

Expansion Chambers

Expansion chambers are used in automatic sprinkler systems to control the effects of thermal expansion on system pressure that can occur due to fluid temperature changes. They are installed in wet pipe systems that utilize water or antifreeze solutions.

These hydropneumatic pressure vessels provide additional space in the system to accommodate the expanded volume of solution when temperature increases. They contain a pre-charged cushion (containing nitrogen or dry air, typically) that is compressed as the system pressure increases creating the space for the increased volume of fluid. Expansion chambers are designed to maintain maximum system pressures within the working pressure limitations of the system equipment. Because of the complex effects of system variables on satisfactory performance, each expansion chamber installation should be engineered by the manufacturer for best results.

Expansion chambers are not intended for use as surge or waterhammer arresters. Those devices can be found under Fire Protection / Automatic Sprinkler Systems / Surge and Waterhammer Arresters.

Fire-X-Trol

Fire-X-Trol

Product Designation	Tank Volume, gal (L)	Max Working Pressure, psi (kPa)	Remarks
Fire-X-Trol FPT-1-C	1.5 gal (5.7 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-5-C	2.1 gal (8 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-12-C	6.4 gal (24 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-20V-C	8 gal (30 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-30V-C	14 gal (53 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-42V-C	17.5 gal (66 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-60V-C	25 gal (95 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-70V-C	34 gal (129 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-80V-C	53 gal (200 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-120V-C	66 gal (250 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-180V-C	77 gal (292 L)	175 psi (1205 kPa)	a, b
Fire-X-Trol FPT-210V-C	90 gal (341 L)	175 psi (1205 kPa)	a, b

Remarks:

- Due to the complex effects of system variables on satisfactory performance, each expansion chamber installation should be engineered by the manufacturer for best results.
- Operating Temperature Range: -20°F (-29°C) to 200°F (93°C)

Company Name:	Amtrol Inc
Company Address:	1400 Division Rd, West Warwick, Rhode Island 02893, USA

Surge and Waterhammer Arresters

Surge arresters or dampers are used to moderate the potentially destructive effects of pressure surges or water hammer due to pump starting and stopping and valve opening and closing. They are employed when an anti-waterhammer check valve, alone, proves inadequate to control the problem, but should always be used in conjunction with such a valve.

These hydropneumatic devices absorb pressure surges into a precalculated volume of captive gas and return the absorbed water volume to the system in a controlled fashion. Surge arresters are installed on the system side of the fire pump discharge check valve and as close to the valve as possible. Because of the complex effects of system variables on satisfactory performance, each surge arrester installation should be engineered by the manufacturer for best results.

Surge-Trol

<i>Product Designation</i>	<i>Tank Volume, gal (L)</i>	<i>Max Working Pressure, psi (kPa)</i>
Surge-Trol SPT-7	53 gal (200 L)	275 psi (1900 kPa)
Surge-Trol SPT-11	80 gal (300 L)	275 psi (1900 kPa)
Surge-Trol SPT-14	106 gal (400 L)	275 psi (1900 kPa)
Surge-Trol SPT-18	132 gal (500 L)	275 psi (1900 kPa)
Surge-Trol SPT-21	158 gal (600 L)	275 psi (1900 kPa)
Surge-Trol SPT-28	211 gal (800 L)	275 psi (1900 kPa)
Surge-Trol SPT-35	264 gal (1000 L)	275 psi (1900 kPa)
Surge-Trol SPT-42	317 gal (1200 L)	275 psi (1900 kPa)
Surge-Trol SPT-50	370 gal (1400 L)	275 psi (1900 kPa)
Surge-Trol SPT-56	422 gal (1600 L)	275 psi (1900 kPa)
Surge-Trol SPT-70	528 gal (2000 L)	275 psi (1900 kPa)

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Company Website:	http://www.amtrol.com

New/Updated Product Listing:	No
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