ASME Buffer Tanks for Hot Water Systems
Tank Sizing

What is a hot water buffer tank?

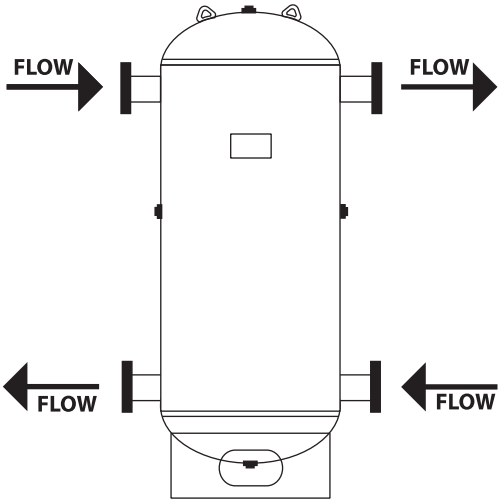
The Wheatley hot water buffer tank (HS) is designed to be used with today's low mass, high efficiency boiler systems. The Wheatley HS series hot water buffer tank affords the needed volume and thermal mass to negate or minimize short cycling during no load or low load conditions.

How do I size a hot water buffer tank?

Once again quite simple.

MCT=Manufacturers recommended minimum boiler cycle time-minues*
MBO= Minimum boiler output-BTUH
MSO=Minimum System Load**
ΔT-Temperature differential in tank***
CBTR=Calculated Buffer tank size required-gallons

$$\frac{MCT\ (MBO-MSO)}{\Delta T \times 500} = CBTR$$



*Typically 1-5 minute
** Enter 0 if not specified
*** Typically 10-20

Example:
MCT - 3 minutes
MBO-900,0000 BTUH
MSO-Unknown, Enter 0
ΔT-20

$$\frac{3 \times (900{,}000-0)}{20 \times 500} = \frac{2{,}700{,}000}{10{,}000} = 270 \text{ Gallon CBTR Hot Water Buffer Tank Required}$$

Please see our website for further details.

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

ITEMS	QUANTITY

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