

Description:

Diaphragm pressure expansion vessels with removable bag type diaphragms are suitable for use in hot water, boosted and water-supply systems. The Airfix D-E expansion vessel can be used in boosted systems either on the suction side or the discharge side of the pumps. These systems are designed to prevent low pressures and changes in pressure at low flow rates.



Features

- Vessel flow through
- Low pressure drop
- Standard diaphragm rupture sensor may be configured for remote control read out.
- Easy to install with long service life
- Sensor for membrane ruptures
- Pressure gauge with blow back protection
- Inspection port (600 litres and above top and bottom)
- Flange internally coated to DIN 4753-4 to prevent oxidation
- Replaceable diaphragm
- Special flow through construction eliminates the formation of unwanted bacteria & legionella

Application of Use

- Potable water
- Sprinkle installation

Maximum Operating Conditions:

- Maximum Temperature: 70°C
- Maximum Working Pressure: 16 Bar
- Maximum Pre-charge Pressure: 5 Bar
- Maximum Efficiency: 60%

Selection Details:

Two factors play an important role in the choice of an expansion vessel. The first consideration is the total flow requirements of the system. This determines the pump capacity, which can be used as the basis for the calculation. The second factor of importance is the time the pump needs to top up the expansion vessel from minimum to maximum pressure.

Material of Construction:

- Head: Ø450-1000: S235JRG2
- Head: Ø1200: P265GH
- Shell: Ø450-1000: S235JRG2
- Shell: Ø1200: P265GH
- Flange 1-5: S235JRG2
- Flange 6: S235JRG3
- Pipe/fitting: p235tr1 (st37.0)
- Bolt: 5.6 din267-13 (3.1b en10204)
- Membrane: Butyl Rubber
- Flange: Stainless Steel 304
- Colour: Powder Coated – Yellow-Green

Certifications and Standards Applied:

- PED 97/23/EC
- Diaphragm failure monitor tested to Directive 89/336/EEC according to DIN 4807-5
- CE Approved
- ACS Certified
- WRAS approved
- Material quality:
 - A181 class 60 : ASTM
 - RSt37.2/C22.3 : DIN
 - 1503-221-410 : BS
 - S235JRG2 EN 10250/2 : EN/ISO
 - P245N EN10222/2 : EN/ISO
- Membrane: DIN 4807-3 & DIN 4807-5
- Flange: EN 1092-1 PN16
- Rupture indicator: IP rated IP65

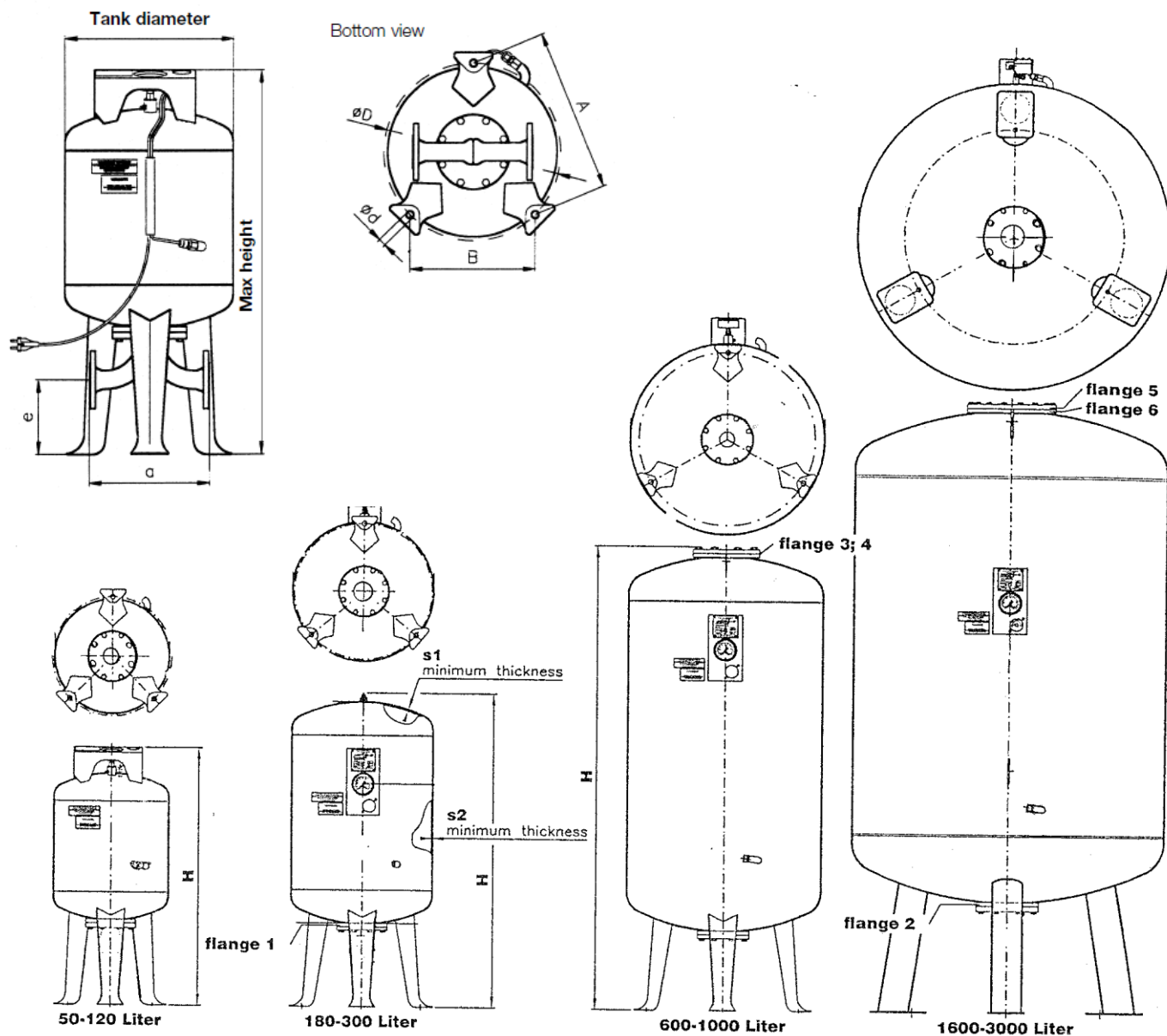
Note: Any questions please contact your local representative

Specification:

Type	Capacity (l)	Dimensions (mm)		Hole diameter (mm) d	Hole Spacing (mm)		Base Circle Diameter (mm) D	s1	s2
		Diameter	Height		A	B			
Airfix D-E 50	50	450	836	20	434	332	470	4.9	4.1
Airfix D-E 80	80	450	1016	20	434	332	470	4.9	4.1
Airfix D-E 120	120	450	1271	20	434	332	470	4.9	4.1
Airfix D-E 180	180	550	1227	20	485	410	535	5.7	4.8
Airfix D-E 240	240	550	1487	20	485	410	535	5.7	4.8
Airfix D-E 300	300	550	1827	20	485	410	535	5.7	4.8
Airfix D-E 600	600	750	1840	20	589	589	680	7.4	6.2
Airfix D-E 800	800	750	2230	20	589	589	680	7.4	6.2
Airfix D-E 1000	1000	750	2730	20	589	589	680	7.4	6.2
Airfix D-E 1600	1600	1000	2663	20	598	598	690	8	7.9
Airfix D-E 2000	2000	1200	2412	20	728	728	840	8	7.8
Airfix D-E 3000	3000	1200	3312	20	258	258	840	8	7.8

(*) With a pressure loss of 0.2 bar

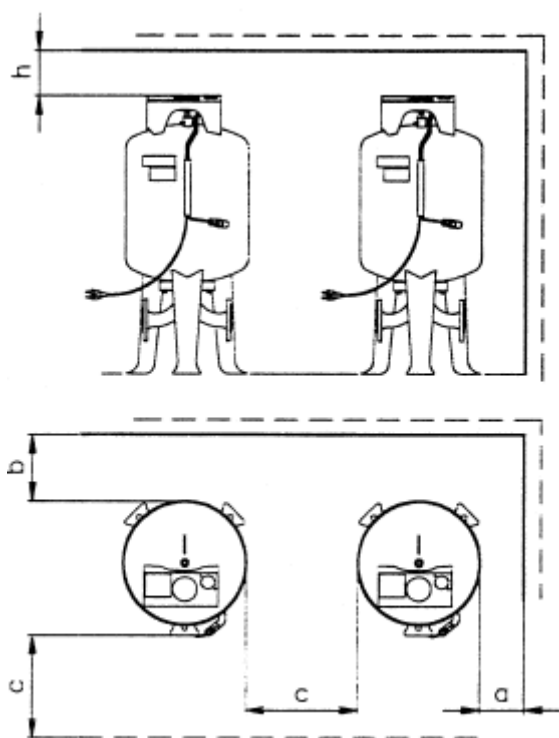
Type	Double system connection (mm)		Flanges (2x) PN 16	Weight (Kg)	Water Flow (*) m³/h	Order Code
	Length (a)	Height (e)				
Airfix D-E 50	320	190	DN 40	70	14.4	19722392
Airfix D-E 80	320	190	DN 40	80	14.4	19722400
Airfix D-E 120	320	190	DN 40	95	14.4	19722411
Airfix D-E 180	320	185	DN 40	135	14.4	19722422
Airfix D-E 240	320	185	DN 40	160	14.4	19722433
Airfix D-E 300	320	185	DN 40	190	14.4	19722444
Airfix D-E 600	390	140	DN 50	300	21.1	19722455
Airfix D-E 800	390	140	DN 50	350	21.1	19722466
Airfix D-E 1000	390	140	DN 50	415	21.1	19722477
Airfix D-E 1600	370	275	DN 80	610	46.9	19722488
Airfix D-E 2000	370	260	DN 80	680	46.9	19722499
Airfix D-E 3000	370	260	DN 80	890	46.9	19722507



Installation & Placement:

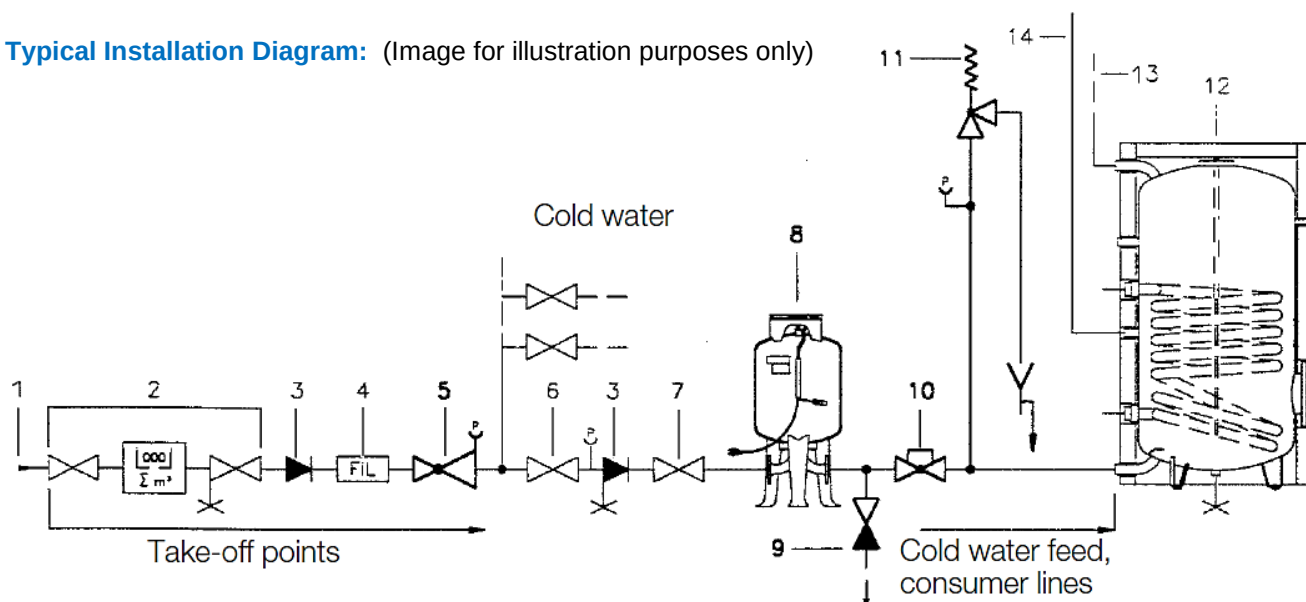
The membrane expansion vessels must be placed so that their operation, inspection and maintenance can constantly be ensured. The tanks must be set up in an enclosed, frost free area, observing the minimum distances shown in Table. The safe ambient temperature range for the vessel is 5-40 °C.

Clearance and connection requirements:



Type	Height (mm) h	Width (mm)		
		a	b	c
Airfix D-E 50	650	500	650	800
Airfix D-E 80	650	500	650	800
Airfix D-E 120	650	500	650	800
Airfix D-E 180	650	500	650	800
Airfix D-E 240	650	500	650	800
Airfix D-E 300	650	500	650	800
Airfix D-E 600	1000	500	650	800
Airfix D-E 800	1000	500	650	800
Airfix D-E 1000	1000	500	650	800
Airfix D-E 1600	1000	500	1000	800
Airfix D-E 2000	1000	500	1000	800
Airfix D-E 3000	1000	500	1000	800

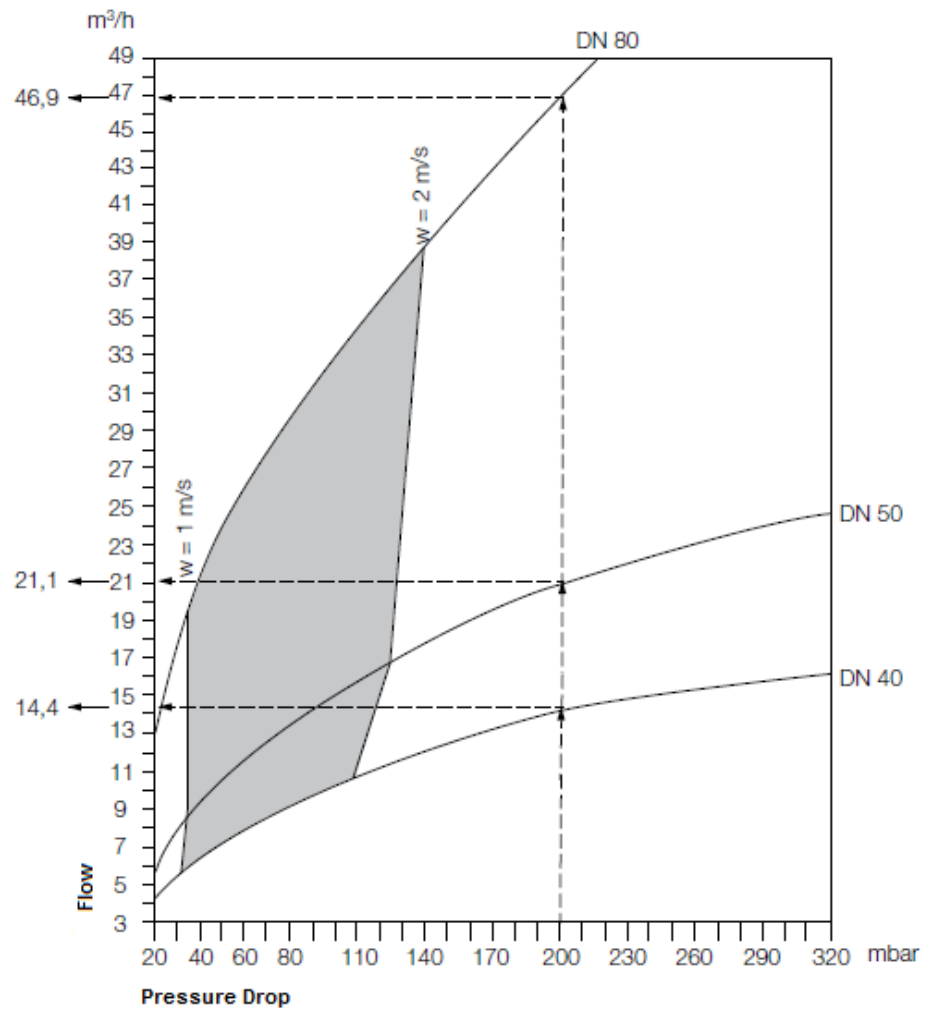
Typical Installation Diagram: (Image for illustration purposes only)



- 1 Potable water supply line
- 2 Water meter system
- 3 Back-flow preventer
- 4 Filter
- 5 Pressure reducer with test connection
- 6 Shut-off valve
- 7 (Shut-off valve > 150 litres water heater)
- 8 Membrane expansion vessel Airfix D-E

- 9 Drainer
- 10 Shut-off device secured against unintentional closure (e.g. cap valve with wire and lead seal)
- 11 Safety valve
- 12 Storage-type water heater
- 13 Hot water line
- 14 Circulation line

Diaphragm Pressure drop curve:



Disclaimer: We reserve the right to change designs and technical specification of our products