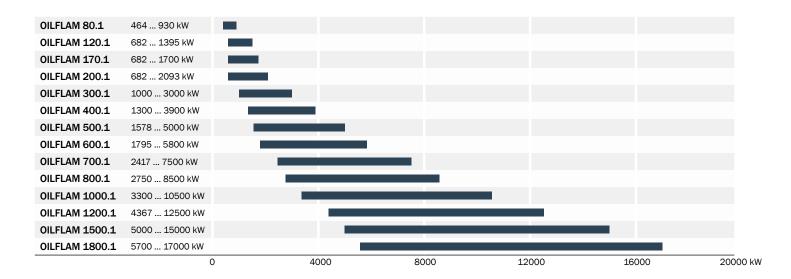












CONFIGURATIONS

MAXFLAM range is available in the following operation modes:

MAXFLAM

MAXFLAM 10 ... 30 One stage

MAXFLAM **AB**

MAXFLAM 30 ... 50 AB

Two stages

OILFLAM range is available in the following operation modes:

OILFLAM **AB**

OILFLAM 80.1 ... 400.1 AB Two stages

OILFLAM **PR**

OILFLAM 80.1 ... 1800.1 PR

Two stages progressive/modulating mechanical

OILFLAM PRE

OILFLAM 80.1 ... 1800.1 PRE

Two stages progressive/modulating electronic

- · Continuous ventilation versions
- High temperature versions
- High viscosity versions suitable for 118 cSt (15°E) at 80°C available on request

- All models are suitable to work with heavy oil up to 50°E at 50°C
- Two stage version with electric servomotor available up to model OILFLAM 400.1
- Integrated electrical panel complete with pre-heater management system
- Digital thermoregulator integrated on the front panel to grant temperature stability of the fuel (from OILFLAM 300.1)
- Self-cleaning filter installed in the pre-heater in order to keep the nozzle clean from OILFLAM 300.1
- Adjustable combustion head for easy regulation and matching with different combustion chambers
- · Heavy oil electric heating system on board
- Ring system for oil preparation can be designed and supply on request
- · Version with fully electronic Burner Management System available for all models on request

FUEL

Heavy oil (max viscosity 380 cSt (50°E) at 50°C)

DIRECTIVES

All products are in accordance with the following directives:

- 2006/42/EC Machinery Directive
- 2014/30/UE EMC Directive
- 2014/35/UE Low Voltage Directive

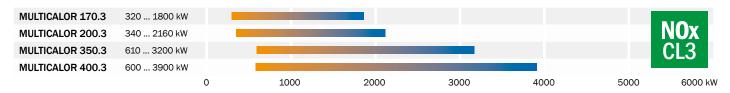




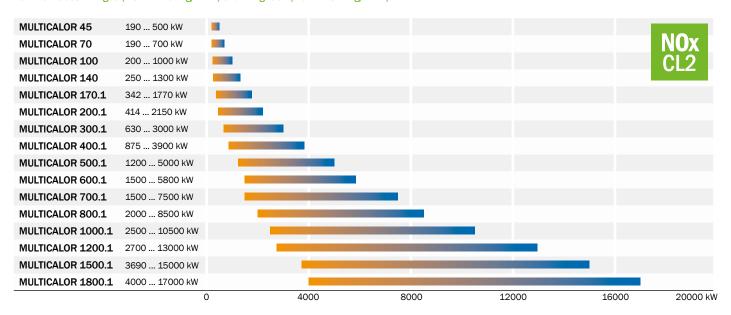




Low NOx Class 3 in gas (NOx ≤ 80 mg/kWh), Class 2 in light oil (NOx ≤ 185 mg/kWh)



Low NOx Class 2 in gas (NOx \leq 120 mg/kWh) and in light oil (NOx \leq 185 mg/kWh)



CONFIGURATIONS

MULTICALOR range is available in the following operation modes:



MULTICALOR 45 ... 200.1
Two stages in gas and in light oil



MULTICALOR 70 ... 200.1 PR/AB

Two stage progressive/modulating mechanical in gas / two stages in light oil



MULTICALOR 170.3/400.3 PR and 70 ... 1800.1 PR

Two stage progressive/modulating mechanical in gas and in light oil



MULTICALOR 170.3/400.3 PRE and 70 ... 1800.1 PRE

Two stage progressive/modulating electronic in gas and in light oil

- · Continuous ventilation versions
- Swirl system for flame geometry customization
- OEM and special versions on request according to feasibility

- MULTICALOR models from 170.3 to 400.3 are equipped with low emissions combustion head and are classified Low NOx class 3 when operating in gas (NOx ≤ 80 mg/kWh according to EN676) and class 2 when operating in ligh oil (NOx ≤ 185 mg/kWh according to EN267)
- Progressive version with electric servomotor and double adjustable mechanical cam that allows air and fuel fine tuning
- Version with fully electronic Burner Management System available for all models
- Adjustable combustion head for easy regulation and matching with different combustion chambers
- · Configurated and special versions on request according to feasibility

FUEL

- Natural gas (G20, G25 according to EN676)
- I PG
- Light oil (viscosity from 1,6 cSt to 6 cSt at 20°C)

EMISSIONS

Class	Gas
	NOx mg/kWh
2	120
3	80

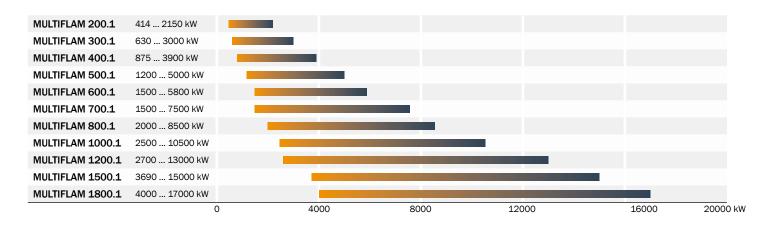
All models are in compliance with EN 676 and EN 267 European Standard

DIRECTIVES

All products are built in accordance with the following directives:

- 2006/42/EC Machinery Directive
- 2014/30/UE EMC Directive
- 2014/35/UE Low Voltage Directive
- 2009/142/CEE Gas Appliances Directive





CONFIGURATIONS

MULTIFLAM range is available in the following operation modes:



MULTIFLAM 200.1

Two stages in gas and in heavy oil



MULTIFLAM 300.1 ... 1800.1 PR

Two stage progressive/modulating mechanical



MULTIFLAM 300.1 ... 1800.1 PRE

Two stage progressive/modulating electronic

- · Continuous ventilation versions
- · High temperature versions
- High viscosity versions suitable for 118 cSt (15°E) at 80°C available on request
- · Versions in electronic configuration

- Two stage version with electric servomotor and integrated system for the regulation of air and fuel (for MULTIFLAM 200.1)
- · Progressive version with electric servomotor and double adjustable mechanical cam that allows air and fuel fine tuning
- Modulating version with PID system controller with digital set point display and real time value
- Digital thermoregulator integrated on the front panel to grant temperature stability of the fuel (from MULTIFLAM 300.1)
- · Adjustable combustion head for easy regulation and matching with different combustion chambers
- · Gas pilot included with separate supply line
- · Heavy oil electric heating system on board
- · Version with fully electronic Burner Management System available for all models on request
- · Configurated and special version on request according to feasibility

FUEL

- Natural gas (G20, G25 according to EN676)
- LPG
- Heavy oil (max viscosity 380 cSt (50°E) at 50°C)

DIRECTIVES

All products are built in accordance with the following directives:

- 2006/42/EC Machinery Directive
- 2014/30/UE EMC Directive
- 2014/35/UE Low Voltage Directive
- 2009/142/CEE Gas Appliances Directive









TS RANGE | DUOBLOCK BURNERS FROM 230 TO 42000 kW

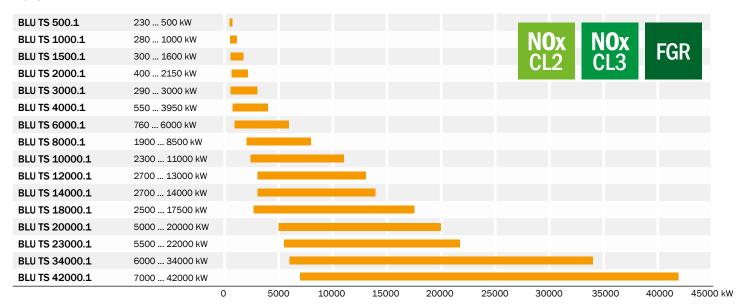
Thanks to their extreme flexibility and ease of use TS burners are suitable for all types of installation up to 42 MW. All the models of the range can work with pre-heated combustion air up to 200°C; **HT2.2 versions** suitable to work with temperature up to 250°C in order to achieve greater values of efficiency are also available.

The following diagrams make reference to burners in standard configuration.

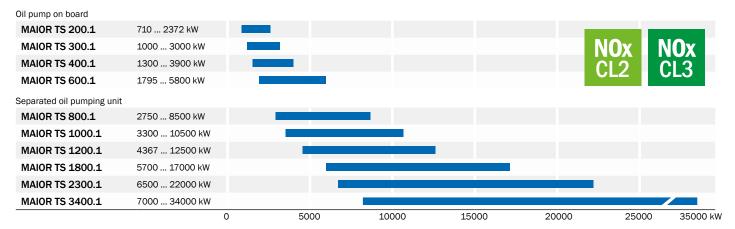
For HT versions it is necessary to consider a reduction in the power range which depends on the chosen configuration and the combustion air temperature.

RANGE OVERVIEW

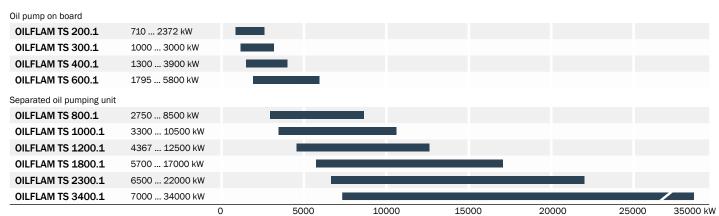
GAS



LIGHT OIL



■ HEAVY OIL





DUAL FUEL (GAS/LIGHT OIL)

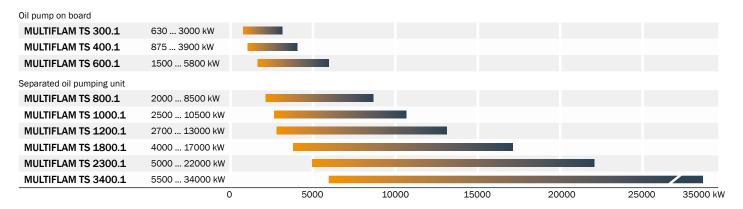
Oil pump on board **MULTICALOR TS 100** 300 ... 1000 kW **MULTICALOR TS 140** 400 ... 1300 kW **MULTICALOR TS 200.1** 414 ... 2150 kW MULTICALOR TS 300.1 630 3000 kW **MULTICALOR TS 400.1** 875 ... 3900 kW MULTICALOR TS 600.1 1500 ... 5800 kW Separated oil pumping unit 2000 ... 8500 kW MULTICALOR TS 800.1 MULTICALOR TS 1000.1 2500 ... 10500 kW MULTICALOR TS 1200.1 2700 ... 13000 kW **MULTICALOR TS 1800.1** 4000 ... 17000 kW MULTICALOR TS 2300.1 5000 ... 22000 kW **MULTICALOR TS 3400.1** 5500 ... 34000 kW

10000

15000

5000

DUAL FUEL (GAS/HEAVY OIL)



CONFIGURATIONS

TS series is available in a wide range of variants to suit any application or specific requirement.

Hot air configuration

All gas and oil models are suitable to work with pre-heated combustion air up to 200°C (100°C for dual fuel models).

High temperature "**HT2.2**" versions suitable to work with pre-heated combustion air up to 250°C in order to achieve greater values of efficiency.

The burners are equipped with:

- external thermal screen protection
- insulated removable upper covers
- servomotors with heat insulation and plastic support
- metallic sheath cables
- integrated control panel



20000

35000 kW

25000

RESIDENTIAL RANGE

Ecoflam is continuously focused on an environmental program, both for optimisation of existing products and new developments, with the target to offer efficient, reliable and technologically advanced solutions able to meet the most restrictive European legislation requirements, in particular in terms of emission and energy saving.







New series of low NOx oil burners for OEM «Unit» applications are available with one stage, two stage or modulating operation. Burners suitable to work with alternative fuels such as biofuels and biogas are also available.

Low NOx one stage burners



MAX LN range

- One stage light oil burners available in different rating sizes from 15 to 65 kW
- Low NOx combustion technology able to guarantee NOx emissions below 115 mg/kWh (EN 267:2009)
- High ventilation performance
- Easy installation, adjustment and maintenance

Low NOx special customized models



UB1 VD range

- Two stage light oil burners covering an output range from 11 to 42 kW
- Blue Flame combustion technology with NOx emissions below 110 mg/kWh (EN 267:2009)
- Suitable to operate in altitude with high performances

Low NOx modulating burners



F10/F15 range

- Innovative modulating light oil burners with an output range from 8 to 62 kW
- Blue Flame combustion technology granting NOx emissions below 100 mg/kWh (EN 267:2009)
- Patented modulating system
- · High ventilation performance
- Low noise and low electrical consumption
- Easy setting through a 3-point curve

Burners suitable for low sulphur oil and light oil/biofuel blends (biofuel up to 10%). Special dedicated burner models available for kerosene Low NOx applications.

SPECIAL VERSIONS

Ecoflam is renowned for its ability to conceive and build flexible products and to propose customized solutions for any type of applications.

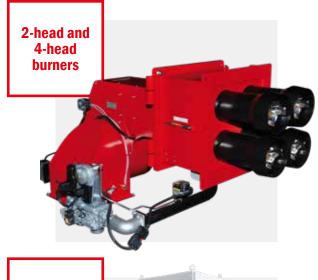
Successful and satisfied customers, both from OEM or distribution fields, demonstrate throughout the years that Ecoflam is able to meet their requests offering a wide range of special products capable to satisfy even the most difficult ones.













WORLDWIDE REFERENCES



2 monoblock gas burners:

BLU 4000.3 PRE FGR

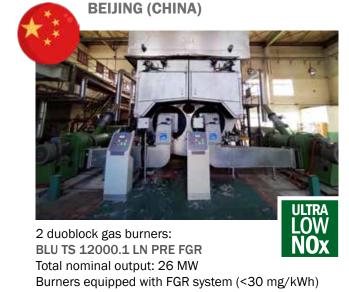
Total nominal output: 8 MW

Burners equipped with FGR system (<30 mg/kWh)



3 monoblock dual fuel burners: MULTICALOR TS 600.1 PR Total nominal output: 17,4 MW







Low NOx class 3 (≤80 NOx mg/kWh)

2 monoblock dual fuel (gas/light oil) burners: MULTICALOR 800.1 PR Total nominal output: 17 MW



1 monoblock light oil burner: MAIOR P 150.1 Nominal output: 1,8 MW

WORLDWIDE REFERENCES

ARKLOW (IRELAND)

1 monoblock dual fuel (gas/light oil) burner: MULTICALOR 800.1 PRE Nominal output: 8,5 MW



6 monoblock gas burners:
1x BLU 2000.3 PRE FGR
5x BLU 6000.3 PRE FGR
Total nominal output: 31 MW
Burners equipped with FGR system (<30 mg/kWh)



2 monoblock dual fuel (gas/light oil) burners: MULTICALOR 800.1 PR
Total nominal output: 17 MW



3 duoblock dual fuel (gas/light oil) burners: MULTICALOR TS 1000.1 LN PRE FGR
Total nominal output: 31,5 MW
Burners equipped with FGR system
(<30 mg/kWh in gas, <150 mg/kWh in oil)



MAX GAS 40 P
Total nominal output: 7,5 MW
Low NOx class 3 (≤80 NOx mg/kWh)



1 duoblock dual fuel (gas/heavy oil) burner: MULTIFLAM TS 200.1 PRE Nominal output: 2 MW

Ecoflam

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Company subject to the direction and coordination of Ariston Group

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ECOFLAM Bruciatori S.p.A. reserve the right to make any adjustments, without prior notice, which is considered necessary or useful to its products, without affecting their main features.