ASME Buffer Tanks for Chilled Water Systems
Tank Sizing

Chiller manufacturers recommend somewhere between 2-6 gallons per ton for nominal cooling in a typical system. Even higher, 6-10 gallons when temperature accuracy is critical.

1. Sizing
   Determine the system volume required by the manufacturer
   Remember to check with the manufacturer for their recommendations as to how many gallons they suggest per ton
   SVR = System Volume Required
   SVR = Total chiller tons X manufacture recommended system volume required gallon per ton

2. Calculate actual existing volume of piping and equipment Table A, below indicate gallons per linear foot of schedule 40 pipe
   ASV = Piping volume (PV) + equipment volume (EV) gallons

3. Calculate actual Buffer Tank size rquired (CBTR)
   Deduct the actual system volume (ASV) from the System Volume Required (SVR)
   CBTR=SVR-ASV

Refer to American Wheatley AWCBT charts for standard sizes. Larger sizes are available POA.

1”	0.04	8”	2.58
1-1/2”	0.1	10”	4.09
2”	0.17	12”	5.82
2-1/2”	0.25	14”	7.02
3”	0.38	16”	9.18
4”	0.66	18”	11.67
5”	1.04	20”	14.45
6”	1.5	24”	23.5

JOB NAME _____
LOCATION _____
_____
_____
CONTRACTOR _____
CONTRACTOR P.O. NO. _____

ITEMS	QUANTITY

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