



COMPARE. YOU'LL TAKE TACO.

CA, CAX, CX EXPANSION TANKS

The Taco "CA", "CAX" and "CX" Series Expansion Tanks were designed to fill a need in the hydronic industry. For many years, old style plain steel expansion tanks have been used to try and control the inherent air problems in systems while trying to maintain a minimum system operating pressure. In some cases, it was possible to make this type of system operate by keeping pressures and velocities high so that the air will remain in solution. However in many cases, the direct air to water interface in an old style plain steel tank allowed the air to be absorbed into solution and carried to other parts of the system thus creating waterlogged tanks, air bound terminal units, excessive corrosion, inefficient balancing, and pump cavitation.

In the "CA", "CAX" and "CX" Series Tanks, the air is held captive on the shell side with all expanded fluid being directed into the bladder (CA and CAX) or diaphragm (CX) chamber. This permanent separation allows the tank to be precharged to the minimum system operating pressure (Pf) eliminating the need for many gallons of charge water to compress an atmospheric condition to the system requirements. The expanded fluid in the bladder or

diaphragm chamber compresses the precharge to the maximum system pressure (PO) which then pushes the fluid back into the system as it contracts. No absorption can take place during the system cycle. Properly sized, selected and located air separation and removal components can provide a stable, tight, and closed hydronic system. In most properly size "CA" systems the tank size can be reduced by up to 80% when compared to the old style plain steel tanks.



Only five design parameters are required for "CA", "CAX" and "CX" sizing which are readily available from the system. When given the total system volume in gallons, minimum and maximum temperatures, and minimum and maximum pressures, a tank can be sized and selected in minutes. Contact your local Taco representative for complete sizing instructions.

SPECIFICATIONS SIZING

- Shell – Fabricated Steel Designed and Constructed per ASME Section VIII. Div. 1.
- Bladder/Diaphragm:

	Standard	Optional
CA*	125 PSIG (862 KPa)	150 PSIG (1034 KPa) 250 PSIG (1723 KPa)
CAX*	125 PSIG (862 KPa)	150 PSIG (1034 KPa)
CX	125 PSIG (862 KPa)	

*Bladder is field replaceable

- Operating Temperature - 240°F (116°C) Maximum

Examples:

(Heating System)	(Required)
Volume 3640 gallons	Old style tank – 3000 gal.
Min. Temp. 70°F	
Max. Temp. 200°F	CA Tank – 528 gal.
Min. Pressure 65 PSIG	
Max. Pressure 90 PSIG	
(Chilled System)	(Required)
Volume 7950 gallons	Old style tank – 3200 gal.
Min. Temp. 40°F	
Max. Temp. 90°F	
Min. Pressure 65 PSIG	
Max. Pressure 90 PSIG	CA Tank – 158 gal.

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CA SERIES EXPANSION TANK

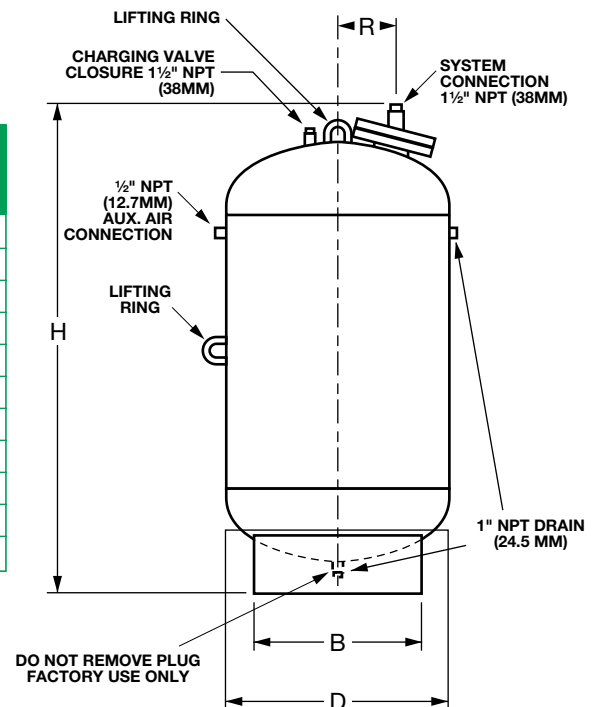
“CA” – Heavy duty butyl rubber bladder removable for inspection on all models. The “CA” Tank is a full acceptance vessel which indicates that the bladder would open to the full shape of the tank if there was no air present for compression. (This condition should never occur and is mentioned only to clarify that the bladder does not stretch.)

ASME construction.



CA SERIES DIMENSIONS

MODEL NUMBER	TANK VOLUME ⁽¹⁾		H HEIGHT		B DIAMETER		D DIAMETER		R RADIUS		SHIPPING WEIGHT	
	GAL.	LIT	INCH	MM	INCH	MM	INCH	MM	INCH	MM	LBS.	Kg
CA140	37	140	42¼	1073	16	406	20	508	5	125	195	88
CA215	57	215	60⅞	1545	16	406	20	508	5	125	290	132
CA300	79	300	60½	1537	20	508	24	610	5¾	146	320	145
CA450	119	450	80⅞	2035	20	508	24	610	5¾	146	400	181
CA600	158	600	73¾	1873	24	610	30	762	6¾	171	460	209
CA800	211	800	91¾	2330	24	610	30	762	6¾	171	590	268
CA1000	264	1000	81	2056	30	762	36	914	8	203	790	358
CA1200	317	1200	93	2361	30	762	36	914	8	203	940	426
CA1400	370	1400	105	2665	30	762	36	914	8	203	1020	463
CA1600	422	1600	77½	1969	40	1016	48	1219	11	278	1380	626
CA2000	528	2000	93	2362	40	1016	48	1219	11	278	1650	748



CAX SERIES EXPANSION TANK

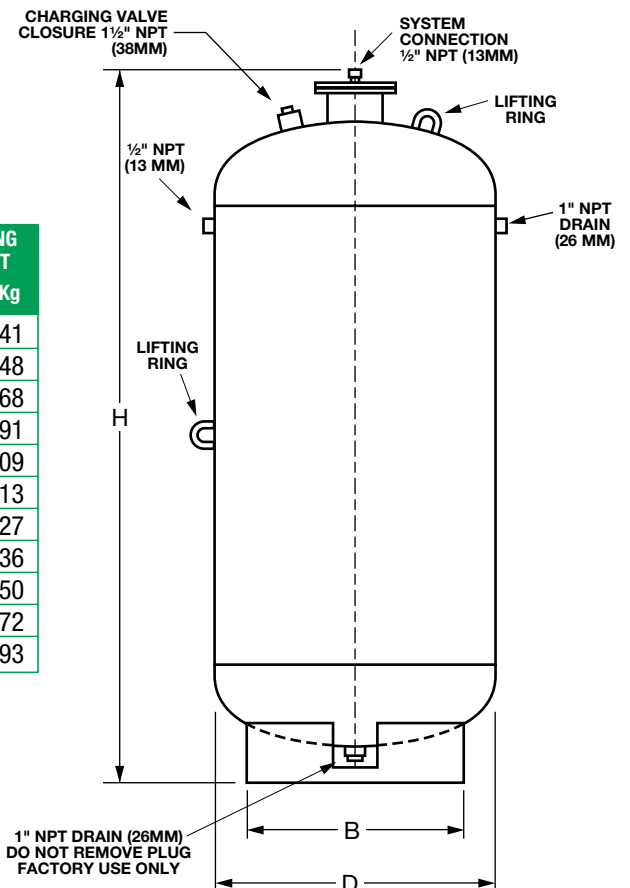
“CAX” – Heavy duty butyl rubber bladder, removable for inspection on all models. “CAX” Tanks are limited acceptance for small installations and many chilled water applications where air volume requirement is small and expanded fluid volume minimal. (The bladder is fully open when acceptance volume shown on dimension chart is reached.

ASME construction.



CAX SERIES DIMENSIONS

MODEL NUMBER	TANK VOLUME ⁽¹⁾		ACCEPTANCE VOLUME		H HEIGHT		B DIAMETER		D DIAMETER		SHIPPING WEIGHT	
	GAL.	LIT	GAL.	LIT	INCH	MM	INCH	MM	INCH	MM	LBS.	Kg
CAX30	8	30	5	19	28 ⁷ / ₈	735	12	305	14	356	90	41
CAX42	11	42	5	19	33 ⁷ / ₈	859	12	305	14	356	105	48
CAX84	22	84	12	45	45 ¹ / ₄	1148	12	305	16	406	150	68
CAX130	34	130	19	72	56 ⁵ / ₈	1438	12	305	16	406	200	91
CAX170	45	170	24	91	70	1776	12	305	16	406	240	109
CAX215	57	215	31	117	61 ⁷ / ₈	1570	16	406	20	508	250	113
CAX254	67	254	34	129	71 ¹ / ₈	1807	16	406	20	508	280	127
CAX300	79	300	43	163	61 ³ / ₈	1559	20	508	24	610	300	136
CAX350	92	350	43	163	61 ¹ / ₂	1740	20	508	24	610	330	150
CAX425	112	425	61	231	81 ¹ / ₈	2059	20	508	24	610	380	172
CAX500	132	500	61	231	89 ³ / ₄	2280	20	508	24	610	425	193



CX SERIES EXPANSION TANK

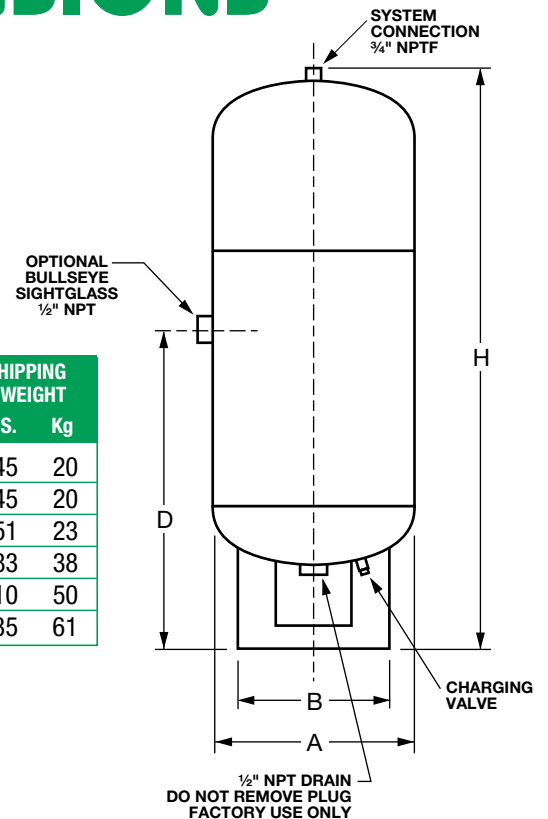
“CX” – Heavy duty Butyl Rubber diaphragm expansion tank allows permanent separation of air and water within the ASME designed and constructed pressure vessel. “CX” tanks are of limited acceptance design for use in small heating installations and most chilled water applications where smaller air volumes and expanded fluid volumes are needed. (note: The acceptance volume indicates the maximum volume of fluid which may be stored in the system chamber of these pressure vessels.)

ASME construction.



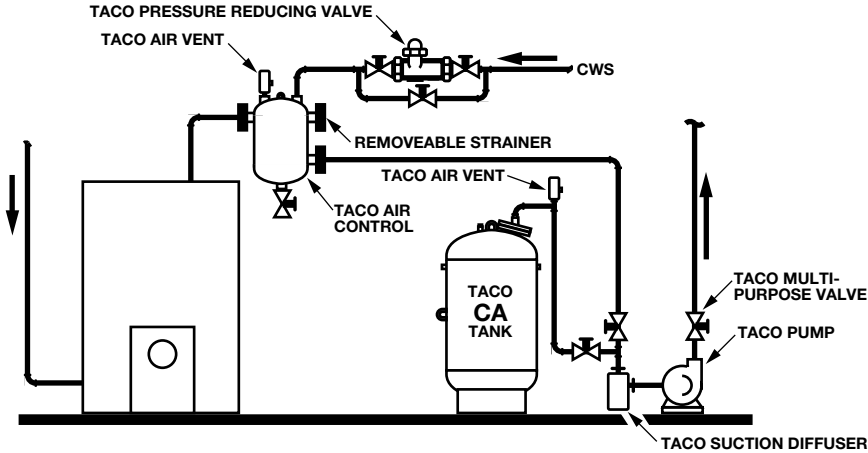
CX SERIES DIMENSIONS

MODEL NUMBER	TANK VOLUME		ACCEPTANCE VOLUME		H HEIGHT		A DIAMETER		B DIAMETER		D DIMENSION		SHIPPING WEIGHT	
	GAL.	LIT	GAL.	LIT	INCH	MM	INCH	MM	INCH	MM	INCH	MM	LBS.	Kg
CX15	7.8	29	2.5	9.5	26 ¹ / ₈	664	12 ¹ / ₂	318	10	254	12 ⁷ / ₈	327	45	20
CX30	8	31	5	17	22 ¹ / ₂	572	14 ¹ / ₂	368	12	305	13 ⁷ / ₈	352	45	20
CX42	11	43	5	17	27 ¹ / ₄	692	14 ¹ / ₂	368	12	305	16 ¹ / ₄	413	51	23
CX84	23	85	10	36	37	940	16 ¹ / ₂	419	12	305	20 ⁷ / ₈	530	83	38
CX130	35	131	15	56	51 ¹ / ₄	1302	16 ¹ / ₂	419	12	305	26 ³ / ₁₆	665	110	50
CX170	45	171	15	56	63 ³ / ₄	1619	16 ¹ / ₂	419	12	305	32 ³ / ₁₆	818	135	61

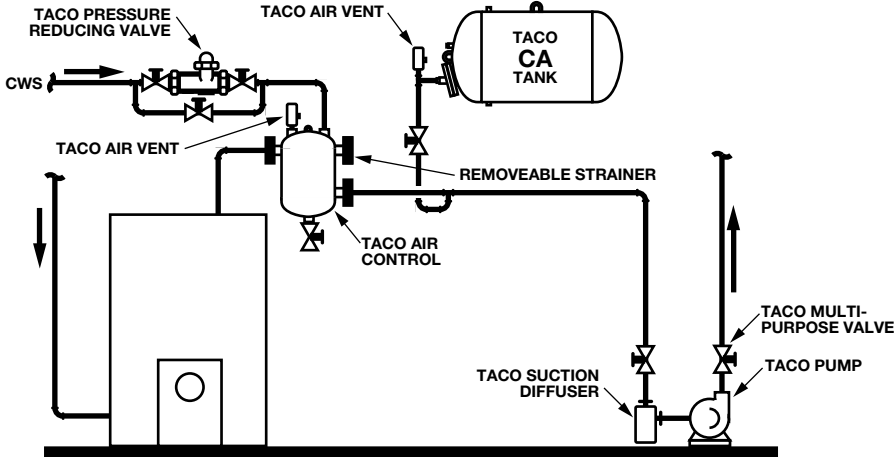


TYPICAL PIPING DETAILS

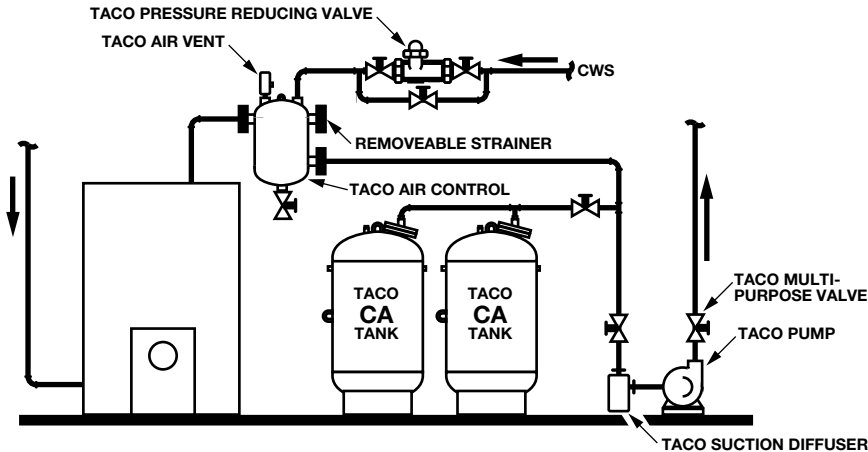
SINGLE INSTALLATION



OPTIONAL HORIZONTAL MOUNTING



MULTIPLE INSTALLATION



NOTE: "CA" and "CAX" do not require installation above boiler as air is not being directed to tank. Tanks are shipped complete with ring stand