MainSaver

Home Pressure System

Product Overview

The DPT MainSaver comprises of the MainSaver vessel complete with our upstream line-in kit.

Application

The DPT MainSaver is designed to offer stored clean, potable cold water at pressure for domestic and smaller commercial applications where mains water is insufficient to offer consistant, reliable water services. Installation parameters must not exceed the values given in the technical specifications.

Storage

If the DPT Mainsaver is to be stored immediately on receipt, ensure that it is stored in a dry, frost and vibration free location in its original packaging to avoid damage or harm to the product.

Warnings

DPT MainSaver systems must not be used for any other application without the written consent of DPT Limited.

Ensure the floor is sufficiently strong enough to take the total weight of the unit when full of water (see Technical Specification section). Take care when manoeuvring the unit so as not to damage it.

Ensure the MainSaver is secured to the flooring using suitable fixings to avoid risk of toppling over or movement.

To reduce the risk of injury, ensure all water pressure is released from the system prior to work being performed. Always ensure pumps are disconnected and/or electrically isolated.

It is recommended that the system is protected by a suitable pressure relief valve set at or below the maximum vessel pressure rating. Failure to install a pressure relief valve may result in vessel explosion in the event of a system malfunction or over pressurisation, resulting in property damage, serious personal injury or death.

If the MainSaver vessel leaks or shows signs of corrosion or damage do not use it and contact DPT.

Introduction

Congratulations on choosing a DPT MainSaver system, designed to offer consistent and reliable water services throughout your property.

How the DPT MainSaver System works

The DPT MainSaver vessel stores water from the main in a sealed water chamber, separated from the air space by a rubber diaphragm and pressurised to an optimum setting. When water is drawn by downstream services, the water from the mains is supplemented by the water from the MainSaver unit to provide a balanced supply at consistent pressure.

IMPORTANT FACTS READ BEFORE COMMENCING INSTALLATION

Water temperature

This unit is designed for cold water applications only which should not exceed the following values:

2.11 The maximum allowable water temperature is 35 oC.
2.12 The minimum allowable water temperature is 4 oC.

Pipework - General

Secure pipework: Ensure pipework to and from the MainSaver is independently supported & clipped to prevent forces being transferred.

Flux: Solder joints must be completed and flux residues removed prior to completing the installation (flux damage will void any warranty).

Pipework design: Care should be taken in the design of pipework runs to minimize the risk of air locks e.g. use drawn bends rather than 90 degree bends.

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MainSaver vessel

Ensure the MainSaver vessel is installed correctly before operating the unit, to avoid damage.

Location

Access

For emergencies and maintenance the MainSaver must be easily accessible at all times.

Protection

The DPT MainSaver system must be located in a dry position, and protected from freezing tempreatures. Avoid environments which have a high ambient temperature, high humidity or excessive condensation and salt damage, etc.

Incoming mains water pressure

An incoming water pressure of at least **2.0 bar** is required and should not exceed 5 bar. (If mains pressure is below 2.0 bar the MainSaver vessel should be supplemented with a pump unit, contact DPT for details).

Ensure that location of the unit allows adequate space to give reasonable access to all parts to accommodate service/commissioning.

Pipework

Pipework should be sized to ensure optimum performance of the system.

Terminology

Upstream line-in kits

Upstream line-in kits for 35mm, 42mm & 54mm installations use separate regulating components and should be installed on the rising main between the stopcock and the MainSaver vessel.

System Designation

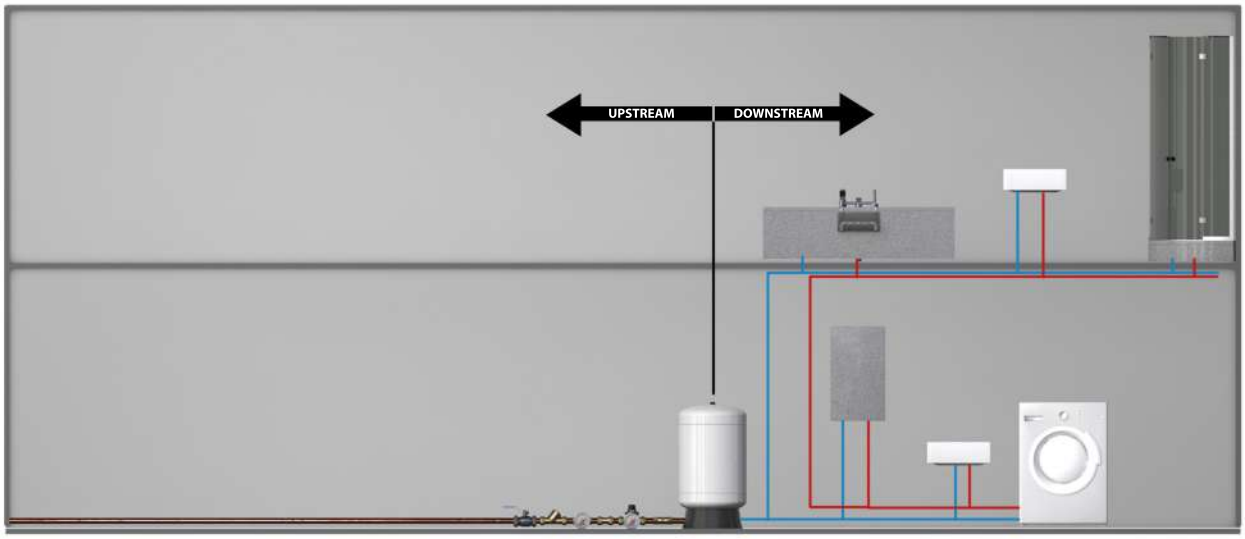
It is important to understand what upstream and downstream refers to before starting the installation.

Upstream

The term 'Upstream' refers to the system configuration from the consumer's stopcock to the point where the supply reaches the inlet port of the MainSaver vessel.

Downstream

The term 'Downstream' refers to the system configuration from the outlet tapping on the MainSaver vessel, along the distribution header (if configured in this way) and into the distribution pipework and outlets. This includes hot and cold services where both are present.



Upstream Inline kIt

Installation

Remove the MainSaver vessel from its packaging and check to ensure it is not damaged.

WARNING: depending on vessel size this may require two people to complete safely.

Ensure the floor is sufficiently strong enough to take the total weight of the unit when full of water. Take care when manoeuvring the unit so as not to damage it.

Vertically mounted MainSaver vessels

Carefully turn the vessel on its side using the discarded packaging to protect it.

Once on its side screw the MainSaver vessel connector provided in the upsteam line-in kit into the tank elbow at the base using suitable thread seal such as PTFE tape or liquid thread lock as shown in the below illustration.

Cut a piece of 28 mm dia. copper pipe to a suitable length, ensuring clearance of the base.

Fit the isolating valve provided to the tail now protruding from the base of the vessel.

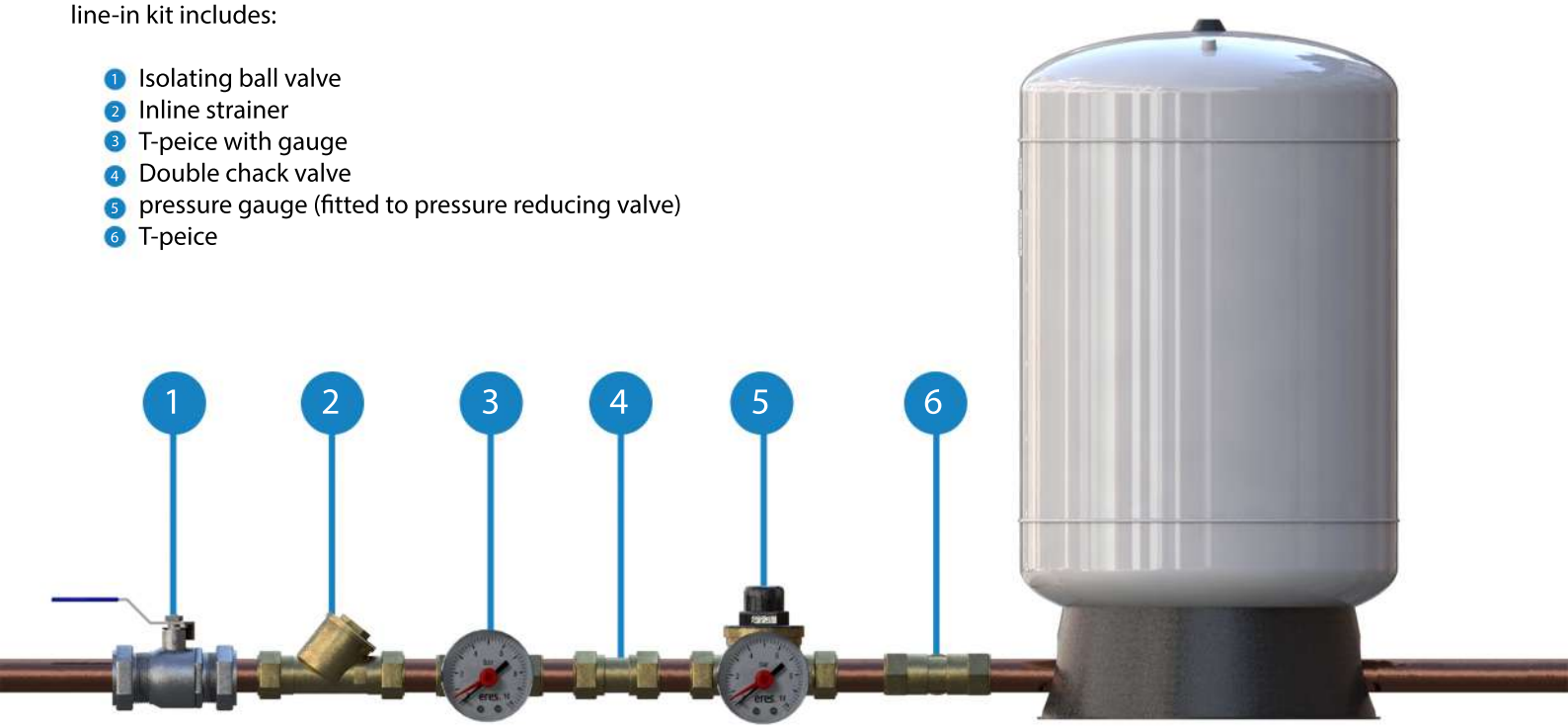
The vessel assembly should then be positioned and checked to ensure there is sufficient space to install the upstream line-in kit between the stopcock and pressure vessel inlet.

Fix the Mainsboost vessel securely to the floor using appropriately selected and sized fixings.

Installation Guide

Upstream line-in kits (35mm, 42mm, 54mm) The upstream line-in kit includes:

1. Isolating ball valve
2. Inline strainer
3. T-peice with gauge
4. Double chack valve
5. pressure gauge (fitted to pressure reducing valve)
6. T-peice



PIPE SIZE	MINIMUM PIPE LENGTH FOR UPSTREAM KIT INSTALLATION
22mm	480mm
28mm	580mm
35mm	630mm
40mm	735mm
54mm	820mm

Commissioning

Check vessel pre-charge pressure

It is important to have the correct pre-charge pressure in the vessel for your site conditions to optimise performance. The vessel is supplied with a pre-charge pressure of approximately 1.4 bar and should never have a preset pressure of less than 0.5 bar.

Checking and adjustment to the vessel pre-charge air pressure can only be carried out when the vessel is empty (contains no water).

Check mains static pressure

Close outlets and check pressure gauge after 'Y' strainer - for static mains pressure and note it. This should be done at peak times of use.

Turn stopcock off and leave outlet taps open.

Check the chart below for the correct vessel pressure against the static mains pressure recorded.

*Adjust pressure regulating valve down to these settings where possible.

**Recommended setting.

Using a pressure gauge check the vessel and adjust to suit through the schrader valve.

Warning: NOTE PRV setting must not exceed 5.0 bar.

On completion of the installation, follow the commissioning process below.

Leave all outlet valves closed.

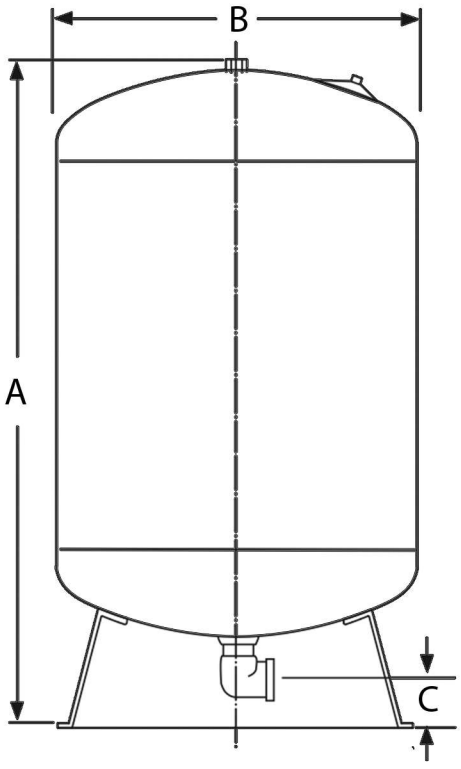
Turn on stopcock and open inlet ballvalve, both pressure gauges on inlet and PRV will start to show movement as the mains pressure fills the system.

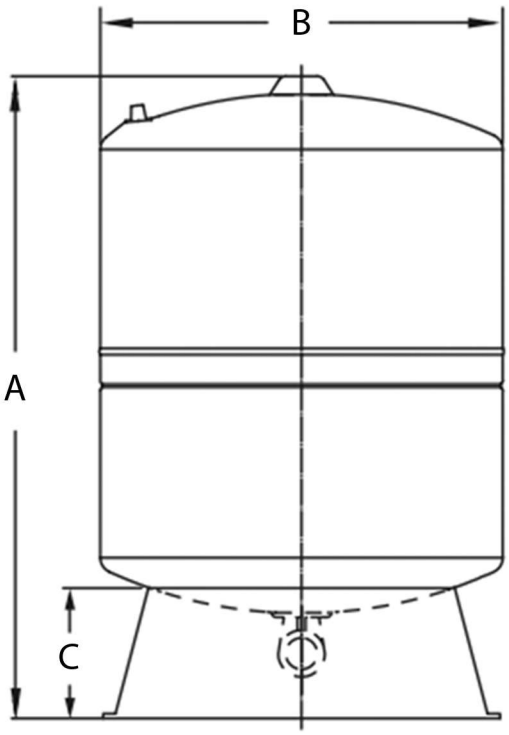
Check for leaks on all joints made.

The incoming mains pressure will start to fill the vessel with water.

STATIC MAINS PRESSURE	SET VESSEL PRE-CHARGE PRESSURE	DIFFERENTIAL	SET PRV MAXIMUM SETTING
bar	bar	bar	Bar
< 2.0	If mains pressure is below 2 bar a pumped unit will be required		
2.0	0.5	1.5	2.0
2.5**	0.7	1.8	2.5*
3.0	1.2	1.8	3.0
3.5	1.7	1.8	3.5
4.0	2.2	1.8	4.0

MainSaver Vessel								
General	WRAS approval				1501305 / 1901372			
	Approvals				WRAS / CE			
	Guarantee				5 Years			
Performance	Maximum working pressure				1000 kPa (10 bar)			
	Min/Max operating temperature				Min 4°C / Max 35°C			
	Max rated temperature				90°C			
Materials	Pressure Vessel				Epoxy coated mild steel			
	Membrane				Butyl rubber			
BSP	**Nominal Volume**		**Dimensions**					
			A		B		C	
	Litre	Gal	CM	Inches	CM	Inches	CM	Inches
Vertical Models								
MS-100LV	100	26.4	80.40	31.65	43.00	16.93	12.90	5.08
MS-130LV	130	34.3	107.40	42.28	43.00	16.93	12.90	5.08
MS-150LV	150	40.0	93.80	36.38	53.00	20.87	13.85	5.45
MS-200LV	200	50	105.56	41.561	53.29	21.03	5.68	2.23
MS-250LV	250	60	122.75	48.33	53.37	21.03	5.68	2.23
MS-300LV	300	80	151.27	59.56	53.37	21.03	5.38	2.23
MS-450LV	450	120	155.07	61.05	66.06	26.01	6.43	2.53





35LV - 150LV

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