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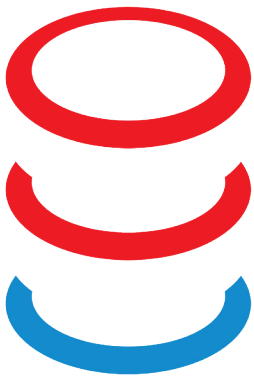


energystore

Firepower

Table of Contents

Introducing the Firepower Energystore

Energystore HP Cylinders are high-performance units specifically engineered for use with heat pumps. Featuring robust insulation, these cylinders are designed to minimise heat loss, ensuring maximum energy efficiency. Their large $3m^2$ internal heat transfer coils are optimised for quick and efficient heating. With convenient lifting handles, installation is made easier for your installer, while the strategically placed and sensibly sized tappings allow for straightforward and hassle-free connections.

Leveraging years of expertise in designing advanced thermal stores for renewable heating systems, we have applied our deep knowledge and innovative principles to the development of the Energystore HP cylinder range. Available in three standard sizes—200, 250, and 300 litres—these cylinders can also be customised in larger sizes upon request.

For added versatility, each standard cylinder is available as a Plus model, which includes an extra coil. This feature is ideal for those integrating a wood pellet boiler, solar thermal system, or conventional boiler into their setup.

For households with higher hot water demands, we offer the HP Combi — a fast recovery 300 litre heat pump cylinder. This model includes an extra $3m^2$ upper coil with a stratification plate beneath, providing near-on-demand hot water, provided that your heat pump's output is suitably high.

Product Support & Guarantee

Sales and after-sales product support

Energystore is a brand owned and conceived by Firepower. We are a family-run company based in the UK. We specialise in supplying renewable heating systems to approved heating engineers across the country. With our extensive expertise in renewable heating, we're well-equipped to guide you in choosing the right HP cylinder, and far more.

We support homeowners from the initial inquiry stage through to the final installation and beyond. Our services include identifying suitable heating solutions, connecting you with local installers, assisting with heating system design and optimisation, providing remote monitoring, and offering comprehensive post-installation support.

Our focus is on supplying systems that are not only efficient and comfortable but also durable, hassle-free, and cost-effective. We put considerable effort into ensuring our systems are as straightforward as possible without compromising on comfort or functionality.

We encourage you to reach out to us both before and after your installation. Unlike some companies, we don’t hide behind chatbots or automated systems. You’ll find our phone numbers and email addresses easily accessible because we value direct communication and are genuinely grateful for your interest.

Guarantee

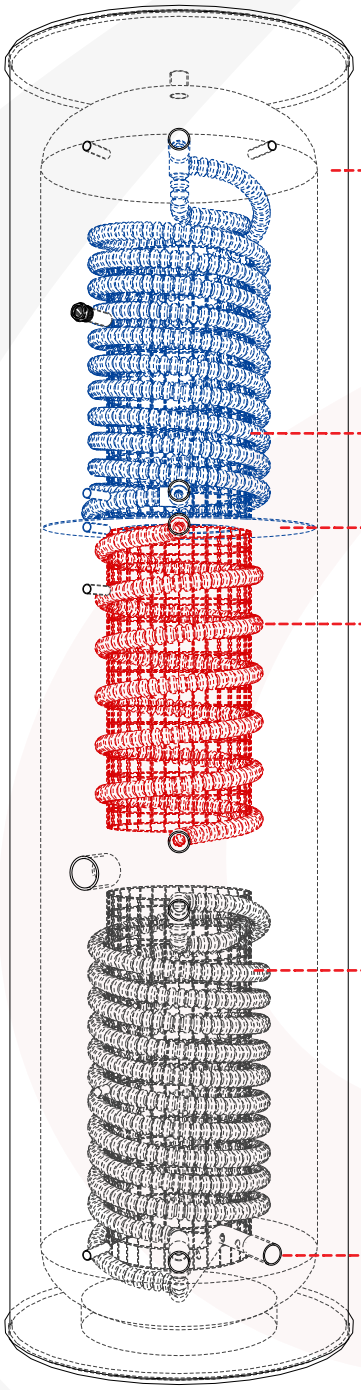
All **Energystore** Cylinders are guaranteed for 5 years against manufacturing defects, provided they have been used and maintained in full accordance with the guidance provided in this document. This must include a full annual service record, with no more than a 12-month period between installation, the first service and each subsequent service. This guarantee does not cover against corrosion, stress fatigue, accidental damage, or any other reason for failure which is out of our control.

Installation, Performance, & System Design Support

You have the option to have your own qualified heating engineer install your Energystore HP cylinder, or we can introduce you to a local installer. We’re happy to review your engineer’s heating system design, and/or provide them with our standard schematics and layouts, and we are available to discuss the project and potential solutions.

Additionally, we offer a full heating system design service, including radiator and underfloor heating loop specifications and sizing. This is available as a chargeable service.

For heat pump systems, we recommend incorporating remote monitoring and control. This feature allows homeowners, installers, and our team to monitor system performance throughout the year and make necessary adjustments. In the event of an issue, remote diagnostics enable your engineer to troubleshoot and modify settings without the need for a costly site visit, saving both time and expense.

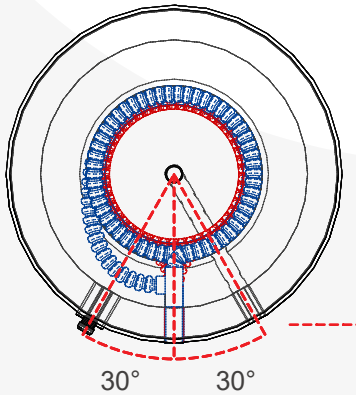


Generous insulation to retain your hard-earned heat.

Optional “+” and “Combi” features to add further functionality

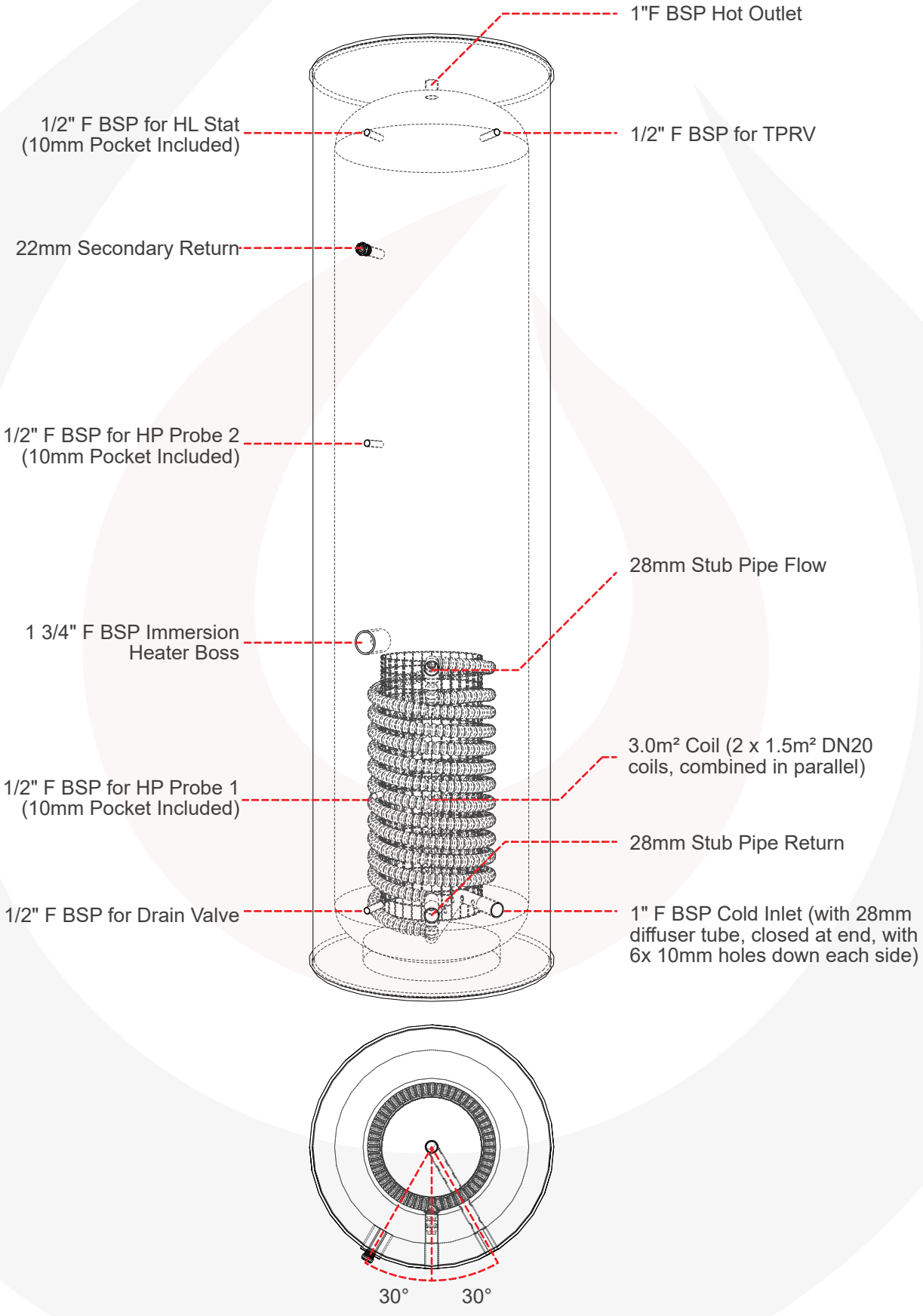
3m^2 coils as standard. They are made from a pair of DN20 coils, which are linked in parallel, and have a single pair of 1” connections for simple installation. This configuration reduces water resistance, ideal for the higher flow rates needed by heat pumps.

Cold inlet diffusers comes as standard - they reduce mixing when mains cold water enters the cylinder, providing useable hot water from the cylinder for longer.



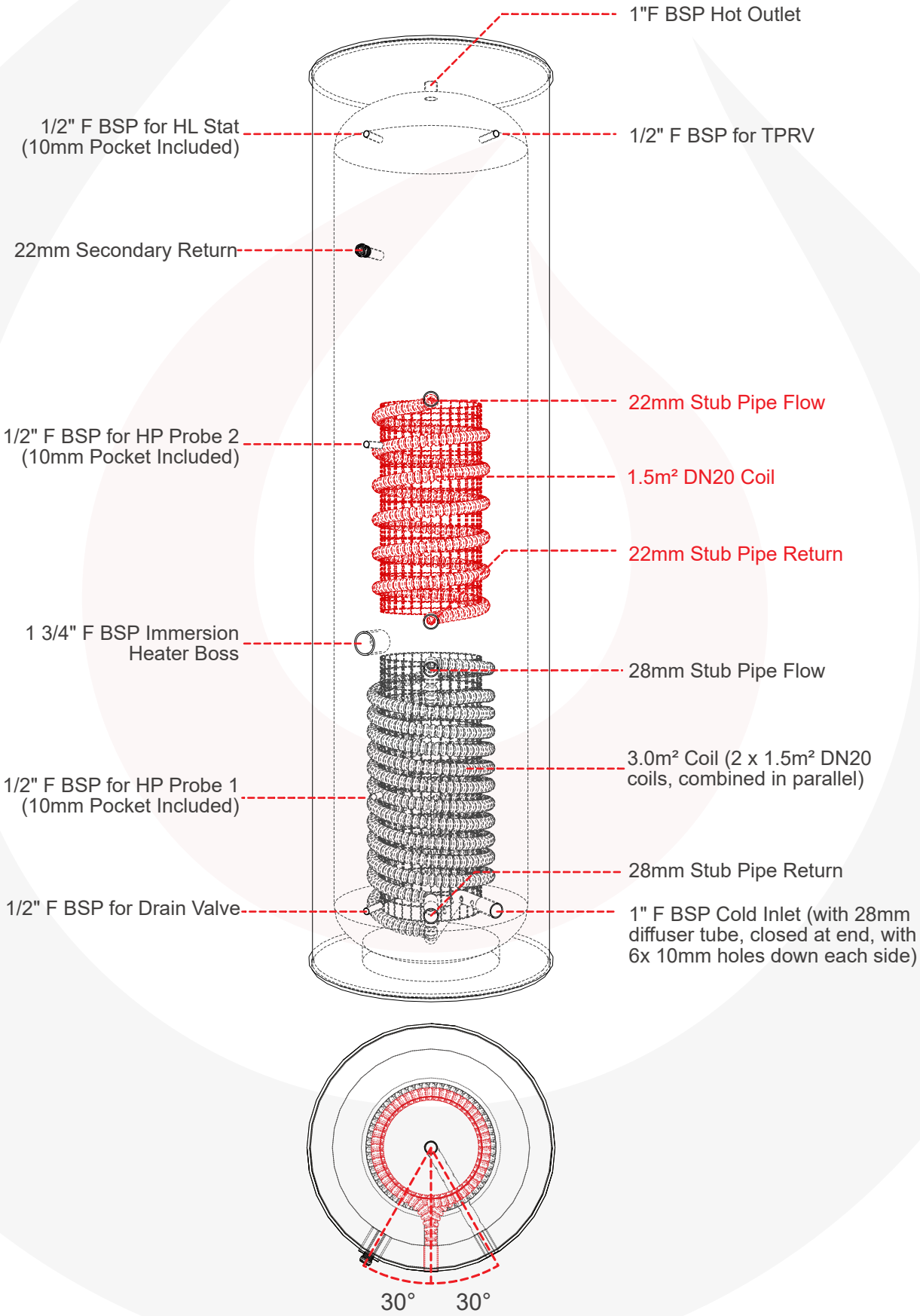
Connections all positioned within a 60º arc to make installation neater and easier. This is especially helpful when space is tight.

HP Models - Example Diagram |



HP+ Models - Example Diagram |

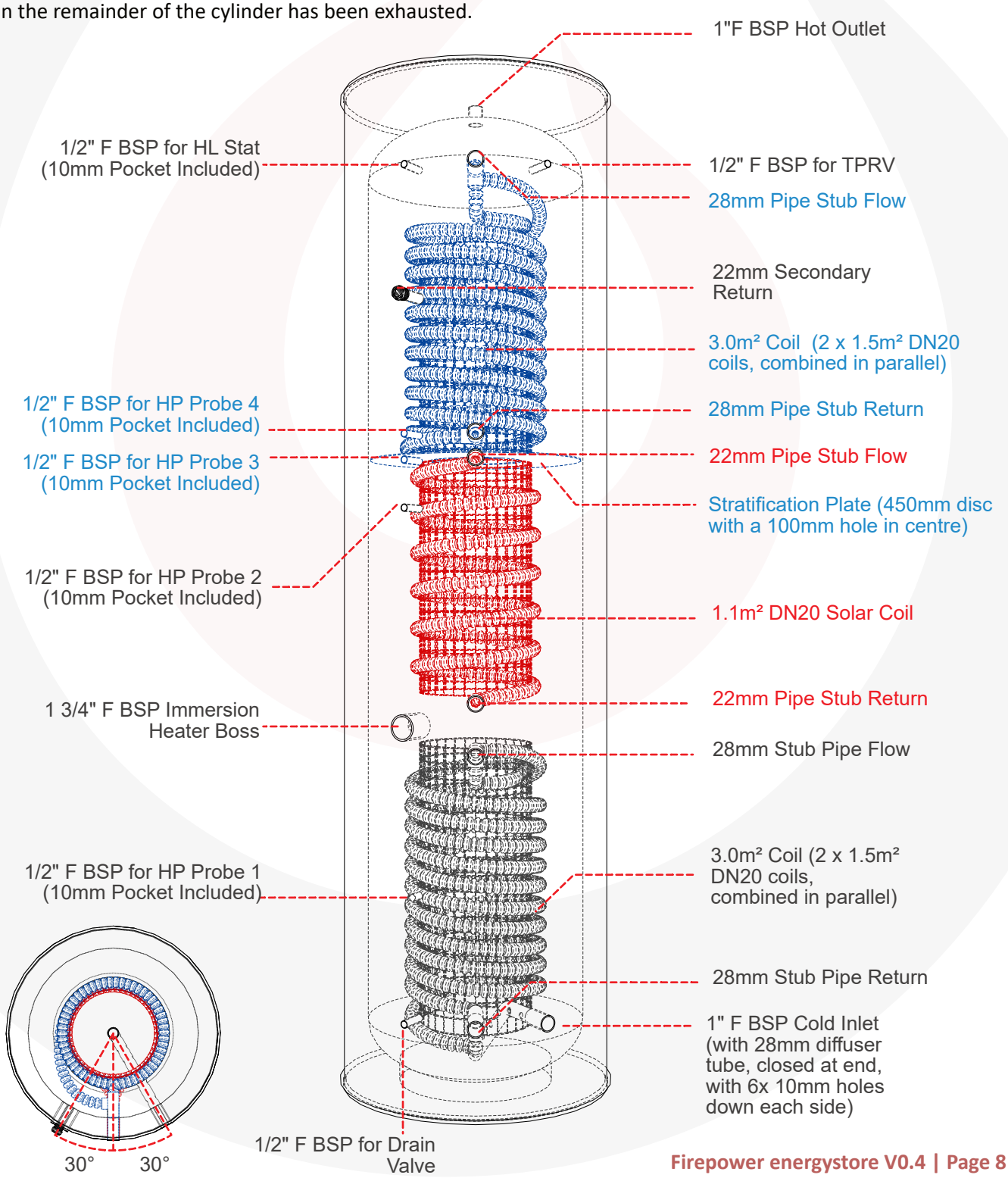
The Energystore HP+ Models have all the features of the standard range, but come with an additional 1.5m² coil for connecting up an alternative heat source, like a wood pellet boiler, solar thermal, or a conventional boiler.



HP300 Combi Model - Example Diagram |

HP Combi cylinders are fast-recovery cylinders for demanding situations in large homes with large heat pumps, and where near-continuous hot water is sometimes needed. Ideal for when you have guests staying, lots of family over for Christmas, or simply teenagers in the house who love long showers!

HP Combi cylinders have all the great features of the standard cylinders, but have **an extra 3m² upper coil**, bringing the total to 6m². These can be used separately or combined. **A stratification plate** creates an upper, fast recovery, portion to the cylinder with the extra upper coil contained within it. When hot water demand is high, your installer can configure the installation so that the heat pump only heats the upper portion of the cylinder, providing **near-continuous hot water.** This of course depends on the output of the heat pump and the hot water demand. For example, a heat pump giving 15kW of heat output should then be able to maintain a warm shower running at 7lt/min, even when the remainder of the cylinder has been exhausted.



General Specification |

Features which are consistent across all Models

All Models within the energystore range have the following features.

The Model specifications on pages 10 & 11, detail all of the features which vary.

Pressurisation Description:	Unvented
Manufacturing Material:	1.0mm Duplex Stainless Steel
Orientation:	Vertical
Product Type:	Cylinder
Normal Working Pressure:	3.0 Bar
Maximum Working Pressure:	6.0 Bar
Test Pressure:	9.0 Bar
Heat Input Coil:	3.0m² (Comprised Of Two 1.5m², DN20 Conv. SS Coils, Combined In Parallel) With 28mm Pipe Stub Connections
HP Probe Pocket 1:	½"F BSP Connection (10mm Dry Pocket included) (positioned at 25% of the way up)
HP Probe Pocket 2:	½"F BSP Connection (10mm Dry Pocket included) (positioned at 60% of the way up)
HP High Limit Stat Pocket 1:	½"F BSP Connections (10mm Dry Pocket included) (positioned at high level)
Cold Mains Inlet:	1”F BSP (with 28mm diffuser tube, closed at other end, with 6x 10mm holes down each side)
Hot Mains Outlet:	1”F BSP
Secondary Return Connection:	22mm compression
TPRV Connection:	½"F BSP
Drain Valve Connection:	½"F BSP
Immersion Heater Boss(es):	1x 1¾"F BSP
Connection Positions:	As per diagram on page 6
Finish:	Metallic silver case
Carry Handles	Coming soon
Labels:	Firepower & energystore branded data label, energystore sticker, & ERP label - Supplied Loose
Components Included:	See page 12

HP200

As per General Spec, plus:

Volume:	200L
Shell Dimensions:	1450 x 450mm
Insulation thickness:	50mm
Nominal Overall Dimensions:	1500 x 550mm
Standing Heat Loss:	1.90 kWh/24h
A-G ERP Heat Loss Rating:	C

HP200+

As per HP200, plus:

A Second Heat Input Coil:	1.1m² (DN20 Conv. SS Coils, Combined In Parallel) With 22mm Pipe Stub Connections
Connection Positions:	As per diagram on page 7

HP250

As per General Spec, plus:

Volume:	250L
Shell Dimensions:	1670 x 450mm
Insulation thickness:	50mm
Nominal Overall Dimensions:	1720 x 550mm
Standing Heat Loss:	1.69 kWh/24h
A-G ERP Heat Loss Rating:	C

HP250+

As per HP250, plus:

A Second Heat Input Coil:	1.1m² (DN20 Conv. SS Coils, Combined In Parallel) With 22mm Pipe Stub Connections
Connection Positions:	As per diagram on page 7

HP300

As per General Spec, plus:

Volume:	300L
Shell Dimensions:	1975 x 450mm
Insulation thickness:	75mm
Nominal Overall Dimensions:	2050 x 600mm
Standing Heat Loss:	1.64 kWh/24h
A-G ERP Heat Loss Rating:	B

HP300+

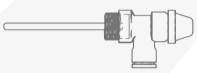
As per HP300, plus:

A Second Heat Input Coil:	1.1m² (DN20 Conv. SS Coils, Combined In Parallel) With 22mm Pipe Stub Connections
Connection Positions:	As per diagram on page 7

HP300 Combi

As per HP300+, plus:

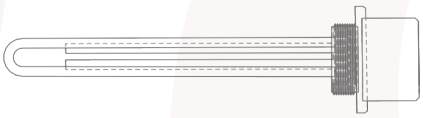
A Third Heat Input Coil:	3.0m² (Comprised Of Two 1.5m², DN20 Conv. SS Coils, Combined In Parallel) With 28mm Pipe Stub Connections (positioned at high level)
Baffle Plate:	A 450mm diameter disc with a 100mm hole in the centre (positioned as high as possible but below the 3.0m² coil)
HP Probe Pocket 3:	½"F BSP Connection (10mm Dry Pocket included) (positioned just below baffle plate)
HP Probe Pocket 4:	½"F BSP Connection (10mm Dry Pocket included) (positioned just above baffle plate)
Connection Positions:	As per diagram on page 8



½" 7 bar Temperature & Pressure Relief Valve
Releases Hot Water should temperatures exceed 90°C.

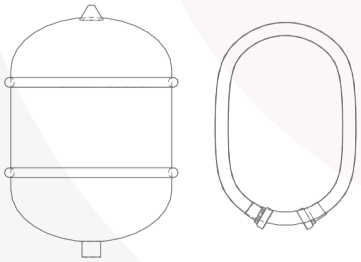
15x22mm Tundish
Allows for audible and visual inspection following excess temperature or pressure.

½" Drain Valve
Allows tank to be drained for maintenance purposes.



3kW Immersion Heater
Electric heating element for backup and/ or boost.

22mm Combined 3 bar PRV, Check Valve & ½" 6 bar ERV
Reduces incoming cold water to 3.0 bar, prevents backflow, and relieves excess system pressure over 6.0 bar.



A suitably sized Expansion Vessel & Hose
Reduces stress fatigue from fluctuations in pressure caused by thermal expansion.

Installation should only be carried out by a “competent operative” i.e. the installer must have attended a recognised course in unvented hot water systems. All registered operatives should carry an Identification Card issued by the institute of Unvented Hot Water Systems.

The installation area should be able to cope with the weight, incoming pipes and discharge pipe when full.

All connections are positioned to enable ease of access. Please ensure suitable space is left for access for repair and/or replacement of valves etc. All the following instructions must be followed:

1. Installers should ensure incoming mains pressure is less that 12 BAR and that local authority approval for installation of unvented systems is granted. Ensure adequate flow rate is available.

2.Excessive use of flux can damage the unit and especially the valves and expansion vessel. Avoid over-use and ensure the system is fully flushed of any debris or flux after connection. If a full sterilisation of all the pipework including the cylinder is required then a complete drain down and flush of the unit is essential. A simple flush through with water is not adequate in removing all sterilising solution within the cylinder. Under no circumstances should sterilising solution be left in the cylinder any longer than required (seek dosage requirements from chemical manufacturer)

3. The unit should be piped in with at least 22mm pipe to ensure an adequate flow rate. The unit is supplied with a pressure reducing valve that has a set pressure of 3.0 BAR. We would strongly recommend fitting an isolating valve (not supplied) prior to the inlet valves for ease of maintenance at a later date. Under no circumstances should an isolating valve be fitted be fitted between the expansion valve and the cylinder.

4. Please ensure the supplied drain valve is fitted to the dedicated drain connection.

5. The TPRV (temperature and pressure relief valve) is set at 90°C and 7 BAR. No valves should be fitted between the relief valves and the cylinder.

6. The tundish, which shows visible discharge from the relief valves, is to be in a prominent, visible and safe position away from any electrical devices . See Discharge and safety devices on pages 15, 16, 17, and 18.

7. The expansion vessel pressure should be checked and set at 3.0 BAR. The vessel should be mounted securely to the wall (or other sufficient support) using the fixing kit supplied. The EV hose should connect the vessel to a suitable position on the cold inlet pipe and must not have any isolating or non-return valves between the two.

8. The electrical supply to each immersion heater must be installed by a qualified electrician. the fuse rating should be sized correctly to suit the heaters duty and isolators must be double pole to BS3456. Correct cable sizes must be used based on the power, cable length, and cable enclosures.

9. All electrical wiring to thermostats, zone valves and immersion heaters must be earthed and to current IEE Wiring Regulations.

Diagram 1 Typical discharge pipe arrangement

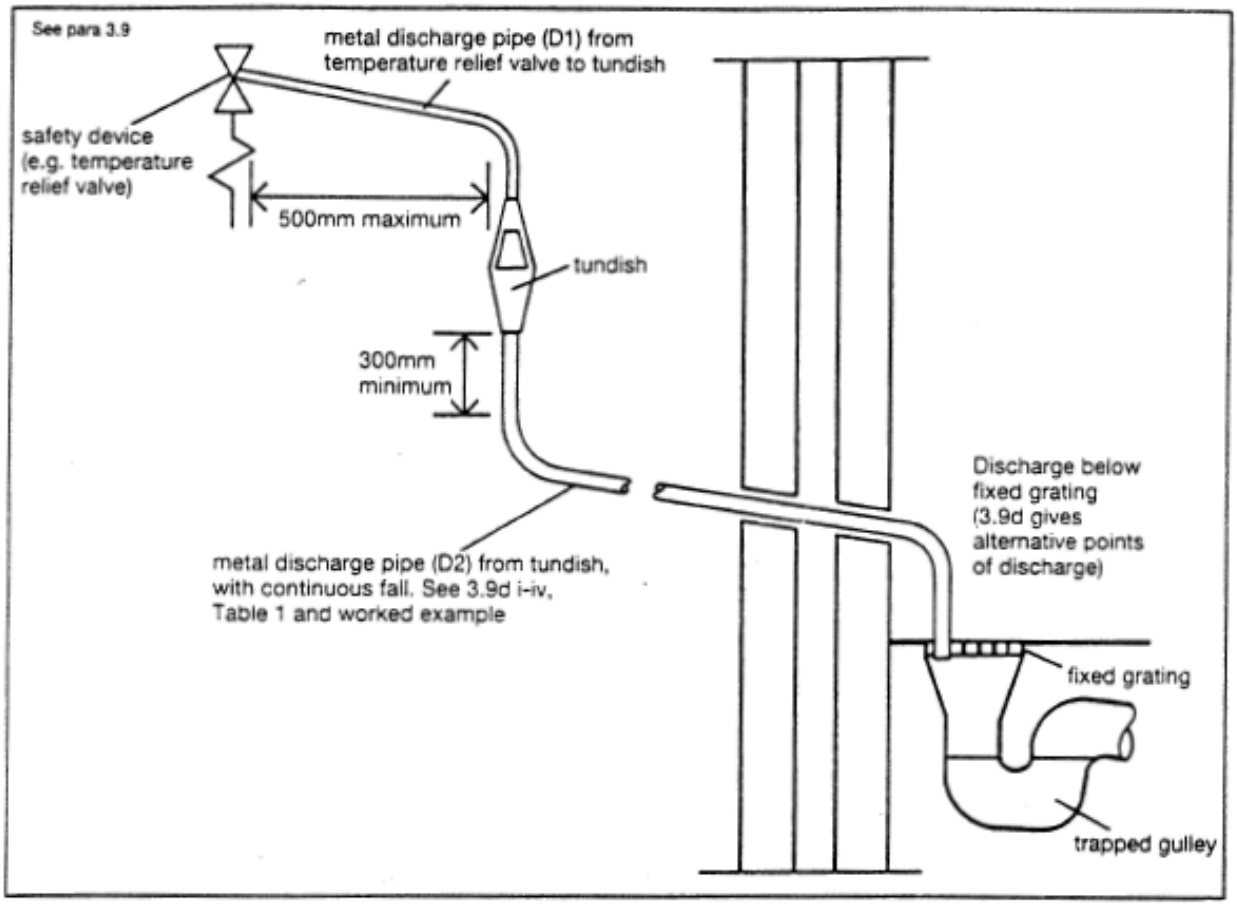


Table 1 Sizing of copper discharge pipe 'D2' for common temperature relief valve outlet sizes

Valve outlet size	Minimum size of discharge pipe D1*	Minimum size of discharge pipe D2* from tundish	Maximum resistance allowed, expressed as a length of straight pipe (i.e. no elbows or bends)	Resistance created by each elbow or bend
G½	15mm	22mm 28mm 35mm	up to 9m up to 18m up to 27m	0.8m 1.0m 1.4m
G ¾	22mm	28mm 35mm 42mm	up to 9m up to 18m up to 27m	1.0m 1.4m 1.7m
G 1	28mm	35mm 42mm 54mm	up to 9m up to 18m up to 27m	1.4m 1.7m 2.3m

*see 3.5, 3.9, 3.9(a) and Diagram 1

Worked example:-

The example below is for a G½ temperature relief valve with a discharge pipe (D2) having 4 No. elbows and length of 7m from the tundish to the point of discharge.

From Table 1:
Maximum resistance allowed for a straight length of 22mm copper discharge pipe (D2) from a G½ temperature relief valve is: 9.0m
Subtract the resistance for 4 No. 22mm elbows at 0.8m each = 3.2m

Therefore the maximum permitted length equates to: 5.8m

5.8m is less than the actual length of 7m therefore calculate the next largest size.

Maximum resistance allowed for a straight length of 28mm pipe (D2) from a G½ temperature relief valve equates to: 18m

Subtract the resistance for 4 No. 28mm elbows at 1.0m each = 4m

Therefore the maximum permitted length equates to: 14m

As the actual length is 7m, a 28mm (D2) copper pipe will be satisfactory.

Discharge pipes from safety devices

D3.50 Safety devices such as temperature relief valves or combined temperature and pressure relief valves should discharge either directly or by way of a manifold via a short length of metal pipe (D1) to a tundish.

3.51 The diameter of discharge pipe (D1) should be not less than the nominal outlet size of the safety device, e.g. temperature relief valve.

3.52 Where a manifold is used it should be sized to accept and discharge the total discharge from the discharge pipes connected to it.

3.53 Where valves other than a temperature and pressure relief valve from a single unvented hot water system discharge by way of the same manifold that is used by the safety devices, the manifold should be factory fitted as part of the hot water storage system unit or package.

Tundish

3.54 The tundish should be vertical, located in the same space as the unvented hot water storage system and be fitted as close as possible to, and lower than, the safety device, with no more than 600mm of pipe between the valve outlet and the tundish. Note: To comply with the Water Supply (Water Fittings) Regulations, the tundish should incorporate a suitable air gap.

3.55 Any discharge should be visible at the tundish. In addition, where discharges from safety devices may not be apparent, e.g. in dwellings occupied by people with impaired vision or mobility, consideration should be given to the installation of a suitable safety device to warn when discharge takes place, e.g. electronically operated.

Discharge pipe D2

3.56 The discharge pipe (D2) from the tundish should:

Discharge Information (continued)

3.57 The discharge pipe (D2) should be made of:

a. metal; or

b. other material that has been demonstrated to be capable of safely withstanding temperatures of the water discharged and is clearly and permanently marked to identify the product and performance standard (e.g. as specified in the relevant part of BS 7291-1:2006 Thermostatic pipes and fittings for hot and cold water for domestic purposes and heating installations in buildings.

3.58 The discharge pipe D2 should be at least one pipe size larger than the nominal outlet size of the safety device unless its total equivalent hydraulic resistance exceeds that of a straight pipe 9m long, i.e. for discharge pipes between 9m and 18m the equivalent resistance length should be at least two sizes larger than the nominal outlet size of the safety device; between 18 and 27m at least 3 sizes larger, and so on; bends must be taken into account in calculating the flow resistance.
See Diagram 1, Table 3.1 and the worked example.

Note: An alternative approach for sizing discharge pipes would be to follow Annex D, section D.2 of BS 6700:2006 + A1:2009 Specification for design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages.

3.59 Where a single common discharge pipe serves more than One system, it should be at least one pipe size larger than the largest individual discharge pipe (D2) to be connected.

3.60 The discharge pipe should not be connected to a oil discharge stack unless it can be demonstrated that the soil discharge stack is capable of safely withstanding temperatures of the water discharged, in which case, it should:

a. contain a mechanical seal, not incorporating a water trap, which allows water into the branch pipe without allowing foul air from the drain to be ventilated through the tundish;

b. be a separate branch pipe with no sanitary appliances connected to it;

Discharge Information (continued)

If plastic pipes are used as branch pipes carrying discharge from a safety device, they should be either polybutylene (PB) or crosslinked polyethylene (PE-X) complying with national standards such as Class S of BS 7291-2:2006 or Class S of BS7291-3:2000 respectively; and d. be continuously marked with a warning that no sanitary appliances should be connected to the pipe.

Notes:

1. Plastic pipes should be joined and assembled with fittings appropriate to the circumstances in which they are used as set out in BS EN ISO 1043-1:2002

2. Where pipes cannot be connected to the stack it may be possible to route a dedicated pipe alongside or in close proximity to the discharge stack.

Termination of discharge pipes

3.61 The discharge pipe (D2) from the tundish should terminate in a safe place where there is no risk to persons in the vicinity of the discharge.

3.62 Examples of acceptable discharge arrangements are:

a. To a trapped gully with the end of the pipe below a fixed grating and above the water seal;

b. Downward discharge at low level; i.e. up to 100mm above external surfaces such as car parks, hard standings, grassed areas etc. are acceptable providing that a wire cage or similar guard is positioned to prevent contact, whilst maintaining visibility;

c. Discharges at high level: e.g. into a metal hopper and metal downpipe with the end of the discharge pipe clearly visible or onto a roof capable of withstanding high temperature discharges of water and 3m from any plastic guttering system that would collect such discharges.

3.63 The discharge would consist of high temperature water and steam. Asphalt, roofing felt and non-metallic rainwater goods may be damaged by such discharges.

IMPORTANT

1. Ensure the drain at the base of the cylinder is closed.

2. Open a hot tap the furthest distance from the unit.

3. Gradually open the cold mains isolator valve and fill cylinder until water appears at the hot tap. Attend to each hot water outlet in turn and ensure water flow is obtained at each outlet expelling any air within the pipework.

4. To ensure the safety valves are operating correctly, turn the tops of the valves independently to ensure water passes through the valve and into the tundish. Once this is confirmed open both valves together allowing as much water as possible to flow through the tundish. At this point make sure that your discharge pipework is free from debris and is transporting the water away to waste effectively. The valves can then be released and a check should be made to ensure they have re-seated correctly.

5. Check the immersion heater control stat is set to approximately 60°C. The Immersion Heater is supplied with a control stat with a built in high limit cut out thermostat which is pre-set and therefore, requires no adjustment.

6. Switch on the immersion heater / water heating system and check operation of the system.

IT IS EXTREMELY IMPORTANT TO FOLLOW ALL OF THESE INSTRUCTIONS, AS FAILURE TO DO SO COULD LEAD TO THE SYSTEM BECOMING OVER-PRESSURISED AND/OR OVER-HEATED, WHICH CAN BE DANGEROUS

The commissioning checklist on the next page is to be completed in full by the competent person who installed the system. This is to demonstrate compliance with the appropriate building regulations. It should then be handed to the end-user to keep for their reference and the reference of any engineers attending this installation in the future. Failure to install and commission this equipment to the manufacturer's instructions may invalidate the warranty but does not affect statutory rights.

Commissioning Checklist

Fitter Details	
Cylinder Production No.	
Commissioned by.	
Registration Operative No.	
Approval Licence No.	
Company Name	
Company Address	
Commissioning Date	
Telephone No.	
Building Regulations Notification	

System Type		
Indirect Boiler	YES	NO
Biomass Boiler	YES	NO
Heat Pump	YES	NO
Solar Panels	YES	NO
Direct Electric	YES	NO

System Primary Settings				
Is the circuit sealed or vented?	Vented		Sealed	
Set system pressure	BAR			
Maximum flow temperature	°C			

Unvented Systems		
Has a temperature & pressure relief valve and expansion valve been fitted and discharge tested?	YES	NO
Is a cut out device fitted?	YES	NO
Pressure Reducing Valve Setting	BAR	
Pressure Reducing Valve Position		
Has the expansion vessel pressure been checked?	YES	NO
Hot Water Temperature at nearest outlet	°C	

Commissioning Checklist (continued)

Final Checks	Check
The system complies with the appropriate building regulations.	
The system has been installed and commissioned in accordance with the manufacturers instructions	
The system controls have been demonstrated to and understood by the customer.	
The manufacturer's literature, including benchmark checklist, has been explained and left with the customer.	

Commissioning Engineers Signature	
Customers Signature	
Date	/ /

All installations must be notified to Local Area Building Control (LABC) either directly or through a Competent Persons Scheme. LABC will then issue a Building Regulations Compliance Certificate to the customer.

DISCHARGE FROM EITHER OF THE RELIEF VALVES INDICATES A MALFUNCTION IN THE SYSTEM AND MUST BE INVESTIGATED IMMEDIATELY.

OVERHEATED HOT WATER DISCHARGE
In the unlikely event of overheated (95°C) water being discharged, the heat source(s) should be switched off immediately and a competent operative called out.

DO NOT SHUT OFF THE COLD WATER SUPPLY OR ADD ADDITIONAL HEAT UNTIL AN ENGINEER HAS INSPECTED, DIAGNOSED THE CAUSE, RECTIFIED, AND RE-COMMISSIONED THE UNIT FOR SAFE USE.

In the event of an overheat, a competent engineer only, should oversee the running off of the hot water safely, via a nearby tap. Once cold water has entered the unit and replaced the overheated water to a suitable extent (running water is now 60°C), the immersion heater and energy cut out should be checked for correct operation.

Once the faulty component (which allowed the cylinder to become overheated) has been identified, it should be replaced and tested for correct operation before re-commissioning the system.

DO NOT FOR ANY REASON BYPASS THE ENERGY CUT-OUT/ HIGH LIMIT STAT

WATER DISCHARGE
If water is occasionally being discharged from the expansion relief valve when the water is heated, this would indicate that one of the pressure regulating components is not doing its job correctly. In this case, the following diagnosis procedure should be followed:

1. Switch off all power and heat supplies to the cylinder and allow the cylinder to go cold.

IF THIS PROCEDURE IS FOLLOWED WHILE THE SYSTEM IS STILL HOT/ WARM, YOU MAY SET THE PRESSURES INCORRECTLY AND NOT RECTIFY THE ISSUE.

2. Use a pressure gauge to check what pressure that is being allowed through the pressure reducing valve. If the gauge shows 3 BAR or below, skip step 3.

3. If the gauge shows a pressure in excess of 3 BAR, the pressure reducing valve (if adjustable) may be set too high, or may have developed a fault. If adjustment of the valve doesn't bring the pressure down to 3 BAR (after opening and re-closing a tap), it should be replaced. If after adjustment/ replacement the issue persists, go to step 4.

4. Check the air pressure in the expansion vessel via the schrader valve on top (situated under the removable plastic cap). If this is 3 BAR, skip step 5.

5. If the expansion vessel pressure is not 3 BAR, isolate the water supply to the cylinder and open a hot tap to deplete the pressure inside the cylinder. While the tap is still open, either add or remove air as necessary, until the pressure is 3 BAR.

6. If the issue persists once you have confirmed that the expansion vessel's air pressure is 3 BAR, the expansion relief valve may have developed a fault causing it to discharge water at a lower pressure than it should. In this case, it should be replaced with a valve that opens at 5 BAR or 6 BAR. If you replace a 6 BAR valve with a 5 BAR valve, the expansion vessel may need to be replaced with a larger one. Failure to size the expansion vessel correctly can result in further complaints of water discharge, and will reduce the lifespan of the cylinder if not addressed.

7. If the issue persists even after the expansion relief valve has been replaced, the system may be experiencing crossflow. This is when the hot and cold water supplies are not pressure-balanced and higher pressure cold water is able to get into the cylinder via mixer taps or mixer valves. If this is the case, then you would need to re-position the point at which the cold main splits, to be downstream of the 3 BAR pressure reducing valve (known as a "balanced cold"). If this is not feasible, then an additional 3 BAR pressure reducing valve may be required to reduce the cold water supply to those mixer taps/ valves. The use of check valves may also be an option, if the cold water is getting to the cylinder by travelling the wrong way down the hot water draw off pipe, secondary return, shower connection, etc.

IMMERSION HEATERS

If the immersion heater is not heating the water, the electrical cut-out (or high limit stat) may have operated. This may be due to the control stat being set too high, being miscalibrated, or having developed another fault.

This issue could also be caused by the high limit stat being set too low, being miscalibrated, or having developed another fault.

To correct this, you should ensure that there is at least a 15° difference between the control stat and the high limit stat's set temperatures. If further guidance on this is needed, please refer to the immersion heater's literature or contact its manufacturer with the thermostat's model numbers.

If after adjusting the temperature settings of the stats and resetting the high limit stat, the issue persists, the stats should be replaced (by contacting the manufacturer with the thermostat's model numbers).

If after replacing the thermostats, the issue persists, the element itself may have developed an irreparable fault, in which case the entire immersion heater should be replaced.

In hard water areas, it is advised to set the immersion heater at no higher than 60°C to reduce limescale build up. If the immersion heater has a significant limescale build up, it is advised to replace it, as its efficiency will be considerably reduced.

Annual maintenance and servicing should be carried out by a competent operative.

Failure to maintain this system in accordance with these instructions will invalidate the manufacturer's warranty. We would, therefore, recommend that a regular service schedule is arranged at the time of its installation.

All maintenance and servicing work should be recorded on the next page of this booklet. Failure to be able to provide a copy of this record with any warranty claim will result in the claim not being successful.

ANNUAL SERVICE CHECKS

Expansion Relief Valve - Manually open the twist cap and check that the water is discharged and runs clearly through the tundish and out at the final discharge point. Ensure that the valve reseats and reseals itself.

Temperature & Pressure Relief Valve (TPRV) - The same procedure as for the expansion relief valve, above.

Strainer - Turn off mains at stopcock, there will be a small amount of residual water in the pipework, remove the cartridge from the pressure reducing valve, clean strainer and replace.

Expansion Vessel - Check the air pressure in the expansion vessel via the Schrader valve on top (situated under the removable plastic cap). If the expansion vessel pressure is anything but 3 BAR, isolate the water supply to the cylinder and open a hot tap to deplete the pressure inside the cylinder. While the tap is still open, either add or remove air as necessary (via the schrader valve) until the pressure is 3 BAR.

Servicing Record

Service Date	Serviced by	Comments

Manual Handling

As our cylinders can vary in both size and weight, it is important to know the correct way to handle them;

Firstly, here are some basic manual handling tips to always keep in mind:

It is recommended that any weight over 25kg should be lifted by at least 2 people. If the item is too heavy for multiple people to lift safely, it is advised to seek alternative methods such as a crane or forklift

Larger items may obstruct vision so ensure there is a clear path which is free from any slip or trip hazards.

Footing should be shoulder width apart so that there is full balance both forward and sideways.

Your back should be straight and kept rigid as to not put strain on the weaker lower back muscles and ensure you don't move in a jerking motion or any way which involves twisting your back.

Elbows should be kept close to the body and upper arms should be parallel to your body.

If possible, wear gloves when lifting, in case of sharp edges.

More specifically to this cylinder:

Carry handles are provided in what we currently believe are the most ergonomic positions possible. These should of course be utilised as much as possible when moving the unit.

It is important that the item is not lifted or moved using any of the fittings as this could break the welds and cause leaks.

Please feel free to contact us for any further information or support that you require:

Firepower

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