CHWS

PROSTOR BV

DHW BUFFER STORAGE VESSEL

Operation & Maintenance Manual

User Instructions

Your system will run automatically in normal use it will however require regular servicing, it is essential that servicing is undertaken by competent installer. It is advisable that servicing of the vessel is timed to coincide with the servicing of your heat source.

Water flowing through the tundish indicates that there is a fault, if the water is hot turn the heat source off and allow water to cool (flow may stop) call out a competent plumber.

Installation Instructions

What follows is essential for warranty validity.

It is the responsibility of the user and/or installer to ensure that the unit is installed and operated safely, and in accordance with the instructions supplied below.

- The installation should also be in accordance with the British Standard Codes of Practice, current Building Regulations, i.e. Health & Safety Document No. 635 (The Electricity At Work Regulations 1989), and the Water Supply (Water fittings) Regulations, BS 5449:1990 Forced circulation hot water systems , BS 6700:2006 Design, installation, testing and maintenance of services supplying water. The relevant regulations are: England and Wales – Building Regulation G3; Scotland – Technical Standard P3; North Ireland – Building Regulation P5
- Installation must be in accordance with the relevant requirements of the Building regulations, IEE Regulations and the Water Supply (Water Fittings) Regulations. It should also be in accordance with any relevant requirements of the Local Authority
- Must be undertaken by a qualified installer
- Must be supplied, with a Temperature/ Pressure safety valve (see Appendix A). Where a heat exchanger is fitted an unvented kit located on the cold water supply must be fitted (see Appendix B)
- Lifting - on larger vessels lifting eyes are available, do not use straps or chains which may result in damage to the vessel
- Do not lift a vessel using the insulation where fitted straps may crush or damage the insulation casing
- Siting, - ensure that the surface the vessel is located on is firm and level to prevent settling, pipe strain or distortion of the vessel. Adequate space to enable installation and servicing and access to the inspection hatch and all connections must be allowed for
- Pipework/connections - ensure threaded/ flanged connections from the pipework is square on to the connections on the vessel. Flanged connections, ensure that the bolts are not tightened consecutively around the flange but diametrically opposite. Pipework connections must be adequately supported to prevent any stress to the vessel

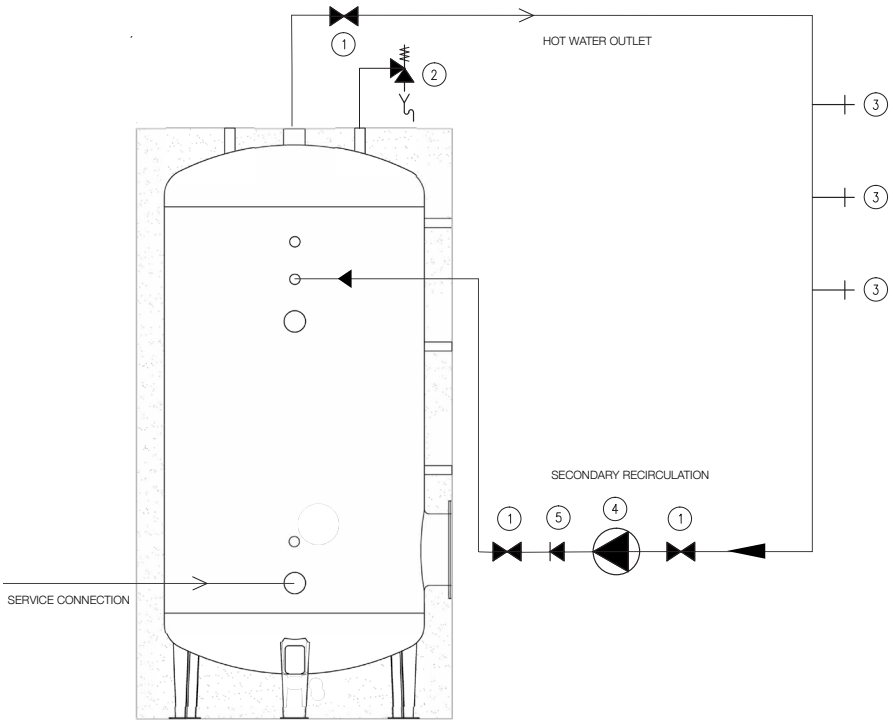
- Before start up/testing and after installation, check and if necessary tighten the hydraulic connections where a heat exchanger is fitted
- Tightening of the bolts should be in a criss cross sequence, any leaks must be rectified before start up
- Where a heat exchanger is fitted and the system is unvented. All unvented systems must be fitted with devices to accommodate the expansion of water during the heating cycle it is essential that an unvented kit is located on the cold water supply during installation
- Direct electrically heated (immersions) must be fitted together with a dual thermostat incorporating an independent high limit cut out thermostat & a control thermostat
- All electrical work must be undertaken by a qualified electrician
- Gradually fill the system ensure adequate venting for air removal during filling and that the drain valve is closed, slowly open other system connections where appropriate
- When the vessel is operating at working temperature and pressure visually check all connections and gaskets, if necessary tighten bolts on the system
- The working temperature of the buffer vessel should not exceed 99°C and the working pressure should not exceed 8 bar

Maintenance

Maintenance will consists of testing and checking if all components are working properly, before attempting any internal inspection/maintenance drain contents of vessel, if fitted with an electrical immersion ensure the immersion is switched off

- Annual internal cleaning of the vessel should be carried out to avoid corrosion
- Undo Bolts from inspection hatch (as previously described) check for wear of gasket, replace if necessary
- If fitted with a heat exchanger, the heat exchanger should be inspected in situ annually, however, where the water is particularly aggressive, it is advisable that inspections should be carried out every 6 month or so. Lime scale build up on the heat exchanger will reduce performance regular cleaning using a suitable descaling agent will avoid performance drop off
- Ensure all hydraulic connections are secured and leak tested before and during vessel refill
- Check that the Pressure/temperature relief valve is operating any hot water from the PT valve must be discharged in a safe way reflecting the requirements of current legislation
- Ensure Immersion(s) are heating the water to the correct temperature
- Electrical checks/tests on the immersion and dual control thermostats must be carried out by a qualified electrician

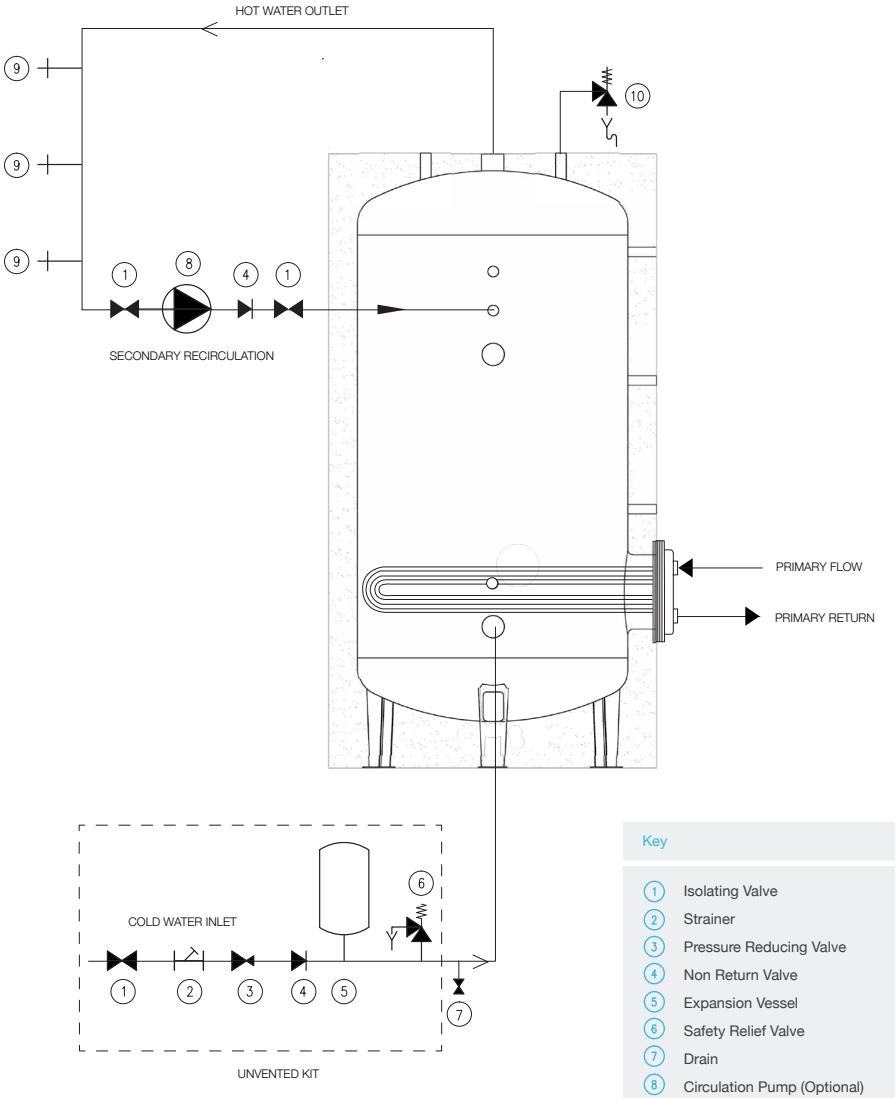
APPENDIX A



Key

1. Isolating Valve
2. T&P Valve
3. Drawn-off Points
4. Circulation Pump
5. Non Return Valve

APPENDIX B



Key

1. Isolating Valve
2. Strainer
3. Pressure Reducing Valve
4. Non Return Valve
5. Expansion Vessel
6. Safety Relief Valve
7. Drain
8. Circulation Pump (Optional)
9. Drawn-off Points
10. T&P Valve

CONNECTOR TYPE		MODEL						
		300	400	500	800	1000	1500	2000
1	Drain	1”	1”	1”	1”	1 1/4”	1 1/4”	1 1/4”
2	Service Connection	1 1/2”	2”	2”	2”	2”	2 1/2”	2 1/2”
3	Destratification Outlet	3/4”	3/4”	3/4”	3/4”	3/4”	1”	1”
4	Secondary Return Inlet	3/4”	3/4”	3/4”	3/4”	3/4”	1”	1”
5	Service Connection Optional Immersion	1 1/2’	2”	2”	2”	2”	2 1/2”	2 1/2”
6	Destratification Inlet	3/4”	3/4”	3/4”	3/4”	3/4”	1”	1”
7	Sacrificial Anode	1 1/4”	1 1/4”	1 1/4”	1 1/4”	1 1/4”	1 1/4”	1 1/4”
8	Domestic Hot Water Outlet	1 1/2”	2”	2”	2’	2”	2 1/2”	2 1/2”
9	Temp Pressure Relief Valve	1/2”	3/4”	3/4”	1”	1”	1”	1 1/4”
10	Hi-Limit Temp stat	1/2”	1/2”	1/2”	1/2”	1/2”	1/2”	1/2”
11	Sensor Tappings x 2 Flanged	1/2”	1/2”	1/2”	1/2”	1/2”	1/2”	1/2”
12	Inspection Access & Exchanger Inlet	180/120 mm	290/220 mm	290/220 mm	290/220 mm	300/220 mm	480/400 mm	480/400 mm

MAXIMUM WORKING PRESSURE 10 bar, MAXIMUM WORKING TEMPERATURE 95 C

GENERAL SPECIFICATIONS

	Unit	BV 300	BV 400	BV 500	BV 800	BV 1000	BV 1500	BV 2000
Contents	litres	285	400	490	749	955	1430	1990
Empty weight	kg	105	130	145	195	205	285	350
Heat Loss	W	63	104	118	174	193	250	305
Max. operating pressure	bar	10	10	10	10	10	10	10
Max. water temperature	°C	95	95	95	95	95	95	95

DIMENSIONS

	Unit	BV 300	BV 400	BV 500	BV 800	BV 1000	BV 1500	BV 2000
Total height	mm	1680	1525	1890	1875	2205	2185	2470
Diameter (without insulation)	mm	500	650	650	790	790	1000	1100
Diameter (with insulation)	mm	700	850	850	990	990	1200	1300
Height to Drain	mm	140	165	165	240	135	280	250
Height to Centre of Inspection Hatch	mm	345	395	395	470	470	545	555
Height to Sensor Pocket	mm	540	595	595	670	670	760	820
Height to Sensor Pocket	mm	1090	910	1140	1200	1530	1375	1445
Height to Hi Limit Temperature Stat	mm	1380	1175	1405	1500	1830	1725	1990
Height to Destratification Inlet	mm	1255	1050	1280	1375	1705	1560	1730
Height to Secondary Return	mm	1155	965	1195	1260	1590	1440	1535
Height to Service connection/immersion	mm	1010	835	1065	1130	1460	1300	1345
Height to Destratification Outlet	mm	540	595	595	670	670	585	595
Height to Service Connection	mm	235	285	285	360	360	435	400
Height to Sacrificial Anode	mm	1380	1175	1405	1500	1830	1725	820
Height to Domestic Hot Water Outlet	mm	1615	1460	1690	1810	2140	2120	2420
Height to T&P Relief Valves	mm	1615	1460	1690	1810	2140	2120	2420

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