

NON-ASME | DIAPHRAGM EXPANSION TANKS | SUBMITTAL

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Job: _____ Representative: _____

Ordered by: _____ Date: _____

Engineer: _____ Submitted by: _____ Date: _____

Contractor: _____ Approved by: _____ Date: _____

APPLICATION

Armstrong expansion tanks provide storage in hydronic systems for increased fluid volume due to temperature change and expansion/contraction, while maintaining normal system charge pressure. This helps to avoid nuisance pressure relief equipment activation and unnecessary water make-up.

The double-clamped diaphragm maintains a vital and permanent pressurized air cushion, preventing expansion tank water-logging and air absorption into the hydronic system, as required for optimum trouble-free system performance.

MATERIALS OF CONSTRUCTION

Shell process connection: Carbon steel/NPT - male

Shell finish: Enamel

Diaphragm: Butyl (double clamped)

Charge connection: Schrader (standard tire) valve

INSTALLATION

Suspended models (Design 1) may be hung directly from Armstrong ART series Air Removal Traps, connected to adequately supported piping. All other models (Design 2 and 3) are free standing. Multiple tanks may be used for increased capacity requirements.

TECHNICAL DATA

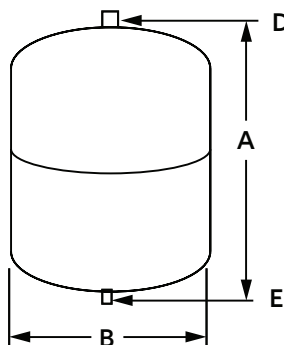
Liquid type: Conditioned water, optionally with up to 50% propyl or ethyl glycol solution

Liquid temperature: 20 to 240°F (-5 to 120°C)
 non-freezing/non-boiling

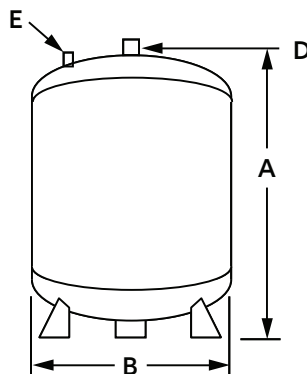
Maximum working pressure: 100 psi (700 kPa, 7 Bar)

Factory pre-charge: 12 psi (83 kPa, 0.8 Bar), field adjustable

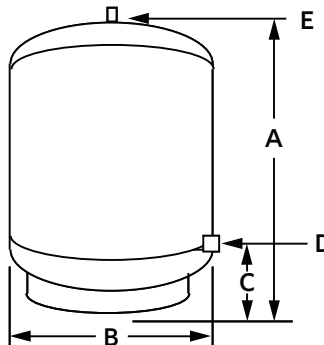
DESIGN 1



DESIGN 2



DESIGN 3



- A: Height
- B: Diameter
- C: Process connection location
- D: Process connection size
- E: Charge connection location

DIMENSIONS

MODEL	DESIGN	VOLUME - USgpm (L)		DIMENSIONS - INCHES (MM)					WEIGHT LBS (KG)	
		TANK	ACCEPTANCE	A	B	C	D	E		
15	1	2.1 (8)	1.0 (4)	10.80 (274)	7.90 (201)	TDC	½"	BDC	5	(2)
30	1	4.8 (18)	3.0 (11)	13.70 (348)	10.60 (269)	TDC	½"	BDC	9	(4)
60	1	6.3 (24)	3.9 (15)	15.40 (391)	11.80 (300)	TDC	½"	BDC	14	(6)
90	1	13.2 (50)	8.2 (31)	21.10 (536)	15.00 (381)	TDC	½"	BDC	23	(10)
SX-30V	2	15.8 (60)	10.4 (39)	28.70 (729)	15.00 (381)	TDC	1"	TOP	31	(14)
SX-40V	3	21.2 (80)	13.1 (50)	23.60 (599)	17.70 (450)	7.75 (197)	1"	TDC	33	(15)
SX-60V	3	39.7 (150)	24.8 (94)	35.20 (894)	19.70 (500)	8.00 (203)	1"	TDC	60	(27)
SX-90V	3	52.9 (200)	32.8 (124)	33.90 (861)	23.60 (599)	9.00 (229)	1"	TDC	81	(37)
SX-110V	3	66.1 (250)	41.0 (155)	39.20 (996)	24.80 (630)	9.50 (241)	1"	TDC	90	(41)
SX-160V	3	79.4 (301)	49.2 (186)	44.70 (1135)	24.80 (630)	9.50 (241)	1"	TDC	106	(48)

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