EVERFLO RAPIDE PLUS - INSTALLATION AND MAINTENANCE INTRUCTIONS

MAY 2016

PART NO 024616 REV 1

IMPORTANT NOTE TO THE INSTALLER

Read these instructions before commencing installation. Unvented cylinders are a controlled service as defined in the latest edition of the building regulations and should only be fitted by a competent person.

The relevant regulations are: England and Wales – Building Regulation G3, Scotland – Technical Standard P3, N Ireland – Building Regulation Part F
After installation the Benchmark checklist must be completed and left, with these instructions, with the householder for future reference.

STORAGE PRIOR TO INSTALLATION

EVERFLO RAPIDE PLUS should be stored in its original packaging in an upright position in an area free from excessive damp.

HANDLING PRODUCT

The EVERFLO RAPIDE PLUS should be carried upright where possible. Assessements of risks for carrying the cylinder should be conducted. Use more than 1 person for carrying where appropriate. Always follow latest guidelines for lifting techniques, to avoid injury and damage to the product.

WATER SUPPLY

EVERFLO RAPIDE PLUS operates at 3.0 bar (controlled by the inlet control set) and is capable of delivering over 50 litres per minute. The high quality inlet control set has been designed to make the most of the flow rates available, however the performance of any unvented system is only as good as the mains water supply. The maximum possible water demand should be assessed, taking into consideration that both hot and cold services are supplied simultaneously from the mains.

The water supply should be checked to ensure it can meet these requirements. If necessary, consult the local water company regarding the likely pressure and flow rate availability.

If measuring the water pressure, note that a high static (no flow) mains pressure is no guarantee of good flow availability. In a domestic installation 1 bar and 25 l/min. should be regarded as the minimum. The maximum mains pressure that the inlet control set can accept is 12 bar.

Consideration should be given to upgrading existing 1/2" (15mm) cold mains pipework to a larger size if the recommended minimum pressure/flow rate is not being achieved.

ELECTRIC SUPPLY

The EVERFLO RAPIDE PLUS requires 240 Volt electrical supply for the immersion elements. The electrical supply to each immersion heater must be fused at 13A via a double pole isolating switch to BS 60335. The cable must be at least 2.5mm^2 heat resistant (85ºC HOFR) sheathed flex complying to BS EN 50525-1 .

UNPACKING THE UNIT

EVERFLO RAPIDE PLUS comes complete with the fittings required to complete the installation.

High flow rate inlet control set 3.0 Bar Pressure reducing vslve 8 Bar Expansion relief

Temperature and pressure relief valve 10 Bar

Acetal tundish 15 x 22 mm

Two port valve

Immersion heater

COMPONENT CONTENT TABLE

	Inlet Control Set	Temperature & Pressure Relief Valve	Tundish	Immersion Heater	Two Port Valve	Integrated Thermostat	Integrated Dual Thermostat	Installation & Maitenance Instructions
Direct Models	⊙	⊙	⊙	⊙		⊙		⊙
Indirect Models	⊙	⊙	⊙	⊙	⊙		⊙	⊙

Direct Models (Electric)
Indirect Models (Single Coil)

SITING THE UNIT

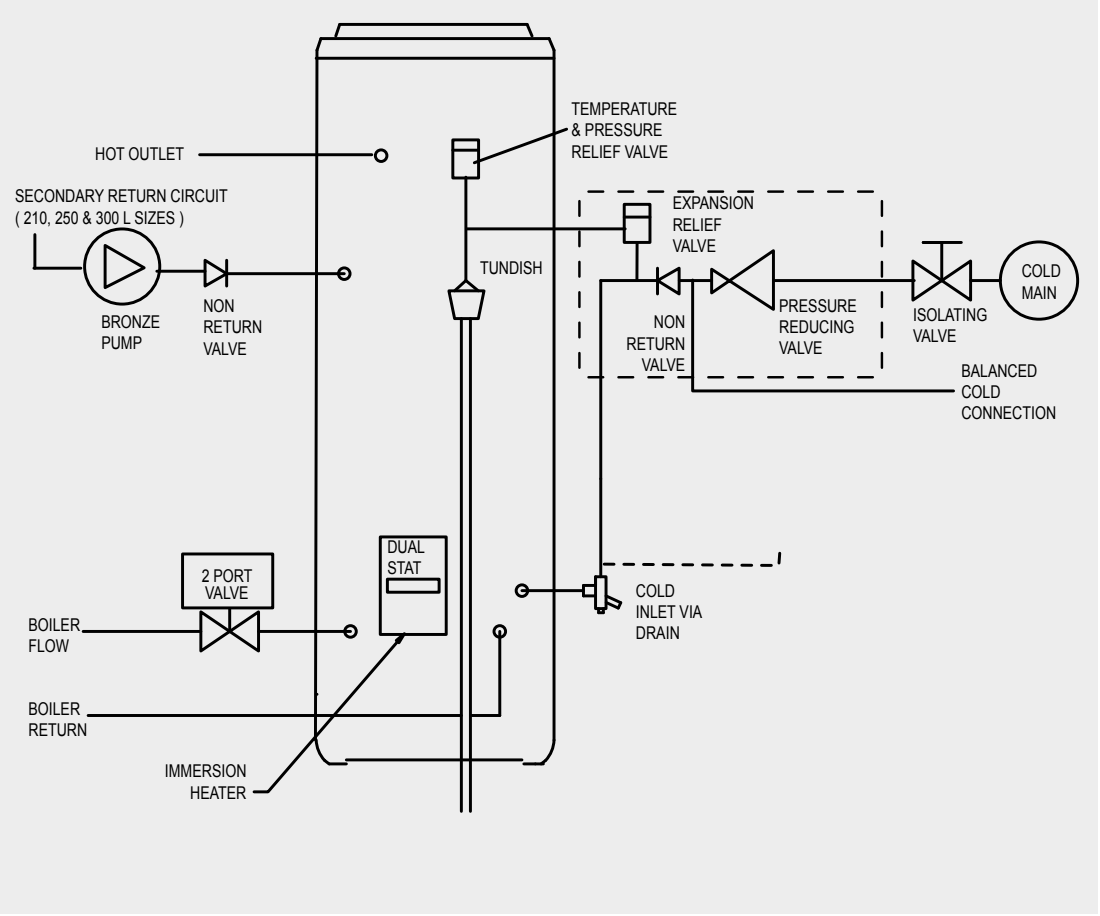
EVERFLO RAPIDE PLUS can supply outlets above it or at some distance from it. Site the unit to minimise "dead leg" distances, especially to the point of most frequent use.

Outlets above the EVERFLO RAPIDE PLUS will reduce the outlet pressure available by 0.1 bar for every 1m of height difference. The unit should be protected from frost. Particular care is needed if siting in a garage or outbuilding. All exposed pipework should be insulated. EVERFLO RAPIDE PLUS must be installed VERTICALLY on a flat base capable of supporting the weight of the cylinder when full. The minimum recommended cupboard size is 650mm wide by 750 deep.

Access for maintenance of the valves should be considered. Consideration should be given to position of discharge pipes (tundish), drain valves - shall be positioned away from electrical components.

The immersion heaters are 410 mm long and care should be taken to ensure that they can be withdrawn for servicing if required. The discharge pipework from the safety valves should fall continuously and terminate safely.

SCHEMATIC DIAGRAM



NOTES:
The pressure reducing valve, non-return valve and expansion relief valve are combined together in the inlet control set.

On 120 – 180 litre sizes there is no dedicated secondary return boss and the secondary return circuit should be tee'd into the cold feed pipe just above the drain elbow.

GENERAL INSTALLATION

COLD MAINS PIPEWORK

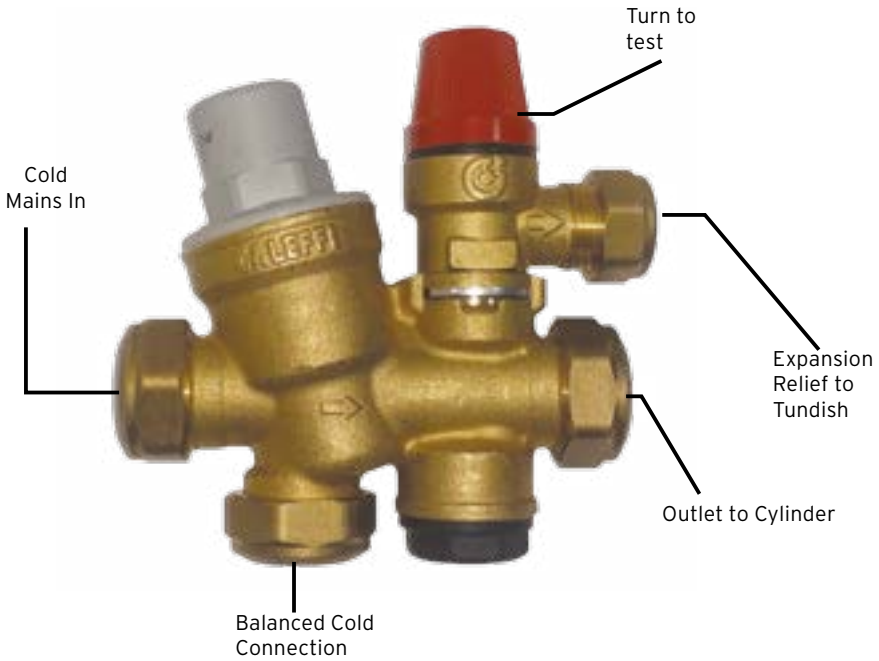
Run the cold main through the building to the place where the EVERFLO RAPIDE PLUS is to be installed. Take care not to run the cold pipe near hot water or heating pipework so that the heat pick-up is minimized. Identify the cold water supply pipe and fit an isolating valve (not supplied).

A 22mm BS1010 stopcock can typically be used but a 22mm quarter turn full bore valve would be better as it does not restrict the flow as much. Do not use "screwdriver slot" or similar valves. Make the connection to the cold feed of the cylinder and incorporate a drain valve. Position the drain valve no higher than the cold inlet to ensure sufficient draining of cylinder when required. Position the inlet control just ABOVE the Temperature & Pressure Relief Valve (TPRV) mounted on the side of the cylinder. This ensures that the cylinder does not have to be drained down in order to service the inlet control set. Ensure that the arrow points in the direction of the water flow.

CONNECTING TO THE CYLINDER

All of the pipework connections on the cylinder are designed to accept 22mm copper pipe. The thread is 3/4" BSP male parallel thread. Suitable nuts and olives are provided.

Cut the tube with a pipe cutter and ensure no sharp edges or burrs protrude. Slide both gland nut and olive onto the tube and push tube fully home into the connection, ensuring the tube end fully bottoms on the connection recess. Smear the outer wall of the olive with plumbing paste and tighten gland nut in the prescribed manner. Upon filling/commissioning, ensure all connections are completely watertight. Note: No control or isolation valve should be fitted between the expansion relief valve and the storage cylinder. The relief valve connections should not be used for any other purpose.



BALANCED COLD CONNECTION

If there are to be showers, bidets or monobloc taps in the installation then a balanced cold supply is necessary. There is a 22mm balanced connection on the inlet set.

HOT WATER PIPEWORK

Run the first part of the hot water distribution pipework in 22mm. This can be reduced to 15mm and 10mm as appropriate for the type of tap etc. Your aim should be to reduce the volume of the hot draw-off pipework to a practical minimum so that the time taken for the hot water is as quick as possible. Where monobloc mixing taps and showers are used, these should be installed to comply with the Water Supply (Water Fittings) Regulations 1999. If these devices are supplied with un-balanced supplies there should be single check valves installed at both inlets, to stop over pressurising of either supply.

PRIMARY COIL CONNECTIONS FOR INDIRECT UNITS

Connect the primary connections (Indirect only) using the compression connections provided. The primary circuit must be positively pumped. Gravity circulation is not suitable. Either primary connection may be used as the primary flow, reheat times are not effected. The primary circuit can be open vented or sealed, with up to a maximum pressure of 3.5 bar. If you seal the primary circuit an additional expansion vessel and safety valve is required. The boiler may be Gas, Electric or Oil but must be under effective thermostatic control. Uncontrolled heat sources such as some AGA's, back boilers, solid fuel stoves, etc. are NOT SUITABLE. Please contact our Technical department for guidance. Connect the two port zone valve (indirect only) into the primary flow pipework.

SECONDARY CIRCULATION

EVERFLO RAPIDE PLUS can be used with secondary circulation. An appropriate WRAS approved bronze circulator should be used in conjunction with a non-return valve to prevent backflow. On large secondary circulation systems it may be necessary to incorporate an extra expansion vessel into the circuit to accommodate the increased system water volume. Secondary circulation should be avoided on Direct electrically heated units being used on off-peak electricity tariffs.

A secondary return boss is fitted as standard on 210, 250 & 300 ltr units. On smaller sizes, tee into the cold feed pipe above the drain.

IMMERSION HEATERS

The immersion heater is supplied with remotety mounted thermostat within the heater enclosure. The thermostat switches both live and neutral and comprises an adjustable control and a high limit maually resettable thermal cut-out. All thermostat connections and probe mounts are factory fitted.

The electrical supply to each immersion heater must be fused at 13A via a double pole isolating switch to BS 60335. The cable must be 1.5mm^2 3 core heat resistant (85ºC HOFR) sheathed flex complying to BS 50525-1. Do not operate the immersion heater/s until the unit is full of water. Do not operate the immersion heater/s if any sterilisation liquid is in the cylinder as this will cause premature failure. Each immersion heater must be earthed.

Remove the thermostat cover by removing the retaining screw, opening the cover and sliding it to the left to disengage from the retaining clamps.

Connect to the terminal block ensuring the outer sheath is clamped and the cables are secured without strain on any of the components or cables.

ELECTRICAL CONNECTIONS

Warning: This appliance must be earthed and all wiring should be completed by a competent electrician in accordance with the latest I.E.E wiring regulations

Complete the wiring – use the appropriate wiring diagrams on page 10 - 11.

DISCHARGE ARRANGEMENT

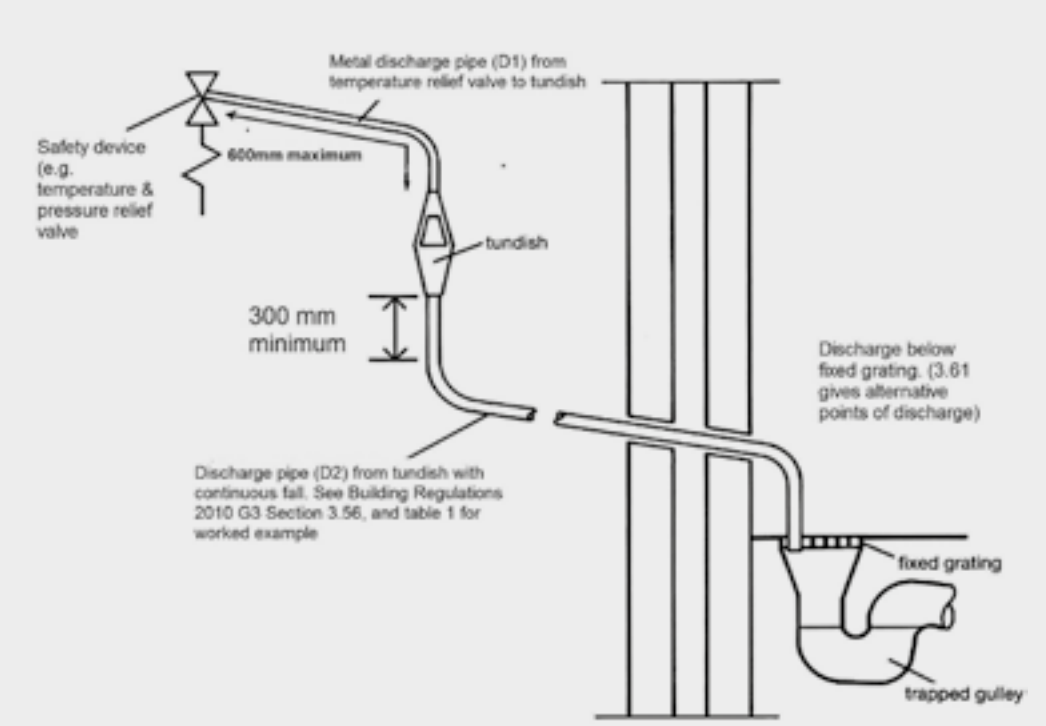


Diagram of a typical discharge pipe arrangement (extract from Building Regulation G3)

Note: The discharge will consist of scalding water and steam. Asphalt, roofing felt and non-metallic rainwater goods may be damaged by such discharges.

Note: D2 pipe from tundish is now allowed to be installed in soil stacks within premises. Discharge from T&P may continue for long periods of time. It is the installer's responsibility to ensure the discharge pipework can support the discharge for prolonged periods.
If used follow guidance on mechanical seal without water trap given in G3 Building Regulations.
As discharge can be in excess of 90oC discharge into plastic pipework is also not recommended.

Position the inlet control group so that the discharge from both safety valves can be joined together via a 15mm end feed Tee (see diagram above). Connect the Tundish and route the discharge pipe. The discharge pipework must be routed in accordance with Part G3 of schedule 1 of the Building Regulations. The information that follows is not exhaustive and if you are in doubt you should seek advice. The two safety valves will only discharge water under fault conditions. When operating normally water will not be discharged. 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. The tundish should be positioned away from electrical devices.
Any Discharge should be visible at the tundish. The tundish should be located such that any discharge is visible. In addition, where discharges from safety devices may not be apparent, e.g. 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.

The discharge pipe (D2) from the tundish should:

A) Have a vertical section of pipe at least 300mm long, below the tundish before any elbows or bends in the pipework.

B) Be installed with a continuous fall of at least 1 in 200 thereafter.

The discharge pipe (D2) from the tundish should be of metal or other material that have been demonstrated to be capable of withstanding temperatures of the water discharged.

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. discharge pipes between 9m and 18m 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. Refer to diagram 1, Table 1 and the worked example. An alternative approach for sizing discharge pipes would be to follow BS6700 Specification for design installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages.

The discharge pipe (D2) should terminate in a safe place where there is no risk to persons in the vicinity of the discharge. Examples of acceptable discharge arrangements are:

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

b. Downward discharges at a low level; i.e. up to 100mm above external surfaces such as car parks, hard standings, grassed areas etc. are acceptable providing that where children play or otherwise come into contact with discharges, a wire cage or similar guard is positioned to prevent contact whilst maintaining visibility.
c. Discharges at a high level; e.g. in to metal hopper and metal down pipe 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 systems that would collect such discharges.
d. Device to warn when discharge takes place.

WORKED EXAMPLE

The example below is for G1/2 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 G1/2 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 G1/2 temperature relief valve equates to: 14m. As the actual length is 7m, a 28mm (D2) copper pipe will be satisfactory.

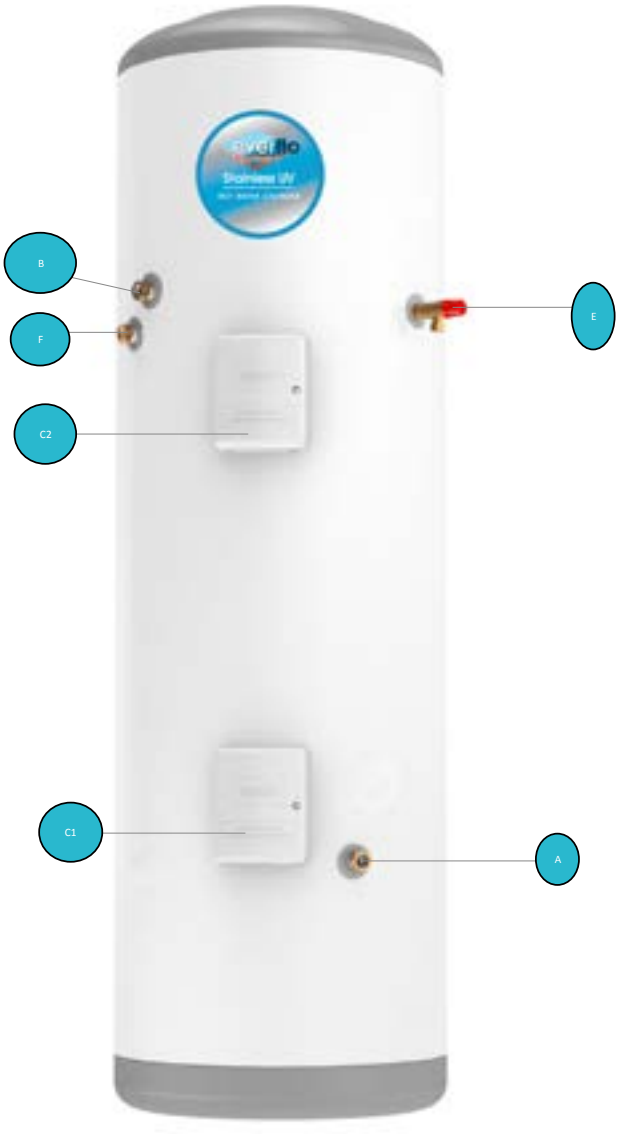
TABLE 1

Sizing of copper discharge pipe 'D2' for a temperature relief valve with a G1/2 outlet size (as supplied).

Size of discharge pipework	Maximum length of straight pipe (no bends or elbows)	Deduct the figure below from the maximum length for each bend or elbow in the discharge pipe
22mm	Up to 9m	0.8m
28mm	Up to 18m	1m
35mm	Up to 27m	1.4m

TECHNICAL SPECIFICATIONS

EVERFLO RAPIDE PLUS DIRECT



Technical specifications

Connections:

A	22mm Cold feed with dip pipe to diffuser in bottom of cylinder
B	22mm Hot water outlet
C1	Immersion heater
C2	Secondary immersion heater
E	Temperature relief valve boss (Valve factory fitted to cylinder)
F*	22mm Secondary return

Code	Reheat Time (Minutes)	Immersion Heaters (3kW)
EXD120	62	2
EXD150	77	2
EXD180	93	2
EXD210	108	2
EXD250	129	2
EXD300	153	2

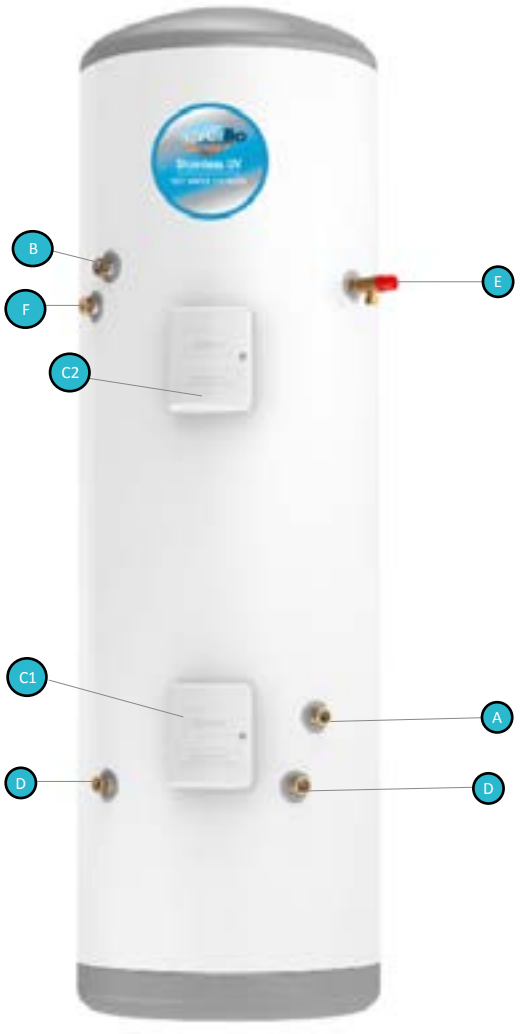
				Boss centre from floor									
Code	Capacity (Ltrs)#	Height (mm)	Dia. (mm)	A (mm)	B (mm)	C1 (mm)	C2 (mm)	E (mm)	F* (mm)	Load Profile	Rating	Efficiency	kWh/ year
EXD120	125	997	550	184	651	244	532	619	NF	M	D	33%	1440
EXD150	154	1185	550	184	837	244	632	805	NF	L	D	36%	2781
EXD180	183	1367	550	184	1021	244	732	989	NF	L	D	35%	2832
EXD210	209	1557	550	184	1087	244	832	1055	1022	L	D	34%	2876
EXD250	247	1802	550	184	1332	244	972	1300	1267	XL	D	36%	4548
EXD300	297	2072	550	184	1584	244	1123	1552	1519	XL	D	36%	4567

* Not always fitted refer to table above

At 3.0 bar
Thermostat set at 60°c
Always isolate from electric supply before working on product

TECHNICAL SPECIFICATIONS

EVERFLO RAPIDE PLUS
INDIRECT



Technical specifications

Connections:

A	22mm Cold feed with dip pipe to diffuser in bottom of cylinder
B	22mm Hot water outlet
C1†	Immersion heater
C2*	Secondary immersion heater
D	22mm Coil connections
E	1/2" Temperature relief valve boss (Valve factory fitted to cylinder)
F*	22mm Secondary return

Code	Heat Up Time (Minutes)	Coil Rating (kW)	Immersion Heaters (3kW)
EXN120	21	14.44	1
EXN150	24	16.85	1
EXN180	27	16.88	1
EXN210	31	17.08	1
EXN250	33	20.31	2
EXN300	42	19.61	2

				Boss centre from floor							ErP	
Code	Capacity (Ltrs)#	Height (mm)	Dia. (mm)	A (mm)	B (mm)	C1† (mm)	C2* (mm)	D (mm)	E (mm)	F* (mm)	ErP Rating	Standing Loss, W
EXN120	119	997	550	455	651	355	NF	315	619	NF	B	49
EXN150	149	1183	550	455	837	385	NF	345	805	NF	B	52
EXN180	178	1367	550	490	1021	415	NF	375	989	NF	C	65
EXN210	205	1557	550	490	1087	415	NF	375	1055	1022	C	76
EXN250	242	1802	550	530	1332	450	1105	410	1300	1267	C	87
EXN300	287	2072	550	530	1584	450	1255	410	1552	1519	C	91

* Not always fitted refer to table above

At 3.0 Bar

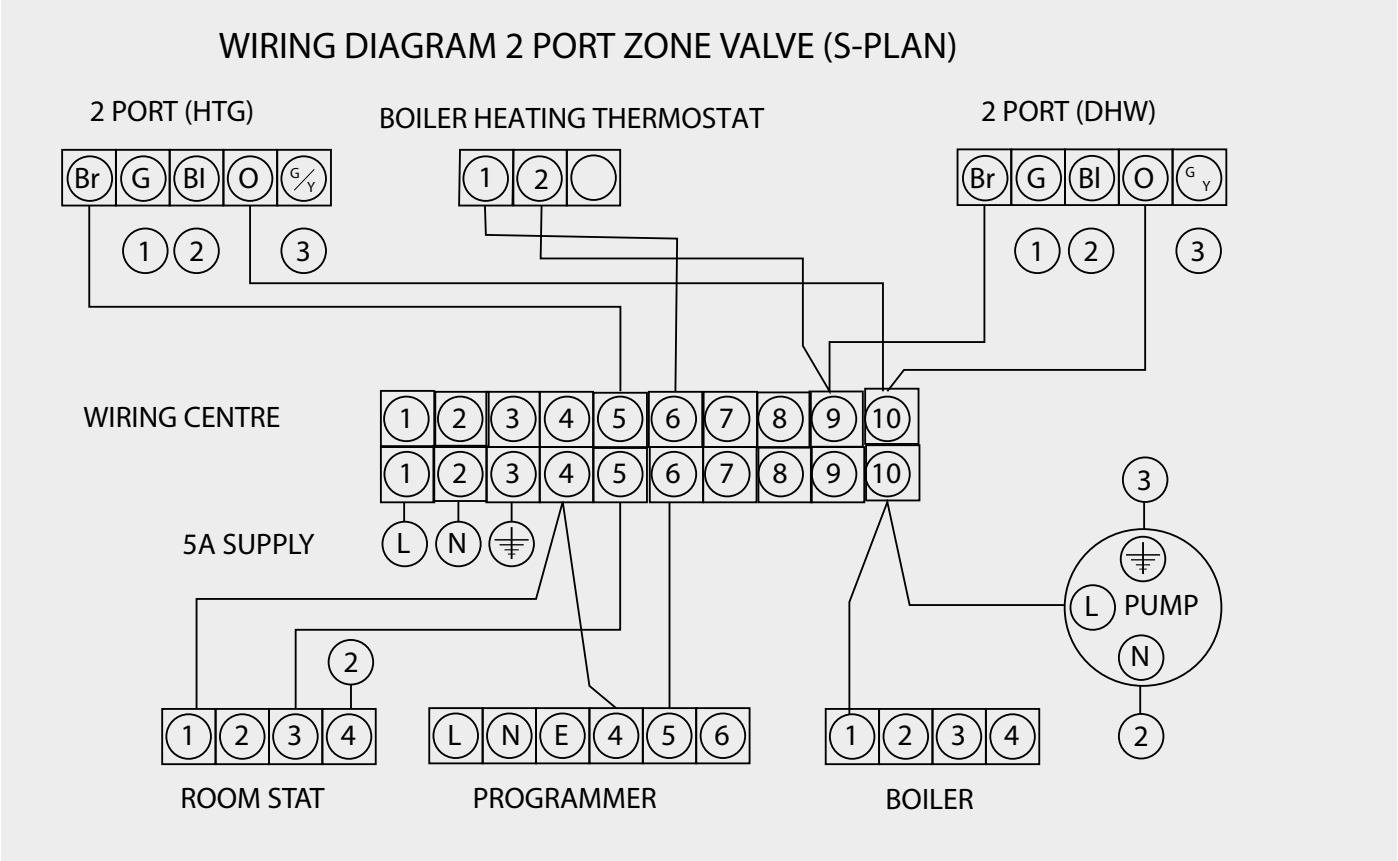
† Not to be used as the primary heat source

TYPICAL SCHEMATIC WIRING DIAGRAMS

The diagrams shown relate to the components listed. Other components and other manufacturers' components may vary in their wiring requirements, particularly thermostats. Always refer to manufacturers' instructions which may override the detail in order to function correctly.

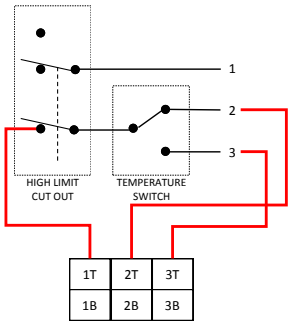
DUAL THERMOSTAT WIRING

WIRING DIAGRAM 2 x TWO PORT ZONE VALVES (S-PLAN)

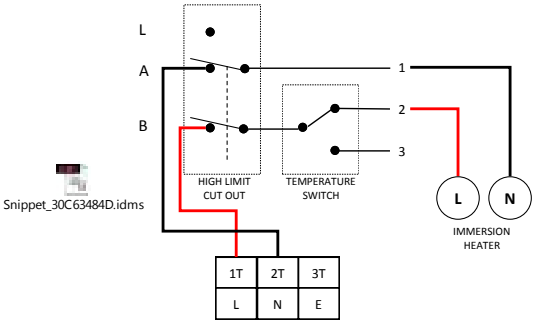


THERMOSTAT WIRING INSIDE BOX

WIRING DIAGRAM 2 x TWO PORT ZONE VALVES (S-PLAN)



BOILER CONTROL THERMOSTAT



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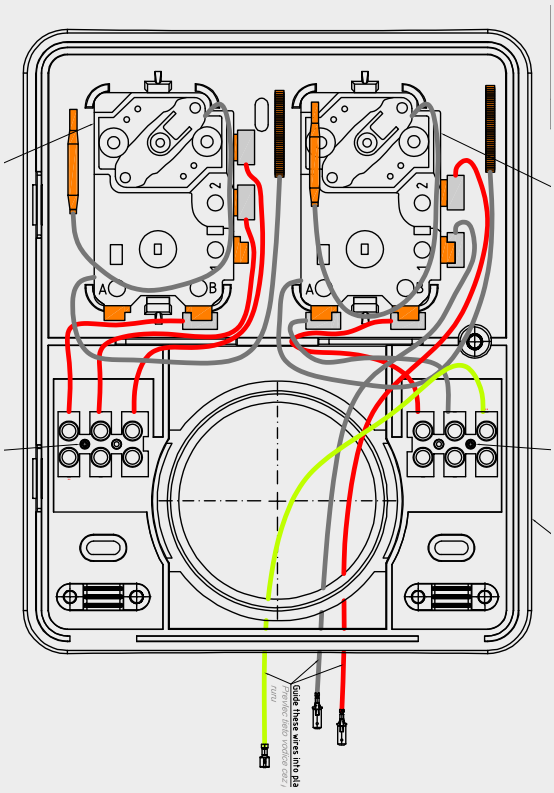
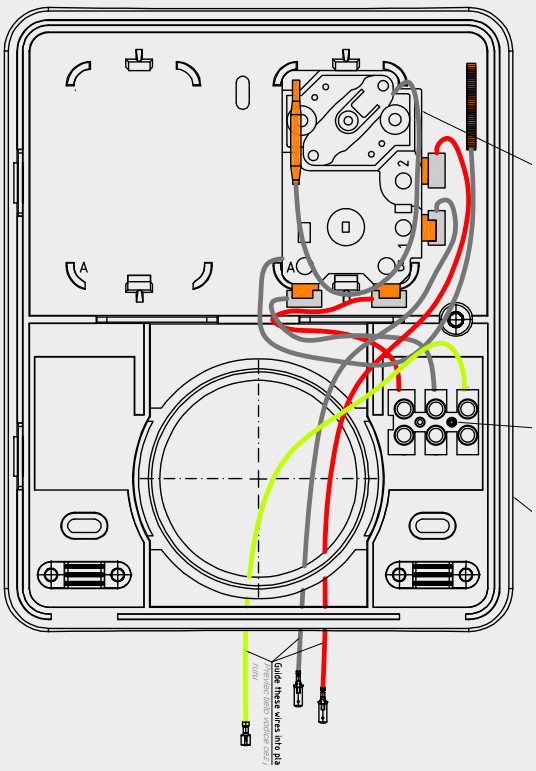
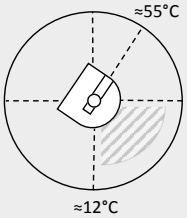
IMMERSION HEATER CONTROL THERMOSTAT

THERMOSTAT WIRING DIAGRAMS

The diagrams below show the wiring within the thermostat box for indirect and direct cylinders respectively.
The thermostat mounted on the right controls the immersion heater.
The thermostat on the left switches the controls for the primary heat exchanger.
On reciept the thermostat probes will inserted into the thermostat pockets on the immersion heater. The immersion heater thermostat probes should alway be inserted in the upper thermostat pocket on the immersion heater and the primary heating thermostat probes should always be inserted into the lower thermostat pocket on the immersion heater.
Connect immersion heater supply right terminal block as detailed inside enclosure
Pre-plumbed cylinders will already be connected to the primary circuit thermostat. Use wiring diagram on previous page to connect to thermostat







LEFT HAND THERMOSTAT (If fitted): BOILER CONTROL

RIGHT HAND THERMOSTAT: IMMERSION HEATER CONTROL

Thermostat/s pre-set to approximately 55°C.

The outlet water temperature should be checked and the thermostat adjusted according to the cylinder commissioning process.

High limit cut out operating temperature: 89°C +0 -10°C

Thermostat switch rating: 20A @ 250V

USER INFO: If the high limit thermostat trips, isolate all electrical supplies and contact your cylinder installer.

Adjusting temperature settings after commissioning may cause water to reach scalding temperatures at the outlets

TECHNICAL SPECIFICATION

Maximum Inlet Water Pressure	12 Bar
Operating Pressure	3.0 Bar
Expansion Valve Opening Pressure	8.0 Bar
Maximum Operating Pressure	8.0 Bar
Opening Pressure of T & P Valve	10.0 Bar
Opening Temperature of T & P Valve	90°C
Maximum Pressure on Primary Circuit (Indirect Coil)	3.5 Bar

Element Rating	3kW @ 240 V
Fuse Requirement	13A via Double Pole Switch
High Limit Thermostat for Element - Temperature Set Point	85°C

PRODUCT CODE	WEIGHT EMPTY	WEIGHT FULL	CAPACITY*	INDIRECT COIL SURFACE AREA	ERP BAND	Standing Loss (W)	Load Profile	Efficiency	kWh/year
EVERFLO RAPIDE PLUS PLUS DIRECT									
AUXD120	30	155	125	N/A	D	-	M	33%	1490
AUXD150	35	190	154	N/A	D	-	L	36%	2781
AUXD180	40	220	183	N/A	D	-	L	35%	2832
AUXD210	45	255	209	N/A	D	-	L	34%	2876
AUXD250	50	300	247	N/A	D	-	XL	36%	4548
AUXD300	55	355	297	N/A	D	-	XL	36%	4567
EVERFLO RAPIDE PLUS INDIRECT									
AUXN120	35	155	119	0.67	B	49	-	-	-
AUXN150	40	190	149	0.77	B	52	-	-	-
AUXN180	45	225	178	0.86	C	65	-	-	-
AUXN210	50	260	205	0.86	C	76	-	-	-
AUXN250	55	305	242	0.96	C	87	-	-	-
AUXN300	60	360	287	0.96	C	91	-	-	-

* at 3.0 Bar

COMMISSIONING

FLUSHING & FILLING

Check all the connections for tightness including any factory made connections such as the immersion heater and the temperature and pressure relief valve. Before filling, open the hot tap furthest away from the EVERFLO RAPIDE PLUS to let air out. Open the cold main isolation valve and allow the unit to fill. When water flows from the tap allow it to run for a short while to flush through any dirt, swarf or flux residue. Close the tap and open every other hot tap in turn to purge all remaining air.

DIRECT UNITS

After filling with water and after sterilisation liquid has been purged, switch on the power to the immersion heaters and allow the unit to start to heat. The immersion heater is supplied preset at 55°C. Turning fully to + sets to approx 65°C. Allow unit to heat up, adjust the thermostat so that the heater switches off at 60°C.

INDIRECT UNITS

Consult the boiler manufacturer's commissioning instructions and fill the primary circuit. Ensure the lever on the two port valve is set to the filling position. When full, move the lever back. Switch the programmer to Domestic Hot Water (DHW) and allow the unit to start to heat. Adjust the dial of the dual thermostat to between 55°C and 65°C as required. Allow unit to heat up, adjust the thermostat so that the heater switches off at 60°C.

STORAGE TEMPERATURE

The recommended storage temperature for both direct and indirect cylinders is 60-65°C. In hard water areas consideration should be given to reducing this to 50-55°C. In many healthcare applications the guidance on Legionella control and safe water delivery temperatures will require storing the water at 60-65°C, distributing at 50- 55°C and using thermostatic mixing valves to control the final temperature. For details consult the NHS Estates Guidance on safe hot water temperatures.

SAFETY VALVE CHECKS

During heat-up there should have been no sign of water coming from either the expansion relief valve or the temperature/pressure relief valve. Now hold both of these safety valves fully open, allowing as much water as possible to flow through the tundish. Check that your discharge pipework is free from debris and is carrying the water away to waste efficiently. Release the valves and check that they reseat properly. On Completion of commissioning, fill in the Benchmark check list and leave with the house owner.

BENCHMARK SCHEME

The installer must follow the Benchmark code of practice for the Benchmark certification to be valid. The benchmark code of practice can be found on the internet using the following internet site www.centralheating.co.uk and follow links.

SERVICING

GENERAL

Servicing should only be carried out by competent installers and any spare parts used must be Range Cylinders approved. NEVER bypass any safety devices or operate the unit without them being fully operational.

DRAINING

Isolate from the electrical supply to prevent the immersion heaters burning out. Turn off the boiler. Isolate the unit from the cold mains. Attach a hose to the draining tap ensuring that it reaches to a level below the unit (this will ensure an efficient syphon is set up and the maximum amount of water is drained from the unit). First open the hot tap closest to the unit and then open the draining tap.

WARNING: WATER DRAINED OFF MAY BE VERY HOT!

IMPORTANT: After draining the cylinder do not close the hot tap until the cylinder has fully cooled, failure to follow this instruction may result in damage to the cylinder and will invalidate the guarantee.

ANNUAL MAINTENANCE

EVERFLO RAPIDE PLUS requires an annual service in order to ensure safe working and optimum performance. It is essential that the following checks are performed by a competent installer on an annual basis. Commonly this is done at the same time as the annual boiler service.

1) Twist the cap of the expansion relief valve on the inlet control set and allow water to flow for 5 seconds. Release and make sure it resets correctly. Repeat with the pressure / temperature relief valve. In both cases check that the discharge pipework is carrying the water away adequately. If not, check for blockages etc. and clear.

WARNING: THE WATER DISCHARGED MAY BE VERY HOT!

2) Check that any immersion heaters fitted are working correctly and that they are controlling the water at a temperature between 55°C and 65°C.

3) Recharge the expansion space by following the instructions on page H1. Turn off the water supply to the unit and open a hot tap and drop the presure in the cylinder. Hold open T&P valve until flow stops. Release T&P valve and turn water suply back on. When water flows from hot tap turn tap off. Check for any leaks.

4) Unscrew the head on the inlet control set and clean the mesh filter within.. valve until wate

YOUR GUARANTEE MAY BE VOID WITHOUT PROOF OF ANNUAL SERVICING.

FAULT FINDING

FAULT	POSSIBLE CAUSE	SOLUTION
Water escaping from the case	Compression fittings not sealing	Check/remake joint with sealing paste
Cold water at Hot taps	Direct - immersion heater not switched on or cutout has triggered	Check / reset
	Indirect - boiler not working	Check boiler - consult boiler manufacturers' instructions
	Indirect - motorised valve fault	Check plumbing / wiring to motorised valve
	Indirect - cutout in dual stat has operated	Reset and investigate cause
Water discharges from expansion relief valve	If continual - pressure reducing valve (part of inlet control set) may not be operating correctly	Check outlet pressure from inlet control set is 3.5 bar.
	If continual - expansion relief valve seat may be damaged	Remove cartridge - check seat and renew if necessary
	Unit it being back pressurised Loss of air gap in cylinder	With cylinder cold check pressure in cylinder. If this is the same as the incoming mains pressure then you are getting backfeed. Install a balanced cold supply (see page 6) Follow recharge steps on page H1
Water discharges from temperature &. pressure relief valve	Unit has overheated - thermal controls have failed	"Switch off power to boiler and immersion heaters. Leave water supply on. Wait until discharge stops. Isolate water supply and replace if faulty"
Milky / cloudy water	Oxygenated water	Water from any pressurised system will release oxygen bubbles when flowing. The bubbles will settle out.
No hot water flow	Cold main off	Check and open stopcock
	Strainer blocked in pressure reducing valve	Isolate water supply and clean
	Inlet control set may be fitted incorrectly	Check and refit as required
Noise during hot water draw-off -typically worse in the morning.	Loose airing cupboard pipework	Install extra clips
Hot or warm water from cold tap	If tap runs cold after a minute or so the pipe is picking up heat from heating pipework.	Insulate / re-route

SPARE PARTS

A full range of spare parts is available from Everflo Cylinders see page 2 for parts.

USER INSTRUCTIONS

Your stainless system is automatic in normal use and requires only annual servicing. You should employ a competent installer to perform the annual servicing. Normally this is timed to coincide with the annual boiler service.

IF WATER IS FLOWING FROM THE SAFETY VALVES THROUGH THE TUNDISH THIS INDICATES A FAULT CONDITION AND ACTION IS NEEDED.

If this water is hot, turn the boiler and / or the immersion heater off. Do not turn off the water until the discharge runs cool. The discharge may also stop.

CALL OUT A COMPETENT PLUMBER TO SERVICE THE UNIT.

Tell them you have a fault on an unvented cylinder. We stock all the spare parts they may need (see page 3).

DRAINING

IMPORTANT: After draining the cylinder do not close the hot tap until the cylinder has fully cooled, failure to follow this instruction may result in damage to the cylinder and will invalidate the guarantee.

The installer must follow the Benchmark code of practice for the Benchmark certification to be valid. Please see page 28 for further details.

EVERFLO RAPIDE PLUS UNVENTED HOT WATER CYLINDERS
HOME OWNER INFORMATION

INTRODUCTION

Congratulations on your purchase of an EVERFLO RAPIDE PLUS Unvented water heater or storage unit. The cylinder in manufactured in the UK from top quality materials and components and meets the latest relevent standards in safety and performance. The inner vessel in manufactured from high grade duplex stainless steel providing the end user with long life performance as long as it is maintained in accordance with the instructions.

Operational differences
Unvented hot water cylinders perform differently to vented cylinders. As water is heated the pressure within the system will rise. This can often be notices when hot taps are first opened by a brief surge in flow. This is a normal fuction for the product and does not indicate a fault.

USER INSTRUCTIONS

Setting of water temperature within the cylinder
Both immersion heater control and boiler heat control thermostats should have been set during the installation process. If a different temperature is required the the thermostat cover will need to be removed. **DO NOT REMOVE THE COVER WITHOUT FIRST ISOLATING THE ELECTRICAL SUPPLY.**
After isolating both the boiler and Immersion heater supply remove the thermostat cover. To increase temperature rotate the adjustment knob clockwise on the thermostat.
The immesion heater control is mounted on the right.
The boiler control is mounted on the left.
If in any doubt contact a competant electrician.

Operational Faults
The air expansion volume within the cylinder will periodically require recharging. Over time this volume is depleted. The indication that the air expansion volume needs to be rechargesd is water intermittently discharging from the expansion relief valve on the inlet control set. To recharge the aair expansion volume follow the steps listed below.

1. Turn off the heat inputs to the Tribune X. Programmer to off and switch of Immersion heater.

2. Turn off the isolator before the inlet control set.

3. Open the lowest hot water outlet that is supplied by the cylinder.

4. Open te temperature and pressure relief valve by rotating and holding the red cap clockwise approx 1/10 of a turn. Water flow from the tap.

5. When the water stops flowing from the tap and air is no longer drawn in through the temperature and pressure relief valve, release the red cap. It will rotate back to its closed position.

6. Open the isolation valve fitted before the inlet control set.

7. Allow water to run from hot tap for a short period before closing the tap. The air expansion voume is now recharged
If water continues to discharge from the expansion relief valve then it is recomended to arrange inspection by a competent installer.

If water discharges from the Temperature and Pressure Relief valve switch off all power to immersion heaters and turn off boiler. Contact Service Engineer to identify and rectify problem. Do not tamper, remove or block any of the safety valves fitted to the unit.

SERVICING

GENERAL

Servicing should only be carried out by competent installers and any spare parts used must be approved parts. NEVER bypass any safety devices or operate the unit without them being fully operational.

DRAINING

Isolate from the electrical supply to prevent the immersion heaters burning out. Turn off the boiler. Isolate the unit from the cold mains. Attach a hose to the draining tap ensuring that it reaches to a level below the unit (this will ensure an efficient syphon is set up and the maximum amount of water is drained from the unit). First open the hot tap closest to the unit and then open the draining tap.

WARNING: WATER DRAINED OFF MAY BE VERY HOT!

IMPORTANT: After draining the cylinder do not close the hot tap until the cylinder has fully cooled, failure to follow this instruction may result in damage to the cylinder and will invalidate the guarantee.

ANNUAL MAINTENANCE

EVERFLO RAPIDE PLUS requires an annual service in order to ensure safe working and optimum performance. It is essential that the following checks are performed by a competent installer on an annual basis. Commonly this is done at the same time as the annual boiler service.
An annual service should include the following as a minimum

1. Recharging of the expansion volume
2. Checking of all safety valves to ensure they are not leaking and function correctly
3. Testing of thermostats to ensure they are functioning correctly
4. Cleaning of filter on inlet control set
5. Test immersionn heater for continuity and resistance
6. Record temperature of hot water at outlet after 1 minute of flow
7. Ensure discharge pipe discharges fully
8. Complete Benchmark Service record

GUARANTEE TERMS AND CONDITIONS

This guarantee applies only to the produc.t(hereafter the term 'product' refers to EVERFLO RAPIDE PLUS).

The manufacturer guarantees to the homeowner that for a period of 2 years from the date of commissioning or legal completion if new build, that the products and associated components installed will - Conform to The manufacturer specification; and be free from defects in materials and workmanship, subject to the conditions set out below.

Please note: this guarantee excludes all pipework and connections and excludes any ancillary equipment as may be connected to the product. (Ex: descaling equipment, water softeners)

The guarantee is extended to a total of 25 years for the stainless steel inner vessel in domestic properties.

The manufacturer reserves the right, at it's discretion to replace a product or major component where it considers it to be beyond economical repair.

In the event of a breakdown during the guarantee period please call our Customer Service Department on:

0845 260 7260 - UK

Guarantee repair is free of charge to you for any parts and labour, providing all the guarantee conditions have been met.

GUARANTEE TERMS & CONDITIONS
Please read the following conditions before registering your product and before seeking any guarantee service support
IMPORTANT: The manufacturer's guarantee is subject to the home owner registering with the The manufacturer Customer Service Department within 30 days of commissioning / occupation if new build to confirm:
• Product Make / Model
• Details of installation (can be found on technical label)
Please complete the registration card provided and return to:
Customer Service Department,
Tadman Street, Wakefield, WF1 5QU, UK

The product must be maintained by a competent person* within 12 months after commissioning, and thereafter at 12 monthly intervals. The manufacturer reserves the right to seek evidence of this maintenance to our reasonable satisfaction before approving any guarantee servicing / repairs. This may include evidence of completed BenchmarkTM log book and service agreement / invoice. Annual Services are available from the Customer Service/ Technical Support team.
*A competent person is a business that has been adjudged by an accredited body** to be sufficiently competent to self-certify that its work complies with Document (G) Part 3 of the Building Regulations of England and Wales
*May Include SEI registered installers and/or FAS trained plumbers who have completed the renewables technology module
** An example of which is BPEC
Any exchanged component will become the legal property of The manufacturer.
This guarantee is valid provided that:
• The product has been installed by a competent installer and as per the instructions contained in the installation manual and all relevant Codes of Practice and Regulations in force at the time of installation.
• Any disinfection has been carried out in accordance with BS 6700.
• The product has not been modified in any way.
• The system is fed from domestic mains water supply complience with water regulations 2000
• The product has only been used for the storage of wholesome water (max. 250mg/l chloride – for hard water areas, The manufacturer recommends the use of an electrolytic scale reducer)
• Any 3rd party labour charges associated with replacing the unit or any of its components have been authorised in advance by the Customer Service/ Technical Support team.
• It has only been used for the storage of potable water.
• The product has not been subjected to frost, nor has it been tampered with or been subjected to misuse or neglect.
• No factory fitted parts have been removed for unauthorised repair or replacement.
• The BenchmarkTM Commissioning Checklist and Service Record included with this product Installation Manual have been completed.
• Regular maintenance has been carried out by a competent person in accordance with the requirements set out in the maintenance section of the installation manual.

• Evidence of purchase and date of supply must be submitted upon making a claim.

GUARANTEE TERMS AND CONDITIONS

•If a defect arises and a valid claim is received within the Warranty Period, at its option and to the extent permitted by law The manufacturer shall either
(1) Repair the defect at no charge, using new or refurbished replacement parts
or
(2) Exchange the product with a product that is new or which has been manufactured using new or serviceable used parts or
(3) Refund the purchase price or a reasonable proportion of the purchase price.
The manufacturer reserves the right to inspect the product at your home before proceeding with any guarantee repair or replacement.
Any valid guarantee claim or guarantee service does not extend the original guarantee period. Information on extend warranties is available upon request.
The guarantee only applies to the property at which the product was originally installed and applied only to properties in the United Kingdom & Ireland. The guarantee is fully transferable from a change of legal ownership of the property.
EXCLUSIONS – The guarantee does not cover:
The manufacturer will not be liable for any fault or costs arising from incorrect installation, incorrect application, lack of regular maintenance or neglect, accidental damage, malicious damage, misuse, any alteration, tampering or repair carried by a non competent person.
• The product if the factory fitted temperature and pressure relief valve has been tampered with or removed.
• Neither the Distributor nor Manufacturer shall be responsible for any consequential damage howsoever caused.
• The effects of scale build up or the effects of corrosion.
• Any consequential losses caused by the failure or malfunction of the product.
• Faults and any associated costs arising from lack of power or water.
• Failure incurred by water contamination, air pollution and natural disasters.
• This guarantee is not valid for installations outside the United Kingdom.
• Any consequential loss, loss of profits, revenues or receipts howsoever arising from any non-conformity or defect affecting the product or from any delay in repair or replacement of the product.
• Any loss or damage caused by delay in conduct of services or supply of parts required to rectify the non-conformity or defect. (provided the manufacturer will use all reasonable efforts to ensure services are performed on a timely basis).
• For repair or replacement of any Product consumables or decorative finishes, such as filters and casings.
This guarantee does not affect any legal rights you may have as a consumer under applicable national legislation governing your purchase of this product

The manufacturer shall make final determination as to the validity of any guarantee claim, and shall be entitled to charge you all reasonable costs incurred in investigating the claim where there is no fault found, or the guarantee claim is rejected in accordance with these conditions.

Customer Service Department
Tadman Street
WAKEFIELD
WF1 5QU
U.K

To be completed by the home owner. Please use this card to register within 30 days of commissioning / occupation if new build.

By completing this form, you consent to The manufacturer holding and using those details for all purposes directly related to the administration and conduct of guarantee services. Apart from the necessary usage, your personal data will not be disclosed to third parties by The manufacturer.

GUARANTEE REGISTRATION CARD

Home Owner Name

Home Address

Post code

Make of product

Model/size

Serial Number

Installers Contact details
(can be found in benchmark log book)

Date of installation
can be found in benchmark log book)

Signature of homeowner

Date

Or Signature of developer
(If new build)

Date