

SCP Plus

Steel High Temperature

Hot Water Boiler

Suitable for Pressure Jet burners

Oil, gas or dual fuel firing

Outputs 3000 - 7000 kW



ORMANDY

Hartley & Sugden

STEAM & HOT WATER BOILERS



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SCP Plus - Steel High temperature Hot water Boiler

The SCP Plus is a range of conventional three pass wet back steel shell and tube high temperature hot water boilers. They are available in sizes ranging from 3000 - 7000 kW, suitable for firing on natural gas, LPG and oil, with a choice of burner manufacturers.

General Description

SCP Plus boilers are designed to provide high efficiency up to 92.0% (net CV), focusing on fuel savings, low flue gas temperatures and low emissions.

They are available in outputs from 3000 kW to 7000 kW, with six different sizes. The boilers have a standard working pressure of up to 6 bar and a maximum water flow temperature of 110°C. However SCP Plus boilers with higher working temperature and pressures are available on request.

The minimum return water temperature is 55°C, with a maximum temperature drop across the boiler of 30k. Each boiler is supplied with a factory tested control panel. The panel is pre-wired and connected to the control and safety limit thermostats and burner.

Where appropriate, SCP Plus boilers should be installed in accordance with BS 6644 and other relevant standards, codes of practice and current building regulations. Water treatment is recommended for all steel shell and tube boilers and a water treatment specialist should be consulted for advice on this matter. All SCP Plus boilers are supplied with a set of cleaning tools.

Design features

- Manufacture to EN12953 on request
- High density insulated casing
- Left or right hand hinged front door
- Three pass boiler with two passes of tubes
- Large water volume
- Flanged front and rear tube plates

Performance features

- High efficiency up to 92.0% (net CV)
- Standard outputs from 3000 - 7000 kW
- Standard working pressures up to 6.0 bar
- Standard maximum flow water temperature 110°C
- Minimum return water temperature 55°C
- Boilers suitable for higher temperatures and pressures available on request



SCP Plus boiler

Design & Construction

The SCP Plus is a conventional three pass wet back shell and tube design which incorporates a combustion chamber and two passes of fire tubes. The boiler is manufactured using high quality steel and incorporates a flanged front and rear tube plate design, which minimises thermal stresses within the boiler.

All SCP Plus boilers are designed and manufactured, inspected and tested as required by the relevant provisions of the Pressure Equipment Directive 97/23/ EC and also in accordance with the EC type - examination certificate (module B). The boilers are CE certified.

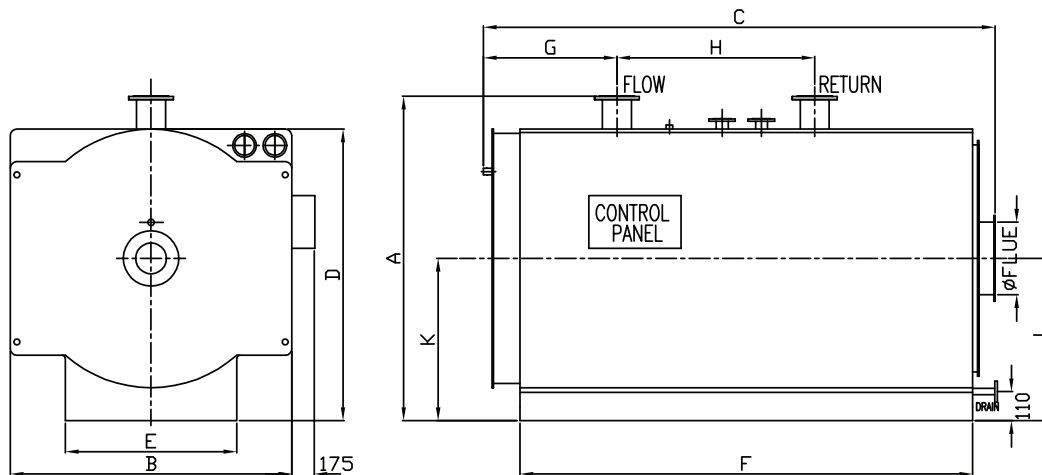
Boilers manufactured and constructed to EN 12953 are available on request. SCP Plus boilers are subject to X-ray and ultrasonic testing and they are hydraulically pressure tested in the factory.

The boilers are supplied with a high density insulated casing, which is fully assembled and factory fitted. They also have an insulated hinged front door, which is available for left or right hand opening. However this needs to be specified at the time of order.

To ensure the highest quality standards, every SCP Plus boiler is hydraulically pressure tested in the factory.

Technical Data and Dimensions

SCP Plus



SCP Plus Model	3000	3500	4000	5000	6000	7000
Output (kW)	3000	3500	4100	5000	6000	7000
Dimensions & weight						
A	2400	2400	2610	2615	2765	2765
B	1960	1960	2170	2170	2320	2320
C	3879	4379	4379	4879	5379	5879
D	2210	2210	2420	2420	2570	2570
E	1300	1300	1400	1400	1600	1600
F	3430	3930	3930	4430	4930	5430
G	1012	1012	1012	1262	1262	1262
H	1500	2000	2000	2200	2700	3200
J	1230	1230	1335	1335	1410	1410
K	1230	1230	1335	1335	1410	1410
Approx. dry weight (kg)	6300	6950	8200	8970	11280	12160
Efficiency based on net CV						
Efficiency (%) @ 100% load	92.0	92.0	92.0	92.0	92.0	92.0
Efficiency (%) @ 30% load	94.0	94.0	94.0	94.0	94.0	94.0
Gas flow rate G20 (m ³ /h)	345	403	472	575	690	805
Combustion and flue data						
Flue Gas Volume (m ³ /min)	130.5	152.2	178.3	217.4	260.9	304.4
Approx Flue Gas Temp. (°C)	181	181	182	181	181	181
Comb. Chamber Resistance (mbar)	13.5	18.0	11.7	14.0	12.0	14.0
Water system						
Hydraulic Resistance (11k) (mbar)	64.2	86.9	120.1	73.8	105.9	144.0
Hydraulic Resistance (20k) (mbar)	19.4	26.3	36.4	22.3	32.0	43.6
Minimum water flow rate (11k) (l/s)	16.2	18.9	21.7	27.1	32.5	37.9
Minimum water flow rate (20k) (l/s)	8.9	10.4	11.9	14.9	17.9	20.8
Water content (l)	4496	5212	6125	7335	9088	10066
Connections						
Flue connection size (mm)	550	550	600	600	700	700
Flow & Return flanged connection (mm)	200	200	200	250	250	250
Drain connection size (mm)	40	40	40	40	40	40
Safety valve size (mm)	50	50	50	65	65	65

Controls

A 400v three phase control panel is supplied mounted on the side of each SCP Plus boiler. The standard control panel features include a main switch, panel live lamp, control thermostats, safety thermostat with manual reset, safety pressure switch with manual

reset, burner on/off switch and pump on/off switch. The standard control thermostats have an operating range up to 110°C, but thermostats with a higher operating range are available on request.

A boiler thermometer and

pressure gauge are supplied mounted on the front of each boiler.

Additional control options are available, including volt free kits, weather compensation, optimised start/stop, cascade control, room and outdoor

sensors, hours run meter, flue gas thermometer, etc. details available on request.

Three phase burners require a separate three phase isolated supply direct to the burner, with a flexible connection for boiler door opening.

Installation

Clearances

SCP 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. All boilers

should also be installed so that there is enough room at the front for cleaning of the tubes and combustion chamber.

Burners

A burner is normally supplied and matched to the boiler to give either high/low or fully modulating operation, which ensures optimum operating efficiency to suit specific requirements. The burner is bolted to the boiler front door and pre-wired to the control panel.

Ancillary items

Safety valves and drain valve are supplied loose for connection to the boiler on site by the purchaser. Alternatively the purchaser may connect the safety valve directly to the system flow pipework between the boiler and the isolation valve.

Boiler base

SCP 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.

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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