

PST Floor-Standing Condensing Boiler

The big boiler that's small enough to fit anywhere

PST



The 'little' modular high-efficiency

With its brand-new PST-FCB 80-3000, PST is delivering a high-quality, 100% customised product with an output ranging from 80 kW to over 3 mW in combination with proven technology and new state-of-the-art electronics. PST's floor-standing high-efficiency boilers set the bar in the higher-output segment.

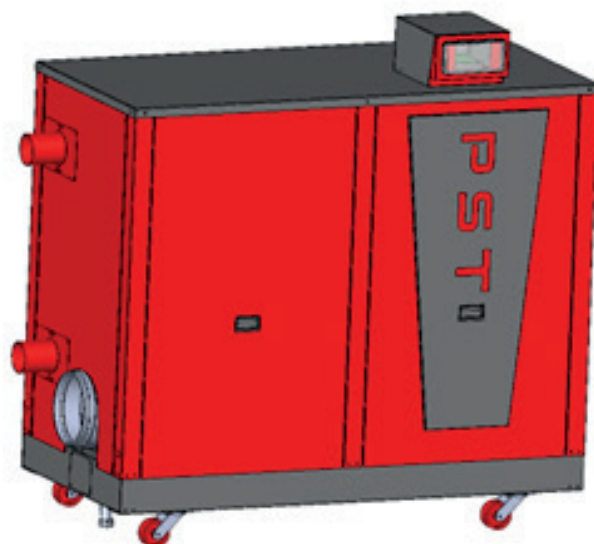
With its exceptional performance and ability to adapt to different applications, the PST-FCB 80-990 has been specifically developed with high output in mind. Aside from its outstanding performance, the boiler can easily be adapted to different applications. Each boiler is supplied fully assembled, pre-configured and tested, as well as fully prepared for optimal transport and installation.

Due to its extremely compact dimensions and low weight, the boiler is easy to transport and install. The boiler is 72-86 cm wide and fits through any standard doorway.

The modern PST Comfort Master control system, with its LCD display, ensures flexible integration into any installation. A great deal of attention has been paid to ease and flexibility of installation, and the boiler's serviceability is exemplary. The number of components has been kept to a minimum, and despite the exceptionally compact design, each one is conveniently placed and can easily be accessed, operated and serviced (if necessary).

The boiler modules are fitted with a non-return valve as standard, making it possible to use overpressure in the combined flue gas discharge pipe without any extra investment. This allows for the required pipe diameter to be reduced, which not only increases application options, but results in significant cost savings as well.

From its inception, the boiler has been designed for customisation with one or more extras, to make it capable of meeting any set of requirements. Thanks to the way the boiler's production line has been set up, each PST-FCB 80-990 can be tailored to the customer's requirements on request (left or right-hand version and different accessories).



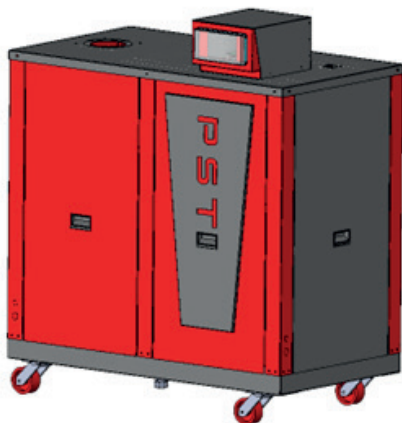
High-efficiency boiler that's big on performance

PST-FCB 80-990

The PST-FCB 80-990 is comprised of a left module and a right module. The flue gas discharge, air supply (if required) and casing elements of each of these modules are combined. The boiler offers optimum flexibility when it comes to installation: each boiler module has its own controls, and can be connected separately to the hydraulics and gas. The flue gas collector is capable of rotating, enabling both vertical and horizontal flue gas connection.

Delivery and installation

The PST-FCB 80-990 is supplied fully assembled and packaged. The PST-FCB 80-990 packaging is 72-86 cm wide and 1488-1800 cm high, and its length is 1290-1804 cm. The boiler measures 72-86 cm wide, meaning it will fit through all standard doorways. The boiler is mounted on a set of castors so that it can be easily manoeuvred once the packaging has been removed. The packaging cover can be used to negotiate obstacles such as doorsteps.



The facts in brief

- Heat exchanger made from corrosion-resistant cast aluminium parts
- Premix combustion technology with gas/air ratio control
- Each boiler is supplied fully pre-configured and assembled
- Fitted with castors as standard
- Extremely compact
- Low weight
- Adjustable feet
- Modern control panel with the option of installing weather-compensated boiler control system
- Low electricity consumption
- Open (conventionally flued) and closed (room-sealed) versions available
- All control and safety equipment is contained within the casing
- Quiet operation
- Fitted with the PST Comfort Master, an advanced self-regulating boiler control system that provides a reliable heat supply
- Left or right-hand versions available
- Delivered in packaging with loading/unloading ramp

Product range

- PST-FCB 80
- PST-FCB 120
- PST-FCB 160
- PST-FCB 200
- PST-FCB 240
- PST-FCB 280
- PST-FCB 360
- PST-FCB 450
- PST-FCB 540
- PST-FCB 630
- PST-FCB 720
- PST-FCB 810
- PST-FCB 990

Electrical panel

Siemens Electrical board LMS14 are digital boiler management units (BMUs) for use with gas-fired appliances equipped with premix burners. They are used for startup, control and supervision of premix burners with capacities from 80 kW to 1 MW in intermittent operation with direct ignition of the main flame.

The Siemens Electrical board LMS14 provide all supervisory and control functions required for burner operation, space heating and DHW heating. They also offer modular system extensions in the form of integrated communication interfaces. Output modulation is performed via a PWM-controlled fan with pneumatic gas-air ratio control.

Cascade System

All consumers in the cascade master can still be used. In addition, consumers can be used in the cascade slave. All requests for heat are forwarded to the cascade master. Functions only used with individual device address (buffer storage tank, system pump/primary controller) are only available with the cascade master.

Control Option

The PST-FCB 80-990 can be controlled in the following ways:

- As a single boiler or in a cascade with modulating controllers based on room and/or outside temperature
- With on/off controllers, using the boiler's internal heating curve if necessary (in combination with outside temperature sensor)
- Analogue signals (0–10 V) for control based on output or flow temperature

Technical specifications

PST-FCB 80-280		Unit	80	120	160	200	240	280
Input control		Modulating, on/off, 0 – 10 V						
Nominal output, CH operation 80/60°C		kW	77.9	112.9	155.8	196.8	236.2	275.5
Nominal output, CH operation 50/30°C		kW	82.2	119.1	164.5	207.8	249.4	290.9
Nominal input, CH operation (Hi)		kW	80	115.9	160	200	240	280
Weight (excl. water)		kg	250	270	290	320	340	360
Dimensions	Length	mm	1290	1290	1290	1290	1290	1290
	Width	mm	717	717	717	717	717	717
	Height	mm	1488	1488	1488	1488	1488	1488
Flue gas discharge connection		mm	Ø 150	Ø 150	Ø 150	Ø 150	Ø 150	Ø 150
Supply and return connection		mm	DN 60	DN 60	DN 60	DN 60	DN 60	DN 60
Maximum operating temperature		°C	90	90	90	90	90	90
Water operating pressure (min.–max.)		bar	0.8-6	0.8-6	0.8-6	0.8-6	0.8-6	0.8-6
Mains voltage		V/Hz	230/50	230/50	230/50	230/50	230/50	230/50
Sound power level, indoors		dB	67	67	67	67	67	67

PST-FCB 360-990		Unit	360	450	540	630	720	810	990
Input control		Modulating, on/off, 0 – 10 V							
Nominal output, CH operation 80/60°C		kW	349.2	436.5	523.8	611.1	698.4	785.7	960.3
Nominal output, CH operation 50/30°C		kW	378	472.5	567	661.5	756	850.5	1039.5
Nominal input, CH operation (Hi)		kW	360	450	540	630	720	810	990
Weight (excl. water)		kg	440	470	500	530	560	600	470
Dimensions	Length	mm	1804	1804	1804	1804	1804	1804	1804
	Width	mm	855	855	855	855	855	855	855
	Height	mm	1800	1800	1800	1800	1800	1800	1800
Flue gas discharge connection		mm	Ø 250	Ø 250	Ø 250	Ø 250	Ø 250	Ø 250	Ø 250
Supply and return connection		mm	DN 100	DN 100	DN 100	DN 100	DN 100	DN 100	DN 100
Maximum operating temperature		°C	90	90	90	90	90	90	90
Water operating pressure (min.–max.)		bar	0.8-6	0.8-6	0.8-6	0.8-6	0.8-6	0.8-6	0.8-6
Mains voltage		V/Hz	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Sound power level, indoors		dB	68	68	68	68	68	68	68


The flow temperature can be increased to maximum 95°C provided that water pressure is at least 1,5 bar and provided that ΔT at maximum load is ≤ 20 K and ΔT at minimum load is $\Delta T \leq 30$ K.


In case anti-freeze is used, the flow temperature can be increased to maximum 95°C provided that water pressure is at least 2,0 bar and provided that ΔT at maximum load is ≤ 15 K and ΔT at minimum load is $\Delta T \leq 25$.

In case of open vented systems, the minimum operating pressure is 0,2 bar and the maximum flow temperature is limited to 75°C.

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