

Expansion Vessels for Potable Water Installations

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Domestic installations lose millions of litres of potable water due to expansion water leaking from the vent and expansion pipe. Flamco's Airfix diaphragm pressure expansion vessels for mains water systems work to prevent this waste. Bacteria formation is prevented because Airfix A, D and D-E vessels are designed to allow a continuous flow through of water to maintain constant circulation. These expansion vessels can be applied in combination with all hot water calorifiers and as surge vessels in pressure boosting systems.

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AIRFIX A/D

For use in potable water or fresh water installations.

The Airfix A and D expansion vessels operate in such a way that the water flows right through and they are continuously flushed with fresh water from the mains. This prevents tepid, stagnant water from collecting in the vessel in which bacterial growth could occur. Therefore, users can be assured of high quality potable water.

Applying an Airfix A / D expansion vessel to a water heater prevents the opening of the safety group or safety valve each time the potable water is heated. As a result, not only the life of the safety group or safety valve is significantly prolonged (damage or calcification of seat is avoided) but also the risk of permanent leakage (with high water loss as a consequence). An Airfix vessel is also a perfect solution in basement applications where the drain is higher than the safety valve.

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Benefits of using Airfix expansion vessels

- No waste of valuable potable water.
- With special flow through construction.
- Continuous flow through prevents bacterial growth.
- Special butyl rubber diaphragm does not add any colour, odour or taste to the water.
- Corrosion-resistant coating inside, not only on the water side but also on the nitrogen side.
- Internationally approved and certified.
- The clench ring construction allows coating before assembly.
- Nitrogen gas filling for longer retention of pre-charge.

- Colour: White RAL9010.
- Maximum working pressure: 8/10 bar.
- Suitable for systems with a maximum flow temperature of 120 °C.
- Maximum temperature diaphragm: 70 °C.
- Vessels in accordance with EN13831.

- Approvals: **DVGW-W270**
WRAS
ACS
PZH
KIWA approved execution available on request.
Approved for potable water applications according to CE 2002/16/EC.

- In accordance with Pressure Equipment Directive 2014/68/EU.

- Airfix A/D 35 - 80: With suspension eye. Connection to the underside of the vessel.

Airfix Selection Table

Selection table for pressure expansion vessels for boiler applications.

- Cold water temperature: 10 °C.
- Hot water temperature: 60 °C.


Boiler Capacity [l]	Initial pressure [bar]	Set pressure safety valve			
		6 bar	7 bar	8 bar	10 bar
100	3	Airfix 8/3	Airfix 8/3	Airfix 8/3	Airfix 8/3
100	4	Airfix 12/4	Airfix 8/4	Airfix 8/4	Airfix 8/4
120	3	Airfix 8/3	Airfix 8/3	Airfix 8/3	Airfix 8/3
120	4	Airfix 18/4	Airfix 12/4	Airfix 8/4	Airfix 8/4
150	3	Airfix 12/3	Airfix 8/3	Airfix 8/3	Airfix 8/3
150	4	Airfix 18/4	Airfix 12/4	Airfix 12/4	Airfix 8/4
200	3	Airfix 18/3	Airfix 12/3	Airfix 12/3	Airfix 8/3
200	4	Airfix 25/4	Airfix 18/4	Airfix 12/4	Airfix 12/4
250	3	Airfix 18/3	Airfix 18/3	Airfix 12/3	Airfix 12/3
250	4	Airfix 35/4	Airfix 25/4	Airfix 18/4	Airfix 12/4
300	3	Airfix 25/3	Airfix 18/3	Airfix 18/3	Airfix 12/3
300	4	Airfix 35/4	Airfix 25/4	Airfix 18/4	Airfix 18/4
400	3	Airfix 35/3	Airfix 25/3	Airfix 18/3	Airfix 18/3
400	4	Airfix 80/4	Airfix 35/4	Airfix 25/4	Airfix 18/4
500	3	Airfix 35/3	Airfix 25/3	Airfix 25/3	Airfix 18/3
500	4	Airfix 50/4 (2x)	Airfix 50/4	Airfix 35/4	Airfix 25/4

Airfix D 8 - 35

The Airfix D is fitted with a synthetic flow through construction and a special T-piece which eliminates the formation of unwanted bacteria.

- Including special brass flow dividing T-piece (3/4") and internal synthetic flow through construction.
- Quality Vignette DIN-DVGW: NW-9481 AU2096.



Type	Pre-charge [bar]	Max. working pressure [bar]	Dimensions		Connection	Weight [kg]		Order Code
			Ø [mm]	H. [mm]				
Airfix D 8	4	10	245	301	R 3/4"	3.2	50	14259
Airfix D 12	4	10	286	334	R 3/4"	4.3	36	14349
Airfix D 18	4	10	328	325	R 3/4"	4.9	24	14459
Airfix D 25	4	10	358	378	R 3/4"	6.6	18	14559
Airfix D 35	4	8	396	437	R 3/4"	8.1	18	14659




Airfix A 8 - 80

The Airfix A is fitted with a synthetic flow through device in a standard T-piece (not included) which eliminates the formation of unwanted bacteria.

- Including synthetic flow divider.
- Quality Vignette DIN-DVGW: 04-0359-W AG 003/04.



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Type	Pre-charge [bar]	Max. working pressure [bar]	Dimensions		Connection	Weight [kg]		Order Code
			Ø [mm]	H. [mm]				
Airfix A 8	4	10	245	301	R 3/4"	3.2	50	24259
Airfix A 8	specify	10	245	301	R 3/4"	3.2	50	24257
Airfix A 12	3	10	286	334	R 3/4"	4.3	36	24348
Airfix A 12	4	10	286	334	R 3/4"	4.3	36	24349
Airfix A 12	specify	10	286	334	R 3/4"	4.3	36	24347
Airfix A 18	3	10	328	325	R 3/4"	4.9	24	24458
Airfix A 18	3.5	10	328	325	R 3/4"	4.9	24	24460
Airfix A 18	4	10	328	325	R 3/4"	4.9	24	24459
Airfix A 18	5	10	328	325	R 3/4"	4.9	24	24455
Airfix A 18	specify	10	328	325	R 3/4"	4.9	24	24457
Airfix A 25	3	10	358	378	R 3/4"	6.6	18	24558
Airfix A 25	4	10	358	378	R 3/4"	6.6	18	24559
Airfix A 25	specify	10	358	378	R 3/4"	6.6	18	24557
Airfix A 35	4	8	396	437	R 3/4"	8.1	18	24659
Airfix A 35	specify	8	396	437	R 3/4"	8.1	18	24657
Airfix A 50	4	8	437	473	R 3/4"	11.2	12	24749
Airfix A 80	4	8	519	540	R 3/4"	15.0	12	24809



AIRFIX D-E

High quality pressure expansion vessels for use in all (potable) water installations.

Its special flow through construction eliminates the formation of unwanted bacteria. The composition of the bladders has been made for this range in such a way that there will be no variation in smell, colour or taste. The inside of the Airfix connection flange has a special coating which prevents oxidation.

- Coated, two-way system connection for complete vessel flow through.
- Low pressure drop.
- Nitrogen gas filling for longer retention of pre-charge.
- Replaceable butyl rubber bladder according to DIN4807/5.
- Easy to install with long service life.
- Pressure gauge with blow back protection.

- Quality Vignette DIN-DVGW: NW-0411 BQ 0340.
- Colour: White, RAL 9010.
- Standard pre-charge: 6 bar.
- Suitable for systems with a maximum flow temperature of 120 °C.
- Maximum temperature bladder: 70 °C.
- In accordance with Pressure Equipment Directive 2014/68/EU.

Airfix D-E - 10.0 bar

- Maximum operating pressure: 10 bar.


Airfix D-E 100 - 1000:

- In accordance with EN13831.
- Delivered with pressure gauge, sight-glass, threaded flow through connection and height adjustable feet.

Airfix D-E 1600 - 3000:

- In accordance with AD2000.
- With electronic diaphragm rupture sensor and flanged connections.
- The diaphragm rupture sensor may be configured for remote read-out.



Type	Capacity [l]	Dimensions		System connection (2x)	Flanges * (2x)	Weight [kg]		Order Code
		Ø [mm]	H. [mm]					
Airfix D-E 100	100	484	897	G 1 1/2" M	-	38	1	14750
Airfix D-E 200	200	600	1075	G 1 1/2" M	-	51	1	14751
Airfix D-E 300	300	600	1444	G 1 1/2" M	-	65	1	14752
Airfix D-E 400	400	790	1287	G 2" M	-	89	1	14753
Airfix D-E 600	600	790	1647	G 2" M	-	110	1	14754
Airfix D-E 800	800	790	1994	G 2" M	-	148	1	14755
Airfix D-E 1000	1000	790	2345	G 2" M	-	170	1	14756
Airfix D-E 1600	1600	1000	2663	-	DN 80	550	1	14916
Airfix D-E 2000	2000	1200	2412	-	DN 80	620	1	14920
Airfix D-E 3000	3000	1200	3312	-	DN 80	805	1	14930

* According to EN 1092-1 PN16.




Airfix D-E - 16.0 bar

- Maximum operating pressure: 16 bar.
- In accordance with AD2000.
- With electronic diaphragm rupture sensor and flanged connections.
- The diaphragm rupture sensor may be configured for remote read-out.



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Type	Capacity [l]	Dimensions		Flanges * (2x)	Weight [kg]		Order Code
		Ø [mm]	H. [mm]				
Airfix D-E 50	50	450	839	DN 40	70	1	14701
Airfix D-E 80	80	450	1019	DN 40	80	1	14801
Airfix D-E 120	120	450	1274	DN 40	95	1	14813
Airfix D-E 180	180	550	1238	DN 40	135	1	14819
Airfix D-E 240	240	550	1498	DN 40	160	1	14825
Airfix D-E 300	300	550	1838	DN 40	190	1	14831
Airfix D-E 600	600	750	1843	DN 50	300	1	14861
Airfix D-E 800	800	750	2233	DN 50	350	1	14881
Airfix D-E 1000	1000	750	2733	DN 50	415	1	14911
Airfix D-E 1600	1600	1000	2682	DN 80	610	1	14917
Airfix D-E 2000	2000	1200	2425	DN 80	680	1	14921
Airfix D-E 3000	3000	1200	3335	DN 80	890	1	14931

* According to EN 1092-1 PN16.



Mono Connections




Stainless steel (AISI 304) and powder coated steel mono connections for non-potable water systems.

Stainless steel connections suitable for:

- Airfix D-E-B 10 bar: 1600 - 3000 l.
- Airfix D-E-B 16, 25 bar: 50 - 3000 l.
- Airfix D-E 10 bar: 100 - 1000 l.: Available on request.
- Airfix D-E 10 bar: 1600 - 3000 l.
- Airfix D-E 16 bar: 50 - 3000 l.

Coated steel connections suitable for:

- Airfix D-E 10 bar: 1600 - 3000 l.
- Airfix D-E 16 bar: 50 - 3000 l.

Type	Capacity [l]	Connection		Order Code
Mono small - Stainless steel	50 - 300	G 1 1/2"	1	14960
Mono medium - Stainless steel	600 - 1000	G 2"	1	14961
Mono large - Stainless steel	1600 - 3000	G 2 1/2"	1	14962
Mono small - Coated steel	50 - 300	G 1 1/2"	1	14955
Mono medium - Coated steel	600 - 1000	G 2"	1	14956
Mono large - Coated steel	1600 - 3000	G 2 1/2"	1	14957


Duo Connections



Stainless steel (AISI 304) flow through armature with double system connection.

Suitable for:

- Airfix D-E 10 bar: 100 - 1000 l.: Available on request.
- Airfix D-E 10 bar: 1600 - 3000 l.
- Airfix D-E 16 bar: 50 - 3000 l.

Type	Capacity [l]	Connection*		Order Code
Duo small - Stainless steel	50 - 300	PN16 DN40	1	14950
Duo medium - Stainless steel	600 - 1000	PN16 DN50	1	14951
Duo large - Stainless steel	1600 - 3000	PN16 DN80	1	14952

* According to EN 1092-1 PN 16.

AIRFIX P

Potable water expansion vessels for use in domestic and commercial sealed chilled and hot water systems.

- Nitrogen gas filling for longer retention of pre-charge.
- Designed to incorporate a unique contoured, replaceable bladder.
- With single threaded steel connection and plastic insert (no flow through function).
- Suitable for addition of glycol-based anti-freeze up to 50%.
- In accordance with Pressure Equipment Directive 2014/68/EU.

Airfix P 2 - 300

- Maximum operating pressure: 10.0 bar.
- Maximum working temperature (bladder): 100 °C.
- Colour: Coated aluminium (RAL 9006).
- Airfix P 50 - 300: With feet.

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Type	Capacity [l]	Pre-charge [bar]	Dimensions		Connection	Bladder	Weight [kg]		Order Code
			Ø [mm]	H. [mm]					
Airfix P 2 **	2	0.7	120	235	G 1/2" M	Butyl	4.6*	336	24840
Airfix P 2	2	3.5	120	235	G 1/2" M	Butyl	4.6*	336	24850
Airfix P 3	3	3.5	170	240	G 3/4" M	Butyl	1.5	168	24851
Airfix P 5	5	3.5	170	275	G 3/4" M	Butyl	1.7	144	24852
Airfix P 8	8	3.5	220	305	G 3/4" M	Butyl	2.2	90	24853
Airfix P 12	12	3.5	260	310	G 3/4" M	Butyl	2.9	72	24854
Airfix P 16	16	3.5	260	345	G 3/4" M	EPDM	3.4	60	24855
Airfix P 18	18	3.5	260	375	G 3/4" M	EPDM	3.5	60	24856
Airfix P 24	24	3.5	260	485	G 3/4" M	EPDM	4.3	56	24857
Airfix P 35	35	3.5	380	470	G 1" M	EPDM	8.0	24	24858
Airfix P 50	50	3.5	380	720	G 1" M	EPDM	9.9	15	24859
Airfix P 60	60	3.5	380	830	G 1" M	EPDM	12.1	15	24860
Airfix P 80	80	3.5	460	760	G 1" M	EPDM	14.0	10	24861
Airfix P 100	100	3.5	460	880	G 1" M	EPDM	16.0	10	24862
Airfix P 150	150	3.5	510	1030	G 1" M	EPDM	25.5	8	24863
Airfix P 200	200	3.5	590	1070	G 1 1/4" M	EPDM	37.5	8	24864
Airfix P 300	300	3.5	650	1250	G 1 1/4" M	EPDM	50.5	3	24865


* Per set of four in one box.



Airfix P 400 - 5000

- Maximum operating pressure: 10.0 bar.
- Maximum working temperature (bladder): 70 °C.
- Colour: white epoxy powder coating (RAL 9010).
- Airfix P 400 - 1000: With height adjustable feet.
- Airfix P 1500 - 5000: With manometer, feet (not adjustable).




Type	Capacity [l]	Pre-charge [bar]	Dimensions		Connec- tion	Bladder	Weight [kg]		Order Code
			Ø [mm]	H [mm]					
Airfix P 400	400	3.5	790	1287	G 1 1/4" M	EPDM	84	3	24933
Airfix P 600	600	3.5	790	1647	G 1 1/4" M	EPDM	106	1	24934
Airfix P 800	800	3.5	790	1994	G 1 1/4" M	EPDM	145	1	24935
Airfix P 1000	1000	3.5	790	2345	G 1 1/4" M	EPDM	167	1	24936
Airfix P 1500	1500	3.5	1000	2510	Rp 2 1/2"	Butyl	423	1	24869
Airfix P 2000	2000	3.5	1100	2745	Rp 2 1/2"	Butyl	483	1	24870
Airfix P 2500	2500	3.5	1200	3295	Rp 2 1/2"	Butyl	537	1	24871
Airfix P 3000	3000	3.5	1200	3425	Rp 2 1/2"	Butyl	766	1	24872
Airfix P 5000	5000	3.5	1500	3615	Rp 2 1/2"	Butyl	1620	1	24873



Airfix P Horizontal

- Maximum operating pressure: 10.0 bar (Airfix P 24-H: 8.0 bar).
- Maximum working temperature (bladder): 100 °C.
- Colour: Coated aluminium (RAL 9006).



Type	Capacity [l]	Pre-charge [bar]	Dimensions		Connec- tion	Bladder	Weight [kg]		Order Code
			Ø [mm]	L. [mm]					
Airfix P 24-H	24	3.5	260	485	G 3/4" M	EPDM	4.7	56	24880
Airfix P 50-H	50	3.5	380	595	G 1" M	EPDM	8.1	20	24890
Airfix P 60-H	60	3.5	380	720	G 1" M	EPDM	10.4	15	24881
Airfix P 80-H	80	3.5	460	660	G 1" M	EPDM	12.3	12	24882
Airfix P 100-H	100	3.5	460	780	G 1" M	EPDM	14.0	12	24883
Airfix P 150-H	150	3.5	510	950	G 1" M	EPDM	23.5	6	24884
Airfix P 200-H	200	3.5	590	940	G 1 1/4" M	EPDM	34.2	6	24885
Airfix P 300-H	300	3.5	650	1150	G 1 1/4" M	EPDM	44.0	6	24886
Airfix P 500-H	500	3.5	750	1420	G 1 1/4" M	EPDM	58.0	6	24887



AIRFIX 2 - 4

Small vessels for use in oxygen rich water installations (the vessels are not flow through and therefore not suitable for potable water).

- Nitrogen gas filling for longer retention of pre-charge.
- Maximum working temperature (diaphragm): 70 °C.
- Colour: White, RAL 9010.
- In accordance with Pressure Equipment Directive 2014/68/EU.

Airfix 2 - 4



- Maximum operating pressure: 6.0 bar.

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Type	Pre-charge [bar]	Dimensions		Connection	Weight [kg]		Order Code
		Ø [mm]	H. [mm]				
Airfix 2	4	216	144	G 3/4" M	1.7	120	24001
Airfix 2	*	216	144	G 3/4" M	1.7	120	24002
Airfix 4	4	216	194	G 3/4" M	2.1	90	24101
Airfix 4	*	216	194	G 3/4" M	2.1	90	24102

* Gas charge must be stated on order.

AIRFIX D-E-B

Standard vessels for use in all (potable) water installations. The construction also permits use in closed HVAC installations with a maximum temperature of 70 °C.

The composition of the bladder has been made for this range in such a way that there will be no variation in smell, colour or taste. The inside of the Airfix connection flange has a special coating which prevents oxidation.

- Nitrogen gas filling for longer retention of pre-charge.
- Replaceable butyl rubber bladder according to DIN4807/5.
- With single threaded coated steel connection (no flow-through function).
- Maximum working temperature (bladder): 70 °C.
- Standard pre-charge: 6.0 bar.
- Colour: White, RAL 9010.
- In accordance with Pressure Equipment Directive 2014/68/EU.
- Material quality:
S235JR.
EN/ISO: P245N.

40 bar execution available on request.

Airfix D-E-B - 10.0 bar



- Maximum working pressure: 10.0 bar.

Type	Capacity [l]	Dimensions		Connection	Weight [kg]		Order Code
		Ø [mm]	H. [mm]				
Airfix D-E-B 1600	1600	1000	2680	Rp 2 1/2"	529	1	14918
Airfix D-E-B 2000	2000	1200	2400	Rp 2 1/2"	593	1	14922
Airfix D-E-B 3000	3000	1200	3300	Rp 2 1/2"	782	1	14932



Airfix D-E-B - 16.0 bar



- Maximum working pressure: 16.0 bar.

Type	Capacity [l]	Dimensions Ø [mm]	H. [mm]	Connection	Weight [kg]		Order Code
Airfix D-E-B 50	50	450	830	Rp 1 1/2"	58	1	14703
Airfix D-E-B 80	80	450	1010	Rp 1 1/2"	69	1	14803
Airfix D-E-B 120	120	450	1265	Rp 1 1/2"	83	1	14815
Airfix D-E-B 180	180	550	1255	Rp 1 1/2"	124	1	14821
Airfix D-E-B 240	240	550	1515	Rp 1 1/2"	147	1	14827
Airfix D-E-B 300	300	550	1855	Rp 1 1/2"	178	1	14833
Airfix D-E-B 600	600	750	1840	Rp 2"	282	1	14863
Airfix D-E-B 800	800	750	2230	Rp 2"	333	1	14883
Airfix D-E-B 1000	1000	750	2730	Rp 2"	398	1	14913
Airfix D-E-B 1600	1600	1000	2680	Rp 2 1/2"	587	1	14919
Airfix D-E-B 2000	2000	1200	2400	Rp 2 1/2"	657	1	14923
Airfix D-E-B 3000	3000	1200	3300	Rp 2 1/2"	864	1	14933

Airfix D-E-B - 25.0 bar



- Maximum working pressure: 25.0 bar.

Type	Capacity [l]	Dimensions Ø [mm]	H. [mm]	Connection	Weight [kg]		Order Code
Airfix D-E-B 50	50	450	830	Rp 1 1/2"	59	1	14705
Airfix D-E-B 80	80	450	1010	Rp 1 1/2"	71	1	14805
Airfix D-E-B 120	120	450	1265	Rp 1 1/2"	87	1	14811
Airfix D-E-B 180	180	550	1255	Rp 1 1/2"	123	1	14817
Airfix D-E-B 240	240	550	1515	Rp 1 1/2"	149	1	14829
Airfix D-E-B 300	300	550	1855	Rp 1 1/2"	182	1	14835
Airfix D-E-B 600	600	750	1840	Rp 2"	349	1	14865
Airfix D-E-B 800	800	750	2230	Rp 2"	417	1	14885
Airfix D-E-B 1000	1000	750	2730	Rp 2"	500	1	14905

Mono Connections



Stainless steel (AISI 304) and powder coated steel mono connections for non-potable water systems.

Stainless steel connections suitable for:

- Airfix D-E-B 10 bar: 1600 - 3000 l.
- Airfix D-E-B 16, 25 bar: 50 - 3000 l.
- Airfix D-E 10 bar: 100 - 1000 l.: Available on request.
- Airfix D-E 10 bar: 1600 - 3000 l.
- Airfix D-E 16 bar: 50 - 3000 l.

Coated steel connections suitable for:

- Airfix D-E 10 bar: 1600 - 3000 l.
- Airfix D-E 16 bar: 50 - 3000 l.

Type	Capacity [l]	Connection		Order Code
Mono small - Stainless steel	50 - 300	G 1 1/2"	1	14960
Mono medium - Stainless steel	600 - 1000	G 2"	1	14961
Mono large - Stainless steel	1600 - 3000	G 2 1/2"	1	14962
Mono small - Coated steel	50 - 300	G 1 1/2"	1	14955
Mono medium - Coated steel	600 - 1000	G 2"	1	14956
Mono large - Coated steel	1600 - 3000	G 2 1/2"	1	14957