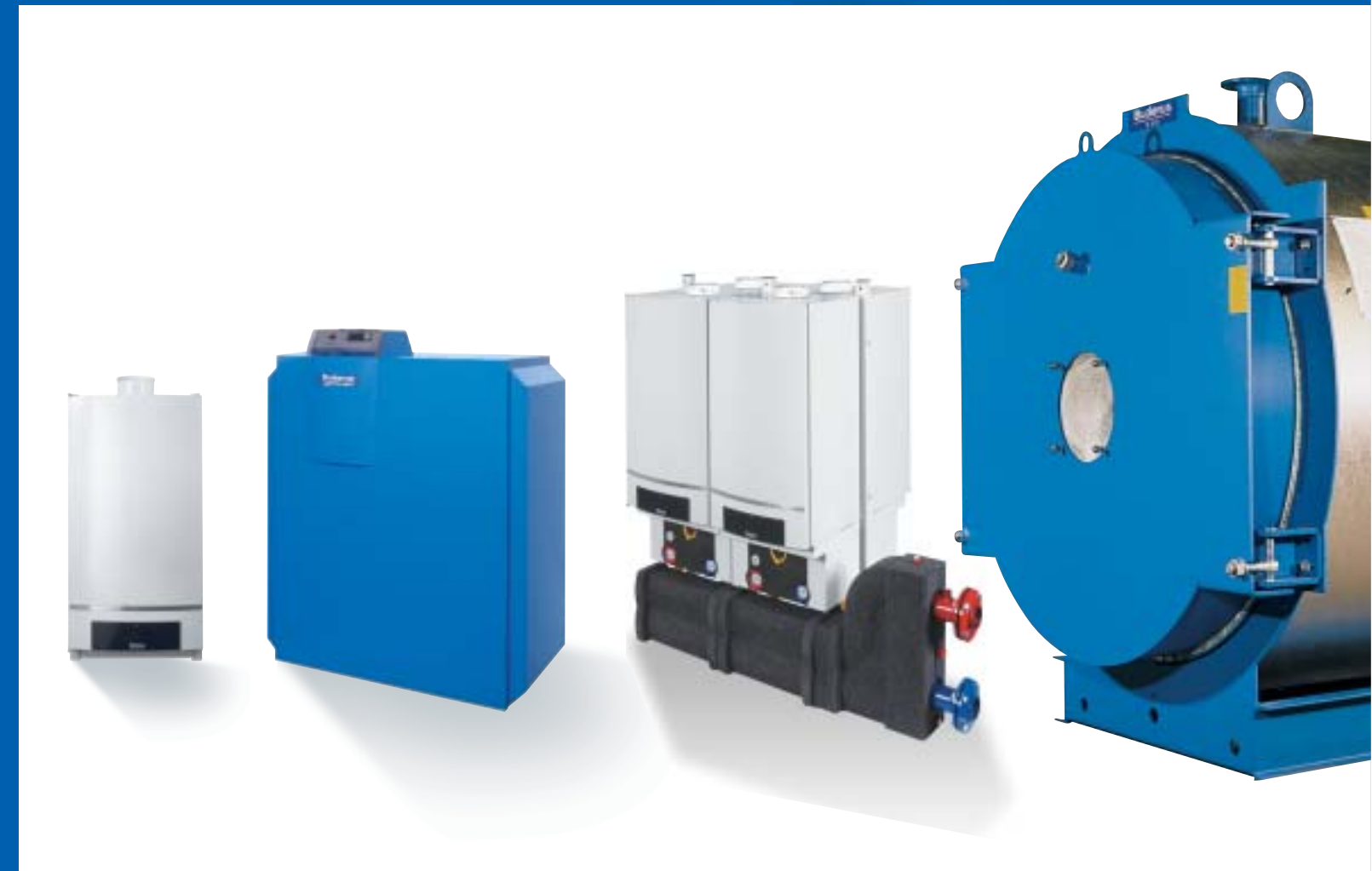




Buderus Commercial  
Boiler Range  
43 – 19,200 kW



## High Efficiency and Condensing Boilers and Cascade Systems

To contact us...

Buderus, Cotswold Way, Warndon, Worcester WR4 9SW

Telephone: 01905 752794

Fax: 01905 753130

[www.buderus-commercial.co.uk](http://www.buderus-commercial.co.uk)

In the UK, Buderus is a trading name of BBT Thermotechnology UK Ltd.

Buderus' policy is one of continuous research and development and this may necessitate alterations to this specification from time to time. Therefore before preparing for the installation of the appliance it is important that the instructions issued with the unit are carefully read and adhered to. The statutory rights of the customer are not affected. Photographs shown are used for illustrative purpose only. All information is correct at time of going to press. Buderus reserves the right to alter any information where necessary. E&OE.

# Buderus

8 716 111 864

ISSUE A 07/06

Intelligent Heating Solutions

# Buderus

## Discover Buderus...

Buderus is one of the largest heating brands world-wide and enjoys a market-leading position in sales of gas condensing boilers across Europe. The German owned heating technologies brand has a manufacturing heritage stretching back over 275 years and has been developing and distributing advanced commercial condensing boilers in the European market for decades.



Rigorous quality testing of each and every component is carried out to ensure that each Buderus boiler delivers high levels of fuel efficiency, consistent heating and hot water performance and a long product life. Buderus is also known throughout Europe and in the US for its expertise in metal casting techniques and special steel products. The Buderus brand has a presence in 50 countries, most of them in Europe.

Buderus commercial boilers are manufactured in Germany and Holland, with the main plants being in Lollar, Eibelshausen and Deventer. Condensing boilers with outputs of up to 19 megawatts are available to provide energy-efficient heating for schools, offices, hospitals, plus a large variety of commercial and industrial applications and bespoke building services projects. Today Buderus has an estimated 3 million reliable condensing appliances installed in European homes and offices and that number continues to grow.

In the UK the Buderus brand is part of BBT Thermotechnology UK Ltd, a company at the forefront of heating and hot water technology in the domestic and commercial market sectors. It has a diverse portfolio of heating products and strong brands, with an international focus and a commitment to the development of sustainable heating technology solutions for the future.



Buderus headquarters in Wetzlar, Germany



Buderus boiler production in Lollar, Germany



Range Overview			Page
<b>CONDENSING TECHNOLOGY</b>		<b>Introduction</b>	<b>4 - 5</b>
<b>CONDENSING WALL HUNG</b>	43 – 60 kW	<b>800 Range</b> The 800 Range of wall-hung gas condensing boilers are designed for very large domestic and smaller commercial properties with high heating demands.	<b>6 - 7</b>
<b>CONDENSING CASCADES</b>	86 – 120 kW	<b>800 Cascades</b> Boilers can be combined as part of the Buderus 'Cascade' multiple boiler unit, suitable for use in light commercial installations.	
<b>CONDENSING WALL HUNG</b>	80 – 100 kW	<b>GB162</b> The GB162 is a stylish and remarkably compact condensing gas boiler. Up to 110% efficiency, quiet and easy to install and maintain.	<b>8 - 11</b>
<b>CONDENSING CASCADES</b>	160 – 800 kW	<b>GB162 Cascades</b> Boilers can be installed in an innovative in-line or back-to-back cascade system of up to 8 boilers, with just 4 boilers back-to-back giving a 400 kW output in just 1m <sup>2</sup> .	
<b>CONDENSING PRE-MIX ALUMINIUM</b>	90 – 280 kW	<b>GB312</b> A compact floor standing, condensing gas boiler the Buderus GB312 is suitable for room sealed or open flue systems and is fitted with a cast aluminium heat exchanger.	<b>12 - 13</b>
<b>CONDENSING CASCADES</b>	180 – 560 kW	<b>GB312 Cascades</b> Available as a two boiler cascade where higher outputs are required.	
<b>CONDENSING STAINLESS STEEL</b>	50 – 115 kW 145 – 640 kW 790 – 1,200 kW	<b>SB315</b> <b>SB615</b> <b>SB735</b> High-performance gas condensing boilers with precision engineered condensing heat exchangers made of high-quality stainless steel and with compact dimensions for easy installation.	<b>14 - 15</b>
<b>CONDENSING CAST IRON WITH SECONDARY HEAT EXCHANGER</b>	115 – 260 kW 240 – 580 kW 645 – 1,150 kW	<b>GE315 PLUS</b> <b>GE515 PLUS</b> <b>GE615 PLUS</b> The GE PLUS range consists of sectional cast iron boilers with external stainless steel condensing heat exchangers. They offer condensing efficiency with the benefit that they can be assembled in the plant room.	<b>16 - 17</b>
<b>CONDENSING STEEL WITH INTEGRAL SECONDARY HEAT EXCHANGER</b>	1,000 – 19,200 kW 500 – 17,500kW	<b>SB825L</b> A versatile gas condensing boiler for larger industrial applications with internal condensing heat exchanger. <b>SB825L LN</b> Special "Low NOx" variant of the SB825 L specified with larger combustion chamber for reduced emissions.	<b>18 - 19</b>
<b>HIGH EFFICIENCY CAST IRON</b>	68 – 83 kW 86 – 230 kW 201 – 510 kW 511 – 1,200 kW	<b>G215</b> <b>GE315</b> <b>GE515</b> <b>GE615</b> The GE range is particularly well suited for replacement boilers, or where access to the boiler room is restricted. They offer high efficiency and allow very simple, cost-effective hydraulic system design.	<b>20 - 23</b>
<b>HIGH EFFICIENCY STEEL</b>	1,000 – 19,200 kW 500 – 17,500 kW	<b>S825L</b> Powerful steel boilers for industrial and high demand usage. <b>S825L LN</b> Special "Low NOx" variant of the S825 L specified with larger combustion chamber for reduced emissions.	<b>24</b>
		<b>Accessories and Flue Systems</b>	<b>25</b>
		<b>Control Systems</b> Buderus control systems allow total flexibility and efficient system operation.	<b>26 - 27</b>
		<b>Technical Data</b> Data and dimensions for all boilers at a glance.	<b>28 - 33</b>



## The condensing revolution

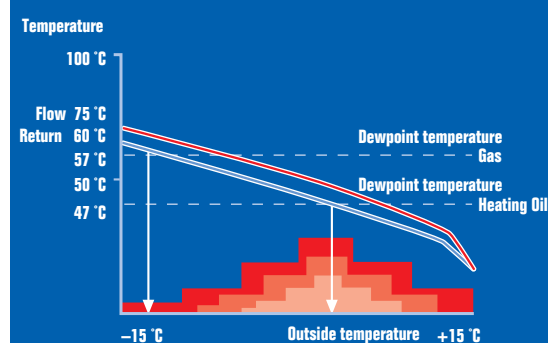
Modern condensing boiler technology provides an economic solution for heating thanks to significantly lower fuel consumption. The reduced heating costs mean that the overall cost of installing a gas condensing boiler can often be recovered within a few years. A modern boiler system also adds value to the building by increasing its rentable value. In addition, installing a condensing boiler is a key measure in meeting modern building regulations regarding the installation of environmentally friendly technology.



### Get up to 15% extra

The basic principle of condensing technology is that it utilises the energy which would otherwise be lost through the flue in a conventional heating system – i.e. the flue gases contain “latent heat”. Flue gases are intensively cooled on the heat exchanger surfaces allowing the water vapour contained in the flue gases to condense in the boiler. This releases additional energy which is then used for heating. As a result of this Buderus boilers can achieve up to 110% nett efficiency (NCV – Nett Calorific Value).

In comparison with conventional systems, a Buderus condensing boiler can save up to 15% of heating costs with gas, and up to 10% with oil. Potential savings are significantly higher when comparisons are made with older boilers.



With weather compensated Buderus controls, the return temperature of the heating curve 75/60°C remains for 96% of the year below the dew point with gas firing. This means that even with these system temperatures, a condensing boiler works almost continuously in its optimum range.

### Low return temperature for greater efficiency

Condensation only starts to occur when the return temperature is below the dew point of the combustion gases. The basic benefit of a condensing boiler results from having the lowest possible flue temperature. Low flue gas temperatures are achieved with highly efficient heat exchanger surfaces, two stage or modulating burners, and also by appropriate operating conditions such as low return temperatures.



### Economical throughout the year

With all Buderus controls it is possible for the return temperature to remain below the dew point, meaning the boiler is in condensing mode for more than 90% of the year.

If a heating system has a maximum designed temperature of 75/60°C to account for the coldest weather conditions, the use of modulating controls allows the boiler to condense for more than 96% of the year. In new buildings with good thermal insulation even lower flow and return temperatures can be used, further increasing the potential savings created by condensing boiler technology through the whole year.

### Investments that make sense

Compared with a conventional boiler, the investment costs of a modern condensing boiler are normally higher. However, for medium and higher output ranges, these investments soon pay for themselves. Condensing gas boilers save so much energy in daily use that the costs of the heating system are recovered in a few years.

### For use anywhere

Whether you are planning projects for private, local authority housing, or commercial premises, the wide range of outputs offered by Buderus means you are certain to find a condensing heating system to suit your needs. From a simple apartment building to a large block of flats, from schools, sports centres or office buildings, right through to larger commercial premises and production facilities.

### Features and benefits of condensing at a glance:

- Lower heating costs due to better energy usage
- Greater efficiency due to lower return and flue gas temperatures
- Quick pay-back of investment costs
- Reduced emissions

## 800 Range

### Flexibility and high efficiency

The 800 Range of light commercial condensing boilers represents over 25 years of research and development by Buderus. These versatile boilers can be combined and controlled as part of a multi-boiler cascade system, and are designed to provide flexible and energy-efficient heating solutions for light commercial applications. The variety of outputs available in the 800 Range means that individual boilers are also suitable for large domestic installations with high demands for heat.

#### Heat Exchanger

- Tried and tested, high quality aluminium heat exchanger
- Up to 109% efficiency
- SEDBUK band 'A' rating

#### Gas-air Unit

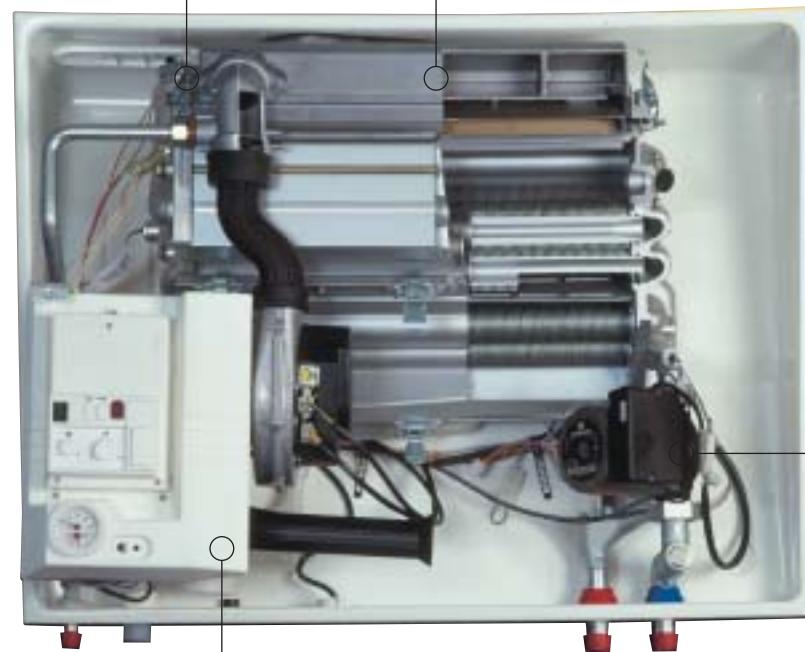
- Always a perfect gas-air mixture
- Fan and gas valve integrated into one unit
- Simple to service

#### Ignition and Ionisation

- Glowplug ceramic pin reaches 1,200°C, ensuring first time reliable ignition

#### Burner

- Made of hard ceramic material for cleaner low NOx combustion
- Modulation down to 30%



#### Controls - UBA Control Box

- Provides detailed status information on service display
- Communicates with Buderus room thermostatic controls
- The 800 boiler is fitted with an RTH converter as standard to allow use with 230V controls

#### Pump

- Variable speed energy saving pump to match system demand



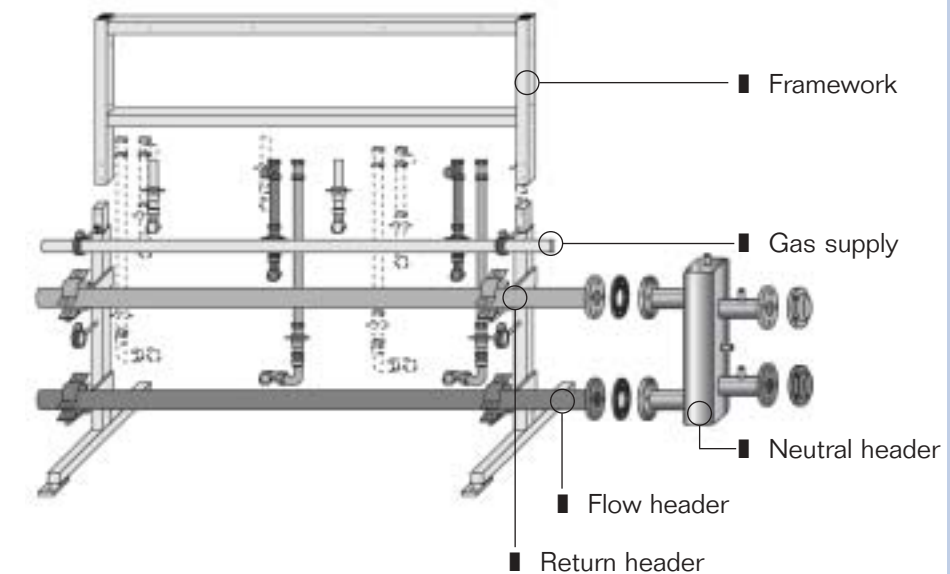
The 800 Range is available in outputs of 43 and 60 kW and in a cascade system combined outputs of up to 120 kW.

#### Cascade, multi-boiler solutions

The Cascade system provides many advantages for commercial installations. The output can better match the demand for heating throughout the year by controlling the number of boilers in operation at any one time. This creates significant energy savings and more consistent levels of comfort.

The 800 Range cascade system is designed to provide a simple and flexible solution for multiple boiler applications, enabling the installation to be tailored to meet the space and energy requirements of the customer. Cascade kits are available with all of the necessary support frames, pipe connections, valves and headers to ensure fitting is straightforward and reliable.

Kit form Cascade: frame only



#### The MBC2 Control



The 800 Cascade systems are available with their own dedicated control system. The MBC2 controller is suitable for use with the Buderus thermostat and the Buderus IRT30 timer for Cascades of up to two boilers.

The MBC unit offers sequence control of the boiler modules to allow the output demand to evenly spread through the entire boiler installation.

Optimised and weather compensated options make Cascades the most energy-efficient solution for commercial heating installations.

Cascade control systems can provide definitive energy management solutions to ensure both comfort and economy.



## GB162

### Compact power

The compact dimensions and lightweight wall-mounted boilers in the GB162 range provide an innovative solution where space is limited. Persuasively low investment costs and excellent energy efficiency make the GB162 the perfect answer to installations where space is at a premium but demand for a modern heating solution is high.



GB162 80 kW  
GB162 100 kW

#### Higher quality for a longer life

Selection of the highest quality components and the robust construction of Buderus boilers is immediately apparent on close inspection of our products, and it is this philosophy that makes the GB162 particularly durable. The compact finned aluminium heat exchanger made using ALU plus technology, is an excellent example of Buderus engineering and design working in perfect harmony. The surface of the aluminium has been treated using plasma polymerisation and a silicon compound to keep maintenance and cleaning costs to a minimum. This process also helps to maintain the efficiency of the boiler as the heating surfaces remain clean even after long periods of usage, and the spiral-cut tube helps generate optimum transfer of heat.



GB162 with BC10 boiler control and optional RC30 Digital Programmer fitted in the boiler.



The spiral channels inside the finned tube create a maximum surface area for heat transfer. The plasma polymerised heat exchanger stays clean for longer maintaining efficiency and making maintenance quick and simple.



#### Setting standards with condensing boiler technology

Modern condensing boiler systems from Buderus set new standards in heating efficiency by using an Energy Management System (EMS) which saves energy and reduces emissions. Buderus boilers achieve their outstanding performance thanks to the large heat exchanger surfaces which optimise the condensing process and maximise energy usage. With a system designed at 70-50 °C, condensing performance can be achieved all year round.

#### Easy planning

The GB162 can be simply integrated into any system design. For example, when renovating an older boiler room the compact GB162 is an excellent choice. The boiler is wall mounted, so removes the need for large floor standing boilers and has an extremely flexible flue system allowing it to be installed easily in a variety of locations.

Depending on conditions in the buildings, the flue system can be room sealed or open vented. The room sealed standard flue uses a concentric pipe-in-pipe system where the flue gas flows through the inner pipe and fresh air required for combustion is drawn in through the outer pipe.

#### Features and benefits of the GB162 at glance:

- Innovative ALU plus technology condensing boiler heat exchanger for the longest possible life and easy servicing
- High quality ALU plus heat exchanger stays clean making maintenance simple
- Compact dimensions: 100 kW output in a small space, with a lift weight of only 70 kg
- In cascades up to 800 kW: 400 kW in 1m<sup>2</sup>
- Quick-Install: innovative cascade concept for easy installation
- Efficiency of up to 110% (NCV)
- Ideal for smaller commercial buildings and large domestic properties
- No minimum flow rate required
- Whisper quiet
- Low flue gas emissions
- Integrated BC10 boiler controls with space for the optional RC30 Digital Programmer and extension modules
- Modulation down to 19% of total output

## GB162

### Compact multi-boiler solutions

High output boilers do not necessarily require lots of space. The GB162 with ALU plus is a perfect example of this. This extremely compact, wall-mounted gas condensing boiler with 100 kW output is particularly suitable for commercial buildings. As heating demand increases, the GB162 range simply grows to suit. For example, an 8 boiler cascade provides outputs from 19 kW to 800 kW. 400 kW can be installed in just in 1m<sup>2</sup>.

#### Simply efficient with no minimum flow rate

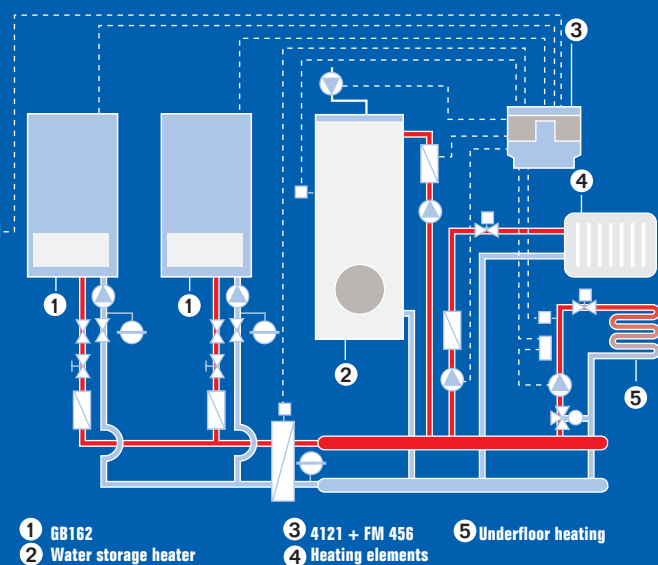
GB162 boilers don't have a minimum flow rate. This makes designing a system much simpler. Savings are also made on the electrical running costs. Modulating fans and optional Buderus pump groups adjust their output to match the actual system demand and as such overall electricity consumption can fall by up to 40% in some cases. The GB162 is also incredibly quiet in operation, due to the low resistance of water flowing through the boiler and the excellent insulation. This is a particular benefit for those boilers being installed in, or in close proximity to, living areas. The comprehensive range of Buderus accessories provides the best solution. They are pre-calculated to give the best performance and are simple and quick to install, reducing installation costs.

#### Better solutions with cascade, multi-boiler options

The GB162 is suitable for cascade operation and so the system design options increase substantially. In large buildings you can connect up to eight boilers in a cascade to achieve a heat output of up to 800 kW, with a modulation down to only 19 kW or less than 2.5% of total output.

The Buderus 4121 control system has everything you need to ensure maximum operating efficiency from your GB162 boiler. Adding the FM 456 cascade module, it will control up to two additional boilers, with module FM 457 up to four additional boilers. With an extra 4122 and FM 457, up to eight boilers can be controlled or additional modules can be added to control more heating circuits.

#### Condensing wall-mounted GB162 boilers with a cascade kit



#### The fully installed pump group:

- Modulating pump or 3 stage pump group
- 1" gas pipe with isolating valve
- Flow and return isolation valves with built in thermometer
- Pressure gauge
- Pressure relief valve
- Drain point
- Non-return valve
- Connection for expansion vessel
- Insulated cover

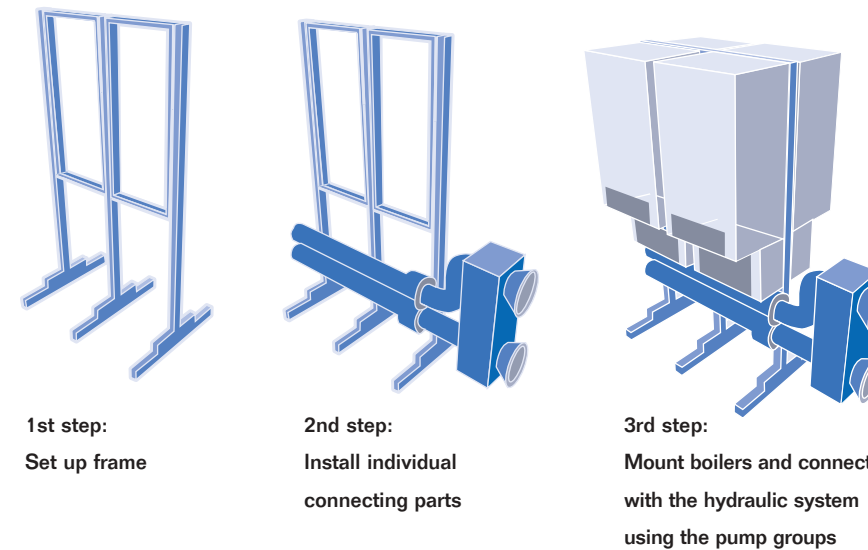


The Buderus modular control system provides a solution for any heating system and is a cost-effective alternative to installing a Building Management System. A low loss header should be installed to separate the boilers from the rest of the heating system. This, together with the optional Buderus modulating boiler pump group, ensures that flow volumes are balanced, efficiency is high and hydraulic performance is optimised.



GB162 four boiler back-to-back cascade with up to 400 kW in 1m<sup>2</sup>. Boilers shown with Buderus pump groups and the full cascade kit.

#### Buderus cascade kits and pump groups



#### Quick and simple to install

The innovative cascade design used with the GB162 range means that it is particularly installation-friendly, saving fitting time and costs. The boiler connection kit is supplied with all the necessary fittings and accessories, so the installer simply builds the framework and joins everything together. A quick and easy job. After installation everything fits together perfectly, pipework is tidy, and the boilers are ready to be connected to the main heating system.

#### The full cascade kit:

- Available in back-to-back (TR) or in-line (TL) for up to 8 boilers.

#### Kit includes:

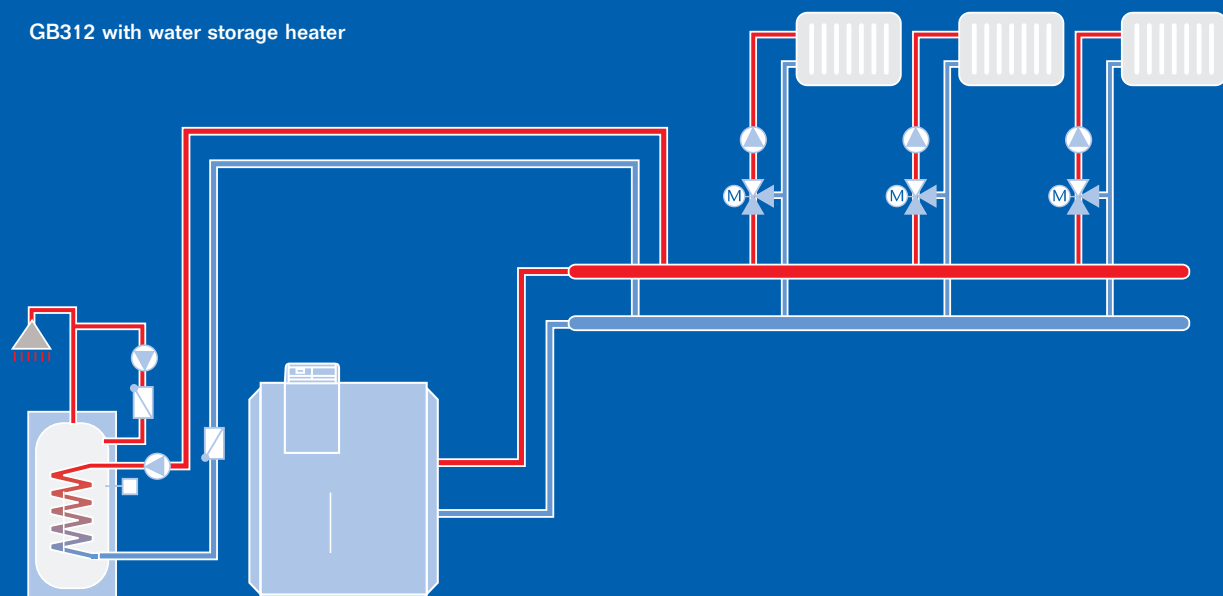
- Mounting frames
- Support legs
- Main gas pipe
- Flow and return headers
- Low loss header
- Boiler connecting pipework
- Full insulation

# GB312

## High quality gas condensing boilers

A compact and modern floor-standing commercial condensing boiler, solidly built to provide reliable and efficient heating performance year after year. The GB312 is an excellent choice for medium-large buildings, office blocks and commercial installations that require the very latest in environmentally friendly heating technology. Buderus uses a high performance condensing aluminium heat exchanger in the GB312 range to help maximise heat transfer and maintain efficiency levels, even when demand for heat is low. This results in a very impressive price/performance ratio by reducing fuel consumption and ensuring a quick pay back of initial investment costs.

GB312 with water storage heater



GB312 heating systems are straightforward and unproblematic to design. The boilers can be installed with room sealed or open vented flues to ensure a high level of installation flexibility.

### Flexible installation options

The GB312 range provides the design engineer with a high degree of flexibility as it can be operated as a room sealed or open vented boiler. The compact dimensions of the boiler frame and low weight of the boiler make replacement installations straightforward. At only 612mm wide without the casing the boiler fits through most doorways. The optimised hydraulic resistance of the boiler means a simple system design is possible. As with all high output, compact boilers, water quality must be managed. In areas with water defined as moderately hard or harder, it is necessary to fill the heating system with treated water. Buderus recommends the use of Sentinel X100.



### 100% quality, inside and out

As with all Buderus boilers the GB312 is subject to the highest quality checks and standards to ensure reliability, safety and a long service life.

Buderus carefully select high quality components that work in harmony with one another to obtain even more efficiency from the boiler. The modulating pre-mix gas burner for example uses a controlled firing system (SAFe) to exactly match its output to the heating demand. The burner is linked to a digital combustion control that continually monitors the system's heat requirement so that energy is not wasted when demand for heat drops. The burner can operate between 30% and 100%. Burners are also factory set, so once installed, the boiler is ready to operate immediately. A fully modulating pre-mix burner also means the boiler is significantly quieter in operation, as there is no need for continuous on/off burner cycling.

The Buderus Service Diagnostic System (SDS) is equipped as standard, and is designed to assist the heating engineer in identifying the current operating status as well as any potential irregularities in the heating system.

### Simple to service

Buderus GB312 boilers are designed so that all components can be easily serviced and maintained from the front. Heating surfaces can be easily accessed if mechanical cleaning is required.

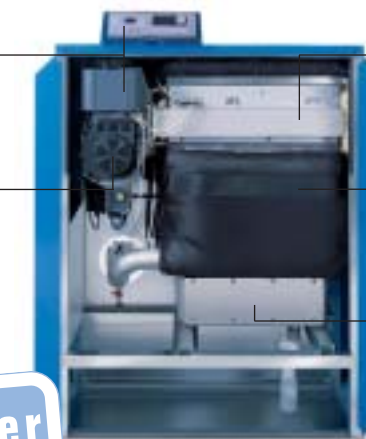
Digital automatic firing system, connected to EMS control system

Output-controlled, electricity-saving burner and air fan

Quiet pre-mixing gas burner

High performance aluminium heat exchanger with insulation for minimum heat loss and maximum energy saving

Large cleaning surface for simple maintenance and inspection



### Cascade: multi-boiler solutions

If demand for heat is high, it is also possible to install the GB312 as a two boiler cascade system offering potential heat outputs of up to 560 kW. The cascade system contains all parts necessary for the installation and can be simply and quickly connected to the existing pipe system, saving time and installation costs.

### Features and benefits of the GB312 Range at a glance:

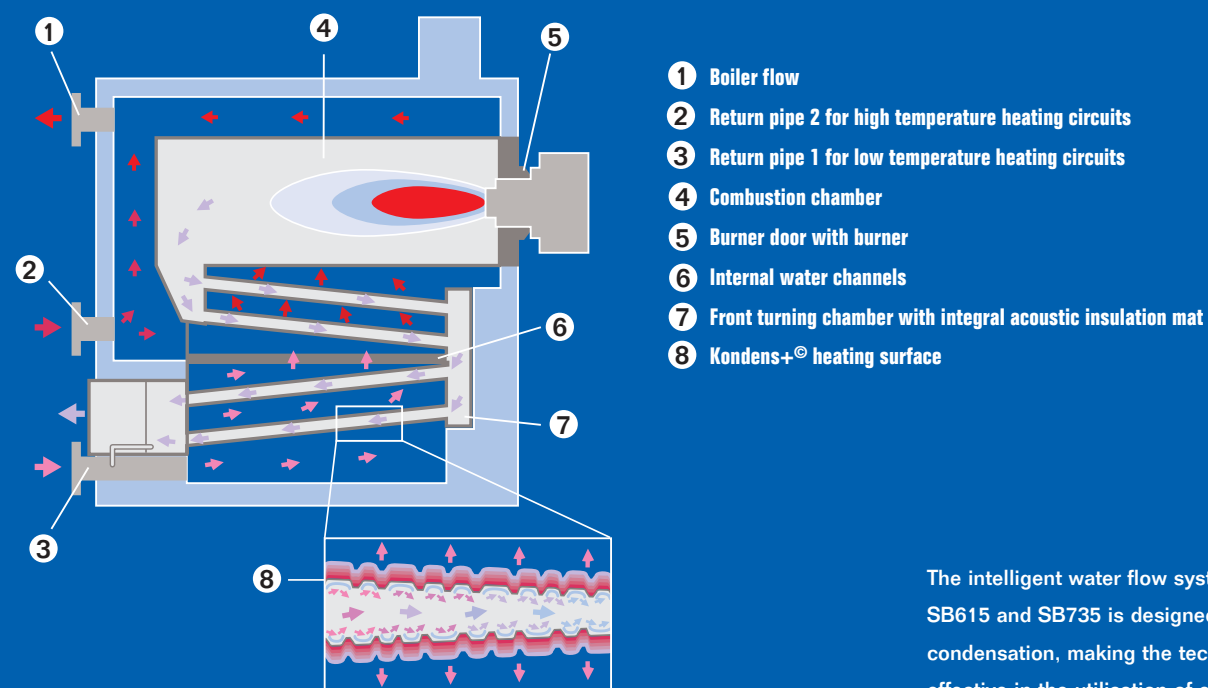
- Quick and simple to install
- Individual boiler outputs from 90 – 280 kW
- Cascade of two boilers up to 560 kW
- Excellent price/performance ratio. High efficiencies of up to 108% (NCV)
- Modulating pre-mix gas burner for extremely quiet operation
- Lightweight, high-performance aluminium heat exchanger for maximum heat transfer
- Insulated boiler block for high energy utilisation
- Intelligent controls with built-in Energy Management System (EMS)
- Supplied with the BC10 boiler control with digital service diagnostic and status display with space for the optional RC30 Digital Programmer and modules to be installed within the boiler
- Burner management technology
- Lightweight and compact to fit into existing boiler rooms
- Suitable for room sealed or open vented installations
- Simple to service and maintain



## SB Range

### The premium condensing boiler for the most demanding commercial and industrial heating systems

With efficiencies of up to 109%, it is not surprising that the SB315, SB615 and SB735 stainless steel condensing boilers are considered top of the range models in the Buderus commercial boiler range. Wherever there is a need for efficient heat production, they are the optimum solution, delivering maximum energy savings. The high water content makes these boilers tolerant of very large volume heating systems.



The intelligent water flow system in the SB315, SB615 and SB735 is designed to encourage condensation, making the technology even more effective in the utilisation of energy.

#### Kondens+ heating surfaces

With its patented Kondens+ heating surface technology, Buderus has introduced yet another innovative idea for even better energy utilisation.

The heat exchanger surfaces are precisely crimped to enable the greatest possible quantity of water vapour to condense. The crimped tube creates micro-turbulence which brings almost the entire volume of hot flue gases into contact with the cold heat exchanger surfaces. This effect is enhanced as the diameter of the heat exchanger tube decreases along its length therefore maintaining the speed of the flue gases moving through the heat exchanger, resulting in minimal pressure loss and optimum heat transfer. With this unique system efficiency can be increased by up to 10% when compared with smooth heat exchanger surfaces and flue temperatures which are only 5 to 10°C above the return temperature. The flow of water through the boiler is also optimised as the main volume of water flows in the opposite direction to the hot flue gases. This means that the flue gas always meets the coldest part of the return water. An additional benefit is that the heating surfaces are practically self-cleaning, as the condensate simply runs away.



SB615 Installation

#### High quality in a compact space

The three pass construction with a water cooled combustion chamber provides the most efficient combustion in the smallest space. Integration of the condensing heat exchanger after the main combustion chamber makes the boiler particularly compact. A smaller boiler is easier to transport and install so the SB Range is ideal for installations where space is limited. Corrosion-resistant stainless steel is used in all parts that come into contact with hot flue gas and condensate for added efficiency and durability.

#### Lower emissions

The SB315, SB615 and SB735 offer more than just first class efficiency. In combination with a two-stage or modulating gas burner, they also provide very low levels of emissions.

#### Effective sound insulation

The SB boiler range has been carefully designed to ensure the quietest possible operation. Acoustic performance has been enhanced by introducing several noise reduction measures within the heat exchanger.

#### Simplification of system design

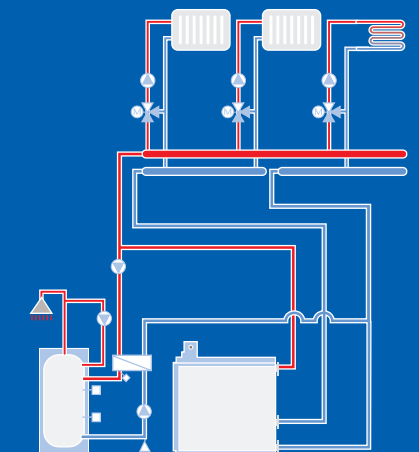
The SB range has no minimum requirements for flow rate, operating temperature or burner output. Heating circuit flow and return pipes can be simply connected as there is no need for additional equipment such as flow monitors, mixing valves or shunt pumps. Separate return pipe connections ensure optimum condensation allowing efficiencies of up to 109% to be achieved. The boiler allows both high and low temperature heating circuits to be connected in the best possible way. Buderus condensing boilers come with two return connections as standard, and by separating high and low temperature returns, further energy savings can be made.



\* The boiler is shown with a burner cover (not available in the UK).

#### Features and benefits of the SB Range at a glance:

- Efficiencies of up to 109% (NCV)
- Stainless steel combustion and heat exchanging surfaces
- 2 return connections for separation of high and low temperature heating circuits
- Low hydraulic resistance
- Low flue resistance
- 3 pass construction
- Combustion chamber optimised for lower emissions
- For use with gas pressure jet burners
- Kondens+ heating surfaces



The lower temperature return from an underfloor heating system or hot water cylinder is separated from the main heating circuit return. This improves the efficiency of the whole heating system and is the best way to operate a condensing boiler.

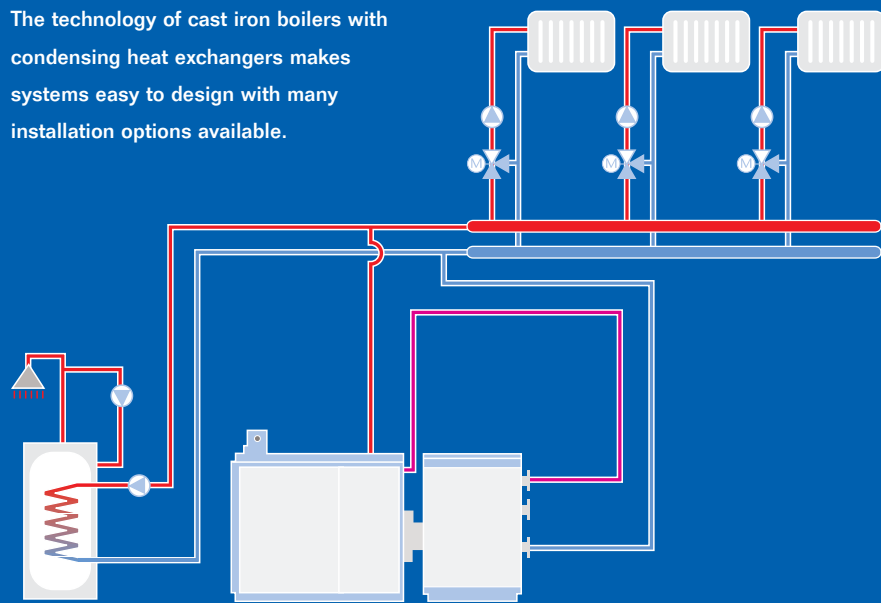


## GE PLUS Range

### Cast iron condensing systems

External condensing heat exchangers from Buderus turn an Ecostream cast iron boiler into a high-performance condensing boiler. These systems can be installed in almost any location as the boiler is delivered in sections for assembly in the boiler room. The GE PLUS range is best used in conjunction with a gas burner, but is also suitable where oil is used as an emergency back-up fuel for short periods.

The technology of cast iron boilers with condensing heat exchangers makes systems easy to design with many installation options available.



#### Split system solutions

Where space is restricted, cast iron boilers fitted with external condensing heat exchangers are ideal. The narrow condensing heat exchanger will fit through any door and the cast iron boiler sections can be transported separately and assembled where the boiler is to be installed making the GE315, GE515 and GE615 PLUS range the perfect choice for replacement jobs in older properties.

#### Environmentally friendly technology

The three pass construction with a water cooled combustion chamber means that a Buderus Ecostream boiler fitted with an environmentally friendly gas burner helps to achieve lower flame temperatures and therefore lower emissions. Patented Thermostream technology also provides uniform temperature distribution throughout the boiler, even when demand is very high, and so creates the optimum conditions for economic and robust operation of the system.

#### Higher performance with less energy

Ecostream boilers fitted with external heat exchangers produce energy savings that you can actually see. Specially developed Kondens+ heating surfaces increase the amount of condensation and boiler efficiency. The innovative design of the high quality stainless steel Kondens+ heat exchanger surfaces makes the boiler extremely fuel efficient and cost-effective. This results in efficiency of up to 107% (NCV). The high level of energy savings means that users will quickly recover the investment costs for the GE PLUS range.

#### Easier planning

Buderus Thermostream technology simplifies the planning and specification process for Ecostream boilers as it is not necessary to take either the minimum return temperature or the minimum flow rate into account. Low return temperatures are the basis for achieving optimum condensing performance. All gas condensing heat exchangers have two separate return connections as standard to enable heating circuits at different temperature levels to be connected separately. The systems are suitable for gas installations where oil is used for limited periods as a back-up fuel. Low hydraulic resistance allows boilers and heat exchangers to be connected in series so that the whole flow volume is running through the condensing system. Separate headers or heating circuit pumps are in most cases unnecessary, this substantially reduces investment and energy costs, as well as planning and installation costs.

GE515 PLUS



#### Features and benefits of the GE PLUS Range at a glance:

- Ecostream boiler
- Thermostream technology – no minimum flow volume and no minimum return temperature necessary
- Low investment costs
- High efficiencies of up to 107% (NCV) with external condensing heat exchangers
- Simple system hydraulics
- Compatible with oil when used as a back-up fuel for limited periods
- Easy to install, even in cramped conditions, as cast iron sections are supplied separately



Manageable Technology: the individual parts of the cast iron boiler and the condensing heat exchanger are supplied separately and so can be transported to the installation site and re-assembled even when space is restricted.

## SB825L and SB825L LN

### Reliable technology

The most important characteristics of a large industrial heating system are maximum economy and reliable operation. The SB825L and SB825L LN are extremely robust and energy-efficient. From manufacture through to commissioning, high quality standards are applied and continually monitored.



#### Condensing technology for increased efficiency and economy

The flue gas temperatures in the condensing heat exchanger are just above the return temperature, this gives the best level of condensing performance.

#### Switch to oil on peak load

If the gas supply is temporarily unavailable, the SB825L condensing boiler can be switched to oil for up to 4 weeks. The prerequisite for this is that the system is equipped with a dual fuel oil/gas burner and the operating conditions are suitable for oil firing. A flexible fuel system will allow a continuous operation even when gas supplies are interrupted.

#### SB825L LN – Low NOx industrial boilers

The SB825L LN is specially designed for when extremely low flue emissions are required. The large combustion chamber reduces the flame temperature and subsequently lowers harmful emissions.

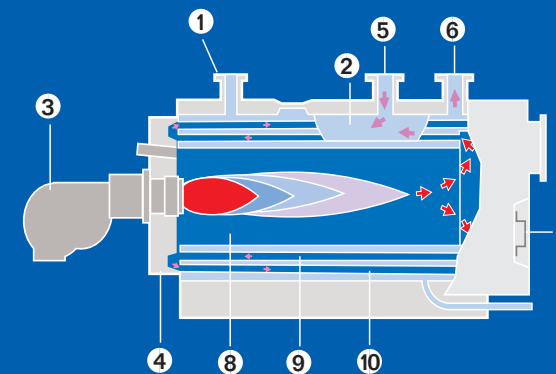
#### Make the most of your energy

The size of the condensing heat exchanger can be optimised according to the type of building to be heated. The compact dimensions of the condensing heat exchanger means that the condensing version of the SB825L boiler does not require significantly more space than the high efficiency SB825L version.

#### Features and benefits of the SB825L and SB825L LN at a glance:

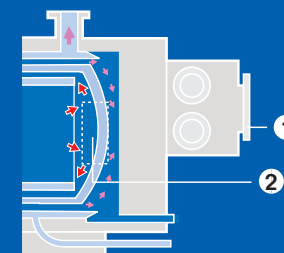
- Maximum reliability in operation through carefully designed water intake
- Optimised energy utilisation through high standard utilisation rates
- Three pass technology for low emission figures in the high-output range
- Compact dimensions for easy transport and installation

Functional principles of the SB825L



- |                      |                                  |
|----------------------|----------------------------------|
| 1 Safety inflow pipe | 6 Flow nozzle                    |
| 2 Water pipe system  | 7 Service hatch on flue gas side |
| 3 Oil/gas fan burner | 8 Combustion chamber (1st pass)  |
| 4 Burner door        | 9 Smoke tube (2nd pass)          |
| 5 Return nozzle      | 10 Smoke tube (3rd pass)         |

SB825L plus with condensing heat exchanger



- |                                  |
|----------------------------------|
| 1 Flue gas connecting nozzle     |
| 2 Service hatch on flue gas side |

SB825L LN



#### Optimum efficiency: three pass technology

Three pass technology and effective design of the heating system provide the best conditions for low emissions and high efficiency. The optimal control of water flow in the boiler and the control of burner modulation without the requirement for a minimum burner output, ensure particularly effective operation. Both will effectively reduce the need for on/off cycling of the burner.

#### Service and cleaning made easy

Even Buderus' largest boilers can be cleaned and maintained easily. The heating surfaces and the combustion chamber can be accessed through the main door; the large number of smooth steel smoke tubes in the heat exchanger make the use of baffles unnecessary and so cleaning and maintenance can be carried out quickly and thoroughly.



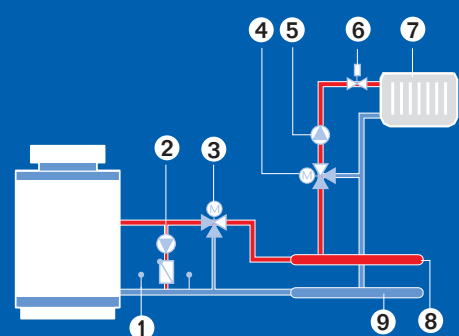


## High Efficiency Cast Iron Boilers

### Thermostream and cast iron – a revolution in boiler technology

Buderus cast iron boilers are a sound investment. Whether you are using gas, oil or a combination of both, cast iron can provide a very economic and effective method of heating.

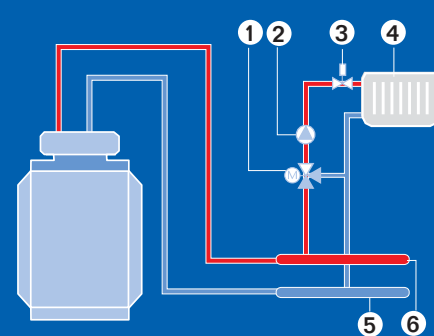
Conventional Cast Iron Boilers



- 1 Sensor return flow 1
- 2 Mixing pump
- 3 Actuator, return temperature increase
- 4 Actuator, heating circuit
- 5 Pump, heating circuit
- 6 Thermostatic radiator valve
- 7 Radiator
- 8 Flow circuit
- 9 Return circuit

Hydraulic diagram of a heating system with mixing pump and actuators

Buderus Ecostream Cast Iron Boiler



- 1 Actuator, heating circuit
- 2 Pump, heating circuit
- 3 Thermostatic radiator valve
- 4 Radiator
- 5 Flow circuit
- 6 Return circuit

With an Ecostream boiler, system planning is easier and material and labour costs are reduced.

#### Thermostream technology – high efficiency with built-in boiler protection

Buderus use thermostream technology in its GE315, GE515 and GE615 cast iron boilers.

In a conventional cast iron boiler additional pumps and mixing valves are required in order to keep the return temperature high enough to prevent condensate forming inside the boiler. If condensate builds up in a cast iron boiler, thermal stress can occur within the boiler sections causing them to fail and energy is wasted burning off this condensate. Thermostream technology removes this situation by partially mixing the cold return water with the warmer water that is already flowing through the heat exchanger. This method increases the temperature of the return water before it comes in contact with the combustion chamber, therefore the conditions for condensation cannot occur during normal operation as the temperatures on the heat exchanger surface remain above the dew point.

The boiler has built-in protection. With other boilers you have to pay to provide this protection.

#### Buderus cast iron technology – robust and reliable

When the boiler is fired from cold in low temperature conditions, condensate can form initially and attack the surfaces which come into contact with flue gases. This is why Buderus uses a special cast iron that is particularly resistant to condensate.

Cast iron is also very easy to mould and shape and allows the combustion chamber and heat surfaces to be designed to ensure optimum transfer of heat and the best possible use of energy.

#### Compact performance

The compact dimensions of the GE boiler makes the footprint extremely small in relation to its output. The components of Buderus cast iron boilers can also be supplied in unassembled sections to further assist transportation and installation of the product.

#### Cast iron technology – for ultimate flexibility in design and construction:

- Simple design without the need to increase return temperature
- Economic low temperature operation
- High efficiencies of up to 96% (NCV)
- Lower electricity costs, as no shunt pump or mixing valve are required
- Reliable operating because of the simple system design. Fewer parts means less maintenance
- Low investment and installation costs



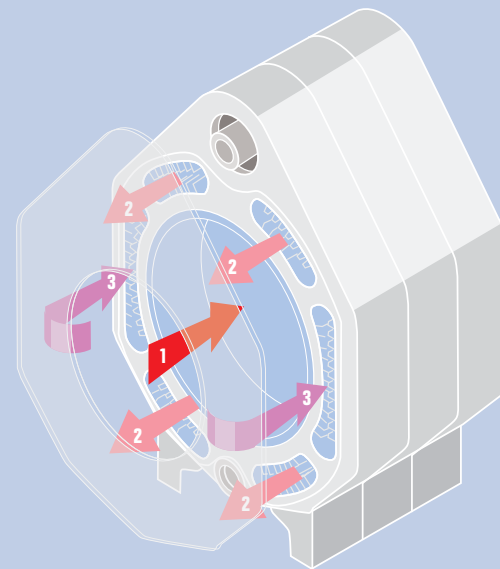
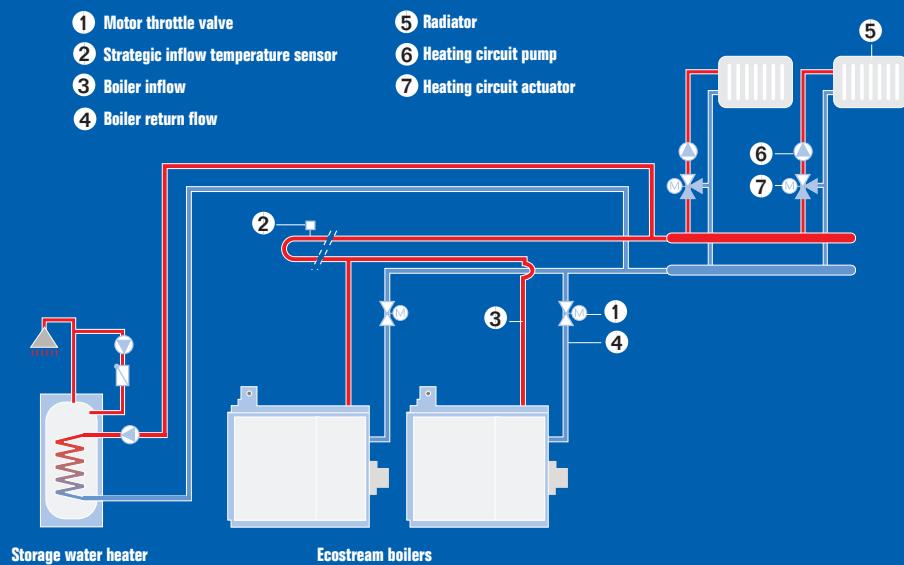


## G/GE Range – High Efficiency Cast Iron

### Gas, oil or both, with the G215, GE315, GE515, GE615 Range

Depending on your project requirements, the versatile G and GE range of cast iron boilers can be operated with an oil or gas burner. It is also possible to use a dual fuel burner which can be switched over from gas to oil when the gas supply is interrupted.

Two-boiler system with boiler and heating circuit control



1st pass (combustion chamber)  
2nd pass (flue gases)  
3rd pass (flue gases)

The three pass principle of the Ecostream boilers is a prerequisite for low NOx emissions.

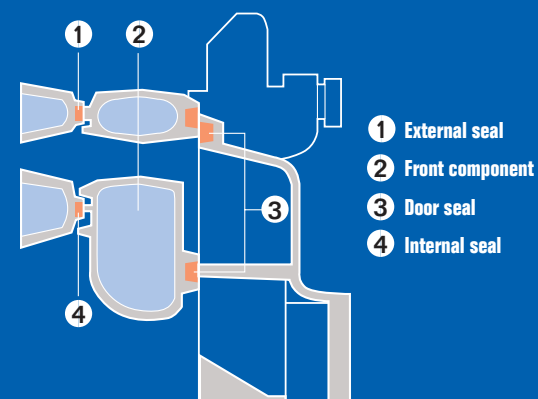
#### Economic and efficient

The Buderus modern cast iron boiler design helps to create optimum combustion conditions: efficiency rates of up to 96% (NCV) are possible with low flue gas temperatures and effective all-round thermal insulation.

#### Cleaner combustion

Combustion chambers for all Buderus cast iron boilers have a large front door and are therefore easily accessible making maintenance quick and simple. Combustion gas channels can also be easily cleaned from the front.

Every single cast iron component in the GE range of cast iron boilers fulfils an important function: it extracts heat from the combustion gases and transfers this energy to the system water. Small fins in the combustion chamber absorb the radiated heat and the larger fins in the heat exchanger absorb convected heat. The cast iron components precisely control the distribution and flow of combustion gases optimising the heat exchange.



A flexible sealing strip made of butyl rubber is pressed into the sealing grooves to ensure that each component is safely connected with a gas-proof seal.

G215



GE315



GE615



GE515



#### Features and benefits of the G/GE Range at a glance:

- Variable outputs of 78 to 1,200 kW
- Economical with standard utilisation rates of up to 96% (NCV)
- Three pass construction for lower emissions
- Compact boiler dimensions
- Easy maintenance and cleaning
- Buderus thermostream technology provides a simple system which is very reliable in low temperature operation and does not require a minimum return temperature to be maintained
- Boilers shown with optional Buderus 4000 control units

## S825L and S825L LN Range

### Economical from start to finish

The Buderus S Range of steel boilers really come into their own when they are used as peak load boilers for dual-boiler systems, e.g. in industrial applications which often have to be run at higher operating temperatures. These boilers have been designed to maximise return on investment with very high levels of efficiency, low maintenance costs and excellent compatibility with modern heating systems.

#### Optimum combustion conditions

The length and diameter of the combustion chamber in the S825L range is precision-designed to suit the flame geometry and delivered heat output. Matching the combustion chamber dimensions to the required output will also help to reduce NOx emissions.

#### The right price and performance

The S Range is a high performance commercial boiler that provides excellent value for money and a quick return on investment. Intelligent boiler design, the selection of the right burner, the large dimensions of the heat exchanger surfaces for low flue gas temperatures and the effective thermal insulation result in an excellent price/performance ratio.

#### Optimum efficiency: Three pass technology

The three pass technology incorporated in Buderus steel boilers together with the effective heat exchanger design, offer the best conditions for low emissions and efficiencies of up to 94% (NCV). The optimal control of water flow in the boiler and the control of burner modulation without the requirement for a minimum burner output, ensure particularly effective operation. Both will effectively reduce the need for on/off cycling of the burner.

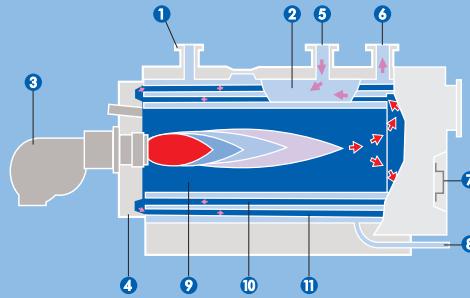
#### SB825L LN – Low NOx industrial boilers

The SB825L LN is specially designed for when extremely low flue emissions are required. The large combustion chamber reduces the flame temperature and subsequently lowers harmful emissions.



#### Features and benefits of the S Range at a glance:

- Excellent price/performance ratio
- Large output range from 1,000 to 19,200 kW
- Optimised energy efficiency of up to 94% (NCV)
- Three pass technology for low emissions in the high output range



- 1 Connection for safety equipment
- 2 Controlled water
- 3 Oil/gas fan burner
- 4 Burner door
- 5 Return connection
- 6 Flow connection
- 7 Maintenance hatch, flue gas side
- 8 Drainage point
- 9 Combustion chamber (1st pass)
- 10 Smoke tube (2nd pass)
- 11 Smoke tube (3rd pass)

## Fluing and Accessories

### Flexible siting options for your heating system

Modern heating technology can be fitted practically anywhere, and as Buderus condensing boilers can be used with a variety of flue gas systems, installers and specifiers enjoy a high degree of flexibility when it comes to siting the boiler.

#### Open flue systems

Boilers which work using open flues draw the oxygen necessary for combustion from the area surrounding the boiler, which has to be sufficiently ventilated. The flue gases are carried away through a corrosion-resistant flue pipe or a chimney which is suitable for the type of boiler being used. Condensing boilers require a special flue due to the condensate produced.

#### Room sealed systems

The concentric Buderus flue system works by moving flue gases through the inner pipe, whilst the necessary combustion air enters the system via the outer pipe. To ensure maximum reliability, quality and safety all Buderus flue gas systems are rigorously tested to the latest industry standards.

#### Whole system solutions

Buderus offers a wide range of accessories to assist with the installation of the boiler range contained within this brochure. This includes all safety and control equipment to ensure that you get the best performance from your Buderus boiler.

#### Complete flue compatibility

Buderus supplies its own flue systems for use with wall hung condensing boilers. All other Buderus commercial boilers are fully compatible with a range of flue systems offered by specialist flue companies. For further details or technical queries relating to flue options and installation please contact our technical helpline, or speak directly to your preferred flue supplier.

## Buderus 4000 Control System and EMS

The Buderus GB162 and GB312 are equipped as standard with an Energy Management System (EMS). This state-of-the-art technology allows the heating engineer quick and easy access to all functions of the boiler and has a standard operating system that works in harmony with Buderus' extensive range of controls. For larger commercial heating projects even greater control possibilities are available with the modular 4000 series.



Boiler control integrated as standard in GB162 and GB312

Using the RC30 and RC20 the heating can be conveniently controlled from virtually anywhere. The RC30 can be installed in the boiler or away from the boiler where it can also work as a room thermostat. The RC20 can be added to additional areas as a room thermostat to control a second heating circuit.



### Controls that adapt to your needs

EMS allows the control system and the automatic firing system in the boiler to communicate with one another. This ensures smooth interaction between the boiler and the burner, and a much smoother and more efficient operation of the system. If a fault should occur, it is detected at an early stage by the integral Buderus Service Diagnostic System (SDS) and shown clearly on the RC30 digital text display. These control units are designed to control up to two heating circuits in smaller commercial installations or in large detached houses with high requirements for heat. In larger commercial heating systems or where the applications are more complex, EMS communicates directly with the high-performance Buderus 4121, 4122 or 4323 control systems.

### Invest in the future: 4000 Series controls. The function of a BMS system at a fraction of the cost

The Buderus 4000 series of controllers provides a wide range of control options for single and multi-boiler systems. The 4000 series can control virtually any heating system, whether an 8 boiler cascade or a simple connection into an existing building management system.



### Simple to use controls RC30 and MEC2

MEC2 and RC30 Digital Programmers have a plain text display for the input of heating system operations and for communication of boiler diagnostics and servicing messages. They can be fitted either on the boiler or wired to the boiler from the living or working space. The MEC2 is supplied with the 4211, 4311, 4121 and 4323 controls.

4000 series control units	4211	4212	4311	4312	4121	4122	4323
Condensing boilers with external condensing heat exchanger	• <sup>1)</sup>	•*	•	•	–	–	–
Condensing boilers with internal condensing heat exchanger	•	•	•	•	•	•	•
Gas burner, one/two step / modulating	•	•	•	•	–	–	–
Free module plug points	2	–	4	4	1	2	4
Heating circuits with mixers (max. possible)	4	–	8	8	2	4	8
Hot water	•	–	•	•	•	•	•
Cascade systems	–	• <sup>2)</sup>	•	•	• <sup>3)</sup>	• <sup>3)</sup>	• <sup>3)</sup>
Programmer connection	•	–	•	•	•	•	•

\* with additional unit ZM 427  
 1) Only in conjunction with heating circuit mixers and function module FM 442  
 2) Used as constant control equipment in conjunction with master control  
 3) Only with modulating burners with EMS

### Applications for EMS with 4000 series:

- Cascade switching
- Extendable - Control up to 256 heating circuits
- Use in conjunction with other heat sources such as solid fuel boilers, heat pumps etc.



Convenient and easy to use with a modern design and functionality.

The MEC2 Digital Programmer with its simple 'press and turn' operation makes setting and changing options easy.

The BFU is a remote control which allows the boiler to be adjusted from the living or working space. It is supplied with a room temperature sensor.



# Technical Data

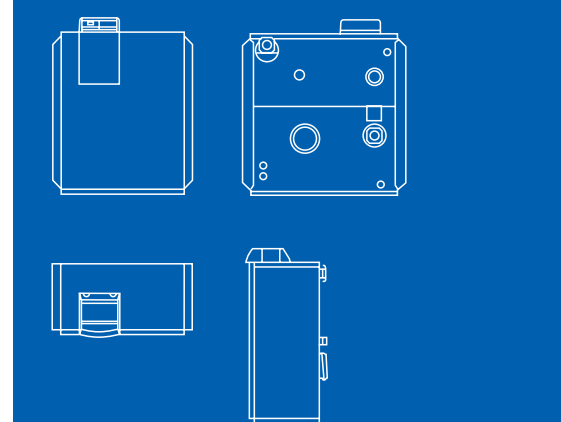
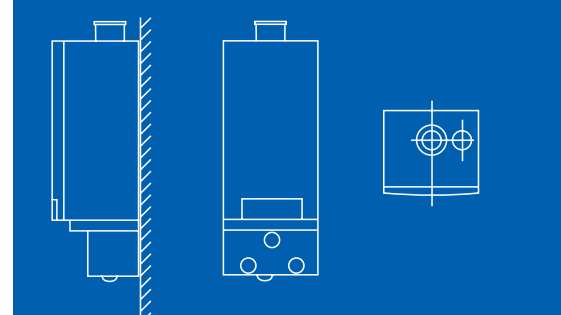
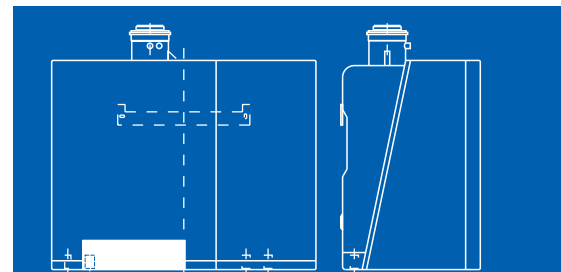
800 Range		kW 43	kW 60
Efficiency % (NCV)	40/30°C	109	109
Nominal Heat Output kW	75/60°C	11.8-39.3	21.4-55.1
Nominal Heat Output kW	40/30°C	12.9-42.9	23.7-60
Max Flow Temperature (°C)		40-80	40-80
Max Working Pressure (bar)		4	4
Flue Temperature (°C)	40/30°C	45	45
Flue Temperature (°C)	75/60°C	65	65
Weight (kg)		53	61
Height (mm)		685	685
Width (mm)		900	900
Depth (mm)		431	431

GB162 (Single Boiler)		kW 80	kW 100
Efficiency % (NCV)	50/30°C	110	110
Nominal Heat Output kW	80/60°C	18.9-80.0	19.0-94.5
Nominal Heat Output kW	50/30°C	20.8-84.5	20.5-99.5
Max Flow Temperature (°C)		90	90
Max Working Pressure (bar)		4	4
Flue Temperature (80/60°C)	Part Load	61	57
Flue Temperature (80/60°C)	Full Load	67	76
Flue Temperature (50/30°C)	Part Load	34	34
Flue Temperature (50/30°C)	Full Load	48	51
Weight (kg)		70	70
Height without pump group (mm)		980	980
Height with pump group (mm)		1310	1310
Width (mm)		520	520
Depth (mm)		465	465

CASCADE SYSTEMS AVAILABLE FOR UP TO 8 BOILERS. FOR FULL DETAILS ON CASCADE SYSTEM SPECIFICATIONS PLEASE VISIT [WWW.BUDERUS-COMMERCIAL.CO.UK](http://WWW.BUDERUS-COMMERCIAL.CO.UK).

GB312 (Single Boiler)		kW 90	kW 120	kW 160	kW 200	kW 240	kW 280
Efficiency % (NCV)		108	108	108	108	108	108
Nominal Heat Output (50/30°C) Full Load		90	120	160	200	240	280
Nominal Heat Output (50/30°C) Part Load		37	37	50	62	75	87
Nominal Heat Output (80/60°C) Full Load		84	113	150	187	225	263
Nominal Heat Output (80/60°C) Part Load		33	33	44	55	66	77
Max Flow Temperature (°C)		80	80	80	80	80	80
Max Working Pressure (bar)		4	4	4	4	4	4
Flue Temperature (80/60°C)	Part Load	58	57	56	58	56	58
Flue Temperature (80/60°C)	Full Load	70	78	77	76	75	78
Flue Temperature (50/30°C)	Part Load	34	33	30	33	33	33
Flue Temperature (50/30°C)	Full Load	50	56	54	55	55	56
Weight (kg)		205	205	240	265	300	330
Height max inc controls (mm)		1532	1532	1532	1532	1532	1532
Width (mm)		994	994	1202	1202	1410	1410
Width for access (mm)		612	612	612	612	612	612
Depth (mm)		625	625	625	625	625	625

CASCADES OF TWO BOILERS AVAILABLE. FOR FULL DETAILS ON CASCADE SYSTEM SPECIFICATIONS PLEASE VISIT [WWW.BUDERUS-COMMERCIAL.CO.UK](http://WWW.BUDERUS-COMMERCIAL.CO.UK).

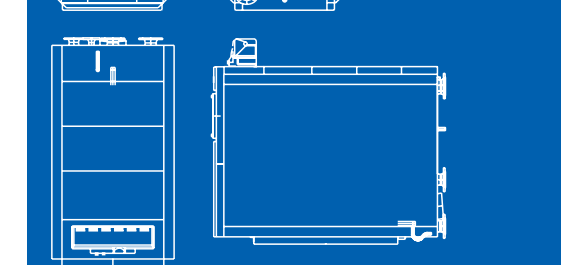
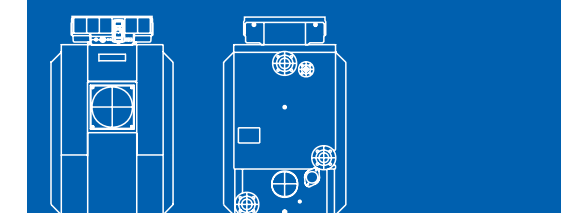
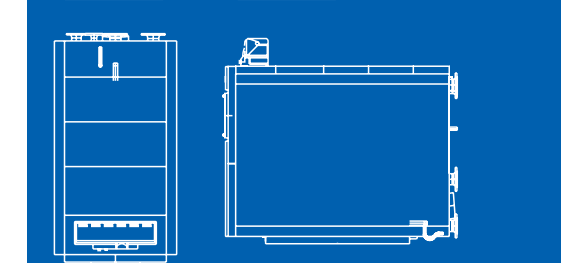
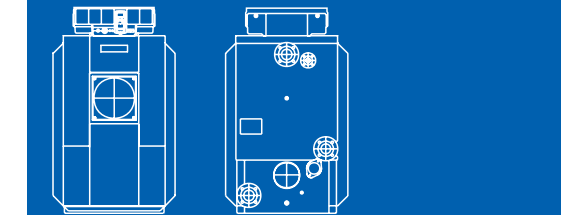
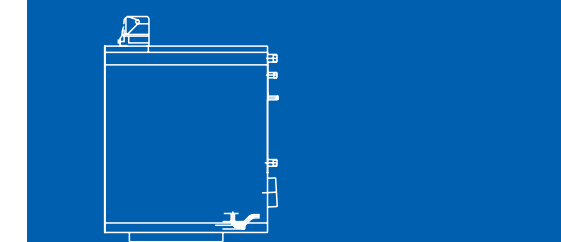
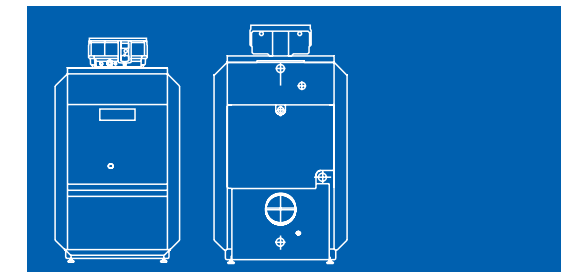


SB315		kW 50	kW 70	kW 90	kW 115
Efficiency % (NCV)		109	109	109	109
Nominal Heat Output (40/30°C)		50	70	90	115
Nominal Heat Output (75/60°C)		45.2	63.5	81.8	104.7
Max Flow Temperature (°C)		120	120	120	120
Max Working Pressure (bar)		4	4	4	4
Weight (kg)		294	300	314	321
Height max with controls (mm)		1503	1503	1503	1503
Width (mm)		820	820	820	820
Width for access (mm)		680	680	680	680
Length (without burner) (mm)		1157	1157	1157	1157

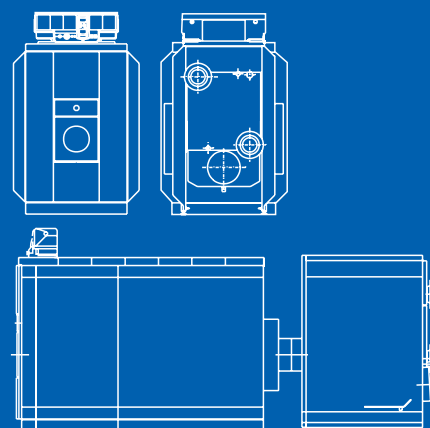
SB615		kW 145	kW 185	kW 240	kW 310	kW 400	kW 510	kW 640
Efficiency % (NCV)		109	109	109	109	109	109	109
Nominal Heat Output (40/30°C)		145	185	240	310	400	510	640
Nominal Heat Output (75/60°C)		132.7	169.2	218.9	262.6	365.2	457.9	585.4
Max Flow Temperature (°C)		120	120	120	120	120	120	120
Max Working Pressure (bar)		4	4	5	5	5.5	5.5	5.5
Weight (kg)		613	620	685	705	953	1056	1079
Height max with controls (mm)		1606	1606	1638	1638	1842	2000	2000
Height side mounted controls (mm)		1376	1376	1408	1408	1612	1770	1770
Width (mm)		900	900	970	970	970	1100	1100
Width for access (mm)		720	720	790	790	790	920	920
Length (without burner) (mm)		1816	1816	1845	1845	1845	1960	1960

SB735		kW 790	kW 970	kW 1200
Efficiency % (NCV)		109	109	109
Nominal Heat Output (40/30°C)		790	970	1200
Nominal Heat Output (75/60°C)		723	888	1098
Max Flow Temperature (°C)		120	120	120
Max Working Pressure (bar)		5.5	5.5	5.5
Weight (kg)		1730	2170	2204
Height max inc controls (mm)		2293	2293	2293+40*
Width (mm)		1372	1372	1372
Width for access (mm)		1120	1120	1170
Length (without burner) (mm)		2600	3018	3016

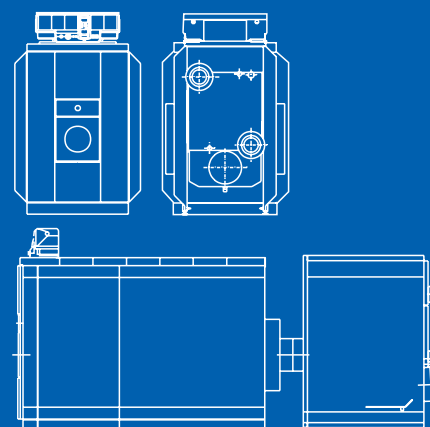
\*+40mm for sound absorbing base.



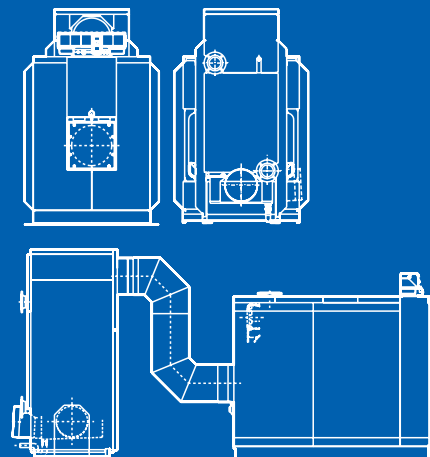
GE315 Plus – Supplied in sections	kW 115	kW 160	kW 195	kW 220	kW 260
Efficiency % (NCV)	107	107	107	107	107
Nominal Heat Output (55/30°C)	115	160	195	220	260
Nominal Heat Output (75/60°C)	106.2	147.8	180.1	203.2	240.2
Max Flow Temperature (°C)	120	120	120	120	120
Max Working Pressure (bar)	6	6	6	6	6
Weight (kg)	650	735	860	967	1055
Height max inc. controls (mm)	1228	1228	1339	1339	1339
Width (mm)	638	638	788	788	788
Length (without burner) (mm)	2075	2235	2568	2778	2938



GE515 Plus – Supplied in sections	kW 240	kW 290	kW 350	kW 400	kW 460	kW 520	kW 580
Efficiency % (NCV)	107	107	107	107	107	107	107
Nominal Heat Output (55/30°C)	240	290	350	400	460	520	580
Nominal Heat Output (75/60°C)	221.7	267.9	323.3	370	425	480	536
Max Flow Temperature (°C)	120	120	120	120	120	120	120
Max Working Pressure (bar)	6	6	6	6	6	6	6
Weight (kg)	1382	1539	1726	1885	2035	2200	2355
Height max inc. controls (mm)	1556	1556	1556	1556	1800	1800	1800
Width (mm)	788	788	788	788	870	870	870
Length (without burner) (mm)	2643	2813	3033	3203	3310	3480	3650



GE615 Plus	kW 645	kW 745	kW 835	kW 970	kW 1065	kW 1150
Efficiency % (NCV)	107	107	107	107	107	107
Nominal Heat Output (55/30°C)	645	745	835	970	1065	1150
Nominal Heat Output (75/60°C)	598	693	776	902	989	1067
Max Flow Temperature (°C)	120	120	120	120	120	120
Max Working Pressure (bar)	6	6	6	6	6	6
Weight (kg)	2885	3127	3375	3860	4095	4532
Height max with controls (mm)	2092	2092	2092	2092	2092	2092
Width (mm)	870	870	870	870	870	870
Length (without burner) (mm)	3973	4143	4313	4653	4823	5163



ALSO AVAILABLE IN CONDENSING LOW NOX SB825L LN, HIGH EFFICIENCY S825L AND HIGH EFFICIENCY LOW NOX S825L LN.

SB825L	kW 1000	kW 1350	kW 1900	kW 2500	kW 3050	kW 3700
Efficiency % (NCV)	108	108	108	108	108	108
Nominal Output Heat Exchanger (30°C)	90	111	156	212	254	281
Nominal Output Heat Exchanger (60°C)	36	42	61	85	101	104
Max Flow Temperature (°C)	110	110	110	110	110	110
Max Working Pressure (bar)	6 to 10	6 to 10	6 to 10	6 to 10	6 to 10	6 to 10
Shipping Weight at 10 Bar (t)	2.6	3.3	3.9	5.3	5.7	6.8
Height (mm)	1615	1715	1815	1865	1965	2015
Width (mm)	1324	1424	1524	1574	1674	1724
Length (mm)	3370	3640	3910	4365	4415	4765

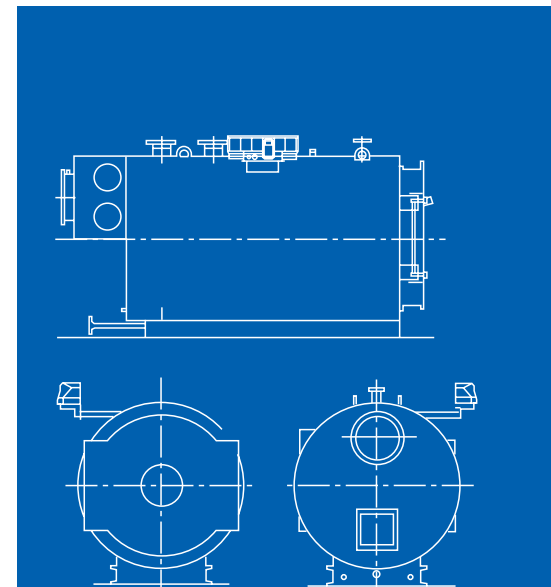
Continued...

SB825L	kW 4200	kW 5200	kW 6500	kW 7700	kW 9300	kW 11200
Efficiency % (NCV)	108	108	108	108	108	108
Nominal Output Heat Exchanger (30°C)	326	413	522	619	729	847
Nominal Output Heat Exchanger (60°C)	125	162	207	250	284	343
Max Flow Temperature (°C)	110	110	110	110	110	110
Max Working Pressure (bar)	6 to 10	6 to 10	6 to 10	6 to 10	6 to 10	6 to 10
Shipping Weight at 10 Bar (t)	8.3	9.6	12.1	14.6	17.5	20.5
Height (mm)	2115	2200	2400	2550	2700	2850
Width (mm)	1824	1924	2100	2250	2450	2550
Length (mm)	5260	5390	5780	6010	6210	6670

Continued...

SB825L	kW 12600	kW 14700	kW 16400	kW 19200
Efficiency % (NCV)	108	108	108	108
Nominal Output Heat Exchanger (30°C)	918	1057	1115	1376
Nominal Output Heat Exchanger (60°C)	345	402	404	528
Max Flow Temperature (°C)	110	110	110	110
Max Working Pressure (bar)	6 to 10	6 to 10	6 to 10	6 to 10
Shipping Weight at 10 Bar (t)	23.5	28.8	36.6	40.7
Height (mm)	3000	3200	3500	3700
Width (mm)	2700	2900	3200	3400
Length (mm)	7005	7740	8220	8670

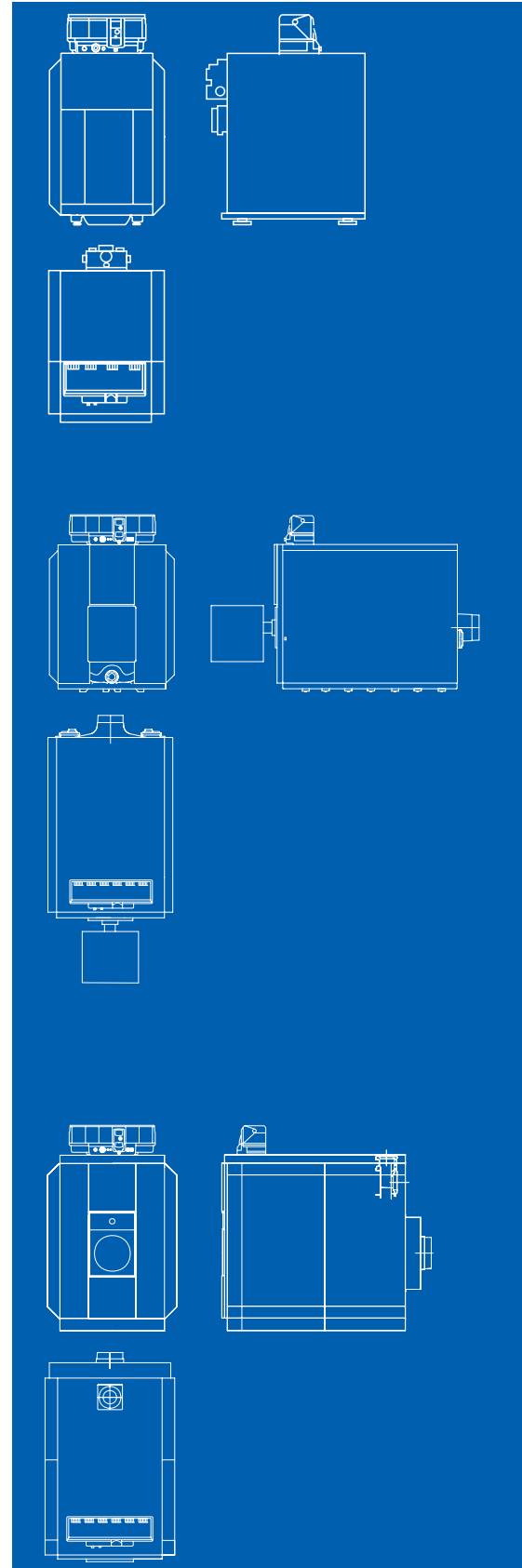
For full details on the entire steel boiler range please visit [www.buderus-commercial.co.uk](http://www.buderus-commercial.co.uk).



GE215 – Supplied pre-assembled	kW 78	kW 95
Efficiency % (NCV)	94	94
Nominal Heat Output kW	59-78	71-95
Max Flow Temperature (°C)	120	120
Max Working Pressure (bar)	4	4
Weight (kg)	317	362
Height max inc. controls (mm)	1126	1126
Width (mm)	600	600
Width for access (mm)	460	460
Length (without burner) (mm)	920	1040

GE315 – Supplied pre-assembled or sections	kW 105	kW 140	kW 170	kW 200	kW 230
Efficiency % (NCV)	96	96	96	96	96
Nominal Heat Output kW	86-105	106-140	141-170	171-200	201-230
Max Flow Temperature (°C)	120	120	120	120	120
Max Working Pressure (bar)	6	6	6	6	6
Weight (kg)	543	631	719	807	895
Height max inc. controls (mm)	1266	1266	1266	1266	1266
Width (mm)	880	880	880	880	880
Width for access assembled (mm)	712	712	712	712	712
Length (without burner) (mm)	970	1130	1290	1450	1610

GE515 – Supplied in sections	kW 240	kW 295	kW 350	kW 400	kW 455	kW 510
Efficiency % (NCV)	96	96	96	96	96	96
Nominal Heat Output kW	201-240	241-294	296-350	351-400	401-455	456-510
Max Flow Temperature (°C)	120	120	120	120	120	120
Max Working Pressure (bar)	6	6	6	6	6	6
Weight (kg)	1270	1430	1590	1753	1900	2060
Height max inc. controls (mm)	1556	1556	1556	1556	1556	1556
Width (mm)	980	980	980	980	980	980
Length (without burner) (mm)	1360	1530	1700	1870	2040	2210



GE615 – Supplied in sections	kW 570	kW 660	kW 740	kW 820	kW 920	kW 1020
Efficiency % (NCV)	96	96	96	96	96	96
Nominal Heat Output kW	511-570	571-660	661-740	741-820	821-920	921-1020
Max Flow Temperature (°C)	120	120	120	120	120	120
Max Working Pressure (bar)	6	6	6	6	6	6
Weight (kg)	2505	2747	2990	3232	3475	3710
Height max inc. controls (mm)	1826	1826	1826	1826	1826	1826
Width (mm)	1281	1281	1281	1281	1281	1281
Length (without burner) (mm)	1804	1974	2144	2314	2484	2654

Continued...

GE615	kW 1110	kW 1200
Efficiency % (NCV)	96	96
Nominal Heat Output kW	1021-1110	1111-1200
Max Flow Temperature (°C)	120	120
Max Working Pressure (bar)	6	6
Weight (kg)	3953	4147
Height max inc. controls (mm)	1826	1826
Width (mm)	1281	1281
Length (without burner) (mm)	2824	2994

