

Commodore Plus

Cast Iron Sectional Hot Water Boiler
Suitable for Pressure Jet Burners
Oil, gas or dual fuel firing

Outputs 162 - 432 kW



ORMANDY

Hartley & Sugden

STEAM & HOT WATER BOILERS

Commodore Plus - Cast Iron Sectional Boiler

The Commodore Plus is a range of cast iron sectional boilers available in sizes from 162 - 432 kW. The boilers are suitable for firing on Natural gas, 35 second oil, LPG, and Kerosene, with a choice of burner manufacturers.



Commodore Plus Boiler

General Description

Commodore Plus boilers have a small footprint, making them particularly suitable for boilerhouses with limited access and space. The boilers have a typical efficiency across the range of up to 94% (net CV).

They also have a maximum working pressure of up to 4 bar, with a maximum flow water temperature of 90°C and a minimum return water temperature of 40°C. The maximum temperature differential between the flow and return is 35k.

The boilers are supplied complete with a control panel located on the top of the boiler, which has been factory tested.

Commodore Plus boilers should be installed in accordance with BS 6644 where applicable and other relevant standards, codes of practice and current building regulations. Water treatment is recommended for all cast iron boilers and a water treatment specialist should be consulted for advice on this matter.

Design features

- Manufactured from Hypoeutectic cast iron
- High corrosion resistant properties
- Combustion chamber guaranteed for 5 years
- Manufactured to EN303
- Insulated steel casing
- Left or right hand hinged front door

Performance features

- Outputs up to 432 kW
- Up to 4 bar working pressure
- Up to 94% efficiency (net CV)
- Small footprint and compact dimensions

Design & Construction

Commodore Plus boilers are manufactured from high quality hypoeutectic cast iron, which has high corrosion resistant properties. The boilers are of a reliable and proven five pass design and the cast iron combustion chamber is guaranteed for five years. The boilers are supplied unassembled and details of our boiler site assembly service are available on request.

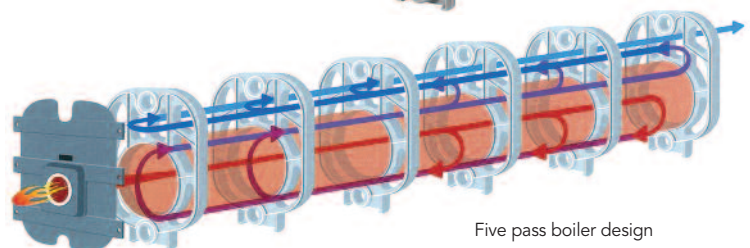
The boilers are assembled using bi-conical steel nipples between each boiler section. Commodore Plus boilers are also supplied with 100mm thick insulation and a painted steel casing.

The cast iron front door can be hinged either right or left, giving easy access to the boiler sections for cleaning purposes.

Commodore Plus boilers are manufactured in accordance with EN303 and are CE certified.



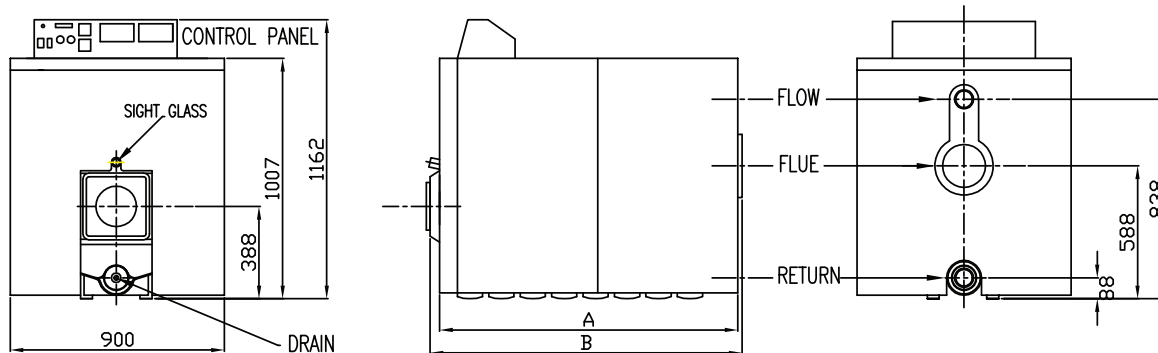
Hypoeutectic cast iron section



Five pass boiler design

Technical Data and Dimensions

Commodore Plus



Commodore Plus Model	5	6	7	8	9	10	11	12	13	14
Output (kW)	162	204	224	253	283	310	339	371	394	432
No. of sections	7	8	9	10	11	12	13	14	15	16
Dimensions & weight										
A Boiler Length (mm)	1253	1253	1513	1513	1773	1773	2033	2033	2293	2293
B Overall Length (mm)	1300	1300	1560	1560	1820	1820	2080	2080	2340	2340
Approx. dry weight (kg)	705	800	895	980	1060	1150	1240	1330	1420	1510
Efficiency based on net CV										
Efficiency (%) @ 100% load	92.5	92.7	92.9	93.2	93.4	93.6	93.8	94.2	94.4	94.6
Combustion and flue data										
Gas flow rate G20 (m ³ /h)	18.8	23.8	26	29.4	33	36	39.7	43.1	45.5	50.2
Oil flow rate (l/h)	18.0	22.7	24.8	28.0	31.5	34.4	37.8	41.2	43.5	47.9
Flue Gas Volume (m ³ /min)	6.3	8.0	8.7	9.8	11.1	12.1	13.3	14.5	15.2	16.8
Approx Flue Gas Temp. (°C)	156	160	156	161	160	152	162	153	141	150
Comb. Chamber Resistance (mbar)	2.9	3.5	2.2	2.6	2.7	3.5	3.6	4.4	4.6	4.6
Water system										
Hydraulic Resistance (11k) (mbar)	8.3	13.1	15.7	25.9	30.9	36.0	41.8	49.4	54.7	64.7
Hydraulic Resistance (20k) (mbar)	2.5	4.0	4.8	7.8	9.3	10.9	12.6	14.9	16.6	19.6
Minimum water flow rate (11k) (l/s)	0.88	1.10	1.21	1.37	1.53	1.68	1.83	2.01	2.13	2.34
Minimum water flow rate (20k) (l/s)	0.48	0.61	0.67	0.75	0.84	0.92	1.01	1.10	1.17	1.29
Water content (l)	115	130	145	160	175	190	205	220	235	250
Connections										
Flue connection size (mm)	180	180	180	180	180	180	180	180	180	180
Flow & Return flanged connection	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
Drain connection size	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"	R3/4"

Controls

A control panel is supplied for mounting on the front of each boiler. It is supplied with wiring for connection to the burner and boiler thermostats. Additional controls can be added to suit burners with a modulating type operation if required.

Volt free kits can also be supplied, details available on request.

The standard panel is supplied with the following :-

- On/off switch
- Temperature gauge
- Control thermostat, adjustable from 40 - 90°C
- High/low thermostat, adjustable from 40 - 90°C
- An overheat Safety thermostat, preset to 110°C (with manual reset)
- Burner connection terminal

The panel requires a 230v 50Hz single phase electricity supply from a suitable fused isolator.

Installation

Clearances

Commodore Plus boilers should be installed and positioned so that there is adequate access to the flue and pipework connections. The boilers should also be installed so that there is enough room at the front for cleaning and maintenance of the boiler/burner unit. Consideration should also be given to the position and projection of the burner with the boiler door in the open position. Commodore Plus boilers can be located together in a modular formation, with a minimum

gap of 10mm recommended between boiler casings.

Burners

A burner is normally supplied and matched to the boiler to give either on/off, high/low or fully modulating operation, which ensures optimum operating efficiency to suit specific requirements. The burner is bolted to the boiler front door by the site assembly team and is wired to the control panel with a plug in lead.

Ancillary items

It is recommended that a suitably sized safety valve is

fitted in the flow pipework before the isolation valve. Please note that the safety valve, pressure gauge and drain valve are not supplied with the boiler.

Boiler base

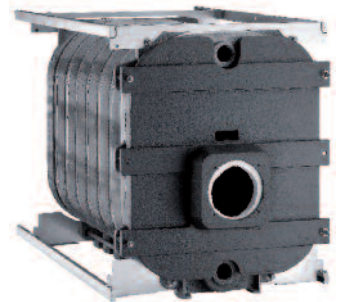
Commodore Plus boilers should be located on a surface capable of supporting the fully flooded weight of the boiler and burner and it should be smooth, level and constructed from a non flammable material.

Delivery

Delivery to site can be arranged.

Commissioning

Commissioning of the boiler/burner can be arranged.



Cast iron sectional block

Ormandy Group Associated Products

The Ormandy group has an extensive range of boilerhouse products, which compliment the Ormandy Hartley & Sugden boiler range. All Ormandy products can be skid mounted to specific requirements. Detailed information on all Ormandy products is available on request.

Additional products include:

- Pressurisation units
- Storage and Non Storage Calorifiers
- Plate heat exchangers
- Package plant rooms which can be designed to incorporate any of the above equipment



Please visit www.ormandy ltd.com to access comprehensive information on Ormandy Hartley & Sugden products and services.

The Ormandy Group: Ormandy Offsite / Ormandy Rycroft / Ormandy Electric Ormandy Hartley & Sugden / Ormandy Newade / Ormandy Dreh / Ormandy Aquatherm

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