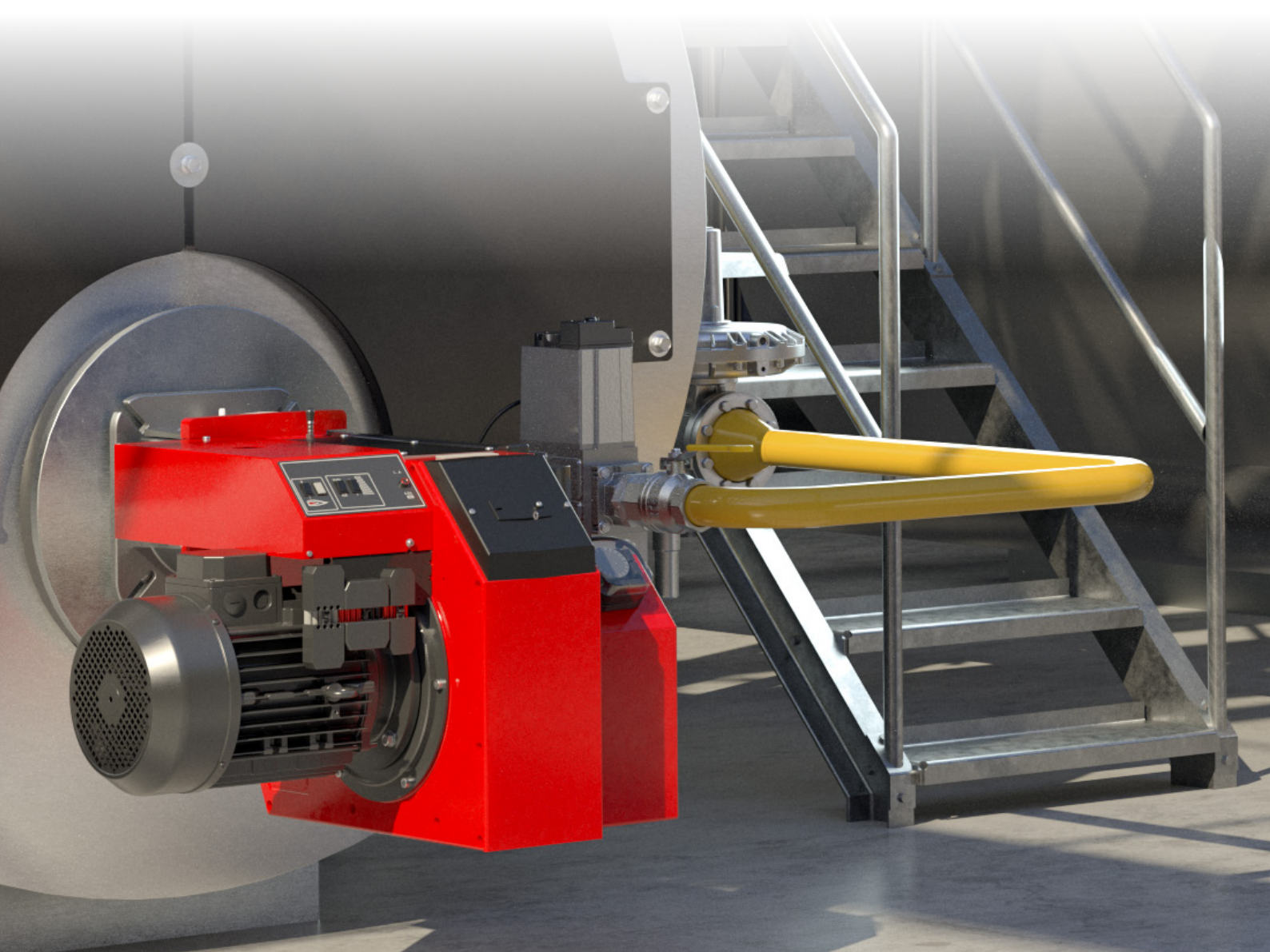


Technical product catalogue

Oil and Gas Burners





Quality in every product.

Enertech burners are developed, engineered, and manufactured across our integrated European production network, with key centres of excellence located in Hemer, Germany, and Droitwich, United Kingdom. These strategic hubs embody our commitment to precision engineering, continuous innovation, and uncompromising performance.

Engineered for Excellence

Since 1954, Bentone has been at the forefront of burner manufacturing in Sweden, building a reputation synonymous with quality, reliability, and high performance. Together with Giersch, founded in Germany in 1951, and Nu-Way, established in the United Kingdom in 1948, we represent a strong heritage of engineering excellence and continuous innovation in burner technology.

All Enertech products are developed and manufactured within our integrated European production network, with key facilities in Hemer, Germany, and Droitwich, England. Our core functions including research and development, production, planning, sales, and technical support work seamlessly together, enabling speed, flexibility, and exceptional customer responsiveness.

This collaborative and integrated approach allows us to meet complex customer requirements while ensuring full compliance with evolving regulations and certification standards. Across all our operations, our highly skilled teams are committed to delivering world-class quality, precision, and reliability in every product.

At Enertech, we don't just deliver products - we build long-term partnerships.

We invite you to be part of the Enertech family.



Niclas Persson
Business Unit Manager

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 SO₂, NO_x 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/Nm³ class 2
- Natural gas burners < 100 mg/Nm³ class 3
- LPG burners < 200 mg/Nm³ class 2



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 NO_x burners already in 2003 and we have continued to develop and introduce new low NO_x 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 NO_x/kWh class 4
- Gas burners < 56 mg NO_x/kWh class 5



Bentone Biofuel Burners



Unlike other renewable energy sources, biomass can be converted directly into liquid fuels, called “biofuels,” these fuels are aimed for the heating of residential homes but will also work as a substitute for the transportation sector. The two most common types of biofuels in use today are ethanol and biodiesel, both of which represent the first generation of Biomass-based biodiesel fuels.

RME

RME or Rapeseed Oil Methyl Esters or FAME (Fatty Acid Methyl Esters) is the most common biofuel in Europe and it is forecasted that the scale of production and consumption of this fuel will continue to increase as a result of the growing demand for diesel fuels. Currently, FAME is added to regular diesel fuels in the amount of up to 10 %.

Bentone was a pioneer especially in Northern Europe where we introduced RME burners to the market already in the early 2100 st century. RME is widely used in the Nordic countries for the heating of residential homes but also as truck diesel where it replaces older types of fuel.

HVO

Hydrotreated vegetable oils (HVO) do not have the detrimental effects of ester type biodiesel fuels, like increased NOx emission, deposit formation, storage stability problems, more rapid aging of engine paraffinic hydrocarbons that are free of aromatics, oxygen and sulfur and have high cetane numbers.

HVO has been used as a substitute fuel in the Nordic countries for several years and Bentone quickly saw the advantages with less consumption of fuel and lower NOx levels. For years we have perfected and tested our range of burners to handle these new Biofuels and we can proudly say that our range of burners are from now on fossil free.



Oil Burners 15-90 kW

BF 1 Range

Bentone burners are a type of oil burner that are commonly used in residential heating systems. There are several benefits associated with using Bentone burners for residential applications.



Benefits

- High efficiency:**
 Bentone burners are highly efficient and can provide a high level of heat output while consuming less fuel than other types of burners. This can result in significant savings on energy costs over time.
- Low emissions:**
 Bentone burners are designed to produce low emissions, which can help to reduce the environmental impact of residential heating systems. This is achieved through advanced combustion technology that produces fewer pollutants than traditional burners.
- Easy Maintenance:**
 Bentone burners are relatively easy to maintain, which can help to minimize the need for repairs and prolong the life of the burner. They are designed to be durable and reliable, and can be serviced by qualified technicians.
- Versatility:**
 Bentone burners can be used with a wide range of fuels, including diesel, kerosene, and biofuels. This makes them a versatile option for residential heating systems, as they can be adapted to meet the specific needs of individual households.

Models 1 stage	Capacity kW
BF 1 FU	15 - 55
BF1 FUV*	15 - 55
BF 1 KS	35 - 90
BF 1 KSV*	35 - 90

Bentone Oil burners are designed for HVO and RME. The burners also work with older types of fuel.
 * V stands for preheater.

Oil Burners 14-157 kW

Sterling Range

Bentone Sterling burners are known for their high-quality and efficient combustion technology, making them a popular choice for ovens and furnaces.



Benefits

- Energy efficiency:**
 Bentone Sterling burners are designed to provide efficient combustion, resulting in lower fuel consumption and reduced energy costs.
- Low emissions:**
 Bentone Sterling burners are equipped with advanced combustion controls that help to minimize emissions of harmful pollutants such as NOx and CO.
- Consistent performance:**
 Bentone Sterling burners are built to provide consistent and reliable performance, ensuring that your oven or furnace operates at peak efficiency.
- Flexibility:**
 Bentone Sterling burners are available in a range of sizes and configurations, making them suitable for a wide range of oven and furnace applications.
- Easy maintenance:**
 Bentone Sterling burners are designed for easy maintenance, with simple and accessible components that can be quickly replaced if needed.

Models 1 stage	Capacity kW
ST 108	14 - 34
ST 120 KA	24 - 66
ST 133 K	48 - 118
ST 146 KS	39 - 119
ST 146 B30	60 - 157

Bentone Oil burners are designed for HVO and RME. The burners also work with older types of fuel.

Oil Burners 15-2500kW

Bentone produces large burners for various applications, such as industrial processes, small and large-scale applications, power generation and heating systems. Bentone burners are known for their high efficiency, reliability and durability, making them suitable for both small and large-scale applications.

Bentone burners are typically used in commercial and industrial settings to generate heat or power. They can burn a variety of fuel and the burners are designed to provide high heat output while maintaining low emissions, which makes them environmentally friendly.

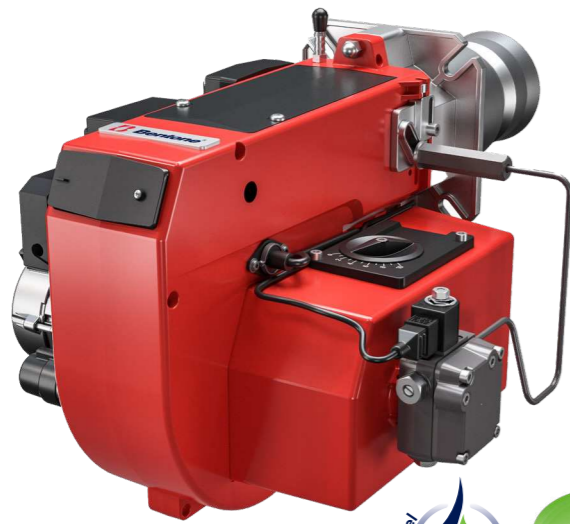
Bentone burners come in different models and sizes to meet the needs of various applications and can generate heat output ranging from 15 kW to 2500 kW. These burners are equipped with advanced control systems that ensure optimal combustion efficiency and allow for precise control of fuel and air supply, enabling optimal combustion efficiency and reduced emissions. Overall, Bentone burners are a reliable and efficient solution for a range of industrial and commercial applications that require high heat output and low emissions.

Benefits

- **High efficiency:**
Bentone burners are designed to provide high combustion efficiency, which means they can effectively convert fuel into heat energy. This helps to reduce fuel consumption and lower operating costs.
- **Low emissions:**
Bentone burners are known for their low emission levels. They are designed to operate with a minimum of pollutants, such as carbon monoxide and nitrogen oxide, which makes them environmentally friendly.
- **Reliable operation:**
Bentone burners are designed to operate reliably over an extended period. They are easy to maintain and repair, which makes them ideal for use in commercial and industrial settings.
- **Flexible installation:**
Bentone burners can be installed in a variety of applications, including boilers, heaters, and furnaces. They are adaptable to different types of fuels, including Biofuels.
- **Versatility:**
Bentone burners can operate at a range of output levels, from low to high, which makes them ideal for a wide range of applications. They can also be easily adjusted to meet specific heating requirements.



Oil Burners 55-540 kW



Models 1 stage	Capacity kW
B 30 A	70 - 200
B 40	107 - 350
Models 2 stage	Capacity kW
B 30 A2.2H	55 - 175
B 40 A2.2H	110 - 320

Oil Burners 155-2500kW



Models 2 stage	Capacity kW
B 55 - 2H	155 - 800
B 65 - 2H	260 - 1180
Models 3 stage	Capacity kW
B 55 - 3R	155 - 760
B 65 - 3R	285 - 1170

Models 1 stage	Capacity kW
B 45 A	96 - 520
Models 2 stage	Capacity kW
B 45 A2.2H	102 - 540



Models 3 stage	Capacity kW
B 70 - 3R	490 - 1650
B 80 - 3R	600 - 2500



Bentone Oil burners are designed for HVO and RME. The burners also work with older types of fuel.

Bentone Oil burners are designed for HVO and RME. The burners also work with older types of fuel..



Bentone Biogas Burners



When you mix methane, CO₂ and small quantities of other gases usually from anaerobic digestion of organic origin in an oxygen-free environment the final product is referred to as a biogas. The exact composition of biogas depends on the type of mix which are used in biogas plants all over the world but they all use the following main technologies.

Biodigesters

These are airtight systems (e.g. containers or tanks) in which organic material, diluted in water, is broken down by naturally occurring micro-organisms. Contaminants and moisture are usually removed prior to use of the biogas.

Landfill gas recovery systems

The decomposition of municipal solid waste (MSW) under anaerobic conditions at landfill sites produces biogas. This can be captured using pipes and extraction wells along with compressors to induce flow to a central collection point.

Wastewater treatment plants

These plants can be equipped to recover organic matter, solids, and nutrients such as nitrogen and phosphorus from sewage sludge. With further treatment, the sewage sludge can be used as an input to produce biogas in an anaerobic digester.

Biomethane

Is a renewable natural gas and has a near-pure source of methane produced either by a upgraded biogas (a process that removes any CO₂ and other contaminants present in the biogas) or through the gasification of solid biomass followed by methanation.

Upgrading biogas

This accounts for around 90% of total biomethane produced worldwide today. Upgrading technologies make use of the different properties of the various gases contained within biogas to separate them, with water scrubbing and membrane separation accounting for almost 60% of biomethane production globally today.

Thermal gasification of solid biomass followed by methanation

Woody biomass is first broken down at high temperature (between 700-800°C) and high pressure in a low-oxygen environment. Under these conditions, the biomass is converted into a mixture of gases, mainly carbon monoxide, hydrogen and methane (sometimes collectively called syngas).

To produce a pure stream of biomethane, this syngas is cleaned to remove any acidic and corrosive components. The methanation process then uses a catalyst to promote a reaction between the hydrogen and carbon monoxide or CO₂ to produce methane. Any remaining CO₂ or water is removed at the end of this process. Bentone launched our range of biogas burners several years ago and they are used on boilers, ovens and for heating all over the world. Our biogas burners are designed for a dry biogas with a minimum content of 45 % Methan gas and our components are approved for a dry biogas with a maximum H₂S content of 0.1.



Gas Burners 15-6300 kW

Bentone produces large burners for various applications, such as industrial processes, small and large-scale applications, power generation and heating systems. Bentone burners are known for their high efficiency, reliability and durability, making them suitable for both small and large-scale applications.

Bentone burners are typically used in commercial and industrial settings to generate heat or power. They can burn a variety of fuel and the burners are designed to provide high heat output while maintaining low emissions, which makes them environmentally friendly.

Bentone burners come in different models and sizes to meet the needs of various applications and can generate heat output ranging from 15 kW to 6300 kW. These burners are equipped with advanced control systems that ensure optimal combustion efficiency and allow for precise control of fuel and air supply, enabling optimal combustion efficiency and reduced emissions. Overall, Bentone burners are a reliable and efficient solution for a range of industrial and commercial applications that require high heat output and low emissions.

Benefits

- **High efficiency:**
Bentone burners are designed to provide high combustion efficiency, which means they can effectively convert fuel into heat energy. This helps to reduce fuel consumption and lower operating costs.
- **Low emissions:**
Bentone burners are known for their low emission levels. They are designed to operate with a minimum of pollutants, such as carbon monoxide and nitrogen oxide, which makes them environmentally friendly.
- **Reliable operation:**
Bentone burners are designed to operate reliably over an extended period. They are easy to maintain and repair, which makes them ideal for use in commercial and industrial settings.
- **Flexible installation:**
Bentone burners can be installed in a variety of applications, including boilers, heaters, and furnaces. They are adaptable to different types of fuels like Natural Gas, LPG and Bio Gas.
- **Versatility:**
Bentone burners can operate at a range of output levels, from low to high, which makes them ideal for a wide range of applications. They can also be easily adjusted to meet specific heating requirements.



Gas Burners 15-100 kW

Bentone specializes in manufacturing and supplying burners for a range of applications, including small gas burners. Their smaller gas burners are designed for use in residential and light commercial heating applications. These burners are typically compact in size and offer high levels of energy efficiency, making them ideal for use in a variety of heating applications. They can be used in boilers, water heaters, and other heating equipment, and are suitable for use with a range of fuels, including Natural Gas and LPG and Bio Gas.

Bentone's smaller gas burners are designed to be easy to install and operate, with a range of safety features to ensure reliable and safe operation. They are also designed to be easy to maintain and service, with many models featuring modular components that can be easily replaced if required.

BFG 1 Range

Bentone specializes in manufacturing and supplying burners for a range of applications, including small gas burners. Their smaller gas burners are designed for use in residential and light commercial heating applications.



Benefits

- High efficiency:**
 Bentone burners are highly efficient and can provide a high level of heat output while consuming less fuel than other types of burners. This can result in significant savings on energy costs over time.
- Low emissions:**
 Bentone burners are designed to produce low emissions, which can help to reduce the environmental impact of residential heating systems. This is achieved through advanced combustion technology that produces fewer pollutants than traditional burners.
- Easy Maintenance:**
 Bentone burners are relatively easy to maintain, which can help to minimize the need for repairs and prolong the life of the burner. They are designed to be durable and reliable, and can be serviced by qualified technicians.
- Versatility:**
 Bentone burners can be used with a wide range of fuels, including Natural Gas, LPG and Bio Gas. This makes them a versatile option for residential heating systems, as they can be adapted to meet the specific needs of individual households.

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

Biogas will affect the output and the components of the burner.

Gas Burners 15-144 kW

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.



Benefits

- High efficiency:**
 Bentone Sterling burners are designed to provide high combustion efficiency with gas fuel, resulting in reduced fuel consumption and lower operating costs.
- Low emissions:**
 Bentone Sterling burners are equipped with advanced combustion controls that help to minimize emissions of harmful pollutants such as NOx and CO, making them a cleaner choice for gas-fired equipment.
- Precise control:**
 Bentone Sterling burners feature advanced control systems that allow for precise adjustment of flame shape, size, and temperature, ensuring optimal performance for your gas-fired oven or furnace.
- Reliable ignition:**
 Bentone Sterling burners are equipped with reliable ignition systems that ensure consistent and safe start-up of your gas-fired equipment.
- Easy maintenance:**
 Bentone Sterling burners are designed for easy maintenance, with simple and accessible components that can be quickly replaced if needed.

Models 1 stage	Capacity kW
STG 120/2	15 - 70
STG 146/2	41 - 144

Biogas will affect the output and the components of the burner.

Gas Burners 50-550 kW



Models 1 stage		Capacity kW
BG 300		50 - 200
BG 400		61 - 340
Models 2 stage		
BG 300-2		50 - 200
BG 400-2		61 - 350
Models Modulating		
BG 300 M		50 - 200
BG 400 M		61 - 350



Models 2 stage	
BG 450-2	120 - 550
Models Modulating	
BG 450 M	120 - 550
BG 460 LN	125 - 530



Biogas will affect the output and the components of the burner.

Gas Burners 140-6300 kW



Models 2 stage		Capacity kW
BG 550-2		140 - 650
BG 650-2		200 - 1125
Models Modulating		
BG 550 M		140 - 650
BG 560 M		224 - 860
BG 650 M		200 - 1125
BG 660 M		600 - 1350
BG 760 M		600 - 2100
BG 810 M		640 - 2500
BG 910 M		790 - 2800
BG 980 M		300 - 3800
BG 1000 M		484 - 4500
BG 1100 M		611 - 6300



Biogas will affect the output and the components of the burner.

Providing sustainable energy solutions worldwide

Enertech, with roots dating back to 1948, is a leading specialist in advanced burner solutions and combustion technology. Bentone, founded in 1954 in Ljungby, Sweden, Giersch, established in 1951 in Germany, and Nu-way, founded in 1948 in the United Kingdom, together form part of the Enertech group bringing decades of experience and expertise in burner technology.

Over the years, we have built a strong reputation for innovation, performance, and uncompromising quality within the heating and energy sectors. Our product portfolio includes oil, gas, and multi-fuel burners designed to meet the demands of applications ranging from residential heating to complex industrial processes.

With a strong focus on energy efficiency and sustainability, we develop solutions that reduce environmental impact while ensuring reliable, high-performance operation. Supported by state-of-the-art manufacturing facilities in Germany and the United Kingdom, Enertech combines engineering excellence with robust production capabilities to deliver premium burner systems worldwide.

Our solutions are trusted across a wide range of industries, including residential and industrial boilers, power generation, metals and minerals, petrochemical processing, waste incineration, food production, and drying applications.

Together, our three established brands Bentone, Nu-way, and Giersch combine extensive expertise in burner technology. Building on this strong foundation, we continue to advance the industry with innovative, efficient, and reliable solutions tailored to the evolving needs of customers worldwide.



 **Bentone**[®]

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