

Chilled Water Buffer 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 required (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. _____	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">ITEMS</th> <th style="width: 50%; text-align: center;">QUANTITY</th> </tr> </thead> <tbody> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> <tr><td>_____</td><td>_____</td></tr> </tbody> </table>	ITEMS	QUANTITY	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	 <p style="text-align: center;"> 1005 E. Houston Broken Arrow, OK 74012 Toll Free: 866-204-5229 PH: 918-317-0401 FAX: 918-317-0407 www.wheatleyhvac.com e-mail: sales@globalflowproducts.com </p>
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