



# Instruction Sheet CX Expansion Tanks

SUPERSEDES: May 1, 2001

EFFECTIVE: March 29, 2013

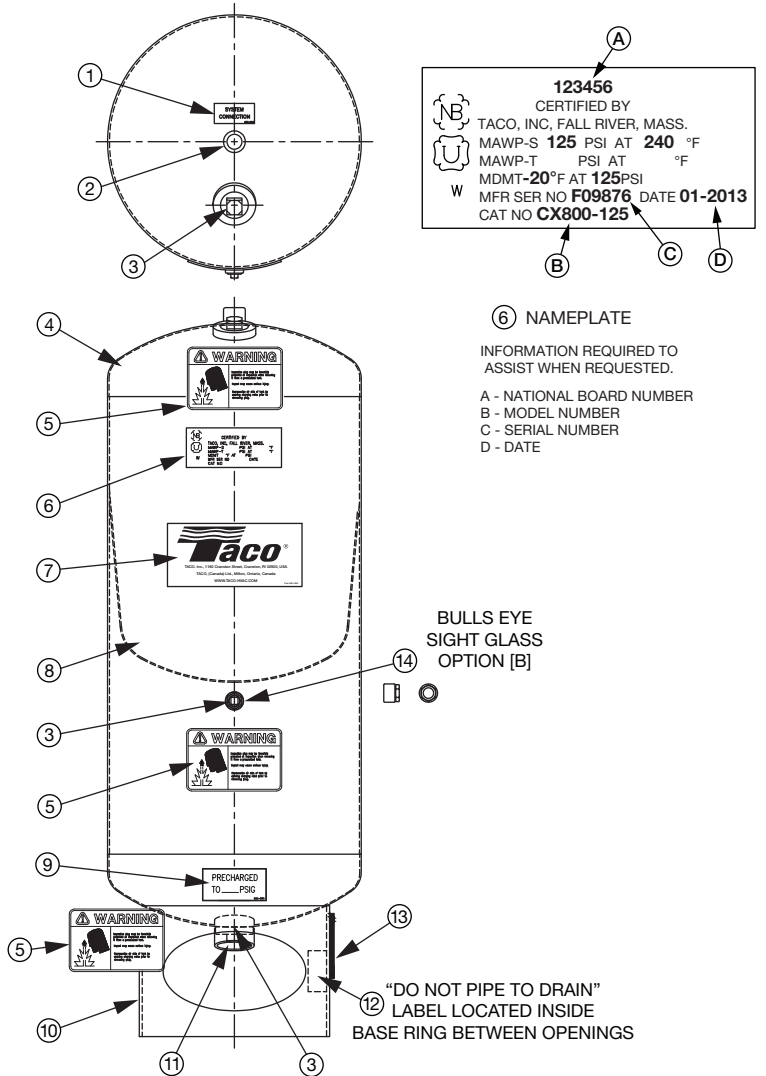
Plant ID No. 001-1017

- Note location of the system connection, charging valve and the drain plug and labels on the tank. Refer to Diagram 1 for location of tank fittings.
- Carefully remove the protective plastic cover in the system connection coupling located at the top center of the tank. There should not be much, if any, air pressure under this plug.

**CAUTION: DO NOT REMOVE THE PIPE PLUGS LOCATED ON THE TOP, SIDE AND BOTTOM OF THE TANK (TANK DRAINS). THESE PLUGS SHOULD NEVER BE REMOVED UNLESS NECESSARY AND THEN ONLY AFTER THE AIR PRESSURE IN THE TANK HAS BEEN BLEDED OFF TO ZERO GAUGE PRESSURE. BEFORE BLEEDING OFF ANY OF THE AIR CHARGE, ALWAYS ISOLATE THE TANK FROM THE SYSTEM WITH A SHUT-OFF VALVE.**

- Before making any connections to the tank, check the tank air charge, should be 11 to 14 psi. Use an accurate automotive or similar type gauge on the air valve located under the tank skirt. **The air charge pressure must be equal to the pre-charge pressure specified for the system. Refer to the label on the tank for the factory provided tank pre-charge pressure. The tank pre-charge pressure should be equal to the system fill pressure at the tank location. This should be adjusted prior to installing the tank.** Use Diagram 2 – Air Charge Check Chart to correct the value read on the pressure gauge for the ambient temperature at the tank location.
- After making sure that the air charge is correct, the pipe connection to the system may now be made. The piping requirements for captive air tanks are different from those of plain steel expansion tanks. Note the Captive Air Tank Piping Diagrams. Piping and air elimination devices should be arranged so that air will not be trapped in the tank, above the tank or in the nozzle. Pitch the piping connection up away from the tank and use automatic air vents where necessary. Note the piping diagram.
- Locate the CX tank connection as close as possible to the suction side of the pump. This ensures that the pressures realized from the pump head will be additive in the system. A combination shut-off and drain valve should be located in the connection piping to provide for tank isolation during the initial hydrostatic test.

• NOT FOR USE WITH POTABLE WATER.



- 1 - System Connection Label
- 2 - System Connection 1" NPTF
- 3 - Sealed NPT at factory - DO NOT REMOVE - Removing plug VOIDS warranty
- 4 - Tank
- 5 - Warning Label
- 6 - ASME Nameplate
- 7 - Taco Label
- 8 - Diaphragm
- 9 - Precharge To \_\_\_ PSIG Label
- 10 - Base Ring
- 11 - CHARGING VALVE CLOSURE (Schrader) 1/8" NPT
- 12 - "DO NOT PIPE TO DRAIN" Label
- 13 - This Installation Sheet
- 14 - Bulls Eye Sight Glass Option [B]

Diagram 1 – Location of Tank Fittings

Diagram 2 – Air Charge Check Chart

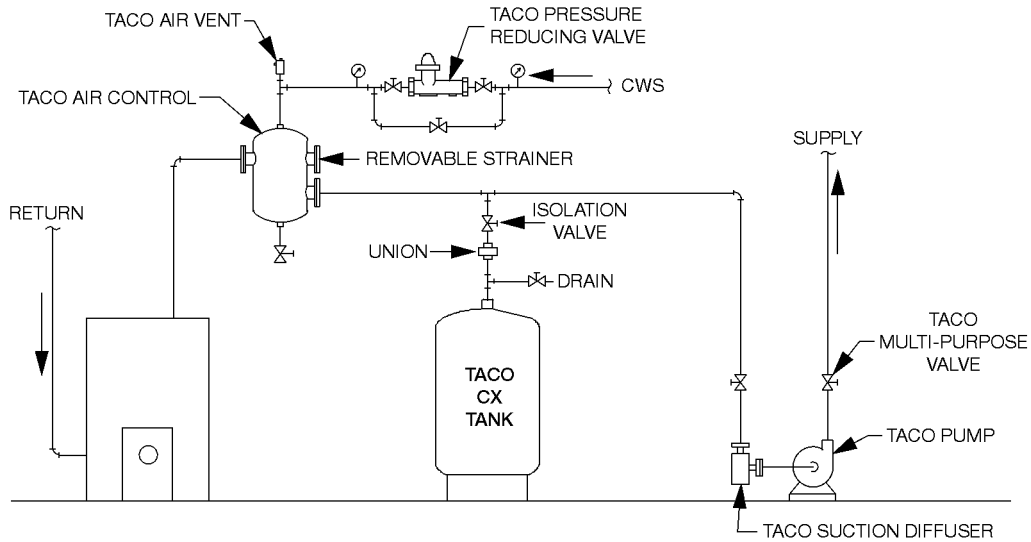
Specified Pre Charge Pressure P.S.I. (at 68°F)	Ambient Temperature (°F)								
	36	44	52	60	68	76	84	92	100
12	10.4	10.8	11.2	11.6	12.0	12.4	12.8	13.2	13.6
20	17.9	18.4	18.9	19.5	20.0	20.5	21.1	21.6	22.1
30	27.3	28.0	28.6	29.3	30.0	30.7	31.4	32.0	32.7
40	36.7	37.5	38.2	39.2	40.0	40.8	41.6	42.5	43.3
50	46.1	47.1	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	72.6	73.9	75.1

### How to Use the Chart

- Determine ambient air temperature where the tank is being checked.
- Locate the specified pre-charge pressure in the left-hand column.
- Follow across horizontally to the number under the ambient air temperature.
- The number found under Step No. 3 is the temperature corrected air charge pressure in p.s.i. and should agree with the gauge reading observed at the tank.
- 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.

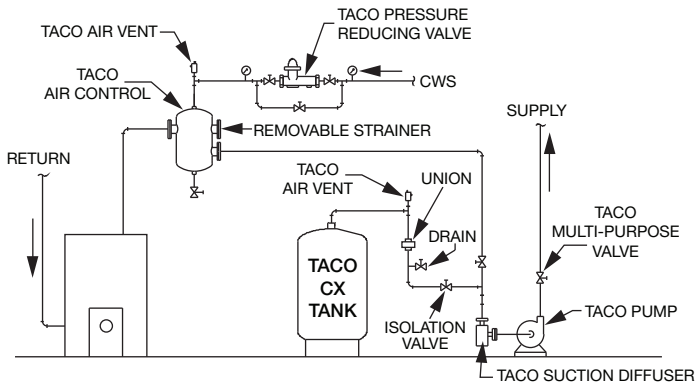
# CX Expansion Tank Piping Diagrams – Recommended Location

## RECOMMENDED SINGLE INSTALLATION

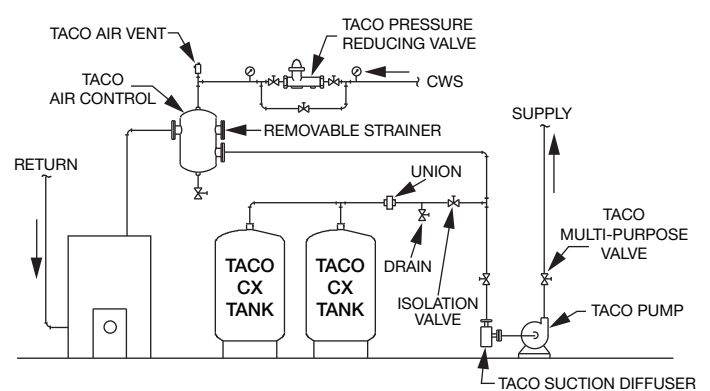


# CX Expansion Tank Piping Diagrams – Alternate Locations

## ALTERNATE SINGLE INSTALLATION



## MULTIPLE INSTALLATION



### See Related Documents:

400-1.2 Catalog  
 402-015 Instruction Sheet, This Document  
 401-021 Submittal

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