

Product
Overview



GB162
4 Boiler
Cascade

"Whatever the size of your heating project Buderus can provide the product, the service support and the technical know-how."



GB162 features and benefits at glance:

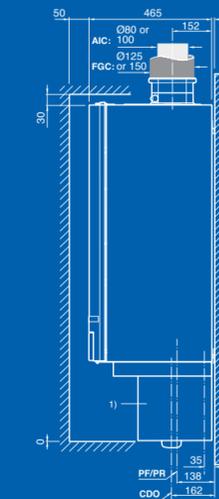
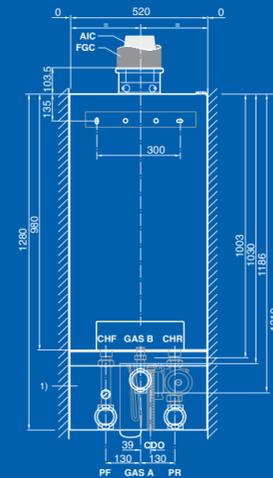
- Individual outputs of 65, 80 & 100kW
- Cascade outputs up to 800kW per frame kit
- Modulation to just 19% of total output for all year round efficiency
- Up to 110% net efficiency
- Ultra low emission levels for cleaner combustion and increased carbon savings
- Fully solar prepared
- Quick and easy installation
- Extremely compact (400kW in just 1m²)
- Individual lift weight only 70kg
- Award winning ALU-Plus heat exchanger for added durability and low cost servicing
- Whisper quiet
- LPG conversion available
- Intuitive user controls for increased system functionality and reduced running costs
- 2 years parts & labour warranty, 5 years on the heat exchanger.

Technical data

Model	65kW	80kW	100kW
Nominal heat output at 50/30°C	15.6kW - 65.0kW	20.8kW - 84.5kW	20.5kW - 99.5kW
Nominal heat output at 80/60°C	14.2W - 60.5kW	18.9kW - 80.0kW	19.0kW - 94.5kW
Max working pressure	4bar	4bar	4bar
Noise level at 1m	46dB(A)	47dB(A)	52dB(A)
Free feed pressure of fan	120Pa	195Pa	220Pa
Condensate water rate natural gas G20, 50/30°C	6.9l/h	9.0l/h	10.8l/h
Minimum volumetric flow rate	0l/h	0l/h	0l/h
Flue gas mass flow rate, full load	27.2g/s	35.3g/s	44.9g/s
Max flow temperature	90°C	90°C	90°C
CO2 content at full load, natural gas G20	9.4%	9.3%	9.4%
Mains connection voltage	230V	230V	230V
Electrical power consumption, full load	99W	97W	147W
Electrical power consumption, part load	21W	30W	28W
Gas pressure	17 - 24mbar	17 - 24mbar	17 - 24mbar
Rated heat input	14.5kW - 62.0kW	19.3kW - 82.0kW	19.3kW - 96.5kW
SEDBUK	A	n/a	n/a
Seasonal efficiency (as L2B)	95.5%	95.7%	96.1%
Net efficiency (NCV)	108%	110%	110%
Standby heat loss	0.05%	0.05%	0.06%
Flow temperature (can be set on the BC10 controller)	30°C - 90°C	30°C - 90°C	30°C - 90°C
Water content	5l	5l	5l
pH value of condensate water	approx. 4.1	approx. 4.1	approx. 4.1
Flue gas temperature 80/60°C, full load	64°C	67°C	76°C
Flue gas temperature 80/60°C, part load	57°C	61°C	57°C
Flue gas temperature 50/30°C, full load	43°C	48°C	51°C
Flue gas temperature 50/30°C, part load	33°C	34°C	34°C
Flue gas value group for air intake/flue gas system	II _s (G61)	II _s (G61)	II _s (G61)
Electrical ingress protection	IPX4D	IPX4D	IPX4D
Current rating	230 VAC, 50 Hz, 10A	230 VAC, 50 Hz, 10A	230 VAC, 50 Hz, 10A
Gas category according to EN 437	GB/IE I2H, 20 mbar	GB/IE I2H, 20 mbar	GB/IE I2H, 20 mbar
NOx rating at 0% oxygen, dry mg/kWh	28	38	38
Minimum gas pressure	15 mbar	15 mbar	15 mbar
Maximum flue length 80/125mm	7.7m	n/a	n/a
Maximum flue length 100/150mm	20m (with adaptor)	20m	20m
Gas rating at 15°C 1013mbar	6.96 m ³ /h	8.95 m ³ /h	10.53 m ³ /h

Data shown is for a GB162 without pump group.

Sealed systems only. For open systems the boiler should be separated from the system with a plate heat exchanger.



- Key
- AIC Air intake connection
 - CHF Central heating flow
 - CHR Central heating return
 - CDO Condensate drain outlet
 - FGC Flue gas connection
 - PF Pump group flow
 - PR Pump group return



High efficiency heating for
a low-carbon future

GB162
65-800kW



GB162 Gas Condensing Boiler

Efficiency through technology

The GB162 provides net efficiencies of up to 110% with ultra low class 5 levels of CO and NOx emissions. This is largely thanks to the unique design of the ALU plus heat exchanger which maximises the transfer of heat to the water flowing through the boiler. Low flame temperatures and a spacious combustion chamber also help minimise levels of emissions and dramatically reduce the boiler's impact on the environment.

A fully modulating pre-mix burner means that fuel consumption can be precisely matched to heat demand. As well as improving efficiency this also reduces the wear and tear on the boiler, prolonging its life and lowering maintenance costs.



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In the UK, Buderus is a brand name of Bosch Thermotechnology 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

Intelligent Heating Solutions

Buderus

Compact and efficient commercial heating: GB162 65, 80 & 100kW condensing boilers

The GB162 range of high performance, energy efficient boilers represents the very latest in heating technology for the environmentally conscious investor. With award winning customer-focused product design, and the engineering quality you'd expect from one of Europe's most respected heating brands, the GB162 is sure to surpass the expectations of anyone looking to upgrade to a modern heating system.



About Buderus...

The Buderus brand was established in Germany over 275 years ago and quickly developed a reputation for manufacturing high quality, robust heating equipment. Today the brand is present in over 50 countries and still leads the way in the design and production of modern fuel efficient technology including boilers, controls and renewable energy products.

In the UK the brand is part of Bosch Thermotechnology Ltd. and specialises in providing complete system solutions for the commercial and industrial heating sectors with individual outputs from 43kW to 19.2MW. For more details visit www.buderus.co.uk



A multitude of heating options

For such a compact boiler, the GB162 is particularly powerful with individual heat outputs of 65, 80 and 100kW. If larger outputs are required Buderus have a comprehensive selection of 'Cascade' frames and accessories allowing multiple GB162 boilers to be combined in systems up to 800kW. This makes the GB162 suitable for a wide variety of installations, from large luxury mansion houses and office buildings, to schools, sports centres, retail units and hotels.

Tax relief with the Carbon Trust

All GB162 boilers are listed on the Carbon Trust ECA scheme. This enables businesses to claim up to 100% of the first year capital allowance on investments in energy saving technology. For more details visit www.eca.gov.uk



Quality and reliability throughout

The GB162 is available with optional controlled variable speed or 3-speed pump groups. Fully insulated these high quality pump groups are supplied with pressure gauges, flow and return valves and high quality fittings for reliable and simple connection to the heating system.

Component Guide

Fully modulating fan and gas valve

Continually optimises gas/air ratio for clean and reliable combustion

Low NOx ceramic pre-mix burner

Lower uniform flame temperatures for cleaner combustion

Ceramic glow ignition and ionisation

Robust first-time firing mechanism

Spacious combustion chamber

Designed for ultra-low emissions and easy servicing

Plasmapolymerised ALU-Plus heat exchanger

Rapid heat transfer, increased efficiency, durability and reduced maintenance

BC10 controls platform with space for built-in RC35 controller

Intuitive controls for optimum functionality and performance



Take control

The GB162 perfectly balances advanced heating technology with usability. Buderus EMS (Energy Management System) modular controls can be easily expanded with either a simple EM10 BMS interface, an advanced RC35 controller for weather compensation, or for larger systems, the Buderus 4000 series controls can be fitted for comprehensive functionality and system diagnostics.

Multi-boiler 'Cascade' systems

As an individual boiler the GB162 sets new standards for delivering reliable, fuel-efficient heating. However, the GB162 can also be linked together as part of a 'Cascade' multi-boiler kit to make it suitable for larger systems with high demands for heat.



Up to 8 GB162 boilers of different outputs can be combined either in-line or back-to-back using our simple, yet very robust cascade frame kits. The framework can be easily constructed in the boiler room and comes complete with all the necessary pipework, low-loss headers, custom-fit insulation and high quality fixings to ensure a quick and reliable installation. The compact, space saving design of the Buderus GB162 cascade kit means that a 4 boiler 400kW system takes up only 1m² of floor space.

Cascade controls

The Buderus 4000 series of modular controls are a cost effective alternative to installing a Building Management System. With a wide-range of functions and settings the 4000 series allows precise regulation of GB162 cascade systems in order that each boiler allows consistent heating performance and operates at its most efficient whatever the demand for heat.

Fluing and accessories

A versatile range of Buderus flues and accessories are available for the GB162 to ensure total compatibility and quality for all installations.

Full technical and specification for all boilers, and hydraulic schematics for our cascade systems, can also be downloaded from our website www.buderus.co.uk



Cascade benefits at a glance:

- Longevity and durability – boilers can be continually cycled to even out wear and tear
- All year round efficiency – strategic modulation to just 2.5% of total output allows boilers to be bought into and out of use in line with heat demand
- Space saving – compact all-in-one unit easily fits the smallest of boiler rooms
- Flexibility – total system output can be sized more accurately to fit building requirements and heat demand
- Constant heat availability - boilers can be individually serviced and maintained without loss of heating