

PAX Series Potable Water Expansion Tanks

These Taco Expansion Tanks feature a shell designed and constructed per ASME Section VIII, Div. 1, and are equipped with a removable heavy duty butyl bladder. Factory precharged to job specifications. Working pressure 150 PSI standard (higher pressures available). There are 13 models available.



Certified to
NSF/ANSI 61-G



Now Available in PAX25 & PAX10 Models



PAX Series



Partial Acceptance Captive Air Bladder Expansion Tank

Taco PAX partial acceptance bladder Captive Air expansion tanks are applied in commercial, institutional and industrial applications for the control of pressure in hydronic systems. PAX bladder tanks use a field replaceable bladder to permanently separate the air and water.

This permanent separation allows the tank to be precharged on the air side to the minimum operating or fill pressure. The precharge eliminates the many gallons of water typically used to compress the atmospheric pressure found in a plain steel tank application. A reduction in the required tank size when incorporating a Captive Air expansion results in tank sizes of up to 80% smaller when compared to air cushion or plain steel tanks. In a PAX bladder tank the partial acceptance bladder is not attached to the tank wall like a diaphragm tank. Rather it sits in the bottom of the expansion tank utilizing an internal assembly connecting to the stainless steel system connection located on the top of the tank.

The partial acceptance bladder inside the tank operates very much like a balloon. It is critical to the sizing of any partial acceptance tank that both the bladder acceptance volume and total tank volume be adequate to accept the net system expansion volume without exceeding the pressure limitations of the system design. Taco is pleased to offer a selection app for the selection of these styles of tanks. Expanded water flows into the inside of the bladder. The air/precharge is on the outside of the bladder between the bladder and the tank. As a result no water is in contact with the tank wall minimizing corrosion. In a partial acceptance bladder tank the bladder is of limited acceptance volume and does not stretch.

The PAX style of expansion tank is available with optional certification to NSF/ANSI 6-G. Specific model numbers have been established for units certified to NSF/ANSI 61-G ending in the letter "P".

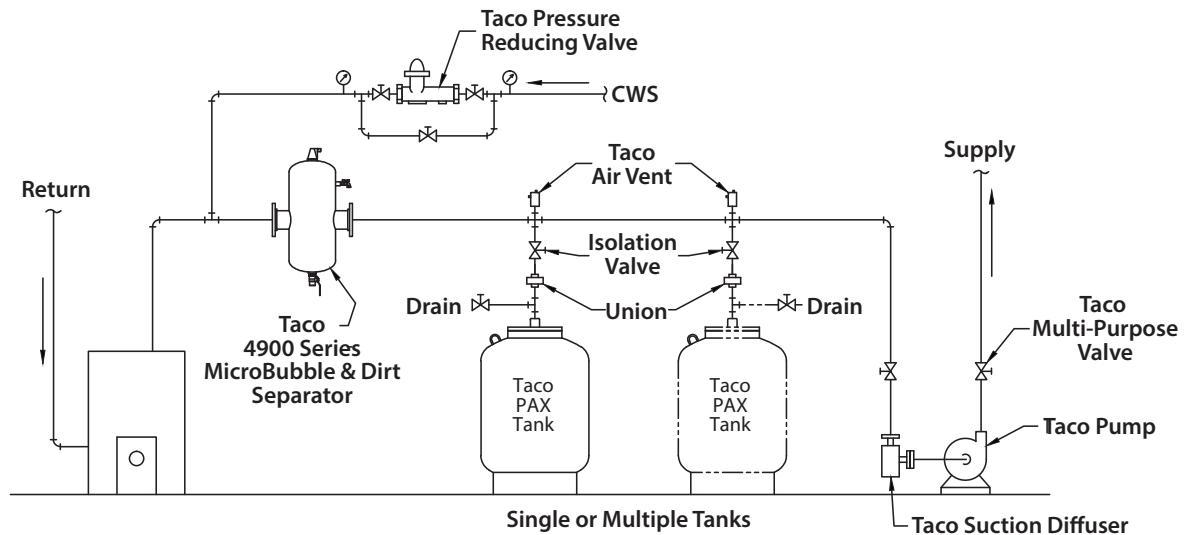
SPECIFIED PRE CHARGE PRESSURE P.S.I. (AT 68°F)	Ambient Temperature (°F)								
	36	44	52	60	68	76	84	92	100
12	10.4	10.8	11.2	11.6	12.0	12.4	12.8	13.2	13.6
20	17.9	18.4	18.9	19.5	20.0	20.5	21.1	21.6	22.1
30	27.3	28.0	28.6	29.3	30.0	30.7	31.4	32.0	32.7
40	36.7	37.5	38.2	39.2	40.0	40.8	41.6	42.5	43.3
50	46.1	46.1	48.0	49.0	50.0	51.0	52.0	52.9	53.9
60	55.5	56.6	57.7	58.9	60.0	61.1	62.3	63.4	64.5
70	64.9	66.1	67.4	68.7	70.0	71.3	76.6	73.9	75.1

How to Use the Chart

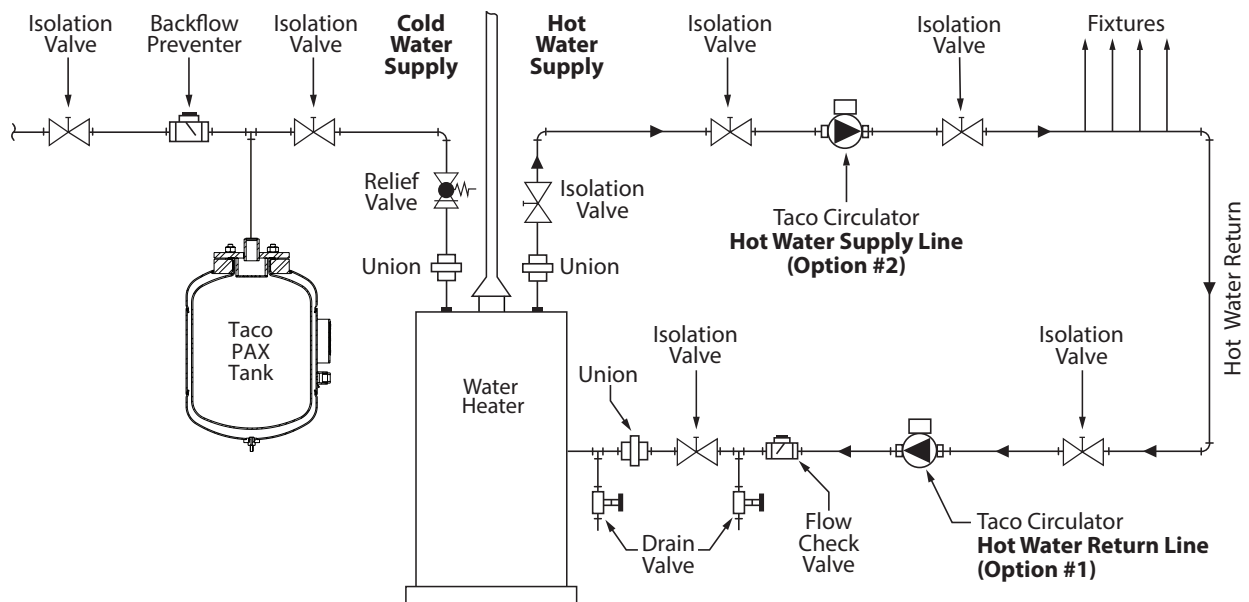
1. Determine ambient air temperature where the tank is being checked.
2. Locate the specified pre-charge pressure in the left-hand column.
3. Follow across horizontally to the number under the ambient air temperature.
4. The number found under Step No. 3 is the temperature corrected aircharge pressure in p.s.i. and should agree with the gauge reading observed at the tank.
5. If the temperature corrected air charge pressure differs by more than 1 p.s.i. from the pre-charge pressure specified for the system, then correct it by bleeding pressure through the air charge valve or by adding pressure with an air compressor.

PAX Piping Diagrams

Recommended Installation for Heating System or Chilled Water Applications



Typical Installation for Hot Water Recirculation Systems (NSF/ANSI 61-G)



Submittal Data # 401-084
 Supersedes: 12/01/14

Effective: 07/16/20

Construction

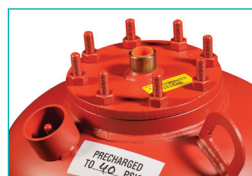
Bladder type for permanent separation of air and water
 Water expands into bladder, air precharge on shell side

Specifications

Shell — Fabricated Steel designed and constructed per ASME Section VII, Div.1
 Bladder — Heavy Duty Butyl **removable** for inspection
 Working Pressure — 150 PSIG (1034 KPa)
 Consult Factory for 175 & 250 psi options
 Non NSF/ANSI 61-G units "Suitable for Vertical or Horizontal Installation"



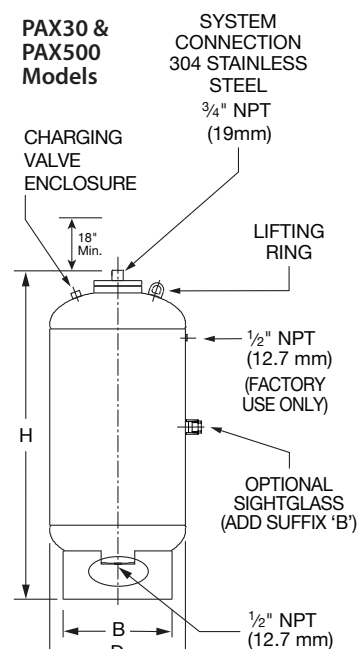
NSF/ANSI 61-G [P] Option,
 Example: P/N PAX30-150P
For VERTICAL Installation ONLY
 Models certified to NSF 61-G are required to be installed on the cold water side of the hot water heater.



NSF

Non-NSF

PAX30 & PAX500 Models

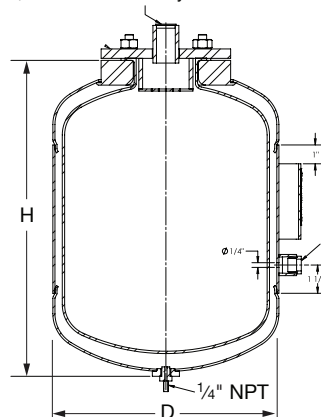


DO NOT PIPE TO DRAIN

*Base Ring & Anchor clips N/A on PAX10 and PAX25 models.

Air Charging Valve located on bottom of tank for PAX10 and PAX25 models

3/4" Stainless Steel System connection



PAX10 & PAX25 Models are offered in Non-NSF
 * OPTIONAL SIGHTGLASS (ADD SUFFIX 'B')



PAX Series Potable Water Expansion Tanks — Dimensions & Weights

Model Number	Tank Volume		Acceptance Volume		H (Height)		B (Diameter)		D (Diameter)		Shipping Weight	
	Gallon	Liter	Gallon	Liter	In.	mm	In.	mm	In.	mm	Lbs.	Kg
PAX10	2.6	10	1.7	6.5	12	305	N/A	N/A	12	305	40	19
PAX25	6.6	25	4	15	20-5/8	502	N/A	N/A	12	305	52	24
PAX30	8	30	5	19	24-3/4	629	12	305	14	356	90	41
PAX42	11	42	5	19	29-3/4	756	12	305	14	356	105	48
PAX84	22	84	12	45	41-1/4	1048	12	305	16	406	150	68
PAX130	34	130	19	72	52-1/2	1334	12	305	16	406	200	91
PAX170	45	170	24	91	65-3/4	1670	12	305	16	406	240	109
PAX215	57	215	31	117	57-7/8	1470	16	406	20	508	250	113
PAX254	67	254	34	129	67-1/4	1708	16	406	20	508	280	127
PAX300	79	300	43	163	56-1/2	1435	20	508	24	610	300	136
PAX350	92	350	43	163	63-5/8	1616	20	508	24	610	330	150
PAX425	112	425	61	231	76-3/8	1940	20	508	24	610	380	172
PAX500	132	500	61	231	84-7/8	2156	20	508	24	610	425	193

NOTE: Weight shown is for 150 psi models only. System Connection Size is 3/4" NPT (19mm).
 Consult factory for shipping weight of higher design pressure models. Allow 18" minimum clearance above tank for piping system connections.

Unless otherwise specified, standard pre-charge is 40 psi (276 kPa).

See Related Documents:

402-100 Instruction Sheet
 402-101 Instruction Sheet, Replacement Bag
 401-084 Submittal Data
 401-084P Submittal Data, NSF



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