



# PV W

## vertical potable water expansion vessels 8 to 33 litre

SD 047 28-08-2020

### Introduction

Altecnic offer a complete range of expansion vessels for use with potable water.

Expansion vessels for heating systems are manufactured to meet the requirements of PED 97/23/EC Directive and BS EN 13831:2007 'Closed expansion vessels with built in diaphragm for installation in water'.

Nitrogen improves the life of the expansion vessel by reducing internal corrosion and prevents the loss of pre-charge pressure.

Nitrogen permeates through rubber slower than oxygen, is far less reactive to steel and does not degrade rubber prolonging the life of the membrane.

### Design

Manufactured in carbon steel with a two part welded construction.

Pre-pressurised air chamber with synthetic rubber compound membrane.

Non-replaceable membrane.

The internal surfaces of the vessel in contact with the water are coated against corrosion.

External surfaces have a blue durable powder coated finish.

Suitable for flow temperatures up to 70°C, resistant to ethylene or propylene glycol mixtures and has low gas permeability.

Altecnic expansion vessels are all tested according to the Pressure Equipment Directive.

### How It Works

In a closed hot water circuit water cannot be compressed so any increase in volume, created by an increase in temperature, has to be accommodated by an expansion vessel.

When water is cold, the pre-charge pressure forces the diaphragm against the tank towards the inlet.

As the temperature increases, the expanded water volume pushes against the diaphragm creating additional volume for the water to enter.

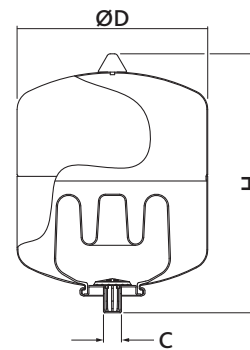
When the temperature decreases, the pre-charge pressure forces the water from the tank and back into the main heating system.

This maintains a constant pressure within the heating system helping to reduce energy consumption.

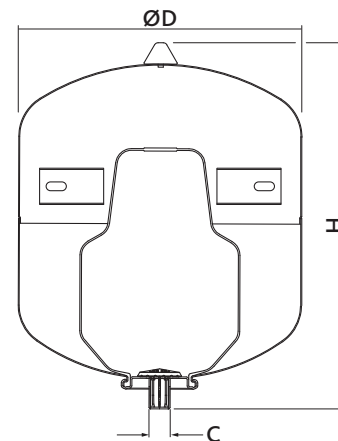
### Component

Component	Material
Shell	Carbon Steel
Connections	Carbon Steel
Membrane	Butyl elastomer
Coating	Powder Epoxy

### Dimensions



2 to 25 litres



33 litres - with wall bracket

Ref No	Capacity	ØD	H	C	Weight
	litre	mm	mm	Connection	kg
PV8W	8	206	335	G $\frac{3}{4}$	1.8
PV12W	12	280	310	G $\frac{3}{4}$	2.4
PV18W	18	280	410	G $\frac{3}{4}$	2.8
PV25W	25	280	520	G $\frac{3}{4}$	4.7
PV33W	33	354	455	G $\frac{3}{4}$	6.6

### Technical Specification

Max. working pressure:	10 bar
Test pressure:	1.5 x max working pressure
Max. vessel operating temperature:	70° C
Factory pre-charge:	4.0 bar - nitrogen
Water connection thread:	BS EN ISO 228

CE marked

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