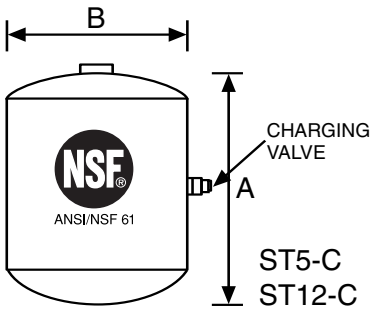
THERM-X-TROL®

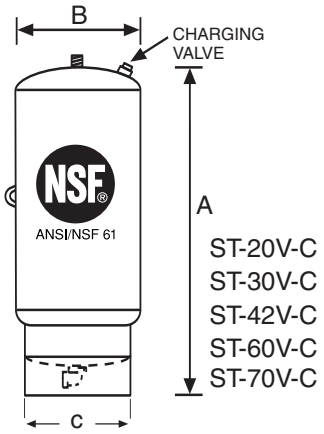
Thermal Expansion Absorbers, ST-C Series (ASME)

150 PSIG Working Pressure



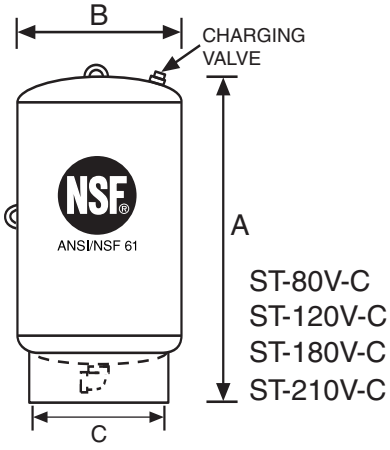
In-Line Models

Model No.	Tank Vol.		Max. Recomm. Accept Vol.		A Height		B Diameter		Sys. Conn.	Ship Wt.	
	Lit.	Gal.	Lit.	Gal	mm	ins.	mm	ins.	ins.	kg	lbs.
ST-5-C	8	4.0	3.44	.9	264	10 3/8	254	10	3/4 NPT	9.5	21
ST-12-C	24	6.4	12.0	3.2	340	13 3/8	305	12	3/4 NPT	12	26



Stand Models

Model No.	Tank Vol.		Max. Recomm Accept. Vol.		A Height		B Diameter		C Dim.		Sys. Conn.	Ship Wt.	
	Lit.	Gal	Lit.	Gal	mm	ins.	mm	ins.	mm	ins.	ins.	kg	lbs.
ST-20V-C	30	8.0	12.0	3.2	510	20 1/16	305	12	273	10 3/4	3/4 NPTF	19	41
ST-30V-C	53	14.0	33.9	8.96	491	19 5/16	419	16 1/4	324	12 3/4	3/4 NPTF	38.1	84
ST-42V-C	66	17.5	42.9	11.4	640	25 3/16	419	16 1/4	324	12 3/4	3/4 NPTF	41	90
ST-60V-C	95	25.0	42.9	11.4	864	34	419	16 1/4	324	12 3/4	3/4 NPTF	44	96
ST-70V-C	129	34.0	42.9	11.4	1076	42 3/8	419	16 1/4	324	12 3/4	3/4 NPTF	56	123
ST-80V-C	200	53.0	130	34	1029	40 1/2	610	24	406	16	1 1/4 NPTF	104	229
ST-120V-C	250	66	130	34	1213	47 3/4	610	24	406	16	1 1/4 NPTF	117	258
ST-180V-C	292	77.0	130	34	1337	52 5/8	610	24	406	16	1 1/4 NPTF	131	288
ST-210V-C	341	90.0	130	34	1524	60	610	24	406	16	1 1/4 NPTF	144	318



Maximum Operating Conditions

Operating Temperature	200°F (93°C)
Working Pressure	150 PSIG (10.5 bar)

Specifications

Description	Standard Construction
Standard Factory Pre-charge	55 PSIG (3.9 bar)
System Connection	Stainless Steel
Diaphragm	Heavy Duty Butyl/EPDM ANSI/NSF61
Liner Material	Polypropylene
Shell	Steel

Constructed per ASME Code Section VIII, Division 1.
All dimensions and weights are approximate.

Job Name_____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No._____

Sales Representative _____

Model No. Ordered _____

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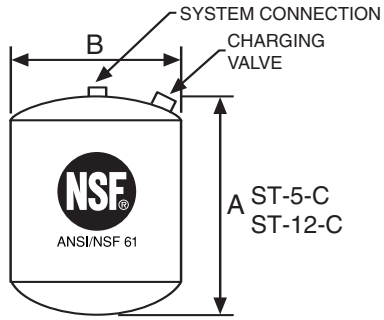
THERM-X-TROL®

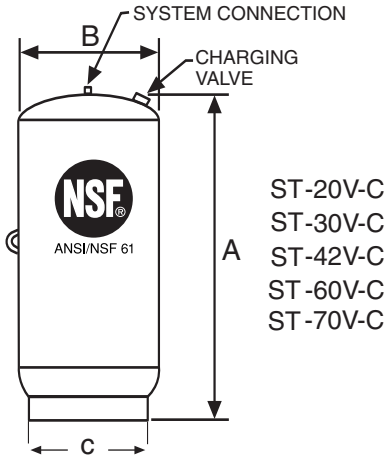
Thermal Expansion Absorbers, ST-C Series (ASME)

250 PSIG Working Pressure



In-Line Models

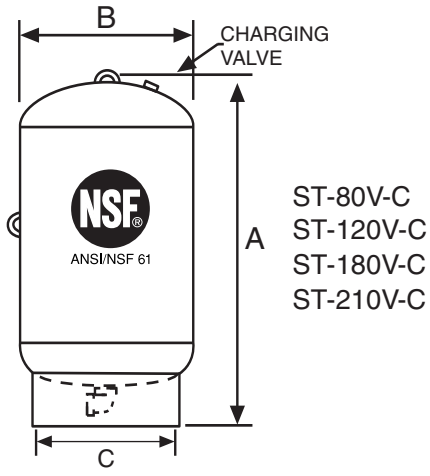
Model No.	Tank Vol.		Max. Recomm. Accept. Vol.		A Vol Height		B Diameter		Sys. Conn.	Ship Wt.	
	Lit.	Gal	Lit.	Gal	mm	ins.	mm	ins.	ins.	kg	lbs.
ST-5-C	8	4.0	3.44	.9	264	10 3/8	254	10	3/4 NPTF	9.5	21
ST-12-C	24	6.4	12.0	3.2	340	13 3/8	305	12	3/4 NPTF	15.4	36



Stand Models

Model No.	Tank Vol.		Max. Recomm. Accept. Vol.		A Height		B Diameter		C Dim.		Sys. Conn.	Ship Wt.	
	Lit.	Gal	Lit.	Gal	mm	ins.	mm	ins.	mm	ins.	ins.	kg	lbs.
ST-20V-C	30	8.0	12.0	3.2	510	20 1/16	305	12	273	10 3/4	3/4 NPTF	23.6	52
ST-30V-C	53	14.0	33.9	8.96	491	19 5/16	419	16 1/4	324	12 3/4	3/4 NPTF	44	97
ST-42V-C	66	17.5	42.9	11.4	640	25 3/16	419	16 1/4	324	12 3/4	3/4 NPTF	52.7	116
ST-60V-C	95	25.0	42.9	11.4	864	34	419	16 1/4	324	12 3/4	3/4 NPTF	70	154
ST-70V-C	129	34.0	42.9	11.4	1076	42 3/8	419	16 1/4	324	12 3/4	3/4 NPTF	90	197
ST-80V-C	200	53.0	130	34	1029	40 1/2	610	24	406	16	1 1/4 NPTF	114	251
ST-120V-C	250	66.0	130	34	1213	47 3/4	610	24	406	16	1 1/4 NPTF	127.6	281
ST-180V-C	292	77.0	130	34	1337	52 5/8	610	24	406	16	1 1/4 NPTF	160.3	353
ST-210V-C	341	90.0	130	34	1524	60	610	24	406	16	1 1/4 NPTF	173.4	382

Constructed per ASME Code Section VIII, Division 1.
All dimensions and weights are approximate.



Maximum Operating Conditions

Operating Temperature	200°F (93°C)
Working Pressure	250 PSIG (17.6 bar)

Specifications

Description	Standard Construction
Standard Factory Pre-charge	55 PSIG (3.9 bar)
System Connection	Stainless Steel
Diaphragm	Heavy Duty Butyl/EPDM ANSI/NSF61
Liner Material	Polypropylene
Shell	Steel
Coating	Red Oxide Primer

Job Name_____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No._____

Sales Representative _____

Model No. Ordered _____

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THERM-X-TROL®

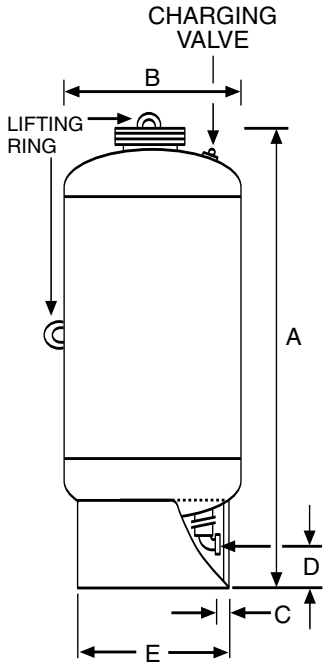
Thermal Expansion Absorbers, ST450-C Series (ASME)

125 PSIG Working Pressure

Stand Models

Model No.	Tank Vol.		0 PSIG Acc. Vol.	Max. Recomm. Accept. Vol.		A Height		B Diameter		C		D		E		Sys. Conn.	Ship Wt.	
	Lit.	Gal	Gal	Lit.	Gal	mm	ins.	mm	ins.	mm	ins.	mm	ins.	mm	ins.	ins.	kg	lbs.
ST-447-C	200	53	53	129	34	1150	45¼	610	24	51	2	95	3¾	483	19	2	120	263
ST-448-C	300	80	80	197	52	1502	59⅛	610	24	51	2	95	3¾	483	19	2	140	308
ST-449-C	400	106	106	261	69	1857	73⅛	610	24	51	2	95	3¾	483	19	2	161	353
ST-450-C	500	132	132	322	85	2200	86⅝	610	24	51	2	95	3¾	483	19	2	178	391
ST-451-C	600	158	158	386	102	1861	73¼	762	30	89	3½	140	5½	608	24	2	230	508
ST-452-C	800	211	211	519	137	2317	91	762	30	89	3½	140	5½	608	24	2	345	760
ST-453-C	1000	264	264	647	171	2175	85⅝	914	36	114	4½	178	7	763	30	3	368	810
ST-454-C	1200	317	317	780	206	2489	98	914	36	114	4½	178	7	763	30	3	415	914
ST-455-C	1400	370	370	908	240	2804	110⅜	914	36	114	4½	178	7	763	30	3	462	1018
ST-456-C	1600	422	422	1037	274	2080	81⅞	1220	48	191	7½	181	7⅛	1063	42	3	750	1655
ST-457-C	2000	528	528	1298	343	2470	97¼	1220	48	191	7½	181	7⅛	1063	42	3	873	1925

Note: Allow 18" (460mm) minimum clearance.



Maximum Operating Conditions

Operating Temperature	240°F (115°C)
Working Pressure	125 PSIG (8.8 bar)

Specifications

Description	Standard Construction
Standard Factory Pre-charge	55 PSIG (3.9 bar)
System Connection	Brass
Bladder	Heavy Duty Butyl ANSI/NSF61
Bladder Thickness	.100 Ins. Minimum
Coating	Red Oxide Primer
Shell	Steel

Constructed per ASME Code Section VIII, Division 1.
All dimensions and weights are approximate.

Job Name_____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No._____

Sales Representative _____

Model No. Ordered _____

ASME CERTIFICATION REQUIRED __ YES __ NO

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THERM-X-TROL®

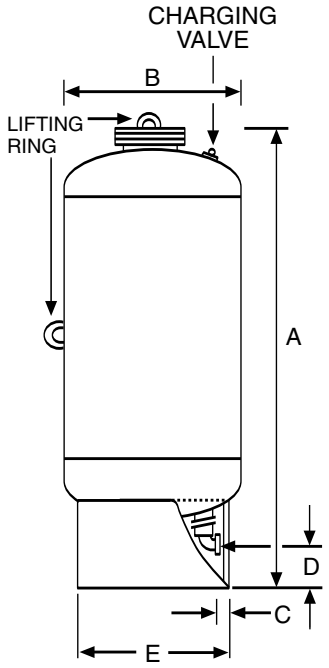
Thermal Expansion Absorbers, ST450-C Series (ASME)

150 PSIG Working Pressure

Stand Models

Model No.	Tank Vol.		0 PSIG Acc. Vol.	Max. Recomm. Accept. Vol.		A Height		B Diameter		C		D		E		Sys. Conn.	Ship Wt.	
	Lit.	Gal	Gal	Lit.	Gal	mm	ins.	mm	ins.	mm	ins.	mm	ins.	mm	ins.	ins.	kg	lbs.
ST-447-C	200	53	53	129	34	1150	45¼	610	24	51	2	95	3¾	483	19	2	120	263
ST-448-C	300	80	80	197	52	1502	59⅛	610	24	51	2	95	3¾	483	19	2	140	308
ST-449-C	400	106	106	261	69	1857	73⅛	610	24	51	2	95	3¾	483	19	2	161	353
ST-450-C	500	132	132	322	85	2200	86⅝	610	24	51	2	95	3¾	483	19	2	178	391
ST-451-C	600	158	158	386	102	1861	73¼	762	30	89	3½	140	5½	608	24	2	230	508
ST-452-C	800	211	211	519	137	2317	91	762	30	89	3½	140	5½	608	24	2	345	760
ST-453-C	1000	264	264	647	171	2175	85⅝	914	36	114	4½	178	7	763	30	3	368	810
ST-454-C	1200	317	317	780	206	2489	98	914	36	114	4½	178	7	763	30	3	415	914
ST-455-C	1400	370	370	908	240	2804	110⅜	914	36	114	4½	178	7	763	30	3	462	1018
ST-456-C	1600	422	422	1037	274	2080	81⅞	1220	48	191	7½	181	7⅛	1063	42	3	750	1655
ST-457-C	2000	528	528	1298	343	2470	97¼	1220	48	191	7½	181	7⅛	1063	42	3	873	1925

Note: Allow 18" (460mm) minimum clearance.



Maximum Operating Conditions

Operating Temperature	240°F (115°C)
Working Pressure	150 PSIG (10.5 bar)

Specifications

Description	Standard Construction
Standard Factory Pre-charge	55 PSIG (3.9 bar)
System Connection	Brass
Bladder	Heavy Duty Butyl ANSI/NSF61
Bladder Thickness	.100 Ins. Minimum
Coating	Red Oxide Primer
Shell	Steel

Constructed per ASME Code Section VIII, Division 1.
All dimensions and weights are approximate.

Job Name_____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No._____

Sales Representative _____

Model No. Ordered _____

ASME CERTIFICATION REQUIRED __ YES __ NO

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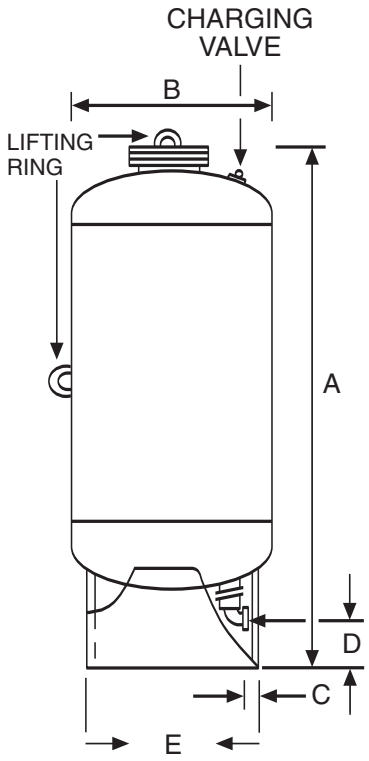
THERM-X-TROL®

Thermal Expansion Absorbers, ST-450 Series (Non-ASME)

150 PSIG Working Pressure

Standard Models

Model No.	Tank Vol.		0 PSIG Acc. Vol.	Max. Recomm. Accept. Vol.		A Height		B Diameter		C		D		E		Sys. Conn.	Ship Wt.	
	Lit.	Gal.	Gal	Lit.	Gal	mm	ins.	mm	ins.	mm	ins.	mm	ins.	mm	ins.	NPTF	kg	lbs.
ST-451	600	158	158	386	.65	1880	74	762	30	89	3½	140	5½	608	24	2	230	508
ST-452	800	211	211	519	.65	2337	92	762	30	89	3½	140	5½	608	24	2	345	760
ST-453	1000	264	264	647	.65	2175	85⅝	914	36	114	4½	178	7	763	30	3	368	810
ST-454	1200	317	317	780	.65	2489	98	914	36	114	4½	178	7	763	30	3	415	914
ST-455	1400	370	370	908	.65	2804	110⅜	914	36	114	4½	178	7	763	30	3	462	1018
ST-456	1600	422	422	1037	.65	2080	81⅞	1220	48	191	7½	181	7⅛	1063	42	3	750	1655
ST-457	2000	528	528	1298	.65	2470	97¼	1220	48	191	7½	181	7⅛	1063	42	3	873	1925



Maximum Operating Conditions

Operating Temperature	240° F (115° C)
Working Pressure	150 PSIG (10.5 bar)

Specifications

Description	Standard Construction
Shell	Steel
System Connection	Brass
Bladder	Heavy Duty Butyl ANSI/NSF 61
Bladder Thickness	.100 Ins. Minimum
Coating	Red Oxide Primer
Factory Pre-set Pressure	55 PSIG (3.9 bar)

All dimensions and weights are approximate.

Job Name_____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No._____

Sales Representative _____

Model No. Ordered _____

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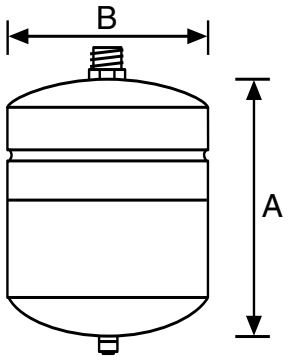
THERM-X-TROL®

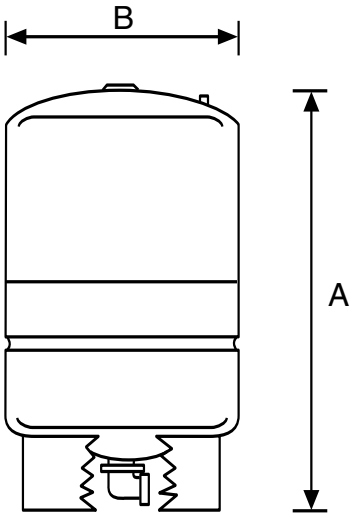
Thermal Expansion Absorbers, ST-Series (Non-ASME)

150 PSIG Working Pressure



ST-5, ST-12

ANSI/NSF 61



ST-25V through ST-210V

ANSI/NSF 61

In-Line Models

Model No.	Tank Vol.		Max. Accept.	A Height		B Diameter		Sys. Conn.	Ship Wt.	
	Lit.	Gal.	Factor	cm	ins.	cm	ins.	NPTM	kg	lbs.
ST-5	8	2.0	0.45	321	12 5/8	203	8	3/4	2.3	5
ST-12	17	4.4	0.73	381	15	279	11	3/4	4.0	9

Stand Models

Model No.	Tank Vol.		Max. Accept.	A Height		B Diameter		Sys. Conn.	Ship Wt.	
	Lit.	Gal.	Factor	cm	ins.	cm	ins.	NPTF	kg	lbs.
ST-25V	39	10.3	1.00	489	19 1/4	391	15 3/8	1	10.5	23
ST-30V	53	14.0	0.81	605	23 7/8	391	15 3/8	1	11.4	25
ST-42V	76	20.0	0.57	802	31 5/8	391	15 3/8	1	15.0	33
ST-60V	129	34.0	1.00	913	29 5/8	559	22	1 1/4	28.0	61
ST-80V	167	44.0	0.77	913	36	559	22	1 1/4	31.0	69
ST-180V	235	62.0	0.55	1186	46 3/4	559	22	1 1/4	41.0	92
ST-210V	326	86.0	0.54	1199	47 1/4	660	26	1 1/4	56.0	123

Maximum Operating Conditions

Operating Temperature	200°F (93°C)
Working Pressure	150 PSIG (10.5 bar)

Specifications

Description	Standard Construction
Standard Factory Pre-charge	40 PSIG (2.8 bar)
System Connection	Brass (ST5,12)
	Stainless Steel (Stand Models)
Diaphragm	Butyl/EPDM
Liner Material	Polypropylene

All dimensions and weights are approximate.

Job Name_____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No._____

Sales Representative _____

Model No. Ordered _____

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Therm-X-Trol® Expansion Tanks

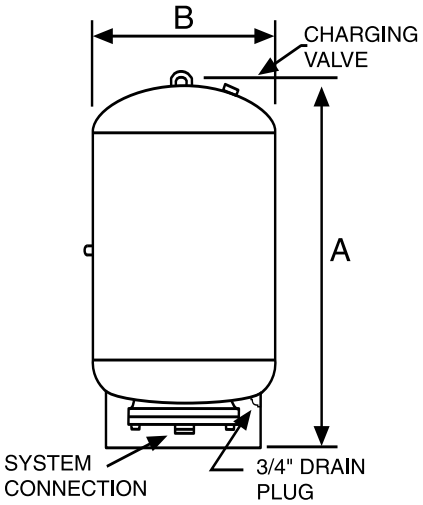
"ST" Series Bottom Connection Bladder Series (ASME)

150 PSIG Working Pressure

150 PSIG WP ASME Models

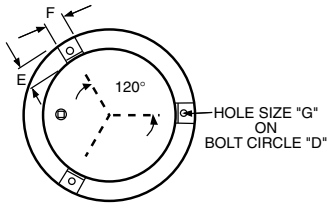
Model No.	Tank Volume		Accept Volume		A Height		B Diameter		Sys. Conn.[1]		Ship Weight	
	Lit.	Gal.	Lit.	Gal.	mm	ins.	mm	ins.	mm	ins.	kg	lbs.
ST-35-CL	35	10	35	10	948	37 1/16	254	10	25	1	29	65
ST-50-CL	50	13	40	11	941	37 1/16	305	12	25	1	33	72
ST-85-CL	85	22	40	11	872	34 5/16	406	16	25	1	40	88
ST-100-CL	100	26	40	11	991	39	406	16	25	1	43	94
ST-130-CL	130	34	100	27	881	34 11/16	508	20	25	1	59	130
ST-165-CL	165	44	100	27	1008	39 11/16	508	20	25	1	64	140
ST-200-CL	200	53	100	27	1039	40 7/8	610	24	25	1	93	205
ST-300-CL	300	80	100	27	1423	56	610	24	25	1	115	254
ST-400-CL	400	106	200	53	1743	68 5/8	610	24	25	1	140	308
ST-500-CL	500	132	200	53	2096	82 1/2	610	24	25	1	160	352
ST-600-CL	600	158	200	53	1702	67	762	30	25	1	200	442

[1]System connection is NPTF



Maximum Operating Conditions

Operating Temperature	240°F (115°C)
Working Pressure	150 PSIG (10 bar)



BOTTOM VIEW

Specifications

Description	Standard Construction
Shell	Carbon Steel
Bladder Material	Heavy Duty Butyl
Bladder Thickness (models 35-100)	.087 Ins. Minimum
Bladder Thickness (models 130-600)	.100 Ins. Minimum
System Connection	Stainless Steel
Coating	Red Oxide Primer
Factory Precharge	55 PSIG (3.8 bar)

Designed & constructed per ASME Section VIII, Division 1.

Optional Seismic Restraints

TANK Diam B	BOLT CIRCLE D	DIM. E	DIM. F	HOLE SIZE G
10	12 5/8	2	2	9/16
12	14 3/4	2	2	9/16
16	16 3/4	2	2	9/16
20	16 3/4	2	2	9/16
24	18	2	2	9/16
30	22 3/4	3	3	3/4

All dimensions and weights are approximate.

Job Name _____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No. _____

Sales Representative _____

Model No. Ordered _____

System Operating Temp Range _____

System Operating Pressure Range _____

Tank Precharge PSIG _____

Date Submitted _____

ASME CERTIFICATION REQUIRED o YES o NO

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Therm-X-Trol® Expansion Tanks

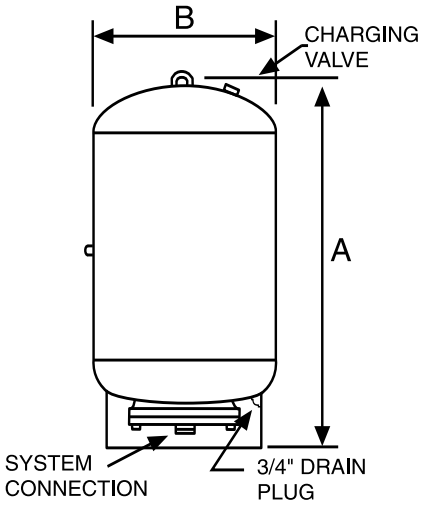
"ST" Series Bottom Connection Bladder Series (Non-ASME)

150 PSIG Working Pressure

150 PSIG WP ASME Models

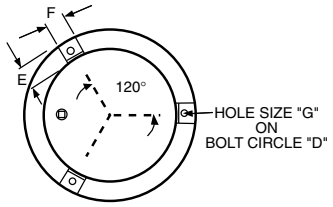
Model No.	Tank Volume		Accept Volume		A Height		B Diameter		Sys. Conn.[1]		Ship Weight	
	Lit.	Gal.	Lit.	Gal.	mm	ins.	mm	ins.	mm	ins.	kg	lbs.
ST-35-L	35	10	35	10	948	37 1/16	254	10	25	1	29	65
ST-50-L	50	13	40	11	941	37 1/16	305	12	25	1	33	72
ST-85-L	85	22	40	11	872	34 5/16	406	16	25	1	40	88
ST-100-L	100	26	40	11	991	39	406	16	25	1	43	94
ST-130-L	130	34	100	27	881	34 11/16	508	20	25	1	59	130
ST-165-L	165	44	100	27	1008	39 11/16	508	20	25	1	64	140
ST-200-L	200	53	100	27	1039	40 7/8	610	24	25	1	93	205
ST-300-L	300	80	100	27	1423	56	610	24	25	1	115	254
ST-400-L	400	106	200	53	1743	68 5/8	610	24	25	1	140	308
ST-500-L	500	132	200	53	2096	82 1/2	610	24	25	1	160	352
ST-600-L	600	158	200	53	1702	67	762	30	25	1	200	442

[1]System connection is NPTF



Maximum Operating Conditions

Operating Temperature	240°F (115°C)
Working Pressure	150 PSIG (10 bar)



BOTTOM VIEW

Specifications

Description	Standard Construction
Shell	Carbon Steel
Bladder Material	Heavy Duty Butyl
Bladder Thickness (models 35-100)	.087 Ins. Minimum
Bladder Thickness (models 130-600)	.100 Ins. Minimum
System Connection	Stainless Steel
Coating	Red Oxide Primer
Factory Precharge	50 PSIG (3.4 bar)

Optional Seismic Restraints

TANK Diam B	BOLT CIRCLE D	DIM. E	DIM. F	HOLE SIZE G
10	12 5/8	2	2	9/16
12	14 3/4	2	2	9/16
16	16 3/4	2	2	9/16
20	16 3/4	2	2	9/16
24	18	2	2	9/16
30	22 3/4	3	3	3/4

All dimensions and weights are approximate.

Job Name _____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No. _____

Sales Representative _____

Model No. Ordered _____

System Operating Temp Range _____

System Operating Pressure Range _____

Tank Precharge PSIG _____

Date Submitted _____

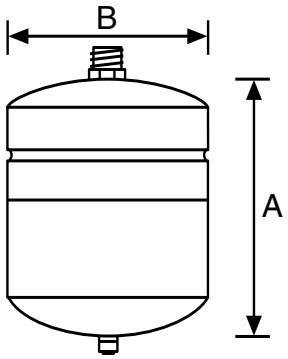
ASME CERTIFICATION REQUIRED o YES o NO

Submittal data sheets can ONLY be ordered as a "Submittal Data Sheet Pack", using MC# 4400. They are not available to order on an individual basis, however each data sheet is available on the Amtrol Web Site and can be downloaded and printed for use as needed.

THERM-X-SPAN®

Thermal Expansion Absorbers, T-Series (Non-ASME)

150 PSIG Working Pressure



T-5, T-12

ANSI/NSF 61

In-Line Models

Model No.	Tank Vol.		Max. Accept.	A Height		B Diameter		Sys. Conn.	Ship Wt.	
	Lit.	Gal.	Factor	cm	ins.	cm	ins.	NPTM	kg	lbs.
T-5	8	2.0	0.45	321	12⅝	203	8	¾	2.3	5
T-12	17	4.4	0.73	381	15	279	11	¾	4.0	9

Maximum Operating Conditions

Operating Temperature	200°F (93°C)
Working Pressure	150 PSIG (10.5 bar)

Specifications

Description	Standard Construction
Standard Factory Pre-charge	40 PSIG (2.8 bar)
System Connection	Brass
Diaphragm	Butyl/EPDM
Liner Material	Polypropylene

All dimensions and weights are approximate.

Job Name_____

Location _____

_____

_____

Engineer _____

Contractor _____

Contractor P.O. No._____

Sales Representative _____

Model No. Ordered _____

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