PremierPlus and PremierPlus SystemFit

Direct and Indirect Unvented Water Heating
PremierPlus
Value-for-Money Pressure Unvented Water Heating

Designed specifically for UK water conditions, PremierPlus leads the way in cost effective mains pressure water heating.

Manufactured to the highest standards from Duplex stainless steel, the units offer exceptional corrosion resistance and a long life expectancy. Advanced primary coil and cold water controls design gives rapid re-heat and good flow rate performance. It provides mains pressure showering and is suitable for use in new build or refurbishment schemes for domestic or commercial applications. PremierPlus is available in capacities from 100 to 300 litres, in both Direct and Indirect models.

All models have 50mm of CFC/HFC-free (ODP zero) foam insulation to give improved insulation standards and are finished in a stylish and durable white Plastisol finish casing with grey high impact thermoplastic moulded top and bottom covers.

PremierPlus has been designed with features that benefit specifiers, installers and end users. These benefits combine to make PremierPlus exceptional value for money.

PremierPlus Unvented System Benefits

To Specifiers and Builders
- Duplex stainless steel for longer life.
- Flexible siting of cylinder installation.
- Complete package incorporates safety and hot water controls.
- Savings on installation from simplified plumbing and electrical connections.
- Mains pressure hot water for balanced supply to showers and mixers – no shower pump to consider.
- High flow rates give improved hot water delivery.
- Equally suited to new build or refurbishment projects.
- Fully indemnified design service.

To Installers
- A complete package for simple on-site installation.
- Simplified plumbing and electrical connections.
- No cold feed cistern required.
- No head problems.
- No shower pump to consider.
- No anode to maintain or replace.
- Fully factory tested for reliability.
- 25 year on-site parts and labour cylinder guarantee.

To Consumers
- High performance showers and balanced mixers.
- High flow rates – fast filling baths.
- Fast recovery rates.
- Safe, economical performance.
- No anode to check or maintain.
- No loft pipes to freeze up.*
- 25 year on-site parts and labour cylinder guarantee.
- 5 year on-site parts and labour expansion vessel guarantee.
- 2 year on-site parts and labour guarantee on element and all other controls.

*Assumes Sealed System boiler installation

Simple Installation
Following extensive surveys of installers’ preferences, Santon has designed PremierPlus with the installer in mind. All of the plumbing and electrical connections are located to give easy access during installation. Plumbing connections are 22mm compression. Electrical connections are made to an integrated wiring centre which facilitates a neater, trouble-free and simpler installation.

Heat Exchanger – Indirect units
A high efficiency ‘coil in coil’ heat exchanger is situated at the base of the unit which ensures that virtually all of the water is heated. This compares with a typical side entry single coil heat exchanger which typically heats only approximately 80% of the water content. The design also ensures that there is rapid reheat when water is used, bettering CHeSS* recommended good practice.

*CHeSS - Central Heating System Specifications
General Information Leaflet 59.
PremierPlus

Safety
The high strength Duplex stainless steel cylinder is manufactured using stringent quality control procedures and is pressure tested to over 1½ times its maximum operating pressure. All PremierPlus units have fully integrated thermostat controls and thermal cut outs for both direct and indirect heating. A higher level of thermal safety is provided by the factory fitted temperature and pressure relief valve.

Cold Water Controls
An integrated cold water control set, exclusively designed for the PremierPlus, and comprising pressure reducing valve and strainer, expansion relief valve and check valve reduces installation time by incorporating three components into one and gives significant improvements in flow rate across a range of inlet pressures.

Guarantee
The use of high grade Duplex stainless steel means that the PremierPlus comes with a 25 year on-site parts and labour guarantee for the cylinder. The expansion vessel and the cold water controls have a 5 year on-site parts and labour guarantee and all other valves and fittings supplied with the unit are covered for a period of 2 years.

<table>
<thead>
<tr>
<th>Indirect units using primary heating coil</th>
<th>Indirect units using element only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Primary flow (ltrs/min @ 80°C to 2°C)</td>
</tr>
<tr>
<td>PP100B</td>
<td>15</td>
</tr>
<tr>
<td>PP120B</td>
<td>15</td>
</tr>
<tr>
<td>PP150B</td>
<td>15</td>
</tr>
<tr>
<td>PP170B</td>
<td>15</td>
</tr>
<tr>
<td>PP210B</td>
<td>15</td>
</tr>
<tr>
<td>PP250B</td>
<td>15</td>
</tr>
<tr>
<td>PP300B</td>
<td>15</td>
</tr>
</tbody>
</table>

*Hot draw-off rate 10 l/min
**Coil output based on kW = litres heated x temp rise/time to heat from cold x 14.3
†Assumes 3kW @ 240V available. Heating times would be extended at 230V input

<table>
<thead>
<tr>
<th>Direct units using lower element only</th>
<th>Standing Heat Loss Chart</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Heat up time from cold through 45°C (mins)</td>
</tr>
<tr>
<td>PP100L</td>
<td>99</td>
</tr>
<tr>
<td>PP120L</td>
<td>121</td>
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<tr>
<td>PP150L</td>
<td>152</td>
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<td>PP170L</td>
<td>173</td>
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<td>PP210L</td>
<td>210</td>
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<tr>
<td>PP250L</td>
<td>257</td>
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<tr>
<td>PP300L</td>
<td>310</td>
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</tbody>
</table>

*Assumes 3kW @ 240V available. Heating times would be extended at 230V input

PremierPlus Heating, Re-Heating and Draw-Off Performance

PremierPlus Performance Specification

PremierPlus Cold Water Combination Valve
Flow In v Flow Out for various static inlet pressures

Recovery times for PremierPlus Indirect units with various boiler outputs (based on 70% recovery)

Typical Installation of an Indirect PremierPlus

SPECIFICATION ADVICE: 01603 420128 FAX: 01603 420229 E-MAIL: specifier@santon.co.uk
Unvented Water Heaters

PremierPlus

Technical Specification

Ordering Guide

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Product Nom.</th>
<th>Element</th>
<th>kW @ 240V</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP100E</td>
<td>94 050 01</td>
<td>100</td>
<td>1 x 3</td>
</tr>
<tr>
<td>PP120E</td>
<td>94 050 019</td>
<td>120</td>
<td>1 x 3</td>
</tr>
<tr>
<td>PP150E</td>
<td>94 050 020</td>
<td>150</td>
<td>2 x 3</td>
</tr>
<tr>
<td>PP210E</td>
<td>94 050 021</td>
<td>210</td>
<td>2 x 3</td>
</tr>
<tr>
<td>PP300E</td>
<td>94 050 024</td>
<td>300</td>
<td>3 x 3</td>
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Model References and Dimensions

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Direct</th>
<th>Indirect</th>
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<tbody>
<tr>
<td>PP100B</td>
<td>94 050 027</td>
<td>100</td>
</tr>
<tr>
<td>PP120B</td>
<td>94 050 028</td>
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<td>PP150B</td>
<td>94 050 030</td>
<td>150</td>
</tr>
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<td>PP210B</td>
<td>94 050 031</td>
<td>210</td>
</tr>
<tr>
<td>PP300B</td>
<td>94 050 033</td>
<td>300</td>
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Dimensions

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Direct</th>
<th>Indirect</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP100E</td>
<td>94 050 018</td>
<td>100</td>
</tr>
<tr>
<td>PP120E</td>
<td>94 050 019</td>
<td>120</td>
</tr>
<tr>
<td>PP150E</td>
<td>94 050 020</td>
<td>150</td>
</tr>
<tr>
<td>PP210E</td>
<td>94 050 021</td>
<td>210</td>
</tr>
<tr>
<td>PP300E</td>
<td>94 050 024</td>
<td>300</td>
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</tbody>
</table>

Selection Guide

<table>
<thead>
<tr>
<th>Property type</th>
<th>Indirect model</th>
<th>Direct model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2 bed with 1 bath/shower</td>
<td>PP100E or PP210B</td>
<td>PP100E or PP120E</td>
</tr>
<tr>
<td>3 bed with 1 bath/shower</td>
<td>PP150E</td>
<td></td>
</tr>
<tr>
<td>4 bed with 1 bath/shower</td>
<td>PP210B or PP300B</td>
<td></td>
</tr>
<tr>
<td>3 bed with 2 bath/shower</td>
<td>PP210E or PP300E</td>
<td></td>
</tr>
<tr>
<td>4/5 bed with 2 bath/shower</td>
<td>PP210E or PP300E</td>
<td></td>
</tr>
</tbody>
</table>

Technical Specification

Specification

<table>
<thead>
<tr>
<th>Nominal Capacities</th>
<th>100, 120, 150, 170, 210, 250 &amp; 300 litres.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element</td>
<td>Long-life Superloy 825 stainless element, incorporated into an easily removable flange plate, should replacement be necessary.</td>
</tr>
<tr>
<td>Outer Coating</td>
<td>White Plastic with grey high impact thermoplastic moulded top and bottom covers.</td>
</tr>
<tr>
<td>Thermal Insulation</td>
<td>CFC/HFC free (GWP 2200) fire retardant expanded polyurethane. 50mm thickness. GWP 3.1 (Global Warming Potential).</td>
</tr>
</tbody>
</table>

Inner Container

Duple stainless steel, pressure tested to 15 bar.

Primary Coil

22mm diameter stainless steel.

Coil-in-coil design for improved performance.

Thermostat

Element thermostat adjustable from 10°C to 70°C.

Element Thermostat

Adjustable from 10°C to 70°C.

Safety Features

All Models.

Temperature and pressure relief valve, factory set to operate at 10 bar and 90°C.

High Watt thermostat, factory set at 80°C.

Thermal Controls

Manually re-settable cut-out, set to 80°C.

Amode

None required.

Approvals

BEAB approved.

KRO approved to the UK Water Supply Regulations.

KRO approved for Building Regulation G3.

Manufactured in the UK in an ISO 9001:2000 registered factory.

Guarantee

The PremierPlus Duplex stainless steel vessel carries a full 25 year on-site parts and labour transferable guarantee against faulty manufacture or materials provided that:

• It has been correctly installed as per the instructions contained in the instruction manual and all relevant Codes of Practice and Regulations in force at the time of installation.

• It has not been modified in any way, other than by Santon.

• It has not been frost damaged.

• It has only been used for the storage of potable water.

• It has not been tampered with or been subjected to misuse or neglect.

• Within 60 days of installation the user completes and returns the certificate supplied along with the proof of purchase to register the product.

• It has been installed in the United Kingdom.

Expansion vessel and cold water controls are guaranteed for a period of 5 years from the date of purchase. The PremierPlus System’s components, immersion heater and thermal controls are guaranteed for a period of 2 years from the date of purchase. Evidence of purchase and date of supply must be submitted. The unit is not guaranteed against damage due to frost. The guarantee is transferable. This guarantee does not affect your statutory rights.

Installation


Fixing

Feet on bottom moulding for floor mounting.

Plumbing Connections

Inlet/Outlet 22mm compression fittings / 1/4” BSP parallel thread.

Direct Coil

22mm compression fittings / 1/4” BSP parallel thread.

Temperature and Pressure Relief Valve

15mm compression outlet.

Cold Water Control

Integrated cold water control set comprising pressure reducing valve and strainer – factory set at 3.5 bar, expansion relief valve – factory set at 6 bar and check valve – 22mm compression fittings.

Mains pressure: Min 1.0 bar, Max 16 bar.

A 2-part motorised valve is supplied with indirect models.

Flow Rates

Up to 55 litres per minute if 6 bar pressure.

Operating Pressure

3.5 bar.

Expansion Relief Valve Pressure

6.0 bar.

Operating Temperature

Recommended 80°C.

Adjustable – 70 - 90°C.

Water Expansion

Remote expansion vessel – 12 ltr vessel supplied with 100, 120 and 150 litre models. 18 litre vessel supplied with 170 and 210 litre models. 25 ltr vessel supplied with 300 and 350 litre models.

Minimum Water Supply Requirements

Recommended minimum supply pressure – 1.5 bar/20 l/min flow rate.

If there are any doubts about water supply pressure or flow rates, please contact our Specification Advice Team to discuss.

Secondary Circulation

Via 22 x 22 x 15mm swept tee, which should be fitted to the inlet pipework. A swept tee is available as an optional accessory – part no 94 970 033. Secondary circulation is NOT recommended for direct electric units being used on off-peak electricity tariffs.

Boiler Installation

Units are tested to 15 bar.

Compatibility

Boilers.

The electrical supply must be permanently connected via a double pole fused isolating switch with a minimum break capacity of 13A.

Indirect models.

Controls should be wired to the boiler, programmer etc. in accordance with the control scheme being used.

All electrical wiring must conform to the latest IEE Wiring Regulations.

Electrical

Direct Models:

Connection is to the combined thermostat/thermal cut-out, housed within the integrated controls housing. The electrical supply must be permanently connected via a double pole fused isolating switch with a minimum break capacity of 13A.

Indirect models.

Controls should be wired to the boiler, programmer etc. in accordance with the control scheme being used.

All electrical wiring must conform to the latest IEE Wiring Regulations.
PremierPlus SystemFit

Pre-plumbed Unvented Water Heating

Santon’s value for money unvented PremierPlus cylinder is now available in a pre-plumbed format. PremierPlus SystemFit has been designed to significantly reduce installation time whilst still offering cost effective mains pressure water heating.

Each factory-assembled unit comes pre-plumbed and pre-wired with 230V central heating controls, pump, two 2-port motorised valves, automatic by-pass and balancing valves. This new timesaving PremierPlus SystemFit package not only speeds installation but also significantly enhances the quality and integrity of the central heating system thus eliminating costly callbacks.

Features
- Duplex stainless steel cylinder.
- 120, 150, 170, 210, 250 and 300 litre models.
- Programmable thermostat with timed Domestic Hot Water (DHW) control.
- Primary system pressure gauge.
- Coil-in-coil heat exchanger.
- Cold-water control set.
- Remote expansion vessel.
- Separate central heating and hot water zones.
- No maintenance three speed circulating pump.
- Automatic by-pass valve for system efficiency.
- Load balancing valve for indirect coil efficiency.
- Connections for vented and unvented heating primaries.
- Primary system filling loop.
- Auto air vent.
- Connection for 2nd CH zone on 170 litre and above.
- Primary system expansion vessel (supplied loose for on-site fitting).

Benefits
- Simplified on-site installation.
- Up to 70% quicker to install.
- Factory assembled for reliability – reduces costly call-backs and delays.
- Consistent electrical and plumbing layout – neat, professional finish.
- Greater customer satisfaction.
- BEAB, WRAS and CE approved.
- 25 year on-site parts and labour cylinder guarantee.
- 5 year on-site parts and labour expansion vessel and cold water controls guarantee.
- 2 year on-site parts and labour guarantee on element and all other controls.

PremierPlus SystemFit

Key Components

1. Motorised valve to radiator circuit – 22mm on 120L/150L models / 28mm on other models
2. 22mm motorised valve to PremierPlus coil heat exchanger
3. Wiring centre
4. Programmable thermostat and room sensor with timed Domestic Hot Water (DHW) control
5. Hot water temperature thermostat
6. Automatic by-pass valve
7. 3 speed circulator pump with quality isolating valves
8. Balancing valve
9. 22mm cold water combination valve (supplied loose)
10. Combined expansion valve/check valve housing
11. 22mm or ¾”BSP hot outlet to taps
12. 22mm Primary flow to PremierPlus coil heat exchanger
13. 22mm Primary return from PremierPlus coil heat exchanger
14. Immersion heater with integral thermostat and thermal cut-out
15. Drain cocks
16. Filling loop
17. Auto air vent
18. Primary system pressure gauge
19. Primary expansion vessel
20. Temperature and pressure relief valve operating at 90°C / 10 bar
21. Tunish
22. High limit hot water thermal cut-out
23. Primary flow connection from boiler – 22mm on 125L/145L models / 28mm on other models
24. Discharge pipe connection 22mm
25. Cold water inlet connection 22mm
26. Primary flow to radiators (CH circuit)
27. 28mm connection for 2nd CH zone (supplied capped) (170 litre and above only)
28. 15mm connection for secondary return (supplied capped)
29. Primary circuit return connection
30. Domestic hot water expansion vessel
PremierPlus SystemFit

Technical Specification

Specification of Cylinder

Nominal Capacities
120, 150, 170, 210, 250 and 300 litres.

Element
CuNi, Superflow 825 alloy sheathed element, incorporated into an easily replaceable heater plate, should replacement be necessary. Rated 3.5kW @ 240V.

Outer Casing
White Painted with grey high impact thermoplastic moulded top and bottom covers.

Thermal Insulation
CFC/Halocarbon free (ODP zero) flame-retardant expanded polyisocyanurate (50mm thick). GWP 3.1 (Global Warming Potential).

Inner Container
Duplex stainless steel, pressure tested to 15 bar

Primary Coil
22mm diameter stainless steel. Coil-in-coil design for improved performance.

Thermostat
Direct: Element thermostat adjustable from 10°C to 70°C.
Indirect: Element thermostat adjustable from 10°C to 70°C.

Safety Features
Direct: Manually re-settable cut-out on heating element operates at 80°C. Indirect: High limit thermal cut-out operates at 80°C.

Suitable for use in series with two-port motorised valve (supplied fitted) to provide primary over temperature protection.

All models: Temperature and Pressure Relief Valve, factory set to operate at 10 bar and 90°C.

Anode
Non required.

Approvals
ABE approved.
KWA approved to the UK Water Supply Regulations.

Guarantee
The PremierPlus Duplex stainless steel vessel carries a full 25 year on-site parts and labour transferable guarantee against faulty manufacture or materials.

Inlet: 22mm compression. Outlet: 22mm compression/3/4”BSP male.

Expansion vessel
12 litre (120 + 150), 18 litre (170 + 210) and 25 litre (250 + 300).

Removable Expansion vessel
12 litre (120 + 150), 18 litre (170 + 210) and 25 litre (250 + 300).

Frost protection setting.

Remote room temperature sensor.

Flow Rates
Up to 55 litres per minute @ 6 bar pressure.

Minimum Water Supply Requirements
20 litres per minute flow and 1.5 bar pressure. (At lesser values, the unit will operate but outlet flow rates may be unacceptable, especially with multiple draw-offs).

Please contact our Specification Advice Team to discuss specific site conditions if the above minimum requirement cannot be met.

Secondary Circulation
Via 15mm tee piece on inlet pipe (supplied capped). A WRAS listed Bronze circulating pump (not supplied) will be required.

Compatible Boilers
Electric, gas or oil-fired - sealed system or open vent type, fitted with integral control thermostat and thermal cut-out.

Tundish
15mm compression inlet and 22mm compression outlet factory fitted.

Electrical
Connection is direct to terminals in the immersion heater which must be permanently connected to the supply through a double-pole linked isolating switch with a minimum breaking capacity of 15A. Indirect controls should be wired to the boiler, in accordance with the control scheme being used. All electrical installation must conform to the latest IEE Wiring Regulations.

Santon’s Specification Advice Team is available to discuss requirements for specific projects, applications and product selection.

ORDERING GUIDE

Table for Ordering Guide:

<table>
<thead>
<tr>
<th>Model</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>C (mm)</th>
<th>D (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP220B 12</td>
<td>936</td>
<td>582</td>
<td>728</td>
<td>411</td>
</tr>
<tr>
<td>PP250B 12</td>
<td>1185</td>
<td>583</td>
<td>804</td>
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<td>PP270B 12</td>
<td>1285</td>
<td>691</td>
<td>1019</td>
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<td>PP300B 12</td>
<td>1500</td>
<td>691</td>
<td>1234</td>
<td>686</td>
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<td>PP220B 12B</td>
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<td>PP300B 12B</td>
<td>2069</td>
<td>1460</td>
<td>1805</td>
<td>561</td>
</tr>
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</table>

Note: Suitable for use in series with two-port motorised valve (supplied fitted) to provide primary over temperature protection.

• It has been correctly installed as per the instructions contained in the instruction manual and all relevant Codes of Practice and Regulations in force at the time of installation.

• It has been fitted in accordance with the instruction manual.

• It has not been damaged in any way, other than by Santon.

• It has not been frost damaged.

• It has only been used for the storage of potable water.

• It has not been tampered with or been subjected to misuse or neglect.

• Within 60 days of installation the user completes and returns the certificate supplied along with the proof of purchase to register the product.

• It has been installed in the United Kingdom.

Expansion vessel and cold water controls are guaranteed for a period of 2 years from the date of purchase. Evidence of purchase and date of supply must be submitted. The unit is not guaranteed against damage due to frost. This guarantee does not affect your statutory rights.

PREMIERPLUSTEAMFIT

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Santon Unvented Water Heaters

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Products

Unvented Water Heating  PremierPlus | Aquaheat | Aqualine
Solar Unvented Water Heating  PremierPlus Solar
Vented Water Heating  Aquarius | Taps
Hand Hygiene  EV2008 | Sanspray | Aqua-dri
Instantaneous Water Heating  Power Pack
Combination Storage  R Unit
Rectangular Heating and Storage  DFB
Immersions  Industrial

National Service Network

A nationwide network of experienced engineers is available to provide fast and efficient on-site service support if required. Spare parts for Santon products are readily available through a network of approved spares stockists.

Santon, Hurricane Way, Norwich, Norfolk, NR6 6EA

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SPECIFICATION  Tel: 01603 420128  Fax: 01603 420229  E-Mail: specifier@santon.co.uk
WEBSITE  www.santon.co.uk

The pace of product development is such that we reserve the right to change product specifications without notice.
We do, however, strive to ensure that all information in this catalogue is accurate at the time of going to publication.

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