



## PV W

### vertical potable water expansion vessels 50 to 1000 litre

SD 048 01-09-2020

#### 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 multi part welded construction.

Pre-pressurised air chamber with synthetic rubber compound membrane.

Replaceable membrane except for 140 litre size.

Sizes 80 litre and larger have a top water connection.

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.

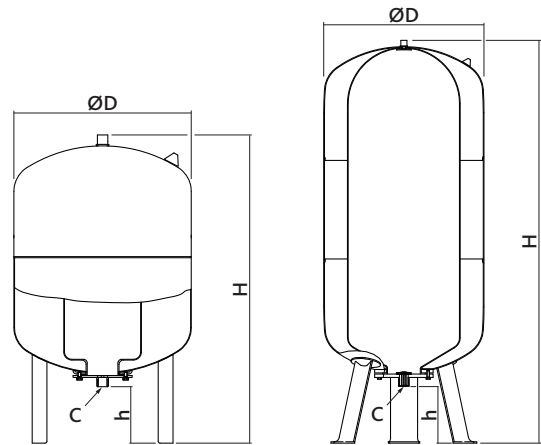
#### Component

Shell  
Connections  
Membrane  
Coating

#### Material

Carbon Steel  
Carbon Steel  
Butyl elastomer  
Powder Epoxy

#### Dimensions



50 to 500 litres

600 and 1000 litres

Ref No	Capacity litre	ØD mm	H mm	h mm	C Connection	Weight kg
PV50W	50	409	605	104	G1	9.5
PV60W	60	409	740	152	G1	14
PV80W	80	480	745	152	G1	16
PV100W	100	480	850	152	G1	19
PV140W	140	480	1015	145	R1	29
PV200W	200	634	970	145	G1¼	40
PV300W	300	634	1270	145	G1¼	54
PV400W	400	740	1245	135	G1¼	70
PV500W	500	740	1475	135	G1¼	79
PV600W	600	740	1860	265	G1½	103
PV800W	800	740	2325	265	G1½	195
PV1000W	1000	740	2804	323	G1½	228

#### 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  
 except 140 litre: BS EN 10226

CE marked

© Patents & Design Altecnic 2020

Altecnic Ltd retains all rights (including patents, designs and copyrights, trademarks and any other intellectual property rights) in relation to all information provided on or via the website, brochures or any other documents, including all texts, graphics and logos, contained on the website, in brochures or in any other documents published in the name of or on behalf of Altecnic Ltd in any form, without prior written consent of Altecnic Ltd.

Altecnic Ltd Mustang Drive, Stafford, Staffordshire ST16 1GW T: +44 (0)1785 218200 E: sales@altecnic.co.uk [altecnic.co.uk](http://altecnic.co.uk)

Registered in England No: 2095101 E & O.E © Altecnic Limited. 2020 ALTECNIC™