



Plumbing Trade Supplies

BOSS™ Expansion Vessels



WRAS
APPROVED
PRODUCT



Introduction

BOSS™ Expansion Vessels have been specifically designed and manufactured to offer the installer a comprehensive range of quality, durable heating vessels and boxed sets of component kits, which makes up compact and neat assemblies for domestic sealed system applications.

Larger vessels up to 1000 litres are available to special order. All our vessels and component kits are fully compliant with all current regulations.



Product Range

Keyword	Capacity Litres	Diameter (mm)	Height (mm)	Max Pressure	Pre-charge	Conns
BV4	4	225	195	5 bar	1.5 bar	3/4"G
BV8	8	220	295	5 bar	1.5 bar	3/4"G
BV12	12	294	281	4 bar	1.5 bar	3/4"G
BV18	18	290	400	4 bar	1.5 bar	3/4"G
BV24	24	324	415	4 bar	1.5 bar	3/4"G
BV35	35	404	408	4 bar	1.5 bar	3/4"G
BV50	50	404	530	4 bar	1.5 bar	3/4"G
BV80	80	450	608	6 bar	2 bar	3/4"G
BV105	105	500	665	6 bar	2 bar	3/4"G
BV150	150	500	897	6 bar	2 bar	3/4"G

Suitable for static systems up to 15 metres

Specification

Vessels

- Designed and tested to: BS4814:1990
-  Approved / Kitemark approved where indicated 
- Construction: deep drawn steel to BS4814
- Diaphragm: fixed, flexible rubber membrane
- Air Charge Valve with protective cap
- Maximum operating temperature: 90°C
- Maximum working pressure: 4-6 bar dependent on capacity
- Finish: powder coated paint
- **Guarantee: 2 years from date of purchase**

Sealed System Component Packs

Pack A - Suitable for vessels up to 24 litres

Keyword: BSSCP

- Vessel Manifold: to connect vessel, SRV, loop & system
- Combined safety relief valve and pressure gauge: factory set at 3 bar. Outlet - 15mm /G 1/2" BSP
- Filling Loop: WRAs approved, complies with G24 (part 1 & 2) of water regulations
- Supplied with mounting bracket

Pack B - Keyword: BSSCPB

As Pack A, except contains separate safety valve for remote mounting

Pack C - Suitable for vessels over 24 litres

Keyword: BSSCPC

As Pack A, without the mounting bracket



Sizing a Vessel

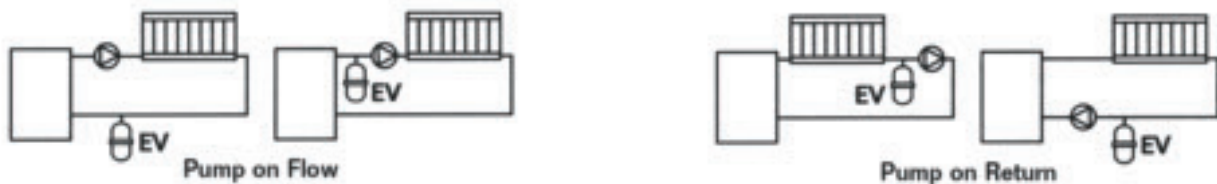
Keyword	Vessel Size Litres	1Static Height	2Boiler Rating Btu/hr	3Content Litres	Connections 3/4" BSP(M)		
					A = Ø	B = Height	Weight
BV4	4	Up to 5m	17060	60	225	195	1.8
BV8	8	Up to 5m	34120	120	220	295	2.4
BV12	12	Up to 5m	51180	180	294	281	3.6
BV18	18	Up to 5m	85300	300	290	400	4.4
BV24	24	Up to 5m	102360	360	324	415	5.4
BV35	35	Up to 5m	136480	480	404	408	7.5
BV50	50	Up to 5m	156383	550	404	530	9.4
BV80	80	Up to 5m	184816	650	450	608	15.4
BV105	105	Up to 5m	227466	800	500	665	17.7
BV150	150	Up to 5m	278646	980	500	897	23.2

1. Static height is the vertical distance from expansion vessel to highest point of the system above expansion vessel.
2. Sizing assumes 12 litres in the system per kW of boiler power as suggested in BS7074: 1989 Part 1.
3. Use this method where possible. Calculations to BS7074: 1989 Part 1.

To size a vessel 50 litres and above please refer to BS7074: part1: 1989

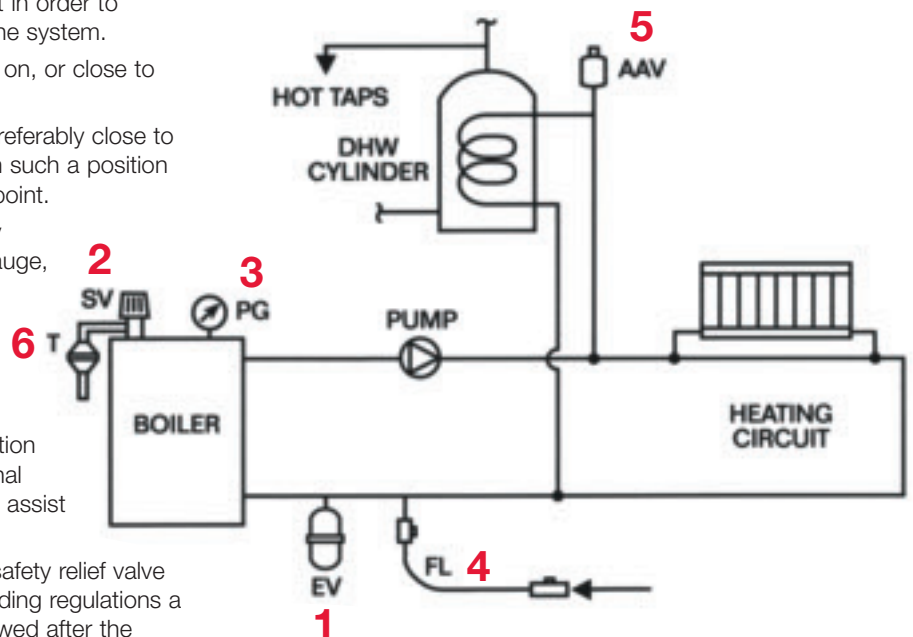
Locating a Vessel

Suitable expansion vessel locations are given below, depending on pump position.



A Typical Sealed System Installation

- 1 **The expansion vessel** should be connected to the system at a point close to the pump inlet in order to maintain positive pressures throughout the system.
- 2 **The safety valve** should be fitted either on, or close to the boiler on the flow pipe.
- 3 **The pressure gauge** should be fitted preferably close to the expansion vessel and/or the boiler, in such a position that it can be easily read from the filling point.
- 4 **The filling point** should be near the key components, particularly the pressure gauge, and should be a temporary connection to allow filling from the water mains, incorporating a double check valve and isolating valve(s).
- 5 **Automatic air vents** should be fitted at the high points in the system. Consideration should also be given to fitting an additional **automatically vented air separator** to assist in purging air from the system.
- 6 **1/2" Tundish** should be fitted after the safety relief valve providing an air gap. To comply with building regulations a drop of 300mm minimum should be allowed after the tundish, before discharge.



Good Installation Practice The installation of any sealed system must be carried out by a competent person(s) possessing the relevant industry qualifications and be strictly in accordance with the requirements of all local/national requirements and the water supply regulations. All installations should be in accordance with the appropriate British Standard and/or Best Practice Guides.

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