

Series HS Hot Water Hydraulic Separator/Buffer Tanks

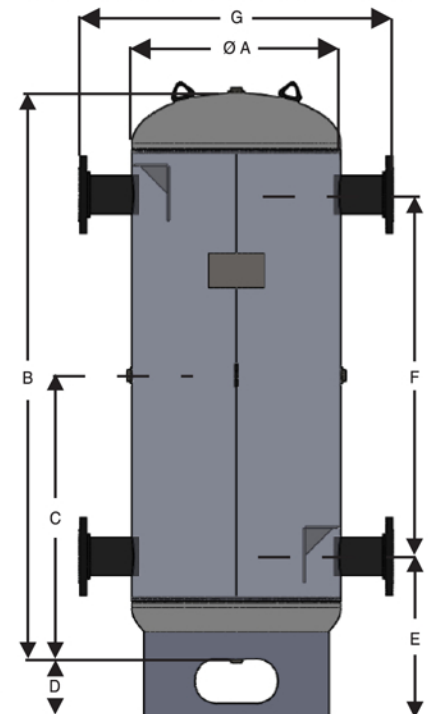
American Wheatley HS Series Hot water buffer tanks are designed to operate with modern high efficiency low-mass modular boiler systems. The American Wheatley hot water buffer tank ensures minimal ΔT and provides the necessary thermal storage to prevent short cycling that could occur during low load conditions.

Features:

- Prevents flow in one circuit from interfering with flow from another circuit
- Eliminates the need for a primary loop circulating pump, air separator, and strainer, thereby reducing initial cost as well as operating cost
- Eliminates complicated piping, reduces labor and piping costs
- Sized for no more than 4 fps, low velocity in the vessel results in low pressure drops
- Correctly installed hydraulic separation allows the use of multiple circulators to operate independently without interfering with each other
- Ideal for multiple load systems
- Standard sizes 40 gallon through 400 gallon with connections, 2" through 16"
- Custom sizes and pressure ratings readily available

Typical Specifications:

Furnish and install an American Wheatley HS series, vertical hydraulic buffer tank as described on the drawings or schedule. Inlet and outlet connections shall be flanged unless otherwise noted. Unit shall be constructed of carbon steel and built in accordance with ASME Section VIII, Division 1, the nameplate manufacturer shall carry all applicable ASME certificates. Exterior shall be primer base coated.



Scale 1:12

MODEL NO.	SIZE	GALLON	AQ STAT	DRAIN	VENT	A IN.	B IN.	C IN.	D IN.	E IN.	F IN.	G IN.	WT LBS.
HS-40	2", 2.5", 3" 4"	40	3/4	3/4	3/4	14	58.75	29.38	6.60	14.75	42.38	26	200
HS-120	2", 2.5", 3" 4"	120	3/4	3/4	3/4	24	65.25	32.63	6.60	18.53	41.38	36	440
HS-200	2", 2.5", 3" 4"	200	3/4	3/4	3/4	30	69.31	34.63	6.60	19.56	43.38	42	630
HS-300	2", 2.5", 3" 4"	300	3/4	3/4	3/4	36	73.63	36.82	6.60	21.75	43.38	48	730
HS-400	2", 2.5", 3" 4"	400	3/4	3/4	3/4	36	96.63	48.31	6.60	21.75	66.38	48	800

All packaging materials, thread protectors, plastic plugs and caps must be removed before installation. Dimensions are subject to change without notice, please confirm actual dimensions with factory at time of order.

JOB NAME _____
LOCATION _____

CONTRACTOR _____
CONTRACTOR P.O. NO. _____

ITEMS	QUANTITY
_____	_____
_____	_____
_____	_____
_____	_____
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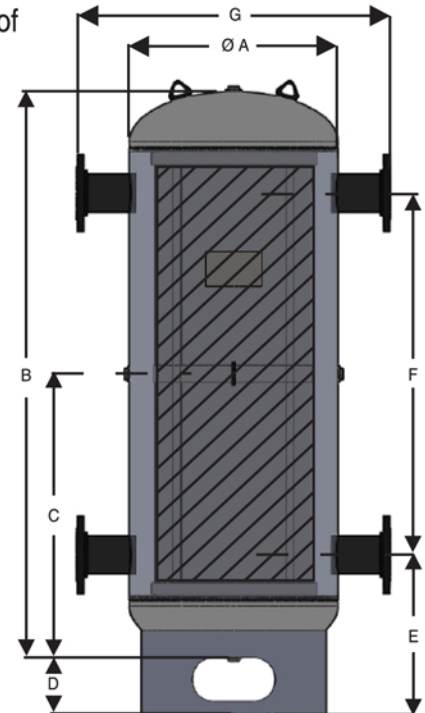
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Series HSC Coalescing Type Hydraulic Separator

American Wheatley HSC Series Coalescing type Hydraulic Separators/Hot Water Buffer Tanks are designed to operate with modern high efficiency low-mass modular boiler systems. The American Wheatley HSC Series ensures minimal ΔT and provides the necessary thermal storage to prevent short cycling that could occur during low load conditions, along with the added benefit of a coalescing media for superior air and dirt separation.

Features:

- Prevents flow in one circuit from interfering with flow from another circuit
- Eliminates the need for a primary loop circulating pump, air separator, and strainer, thereby reducing initial cost as well as operating cost
- Eliminates complicated piping, reduces labor and piping costs
- High performance stainless steel ring type coalescing media
- Correctly installed hydraulic separation allows the use of multiple circulators to operate independently without interfering with each other
- Ideal for multiple load systems
- Standard sizes 40 gallon through 400 gallon with connections, 2" through 16"
- Custom sizes and pressure ratings readily available



Scale 1:12

Typical Specifications:

Furnish and install an American Wheatley HSC series, coalescing type vertical hydraulic separator as described on the drawings or schedule. Inlet and outlet connections shall be flanged unless otherwise noted. Unit shall be constructed of carbon steel and built in accordance with ASME Section VIII, Division 1, the nameplate manufacturer shall carry all applicable ASME certificates. Coalescing media must be stainless steel. Exterior shall be primer base coated.

MODEL NO.	SIZE	GALLON	AQ STAT	DRAIN	VENT	A IN.	B IN.	C IN.	D IN.	E IN.	F IN.	G IN.	WT LBS.
HSC-40	2", 2.5", 3" 4"	40	3/4	3/4	3/4	14	58.75	29.38	6.60	14.75	42.38	26	200
HSC-120	2", 2.5", 3" 4"	120	3/4	3/4	3/4	24	65.25	32.63	6.60	18.53	41.38	36	440
HSC-200	2", 2.5", 3" 4"	200	3/4	3/4	3/4	30	69.31	34.63	6.60	19.56	43.38	42	630
HSC-300	2", 2.5", 3" 4"	300	3/4	3/4	3/4	36	73.63	36.82	6.60	21.75	43.38	48	730
HSC-400	2", 2.5", 3" 4"	400	3/4	3/4	3/4	36	96.63	48.31	6.60	21.75	66.38	48	800

All packaging materials, thread protectors, plastic plugs and caps must be removed before installation.

Dimensions are subject to change without notice, please confirm actual dimensions with factory at time of order.

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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:

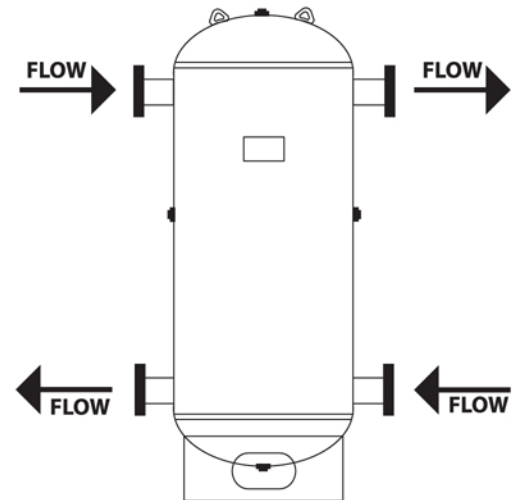
MCT - 3 minutes

MBO-900,000 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. _____

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_____	_____
_____	_____
_____	_____
_____	_____
_____	_____