Slimline - HP

150 l.

UK



EN - SAFETY INFORMATION
O&M INFORMATION
INSTALLATION MANUAL
TDS - TECHNICAL DATA SHEET

hot water association
CHARTER MEMBER

OSO
HOTWATER

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Symbols used in this manual:

⚠ WARNING	Could cause serious injury or death
⚠ CAUTION	Could cause minor or moderate injury or damage to property
⊘	DO NOT
❗	DO

❗	This document must be kept in a suitable place where it is accessible for future reference.

Safety instructions

- Read the following safety instructions carefully before installing, maintaining or adjusting the water heater.
- Personal injury or material damage may result if the product is not installed or used in the intended manner.
- Keep this manual and other relevant documents where they are accessible for future reference.
- The manufacturer assumes compliance (by the end-user) with the safety, operating and maintenance instructions supplied and (by the installer) with the fitting manual and relevant standards and regulations in effect at the date of installation.

Safety instructions for users

⚠ WARNING	
⊘	The overflow from the safety valve must NOT be sealed or plugged.
⊘	The product must NOT be modified or changed from its original state.
⊘	Children must NOT play with the product or go near it without supervision.
❗	The product shall be filled with water before the power is switched on.
❗	Maintenance/settings shall only be carried out by persons over 18 years of age, with sufficient understanding

⚠ CAUTION	
⊘	The product must not be exposed to frost, over-pressure, over-voltage or chlorine treatment. See warranty provisions.
⊘	Maintenance/settings shall not be carried out by persons of diminished physical or mental capacity, unless they have been instructed in the correct use by someone responsible for their safety.

Safety instructions for installers

⚠ WARNING	
⊘	The overflow from the safety valve must NOT be sealed or plugged.
❗	Discharge must comply with current building regulations.
❗	Fixed electric fittings shall be used for installation in new homes or when changing an existing electrical setup in accordance with local regulations.
❗	The mains cable shall withstand 90°C. A strain reliever must be fitted.
❗	The product shall be filled with water before the power is switched on.
❗	The relevant regulations and standards, and this installation manual, must be followed.

⚠ CAUTION	
❗	The cylinder must be installed complying with current building regulations. Liability for consequential damage will only apply if this is followed.
❗	The product shall be properly aligned vertically and horizontally, on a floor or wall suitable for the total weight of the product when in operation. See type plate.
❗	The product must have a clearance for servicing of 40 cm. in front of the electric junction box covers / 40 mm. above the highest point.

This OSO product is approved to building and water regulations by KIWA Watertec Ltd.
Tel: 01495 308 185 • Email: watertecenquiries@kiwa.co.uk

1. GENERAL INFORMATION

1.1 Product Identification

Identification of your product can be found on the label attached to the product. The label contains information about the product according to EN 12897: 2016 and EN 60335-2-21, in addition to other useful data. See Declaration of Conformity at www.osohotwater.com for more information

OSO products are designed and manufactured according to:

- Tank standard EN 12897:2016
- Safety standard EN 60335-2-21
- Welding standard ISO 3834-2

OSO Hotwater AS is certified according to

- Quality ISO 9001
- Environment ISO 14001
- Working Environment ISO 45001

1.2 UKCA marking

UK
CA

The UKCA mark shows that the product complies with the relevant Directives. See Declaration of Conformity at www.osohotwater.com for more information.

The product complies with Directives for:

- Low voltage LVD 2014/35/EU
- Electromagnetic compatibility EMC 2014/30/EU
- Pressurised equipment PED 2014/68/EU

1.3 ErP data - Technical Data Sheet

TDS - Technical Data Sheet - Direct electric water heater - ErP data					
Directive: 2017/1369/EU Regulation: EU 812/2013		Directive: 2009/125/EC Regulation: EU 814/2013			
Standing heat loss according to standard: EN 12897: 2016					
Trade mark	M T. item no.	Model/identifier	ErP Rating	Heat loss W	Storage volume L
OSO Hotwater AS	11014614	Slimline HP 150 - 3 kW / 1x240V + HX 1.8 m²	C	76	137

1.4 General information

Thank-you for purchasing the OSO Slimline HP indirect hot water cylinder.

This manual gives detailed advice for installation and shall be read carefully prior to fitting any unvented unit. OSO Slimline cylinders are not suitable for gravity fed primary systems. In known hard water regions, precautions must be taken to prevent limescale formation in hot water cylinders, in accordance with Building Regulation Part L, Domestic Heating Compliance Guide.

This OSO cylinder must be installed by a competent person and be installed in compliance with the OSO Installation and Maintenance Instructions, all current legislation, codes of practice and regulations governing the installation of unvented hot water cylinders in force at the date of installation.

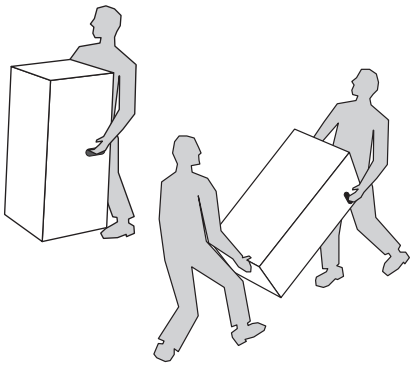
⚠ CAUTION

The indirect hot water storage tank (Slimline HP) is intended to be connected to a high efficiency external energy source. The immersion heaters are intended for backup and supplementary use only. Immersion heaters as sole heat source should be avoided and would lead to higher energy consumption and higher operating cost.

1.5 Handling, location and positioning

The product shall be transported carefully as shown, with packaging. Use the handles in the box.

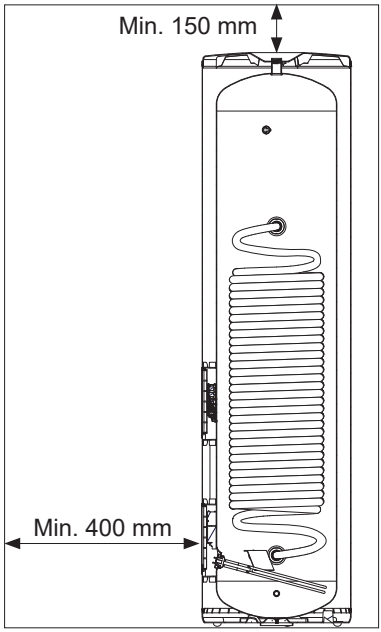
⚠ CAUTION
Tappings, valves etc. shall not be used to lift the product as this could cause malfunction.



⚠ CAUTION	
❗	The cylinder must be installed complying with current building regulations.
❗	The product shall be placed in a dry and permanently frost-free position.
❗	The product shall be placed on a floor or wall suitable for the total weight of the product when in operation.
❗	The product must have a clearance for servicing of 40 cm. in front of the electric junction box covers / 40 mm. above the highest point.
❗	The product shall be easily accessible in the home for servicing and maintenance.

1.6 Clearances

Ensure free space of min. 150 mm. above the highest point and min. 400 mm. in front of the electric junction boxes to allow space for service and maintenance.
The product should not be covered in any way or have objects stored or stacked closely around it.



2. INSTALLATION

2.1 Health and safety regulations

Handling Operations Regulations 1992 defines manual handling as: “any transporting or supporting of a load (including the lifting, putting down, pushing, pulling, carrying or moving thereof by hand or bodily force”. The Regulations set no specific requirements such as weight limits. However common sense still has to be used based on an ergonomic approach for each individual.

The Slimline should be transported and stored in a vertical position.

2.2 Siting the Slimline

There are few restrictions on the siting of the OSO Slimline, however it should not be sited anywhere open to frost attack.

The unit should be placed on a stable flat surface capable of withstanding the weight of the cylinder when full and access must be allowed for maintenance purposes. Provision should also be allowed for the routing of the discharge pipe away from the cylinder to an outside point according to building regulation G3.

2.3 Component check list

Components supplied with the unit in a separate accessory kit for site fitting:

- Expansion vessel with wall bracket
- Pressure reducing valve multibloc 3 bar with line strainer, balanced cold water take-off, check valve and expansion relief valve 6 bar
- Motorised zone valve
- Tundish (incl. screws)
- Plastic cable clamp
- Drain cock

Components factory fitted:

- P&T valve
- Immersion heater - 2.8 kW
- Thermostat(s) / thermal cut-out

Documentation supplied:

- Installation manual & service logbook

2.4 Supply requirements

An uninterrupted 22 mm cold water mains supply is recommended, however if only a 15 mm supply is available, this may be used provided there is sufficient flow rate available. A minimum standing pressure of 2.5 bar and a flow rate of 20 litres per minute with a 1 bar dynamic pressure is recommended. The cylinder will operate at lower pressures and flow rates however the performance will be compromised. The OSO unvented unit is designed for use with supply pressure up to 12 bar. For pressures over 12 bar an additional pressure reducing valve must be fitted in the supply pipe to the unit.

2.5 Expansion vessel

An expansion vessel with wall bracket is supplied with unit. The vessel accommodate expanded water when the cylinder is heated and prevents the cylinder reaching its maximum working pressure.

2.6 Preliminary wiring

Before final installation and pipe fitting it is recommended to feed the electrical wires to the electrical box. The OSO Slimline is supplied with all internal wiring factory fitted.

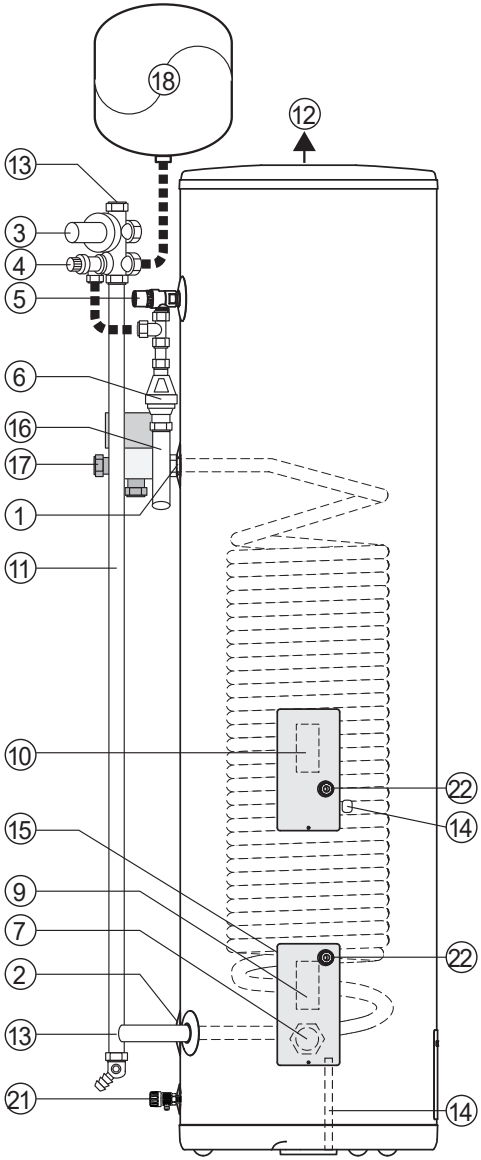
For more information about electrical installations see chapter 4. ELECTRICAL INSTALLATION.

2.7 Pipework

Cold water supply:

1. To obtain the best performance from your OSO unvented system it is advisable to feed the unit with an uninterrupted supply.
2. Before connecting to the multibloc, flush the cold supply pipework of all flux and debris.
3. Locate the water heater in a suitable position to facilitate the installation of the cold water supply, discharge fittings and pipework. Also take into account access to the immersion heater.
4. Fit a 3/4” - 22 mm elbow (not supplied) to cold supply point so that the compression fitting is vertical.
5. Fit a drain valve at the lowest point of the cold water supply pipe (not supplied).
6. Fit a length of copper tube 22 mm to the cold feed elbow to include a Tee piece if a secondary return is required
7. Fit the Pressure Reducing Valve to the top of the copper tube.
8. Connect 15 mm copper tube from the expansion relief valve (4) and also from the T & P valve (5) and join together in a Tee as shown in illustration.
9. Fit the tundish (6) to the bottom connection of

No.	Description	Part No.
1	Flow Heat Pump - 3/4" BSP	
2	Return Heat Pump - 3/4" BSP	
3	Pressure Reducing Valve Multibloc (3 bar) includes Item 4 & 6	92043
4	Expansion relief valve (6 bar)	
5	Temperature and Pressure Relief Valve	92025
6	Tundish	
7	Immersion heater (2.8 kW)	71214
9	Immersion heater thermostat	80020
10	Thermostat boiler	80030
11	Cold Feed Tube (not supplied)	
12	Hot water outlet - 3/4" BSP	
13	CW inlet 3/4" BSP	
14	Cable entry	
15	Electrical junction box	
16	Discharge pipe (not supplied)	
17	Motorised valve (Not factory fitted)	
18	Expansion vessel	AX 12
21	Drain cock 1/4"	156305
22	Sensor clamp	



this tee.

10. If a balanced mains pressure cold water supply is required to a shower or bidet (over rim type only), remove the blanking cap from the pressure reducing valve (3) and connect to the shower or bidet cold supply. Do not use this balanced cold outlet to feed all cold outlets.
11. Connect the cold supply to the PRV (3).
12. Fit the expansion vessel to the wall close to the water heater using the enclosed mounting bracket. Connect the expansion vessel to the PRV.

Hot water supply

13. Connect the hot water supply pipe to the outlet (12). Ensure connection is water tight.

Discharge pipe

14. Connect the discharge pipe (16) from the tundish (6). This must have a continuous fall and be fitted in accordance with The Building Regulations (see page 18.). The tundish should be installed away from electrical devices.

Heat pump primaries - Primary flow & return and motorized valve

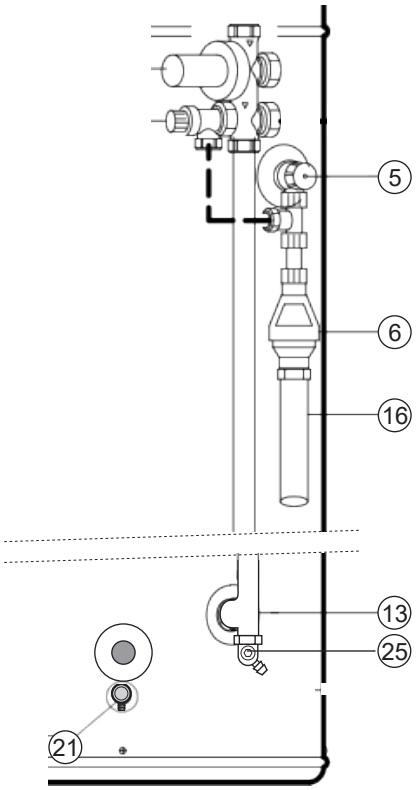
15. The heat pump primary flow and return connections should be made connections 1 & 2. The motorised valve can be connected to the primary flow pipe. The primary flow and return fittings are 3/4" BSP female.
    The direction of primary flow in the coil is top to bottom when connected to a heatpump, and bottom to top when connected to a boiler. The maximum operating temperature of the primary flow would typically be 82°C.
16. For electrical connection of the motorised valve and immersion heater, please read Electrical Installation Instructions..

Tundish

17. Install the Tundish (6) in a vertical position within a maximum of 600 mm from the temperature and Pressure Relief Valve drain connection (5). Ensure the expansion relief pipework discharges through the tundish. Tundish pipework (16) must be 22 mm with a minimum vertical length of 300 mm below tundish. Maximum permitted length of 22 mm pipework is 9 m. Each bend or elbow is equivalent to 0.8 m of pipework. All pipework must have continuous fall and discharge in a safe, visible position. If any doubt, refer to Building Regulation G3.

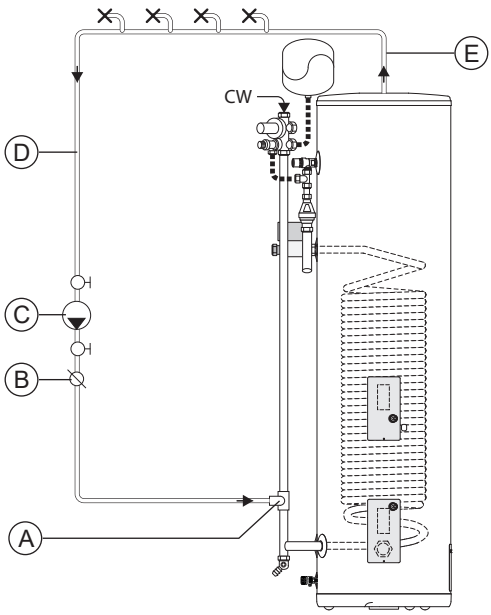
Drain cock

18. Fit the drain cock (supplied) to the 1/4" drain connection (21), see illustration. It is also recommended to add a drain cock (25) (not supplied) on lowest point of cold water inlet supply (13), see illustration.



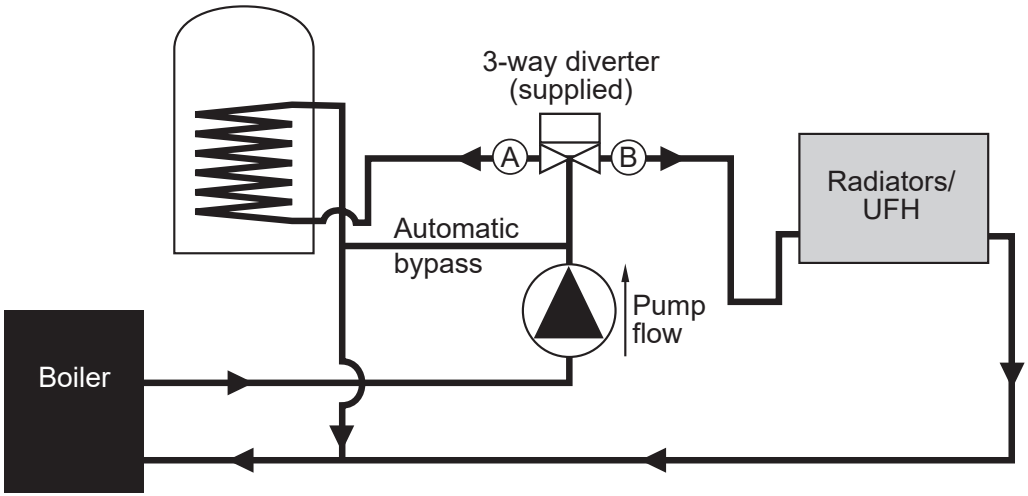
2.8 Secondary return

A. Secondary return fitting
B. Non return valve
C. Circulation pump
D. Secondary return line
E. Hot water draw-off to outlets

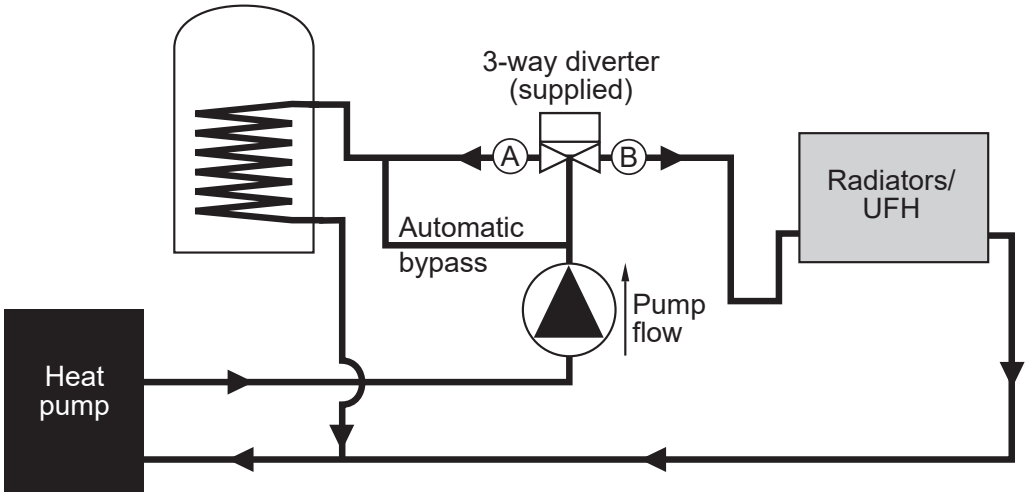


2.9 Piping diagrams

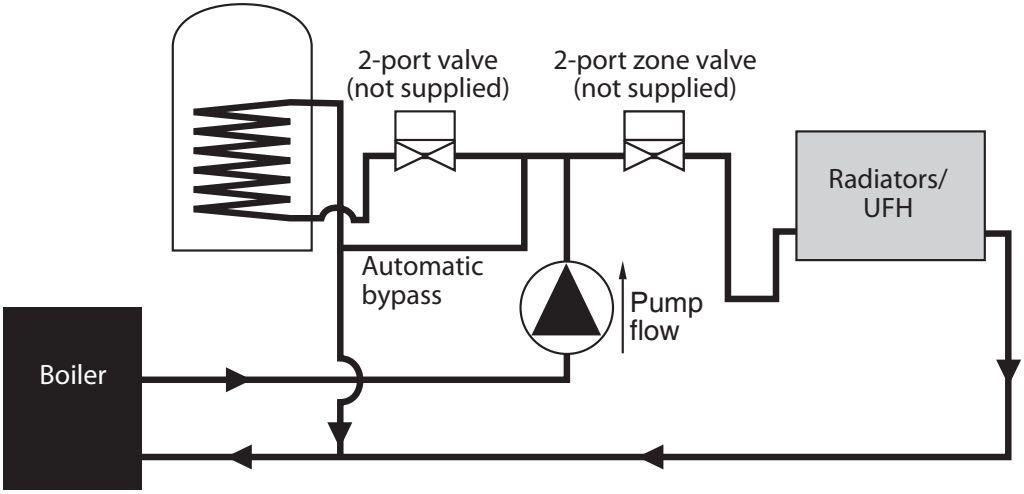
3-port diverter piping diagram - boiler



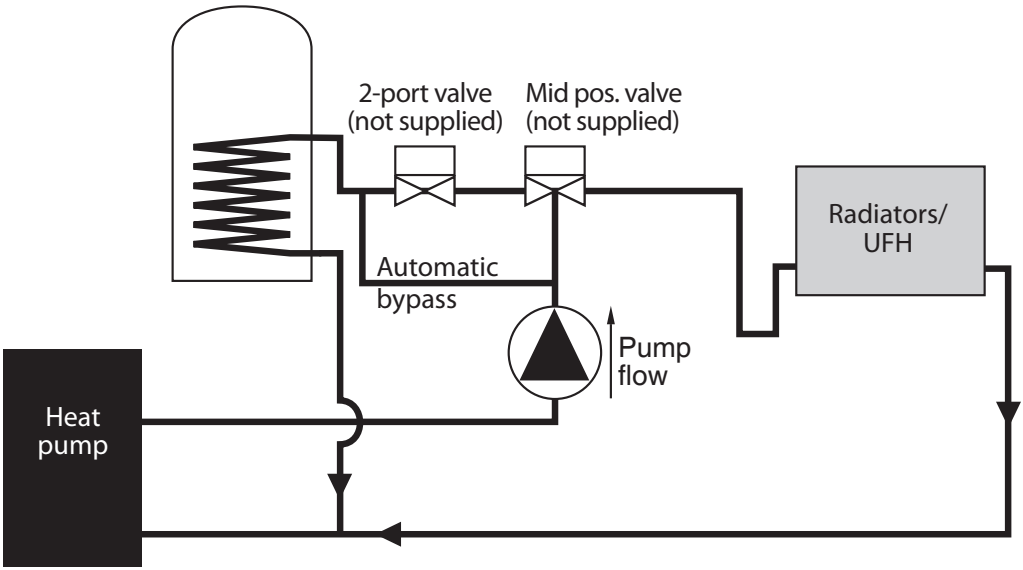
3-port diverter piping diagram - heat pump



S-plan piping diagram



Y-plan piping diagram



3. COMMISSIONING & INSTALLATION

3.1 Filling up

1. Open a hot tap.
2. Open the cold water supply valve
3. When water flows from hot tap, close the tap
4. Allow the system to stabilize for 5 minutes
5. Open each hot water tap in turn to expel air from the system pipe work.
6. Check for leaks.
7. Manually operate Temperature and Pressure Relief Valve (5) to ensure free water flow through discharge pipe. (Turn knob left.)

3.2 Draining

Switch off the electrical power (important to avoid damage to element (8)). Turn off the cold water supply valve. Open hot water tap. Drain cylinder by opening optional drain cock (not supplied) on cold supply pipework (25). If bottom immersion (8) is to be replaced then additionally open drain cock at base of cylinder (21). The unit will drain. Draining process may be speeded up by opening the temperature and pressure relief valve. A hose can be applied to bottom drain cock to lead the water to a gully, sink or similar.

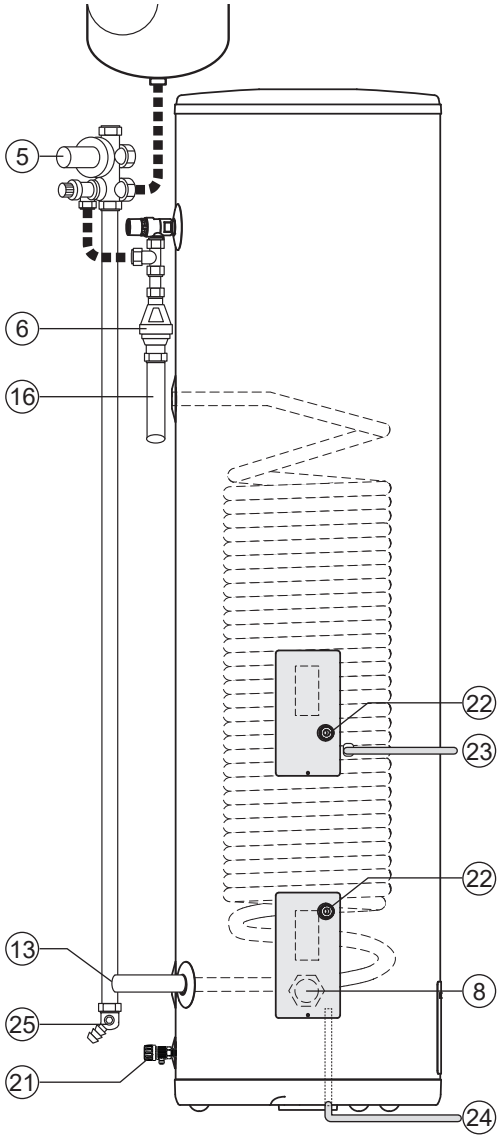
3.3 System flushing

System flushing will not be necessary under normal circumstances as the line strainer will prevent ingress of foreign materials, however if flushing is required, run at least 50 litres of water from the cylinder at the highest possible flowrate. Close the taps and follow draining procedure above.

A temperature sensor bracket (22) is factory fitted in the electrical junction boxes, see pt. 4.2.1.

Data tables

Note: Temperature rise is from 15 to 60°C. Coil heating performance based on a primary flow rate of 15 l/min. at 80°C. Test results are in accordance with BS EN 12897:2016.



Product ref.	Max. design pressure	Operating pressure CW feed & coil	Pressure drop primary heater coil	Temp./pressure relief valve	Safety valve Pressure/conn.	Exp. vessel capacity
HP 150	6 bar	Cw in 3 bar, coil 2.5 bar	0.04 bar	90-95°C /7 bar	6 bar / 15 mm - 1/2"	12 l.

Product	Weight empty	Weight full	Heat loss kWh/24h	Recovery rate 70%	Primary flow rate
HP 150	43	180	1.82	17	15 l/min. - 80°C

3.4 Pressure drop table - coil

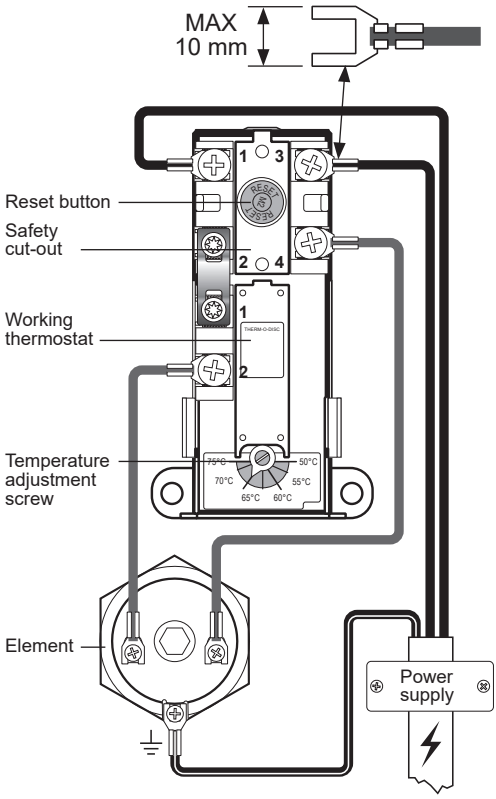
Product info:		Pressure drop (mbar) at volume flow:							Cw value (m³/h):
Product code	Coil surface (m²)	540 L/h (0,15L/s)	900 L/h (0,25 L/s)	1800 L/h (0,50 L/s)	2700 L/h (0,75 L/s)	3600 L/h (1,00L/s)	4500 L/h (1,25 L/s)	5400 L/h (1,50 L/s)	Flow @ 1bar pressure drop
HP 150	1.8	50	135	455	930	1580	2350	3350	3.0

4. ELECTRICAL INSTALLATION

4.1 Thermostat connection

The power supply cable to the upper electrical junction box (23) is fed through the cable fastener fitted to the box cover. The power cable to the lower electrical junction box (24) is fed up from the bottom of the product, see illustration on previous page. Use supplied cable fastener. All wiring must be fitted by authorized electrician, who must ensure suitable cable quality is used.

When connecting cables to thermostats, use spade connectors as shown in diagram. Ensure that connector is less than 10 mm in outer dimension and fits inside the shoulders of the thermostat and is not tightened onto the top of the shoulders.



4.2 Immersion heaters

All units are fitted with an immersion heater which is located behind the bottom electrical junction box cover. Wiring instructions for the immersion heater is located on the reverse side of the electrical box cover.

Follow the wiring instructions connecting the live, neutral and earth as indicated. A dedicated permanent supply complying with current IEE regulations should be used, and each circuit must be protected by a suitable MCB and double pole isolating switch with a contact separation of at least 3 mm in both poles. All cables should comply with BS6141 table 8 HOFR 85c.

All internal wiring is factory mounted. The immersion heater has a working thermostat adjustable between 40°C and 70°C. A safety cut-out is also incorporated within the thermostat and will operate at 85°C ± 3°C. Should this happen, press the reset button.

Important: Before resetting the safety cut-out or altering the thermostat setting, isolate electrical supply to the unit prior to removal of the electrical junction box cover. Ensure the cover to the electrical junction box is refitted correctly and that the retaining screw is fitted.

4.2.1 Temperature sensor installation

A temperature sensor bracket (22) is factory fitted to the electrical junction boxes, see il-

lustration on previous page. Ensure the sensor has proper contact with the inner vessel when fitting.

4.3 Motorised valve

To comply with regulations governing the installation of indirect unvented hot water cylinders, a motorised valve must be fitted in the primary flow or return (Building Regulations Part G3, IEE BS 7671). Your OSO unit has been supplied with a three-port motorised valve, which acts as a positive energy cut-out should the safety cut-out operate. The motorised valve also controls the temperature of the domestic stored water via the cylinder thermostat located inside the electrical box. The unit should be installed using the OSO 3 port diverter wiring diagram (see page 9, Fig. 1); alternatively, S-Plan or Y-Plan systems may be used. Please follow the instructions carefully, ensuring all electrical connections conform to current IEE Wiring Regulations (BS 7671).

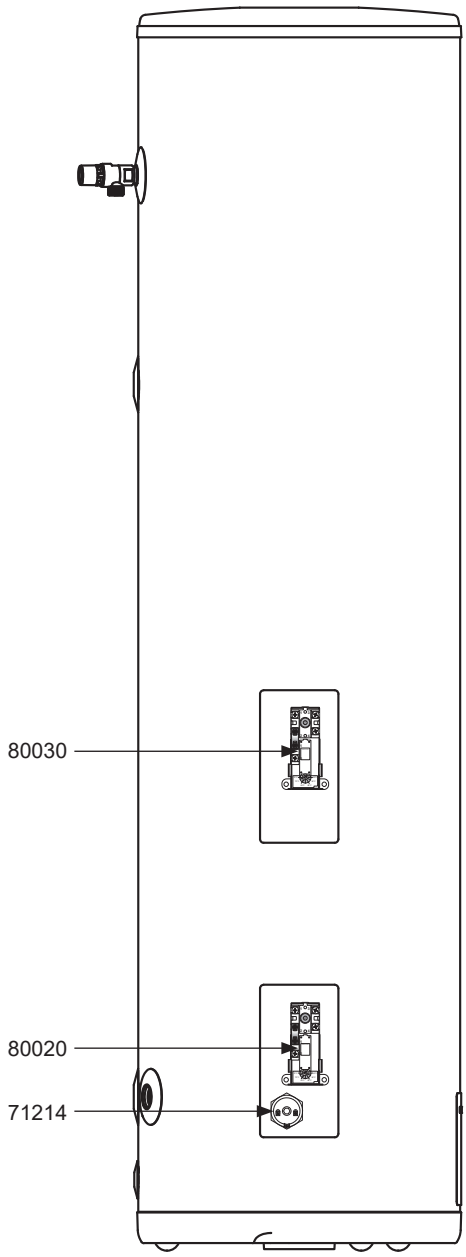
The working thermostat is adjustable between 50°C and 75°C, while the safety cut-out will operate at 85°C ± 3°C (see Fig. 2). If the safety cut-out operates, the motorised valve will automatically close the primary flow to the cylinder. Before resetting the safety cut-out or adjusting the thermostat, always isolate the electrical supply and remove the junction-box cover. To reset the unit, press the manual reset button (Fig. 2), then restore power and check that the system operates correctly.

OSO Hotwater (UK) Ltd cannot be held responsible for faults or malfunctions resulting from the use of alternative wiring plans or non-standard installation methods.

Important: *Before resetting the safety cut-out or altering the thermostat setting isolate electrical supply to the unit before removal of the junction box cover.*

4.4 Electrical spare parts

Part for	Description	Part No.
Indirect	Immersion heater	71214
Indirect	Upper thermostat	80030
Indirect	Lower thermostat	80020



4.5 W-plan wiring layout

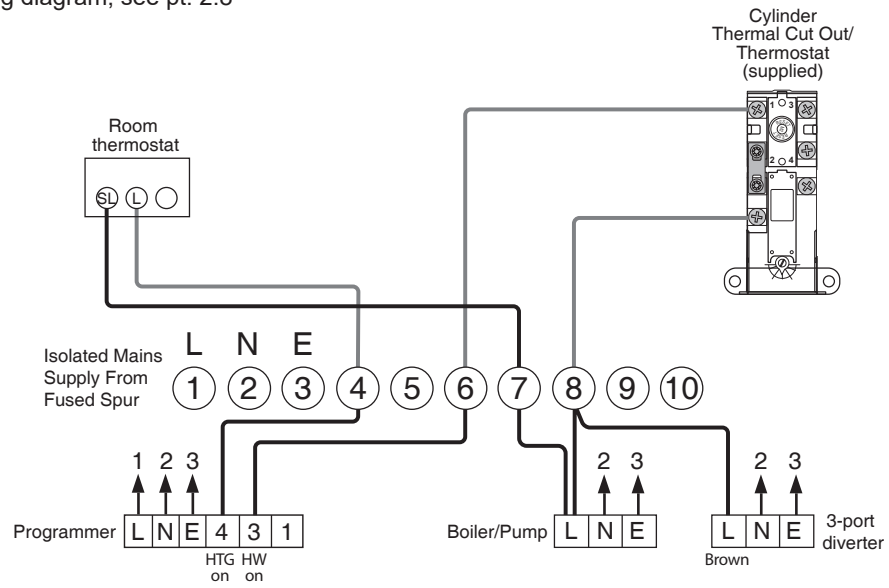
OSO Slimline cylinders can be fitted with all types of boilers. Standard boilers operate using room and cylinder thermostats. Please follow the diagram below. Failure to use the 3-way valve contravenes regulations.

The wiring plan is based on the use of a 10-way Junction Box (Honeywell Part no. 42002116-001). Junction Box terminal 8 is switched live and, if needed, terminal 10 is pump live.

Wiring for heat pump boiler

Spare parts, see pt. 4.4

Piping diagram, see pt. 2.8



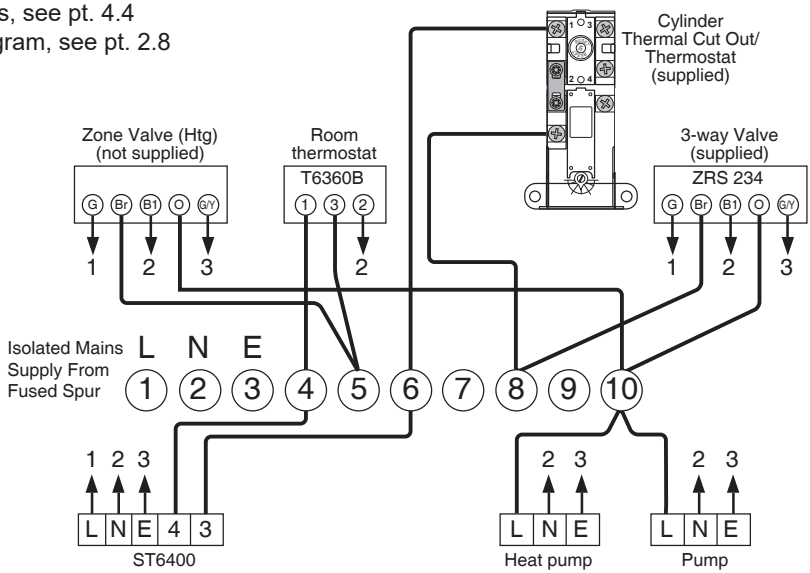
4.6 S-plan wiring layout

OSO Slimline cylinders can be fitted with all types of boilers. Standard boilers operate using room and cylinder thermostats. Please follow upper diagram: 'Wiring for Standard Boiler'.

Both wiring plans shown is based on the use of a 10-way Junction Box (Honey-well Part no. 42002116-001). Junction Box terminal 8 is switched live and, if needed, terminal 10 is pump live.

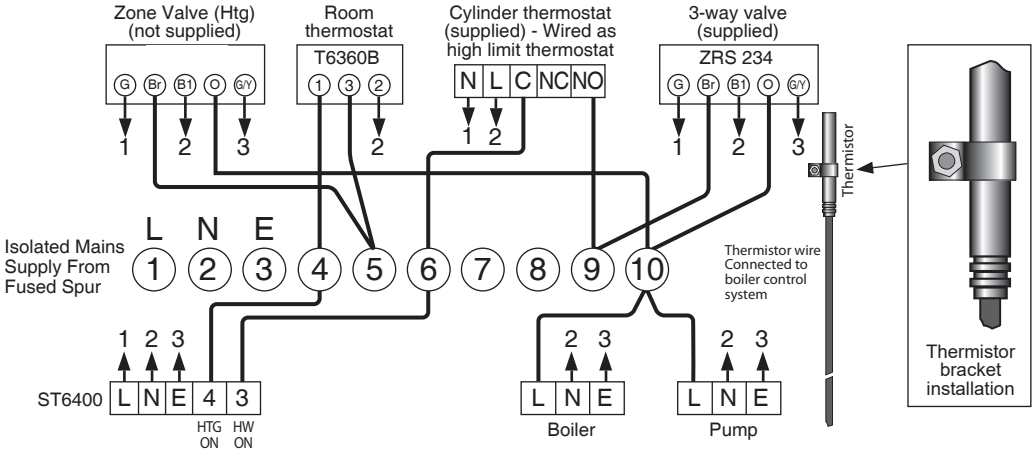
Wiring for heat pump boiler

Spare parts, see pt. 4.4
Piping diagram, see pt. 2.8



Wiring for thermistor controlled boiler

Spare parts, see pt. 4.4
Piping diagram, see pt. 2.8



4.7 Y-plan wiring layout

OSO Slimline cylinders can be fitted with all types of boilers. Standard boilers operate using room and cylinder thermostats. Please follow upper diagram: 'Wiring for Standard Boiler'.

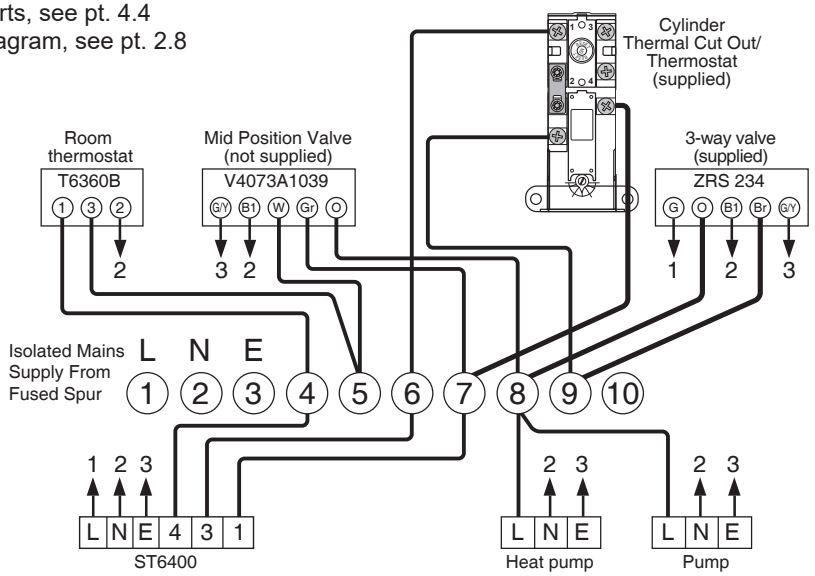
Y-plan systems with unvented cylinders require use of both a mid-position valve and the supplied zone valve. Failure to use the zone valve contravenes regulations.

Both wiring plans shown is based on the use of a 10-way Junction Box (Honeywell Part no. 42002116-001). Junction Box terminal 8 is switched live and, if needed, terminal 10 is pump live.

Wiring for heat pump boiler

Spare parts, see pt. 4.4

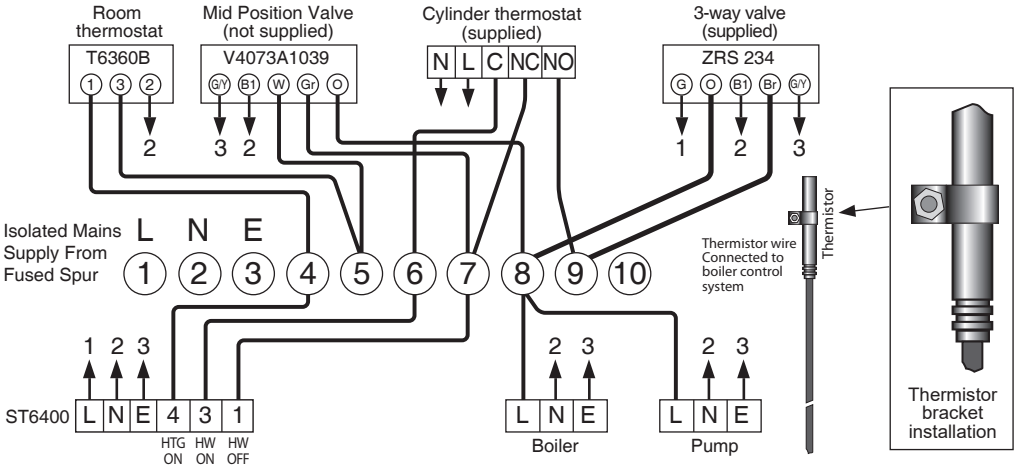
Piping diagram, see pt. 2.8



Wiring for thermistor controlled boiler

Spare parts, see pt. 4.4

Piping diagram, see pt. 2.8



5. MAINTENANCE, SAFETY AND SERVICING

Maintenance must be carried out by a competent person.

5.1 Draining/flushing

1. Turn off mains supply.
2. Connect hose pipe to drain cock on cold water supply pipework. If bottom immersion is to be replaced then additionally open drain cock at base of cylinder (21).
3. Open hot tap. Open temperature & pressure relief valve.
4. Allow vessel to drain. Follow commissioning instructions (above) to refill.

5.2 Recommissioning

Cold or tepid water discharge from tundish
The tundish should be installed away from electrical devices.

1. Close cold water supply valve
2. Open a hot tap.
3. Repressurize the expansion vessel air charge to its set level.
4. Close hot tap
5. Open the cold water supply valve

Hot water discharge from tundish: This indicates a malfunction of a thermal cut-out, operating thermostat or the combined temperature and pressure relief valve. Turn off the electrical supply to the immersion heater and also isolate an indirect unit from the boiler.
Contact the installer or competent engineer.

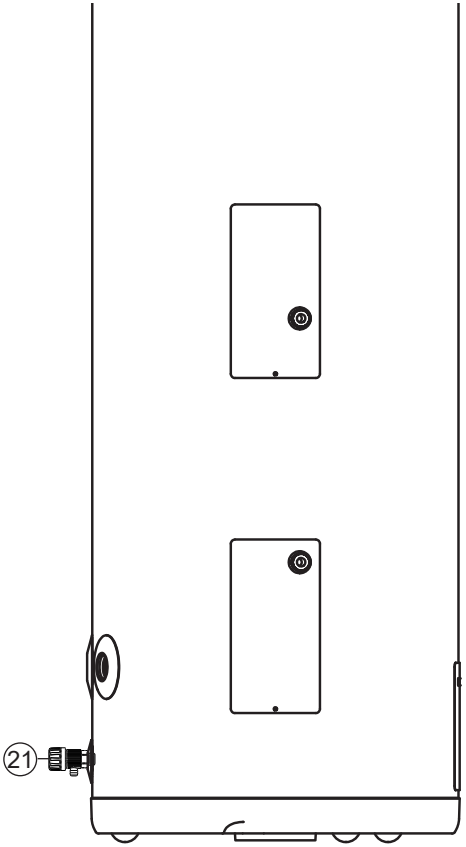
5.3 Safety and maintenance

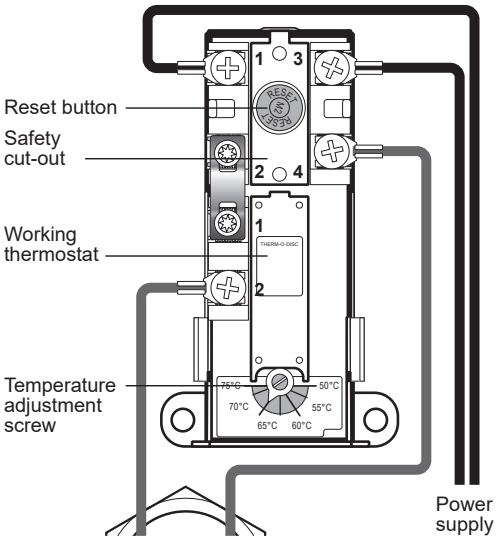
Safety cut-out

1. The safety cut-out operates if:
   a). Wiring is incorrect.
   b). The immersion heater thermostat or cylinder thermostat fails.
   c). Thermostat is set too high.
2. Remember before resetting the safety cut-out or altering the thermostat setting, isolate electrical supply to the unit prior to removal of the electrical box lid.
3. Reduce thermostat setting and press the reset button. After adjustments are completed, ensure the lid to the electrical box is replaced correctly and the retaining screw is fitted.
4. If still out of operation, contact installer.

Pressure reducing valve

1. Isolate the cold water supply and open a ground floor cold tap.
2. Unscrew the pressure reducing cartridge





3. Clean the filter mesh and the cartridge under running water.
4. Replace cartridge ensuring that strainer is correctly located and reassemble the unit. Pressure Reducing Valve cartridge and strainer Part No. REDC355030 - 3 Bar.

Expansion relief cartridge

1. Isolate the cold water supply and open a ground floor cold tap.
2. Unscrew blue expansion relief headwork (4) from valve body.
3. Clean valve seat face and seating - do not scratch or damage either seat face or seating.
4. Refit in reverse order. Do not overtighten Expansion valve cartridge and seat Part No. RELC 214005 6.0 Bar.
   Complete Expansion Valve Part No. PREL 355030.

Expansion vessel

Repressurizing vessel:

1. Close cold water supply valve
2. Remove cap (C) covering air valve
3. Adjust the vessel air pressure in relation to the set incoming water pressure using an air compressor or hand pump.
4. Refit the air valve cap (C).

Note: If water emits from the air valve the vessel is punctured and must be replaced.

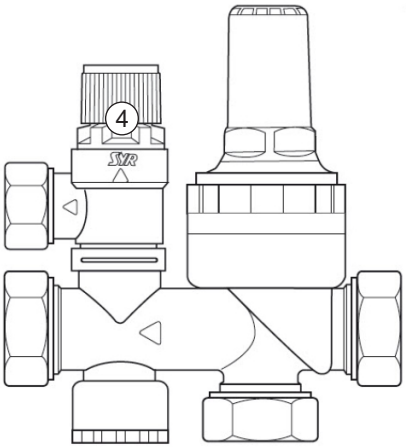
It is a condition of the warranty that annually a competent person:

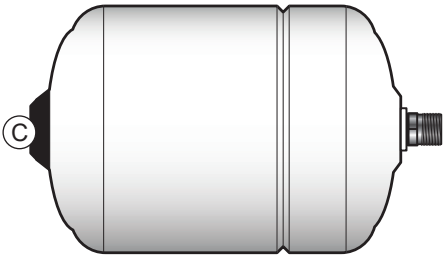
1. Inspects and cleans the line strainer.
2. Checks the operation of the expansion relief valve and temperature & pressure relief valve.
3. Recommissions the cylinder in accordance with the instructions above.
4. Checks the thermostat and visually inspect the immersion heater.

5.4 Corrosion resistance

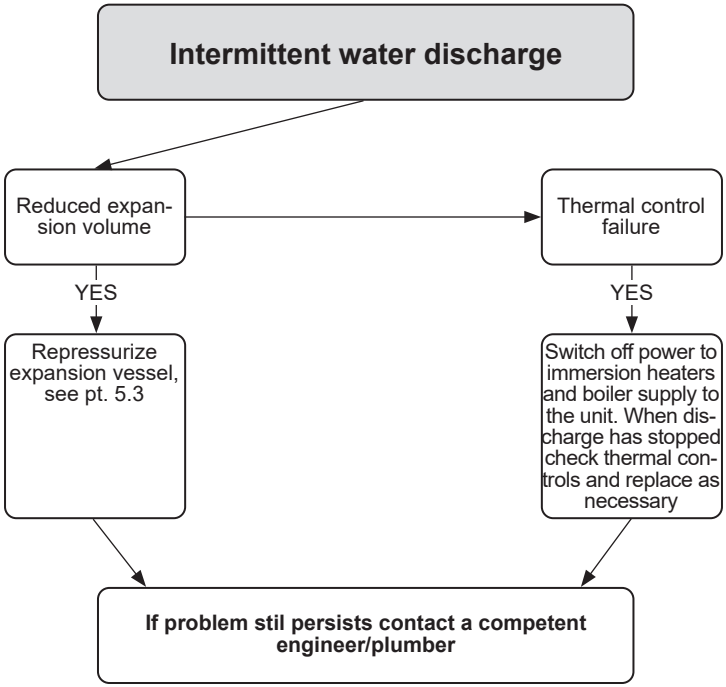
Stainless steel is naturally corrosion resistant to mains water supply. No specific maintenance is required to maintain this resistance. Please see warranty terms for permissable water content. Please note: OSO cylinders are not warranted for use with a private water supply. The immersion heater can be removed to provide visual inspection access to the cylinder.

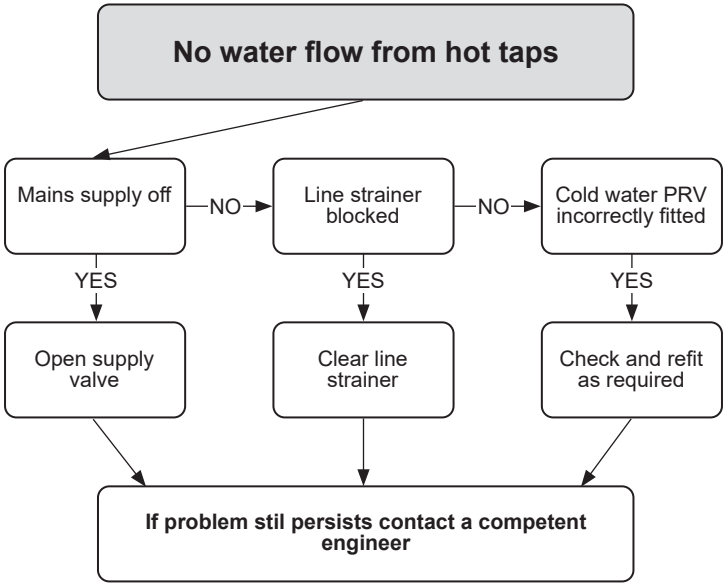
For further information contact your Building Control Office.



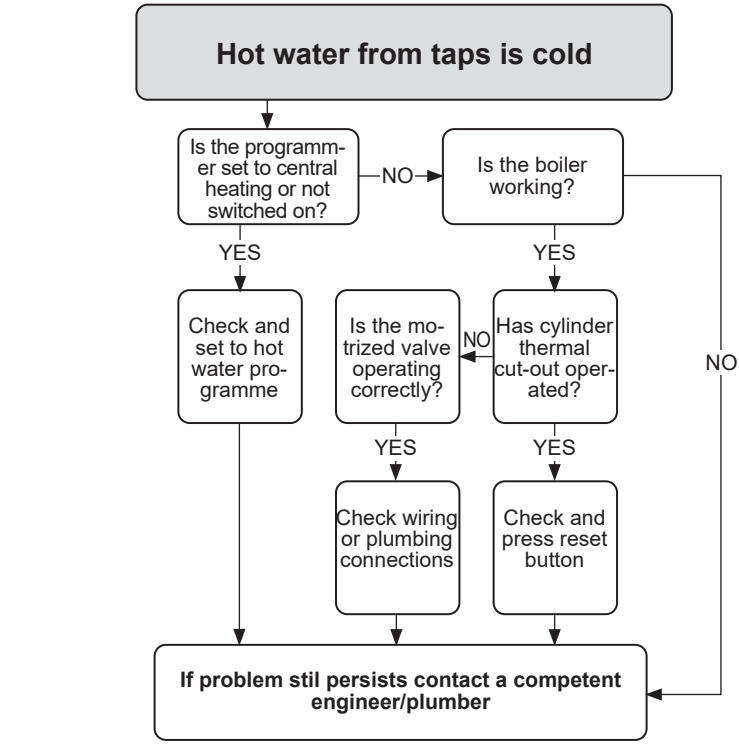


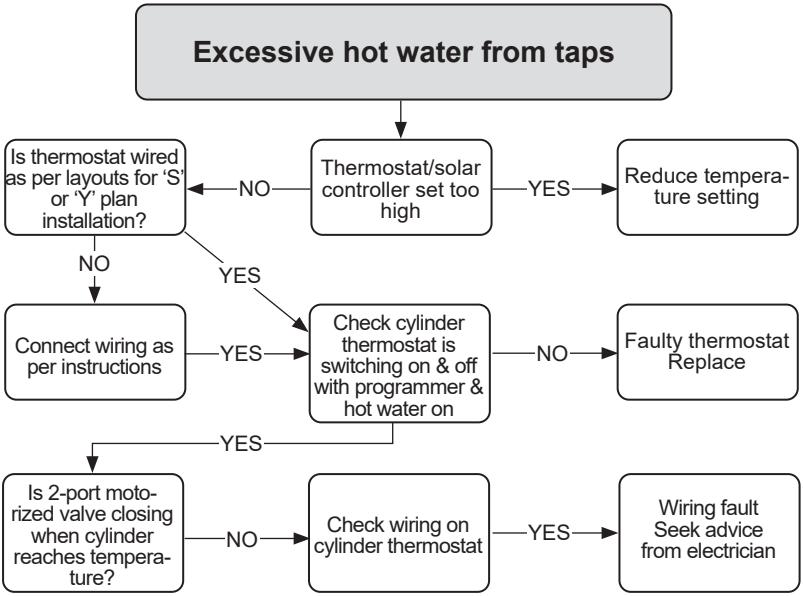
5.5 Fault finding flow charts





❗	If in doubt at any stage consult a qualified installer / electrician



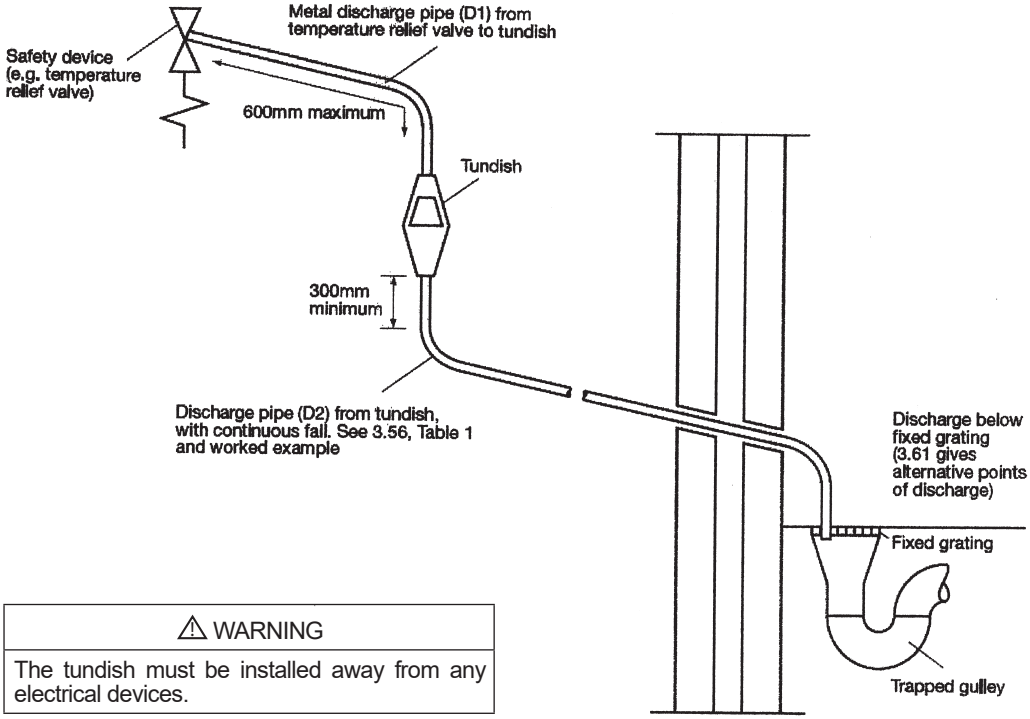


If in doubt at any stage consult a qualified installer / electrician

6. ALTERNATIVE DISCHARGE

6.1 Alternative discharge

Downward discharges at low level, i.e. up to 100 mm above external surfaces such as car parks, hard standings, grassed areas etc, are acceptable providing that where children may play or otherwise come into contact with discharges, a wire cage or similar guard is positioned to prevent contact, whilst maintaining visibility. Discharge at high level, i.e. into a metal hopper and metal down pipe with the end of the discharge pipe clearly visible (tundish visible or not) or onto a roof capable of withstanding high temperature discharges of water and 3 m from any plastics guttering system that would collect such discharges (tundish visible). 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. For further information contact your Building Control Office or The British Board of Agrément.



⚠ WARNING
The tundish must be installed away from any electrical devices.

7. WARRANTY CONDITIONS - applies to UK only

1. Scope
OSO Hotwater UK Ltd. (hereinafter called OSO) warrants for 2 years from the date of purchase, that the Product will: i) conform to OSO specification, ii) be free from defects in materials and workmanship, subject to conditions below. All components carry a 2-year warranty.
The warranty is voluntarily extended by OSO to 25 years for the stainless steel inner tank. This extended warranty only applies to Products purchased by a consumer, that has been installed for private use and that has been distributed by OSO or by a distributor where the Products have been originally sold by OSO. The extended warranty does not apply to Products purchased by commercial entities or for Products that have been installed for commercial use. These shall be subject only to the mandatory provisions of the law. The conditions and limitations set out below shall apply.

2. Coverage
If a defect arises and a valid claim is received within the statutory warranty period, at its option and to the extent permitted by law, OSO shall either; i) repair the defect, or; ii) replace the product with a product that is identical or similar in function, or; iii) refund the purchase price.
If a defect arises and a valid claim is received after the statutory warranty period has expired, but within the extended warranty period, OSO will supply a product that is identical or similar in function. OSO will in such cases not cover any other associated costs. In addition, for every year after the statutory warranty period, the claimant must contribute 4 % of the list price of the cylinder in question to OSO.
Any exchanged Product or component will become the legal property of OSO. Any valid claim or service does not extend the original warranty. The replacement Product or part does not carry a new warranty.

3. Conditions
The Product is manufactured to suit most public water supplies. However, there are certain water chemistries (outlined below) that can have a detrimental effect on the Product and its life expectancy. If there are uncertainties regarding water quality, the local water supply authority can supply the necessary data.
The warranty applies only if the conditions set out below are met in full:

- The Product has been installed by a professional installer, in accordance with the instructions in the installation manual and all relevant Codes of Practice and Regulations in force at the time of installation.
- The Product has not been modified in any way, tampered with or subjected to misuse and no factory fitted parts have been removed for unauthorized repair or replacement.
- The Product has only been connected to a domestic mains water supply in compliance with the European Drinking Water Directive EN 98/83 EC, or latest version. The water should not be aggressive, i.e. the water chemistry shall comply with the following:

- Chloride	< 250 mg / L
- Electric Conductivity (EC) @25°C	< 750 uS / cm
-Saturation Index (LSI) @80°C	> - 1,0 / < 0,8
- pH level	> 6,0 / < 9,5

- The immersion heater has not been exposed to hardness levels exceeding 5°dH (180 ppm CaCO3). A water softener is recommended in such cases.
- Any disinfection has been carried out without affecting the Product in any way whatsoever. The Product shall be isolated from any system chlorination.
- The Product has been in regular use from the date of installation. If the Product is not intended to be used for 60 days or more, it must be drained.
- The immersion heater element must be removed for inspection on service after 5 years. The threads must be checked for corrosion. If signs of corrosion are evident, the element must be replaced. Subsequently the element must be removed and examined every 3 years. Failure to do so in areas of aggressive water may result in the element separating from the cylinder with consequential escape of water.
- Service and/or repair shall be done according to the installation manual and all relevant codes of practice. Any replacement parts used shall be original OSO spare parts.
- The Service record / Benchmark logbook has been completed and updated after each annual service. Invoices should be kept as proof of service.
- The Commissioning Checklist / Benchmark certificate has been completed at the time of installation.
- Any third-party costs associated with any claim has been authorized in advance by OSO in writing.
- The purchase invoice and/or installation invoice, a water sample as well as the defective product is made available to OSO upon request.

Failure to follow these instructions and conditions may result in product failure, and water escaping from the Product.

4. Limitations
The warranty does not cover:

- Any fault or costs arising from incorrect installation, incorrect application, lack of regular maintenance in accordance with the installation manual, neglect, accidental or malicious damage, misuse, any alteration, tampering or repair carried out by a non-professional, any fault arising from the tampering with or removal of any factory fitted safety components or measures.
- Any consequential damage or any indirect loss caused by any failure or malfunction of the Product whatsoever.
- Any pipework or any equipment connected to the Product.
- The effects of frost, lightning, voltage variation, lack of water, dry boiling, excess pressure or chlorination procedures.
- The effects of stagnant (de-aerated) water if the Product has been left unused for more than 60 days consecutively.
- Damage caused during transportation. Buyer shall give the carrier notice of such damage.
- Costs arising if the Product is not immediately accessible for servicing.

These warranties do not affect the Buyer's statutory rights.

7.1 Customer service

In case of problems that cannot be resolved with the aid of the troubleshooting guide in this installation manual, contact either:

A) The installer who supplied the product.
B) OSO Hotwater UK: Phone: (0191) 482 0800 technical.uk@oso-hotwater.com www.osohotwater.co.uk

8. REMOVING THE PRODUCT

8.1 Removal

A) Disconnect the power supply.
B) Shut off incoming cold water supply.
C) Empty the product of water – see section 4.4.
D) Disconnect all pipes.
E) The product can now be removed.

8.2 Returns scheme

This product is recyclable and should be taken to the environmental recycling centre. If the product is to be replaced with a new one, the installer can take the old cylinder away for recycling.



IT IS THE RESPONSIBILITY OF THE INSTALLER TO COMPLETE THIS LOG BOOK AND PASS IT ON TO THE CUSTOMER. FAILURE TO DO SO MAY INVALIDATE THE CYLINDER WARRANTY

OSO

HOTWATER

The code of practice for the installation, commissioning & servicing of mains pressure hot water storage

Installation,Commissioning and Service Record Log Book

CUSTOMER DETAILS

NAME

ADDRESS

TEL No.

IMPORTANT

1. Please, keep the Log Book in a safe place for future reference.
2. This Log Book is to be completed in full by the competent person(s) who commissioned the equipment and then handed to the customer. When this is done, the Log Book is a commissioning certificate that can be accepted as evidence of compliance with the appropriate Building Regulations.
3. Failure to install and commission this appliance to the manufacturer's instructions may invalidate the warranty.

The above does not affect your statutory rights.

hot water association
CHARTER MEMBER

© HEATING AND HOTWATER INFORMATION COUNCIL

HWA charter members agree to:

- To supply fit for purpose products clearly and honestly described
- To supply products that meet, or exceed appropriate standards and building and water regulations
- To provide pre and post sales technical support
- To provide clear and concise warranty details to customers

For full details on the HWA charter please visit **http://www.hotwater.org.uk/**

INSTALLER & COMMISSIONING ENGINEER DETAILS

INSTALLER DETAILS

COMPANY NAME DATE

ADDRESS

INSTALLER NAME TEL No.

REGISTRATION DETAILS

REGISTERED OPERATIVE ID CARD No.
(IF APPLICABLE)

COMMISSIONING ENGINEER (IF DIFFERENT)

NAME DATE

ADDRESS

TEL No.

REGISTRATION DETAILS

REGISTERED OPERATIVE ID CARD No.
(IF APPLICABLE)

APPLIANCE & TIME CONTROL DETAILS

MANUFACTURER OSO HOTWATER (UK)			MODEL
CAPACITY	litres		SERIAL No.
TYPE	UNVENTED		
TIME CONTROL	PROGRAMMER ☐	or	TIME SWITCH ☐

IT IS THE RESPONSIBILITY OF THE INSTALLER TO COMPLETE THIS LOGBOOK AND PASS IT ON TO THE CUSTOMER. FAILURE TO DO SO MAY INVALIDATE THE CYLINDER Warranty

COMMISSIONING PROCEDURE INFORMATION

BOILER PRIMARY SETTINGS (INDIRECT HEATING ONLY) ALL BOILERS

IS THE PRIMARY A SEALED OR OPEN VENTED SYSTEM?	SEALED ☐ OPEN ☐
WHAT IS THE BOILER FLOW TEMPERATURE?	____ °C

ALL MAINS PRESSURISED SYSTEMS

WHAT IS INCOMING STATIC COLD WATER PRESSURE AT THE INLET TO THE PRESSURE REDUCING VALVE?	____ bar
HAS STRAINER (IF FITTED) BEEN CLEANED OF INSTALLATION DEBRIS?	YES ☐ NO ☐
HAS A WATER SCALE REDUCER BEEN FITTED?	YES ☐ NO ☐
WHAT TYPE OF SCALE REDUCER HAS BEEN FITTED?	

UNVENTED SYSTEMS

ARE COMBINED TEMPERATURE AND PRESSURE RELIEF VALVE AND EXPANSION VALVE FITTED AND DISCHARGE TESTED?	YES ☐ NO ☐
IS PRIMARY ENERGY SOURCE CUT OUT FITTED (NORMALLY 2 PORT VALVE)?	YES ☐ NO ☐
WHAT IS THE PRESSURE REDUCING VALVE SETTING (IF FITTED)?	____ bar
HAS THE EXPANSION VESSEL OR INTERNAL AIR SPACE BEEN CHECKED?	YES ☐ NO ☐
WHAT IS THE HOT WATER TEMPERATURE AT THE NEAREST OUTLET?	____ °C

ALL PRODUCTS

DOES THE HOT WATER SYSTEM COMPLY WITH THE APPROPRIATE BUILDING REGULATIONS?	YES ☐
HAS THE SYSTEM BEEN INSTALLED AND COMMISSIONED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS?	YES ☐
HAVE YOU DEMONSTRATED THE OPERATION OF THE SYSTEM CONTROLS TO THE CUSTOMER?	YES ☐
HAVE YOU LEFT ALL THE MANUFACTURER'S LITERATURE WITH THE CUSTOMER?	YES ☐

COMPETENT PERSON'S SIGNATURE	CUSTOMER'S SIGNATURE

(To confirm demonstrations of equipment and receipt of appliance instructions)

PLEASE FOLLOW THE INSTALLATION AND COMMISSIONING INSTRUCTIONS IN THE INSTALLATION MANUAL SUPPLIED WITH THE EQUIPMENT (this document)

SERVICE INTERVAL RECORD

It is recommended that your hot water system is serviced regularly and that your service engineer completes the appropriate Service Interval Record below.

SERVICE PROVIDER

Before completing the appropriate Service Interval Record below, please ensure you have carried out the service as described in the manufacturer's instructions and in compliance with all relevant codes of practice.

SERVICE 1 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 2 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 3 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 4 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 5 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 6 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 7 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 8 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 9 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

SERVICE 10 **DATE:**
ENGINEER NAME
COMPANY NAME
TEL No.
COMMENTS
SIGNATURE

When all the above services have been completed, please contact your Service Engineer for an additional service interval record sheet.

HWSLB First Edition 01.03.02

OSO
HOTWATER

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Team Valley Trading Estate,
Gateshead,
Tyne & Wear,
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E-mail technical.uk@oso-hotwater.com
E-mail spareparts.uk@oso-hotwater.com
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