

# Product catalogue





# Our aim is to ensure the highest quality of our products



MADE IN SWEDEN



## Quality is built-in

Bentone started production of burners in Sweden in 1954, and our brand has been a hallmark of quality and performance ever since then. All Bentone products are still designed and produced in Ljungby in Sweden. The fact that all the company functions of R&D, production, planning, sales and technical support are located on the same site, makes us uniquely suited to solving problems and challenges for our customers. This includes new legislation and requirements of certification. Our skilled and loyal workforce will then ensure world class standards of manufacturing and quality assurance.

Over the years, Bentone has built up a multitude of partners who distribute and sell our products in every corner of the world. Our partners and of course the end customers appreciate our dedication to prompt and reliable supply of first class products to each and every market.

Welcome to be part of the Bentone world!



Helene Richmond  
CEO  
Enertech AB

# Bentone Ecodesign

The Ecodesign Directive aims at reducing the environmental impact. The Directive actual purpose is to lay down the general principles of ecodesign and to define conditions and needs for setting specific requirements.

## Ecodesign Directive

The Ecodesign Directive aims at reducing the environmental impact of products, including their energy consumption throughout their entire cycle of life. The production, distribution, use and end-of life management of energy using products have significant negative effects on the environment.

The Directive actual purpose is to lay down the general principles of ecodesign and to define conditions and needs for setting specific requirements. These requirements can then be researched and tailored to specific product groups and published relatively quickly, and they will relate to environmentally relevant product characteristics, such as energy consumption.

Bentone launched low NOx burners already in 2003 and we have continued to develop and introduce new low NOx burners and will continue to set new standards for years to come.

## Ecodesign Directive 2009/125/EC (ErP)

Boilers fitted with an oil- or a gas burner in capacities up to 400 kW for residential heating shall comply according to Ecodesign rules from the 26 of September 2018.

### Emission class

- Oil burners < 120 mg NOx/kWh class 4
- Gas burners < 56 mg NOx/kWh class 5



# Medium Combustion Plant Directive MCP

The Medium Combustion Plant Directive (MCPD) regulates pollutant emissions from the combustion of fuels in plants with a rated thermal input equal to or greater than 1 Megawatt thermal (MWth) and less than 50 MWth.

## Medium Combustion Plant Directive MCP

The MCPD was proposed as part of the Clean Air Policy Package in 2013. The work to assess the impacts of the Clean Air Policy Package identified cost-effective emission reduction measures for MCPs thus demonstrating a potential for EU source legislation in this area.

This Directive fills the regulatory gap at EU level between large combustion plants (> 50 MWth), covered by the Industrial Emissions Directive (IED) and smaller appliances (heaters and boilers <1 MWth) covered by the Ecodesign Directive.

The MCPD regulates emissions of SO<sub>2</sub>, NO<sub>x</sub> and dust to air. It aims to reduce those emissions and the resultant risks to human health and the environment. It also requires monitoring of carbon monoxide (CO) emissions. The emission limit values set in the MCPD apply from 20 December 2018 for new plants and 2025 or 2030 for existing plants, depending on their size. The flexibility provisions for district heating plants and biomass firing ensure that climate and air quality policies are consistent and their synergies are maximised.

The MCPD addresses the potential need for Member States to apply stricter emission limit values in areas where this can improve local air quality in a cost effective way. The Commission will help Member States deal with such hotspots by providing information on the lowest emissions achievable with the most advanced techniques.



## Directive 2015/2193/EC (MCP)

Medium Combustion Plant Directive (MCPD) regulates pollutant emissions from the combustion mid-sized combustion plants was implemented on the 20 of December 2018 (MCP).

### Emission class

- Oil burners < 200 mg/Nm<sup>3</sup> class 2
- Natural gas burners < 100 mg/Nm<sup>3</sup> class 3
- LPG burners < 200 mg/Nm<sup>3</sup> class 2

# Bentone Annex J/K

With the introduction of the annex J/K of EN 267, EN 676 and EN 746-2 Bentone has developed a new range of burners for steam boilers, kilns and industrial ovens.

## Approved oil burners

Bentones oil burners are approved according to EN 267 and are designed for traditional hot water boilers with temperatures up to 110 °C. In addition they can be delivered approved according to the annex J/K. The annex J/K is applicable in the EU and countries that comply with the same standard.

## Approved gas burners

Bentones gas burners are approved according to EN 676 and are designed for traditional hot water boilers with temperatures up to 110 °C. In addition they can be delivered approved according to the annex J/K. The annex J/K is applicable in the EU and countries that comply with the same standard.



### • Annex J

Harmonization of the Machinery Directive: Requirements for installation of burners in industrial applications.

### • Annex K

Harmonization of the Pressure Equipment Directive: Requirements for the installation of burners on boilers and hot water boilers with a temperature above 110 °C.

### • EN 746-2

Industrial process burners: Requirements for the installation of burners on boilers for processing, refining, manufacturing and other industrial processes.

# Residential Range Oil

BF 1 is easy to maintain and designed in line with modern requirements. Bentone BF 1 burners are suitable for residential, commercial heating and industrial applications including mobil road equipment.

## BF 1 Range

Our most flexible burner for residential applications and available in several different models. Designed for a modern efficient combustion and approved according to the latest Ecodesign directive.

The burner has small dimensions with a high capacity and parts are easy to replace and the burner is very service friendly.

Ecodesigned approved according to class 4 (ErP)



### Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Suitable for condensing boilers
- B** Optional balanced flue system
- B** Approved for RME (FAME)

Models 1 stage	Capacity kW
BF 1 FU	15 - 55
BF 1 FU V	15 - 55
BF 1 FU V RME	15 - 55
BF 1 KS	35 - 90
BF 1 KSV	35 - 90
BF 1 KSV RME	35 - 90

V stands for preheater.

# Residential Range Oil

B 2 is easy to maintain and designed in line with modern requirements and is suitable for residential and commercial heating.

## B 2 Range

B 2 is a modern oil burner for residential and commercial heating applications. Designed for a modern efficient combustion and approved to the latest Ecodesign directive.

The environment is always in focus and Bentone has developed the B 2 for the environment and it has a low fuel consumption. With a capsuled air system the burner is very quiet in operation.

Ecodesigned approved according to class 4 (ErP)



### Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Compatible with environmental requirements
- B** Designed for easy maintenance
- B** Quiet in operation

Models 1 stage	Capacity kW
B 2 KA	28 - 105
B 2 KAV	28 - 105
B 2 KS	46 - 125
B 2 KSV	46 - 125

V stands for preheater.

# Sterling Range Oil

Bentones Sterling burners is a tough compact burner mainly designed and constructed for ovens in industrial applications. The housing is made of aluminium and the low weight combined with a high efficiency makes it the obvious choice for many of our customers.

## Sterling Range

Sterling burners are especially suitable for ovens and boilers in the lower capacity range. Sterling features includes a coordinated fan combined with the oil pump, all combined within the housing.

This lowers operating costs considerably and it's compact design is ideal for rack ovens.

Ecodesigned approved according to class 4 (ErP)



### Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Compact design
- B** Optional balanced flue system
- B** Ideal for smaller ovens

Models 1 stage	Capacity kW
ST 108 R	14 - 47
ST 108 RV	14 - 47
ST 120 R	17 - 51
ST 120 RV	17 - 51
ST 120 KA	24 - 66
ST 133 S	36 - 90
ST 133 SV	36 - 90
ST 133 K	48 - 118
ST 146 KS	39 - 119
ST 146 B30	60 - 157

V stands for preheater.

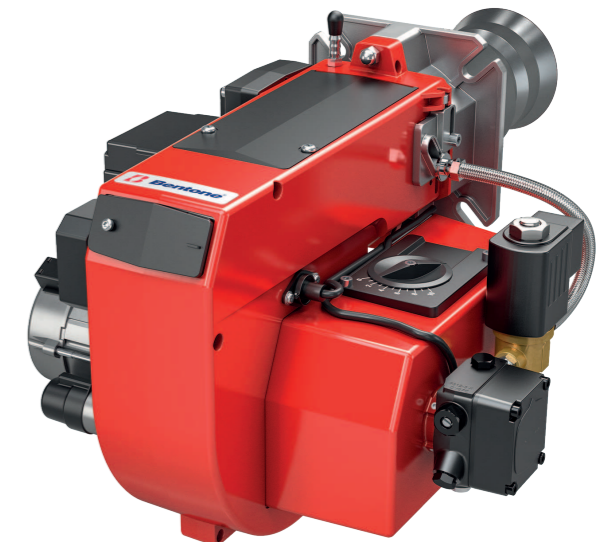
# Intermediate Range Oil

Bentones family of intermediate burners are well designed and robust burners aimed for an industrial process or heating of semi large commercial buildings. For many years these burners has been the backbone of Bentone and we have constantly modernized our burners to meet the new demands of modern regulations and lower NOx levels.


## Intermediate Range

Probably the worlds most succesful burner with endless installations in various applications. The original design goes back to the '70s but as with many of our burners we have constantly modified and perfected our design over the years.

Ecodesigned approved according to class 4 (ErP)



### Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Approved for RME (FAME)
- B** Available with LMV37 
- B** Available according to Annex J/K

Models 1 stage	Capacity kW
B 30 A	72 - 200
B 30 A RME	72 - 200
B 30 A J/K	72 - 200
B 40	107 - 350
B 40 A	107 - 350
B 40 A RME	107 - 350
B 45 A	96 - 520
Models 2 stage	
B 30 2A	72 - 200
B 30 A2.2	55 - 175
B 30 A2.2 RME	55 - 175
B 30 A2.2H	55 - 175
B 40 A2.2	110 - 320
B 40 A2.2 RME	110 - 320
B 40 A2.2H	110 - 320
B 45 A2.2	102 - 540
B 45 A2.2 RME	102 - 540
B 45 A2.2H	102 - 540
B 45i A2.2H J/K	102 - 540



# Top Range Oil

Bentones top range of burners are designed and constructed for steam boilers in larger commercial buildings and industrial applications such as kilns and industrial ovens. They are well known for their high efficiency in combination with a low fuel consumption.


## Top Range

Our top range of burners are well designed for the toughest environments and will give you a troublefree operation for years.

Approved according to class 2 and 3 (MCP)

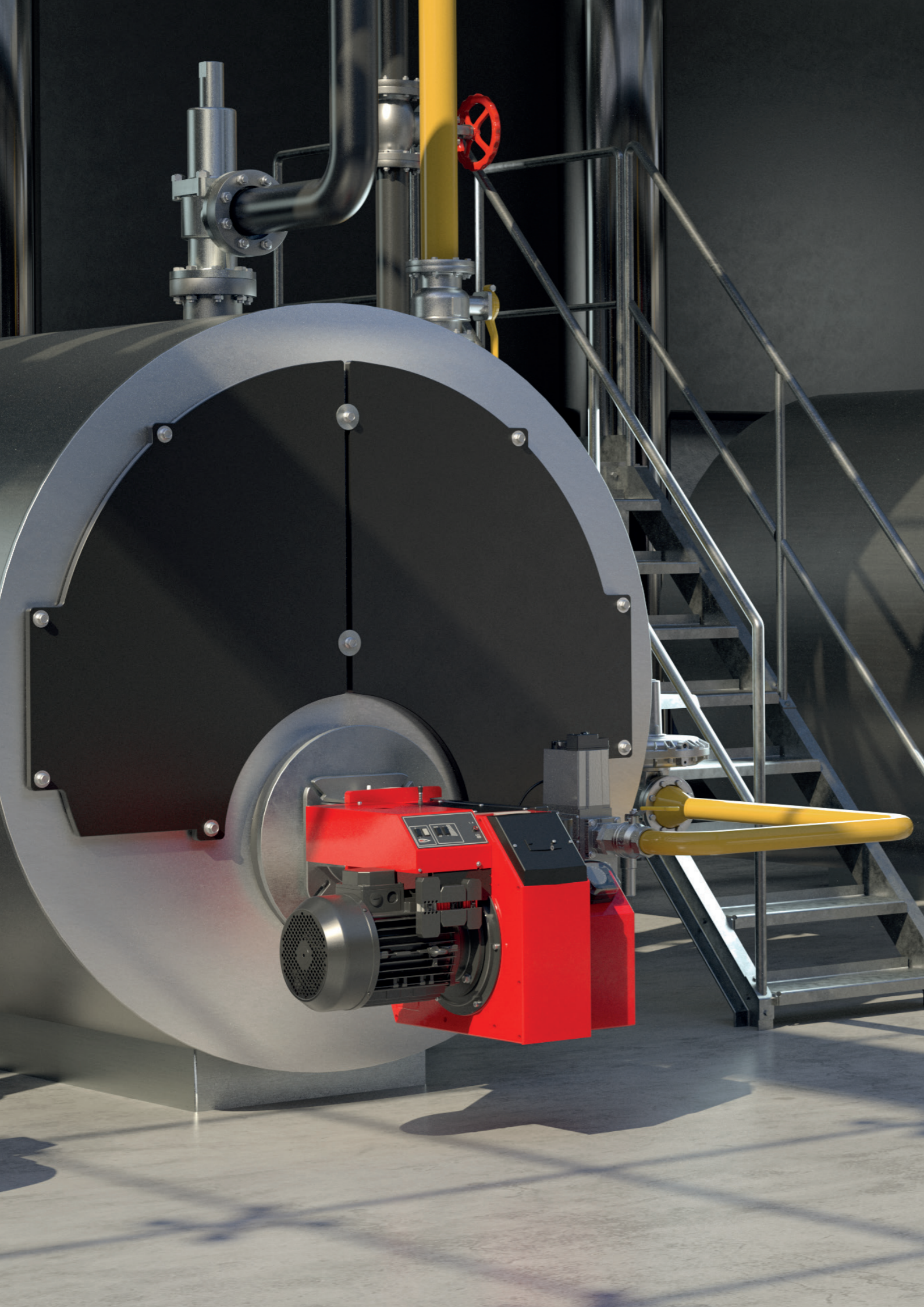


### Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Approved for RME (FAME)
- B** Available with LMV37 
- B** Available according to Annex J/K

Models 2 stage	Capacity kW
B 55 - 2	155 - 800
B 55 - 2 RME	155 - 800
B 55 - 2H	155 - 800
B 65 - 2	260 - 1180
B 65 - 2 RME	260 - 1180
B 65 - 2H	260 - 1180
Models 3 stage	
B 55 - 3R	155 - 760
B 55 - 3R R316 ***	155 - 760
B 65 - 3R	285 - 1170
B 65 - 3R R316 ***	285 - 1170
B 65i - 3R J/K	285 - 1170

\*\*\* Equipped with Jumo 316 regulator.



# Top Range Oil







You will find our larger burners operating on boilers for years all over the world and our aluminium housings for our burners are designed and manufactured for tough environments. Lowering emissions is part of Bentones strategies and one of our goal towards a green future. Low fuel consumption combined with high degree of efficiency will decrease carbon emissions and increase performance.

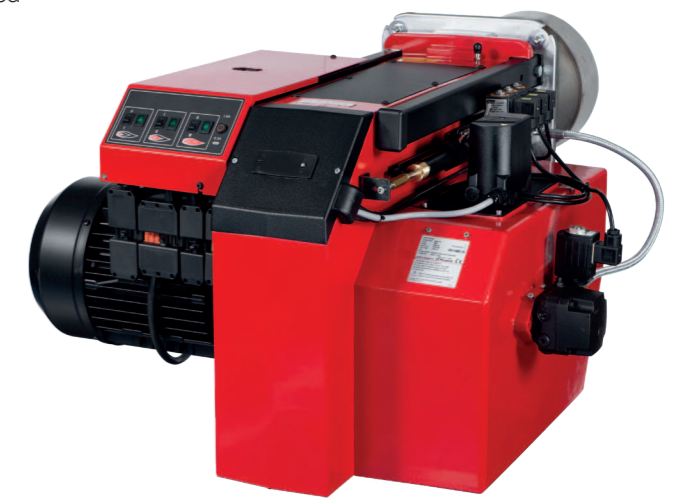
## Top Range

Our top range of burners are well designed and designed for the toughest environments and will give you a troublefree operation for years.

Approved according to class 2 (MCP)

### Benefits

-  Energy saving
-  Low fuel consumption
-  Approved for RME (FAME)
-  Available with LMV37 
-  Available according to Annex J/K



Models 3 stage	Capacity kW
B 70 - 3R	490 - 1650
B 70 - 3R R316 ***	490 - 1650
B 70i - 3R RME J/K	490 - 1650
B 80 - 3R	600 - 2500
B 80 - 3R R316 ***	600 - 2500
B 80i - 3R RME J/K	600 - 2500

\*\*\* Equipped with Jumo 316 regulator.





# Multi Fuel

Bentone Multi Fuel burners are designed to operate on various bio fuels of both fossil and biological origin including rapeseed oil (FAME) Our range of Multi Fuel burners are equipped with a preheater and include suitable components for bio-oil.

## Multi Fuel Range

Bio-oil are becoming more and more popular and Bentones Multi Fuel burners are designed and constructed to handle bio-oils which have a higher viscosity. The burners are designed according to EN 267 with pure rapeseed oil, with a max viscosity of 120 cSt at 20 °C.

### Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Compatible with environmental requirements
- B** Designed for easy maintenance
- B** Approved according to EN 267 and DIN 51605



Models 1 stage	Capacity kW
B 40 MF	65 - 300
Models 2 stage	
B 45 -2 MF	90 - 570



# Residential Range Gas

Easy to maintain and compatible with modern requirements. Bentone gas burners are designed and approved in accordance with the European standard EN 676. Our BFG 1 burners saves energy and compatible with the environmental requirements and is also very reliable.

## BFG 1 Range

Our most flexible burner for residential applications with several different versions available.

BFG 1 can be used for traditional heating of residential and commercial buildings including industrial applications.

The burner has small dimensions and a high capacity and parts are easy to replace and the burner is very service friendly.

Approved according to class 3 (EN 676)



## Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Suitable for condensing boilers
- B** Optional balanced flue system
- B** Available for Natural Gas, LPG and Biogas

Models 1 stage	Capacity kW
BFG 1 H1	15 - 60
BFG 1 H2	15 - 65
BGF 1 H3	25 - 100
Models 2 stage	
BFG 1 - 2 H3	25 - 100

Also available in biogas versions. Biogas will affect the output and the components of the burner.

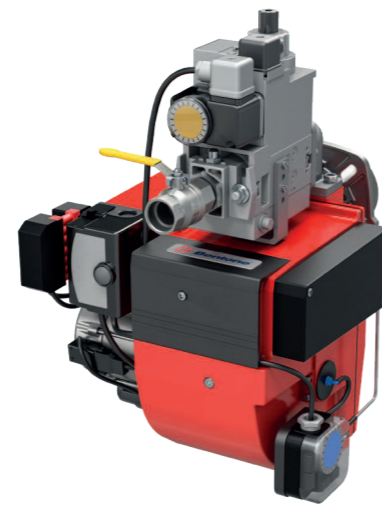
# Sterling Range Gas

Bentone Sterling burners exist in various models and are designed for ovens and industrial applications. Our Sterling range of burners are made of aluminium and are designed especially for a tough environment in an industrial process.

## Sterling Range

Our range of Sterling gas burners are very popular for ovens and melting furnaces. The small compact design combined with our combustion efficiency makes it the obvious choice for customers all over the world.

Approved according to class 3 (EN 676)



### Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Compact design
- B** Optional balanced flue system
- B** Available for Natural Gas, LPG and Biogas

Models 1 stage	Capacity kW
STG 120/1	12 - 51
STG 120/2	15 - 70
STG 146/1	24 - 65
STG 146/2	41 - 144

Also available in biogas versions. Biogas will affect the output and the components of the burner.

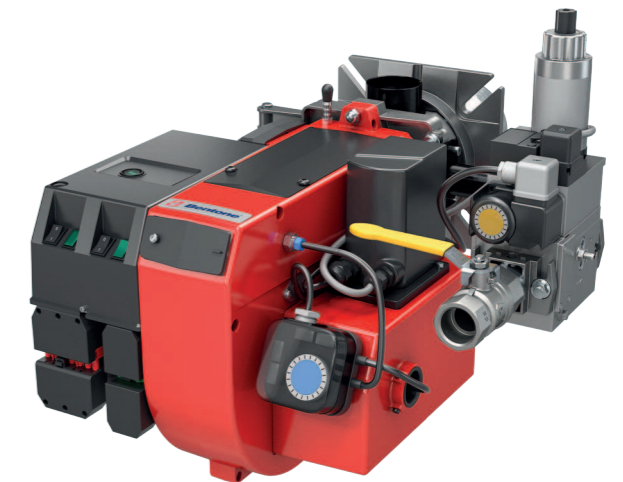
# Intermediate Range Gas

Bentone's family of intermediate burners are well designed and robust burners aimed for an industrial process or heating of a semi large commercial building. For many years these burners have been the backbone of Bentone and we have constantly modernized our burners to meet the new demands of modern regulations and lower NOx levels.


## Intermediate Range

Our range of intermediate burners were initially designed for boilers but are also widely used in ovens as they are approved according to EN 676 and EN 746-2. Annex J/K are mandatory supplements of the EN 746-2 regulation which covers industrial ovens, kilns and steam boilers.

Ecodesigned approved according to class 5 (ErP)



### Benefits

- B** Energy saving
- B** Low fuel consumption
- B** Available for Natural Gas, LPG and Biogas
- B** Available with LMV37 
- B** Available according to Annex J/K



Models 1 stage	Capacity kW
BG 300	50 - 200
BG 400	61 - 340

Models 2 stage	Capacity kW
BG 300 - 2	50 - 200
BG 400 - 2	61 - 350
BG 450 - 2	120 - 550

Models Modulating	Capacity kW
BG 300 M	50 - 200
BG 300 M J/K	50 - 200
BG 300 LN	45 - 120
BG 400 M	61 - 350
BG 400 M J/K	61 - 350
BG 400 LN	56 - 171
BG 450 M	120 - 550
BG 450 M R316 ***	120 - 550
BG 450 M J/K	120 - 550
BG 450i M J/K	120 - 550
BG 450 LN	90 - 449

\*\*\* Equipped with Jumo 316 regulator. Also available in biogas versions. Biogas will affect the output and the components of the burner.

# Top Range Gas

Bentones family of intermediate burners are well designed and robust burners aimed for an industrial process or heating of a semi large commercial building. For many years these burners has been the backbone of Bentone and we have constantly modernized our burners to meet the new demands of modern regulations and lower NOx levels.

## Top Range

Extremely efficient burners with a low fuel consumption combined with a high efficiency. Our top range of burners are extremely popular and especially our Low NOx versions are widely used all over Europe. Innovations for a green future is a key figure at Bentone.

Approved according to class 3 (EN 676)



### Benefits

- Energy saving
- Low fuel consumption
- Available for Natural Gas, LPG and Biogas
- Available with LMV37
- Available according to Annex J/K

Models 2 stage	Capacity kW
BG 550-2	140 - 650
BG 650-2	200 - 1125

Models Modulating	Capacity kW
BG 550 M	140 - 650
BG 550 M R316 ***	140 - 650
BG 550i M	140 - 650
BG 550i M J/K	140 - 650
BG 550 LN	140 - 640
BG 650 M	200 - 1125
BG 650 M R316 ***	200 - 1125
BG 650i M	200 - 1125
BG 650i M J/K	200 - 1125

\*\*\* Equipped with Jumo 316 regulator. Also available in biogas versions. Biogas will affect the output and the components of the burner.

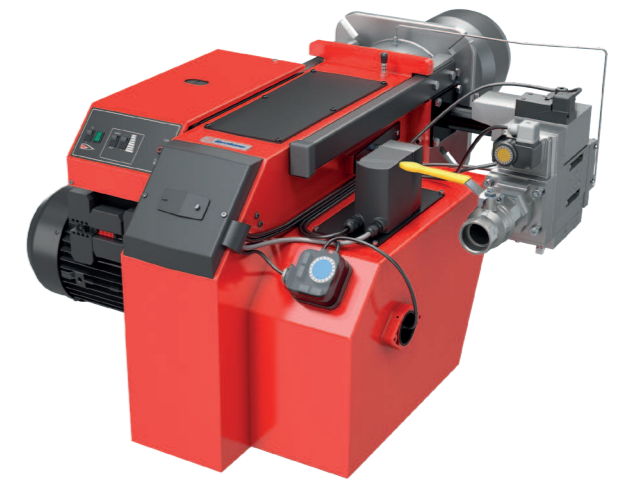
# Top Range Gas

You will find our larger burners operating on boilers for years all over the world and our aluminium coated housings for our burners are designed and manufactured for tough environments. Lowering emissions is part of Bentones strategies and one of our goal towards a green future. Low fuel consumption combined with high degree of efficiency will decrease carbon emissions and increase performance.

## Top Range

Extremely efficient burners with a low fuel consumption combined with a high efficiency. Our top range of burners are extremely popular and especially our Low NOx versions are widely used all over Europe. Innovations for a green future is a key figure at Bentone.

Approved according to class 4 (EN 676)



### Benefits

- Energy saving
- Low fuel consumption
- Available for Natural Gas, LPG and Biogas
- Available with LMV37
- Available according to Annex J/K

Models 2 stage	Capacity kW
BG 700-2	300 - 1 650

Models Modulating	Capacity kW
BG 700 M	300 - 1650
BG 700 M R316 ***	300 - 1650
BG 700i M	300 - 1650
BG 800 M	380 - 2400
BG 800 M R316 **	380 - 2400
BG 800i M	380 - 2400
BG 950 M	500 - 3200
BG 950 M R316 ***	500 - 3200
BG 950i M	500 - 3200

\*\*\* Equipped with Jumo 316 regulator. Also available in biogas versions. Biogas will affect the output and the components of the burner.

Providing sustainable energy solutions worldwide

**Enertech AB is the holding company of Bentone, CTC, Giersch, Nu-Way, Osby Parca, Turboflame, VEÅ and Waterkotte. We started already as a manufacturer of boilers in 1923 in Gothenburg in Sweden.**

**Bentone was founded in Ljungby in 1954 and from the start we were focused on optimizing burners to always perform better than our competitors. Performance, high quality and reliability continue to be our main focus.**

**Today with our new financially strong owner Nibe we have the perfect opportunity to continue to develop more fuel efficient and low NOx burners suitable for different markets all over the world from Brazil to China.**



 **Bentone**<sup>®</sup>

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