2022 PRODUCT CATALOG

Residential • Commercial

CALEFACTIO

Improve What's Best

Our Promise: Improve What’s Best

Calefactio Solutions is a Canadian manufacturer that develops and distributes specialized plumbing products, especially in hydronic heating across North America.

Driven by a wish to continually improve what's best, the two young founders have embraced a mission to transform the hydronic plumbing industry their way, by investing in continual improvement. Not only do they offer quality products at affordable prices, they also want to make service more accessible and relevant to their customer by anticipating their need.

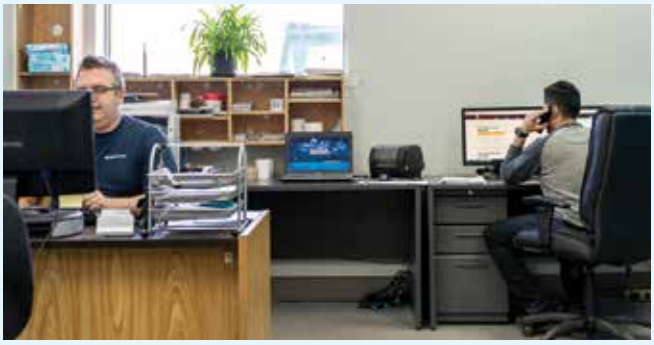
As well, they welcome input from their employees and collaborators, reinventing ways of doing things to offer a human experience rooted in trust and collaboration.

OUR APPROACH

We always strive to do better and to do things differently. We want to offer exceptional products, but we also want to provide you with fast, efficient, flexible service. Our team are always available to answer your questions. They'll ensure the process is smooth and easy from start to finish.

WHY CHOOSE US?

- A Canadian business that's committed to the wellness of its members
- A dedicated versatile team that's available and ready to listen
- Fast, customized service
- Competitive prices without compromises on quality
- Continuous improvement viewed as a top priority
- Efficient and fast distribution network



THE DIFFERENCE BETWEEN OUR COMPETITORS AND US, IT'S US!

TABLE OF CONTENTS

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The information contained in this document is based on the most recent information available at the time of its publication and is intended as a general overview of our products. The accuracy of this information cannot be guaranteed. Our products are regularly improved, and their technical specifications may be modified without notice. Consult our website at any time for all product-related information.

NON-CODE BLADDER EXPANSION TANKS

- **WATER IS STORED IN THE BLADDER**
- **WATER DOES NOT COME IN CONTACT WITH THE SHELL OF THE TANK**
- **NO RUST OR CORROSION OF THE SHELL OF THE TANK**

HEATING

THE ONE®
Patent pending

POTABLE

WELDED AND ROBUST CONSTRUCTION The steel shells are designed to withstand high pressure and provide protection of your installation. The tanks are solid and durable, while remaining light, easy to handle and simple to use.

FULL ACCEPTANCE EPDM BLADDER The bladders resist temperatures up to 200°F (93°C) for potable water systems, 240°F (115°C) for heating installations and 315°F (157°C) for high temperature systems. Characterized by solid construction, the bladders are fabricated following an injection molding process. They are suitable for glycol (up to 50 %), heating solar and cooling installations.

RESISTANT COATING The finish, obtained by an electrostatic painting process, gives the tanks an attractive and durable appearance.

FACTORY PRECHARGE FOR ALL MODELS Suitable for most common installations. Precharge must be manually adjusted on site.

HEATING

Series HGT and HGTV expansion tanks are available in formats ranging from 2 to 74 gallons, in models mounted in-line or on base. These tanks are formed from a steel shell designed to resist high pressures, which makes your installation even safer. The EPDM bladder separates air from water while preventing water infiltration and saving space and energy. These devices are suitable for heating and cooling installations and are also compatible with glycol.

- Heating applications
- EPDM bladder – water never comes in contact with the tank
- Maximum temperature: 240°F
- Precharge: 12 PSI
- Maximum operating pressure: 115 PSI
- 2 to 74 gallons

HGT

- Fixed bladder expansion tank
- MNPT top connection (in-line)

Model#	Volume		Connect.	Dimension				Weight	
				A		B			
	gal	L		in	mm	in	mm	lb	kg
HGT15	2.1	8	½"	7.9	200	13.7	348	5	2
HGT30	4.8	18	½"	10.6	270	16.3	415	9	4
HGT60M	6	23	½"	10.6	270	18.9	480	9.25	4.2
HGT60	8	30	½"	13.8	350	17.9	455	14	6
HGT90	13	50	1"	14.9	380	23.0	585	23	10

HGTV

- Expansion tank with replaceable bladder
- FNPT bottom connection (on base)

Model#	Volume		Connect.	Dimension				Weight	
				A		B			
	gal	L		in	mm	in	mm	lb	kg
HGTV30	13	50	1"	14.9	380	25.3	645	25	12
HGTV40	21	80	1"	17.7	450	26.7	680	29	13
HGTV60	26	100	1"	17.7	450	30.1	765	35	16
HGTV90	40	150	1¼"	19.7	500	41.1	1045	49	22
HGTV110	57	215	1¼"	19.7	500	52.1	1325	77	35
HGTV150	74	280	1¼"	19.7	500	63.1	1605	102	46

HIGH TEMPERATURE

HTS

- Compatible with glycol
- EPDM bladder
- Epoxy coating
- Welded steel shell
- Temperature max.: 315°F and up*
- Precharge: 25 PSI
- Max. operation pressure: 150 PSI

Model#	Volume		Conn.	Weight	
	gal	L		lb	kg
HTS30	6.6	25	½"	12	5.4

*See the Calefactio engineering department.

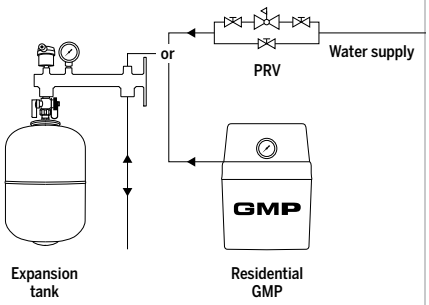
SERVICE KIT

SERVICE KIT FOR HEATING SYSTEM

- Safe, practical and easy access installation
- Provides an overview of the state of the system

Model#	Content	Weight	
		lb	kg
SERVICEKIT15	⊕ HGT15 ⊕ HGSC-MULTI ⊕ R8818 ⊕ HGSV12 ⊕ GAUGE0-30BOTTOM	10	4.55
SERVICEKIT30	⊕ HGT30 ⊕ HGSC-MULTI ⊕ R8818 ⊕ HGSV12 ⊕ GAUGE0-30BOTTOM	12	5.45
SERVICEKIT60M	⊕ HGT60M ⊕ HGSC-MULTI ⊕ R8818 ⊕ HGSV12 ⊕ GAUGE0-30BOTTOM	15	6.82
SERVICEKIT60	⊕ HGT60 ⊕ HGSC-MULTI ⊕ R8818 ⊕ HGSV12 ⊕ GAUGE0-30BOTTOM	16	7.27

Installation Schematic



Optional

CONNECTION HOSE

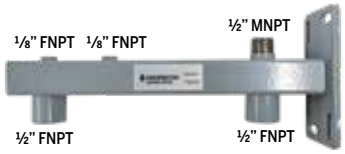
Model#	Description	Weight	
		lb	kg
BH72	Braided hose 72" ½" FNPT × ½" MNPT	1.32	0.6

INCLUDED

Suitable for tank HGT15, HGT30, HGT60M and HGT60

SERVICE CENTER

- Steel frame



Model#	L	H	W	Weight	
				lb	kg
HGSC-MULTI	10¾"	4½"	2⅜"	2.8	1.27

AUTOMATIC VENT

Model#	Description	Weight	
		lb	kg
R8818	⅛" MNPT	0.24	0.11

SERVICE VALVE

Model#	Description	Weight	
		lb	kg
HGSV12	½" FNPT	0.66	0.3

⅛" MNPT PRESSURE GAUGE

Model#	Description	Weight	
		lb	kg
GAGE0-30BOTTOM	0-30 PSI	0.22	0.1
GAGE0-100BOTTOM	0-100 PSI	0.22	0.1

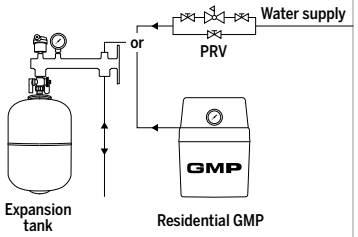
MASTER KIT

SERVICE KIT FOR HEATING SYSTEM

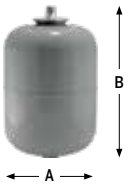
NEW

- Seven items in one single box
- Safe, practical and easy access installation
- Provides an overview of the state of the system

INSTALLATION SCHEMATIC



Model#	Content	Weight	
		lb	kg
MASTERKIT-JR15-72	⊕ HGT15 ⊕ GMP4	21	9.5
MASTERKIT-JR30-72	⊕ HGT30 ⊕ GMP4	23	10.4



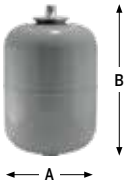
EXPANSION TANKS

Model#	Volume		Connect.	Dimension				Weight	
				A		B			
	gal	L		in	mm	in	mm	lb	kg
HGT15	2.1	8	½"	7.9	200	13.7	348	5	2
HGT30	4.8	18	½"	10.6	270	16.3	415	9	4

GLYCOL MAKE-UP PACKAGE

Model#	Description	Weight	
		lb	kg
GMP4	Capacity of 4 gal (15 L)	9.6	4.4

Model#	Content	Weight	
		lb	kg
MASTERKIT15-72	⊕ HGT15 ⊕ GMP6	30.2	13.7
MASTERKIT30-72	⊕ HGT30 ⊕ GMP6	32.2	14.6
MASTERKIT60-72	⊕ HGT60 ⊕ GMP6	33.3	15.1



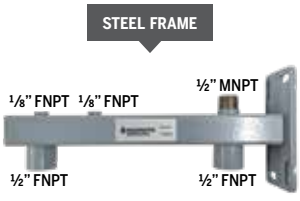
EXPANSION TANKS

Model#	Volume		Connect.	Dimension				Weight	
				A		B			
	gal	L		in	mm	in	mm	lb	kg
HGT15	2.1	8	½"	7.9	200	13.7	348	5	2
HGT30	4.8	18	½"	10.6	270	16.3	415	9	4
HGT60	8	30	½"	13.8	350	17.9	455	14	6

GLYCOL MAKE-UP PACKAGE

Model#	Description	Weight	
		lb	kg
GMP6	Capacity of 6 gal (22.7 L)	18.2	8.6

INCLUDED IN ALL SETS



CONNECTION HOSE

Model#	Description	Weight	
		lb	kg
BH72	Braided hose 72" ½" FNPT × ½" MNPT	1.32	0.6

⅛" MNPT PRESSURE GAUGE

Model#	Description	Weight	
		lb	kg
GAGEO-30BOTTOM	0-30 PSI	0.22	0.1

SERVICE CENTER

Model#	L	H	W	Weight	
				lb	kg
HGSC-MULTI	10¾"	4½"	2⅜"	2.8	1.27

AUTOMATIC VENT

Model#	Description	Weight	
		lb	kg
R8818	⅛" MNPT	0.24	0.11

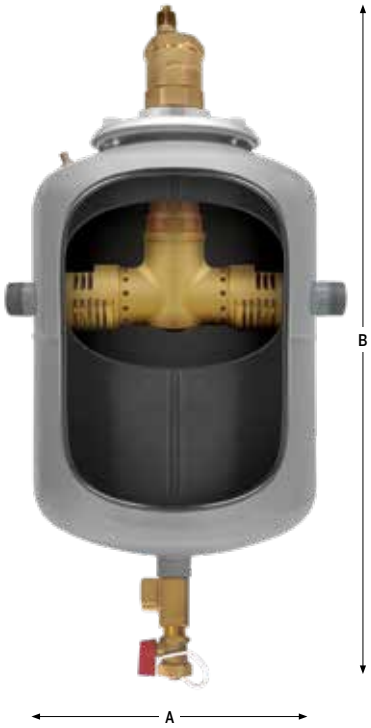
SERVICE VALVE

Model#	Description	Weight	
		lb	kg
HGSV12	½" FNPT	0.66	0.3

THE ONE®

UNIQUE AND EXCLUSIVE TO CALEFACTIO

Patent pending



Highest performing air and dirt separator in the industry due to an oversize chamber which absorbs shock to the system.

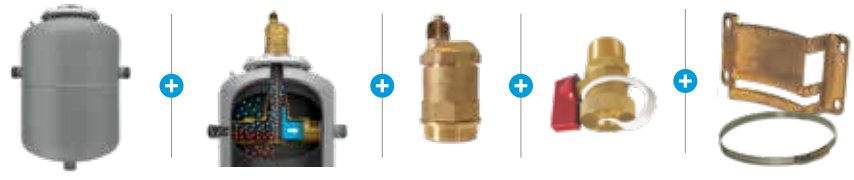
The only device which combines an expansion tank, an air separator and a dirt separator.

- Coalescent media in stainless steel
- Minimum loss of pressure (CV22)
- Superior performance for separation of microbubbles
- High efficiency for separation of solids and dirt
- Brass and copper casing

The ONE®

- Save money
- Save time
- Reduce the risk of leaks
- Reduce the number of joints and welds

Model#	Total volume		Net volume		Max. operating pressurez	Conn. MNPT	Dimension				Weight	
							A		B			
	gal	L	gal	L	PSI	in	in	mm	in	mm	lb	kg
T015	2.7	10	2.7	8	115	1	12.8	325	15.6	395	15	6.82
T030	5.3	20	4.8	18	115	1	12.8	325	22.4	570	19.2	8.73



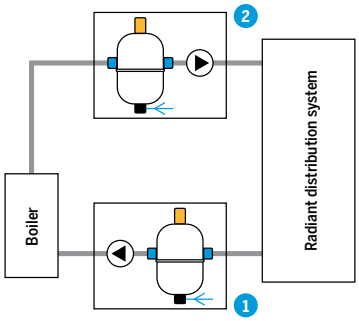
Replaceable bladder expansion tank | Air and dirt separator | Calvent automatic air vent | Drain valve | Wall support

TECHNICAL CHARACTERISTICS

- **Material**
  Casing: brass
  Internal element: stainless steel
  Joint: EPDM
- **Adapted fluids**
  Water and 50% glycol solution
- **Temperature range**
  32-240°F (0-115°C)
- **Maximum pressure**
  115 PSI

Installation Schematic

2 possible configurations



Air & Dirt Separator

The heart of The ONE® is a brass casing air and dirt separator of superior quality and highly resistant. Its efficiency is 40% higher than that of other air and dirt removal devices due to its size.

POTABLE

- Potable water applications in a domestic system
- EPDM bladder – water never comes in contact with the tank
- Maximum temperature: 200°F (93°C)
- Precharge: 50 PSI
- Maximum operating pressure: 150 PSI
- 0.4 to 74 gallons

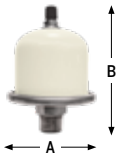
C US
Drinking Water
NSF/ANSI 61 & 372

HGTE1

- For tankless water heaters of less than 2 gallons

Model#	Volume		Connect.	Dimension				Weight		Qty/ Box*
				A		B				
	gal	L		in	mm	in	mm	lb	kg	
HGTE1	0.4	0.16	½"	3.25	80	4.5	112	0.5	0.2	8

*This product is sold individually, but it can also be sold in a master pack.



FOR APPLICATION WITHOUT RECIRCULATION

HGTE

- Fixed bladder expansion tank
- MNPT Top connection (stainless steel)

Model#	Volume		Connect.	Dimension				Weight	
				A		B			
	gal	L		in	mm	in	mm	lb	kg
HGTE5	2.1	8	¾"	7.9	200	13.7	348	5	2
HGTE8	3.2	12	¾"	10.6	270	12.8	325	9	4
HGTE12	4.7	18	¾"	10.6	270	16.7	425	11	5
HGTE25	8.0	30	¾"	13.8	350	16.4	418	14	6

HGTEV

- Expansion tank with replaceable bladder
- FNPT (stainless steel) bottom connection (on base)

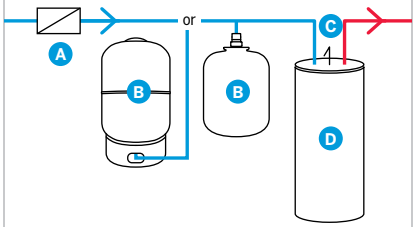
Model#	Volume		Connect.	Dimension				Weight	
				A		B			
	gal	L		in	mm	in	mm	lb	kg
HGTEV30	14	53	¾"	14.9	380	26.4	670	26	12
HGTEV42	20	75.8	¾"	17.7	450	27.8	750	31	14
HGTEV60	30	114	1¼"	17.7	450	31.8	808	37	17
HGTEV80	44	167	1¼"	19.7	500	42.0	1065	52	23
HGTEV180	57	215	1¼"	19.7	500	52.4	1330	75	34
HGTEV200	74	280	1¼"	19.7	500	63.4	1610	103	47

FTTE – Flow Through

- Limits the risk of system contamination by legionella bacteria
- Avoids water stagnation

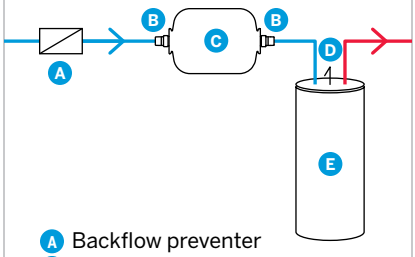
Model#	Volume		Connect.	Dimension				Weight	
				A		B			
	gal	L		in	mm	in	mm	lb	kg
FTTE5	2.1	8	¾"	14.3	365	7.9	200	6.3	2.9
FTTE8	3.2	12	¾"	14.3	365	10.6	270	7.6	3.5
FTTE12	4.7	18	¾"	17.5	445	10.6	270	9.3	4.2
FTTE25	8	30	¾"	17.5	445	13.8	350	11.5	5.2

Installation Schematic
For HGTE/HGTEV



- A Check valve
- B HGTE/HGTEV tank
- C Safety valve
- D Water heater

Installation Schematic
For FTTE



- A Backflow preventer
- B Union (optional)
- C FTTE tank
- D Safety valve
- E Water heater

11

SERVICE KIT

SERVICE KIT FOR POTABLE WATER SYSTEM

- Provides an overview of the state of the system
- Saves time and money

Operation

The service kit for potable water systems includes an expansion tank (HGTE-5, HGTE-8, HGTE-12 or HGTE-25), a stainless steel service center (#HGSC-SS), and a service valve with pressure gauge (#HGSV34). The potable water system service valve from Calefactio combines several functions, one of which allows reading the system pressure at any time.

When the valve is in closed position, it is possible to use it to drain the tank, or perform maintenance. Once the tank is drained, it becomes very easy to verify that the pressure is equal to or greater than that of the municipal network and to adjust it for proper functioning if necessary.

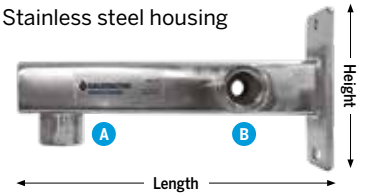
Model#	Content	Weight	
		lb	kg
SERVICEKIT5	⊕ HGTE5 ⊕ HGSC-SS ⊕ HGSV34	8.7	3.95
SERVICEKIT8	⊕ HGTE8 ⊕ HGSC-SS ⊕ HGSV34	12.7	5.77
SERVICEKIT12	⊕ HGTE12 ⊕ HGSC-SS ⊕ HGSV34	14.7	6.68
SERVICEKIT25	⊕ HGTE25 ⊕ HGSC-SS ⊕ HGSV34	17.7	8.05

INCLUDED

Suitable for tank HGTE5, HGTE8, HGTE12 and HGTE25

SERVICE CENTER

Stainless steel housing

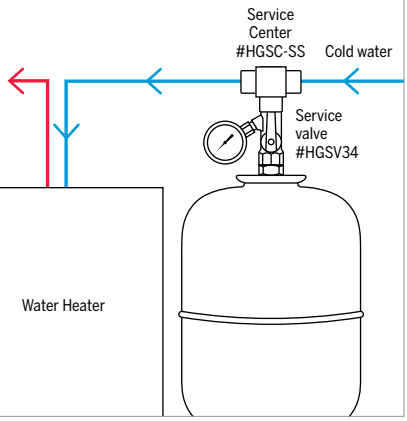


Model#	HGSC-SS				
A		B			
¾" FNPT		¾" FNPT			
Length	Height	Width	Weight		
			lb	kg	
9¼"	4¾"	2⅜"	2.6	1.18	

SERVICE VALVE WITH DRAIN

Model#	Description	Weight	
		lb	kg
HGSV34	¾" MNPT × ¾" FNPT	1.1	0.5

Installation Schematic



12

ACCESSORIES FOR EXPANSION TANKS / HEATING

WALL SUPPORT

Model# for HGT15	Weight	
	lb	kg
BRACKET200MM	0.66	0.3

Model# for HGT30/HGT60M/TO15/TO30	Weight	
	lb	kg
BRACKET270MM	0.66	0.3

SERVICE VALVE

Model#	Description	Weight	
		lb	kg
#HGSV12	½" MNPT × ½" FNPT	0.66	0.3

⅛" MNPT PRESSURE GAUGE

Model#	Description	Weight	
		lb	kg
GAUGE0-30BOTTOM	0-30 PSI	0.22	0.1
GAUGE0-100BOTTOM	0-100 PSI	0.22	0.1

AUTOMATIC VENT

Model#	Description	Weight	
		lb	kg
R8818	⅛" MNPT	0.24	0.11

CONNECTION HOSE

Model#	Description	Weight	
		lb	kg
BH72	Braided hose 72" ½" FNPT × ½" MNPT	1.32	0.6

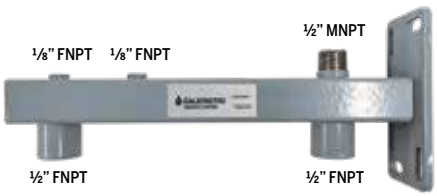
HEATING SYSTEM SERVICE CENTER

▶ Steel frame

Model#	Length	Height	Width	Weight		Qty/ box*
				lb	kg	
HGSC-MULTI	10¾"	4½"	2⅜"	2.8	1.27	12

Compatible with

- HGT15
- HGT30
- HGT60M
- HGT60



ACCESSORIES FOR EXPANSION TANKS / POTABLE

WALL SUPPORT

Model# for HGTE5/FTTE5	Weight	
	lb	kg
BRACKET200MM	0.66	0.3

Model# for HGTE8/HGTE12/FTTE8/FTTE12	Weight	
	lb	kg
BRACKET270MM	0.66	0.3

SERVICE VALVE WITH DRAIN

Model#	Description	Weight	
		lb	kg
#HGSV34	¾" MNPT × ¾" FNPT system ¼" gauge	1.1	0.5

Compatible with

- HGTE5
- HGTE8
- HGTE12
- HGTE25
- FTTE5
- FTTE8
- FTTE12
- FTTE25

JAUGE POUR TEST PRESSION MAXIMUM

NEW

Thanks to its red marker indicating the highest pressure reached, you'll be able to prevent several problems that could be caused by excessive water pressure in your system.

Model#	Description	Weight	
		lb	kg
WPG-C	GHT ¾", 0-200 psi	0.2	0.1

POTABLE WATER SERVICE CENTER

▶ Stainless steel housing

Model#	Length	Height	Width	Weight		Qty/ box*
				lb	kg	
HGSC-SS	9¼"	4¾"	2⅜"	2.6	1.18	20

Compatible with

- HGTE5
- HGTE8
- HGTE12
- HGTE25

*This product is sold individually, but it can also be sold in a master pack.

VENTS, AIR, DIRT AND HYDRAULIC SEPARATORS

CAL-X-TRACT
Air Separators

NEW

CAL-X-TRACT-D
Dirt Separators

NEW

CAL-X-TRACT-AD
Air and Dirt Separators

CALVENT
Automatic Air Vent

MAGNET

CALBALANCE
Hydraulic Separators

AUTOMATIC AIR VENT

CALVENT

Technical Specifications

- **Material**
  Body: brass
  Cover: brass
  Float: polypropylene
  Float guide: brass
  Float linkage: stainless steel
  O-ring: EPDM

- **Adapted fluids**
  Water and 50% glycol solution

Advantages

- Float guided by a tree
- Easy to disassemble hexagonal head for cleaning and maintenance
- Enhances heating systems efficiency
- A system without air allows full contact between the liquid and transfer surfaces offering an optimized temperature control
- Limits system components' corrosion
- Vent pipe connection ½" MNPT

Model#	Connection	Maximum operation pressure	Temp. range		A		B		Weight		Qty/ box*
			°C	°F	in	mm	in	mm	lb	kg	
CV050	½" FNPT × ¾" MNPT	150 PSI	0-121	32-250	2¼	56	5⅓	136	1.6	0.73	18

*This product is sold individually, but it can also be sold in a master pack.

AUTOMATIC BRASS VENTS

Calefactio's automatic brass vents evacuate trapped air to restore optimal functioning of the installation. They are made of solid brass able to resist high temperatures up to 120°C/248°F. These vents evacuate the air laterally reducing the accumulation of foreign bodies in the seat.

Model#	Connection	Pressure	Dimension		Weight		Qty/ box*
			Width	Height	lb	kg	
R8818	⅛" MNPT	150 PSI	1¾"	2"	0.24	0.11	10
R8814	¼" MNPT	150 PSI	1¾"	2"	0.25	0.11	10
R8812	½" MNPT	150 PSI	1¾"	2¼"	0.22	0.10	

*This product is sold individually, but it can also be sold in a master pack.

CAL-X-TRACT®

Impurities in the water caused by the presence of air, sand, cement, or other contaminants are common and can damage all system components. Calefactio's Cal-X-Tract range of air and dirt separators features stainless steel brush-type coalescing media designed to allow air bubbles and dirt particles to cling to it while maintaining a constant flow of fluid. This technology reduces the risk of corrosion and damage that could be caused by impurities in the system. Therefore, you'll see better energy efficiency and reduce maintenance frequency. With its oversized housing and robust design, you get a reliable product that will perform well for the life of the system.

Technical specifications

- Coalescent media: 316 stainless steel
- Connections: NPT, Sweat or Press, ¾" to 2"
- Body: brass
- Adapted fluids: water and 50% glycol solution
- Maximum temperature: 120°C (250°F)
- Maximum design pressure: 150 PSI

Advantages

- Brush-type coalescent media designed for catching micro-bubbles while maintaining constant flow
- Improves the efficiency of the system
- Increases component life
- Easy to disassemble to simplify cleaning if needed

CAL-X-TRACT / AIR SEPARATORS

Operation

The coalescence process generated by the brush allows the droplets to cling and coalesce into a larger size. The droplets then break away from the media and into the upper part of the air separator where they are released through the Calvent automatic vent.

- Anti-clogging vent (the head is designed to stay dry and clean, reducing the risk of clogging)
- ½" NPT service port installed at the bottom of the device
- Reduces the risks of cavitation of the pump and of rust from oxygen

NPT

Model#	Connect.	Dimension				Weight		Qty/ box†
		A		B				
		in	mm	in	mm	lb	kg	
CXT-075NC	¾"*	3⅜	85	6⅞	176	2.0	0.9	21
CXT-100N	1"	4½	115	8½	215	4.0	1.8	8
CXT-125N	1¼"	4½	115	8½	215	4.0	1.8	8
CXT-150N	1½"	8½	215	8½	215	4.4	2.0	8
CXT-200N	2"	8½	215	8½	215	4.2	1.9	8

Sweat

Model#	Connect.	Dimension				Weight		Qty/ box†
		A		B				
		in	mm	in	mm	lb	kg	
CXT-075SC	¾"*	3⅝	92	6⅞	176	2.0	0.9	21
CXT-100S	1"	4½	115	8½	215	4.0	1.8	8
CXT-125S	1¼"	4½	115	8½	215	3.75	1.7	8
CXT-150S	1½"	5⅛	131	8½	215	4.6	2.1	8
CXT-200S	2"	5⅛	143	8½	215	4.6	2.1	8

Press

Model#	Connect.	Dimension				Weight		Qty/ box†
		A		B				
		in	mm	in	mm	lb	kg	
CXT-075PC	¾"*	6⅜	162	6⅞	176	2.4	1.1	21
CXT-100P	1"	7½	190	8½	215	4.5	2.1	8
CXT-125P	1¼"	8	203	8½	215	4.9	2.2	8
CXT-150P	1½"	8½	216	8½	215	5.7	2.6	8
CXT-200P	2"	9	229	8½	215	6.2	2.8	8

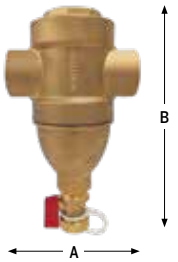
*This product is sold individually, but it can also be sold in a master pack.

CAL-X-TRACT-D / DIRT SEPARATORS

NEW

Operation

The coalescence process generated by the brush allows the dirt to cling to it and fall into the lower part of the dirt separator where it is removed through the drain valve. Unlike a mesh filter, the brush-type coalescing media included in our dirt separators creates a swirling effect that prevents the product from clogging.



NPT

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTD-075N	¾"	4.5	115	8.3	210	3.65	1.65
CXTD-100N	1"	4.5	115	8.3	210	3.65	1.65
CXTD-125N	1¼"	4.5	115	8.3	210	3.65	1.65
CXTD-150N	1½"	4.5	115	8.3	210	4.09	1.85
CXTD-200N	2"	4.5	115	8.3	210	3.87	1.75

Sweat

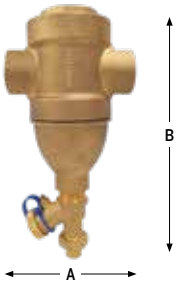
Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTD-075S	¾"	4.5	115	8.3	210	3.43	1.55
CXTD-100S	1"	4.5	115	8.3	210	3.43	1.55
CXTD-125S	1¼"	4.5	115	8.3	210	3.43	1.55
CXTD-150S	1½"	5.6	143	8.3	210	4.31	1.95
CXTD-200S	2"	5.6	143	8.3	210	4.09	1.85

Press

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTD-075P	¾"	6.53	166	8.3	210	3.65	1.65
CXTD-100P	1"	6.53	166	8.3	210	3.65	1.65
CXTD-125P	1¼"	8.03	204	8.3	210	3.65	1.65
CXTD-150P	1½"	8.31	211	8.3	210	4.09	1.85
CXTD-200P	2"	9.02	229	8.3	210	3.87	1.75

Dirt separators with magnet

Models with a magnet facilitate the separation and accumulation of ferrous impurities thanks to their magnetic field. Some non-ferrous particles are also captured due to cross-contamination when they come into contact with iron particles.



NPT

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTD-075N-MAG	¾"	4.5	115	9.3	235	4.26	1.95
CXTD-100N-MAG	1"	4.5	115	9.3	235	4.26	1.95
CXTD-125N-MAG	1¼"	4.5	115	9.3	235	4.26	1.95
CXTD-150N-MAG	1½"	4.5	115	9.3	235	4.76	2.15
CXTD-200N-MAG	2"	4.5	115	9.3	235	4.56	2.05

Sweat

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTD-075S-MAG	¾"	4.5	115	9.3	235	4.06	1.85
CXTD-100S-MAG	1"	4.5	115	9.3	235	4.06	1.85
CXTD-125S-MAG	1¼"	4.5	115	9.3	235	4.06	1.85
CXTD-150S-MAG	1½"	5.6	143	9.3	235	4.96	2.25
CXTD-200S-MAG	2"	5.6	143	9.3	235	4.76	2.15

Press

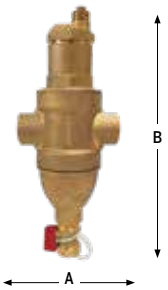
Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTD-075P-MAG	¾"	4.5	115	9.3	235	4.26	1.95
CXTD-100P-MAG	1"	4.5	115	9.3	235	4.26	1.95
CXTD-125P-MAG	1¼"	4.5	115	9.3	235	4.26	1.95
CXTD-150P-MAG	1½"	4.5	115	9.3	235	4.76	2.15
CXTD-200P-MAG	2"	4.5	115	9.3	235	4.56	2.05

CAL-X-TRACT-AD / AIR AND DIRT SEPARATORS

NEW

Operation

The coalescence process generated by the brush allows droplets and dirt to cling to it. Unlike a mesh filter, the coalescing media creates a swirling effect that prevents the product from clogging. Dirt will fall to the bottom and air will be evacuated through the Calvent automatic vent.



NPT

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTAD-075N	¾"	4.5	115	11.6	295	4.53	2.05
CXTAD-100N	1"	4.5	115	11.6	295	4.75	2.15
CXTAD-125N	1¼"	4.5	115	11.6	295	4.75	2.15
CXTAD-150N	1½"	4.5	115	11.6	295	5.19	2.35
CXTAD-200N	2"	4.5	115	11.6	295	4.97	2.25

Sweat

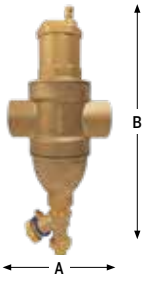
Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTAD-075S	¾"	4.5	115	11.6	295	4.53	2.05
CXTAD-100S	1"	4.5	115	11.6	295	4.53	2.05
CXTAD-125S	1¼"	4.5	115	11.6	295	4.53	2.05
CXTAD-150S	1½"	5.6	143	11.6	295	5.41	2.45
CXTAD-200S	2"	5.6	143	11.6	295	5.19	2.35

Press

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTAD-075P	¾"	6.5	166	11.6	295	4.53	2.05
CXTAD-100P	1"	6.5	166	11.6	295	4.75	2.15
CXTAD-125P	1¼"	8.0	204	11.6	295	4.75	2.15
CXTAD-150P	1½"	9.4	239	11.6	295	5.19	2.35
CXTAD-200P	2"	10.1	257	11.6	295	4.97	2.25

Air and dirt separators with magnet

Models with a magnet facilitate the separation and accumulation of ferrous impurities thanks to their magnetic field. Some non-ferrous particles are also captured due to cross-contamination when they come into contact with iron particles.



NPT

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTAD-075N-MAG	¾"	4.5	115	12.6	320	5.16	2.35
CXTAD-100N-MAG	1"	4.5	115	12.6	320	5.46	2.45
CXTAD-125N-MAG	1¼"	4.5	115	12.6	320	5.46	2.45
CXTAD-150N-MAG	1½"	4.5	115	12.6	320	5.86	2.65
CXTAD-200N-MAG	2"	4.5	115	12.6	320	5.66	2.55

Sweat

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTAD-075S-MAG	¾"	4.5	115	12.6	320	5.16	2.35
CXTAD-100S-MAG	1"	4.5	115	12.6	320	5.16	2.35
CXTAD-125S-MAG	1¼"	4.5	115	12.6	320	5.16	2.35
CXTAD-150S-MAG	1½"	5.6	143	12.6	320	6.06	2.75
CXTAD-200S-MAG	2"	5.6	143	12.6	320	5.86	2.65

Press

Model#	Connect.	Dimension				Weight	
		A		B			
		in	mm	in	mm	lb	kg
CXTAD-075P-MAG	¾"	4.5	115	12.6	320	5.85	2.65
CXTAD-100P-MAG	1"	4.5	115	12.6	320	6.06	2.75
CXTAD-125P-MAG	1¼"	4.5	115	12.6	320	6.26	2.85
CXTAD-150P-MAG	1½"	5.6	143	12.6	320	7.16	3.25
CXTAD-200P-MAG	2"	5.6	143	12.6	320	7.86	3.57

VENTS / MAGNET / AIR VALVES

Industrial Vents

Calefactio's industrial vents reduce the accumulation of air in the systems while improving their efficiency. Installed at high points in your piping system, the industrial vents eliminate air pockets, providing an inexpensive method to reduce air pressure in the system.

Model#	Connection	Maximum pressure	Maximum temperature	Inlet	Outlet	Weight	
						lb	kg
MV15	¾" FNPT	150 PSI 1034 kPa	250°F 121°C	¾" NPT	½" NPT	5.5	2.5

Magnet

This magnet captures ferrous and non-ferrous particles thanks to its magnetic field. Non-ferrous particles are captured due to the cross contamination occurred when particles are charged with the velocity rate of the stream.

Iron particles contaminate non-ferrous particles by attracting them to the statically charged surface. Another form of cross contamination occurs when iron particles strike non-ferrous particles, creating a static charge transmission on the non-ferrous particles.

When cleaning simply open the valve and drain, wipe the magnet removing all particle residues and reinstall.

Model#	Connection	Weight	
		lb	kg
MAGNET7075	¾"	0.8	0.4

Coin or Key Air Valves

Air valves are designed to reduce the operating frequency of the burner in hydronic and vapour heating systems to save energy. They are made of anticorrosive material and offer a waterproof closure.

HG9

HG14

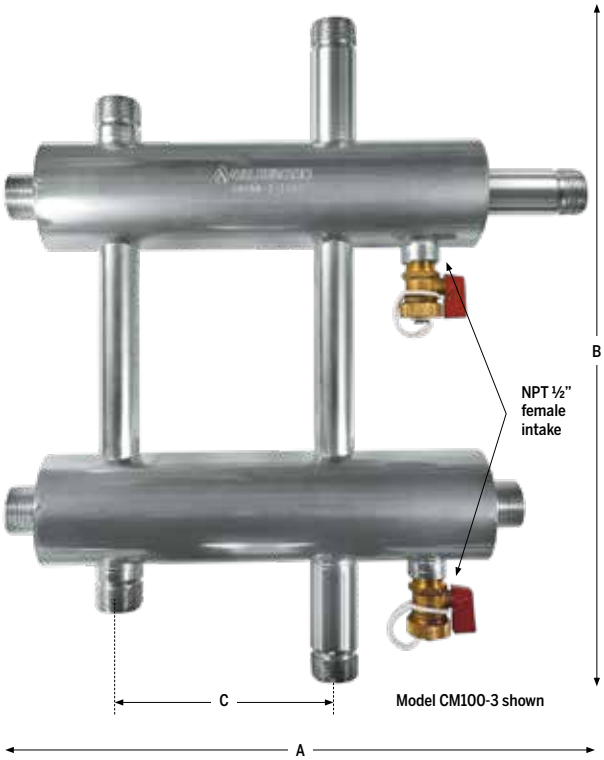
Model#	Connection	Description	Weight		Qty/ box*
			lb	kg	
HG9	⅛"MNPT	Room ventilation	1.1/50 units	0.5/50 units	50
HG10	⅛"MNPT	Keyed vent	1.1/50 units	0.5/50 units	10
HKEY	n/a	Key for HG10 and HG14	0.66/50 units	0.3/50 units	
HG14	⅛"MNPT	Kit for key valve and tube kit 20"	0.22	0.10	
HG14A	⅛"MNPT	Kit for room valve and tube 20"	0.22	0.10	

*This product is sold individually, but it can also be sold in a master pack.

HEATING DISTRIBUTION MANIFOLD

CALMAN

The Calman distribution manifold allows the user to connect all the heating zones in a single point. The Calman heat distribution manifold guarantees a uniform temperature of heat carrying liquid in each zone while increasing time and money savings because it is only necessary to install one item rather than a large number of elbows and tees in order to create the required zones.



Benefits

- Guarantees a uniform temperature
- Saves time and money
- Reduces the number of potential leak points
- Sufficient space planned to accept pumps between each zone
- Connects directly to the Calbalance hydraulic separator

Model#	Conn.	Zones	A		B		C		Weight	
			in	mm	in	mm	in	mm	lb	kg
CM100-3	1"	3	16½	421	18¾	476	6	152.4	3.75	1.7
CM100-4	1"	4	28½	725	18¾	476	6	152.4	4.0	1.8
CM125-4	1¼"	4	28½	725	18¾	476	6	152.4	4.0	1.8
CM125-5	1¼"	5	28½	725	18¾	476	6	152.4	4.4	2.0

ACCESSORIES

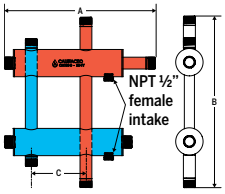
Drain Valve

Model#	Description	Weight	
		lb	kg
DV12	½" Connection	0.2	0.1

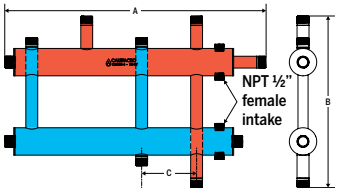
Technical specifications

- Maximum temperature: 100°C (212°F)
- Maximum design pressure: 150 PSI
- Steel frame
- Drain valve included
- Zone connections: 1 in

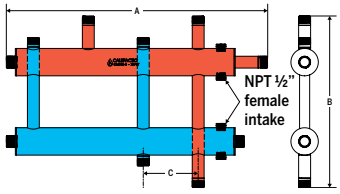
MODELS



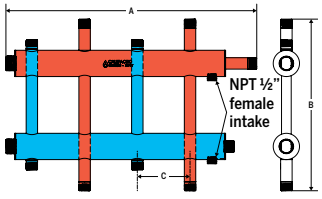
CM100-3



CM100-4



CM125-4



CM125-5

*Sold together or individually.

HYDRAULIC SEPARATORS

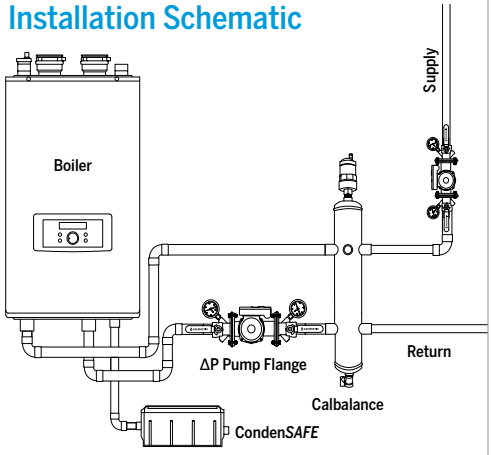
CALBALANCE NPT

Technical Specifications

- Equipped with a Calvent automatic air vent (#CV050)
- Separates air
- Offered with drain valve (#DV34)
- Housing in carbonized steel
- Wall support included
- Maximum operating pressure: 150 PSI
- Maximum operating temperature with isolation: 100°C (212°F)
- Maximum operating temperature without isolation: 132°C (270°F)
- Adapted fluids: water and 50% glycol solution

- **Benefits**
- Simple to install
- Easy maintenance
- ½" FNPT thermometer port
- Eliminates the need to install an automatic vent and a dirt separator
- Reduces energy consumption as the pumps are only used in required zones

Installation Schematic

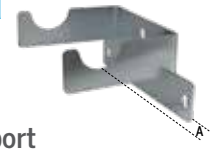


Calbalance NPT

Model#	Conn. FNPT	Flow		Dimension										Weight approx.	
				A		B		C		D		E			
	in	GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CB100	1	11	2.5	3	76	26	660	10½	267	8⅝	220	6¾	172	8.4	3.8
CB125	1¼	18	4	3½	89	28	710	11¼	282	9½	240	7⅜	188	10.6	4.9
CB150	1½	26	6	4½	114	30	760	11¾	298	10¼	260	8	203	14.5	6.6
CB200	2	39	9	5½	140	32	810	11¾	298	11⅞	300	8⅜	213	19.8	8.9

ACCESSORIES

Included



Wall Support

Compatible with	A*		Weight	
	in	mm	lb	kg
CB100	2⅞	73	0.6	0.3
CB125	3⅜	86	0.8	0.4
CB150	3⅞	98	1.0	0.5
CB200	4⅜	111	1.8	0.8

*Distance to the centre of the wall.

Drain Valve

Model#	Description	Weight	
		lb	kg
DV34	¾" Connection	0.2	0.1

Optional

Available with preformed polyurethane insulation to minimize heat loss.

Preformed Insulation

Model#	Compatible with	Weight	
		lb	kg
CB100-FOAM	CB100	0.44	0.2
CB125-FOAM	CB125	0.44	0.2
CB150-FOAM	CB150	0.66	0.3
CB200-FOAM	CB200	0.66	0.3

Magnet

Model#	Conn.	Weight	
		lb	kg
MAGNET7075	¾"	0.8	0.4

HYDRAULIC SEPARATORS

CALBALANCE NPT 2 ZONES

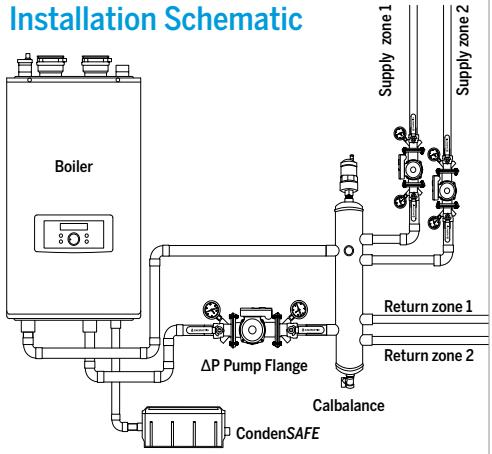
Technical Specifications

- Equipped with a Calvent automatic air vent (#CV050)
- Separate air
- Offered with drain valve (#DV34)
- Housing in carbonized steel
- Wall support included
- Maximum operating pressure: 150 PSI
- Maximum operating temperature with isolation: 100°C (212°F)
- Maximum operating temperature without isolation: 132°C (270°F)
- Adapted fluids: water and 50% glycol solution

Benefits

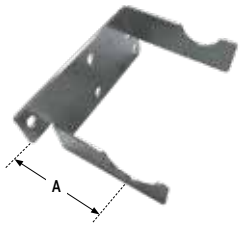
- Simple to install
- Easy maintenance
- ½" FNPT thermometer port
- Eliminates the need to install an automatic vent and a dirt separator
- Reduces energy consumption as the pumps are only used in required zones

Installation Schematic



ACCESSORIES

Included



Wall Support

Compatible with	A*		Weight	
	in	mm	lb	kg
CB1002Z	2⅞	73	0.6	0.3
CB1252Z	3⅜	86	0.8	0.4

*Distance to the centre of the wall.

Drain Valve

Model#	Description	Weight	
		lb	kg
DV34	¾" Connection	0.2	0.1

Optional

Magnet

Model#	Conn.	Weight	
		lb	kg
MAGNET7075	¾"	0.8	0.4

Calbalance NPT/2 zones

Model#	Conn. FNPT	Flow		Dimension										Weight approx.	
				A		B		C		D		E			
	in	GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CB1002Z	1	11	2.5	3	76	25¾	653	8⅛	206	4¾	120	5	127	8.8	4
CB1252Z	1¼	18	4	3½	89	27½	698	8½	218	5½	140	5½	140	11.2	5.1

HYDRAULIC SEPARATORS

CALBALANCE WITH FLANGE

Technical Specifications

- Equipped with a Calvent automatic air vent (#CV050)
- Separate air with baffles
- Housing in carbonized steel
- Adapted fluids: water and 50% glycol solution
- Models with connections of 6 in or greater supplied on stand
- Supplied with a drain valve
- Maximum operating pressure: 10 bar/150 PSI
- Operating temperature: 0-132°C/32-270°F

Benefits

- Simple to install
- Easy to maintain
- Reduces energy consumption as the pumps are only used in required zones
- Eliminates the need to install an automatic air vent and a dirt separator

Calbalance with bride
NONE-ASME Models

Model#	Connect.	Flow		Dimension													Weight approx.	
				A		B		C		D		E		F		G		
	in	GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	lb	kg
CB250F	2½	88	20	6⅝	168	41¼	1049	13¾	350	15¼	388	13	330	13	331	1	60	27
CB300F	3	132	30	8⅝	219	43³⁄₁₆	1147	18⅜	467	14⅞	377	17¾	450	12⅝	320	1	75	34
CB400F	4	255	58	8⅝	219	43³⁄₁₆	1147	18⅜	467	14⅞	377	17¾	450	12⅝	320	1	84	38

See our ASME models on page 47.

GMP
Glycol Make-up Package

GLYCOL MAKE-UP PACKAGE

GMP from Calefactio are economical and robust. Their main function is to automatically maintain the pressure of water or of a water/glycol mixture in the closed loops of auxiliary heating, solar, radiant heating or snow melting system. Different sets of level alarm panels, as an option, offer an audible and visual indication in case of leak.

RESIDENTIAL & COMMERCIAL

COMMERCIAL & INDUSTRIAL

RESIDENTIAL & COMMERCIAL

GMP4

THE COMPACT GLYCOL MAKE-UP PACKAGE THAT OFFERS PERFORMANCE AND RELIABILITY

Calefactio's GMP are economical yet rugged, compact and easy to use fluid feeders for small closed-loop systems. Their function is to automatically supply pressurized water or a water/glycol mixture to a closed-loop space heating, chilled water, snowmelt, solar, radiant heating or process control system, to ensure that minimum system pressure levels are maintained.

Benefits

- Prevent major floods
- No direct connection to potable water supply
- Provide leak detection
- Low level alarm
- Easy maintenance
- By-pass valve
- Connected with a flexible braided hose
- Self priming pump

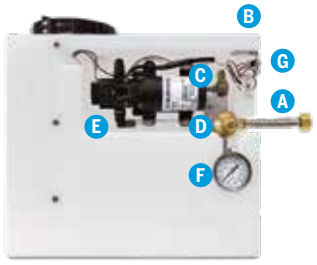
GMP4

Model#	Capacity		Pump	Dimension						Approx. weight	
				A		B		C			
	gal	L	PSI	in	mm	in	mm	in	mm	lb	kg
GMP4	4	15	100	16¼	412.8	13½	343	7½	190.5	9.6	4.4

DISCOVER OUR NEW MASTER KIT FOR HEATING SYSTEM ON PAGE 10.

SPECIFICATIONS

- Easy to adjust PRV to maintain system pressure
- 24V Pump, 35 PSI (241 kPa), 1.06 GPM (3.8 LPM)
- Level switch – stops the pump if fluid level in the tank is too low
- Integrated low liquid level float for audible alarm
- Discharge connection: ½" FNPT



- **A** Flexible braided hose
- **B** ¾" opening for relief valve
- **C** By-pass valve
- **D** PRV
- **E** 24V Pump, 35 PSI (241 kPa), 1.06 GPM (3.8 LPM)
- **F** Glycerine filled pressure gauge (0-100 PSI)
- **G** Adaptor plug
- **H** Included wall support
- **I** Heavy duty roto-molded tank with embossed graduation for a liquid level indicator that won't fade away.
- **J** 24V Adaptor

RESIDENTIAL & COMMERCIAL

GMP6/GMP18 GMPLC55/GMPLC100

Calefactio's GMP are economical yet rugged, compact and easy to use fluid feeders for small closed-loop systems. Their function is to automatically supply pressurized water or a water/glycol mixture to a closed-loop space heating, chilled water, snowmelt, solar, radiant heating or process control system, to ensure that minimum system pressure levels are maintained.

GMP6/GMP18/GMPLC55/GMPLC100

Model#	Capacity		Pump	Dimension						Approx. weight	
				A		B		C			
	gal	L	PSI	in	mm	in	mm	in	mm	lb	kg
GMP6	6	22.7	60	12	305	17.5	445	12	305	18.92	8.6
GMP18	18	68.1	100	12	305	39.25	997	12	305	26.62	12.1
GMPLC55	55	208	100	24	610	48	1219	–	–	37.84	17.2
GMPLC100	100	379	100	33	838	62	1575	–	–	51.48	23.4
GMP6S	4	15	100	16¼	412.8	13½	343	7½	190.5	9.6	4.4
GMP18S	6	22.7	100	12	305	17.5	445	12	305	18.92	8.6

DISCOVER OUR NEW MASTER KIT FOR HEATING SYSTEM ON PAGE 10.

SPECIFICATIONS

- Pump: 1.6 GPM (6 L/m)
  GMP6 and GMP18: 60 PSI
  GMPLC55 and GMPLC100: 100 PSI
- Discharge connection: ½" FNPT
- 120 VAC/1 ph/60 Hz, standard plug with 1.8 m (6 ft) power cord.
- Level switch with plug (piggyback), pump power cutoff when the liquid in the tank is too low.
- The pressure regulation valve is easily adjustable to maintain pressure up to 412.8 kPa (60 psig), and 690 kPa (100 psig) for solar models.

- **A** Flexible braided hose
- **B** ¾" Opening for return from the system safety valve
- **C** By-pass valve
- **D** Pressure adjustment valve
- **E** Pump
- **F** Glycerine pressure gauge (0-100 PSI)
- **G** 3-way filling valve*

*GMP6 and GMP18 only.

ACCESSORIES

Compatible with
- GMP4

AUDIBLE ALARM

Model#	Description	Weight	
		lb	kg
GMP4ALARM	Low liquid level alarm	0.1	0.04

Compatible with
- GMP6

WALL MOUNTING SHELF

Model#	Description	Weight	
		lb	kg
GMP6WMS	Wall support for GMP6	7.48	3.4

Compatible with
- GMP4
- GMP6
- GMP18
- GMPLC55
- GMPLC100

CONNECTION HOSE

Model#	Description	Weight	
		lb	kg
BH72	72" Braided hose ½" FNPT × ½" MNPT	1.32	0.6

Compatible with
- GMP6
- GMP18
- GMPLC55
- GMPLC100

ALARM PANEL KIT

Model#	Description	Weight	
		lb	kg
GMPAL	Remote low level alarm	1.98	0.9

Compatible with
- GMP6
- GMP18
- GMPLC55
- GMPLC100

FLOAT

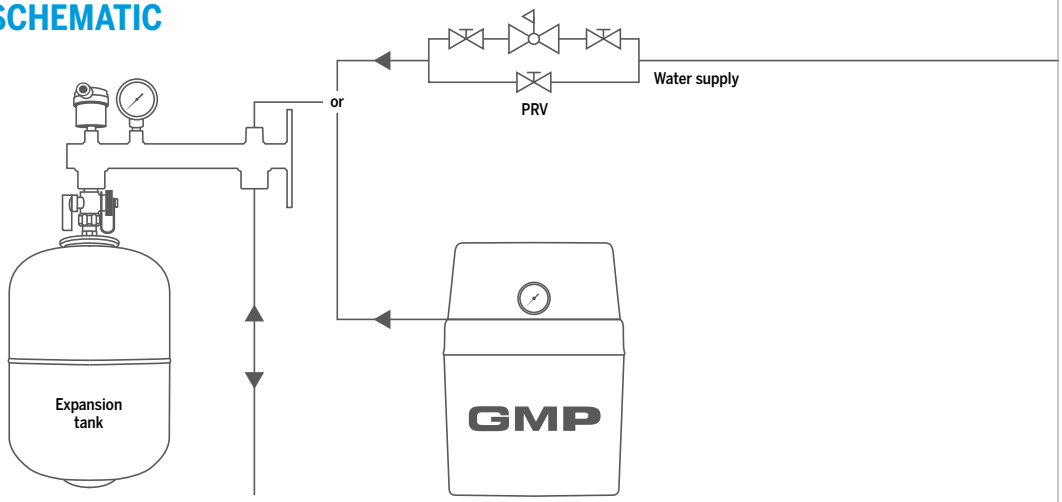
Model#	Description	Weight	
		lb	kg
GMPDC	Low level interrupter	1.32	0.6

Compatible with
- GMP6
- GMP18

FILLING KIT

Model#	Description	Weight	
		lb	kg
GMPFILLINGKIT	Reusable hose	0.22	0.1

INSTALLATION SCHEMATIC



COMMERCIAL & INDUSTRIAL

SIMPLE/DUPLEX/TWIN

Simple GMP

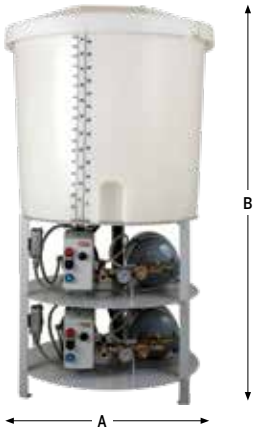
- Tank, 50 or 100 gallons
- 1 booster pump of ⅓ or ½ H.P.
- 1 pressure regulator
- Pressure maintained between 10 and 70 PSI

Model#	Motor		Tank		Dimension				Approx. weight	
					A		B			
	HP	kW	gal	L	in	mm	in	mm	lb	kg
GMP13050	⅓	0.2	50	189	28	710	42	1070	90	41
GMP13100	⅓	0.2	100	378	28	710	67	1700	105	47
GMP15050	½	0.4	50	189	28	710	42	1070	95	43
GMP15100	½	0.4	100	378	28	710	67	1700	110	49

Duplex GMP

- Tank, 50 or 100 gallons
- 2 booster pumps of ⅓ or ½ H.P.
- 2 pressure regulators
- Pressure maintained between 10 and 70 PSI

Model#	Motor		Tank		Dimension				Approx. weight	
					A		B			
	HP	kW	gal	L	in	mm	in	mm	lb	kg
GMPD23050	⅓	0.2	50	189	28	710	55	1400	153	69
GMPD23100	⅓	0.2	100	378	28	710	78	1980	166	75
GMPD25050	½	0.4	50	189	28	710	55	1400	153	69
GMPD25100	½	0.4	100	378	28	710	78	1980	166	75



Twin GMP

- Tank, 50 or 100 gallons
- 2 booster pumps of ⅓ or ½ H.P.
- 2 pressure regulators
- Pressure maintained between 10 and 70 PSI
- Alternation managed by a control panel supplied by an alternator and two magnetic starters

Model#	Motor		Tank		Dimension				Approx. weight	
					A		B			
	HP	kW	gal	L	in	mm	in	mm	lb	kg
GMPT33050	⅓	0.2	50	189	28	710	55	1400	188	85
GMPT33100	⅓	0.2	100	378	28	710	78	1980	201	91
GMPT35050	½	0.4	50	189	28	710	55	1400	188	85
GMPT35100	½	0.4	100	378	28	710	78	1980	201	91

SPECIFICATIONS

- **Make-up capacity**
  1.8 gpm@70 PSI
  6.8 L/m@482 kPa
- **Voltage:** 120 V/1 ph/60 Hz
- **Pressure range**
  10-70 PSI/69-482 kPa

INCLUDED

Each set includes:

- Base on stand
- Pump and motor (one or two)
- Liquid detection probe
- Manometer
- Audible and visual alarm panel
- Magnetic starter with selector (automatic, manual, off)
- Tank, 50 or 100 gallons

ACCESSORIES

HIGH LEVEL ALARM

Model#	Description
GMPOF	High level alarm

PROTECTIVE SKIRTS

Model#	Description
GMPJU	Protective skirts

CONDENSAFE™

BOILER TECHNOLOGY

An exceptional innovation in condensate neutralization

NEW

CS2 NEUTRALIZER

NEW

TIME INDICATOR

CS6 NEUTRALIZER

HIGH CAPACITY NEUTRALIZER

PUMP

NEUTRALIZER WITH PUMP

CONDENSAFE

NEW

CS2 NEUTRALIZER

NEW!

TIME INDICATOR

Features

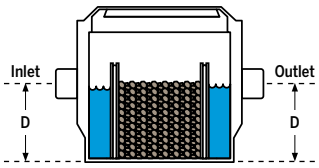
- Easy to replace media
- Allows direct connection
- Safe for the environment
- Time indicator included
- Wall supports included

Model#	A		B		C		D		Inlet Outlet	Weight		Qty/ box†
	in	cm	in	cm	in	cm	in	cm		lb	kg	
CS2	5¾	14.5	4¾	12	2½	6	2½	6	¾" FNPT	2.9	1.32	6
	Including: 1 media bag, 1 ¾" straight fitting and 1 90° elbow.											

*This product is sold individually, but it can also be sold in a master pack.

THE DATE LABEL HAS BEEN REPLACED WITH A NEW TIME INDICATOR THAT YOU NEED TO ACTIVATE AND PUT ON TOP OF THE COVER.

THE UNIT HAS ONE SECTION ONLY



TREATMENT CAPACITY			
1 Section			
MBH	kWh	gal/h	L/h
525	154	2.1	8
Maximum treatment volume*			
2.1 GPH (8 LPH)			

OPERATION

The unit is compact and easy to install with the wall brackets included. It only includes one section, including a media bag that must be replaced every year. We've included a 12-month time indicator so that the user knows exactly when to replace it to protect the drain from corrosion.

INCLUDED

TIME INDICATOR

NEW

Model#	Description	Weight	
		lb	kg
CSTS	12 months	0.44	0.002

MEDIA BAG

Model#	Description	Weight	
		lb	kg
CSM2	1 media bag	1.7	0.78

ACCESSORIES

HOSE AND CLIPS KIT

Model#	Description	Weight		Qty/ box†
		lb	kg	
CSHK	Hose and clips kit	1.32	0.6	12

*This product is sold individually, but it can also be sold in a master pack.

*Verify the flow of condensate produced by your device. Generally speaking, a boiler with a capacity of 500,000 BTU/h at 92% efficiency should generate about 1.6 gal/h of condensate.

CONDENSAFE

CS6 NEUTRALIZER

NEW!

TIME INDICATOR

Features

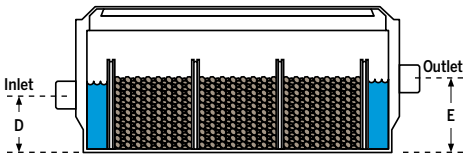
- Easy to replace media
- Allows direct connection
- Safe for the environment
- Time indicator included

Model#	A		B		C		D		E		Inlet Outlet	Weight		Qty/ box†
	in	cm	in	cm	in	cm	in	cm	in	cm		lb	kg	
CS6	12	30.5	4¾	12	5½	14	2½	6	3	7.6	½" FNPT	4.18	1.9	6
	Including: 1 media bag, 1 set of wall supports, 2 barbed fittings ¾" and 2 glued fittings ¾" female													

*This product is sold individually, but it can also be sold in a master pack.

USE ONLY THE SECTIONS THAT YOU NEED!

THE UNIT IS DIVIDED IN THREE SECTIONS



TREATMENT CAPACITY											
1 Section				2 Sections				3 Sections			
MBH	kWh	gal/h	L/h	MBH	kWh	gal/h	L/h	MBH	kWh	gal/h	L/h
525	154	2.1	8	1050	308	4.2	16	1575	461	6.3	24
MAXIMUM TREATMENT VOLUME*											
6.3 GPH (24 LPH)											

*Verify the flow of condensate produced by your device. Generally speaking, a boiler with a capacity of 500,000 BTU/h at 92% efficiency should generate about 1.6 gal/h of condensate.

OPERATION

The unit is divided into three sections, and the engineering media is contained in bags which needs to be replaced every year. Use only the sections you need! As the unit is divided into three sections, you can use one, two, or three media bags, depending on the volume of condensate to be treated.

INCLUDED

TIME INDICATOR

NEW

Model#	Description	Weight	
		lb	kg
CSTS	12 months	0.44	0.002

MEDIA BAG

Model#	Description	Weight	
		lb	kg
CSM2	Media bag	1.7	0.78

WALL SUPPORTS

Model#	Description	Weight	
		lb	kg
CSB	For wall mounting	0.44	0.2

ACCESSOIRES

HOSE AND CLIPS KIT

Model#	Description	Weight		Qty/ box†
		lb	kg	
CSHK	Hose and clips kit	1.32	0.6	12

*This product is sold individually, but it can also be sold in a master pack.

CONDENSAFE

NEUTRALIZER WITH PUMP

Complies with
UL 778
CSA 22.2 No. 108

E114970

NEW!
TIME INDICATOR

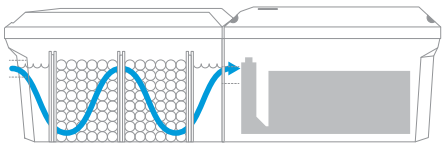
Features

- All-in-one
- Preserve your drain from corroding
- Compact, space saving construction
- Designed to prevent fire and short circuit
- AC inlet port included
- Easy maintenance
- Non return valve

Model#	A		B		C		D		Inlet	Outlet	Weight	
	in	cm	in	cm	in	cm	in	cm			lb	kg
CSNP20	15⅝	40	5	12.7	4¾	12	3	7.6	½" FNPT	⅜" I.D. barbed	9.43	4.28
	Including: 1 media bag, 1 pump CSP20, 1 barbed fitting ½" × ¾", 1 glued fitting ½" × ¾", 1 flexible hose 3,8" (20'), 1 power cord 120 V, 60 Hz. 7.2 ft (2.2 m), 1 safety switch 1 ft (30 cm) NO or NC											

Technical Data

TREATMENT CAPACITY							
1 Section				2 Sections			
MBH	kWh	Gal/h	L/H	MBH	kWh	Gal/h	L/H
525	151	2.1	8	1050	308	4.2	16
Maximum treatment volume*							
4.2 GPH (16 L/H)							



USE ONLY THE SECTIONS THAT YOU NEED!

OPERATION

The unit is divided into two sections, and the engineering media is contained in bags which needs to be replaced every year. The pump drives the water to the drain.

INCLUDED

TIME INDICATOR

NEW

Model#	Description	Weight	
		lb	kg
CSTS	12 months	0.44	0.002

MEDIA BAG

Model#	Description	Weight	
		lb	kg
CSM2	1 media bag	1.7	0.78

PUMP

Model#	Description	Weight	
		lb	kg
CSP20	Water and dust proof	3.0	1.4

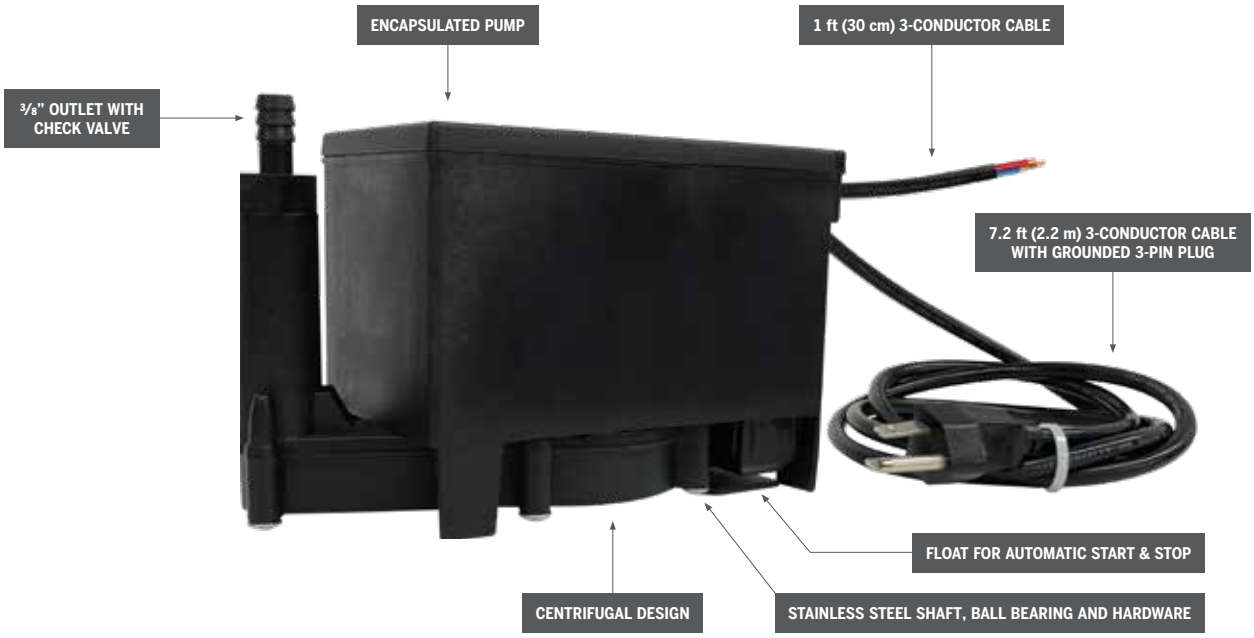
ACCESSORIES

ALARM PANEL

Model#	Description	Weight	
		lb	kg
CAL-AL120	Alarm panel	1.98	0.9

CONDENSAFE

PUMP



Features

- Protection class IP65 (compares to NEMA 4) waterproof and dust proof
- 7.2 ft (2.2 m) 3-conductor cable with grounded 3-pin plug
- Pump encapsulated and fluid cooled thermally protected
- Ultra low noise
- Centrifugal pump design
- Strong nylon glass plastic pump housing (acid resistant, ≥ Ph3)
- Maximum water temperature: 158°F (70°C)
- Automatic start and stop operation
- Compact, space saving construction
- Integrated check valve
- Non-submersible pump
- Integrated safety switch, NO or NC
- Designed to prevent fire and short circuit

MET c us

Complies with
UL 778
CSA C22.2 No.108

E114970

Technical Data

Model#	Dimensions						Power			Discharge	Cord	Shut off	Flow GPH/LPH					Weight	
	A		B		C		Volt	Hz	Amps			ft/m	1'	5'	10'	15'	20'	lb	kg
	in	mm	in	mm	in	mm													
CSP20	6.7	170	3.9	100	3.1	80	120	60	2.0	⅜" I.D.	7.2'	20/6.1	114/430	108/410	87/330	58/220	20/75	3.0	1.4

Operating point start ± 34 mm, stop ± 13 mm, alarm 40 mm.

CONDEN*SAFE*

HIGH CAPACITY NEUTRALIZER

NEW!
TIME INDICATOR

Features

- The entire volume of condensate crosses the entire thickness of the engineering media
- Treatment optimized by feeding at bottom
- Integrated overflow protection
- Stainless steel media support of 53 in² (342 cm²)
- Easy to clean
- Supplied with Calefactio engineered media

Model#	Capacity	Max. volume treatment per hour		A		B		C		D		Connection		Weight	
		L	gal	in	mm	in	mm	in	mm	in	mm	Inlet	Outlet	lb	kg
CSC28	3,500 MBH 1,026 KwH	106	28	7½	190	10½	267	16¼	414	5½	140	1" MNPT	1" FNPT	18	8.18

TO INCREASE TREATMENT CAPACITY

Conden*SAFE* being modular, it is possible to install up to 3 units in series to obtain a treatment able to reach 10,500 MBH.

OPERATION

CondenSAFE commercial units are designed to optimize the flow mode of the raw condensate. The double wall reactor offers a buffer volume for preneutralization. The preneutralized condensate flows ascending vertically across all the reactive media.

A layer of several centimetres of condensate is omnipresent at the surface of the media, thus minimizing direct gaseous exchanges between the ambient air, containing CO2, and the media.

INCLUDED

TIME INDICATOR

NEW

Model#	Description	Weight	
		lb	kg
CSTS	12 months	0.44	0.002

ENGINEERED MEDIA

Model#	Description	Weight	
		lb	kg
CSM28	Suitable for #CSC28	10.34	4.7

ACCESSORIES

CONNECTION UNION

Model#	Description	Weight	
		lb	kg
CSCUK	For installation in series	0.22	0.1

ΔP (DELTA P) PUMP FLANGE

Pump flanges from Calefactio are perfect to monitoring your system (Delta P). They also allow you to drain on the pump side or on the system side. Maintenance is also easier due to the drain now located on the side.

THE ΔP PUMP FLANGE ALLOWS A QUICK OVERVIEW OF THE SYSTEM

NEW!

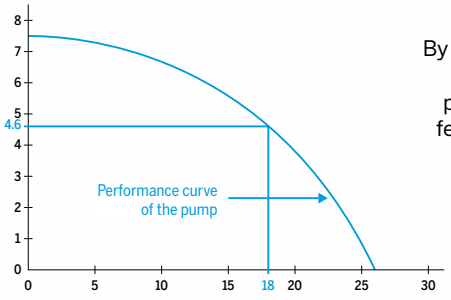
DRAIN LOCATED ON THE SIDE FOR MORE ACCESSIBILITY

Specifications

- Full port brass ball valve
- Rotating flange
- Gauge ports on each side and drain on one side
- Ball valve isolation for circulating pumps
- Blowout-proof stem, packing gland and O-ring stem seal
- Forged brass body
- 500 CWP (Cold Working Pressure)
- Thread conforms to the ANSI B1.20.1 standard

Benefits

- Allows drainage on the system side or on the pump side
- Fits all high velocity pumps
- Reduce the number of joints to save you time and money
- Ensures a great seal due to its forged brass body



By taking a reading of the pressure gauges on each side of the pump, one obtains the pressure differential in PSI, also known under the name ΔP (Delta P). The pump curves show the ΔP in head loss. In order to convert the gauge reading to feet of head loss, it is necessary to multiply the ΔP by 2.3. A pressure differential of 2 psig multiplied by 2.3 is equivalent to 4.6 feet of static head. On the pump curve, using 4.6 feet of head, one obtains the flow of the pump.

KIT

Gauge not included

NPT (N)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034N	¾"	3.31	1.50	12
PF100N	1"	4.17	1.90	8
PF114N	1¼"	5.51	2.50	8
PF112N	1½"	6.44	2.93	4
PF200N*	2"	9.66	4.38	

PRESS (P)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034P	¾"	3.42	1.55	12
PF100P	1"	4.24	1.93	8
PF114P	1¼"	5.72	2.60	8
PF112P	1½"	6.77	3.08	4
PF200P*	2"	10.3	4.7	

SWEAT (S)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034S	¾"	3.24	1.47	12
PF100S	1"	4.06	1.85	8
PF114S	1¼"	5.36	2.44	8
PF112S	1½"	6.23	2.83	4
PF200S*	2"	9.46	4.30	

PEX F1960 (F)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034F	¾"	3.34	1.52	12
PF100F	1"	4.19	1.90	8
PF114F	1¼"	5.61	2.55	8
PF112F	1½"	6.57	2.99	4

*Models without drain only. †This product is sold individually, but it can also be sold in a master pack.

UNIT

Gauge not included

With Drain

NPT (N-D)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034N-D	¾"	1.69	0.77	24
PF100N-D	1"	2.13	0.97	18
PF114N-D	1¼"	2.81	1.28	12
PF112N-D	1½"	3.27	1.49	12

SWEAT (S-D)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034S-D	¾"	1.66	0.76	24
PF100S-D	1"	2.07	0.94	18
PF114S-D	1¼"	2.73	1.24	12
PF112S-D	1½"	3.16	1.44	12

PRESS (P-D)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034P-D	¾"	1.75	0.80	24
PF100P-D	1"	2.16	0.98	18
PF114P-D	1¼"	2.91	1.32	12
PF112P-D	1½"	3.44	1.56	12

PEX F1960 (F-D)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034F-D	¾"	1.71	0.78	24
PF100F-D	1"	2.13	0.97	18
PF114F-D	1¼"	2.86	1.30	12
PF112F-D	1½"	3.33	1.52	12

Without Drain

NPT (N-ND)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034N-ND	¾"	1.61	0.73	24
PF100N-ND	1"	2.05	0.93	18
PF114N-ND	1¼"	2.70	1.23	12
PF112N-ND	1½"	3.17	1.44	12
PF200N-ND	2"	4.83	2.19	6

SWEAT (S-ND)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034S-ND	¾"	1.57	0.72	24
PF100S-ND	1"	1.99	0.90	18
PF114S-ND	1¼"	2.63	1.19	12
PF112S-ND	1½"	3.06	1.39	12
PF200S-ND	2"	4.73	2.15	6

PRESS (P-ND)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034P-ND	¾"	1.66	0.76	24
PF100P-ND	1"	2.08	0.95	18
PF114P-ND	1¼"	2.81	1.28	12
PF112P-ND	1½"	3.34	1.52	12
PF200P-ND	2"	5.07	2.30	6

PEX F1960 (F-ND)

Model#	Size	Weight		Qty/ box†
		lb	kg	
PF034F-ND	¾"	1.62	0.74	24
PF100F-ND	1"	2.05	0.93	18
PF114F-ND	1¼"	2.75	1.25	12
PF112F-ND	1½"	3.23	1.47	12

*Models without drain only. †This product is sold individually, but it can also be sold in a master pack.

NEW!

We changed the location of our pump flange valve to make sure it's easier to reach.

OPTIONAL

⅛" MNPT PRESSURE GAUGE

Model#	PSI	Weight	
		lb	kg
GAGE0-30BOTTOM	0-30	0.22	0.1
GAGE0-100BOTTOM	0-100	0.22	0.1

INCLUDED

Each valve comes with the following elements

- 1 gasket
- 2 nuts and 2 bolts
- 2 plugs ⅛" (installed)

VALVES

Range of tankless water heater valves, thermostatic valves and brass ball valves

TANKLESS WATER HEATER VALVES

THERMOSTATIC VALVES

BALL VALVE FOR DRAINAGE

THERMOSTATIC VALVES

TANKLESS WATER HEATER VALVES

Lead free

Features

- Secure seal
- Lead Free
- Facilitate maintenance with dedicated ports
- Easy identification of hot and cold valves
- Provided with 150 PSI pressure relief valve (PRV) (30 PSI available in option)

Valve Specifications

- Temperature rating: 40°F to 180°F
- Pressure rating: 125 PSI WOG maximum
- Valve seat rating: 600 WOG
- IAPMO listed to NSF/ANSI 61-2010 (folder #N-5427) and IGC 157-2010 (folder #5427)

PRV Specifications

- Maximum pressure: 150 PSI
- Maximum heating input: 200,000 BTU
- Connection: ¾"

Model#	Size	Width		Height		Weight		Qty/ box†
		in	mm	in	mm	lb	kg	
TK075N	¾"	3	76.6	4	101.6	2.87	1.3	12
TK075S	¾"	3	76.6	4	101.6	2.65	1.2	12
TK075N-30*	¾"	3	76.6	4½	114.3	3.97	1.8	12

*30 PSI PRV.
†This product is sold individually, but it can also be sold in a master pack.

Model#	Size	Width		Height		Weight		Qty/ box†
		in	mm	in	mm	lb	kg	
TK100N	1"	3	76.6	4½	114.3	3.97	1.8	8
TK100N-30*	1"	3	76.6	4½	114.3	3.97	1.8	8

*30 PSI PRV.
†This product is sold individually, but it can also be sold in a master pack.

Model#	Size	Width		Height		Max pressure	Max temp.	Maximum heating input	Connection	Certification	Weight	
		in	mm	in	mm						lb	kg
PRV075-30	¾"	2	51	2½	63.5	30 PSI	99°C	535 000 BTU	¾" MNPT	ASME	0.66	0.3
PRV075-150	¾"	2	51	2½	63.5	150 PSI	99°C	200 000 BTU	¾" MNPT	CSA ANSI Z21.22	0.44	0.2

Lead free
Drinking Water
NSF/ANSI 61
NSF14

DRAIN VALVES

DRAIN VALVES

Model#	Description	Weight	
		lb	kg
DV12	½" Connection	0.2	0.1
DV34	¾" Connection	0.2	0.1

BALL VALVE FOR DRAINAGE

Model#	Description	Weight		Qty/ box†
		lb	kg	
DBV034N	¾" Connection	0.7	0.32	8

†This product is sold individually, but it can also be sold in a master pack.

THERMOSTATIC VALVES

Features

- Temperature setting range: 33 to 49°C (86 to 120°F)
- Set and locked at the factory at 41°C (106°F)
- Hot supply: 49 to 82°C (120 to 180°F)
- Cold supply: 4 to 27°C (40 to 80°F)
- Maximum static pressure: 145 PSI (1,000 kPa)
- Flow rate range: 1 to 12 GPM (4 LPM to 45 LPM)
- Chrome plated finish
- Check valve can be disassembled and cleaned

PEX × PEX × SWEAT

Model#	Size	Width		Height		Weight	
		in	mm	in	mm	lb	kg
21001	¾"	5⅞	142	5⅛	130	1.4	0.6

ASSE 1016	ASSE 1017	ASSE 1069	ASSE 1070	CSA B125.16-17

SWEAT × SWEAT × SWEAT

Model#	Size	Width		Height		Weight	
		in	mm	in	mm	lb	kg
21002	¾"	5⅞	142	5⅛	130	1.4	0.6

ASSE 1016	ASSE 1017	ASSE 1069	ASSE 1070	CSA B125.16-17

PRESS × PRESS × PRESS

Model#	Size	Width		Height		Weight	
		in	mm	in	mm	lb	kg
21003	¾"	5⅞	142	5⅛	130	1.6	0.7

ASSE 1016	ASSE 1017	ASSE 1069	ASSE 1070	CSA B125.16-17

PUSH × PUSH × PUSH

Model#	Size	Width		Height		Weight	
		in	mm	in	mm	lb	kg
21004	¾"	5⅞	142	5⅛	130	1.8	0.8

ASSE 1016	ASSE 1017	ASSE 1069	ASSE 1070	CSA B125.16-17

THERMOSTATIC MIXING VALVE ASSEMBLY

Ready to install

- Temperature actuated mixing valve that mixes hot and cold water to distribute tempered water at a controlled temperature between 32 and 54°C (90 and 129°F)
- Installation of the water heater allows the device to be set at 60°C (140°F), thus providing a greater effective volume of hot water and reducing the chances of Legionella bacteria growth in the water
- Factory set at 48°C (118°F), easily adjustable

Material

- Body: brass
- Springs: stainless steel
- Piston: engineered polymer
- Seals: EPDM
- Internal cap: brass

Model#	21005					
Connect.	Width		Height		Weight	
	in	mm	in	mm	lb	kg
¾"	3⅞	99	4¼	107	2.4	1.1

FLOW REGULATORS

Discover our complete range of flow regulators conforming to the NSF61 standard.

FIXED

UNION

INDUSTRIAL

SPECIALIZED

FIXED
REGULATORS

- Also available in SS316
- Made in lead free brass
- Available in five formats and more than 30 flow rates
- Certified by CSA for NSF/ANSI 61 & NSF/ANSI 372 LLC standards, the certification for potable water

Potable water
NSF/ANSI 61
NSF/ANSI 372 LLC

Model#	Connect.	Height	GPM	Gallons per minute (GPM)																																		Weight
				0.13	0.19	0.25	0.35	0.50	0.75	1.00	1.30	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	6.00	6.50	7.00	8.00	9.00	10.0	12.0	13.0	13.5	15.0	18.0	20.0	24.0	25.0	26.0	30.0	
A	⅜" FNPT	1¾"	0.13 to 4	•	•	•	•	•	•	•	•	•	•	•	•	•		•																			3.00 oz
B	½" FNPT	2"	0.25 to 9			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•													3.60 oz
C	¾" FNPT	2¼"	0.25 to 30			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	6.00 oz
X	1" FNPT	2¾"	2.5 to 30							•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	10.8 oz
Z	1½" FNPT	2¾"	5 to 30																	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	22.6 oz
SSA	⅜" FNPT	1¾"	0.13 to 4	•	•	•	•	•	•	•	•	•	•	•	•	•		•																				2.90 oz
SSB	½" FNPT	2"	0.25 to 9			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•													3.30 oz
SSC	¾" FNPT	2¼"	0.25 to 30			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	5.50 oz
SSX	1" FNPT	2¾"	2.5 to 30							•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	9.00 oz
SSZ	1½" FNPT	2¾"	5.0 to 30																	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	21.0 oz

UNION
REGULATORS

- Also available in SS316
- Made in lead free brass
- Available in four formats and more than 30 flow rates
- Certified by CSA for NSF/ANSI 61 & NSF/ANSI 372 LLC standards, the certification for potable water

Potable water
NSF/ANSI 61
NSF/ANSI 372 LLC

Model#	Connect.	Height	GPM	Gallons per minute (GPM)																																		Weight
				0.13	0.19	0.25	0.35	0.50	0.75	1.00	1.30	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	6.00	6.50	7.00	8.00	9.00	10.0	12.0	13.0	13.5	15.0	18.0	20.0	24.0	25.0	26.0	30.0	
AU	⅜" FNPT	1⅞"	0.13 to 4	•	•	•	•	•	•	•	•	•	•	•	•	•		•																				0.02 oz
BU	½" FNPT	2⅛"	0.25 to 9			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•													4.00 oz
CU	¾" FNPT	2¼"	0.25 to 30			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	6.40 oz
XU	1" FNPT	2¾"	2.5 to 30							•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	12.8 oz

Custom requests are welcome (OEM)

INDUSTRIAL
REGULATORS

- Made in lead free brass
- Available in five formats and more than 30 flow rates
- Certified by CSA for NSF/ANSI 61 & NSF/ANSI 372 LLC standards, the certification for potable water

Potable water
NSF/ANSI 61
NSF/ANSI 372 LLC

Model#	Connection	Height	GPM	Gallons per minute (GPM)																																				Weight
				5.00	6.00	6.50	7.00	8.00	9.00	10.0	12.0	13.0	13.5	15.0	18.0	20.0	24.0	25.0	26.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100	105	110	115	120	
P	1¼"×1¼" MNPT	3"	5 to 30	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•																		10 oz
T	1½"×1½" MNPT	3"	5 to 30	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•																		13 oz
F	2"×2" MNPT	3"	10 to 30							•	•	•	•	•	•	•	•	•	•	•																		19 oz
H	2½"×2½" MNPT	4"	30 to 90																	•	•	•	•	•	•	•	•	•	•	•	•						32 oz
K	3"×3" MNPT	4"	30 to 120																	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	51 oz

SPECIALIZED
REGULATORS

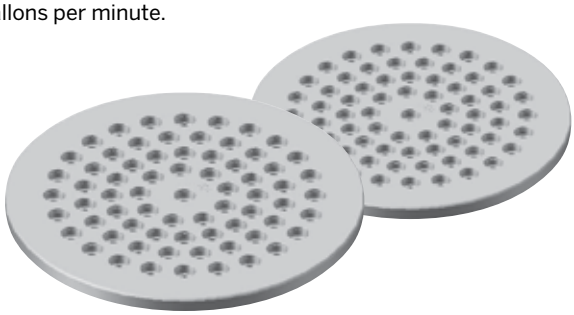
- For irrigation

Model#	Connection	Height	GPM	Gallons per minute (GPM)																			Weight
				0.50	0.75	1.00	1.30	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	6.00	6.50	7.00	8.00	9.00	10.0	
Y	¾" MNPT × ¾" FNPT	1½"	1 to 10			•		•		•	•	•	•	•		•	•		•	•	•	•	4.5 oz

WAFER TYPE FLOW REGULATORS

Wafer type flow regulators from Calefactio are available in five sizes and cover a large range of flows, from 60 to 2,100 gallons per minute.

Model#	Diameter	Total diameter	GPM
WF4	4"	6"	60 to 240
WF6	6"	7⅛"	100 to 540
WF8	8"	10⅛"	200 to 960
WF10	10"	12½"	300 to 1,500
WF12	12"	15¼"	400 to 2,100



Pb
Lead free

ASME EXPANSION TANKS

HEATING

POTABLE

HYDRO-PNEUMATICS

Expanflex

Use our online selector tool to choose the right tank size.
calefactio.com/en/sizing-tool

HEATING

AL SERIES

Replaceable bladder **Bottom connection**

- Acceptance factor of 100 %
- Replaceable butyl bladder
- Design conforms to ASME, section VIII
- Water remains permanently separated from air
- Air precharged at factory; pressure adjustable on site

Technical specifications

- Exterior finish in painted primer
- Maximum temperature 240°F (115°C)
- Air precharged at factory at 12 PSI (83 kPa)
- Service pressure 125 PSI (862 kPa)
- Maximum pressure of 150, 175, 250 and 300 PSI also available

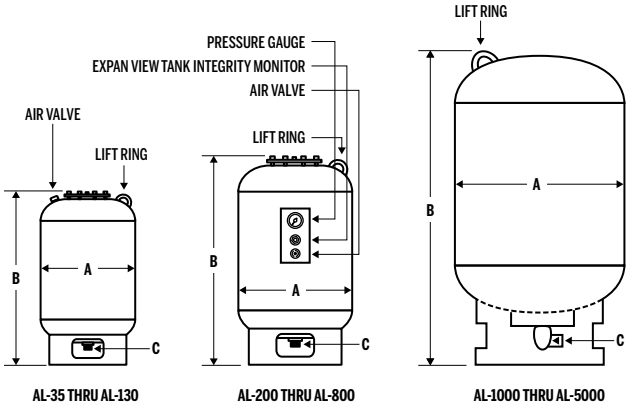
Integrated pressure gauge and tank integrity indicator.
Expanview included for models AL-200 and up. Option available on models AL-35 to AL-130.

Model AL-35 thru AL-130 shown

Model AL-200 thru AL-800 shown

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

Models



AL-35 THRU AL-130 | AL-200 THRU AL-800 | AL-1000 THRU AL-5000

EXPAN VIEW For models AL-200 thru AL-800:
Equipped standard with a pressure gauge and the ExpanView tank integrity indicator.

Use our online selector tool to choose the right tank size.
calefactio.com/en/sizing-tool

Model#	Volume		Dimension				NPT Connection		Approx. weight	
			A		B		C			
	gal	L	in	mm	in	mm	in	mm	lb	kg
AL-35	10	38	12	305	25	635	1	25	40	18
AL-50	13	50	12	305	36	918	1	25	60	27
AL-85	23	87	16	406	37	940	1	25	90	41
AL-130	35	132	20	508	37	940	1	25	125	57
AL-200	53	200	24	610	43	1092	1½	38	210	95
AL-300	79	299	24	610	55	1397	1½	38	225	102
AL-400	106	401	30	762	49	1245	1½	38	300	136
AL-500	132	500	30	762	57	1448	2	50	330	150
AL-600	158	598	30	762	65	1651	2	50	360	163
AL-800	211	798	32	813	76	1930	2	50	475	215
AL-1000	264	999	36	914	87	2210	3	76	735	333
AL-1200	317	1200	36	914	98.5	2502	3	76	745	338
AL-1400	370	1400	36	914	112	2845	3	76	900	408
AL-1600	422	1597	48	1219	84	2134	3	76	1210	549
AL-2000	528	1999	48	1219	96	2438	3	76	1305	592
AL-2500	660	2498	48	1219	114	2896	4	102	1430	649
AL-3000L	792	2998	48	1219	134	3404	4	102	1671	758
AL-3000S	792	2998	60	1524	93	2362	4	102	2169	984
AL-4000	1056	3997	60	1524	115	2921	4	102	2638	1197
AL-5000	1320	4996	60	1524	138	3505	4	102	3246	1472

HEATING

ALT SERIES

Replaceable bladder **Top connection**

- Acceptance factor of 100 %
- Replaceable butyl bladder
- Design conforms to ASME, section VIII
- Water remains permanently separated from air
- Air precharged at factory; pressure adjustable on site

Technical specifications

- Exterior finish in painted primer
- Maximum temperature 240°F (115°C)
- Air precharged at factory at 12 PSI (83 kPa)
- Service pressure 125 PSI (862 kPa)
- Maximum pressure of 150, 175, 250 and 300 PSI also available

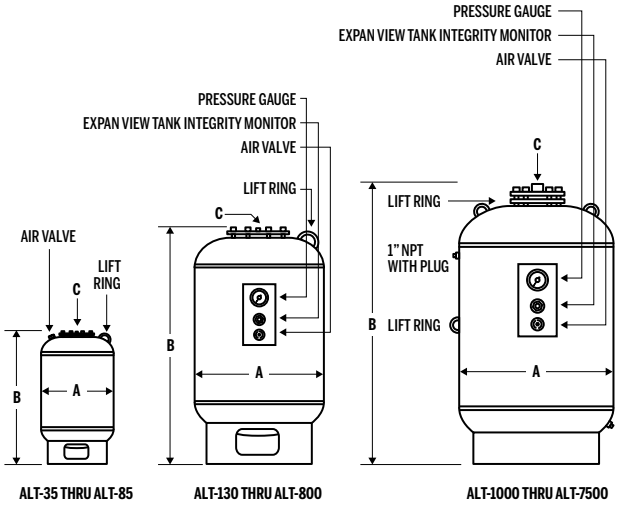
Model ALT-35 thru ALT-85 shown

Model ALT-130 thru ALT-800 shown

Integrated pressure gauge and tank integrity indicator. Expanview included for models ALT-200 and up. Option available on models ALT-35 to ALT-130.

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

Models



EXPAN VIEW **For models ALT-130 thru ALT-7500 :**
Equipped standard with a pressure gauge and the ExpanView tank integrity indicator.

Use our online selector tool to choose the right tank size.
calefactio.com/en/sizing-tool

Model#	Volume		Dimension				Connection		Approx. weight	
			A		B		C			
	gal	L	in	mm	in	mm	in	mm	lb	kg
ALT-35	10	38	12	305	28	706	1	25	50	23
ALT-50	13	50	12	305	36	918	1	25	60	27
ALT-85	23	87	16	406	37	935	1	25	80	36
ALT-130	35	132	20	508	37	940	¾	19	125	57
ALT-200	53	200	24	610	43	1092	¾	19	210	95
ALT-300	79	299	24	610	55	1397	¾	19	225	102
ALT-400	106	401	30	762	49	1245	¾	19	300	136
ALT-500	132	500	30	762	57	1448	¾	19	335	152
ALT-600	158	598	30	762	65	1651	¾	19	360	163
ALT-800	211	798	32	813	76	1930	¾	19	475	215
ALT-1000	264	999	36	914	76	1930	1½	38	552	250
ALT-1200	317	1200	36	914	88	2235	1½	38	679	308
ALT-1400	370	1400	36	914	100	2540	1½	38	688	312
ALT-1600	422	1597	48	1219	74	1880	1½	38	1046	474
ALT-2000	528	1999	48	1219	86	2184	1½	38	1150	522
ALT-2500	660	2498	48	1219	104	2642	2	51	1444	655
ALT-3000L	792	2998	48	1219	124	3150	2	51	1658	752
ALT-3000S	792	2998	60	1524	83	2108	2	51	1868	847
ALT-3500	926	3505	54	1372	111	2819	2	51	2369	1075
ALT-4000	1056	3997	60	1524	105	2667	2	51	2238	1015
ALT-5000	1320	4996	60	1524	128	3251	2	51	2617	1187
ALT-7500	1981	7499	72	1829	131	3327	3	76	3768	1709

HEATING

OT SERIES

Fixed bladder **Top connection**

- Design conforms to ASME, section VIII
- Fixed bladder in ultra resistant EPDM
- Air precharged at factory; pressure adjustable on site
- Water remains permanently separated from air for the duration of the useful life of the installation

Technical specifications

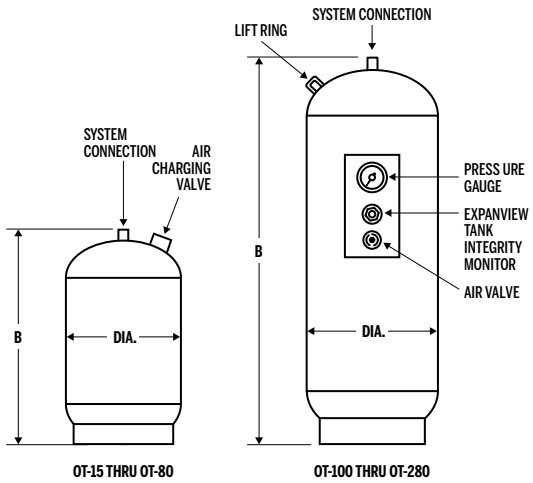
- Exterior finish in painted primer
- Maximum temperature of 240°F (115°C) at the tank level
- Air precharged at factory at 12 PSI (83 kPa)
- Service pressure
  - Models OT-15 thru OT-60: 150 PSI (1034 kPa)
  - Models OT-80 thru OT-280: 125 PSI (862 kPa)
- Maximum pressure of 175, 250 and 300 PSI also available

Integrated pressure gauge and tank integrity indicator.
Expanview included for models OT-100 and up. Option available on models OT-15 to OT-80.

Model OT-80 thru OT-280 shown

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Tank volume		Acceptance volume		NPT Connection		Dimension				Approx. weight	
							A		B			
	gal	L	gal	L	in	mm	in	mm	in	mm	lb	kg
OT-15	7.8	30	6.3	24	¾	19	12	305	21.5	533.4	35.6	16.2
OT-20	11	42	8.8	33	¾	19	12	305	26.5	660.4	40.3	18.3
OT-40	25	95	20.2	76	1	25	16	406	35	885	67.5	30.7
OT-60	35	132	28	106	1	25	16	406	46	1165	82.9	37.7
OT-80	45	170	36	136	1	25	20	508	38	965	148	67
OT-100	60	227	48.5	184	1	25	20	508	49	1245	175	79
OT-120	70	265	56.5	214	1½	38	24	610	46	1168	259	117
OT-144	80	303	65	246	1½	38	24	610	49	1245	268	122
OT-180	90	341	73	276	1½	38	24	610	52	1321	283	128
OT-200	115	435	93	352	1½	38	24	610	66	1676	325	147
OT-240	140	530	113.5	430	1½	38	24	610	78	1981	362	164
OT-260	158	598	128	485	1½	38	30	762	63	1600	591	268
OT-280	211	799	171	647	1½	38	30	762	81	2032	752	341

Use our online selector tool to choose the right tank size.
calefactio.com/en/sizing-tool

EXPAN VIEW

For Models OT-80 thru OT-280:
Equipped standard with a pressure gauge and the ExpanView tank integrity indicator.

HEATING

NA SERIES

Without bladder **Without membrane**

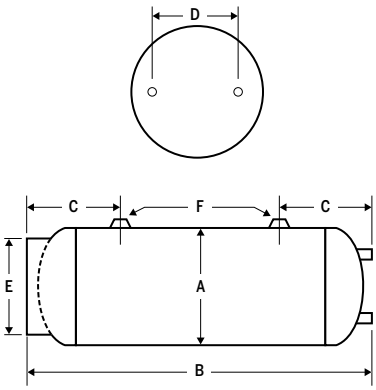
- Design conforms to ASME, section VIII
- Base ring for vertical storage
- Glass level indicator connection at top
- Straps available for hanging installation
- Tanks in galvanized steel are also available

Technical specifications

- Steel construction
- Maximum design temperature: 450°F (232°C)
- Maximum design pressure
  - Models 12NA33 thru 20NA78: 150 PSI
  - Models 24NA65 thru 42NA96: 125 PSI

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Volume		Dimension												Approx. weight	
			A		B		C		D		E		F			
	gal	L	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
12NA33	15	57	12	305	33	838	7	203	8	203	11½	292	1	25	44	20
12NA51	24	91	12	305	51	1295	7	203	8	203	11½	292	1	25	62	28
14NA48	30	114	14	356	48	1219	10	254	10	254	11½	292	1	25	72	33
14NA63	40	151	14	356	63	1600	10	254	10	254	11½	292	1	25	92	42
16NA72	60	227	16	406	72	1829	10	254	12	305	11½	292	1	25	120	54
20NA62	80	303	20	508	62½	1587	10	254	16	406	18	457	1	25	136	62
20NA78	100	379	20	508	78	1981	10	254	16	406	18	457	1	25	168	76
24NA65	120	454	24	610	65	1651	11⅛	283	20	508	18	457	1	25	218	99
24NA72	135	511	24	610	72	1829	11⅛	283	20	508	18	457	1	25	238	108
30NA62	175	662	30	762	62¼	1581	13½	343	22	559	24	610	1½	38	338	153
30NA77	220	833	30	762	77	1956	13½	343	22	559	24	610	1½	38	368	167
30NA84	240	908	30	762	84	2134	13½	343	22	559	24	610	1½	38	394	179
30NA105	305	1155	30	762	105¾	2686	13½	343	22	559	24	610	1½	38	486	220
36NA72	295	1117	36	914	72	1829	14¾	375	28	711	30	762	1½	38	502	227
36NA93	400	1514	36	914	92½	2349	14¾	375	28	711	30	762	1½	38	645	292
36NA120	505*	1912	36	914	120	3048	14¾	375	28	711	N/A	N/A	1½	38	810	367
42NA96	525*‡	1987	42	1067	96	2438	18	457	28	711	N/A	N/A	1½	38	895	406

Use our online selector tool to choose the right tank size.
calefactio.com/en/sizing-tool

*The 505 and 525 gallon tanks are not supplied with a base ring. ‡The 525 gallon tanks have an 11"×15" footprint.

POTABLE

BFA SERIES

Fixed bladder **Top connection**

- Design conforms to ASME, section VIII
- Fixed EPDM bladder ultra resistant CSA approved conforms to the NSF61 standard
- Water remains permanently separated from air
- Air precharged at factory; pressure adjustable on site

Technical specifications

- Stainless steel connection
- Exterior finish in painted primer
- Maximum temperature 240°F (115°C)
- Air precharged at factory at 40 PSI (275 kPa)
- Service pressure 150 PSI (1034 kPa)
- Maximum pressure of 175, 250 and 300 PSI also available

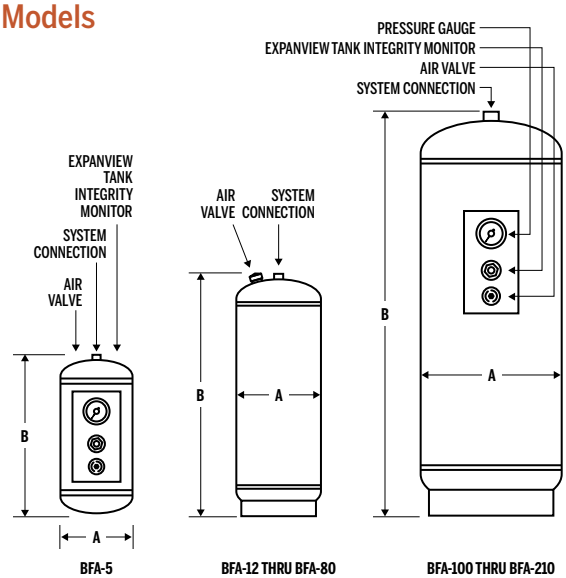
Integrated pressure gauge and tank integrity indicator. Expanview included for models BFA-5 and BFA-100 and up. Option available on models BFA-12 to BFA-80.

Model BFA-12 thru BFA-80 shown

Model BFA-100 thru BFA-210 shown

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Tank volume		Acceptance volume		NPT Connection		Dimension				Approx. weight	
							A		B			
	gal	L	gal	L	in	mm	in	mm	in	mm	lb	kg
BFA-5	3.5	13	2.3	9	¾	19	10	254	14	356	22	10
BFA-12	5	19	3.3	12	¾	19	12	305	15	380	28	13
BFA-20	8	30	5.3	20	¾	19	12	305	21	535	34	15
BFA-30	15	57	10	38	1	25	16	406	25	630	64	29
BFA-42	22	83	14.5	55	1	25	16	406	32	810	88	40
BFA-60	26	98	17.5	66	1	25	16	406	35	885	93	42
BFA-80	35	132	23.5	89	1	25	16	406	46	1165	109	49
BFA-100	45	170	36	136	1	25	20	508	38	965	148	67
BFA-125	60	227	48.5	184	1	25	20	508	49	1245	175	79
BFA-160	70	265	56.5	214	1½	38	24	610	46	1168	259	117
BFA-180	80	303	65	246	1½	38	24	610	49	1245	268	122
BFA-210	90	341	73	276	1½	38	24	610	52	1321	283	128

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For models BFA-5, BFA-100, BFA-125, BFA-160, BFA-180 and BFA-210: Equipped standard with a pressure gauge and the ExpanView tank integrity indicator.

POTABLE

TXA SERIES

Replaceable bladder **Bottom connection**

- Replaceable butyl bladder ultra resistant CSA approved conforms to the NSF61 standard
- Construction conforms to ASME Section VIII
- Water remains permanently separated from air for for the entire duration of the life of the reservoir
- Air precharged at factory; pressure adjustable on site

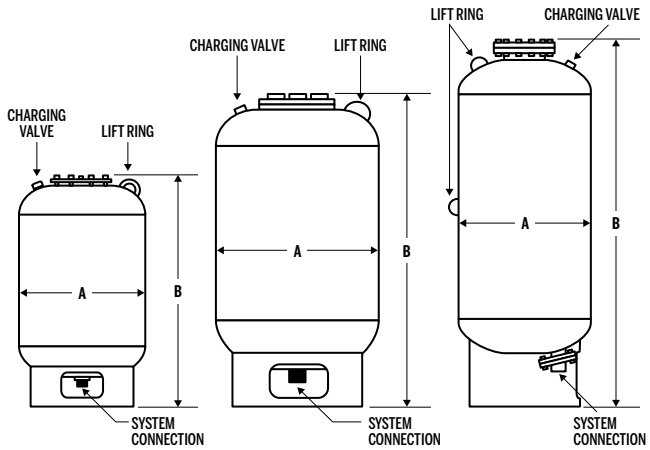
Technical specifications

- Stainless steel connection
- Maximum design temperature: 240°F (115°C)
- Air precharged at factory at 40 PSI
- Maximum design pressure 150 PSI
- Maximum pressure of 175, 250 and 300 PSI also available

Model TXA-85 thru TXA-800 shown

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

Models



TXA-35 THRU TXA-50 TXA-85 THRU TXA-800 TXA-1000 THRU TXA-2000

Model#	Total volume		Dimension				NPT Connection		Approx. weight	
			A		B					
	gal	L	in	mm	in	mm	in	mm	lb	kg
TXA-35	10	38	12	305	28	706	1	25	40	18
TXA-50	13	49	12	305	36	918	1	25	50	23
TXA-85	23	87	16	406	37	935	1	25	90	41
TXA-130	35	132	16	406	50	1283	1	25	132	60
TXA-200	53	201	24	610	43	1092	1½	38	210	95
TXA-300	79	299	24	610	55	1397	1½	38	225	102
TXA-400	106	401	30	762	49	1245	1½	38	300	136
TXA-500	132	500	30	762	57	1448	2	51	335	152
TXA-600	158	598	30	762	65	1651	2	51	360	163
TXA-800L	211	799	32	813	76	1930	2	51	475	215
TXA-1000	264	999	36	914	87	2210	3	76	735	333
TXA-1200	317	1200	36	914	98	2489	3	76	745	338
TXA-1400	370	1401	36	914	111	2819	3	76	900	408
TXA-1600	422	1597	48	1219	84	2134	3	76	1210	549
TXA-2000	528	1999	48	1219	96	2438	3	76	1305	592

Use our online selector tool to choose the right tank size.
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POTABLE

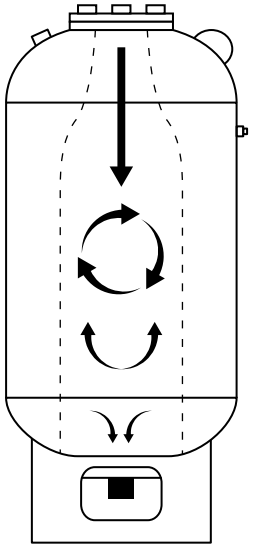
FTTE-C SERIES

Replaceable bladder **Flow through**

- Shell: carbon steel
- Heads: carbon steel
- Connections: stainless steel
- Ultra resistant butyl bladder, NSF approved
- Water remains permanently separated from air
- Air precharged at factory; pressure adjustable on site

Technical specifications

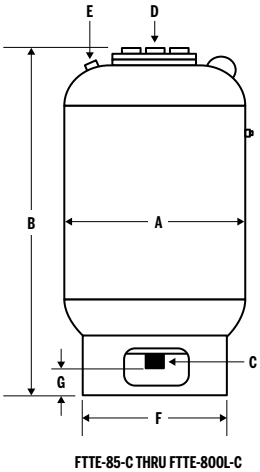
- Maximum design temperature: 240°F (115°C)
- Air precharged at factory at 40 PSI
- Maximum design pressure: 150 psig, 200 and 250 psig available



Internal view

The unique design of the FTTE-C promotes mixing of fluids allowing them to cross the tank completely.
This movement inside the bladder avoids water stagnation, thus preventing the potential growth of harmful bacteria colonies.

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.



FTTE-85-C THRU FTTE-800L-C

Models

Model#	Volume		Dimension				Connection				Charg. valve	F		G		Approx. weight	
			A		B		C		D		E						
	gal	L	in	mm	in	mm	in	mm	in	mm		in	mm	in	mm	lb	kg
FTTE-85-C	23	87	16	406	37	940	1	25	1	25	0.302" – 32 NC	12	305	5¼	133	90	41
FTTE-130-C	35	132	20	508	37	940	1	25	1	25		12	406	5¼	133	132	60
FTTE-200-C	53	201	24	610	43	1092	1½	38	1½	38		20	508	5¼	133	220	100
FTTE-300-C	79	299	24	610	55	1397	1½	38	1½	38		20	508	5¼	133	236	107
FTTE-400-C	106	401	30	762	49	1245	1½	38	1½	38		24	610	5¼	133	315	143
FTTE-500-C	132	500	30	762	57	1448	2	51	2	51		24	610	4¾	121	347	157
FTTE-600-C	158	598	30	762	65	1651	2	51	2	51		24	610	4¾	121	378	171
FTTE-800L-C	211	799	32	813	76	1930	2	51	2	51		28	711	4¾	121	503	228

Use our online selector tool to choose the right tank size.
calefactio.com/en/sizing-tool

HYDRO-PNEUMATICS

AFX SERIES

Replaceable bladder
Bottom connection

- Ultra resistant butyl bladder, NSF approved
- Design conforms to ASME, section VIII
- Air precharged at factory; pressure adjustable on site
- Ideal for booster systems
- Storage tank for drinking and well water

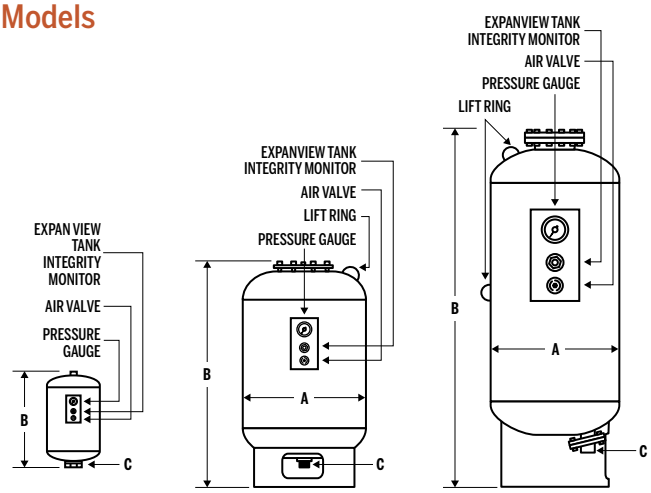
Technical specifications

- Exterior finish in painted primer
- Maximum temperature 240°F (115°C)
- Air precharged at factory at 30 PSI
- Standard pressure of 125 PSI

Model AFX-85 thru AFX-800 shown

Use our online selector tool to choose the right tank size.
calefactio.com/en/sizing-tool

Models



Model#	Tank volume		Dimension				NPT Connect.		Approx. weight	
			A		B		C			
	gal	L	in	mm	in	mm	in	mm	lb	kg
AFX-35	10	38	12	305	25	635	¾	19	40	18
AFX-50	13	49	14	356	25	635	¾	19	50	23
AFX-85	23	87	16	406	37	940	1	25	90	41
AFX-130	35	133	20	508	37	940	1	25	125	57
AFX-200	53	201	24	610	43	1092	1½	38	210	95
AFX-300	79	299	24	610	55	1397	1½	38	225	102
AFX-400	106	401	30	762	49	1245	1½	38	300	136
AFX-500	132	500	30	762	57	1448	2	51	335	152
AFX-600	158	598	30	762	65	1651	2	51	360	164
AFX-800	211	799	32	813	76	1930	2	51	475	216
AFX-1000	264	999	36	914	82	2083	3	76	735	333
AFX-1200	317	1200	36	914	94	2387	3	76	745	338
AFX-1400	370	1401	36	914	107	2718	3	76	900	408
AFX-1600	422	1597	48	1219	84	2133	3	76	1210	549
AFX-2000	528	1999	48	1219	97	2464	3	76	1305	592
AFX-2500	660	2498	48	1219	116	2946	4	102	1430	649
AFX-3000L	792	2998	48	1219	134	3404	4	102	1575	714
AFX-3000S	792	2998	60	1524	97	2464	4	102	2169	984
AFX-4000	1056	3997	60	1524	123	3124	4	102	2638	1197
AFX-5000	1320	4997	60	1524	146	3708	4	102	3246	1472

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

NON-CODED HYDRO-PNEUMATICS

FX SERIES

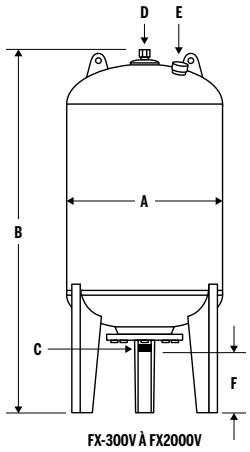
Replaceable bladder

- NON-ASME Expansion tank
- Ultra resistant butyl bladder
- Water remains permanently separated from air
- Preload of air at factory, adjustable pressure on site
- Effectively controls pressure surges and shocks that occur when the system is turned on and off
- Equipped with connections for large water systems, designed to quickly accept water pressure surges with minimal pressure drop

Technical specifications

- Maximum design temperature: 240°F (115°C)
- Maximum design pressure: 150 PSIG
- Air precharged at factory at 30 PSI
- Bladder: – Ultra resistant butyl
  – FDA approved
  – Conforms to the NSF61 standard
- Stainless steel connection

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.



FX-300V À FX2000V

Models

Model#	Volume		Dimension				Connection				Charging valve	F		Approx. weight	
			A		B		C		D		E				
	gal	L	in	mm	in	mm	in	mm	in	mm		in	mm	lb	kg
FX-300V	80	303	25	635	55	1397	1½	38	½	13	0.302" – 32 NC	8.5	216	141	70.0
FX-500V	132	500	31	787	61	1549	1½	38	½	13		9	229	265	120.2
FX-750V	198	750	31	787	79	2007	1½	38	½	13	7.7 mm – 32 NC	9	229	330	149.7
FX-1000V	264	999	37	940	77	1956	2	51	½	13		9	229	398	180.5
FX-2000V	528	1999	50	1270	84	2134	2	51	½	13		9	229	835	378.8

Use our online selector tool to choose the right tank size.
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HYDRO-PNEUMATICS

SSA SERIES / SHOCK AND SURGE ARRESTORS

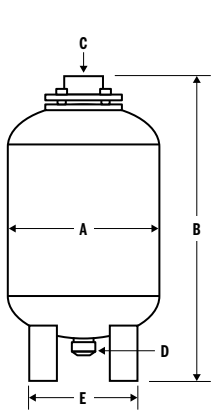
Replaceable bladder

- Ultra resistant butyl bladder
- Construction conforms to ASME Section VIII
- Water remains permanently separated from air
- Air precharged at factory; pressure adjustable on site
- Effectively control water hammer shock and pump start-up/shut-down water surge
- Connection at the bottom for all models except SSA-35 and SSA-50
- With large water system connections designed to quickly accept water surge pressures, with minimal pressure drop

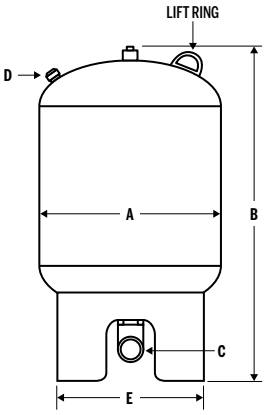
Technical specifications

- Maximum design temp.: 240°F (115°C)
- Air precharged at factory at 30 psi
- Maximum design pressure: 250 PSI

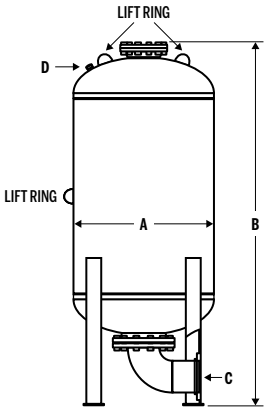
Models



SSA-35 THRU SSA-85



SSA-130 THRU SSA-800



SSA-1000 THRU SSA-2500

Model#	Volume		Dimension								Approx. weight	
			A		B		C		Charging valve D	E		
	gal	L	in	mm	in	mm	in	mm		in mm	lb	kg
SSA-35	10	38	12	305	26	660	2½	64		9 229	55	25
SSA-50	13	49	14	356	26	660	2½	64		10 254	65	30
SSA-85	23	87	16	406	30½	775	3	76		12 305	134	61
SSA-130	35	132	20	508	30½	775	3	76		16 406	175	79
SSA-200	53	201	24	610	46½	1181	4	102		20 508	250	113
SSA-300	79	299	24	610	58½	1486	4	102		20 508	341	155
SSA-400	106	401	30	762	52½	1334	4	102	0.302" – 32 NC	24 610	430	195
SSA-500	132	500	30	762	63	1600	6	152		24 610	596	270
SSA-600	158	598	30	762	71	1803	6	152	7.7 mm – 32 NC	24 610	653	296
SSA-700	185	700	30	762	81½	2070	6	152		24 610	726	329
SSA-800	211	799	32	813	82	2083	6	152		26 660	902	409
SSA-1000	264	999	36	914	85	2159	10	254		– –	1147	520
SSA-1200	317	1199	36	914	107	2718	10	254		– –	1303	591
SSA-1400	370	1401	36	914	119	3023	10	254		– –	1447	656
SSA-1600	422	1597	48	1219	92	2337	10	254		– –	1888	856
SSA-2000	528	1999	48	1219	105	2667	10	254		– –	2105	955
SSA-2500	660	2498	48	1219	122	3099	10	254		– –	2425	1100

Use our online selector tool to choose the right tank size.
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To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

NOTE: Available with mounting clips.

HYDRO-PNEUMATICS

ABM SERIES / MUNICIPAL HAMMER ARRESTORS

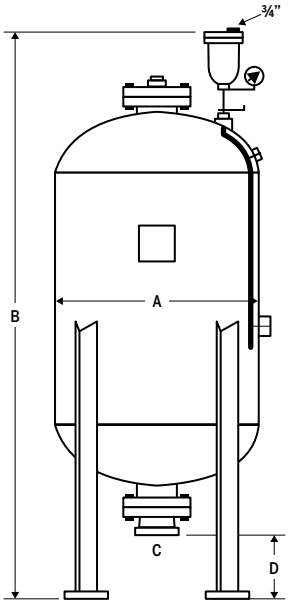
Replaceable bladder

- Heavy duty butyl bladder
- Design conforms to ASME, section VIII
- For use in wastewater systems
- Equipped with a biogas vent and manometer

Technical specifications

- Maximum temperature: 240°F (115°C)
- Maximum design pressure: 150 PSI

Models



Model#	Total volume		Dimension								Approx. weight	
			A		B		C		D			
	gal	L	in	mm	in	mm	in	mm	in	mm	lb	kg
ABM-160	43	163	24	610	60	1524	6	152	12	305	250	114
ABM-250	66	250	24	610	72	1829	6	152	12	305	300	136
ABM-400	106	401	24	610	98	2489	8	203	16	406	365	166
ABM-600	158	598	30	760	96	2438	8	203	16	406	590	268
ABM-1000	264	999	36	914	101	2565	10	254	24	610	900	409
ABM-1600	423	1601	48	1220	105	2667	12	305	30	760	1610	731
ABM-2000	528	1999	48	1220	119	3023	12	305	30	760	1810	823

Use our online selector tool to choose the right tank size.
calefactio.com/en/sizing-tool

To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

ACCESSORIES

SADDLES

For horizontal installation on the floor.

Model#	Diameter
SAD12	12”
SAD14	14”
SAD16	16”
SAD18	18”
SAD20	20”
SAD24	24”
SAD30	30”
SAD36	36”
SAD48	48”

STRAPS

Straps to attach the tank.

Model#	Diameter
STRAP12	12”
STRAP14	14”
STRAP16	16”
STRAP18	18”
STRAP20	20”
STRAP24	24”
STRAP30	30”
STRAP36	36”
STRAP48	48”

ANTI-SEISMIC BRACKETS

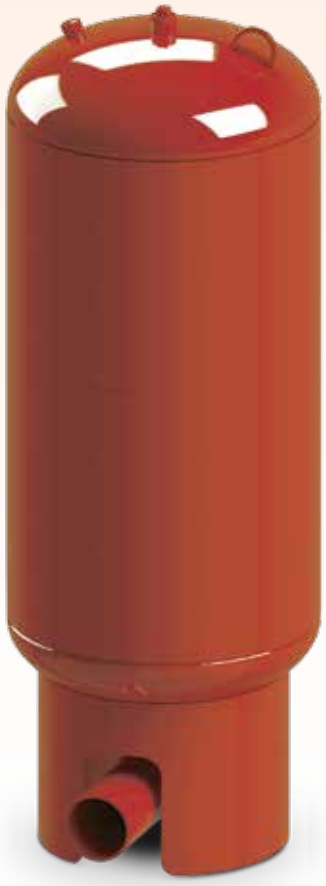
The anti-seismic brackets are designed to protect the tanks in case of an earthquake.

Model#	Width
BKT2	2”
BKT4	4”

ASME SPECIALIZED TANKS

Calefactio can manufacture custom tanks. Tell us about your project!

- ALL ASME TANKS IN STAINLESS STEEL
- LOW LOSS HEADER
- AND MUCH MORE!



SPECIFICATIONS

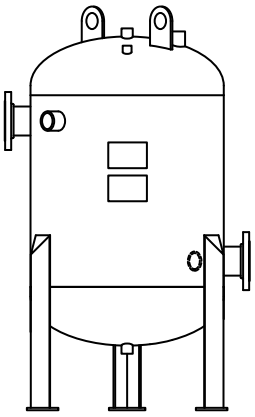
- Constructed according to the ASME code, section VIII, DIV. 1
- Conforms to the CSA B.51 standard
- Available vertically (V) or horizontally (H)
- Carbon steel or stainless steel construction
- Design of 125 PSI (862 KPa), 150 PSI (1,034 KPa), 200 PSI (1,379 KPa) and greater on demand
- Exterior finish: external solvent cleaning and grey coat primer application

ASME Storage Tank for Chilled Water and Glycol

Options

- Epoxy coated interior
- Concrete coated interior
- Horizontal with steel "floor" saddles

Model#	Description
CBT	Available from 24" to 144" diameter



ASME Bi-Energy Domestic Hot Water Storage Tank

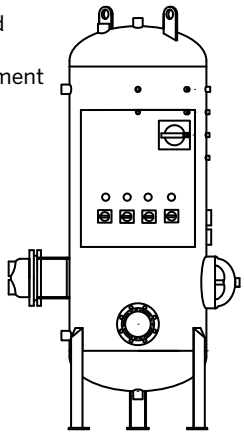
Technical Specifications

- Conforms to the NSF61 standard
- With water (W) or vapour (V) exchanger tube and electric element
- Replaceable aluminium anodes
- C/A pre-wired control panel

Options

- Interior coating hydrophobic cement, 20 mm (¾") thick
- Horizontal with steel "floor" saddles

Model#	Description
STA-BI	Available from 24" to 144" diameter



ASME Domestic Hot Water Storage Tank with Heater

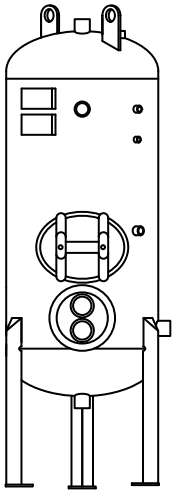
Technical Specifications

- Conforms to the NSF61 standard
- Replaceable aluminium anodes
- C/A pre-screened control panel
- Available from 24" to 144" diameter

Options

- Interior coating hydrophobic cement, 20 mm (¾") thick
- Horizontal with steel "floor" saddles

Model#	Description
STATEW	With water – tube exchanger
STATEV	With vapour – tube exchanger
STAEE	With electrical exchanger



ASME Domestic Hot Water Storage Tank without Heater

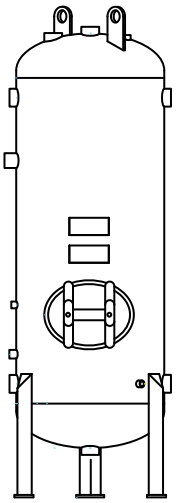
Technical Specifications

- Conforms to the NSF61 standard
- Aluminium anodes

Options

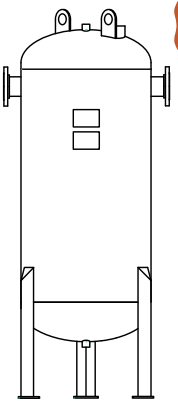
- Interior coating hydrophobic cement, from 20 mm (¾") thick
- Horizontal with steel "floor" saddles

Model#	Description
STA	Available from 24" to 144" diameter



SPECIFICATIONS

- Constructed according to the ASME code, section VIII, DIV. 1
- Conforms to the CSA B.51 standard
- Available vertically (V) or horizontally (H)
- Carbon steel or stainless steel construction
- Designs of 125 PSI (862 KPa), 150 PSI (1,034 KPa), 200 PSI (1,379 KPa) and greater on demand
- Exterior finish: external solvent cleaning and grey coat primer application



ASME Buffer Tank

Options

- Horizontal with steel "floor" saddles
- Bottom connection
- Internal deflector for a more uniform mixture

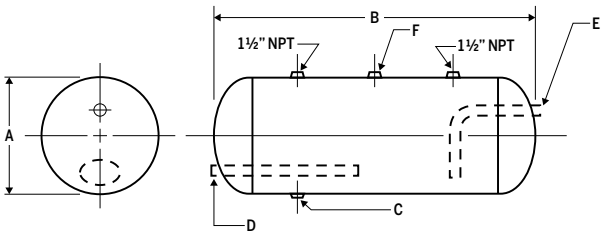
Model#	Description
HBT	Available from 24" to 144" diameter

ASME FLASH TANKS

EFTA SERIES

Construction

- Constructed according to ASME standard, section VIII, Div.1
- Design temperature: 450°F / 232 °C
- Painted exterior with a primer coat



Models

Model#	Capacity		W.P.	Dimension										Weight		Clear.	Options		
				A		B		C		D	E	F							
	gal	L	PSI	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg	ft²	Inlet	Outlet	Hand hole
EFTA-13	13	49.2	150	10	254	39	991	1	25	1½	38	2	51	79	36	2.71	1½"×18" with 20 holes ⅜"	1½" 38.1 mm	4"×6" 101.6 mm × 152.4 mm
EFTA-18	18	68.1	150	12	305	39	991	1	25	1½	38	2	51	94	43	3.25			
EFTA-24	24	90.8	150	14	356	39	991	1	25	1½	38	2	51	108	49	3.79			
EFTA-30	30	113.6	150	16	406	38	965	1½	38	1½	38	2½	64	121	55	4.22			
EFTA-48	48	181.7	125	18	457	48	1219	2	51	1½	38	2½	64	168	76	6.00			
EFTA-80	80	302.8	125	24	610	46	1168	2	51	2	51	3	76	214	97	7.67	2"×24" with 32 holes ⅜"	2" 50.8 mm	
EFTA-125	125	473.2	125	30	762	48	1219	2½	64	2	51	3	76	285	129	10			
EFTA-180	180	681.4	125	36	914	48	1219	3	76	2	51	3	76	339	154	12			

Spray duct, splash pipes and inspection holes are available as optional equipment.

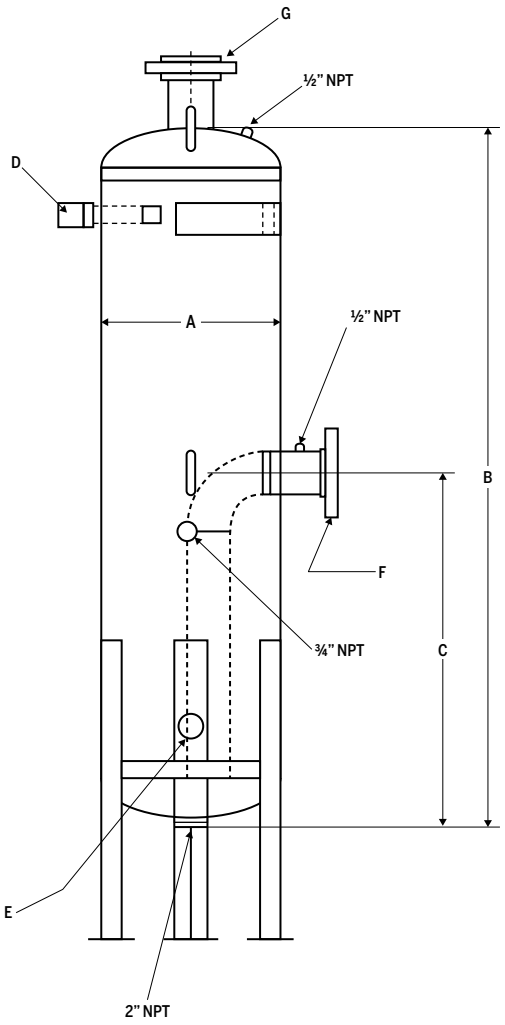
To obtain a tank of higher capacity and greater pressure, contact the manufacturer.

ASME BLOWDOWN TANKS

EBDT SERIES

Technical Specifications

- Conforms to chapter VIII of the ASME code
- Exterior painted primer
- Head and shell from ⅜ in material
- Design temperature 450°F
- Operating pressure 125 psig



Models

Model#	Design pressure for boiler	Dimension				Exit height		Pressure purger		Cold water intake		Cold water intake		Pressure purger	
		A		B		C		D		E		F		G	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
EBDT-21	20 to 50	14	356	66	1676	33	838	¾	19	¾	19	1½	38	2	51
EBDT-22	20 to 50	14	356	66	1676	33	838	1	25	1	25	1½	38	2	51
EBDT-23	20 to 50	14	356	66	1676	33	838	1¼	32	1¼	32	2½	64	2	51
EBDT-24	20 to 50	14	356	66	1676	33	838	1½	38	1¼	32	2½	64	2½	64
EBDT-25	20 to 50	18	457	72	1829	36	914	2	51	2	51	4	102	3	76
EBDT-26	20 to 50	20	508	72	1829	36	914	2½	64	2	51	4	102	4	102
EBDT-51	51 to 100	14	356	66	1676	33	838	¾	19	1	25	1½	38	2	51
EBDT-52	51 to 100	14	356	66	1676	33	838	1	25	1¼	32	2	51	2½	64
EBDT-53	51 to 100	18	457	72	1829	36	914	1¼	32	1½	38	3	76	3	76
EBDT-54	51 to 100	18	457	72	1829	36	914	1½	38	2	51	4	102	4	102
EBDT-55	51 to 100	24	610	72	1829	36	914	2	51	2½	64	4	102	5	127
EBDT-56	51 to 100	30	762	78	1981	39	990	2½	64	2½	64	5	127	6	152
EBDT-101	101 to 150	14	356	66	1676	33	838	¾	19	1	25	2	51	2½	64
EBDT-102	101 to 150	14	356	66	1676	33	838	1	25	1¼	32	3	76	3	76
EBDT-103	101 to 150	20	508	72	1829	36	914	1¼	32	1½	38	3	76	4	102
EBDT-104	101 to 150	24	610	72	1829	36	914	1½	38	2	51	4	102	5	127
EBDT-151	151 to 200	14	356	66	1676	33	838	¾	19	1	25	2	51	3	76
EBDT-152	151 to 200	18	457	72	1829	36	914	1	25	1¼	32	2½	64	4	102
EBDT-153	151 to 200	24	610	72	1829	36	914	1¼	32	2	51	3	76	5	127
EBDT-154	151 to 200	30	762	78	1981	39	990	1½	38	2	51	4	102	6	152
EBDT-156	151 to 200	48	1219	78	1981	39	990	2½	64	3	76	5	127	8	203
EBDT-201	201 to 300	18	457	72	1829	34	863	¾	19	1¼	32	2	51	4	102
EBDT-202	201 to 300	24	610	72	1829	34	863	1	25	1½	38	2½	64	5	127
EBDT-203	201 to 300	30	762	78	1981	39	990	1¼	32	2	51	4	102	6	152
EBDT-204	201 to 300	36	914	78	1981	39	990	1½	38	2½	64	4	102	6	152
EBDT-205	201 to 300	48	1219	78	1981	39	990	2	51	3	76	5	127	8	203
EBDT-206	201 to 300	54	1372	84	2134	42	1067	2½	64	3	76	6	152	10	254
EBDT-301	301 to 400	20	508	72	1829	36	914	¾	19	1¼	32	2½	64	4	102
EBDT-302	301 to 400	24	610	72	1829	36	914	1	25	1½	38	3	76	5	127
EBDT-304	301 to 400	42	1067	78	1981	39	990	1½	38	2½	64	4	102	8	203
EBDT-305	301 to 400	54	1372	84	2134	42	1067	2	51	3	76	5	127	10	254
EBDT-306	301 to 400	66	1676	84	2134	42	1067	2½	64	4	102	6	152	10	254
EBDT-401	401 to 500	20	508	72	1829	36	914	1¼	19	1¼	32	2½	64	4	102
EBDT-404	401 to 500	48	1219	78	1981	39	990	1½	38	1½	38	4	102	8	203
EBDT-405	401 to 500	60	1524	84	2134	42	1067	2	51	3	76	5	127	10	254
EBDT-406	401 to 500	72	1829	84	2134	42	1067	2½	64	4	102	8	203	12	305
EBDT-501	501 to 600	24	610	72	1829	36	914	¾	19	1¼	32	2½	64	5	127
EBDT-502	501 to 600	30	762	78	1981	39	990	1	25	1½	38	3	76	6	152
EBDT-503	501 to 600	42	1067	78	1981	39	990	1¼	32	2½	64	4	102	8	203
EBDT-504	501 to 600	54	1372	84	2134	42	1067	1½	38	2½	64	5	127	10	254
EBDT-505	501 to 600	66	1676	84	2134	42	1067	2	51	3	76	6	152	12	305
EBDT-506	501 to 600	72	1829	84	2134	42	1067	2½	64	4	102	8	203	12	305
EBDT-602	601 to 800	36	914	78	1981	39	990	1	25	1½	38	3	76	6	152
EBDT-603	601 to 800	48	1219	78	1981	39	990	1¼	32	2	51	4	102	8	203
EBDT-604	601 to 800	60	1524	84	2134	42	1067	1½	38	2½	64	5	127	10	254
EBDT-605	601 to 800	72	1829	84	2134	42	1067	2	51	3	76	6	152	12	305
EBDT-606	601 to 800	72	1829	84	2134	42	1067	2½	64	4	102	8	203	12	305

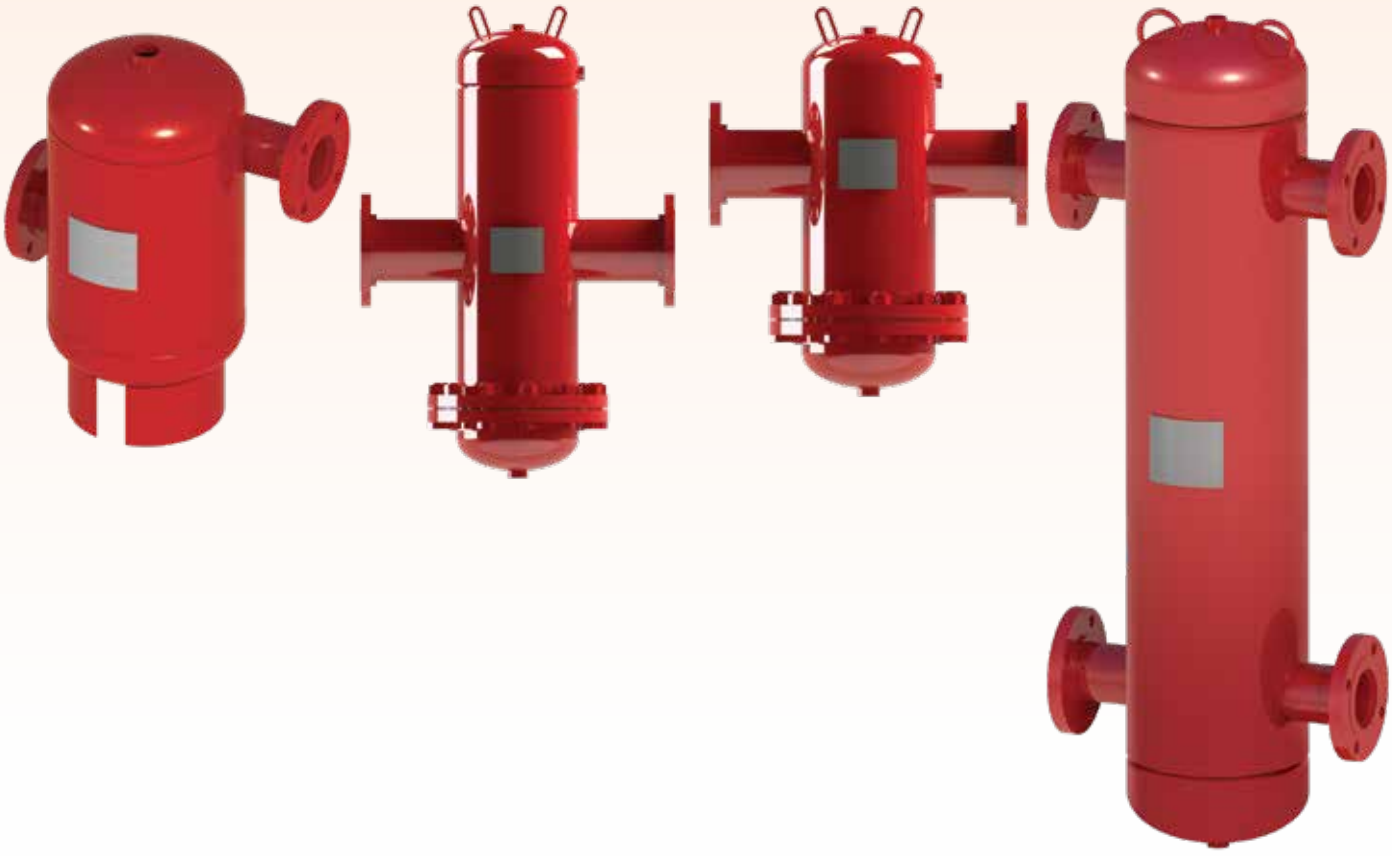
ASME AIR, DIRT AND HYDRAULIC SEPARATORS

AIR SEPARATORS

AIR AND DIRT SEPARATORS

DIRT SEPARATORS

HYDRAULIC SEPARATORS



TANGENTIELS AIR SEPARATORS

ESPA / WITHOUT STRAINER

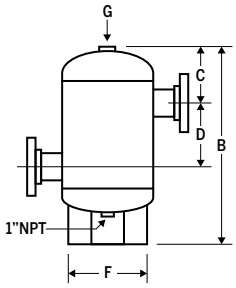
- Design conforms to ASME, section VIII
- Separate air
- Adapted fluids: water and 50% glycol solution
- Ideal for heating or cooling installations in open or closed loop
- Calvent automatic vent (#CV050) available in option

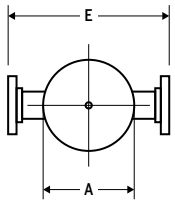
Technical specifications

- Carbonized steel housing
- Exterior finish in painted primer
- Maximum temperature: 232°C (450°F)
- Maximum service pressure: 125 PSI
- Pressure of 150, 175, 200, 250 and 300 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models





Model#	Max GPM	Connect.		Type	Dimension														Approx. weight	
					A		B		C		D		E		F		G			
		in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
ESPA-2	56	2	51	NPT	12	305	22½	572	5½	140	8½	216	16⅝	422	9½	241	1¼	32	50	23
ESPA-2.5	90	2½	64	NPT	12	305	22½	572	5½	140	8½	216	16⅝	422	9½	241	1¼	32	55	25
ESPA-3	190	3	76	CLAMPED	12	305	22½	572	5¾	146	8	203	19¾	502	9½	241	1¼	32	60	27
ESPA-4	300	4	102	CLAMPED	14	356	32	813	9⅛	232	10¾	273	21¾	552	11½	292	1½	38	90	41
ESPA-5	530	5	127	CLAMPED	14	356	32	813	9⅛	232	10¾	273	21¾	552	11½	292	1½	38	148	67
ESPA-6	850	6	152	CLAMPED	20	508	44	1118	13¼	337	14½	368	28	711	18	457	2	51	191	87
ESPA-8	1900	8	203	CLAMPED	20	508	44	1118	13¼	337	14½	368	28	711	18	457	2	51	379	172
ESPA-10	3600	10	254	CLAMPED	30	762	60½	1537	19	483	20	508	41	1041	24	610	2	51	598	271
ESPA-12	4800	12	305	CLAMPED	30	762	60½	1537	19	483	20	508	41	1041	24	610	2	51	947	430
ESPA-14	6100	14	356	CLAMPED	36	914	78	1981	22	559	31½	800	46⅜	1178	30	762	2	51	1680	762
ESPA-16	8000	16	406	CLAMPED	48	1219	108	2743	30	762	40	1016	60	1524	38	965	2	51	2300	1043
ESPA-18	9700	18	457	CLAMPED	54	1371	124	3150	33	838	50	1270	66	1676	44	1118	2	51	3235	1467
ESPA-20	12000	20	508	CLAMPED	60	1524	137	3480	35	889	60	1524	72	1829	50	1270	2	51	5100	2313
ESPA-22	15000	22	559	CLAMPED	66	1676	150	3810	38	965	66	1676	78	1981	56	1422	2	51	6150	2790
ESPA-24	17000	24	610	CLAMPED	66	1676	150	3810	38	965	66	1676	80	1270	56	1422	2	51	6400	2903

TANGENTIEL AIR SEPARATORS

ESPA-S / WITH STRAINER

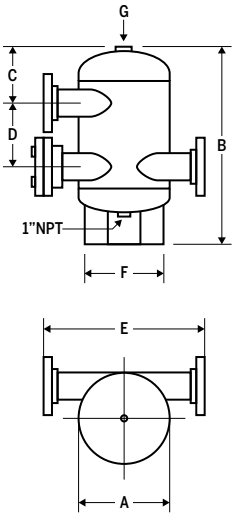
- Design conforms to ASME, section VIII
- Separate air
- With strainer allowing debris retention
- Adapted fluids: water and 50% glycol solution
- Ideal for heating or cooling installations in open or closed loop
- Calvent automatic vent (#CV050) available in option

Technical specifications

- Carbonized steel housing
- Exterior finish in painted primer
- Maximum temperature: 232°C (450°F)
- Maximum service pressure: 125 PSI
- Pressure of 150, 175, 200, 250 and 300 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Max GPM	Connect.		Type	Dimension														Approx. weight	
					A		B		C		D		E		F		G			
		in	mm		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
ESPA-2S	56	2	51	NPT	12	305	22½	572	5½	140	8½	216	16⅝	422	9½	241	1¼	32	55	25
ESPA-2.5S	90	2½	64	NPT	12	305	22½	572	5½	140	8½	216	16⅝	422	9½	241	1¼	32	61	28
ESPA-3S	190	3	76	CLAMPED	12	305	22½	572	5¾	146	8	203	19¾	502	9½	241	1¼	32	66	30
ESPA-4S	300	4	102	CLAMPED	14	356	32	813	9⅛	232	10¾	273	21¾	552	11½	292	1½	38	99	45
ESPA-5S	530	5	127	CLAMPED	14	356	32	813	9⅛	232	10¾	273	21¾	552	11½	292	1½	38	163	74
ESPA-6S	850	6	152	CLAMPED	20	508	44	1118	13¼	337	14½	368	28	711	18	457	2	51	210	95
ESPA-8S	1900	8	203	CLAMPED	20	508	44	1118	13¼	337	14½	368	28	711	18	457	2	51	417	189
ESPA-10S	3600	10	254	CLAMPED	30	762	60½	1537	19	483	20	508	41	1041	24	610	2	51	658	298
ESPA-12S	4800	12	305	CLAMPED	30	762	60½	1537	19	483	20	508	41	1041	24	610	2	51	1042	473
ESPA-14S	6100	14	356	CLAMPED	36	914	78	1981	22	559	31½	800	46⅜	1178	30	762	2	51	1848	838
ESPA-16S	8000	16	406	CLAMPED	48	1219	108	2743	30	762	40	1016	60	1524	38	965	2	51	2530	1148
ESPA-18S	9700	18	457	CLAMPED	54	1371	124	3150	33	838	50	1270	66	1676	44	1118	2	51	3559	1614
ESPA-20S	12000	20	508	CLAMPED	60	1524	137	3480	35	889	60	1524	72	1829	50	1270	2	51	5610	2545
ESPA-22S	15000	22	559	CLAMPED	66	1676	150	3810	38	965	66	1676	78	1981	56	1422	2	51	6765	3068
ESPA-24S	17000	24	610	CLAMPED	72	1829	150	3810	38	965	66	1676	78	1981	56	1422	2	51	7931	3597

COALESCENT AIR SEPARATORS

EWVAA

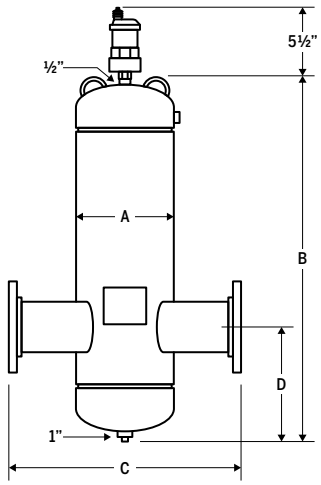
- Design conforms to ASME, section VIII
- Equipped with a Calvent automatic vent (#CV050)
- Supplied with a drain valve

Technical specifications

- Coalescent media: stainless steel
- Shell: carbonized steel
- Pressure purger valve: brass
- Maximum design temperature: 121°C (250°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 200 and 250 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Connection		Maximum flow		Dimension								Approx. weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAA-2	2	51	69	261	4	102	18½	470	15¼	387	7	178	35	16
EWVAA-2NPT	2	51	69	261	4	102	18½	470	10⅜	264	7	178	26	12
EWVAA-2.5	2½	64	108	409	5	127	18½	470	15¾	400	7	178	61	28
EWVAA-2.5NPT	2½	64	108	409	5	127	18½	470	11	279	7	178	38	17
EWVAA-3	3	76	144	545	6	152	23	584	20¼	514	8½	216	71	32
EWVAA-3NPT	3	76	144	545	6	152	23	584	12½	318	8½	216	56	25
EWVAA-4	4	102	255	965	8	203	23	584	20⅝	524	8½	216	105	48
EWVAA-5	5	127	398	1507	10	254	31	787	27¾	705	11½	292	92	42
EWVAA-6	6	152	570	2158	12	305	31	787	27¾	705	11½	292	129	59
EWVAA-8	8	203	945	3577	16	406	36	914	33⅝	854	11½	292	225	102
EWVAA-10	10	254	1440	5451	20	508	46	1168	37½	953	13½	343	375	170
EWVAA-12	12	305	2100	7949	24	610	54	1372	42½	1080	16	406	564	256

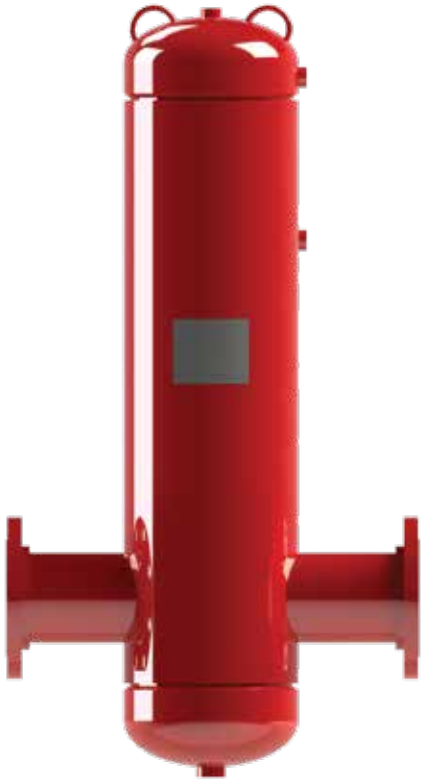
COALESCENT AIR SEPARATORS

EWVAA-HV / HIGH VELOCITY

- Design conforms to ASME, section VIII
- High velocity
- Equipped with Calvent automatic vent (#CV050)
- Supplied with a drain valve

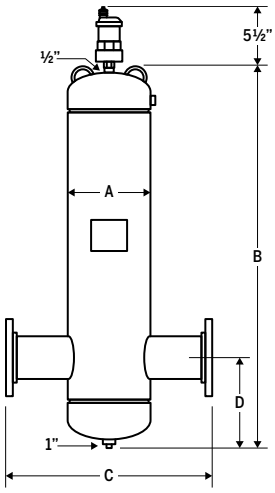
Technical specifications

- Coalescent media: stainless steel
- Shell: carbonized steel
- Pressure purger valve: brass
- Maximum design temperature: 121°C (250°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 200 and 250 PSI also available



To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Connection		Maximum flow		Dimension								Approx. weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAA-2HV	2	51	105	397	4	102	23	584	15¼	387	6½	165	40	18
EWVAA-2HV-NPT	2	51	105	397	4	102	23	584	10⅜	264	6½	165	31	14
EWVAA-2.5HV	2½	64	155	587	5	127	23	584	15¾	400	6½	165	68	31
EWVAA-2.5HV-NPT	2½	64	155	587	5	127	23	584	11	279	6½	165	45	20
EWVAA-3HV	3	76	225	852	6	152	30	762	20¼	514	9	229	82	37
EWVAA-3HV-NPT	3	76	225	852	6	152	30	762	12½	318	9	229	68	31
EWVAA-4HV	4	102	405	1533	8	203	30	762	20⅝	524	9	229	122	55
EWVAA-5HV	5	127	630	2385	10	254	41	1041	27¾	705	11½	292	128	58
EWVAA-6HV	6	152	910	3445	12	305	41	1041	27¾	705	11½	292	140	64
EWVAA-8HV	8	203	1610	6094	16	406	49	1245	33⅜	854	11½	292	245	111
EWVAA-10HV	10	254	2450	9274	20	508	60	1524	37½	953	14	356	407	185
EWVAA-12HV	12	305	3500	13249	24	610	71	1803	42½	1080	16	406	612	278

COALESCENT AIR AND DIRT SEPARATORS

EWVA / REPLACEABLE MEDIA

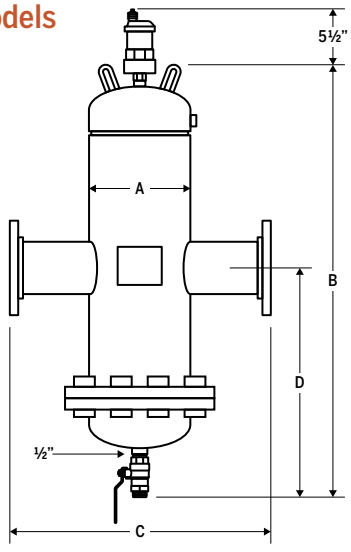
- Design conforms to ASME, section VIII
- The media can be removed for maintenance or replacement
- Equipped with Calvent automatic vent (#CV050)
- Supplied with a drain valve

Technical specifications

- Coalescent media: stainless steel
- Shell: steel
- Pressure purger valve: bronze
- Exterior finish in painted primer
- Maximum design temperature: 121°C (250°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 175, 200, 250 and 300 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Connection		Flow		Dimension								Approx. weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVA-2	2	51	46	174	9	229	23	584	15¼	387	11½	292	100	45
EWVA-2 NPT	2	51	46	174	9	229	23	584	10⅜	264	11½	292	90	41
EWVA-2.5	2½	64	72	273	10	254	23	584	15¾	400	11½	292	125	57
EWVA-2.5 NPT	2½	64	72	273	10	254	23	584	11	279	11½	292	115	52
EWVA-3	3	76	96	363	11	279	29	737	20¼	514	14½	368	150	68
EWVA-3 NPT	3	76	96	363	11	279	29	737	12½	318	14½	368	130	59
EWVA-4	4	102	170	644	13½	343	29	737	20⅝	524	14½	368	250	113
EWVA-5	5	127	265	1003	16	406	39	991	27¾	705	19½	495	310	141
EWVA-6	6	152	380	1438	19	483	39	991	27¾	705	19½	495	375	170
EWVA-8	8	203	630	2385	23½	597	49	1245	35⅝	905	24½	622	700	318
EWVA-10	10	254	960	3634	27½	699	65	1651	37½	953	32½	826	1000	454
EWVA-12	12	305	1400	5300	32	813	76	1930	42½	1080	38	965	1500	680

COALESCENT AIR AND DIRT SEPARATORS

EWVA-HV / HIGH VELOCITY / REPLACEABLE MEDIA

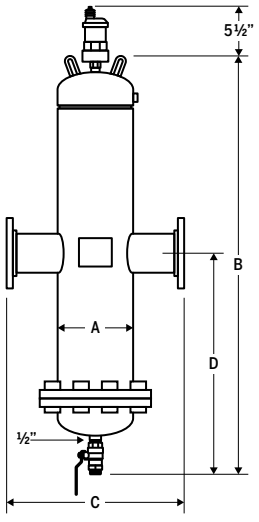
- Design conforms to ASME, section VIII
- High velocity
- The media can be removed for maintenance or replacement
- Equipped with Calvent automatic air vent (#CV050)
- Supplied with a drain valve

Technical specifications

- Coalescent media: stainless steel
- Shell: steel
- Pressure purger valve: bronze
- Exterior finish in painted primer
- Maximum design temperature: 121°C (250°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 175, 200, 250 and 300 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Connection		Flow		Dimension								Approx. weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVA-2-HV	2	51	105	397	4	102	33	838	15¼	387	16½	419	76	35
EWVA-2.5-HV	2½	64	155	587	5	127	33	838	15¼	387	16½	419	99	45
EWVA-3-HV	3	76	225	852	6	152	42	1067	20¼	514	21	533	139	64
EWVA-4-HV	4	102	405	1533	8	203	42	1067	20⅝	524	21	533	219	99
EWVA-5-HV	5	127	630	2385	10	254	59	1499	27¾	705	29½	749	236	107
EWVA-6-HV	6	152	910	3445	12	305	59	1499	27¾	705	29½	749	405	184
EWVA-8-HV	8	203	1610	6095	16	406	75	1905	33⅝	854	37½	953	639	290
EWVA-10-HV	10	254	2450	9274	20	508	92	2337	37½	953	46	1168	1045	474
EWVA-12-HV	12	305	3500	13249	24	610	110	2794	42½	1080	55	1397	1630	739
EWVA-14-HV	14	356	4800	18170	30	762	110	2794	48	1219	55	1397	2400	1087
EWVA-16-HV	16	406	6250	23659	32	813	110	2794	48	1219	55	1397	3000	1361

COALESCENT AIR AND DIRT SEPARATORS

EWVAN

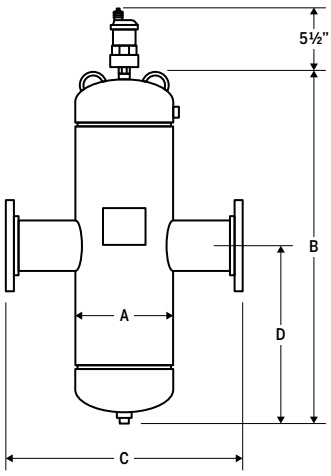
- Design conforms to ASME, section VIII
- Non-replaceable media
- Equipped with Calvent automatic vent (#CV050)
- Supplied with a drain valve

Technical specifications

- Coalescent media: stainless steel
- Shell: carbonized steel
- Pressure purger valve: bronze
- Exterior finish in painted primer
- Maximum design temperature: 121°C (250°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 200 and 250 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Connection		Maximum flow		Dimension								Approx. weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAN-2	2	51	69	261	4½	114	23	584	15¼	387	11½	292	76	35
EWVAN-2NPT	2	51	69	261	4½	114	23	584	9	229	11½	292	70	32
EWVAN-2.5	2½	64	108	409	5½	140	23	584	15¾	400	11½	292	99	45
EWVAN-2.5NPT	2½	64	108	409	5½	140	23	584	10½	267	11½	292	90	41
EWVAN-3	3	76	144	545	6½	165	29	737	20¼	514	14½	368	114	52
EWVAN-3NPT	3	76	144	545	6½	165	29	737	12¾	324	14½	368	100	46
EWVAN-4	4	102	255	965	8½	216	29	737	20⅝	524	14½	368	194	88
EWVAN-5	5	127	398	1507	10	254	39	991	27¾	705	19½	495	230	105
EWVAN-6	6	152	570	2158	12	305	39	991	27¾	705	19½	495	255	116
EWVAN-8	8	203	945	3577	16	406	49	1245	33⅜	854	24½	622	514	234
EWVAN-10	10	254	1440	5451	20	508	65	1651	37½	953	32½	826	770	350
EWVAN-12	12	305	2100	7949	24	610	76	1930	42½	1080	38	965	1080	491

COALESCENT AIR AND DIRT SEPARATORS

EWVAN-HV / HIGH VELOCITY

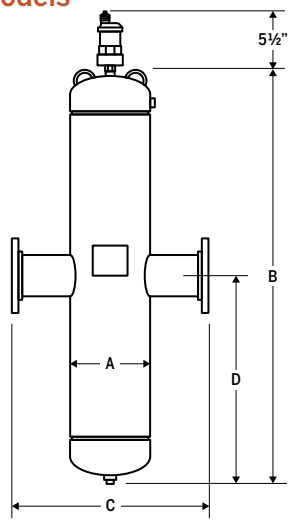
- Design conforms to ASME, section VIII
- Non-replaceable media
- Equipped with Calvent automatic air vent (#CV050)
- Supplied with a drain valve

Technical specifications

- Coalescent media: stainless steel
- Shell: carbonized steel
- Pressure purger valve: bronze
- Exterior finish in painted primer
- Maximum design temperature: 121°C (250°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 200 and 250 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Connection		Maximum flow		Dimension								Approx. weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAN-2HV	2	51	105	397	4½	114	33	838	15¾	400	16½	419	100	45
EWVAN-2HV-NPT	2	51	105	397	4½	114	33	838	9	229	16½	419	90	41
EWVAN-2.5HV	2½	64	155	587	5½	140	33	838	15¾	400	16½	419	125	57
EWVAN-2.5HV-NPT	2½	64	155	587	5½	140	33	838	10½	267	16½	419	115	52
EWVAN-3HV	3	76	225	852	6½	165	42	1067	20¼	514	21	533	150	68
EWVAN-3HV-NPT	3	76	225	852	6½	165	42	1067	12¾	324	21	533	130	59
EWVAN-4HV	4	102	405	1533	8½	216	42	1067	20⅝	524	21	533	250	114
EWVAN-5HV	5	127	630	2385	10	254	59	1499	27¾	705	29½	749	310	141
EWVAN-6HV	6	152	910	3445	12	305	59	1499	27¾	705	29½	749	375	170
EWVAN-8HV	8	203	1610	6094	16	406	75	1905	33⅝	854	37½	953	700	318
EWVAN-10HV	10	254	2450	9274	20	508	92	2337	37½	953	46	1168	1000	455
EWVAN-12HV	12	305	3500	13249	24	610	110	2794	42½	1080	55	1397	1500	682

COALESCENT DIRT SEPARATORS

EWVAD / REPLACEABLE INTERNAL

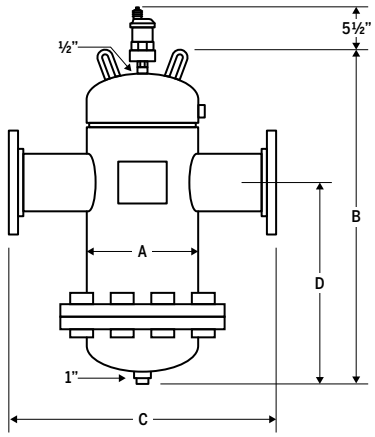
- Design conforms to ASME, section VIII
- Removable base for easy maintenance
- Equipped with Calvent automatic vent (#CV050)
- Supplied with a drain valve

Technical specifications

- Coalescent media: stainless steel
- Shell: steel
- Pressure purger valve: brass
- Exterior finish in painted primer
- Maximum design temperature: 121°C (250°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 200 and 250 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Connection		Maximum Flow		Dimension								Approx. weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAD-2	2	51	69	261	9	229	18½	470	15¼	387	11½	292	64	29
EWVAD-2NPT	2	51	69	261	9	229	18½	470	10⅜	264	11½	292	55	25
EWVAD-2.5	2½	64	108	409	10	254	18½	470	15¾	400	11½	292	82	37
EWVAD-2.5NPT	2½	64	108	409	10	254	18½	470	11	279	11½	292	70	32
EWVAD-3	3	76	144	545	11	279	23	584	20¼	514	14½	368	113	51
EWVAD-3NPT	3	76	144	545	11	279	23	584	12½	318	14½	368	198	90
EWVAD-4	4	102	255	965	13½	343	23	584	20⅝	524	14½	368	168	76
EWVAD-5	5	127	398	1507	16	406	31	787	27¾	705	19½	495	245	111
EWVAD-6	6	152	570	2158	19	483	31	787	27¾	705	19½	495	347	158
EWVAD-8	8	203	945	3577	23½	597	36	914	33⅜	854	24½	622	451	205
EWVAD-10	10	254	1440	5451	27½	699	46	1168	37½	953	32½	826	711	323
EWVAD-12	12	305	2100	7949	32	813	54	1372	42½	1080	38	965	1121	510

COALESCENT DIRT SEPARATORS

EWVAD-HV / HIGH VELOCITY / REPLACEABLE INTERNAL

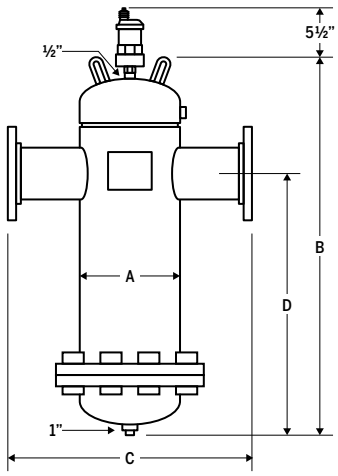
- Design conforms to ASME, section VIII
- High velocity
- Removable base for easy maintenance
- Equipped with Calvent automatic air vent (#CV050)
- Supplied with drain valve

Technical specifications

- Coalescent media: stainless steel
- Shell: steel
- Pressure purger valve: brass
- Exterior finish in painted primer
- Maximum design temperature: 121°C (250°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 200 and 250 PSI also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Connection		Maximum flow		Dimension								Approx. weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAD-2HV	2	51	105	397	9	229	23	584	15¼	387	16½	419	69	31
EWVAD-2HV-NPT	2	51	105	397	9	229	23	584	10⅜	264	16½	419	60	27
EWVAD-2.5HV	2½	64	155	587	10	254	23	584	15¾	400	16½	419	89	40
EWVAD-2.5HV-NPT	2½	64	155	587	10	254	23	584	11	279	16½	419	77	35
EWVAD-3HV	3	76	225	852	11	279	30	762	20¼	514	21	533	125	57
EWVAD-3HV-NPT	3	76	225	852	11	279	30	762	12½	318	21	533	110	50
EWVAD-4HV	4	102	405	1533	13½	343	30	762	20⅝	524	21	533	185	84
EWVAD-5HV	5	127	630	2385	16	406	41	1041	27¾	705	29½	749	280	127
EWVAD-6HV	6	152	910	3445	19	483	41	1041	27¾	705	29½	749	390	177
EWVAD-8HV	8	203	1610	6094	23½	597	49	1245	33⅝	854	37¾	959	472	215
EWVAD-10HV	10	254	2450	9274	27½	699	60	1524	37½	953	46	1168	744	338
EWVAD-12HV	12	305	3500	13249	32	813	71	1803	42½	1080	55	1397	1169	531

HYDRAULIC SEPARATORS

ASME CALBALANCE WITH FLANGE

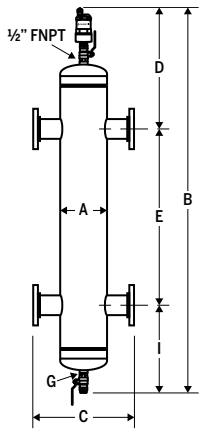
- Design conforms to ASME, section VIII
- Equipped with a Calvent automatic vent (#CV050)
- Supplied with a drain valve (#DV34)
- Simple to install
- Easy maintenance

Technical specifications

- Coalescent media: stainless steel
- Carbonized steel housing
- Maximum operating pressure: 10 bar/150 PSI (200 & 250 PSI/13 & 17 bar available)
- Operating temperature: 0°C-232°C/32°F-450°F

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Conn.	Flow		Dimension														Approx. weight	
				A		B		C		D		E		F		G	I		
	in	GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	in	mm	lb	kg
CB200A	2	34	7,7	6⅝	168	44¾	1137	14¾	375	14¾	375	20¾	527	–	–	½	9	235	90	41
CB250A	2½	90	20,4	6⅝	168	49¾	1264	14¾	375	15¼	387	24¾	628				10	248	115	52
CB300A	3	130	29	10¾	273	60	1524	18¾	476	17⅜	441	30¾	781				12	302	225	102
CB400A	4	255	58	10¾	273	81¼	2064	22¾	578	23	584	40¼	1022			1	18	457	330	150
CB500A	5	398	90	14	356	91½	2324	26	660	23	584	50½	1283				18	457	415	188
CB600A	6	570	129	18	457	104¾	2661	30	762	24½	622	60¾	1643	14	356		20	495	420	191
CB800A	8	945	214	24	610	133¾	3397	36	914	29⅜	746	80	2032				24	619	575	261
CB1000A	10	1440	326	30	762	160¼	4070	42	1067	32½	826	100¼	2546				28	699	935	424
CB1200A	12	2100	476	30	762	192	4877	42	1067	38	965	119½	3035			2	35	876	1165	528
CB1400A	14	2550	578	42	1067	211¾	5378	54	1371	42	1067	131¼	3334				39	978	2430	1102
CB1600A	16	3330	748	48	1220	236¾	6013	60	1524	45⅛	1146	150	3810				42	1057	3260	1479

HYDRAULIC SEPARATORS

ASME CALBALANCE WITH FLANGE AND AIR & DIRT SEPARATOR

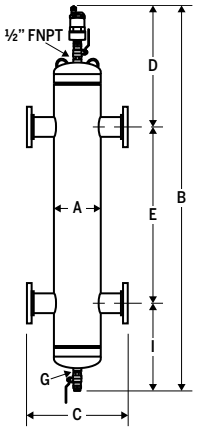
- Design conforms to ASME, section VIII
- Separates air and dirt
- Adapted fluids: water and 50% glycol solution
- Equipped with a Calvent automatic vent (#CV050)
- Supplied with a drain valve
- 6" or larger connection models supplied on stand
- Simple to install
- Easy maintenance
- Reduces energy consumption as the pumps are only used in required zones

Technical specifications

- Coalescent media: stainless steel
- Carbonized steel housing
- Maximum design temperature: 232°C (450°F)
- Maximum operating pressure: 10 bar/150 PSI
- Pressure of 200 and 250 psig also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Conn.	Flow		Dimension														Approx. weight	
				A		B		C		D		E		F		G	I		
	in	GPM	LPM	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	in	mm	lb	kg
CB200AV	2	69	261	6⅝	168	44¾	1137	14¾	375	14¾	375	20¾	527	–	–	½	9	235	90	41
CB250AV	2½	108	409	6⅝	168	49¾	1264	14¾	375	15¼	387	24¾	629	–	–	½	10	248	115	52
CB300AV	3	144	545	10¾	273	60	1524	18¾	476	17⅜	441	30¾	781	–	–	½	12	302	225	102
CB400AV	4	255	965	10¾	273	81¼	2064	22¾	578	23	584	40¼	1022	–	–	1	18	457	330	150
CB500AV	5	398	1507	14	356	91½	2324	26	660	23	584	50½	1283	–	–	1	18	457	415	189
CB600AV	6	570	2158	18	457	104¾	2661	30	762	24½	622	60¾	1543	14	356	1	20	495	420	191
CB800AV	8	945	3577	24	610	133¾	3397	36	914	29⅜	746	80	2032	14	356	1	24	619	575	261
CB1000AV	10	1440	5451	30	762	160¼	4070	42	1067	32½	826	100¼	2546	14	356	1	28	699	935	425
CB1200AV	12	2100	7949	30	762	192	4877	42	1067	38	965	119½	3035	14	356	2	35	876	1165	530
CB1400AV	14	2550	9653	42	1067	211¾	5378	54	1372	42	1067	131¼	3334	14	356	2	39	978	2430	1105
CB1600AV	16	3300	12492	48	1219	236¾	6013	60	1524	45⅛	1146	150	3810	14	356	2	42	1057	3260	1482

HYDRAULIC SEPARATORS

ASME CALBALANCE WITH FLANGE AND AIR & DIRT SEPARATOR / REPLACEABLE INTERNAL

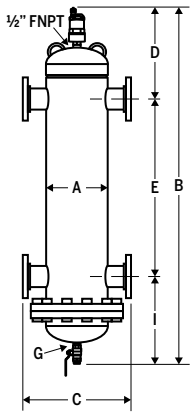
- Design conforms to ASME, section VIII
- Separates air and dirt
- Adapted fluids: water and 50% glycol solution
- Equipped with a Calvent automatic vent (#CV050)
- Supplied with a drain valve
- 6" or larger connection models supplied on stand
- Simple to install
- Easy maintenance
- Reduces energy consumption as the pumps are only used in required zones

Technical specifications

- Coalescent media: stainless steel
- Carbonized steel housing
- Maximum design temperature: 232°C (450°F)
- Maximum operating pressure: 10 bar/150 PSI
- Pressure of 200 and 250 psig also available

To obtain a separator of higher capacity and greater pressure, contact the manufacturer.

Models



Model#	Conn.	Flow		Dimension														Approx. weight	
				A		B		C		D		E		F		G	I		
	in	GPM	LPM	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	in	mm	lb	kg
CB200AVR	2	69	261	6⅝	168	44¾	1137	14¾	375	14¾	375	20¾	527	–	–	½	9	235	162	74
CB250AVR	2½	108	409	6⅝	168	49¾	1264	14¾	375	15¼	387	24¾	629	–	–	½	10	248	187	85
CB300AVR	3	144	545	10¾	273	60	1524	18¾	476	17⅜	441	30¾	781	–	–	½	12	302	354	161
CB400AVR	4	255	965	10¾	273	81¼	2064	22¾	578	23	584	40¼	1022	–	–	1	18	457	464	211
CB500AVR	5	398	1507	14	356	91½	2324	26	660	23	584	50½	1283	–	–	1	18	457	544	247
CB600AVR	6	570	2158	18	457	104¾	2661	30	762	24½	622	60¾	1543	14	356	1	20	495	625	284
CB800AVR	8	945	3577	24	610	133¾	3397	36	914	29⅜	746	80	2032	14	356	1	24	619	1075	489
CB1000AVR	10	1440	5451	30	762	160¼	4070	42	1067	32½	826	100¼	2546	14	356	1	28	699	1733	788
CB1200AVR	12	2100	7949	30	762	192	4877	42	1067	38	965	119½	3035	14	356	2	35	876	1988	904
CB1400AVR	14	2550	9653	42	1067	211¾	5378	54	1372	42	1067	131¼	3334	14	356	2	39	978	4138	1881
CB1600AVR	16	3300	12492	48	1219	236¾	6013	60	1524	45⅛	1146	150	3810	14	356	2	42	1057	5142	2337

SIZING GUIDE
ASME EXPANSION TANKS

Why an expansion tank?

An expansion tank is required in a closed loop heating or chilled water HVAC system for two very important reasons:

- To control the systems operating pressure range;
- To give the expanded water in the system a place to go as the water is heated. In a heating system this occurs when the system is heated from its coldest fill temperature to operation temperature. In a chilled water system this expansion occurs when the system is shut down and the system temperature rises from operating to ambient.

The goal in sizing any expansion tank is to make the system able to accommodate the expansion of the system water throughout the heating or cooling cycles without allowing the system to exceed the pressure limits of the lowest pressure rated component in that system. The lowest rated component in most systems is, by design, the pressure relief valve. The maximum system pressure is normally set at 90% of the pressure relief valve rating at its point of installation.

Bladder or diaphragm tanks compared to plain steel tanks

The plain steel expansion tank has been used for many years, and, in some systems, has worked very well. Using a plain steel expansion tank makes the system an air control system. One must control the air volume or air cushion above the water level of the tank. The common interface between this air cushion and the water in the tank allows the air to be absorbed by the water. If the air is not removed properly from the water and placed back into the air cushion, the expansion tank will become waterlogged.

A waterlogged tank is an expansion tank that no longer has an air cushion large enough to allow all the expanded water from the system to enter the tank without exceeding the maximum system pressure. When this occurs, the safety relief valve will open and heated system water will be discharged to the drain.

CAUTION: An expansion tank does not need to be 100% full to be waterlogged. The same symptoms will also show if the expansion tank is sized too small.

The advantage of a plain steel tank is that the initial purchase cost is lower than a diaphragm/bladder tank, but in many cases the operation costs will offset this advantage.

The bladder/diaphragm expansion tank has been developed to allow the system's air cushion to be separated from the system's water. No waterlogging of the tank can occur as the air is held between the tank wall and the exterior of a bladder placed inside the tank, while the system water is contained inside the bladder. This changes the system to an air elimination system, as any air extracted from the system water is passed out of the system into the atmosphere.

The bladder tank is usually smaller than a plain steel tank for the same application as they are precharged with air to the system operating pressure before the system is filled with water. The only water that needs to be accommodated by a bladder/diaphragm tank is the expanded water. In a heating system, this occurs when the water is heated from the fill temperature to the operating temperature. In a chilled water system the water temperature rises from operating temperature to ambient temperature. The air elimination system allows the air vent and air separator to be placed at the most advantageous point in the system for air removal, usually at the system's high point where the pressure is the lowest or at the boiler outlet where the water temperature is the highest. The expansion tank can now be placed at floor level, since air no longer needs to be returned to the tank. The diaphragm/bladder tank can also be placed at the most advantageous point in the system.

Typical positioning of an expansion tank

The system connection of an expansion is known as "The Point of No Pressure Change". This means that wherever the expansion tank is connected to the system, the pressure will always be the same as the pressure inside the tank. This is true if the tank is a plain steel or bladder/diaphragm type. This is also true whether the system pump is on or off. This pressure is only changed as water or air are added to or removed from the tank. To better understand this "Point of No Pressure Change", an in-depth study of Boyle's Law is necessary.

Because of this "Point of No Pressure Change", the system sees a pump additive pressure from the pump discharge to the expansion tank connection. From the expansion tank connection back to the pump suction, the system receives a negative pressure change from the tank pressure, due to the friction loss when there is flow.

With this loss of pressure added by the pump and the loss due to flow, it is usually better to place the "Point of No Pressure Change" or expansion tank system connection as close to the pump suction as possible.

PLAIN STEEL EXPANSION TANKS / WITHOUT MEMBRANE

NA SERIES

Job Name: _____ Date: _____

Job Location: _____ Model #: _____

Contact Name: _____ Date submitted: _____

Engineer: _____ Approved by: _____

Contractor: _____ Date of approval: _____

RENSEIGNEMENTS REQUIS

1. Total system water content **(1)** _____ gal _____ L

2. Temperature of water when system is filled **(2)** _____ °F _____ °C

3. Maximum operating temperature **(3)** _____ °F _____ °C

4. Minimum operating pressure (typically fill pressure) **(4)** _____ psi _____ kPa

5. Maximum operating pressure (10% below relief valve) **(5)** _____ psi _____ kPa

SIZING FOR HYDRONIC HEATING/COOLING SYSTEMS

6. Enter total system water content from line **(1)**. **(6)** _____ gal _____ L

7. Using the Expansion Factors table (see page 83), find and enter the expansion factor. **(7)** _____ _____

8. Multiply line **(6)** by line **(7)**. Enter expanded water volume. **(8)** _____ gal _____ L

9. Determine the acceptance factor by (Pa ÷ P*f*) (Pa ÷ Po), where Pa = Pressure (atmospheric)
P*f* = Pressure at fill (atmospheric)
Po = Pressure at operation (atmospheric)
and enter the result. **(9)** _____ _____

10. Divide line **(8)** by line **(9)** and enter tank size. **(10)** _____ gal _____ L

MODEL SELECTION

Select plain steel tank from NA section (see page 51). **Model** _____

CAUTION: The expansion chart is for water only. Add 60% to the expansion factors for 50/50 glycol/water solutions or contact your local Calefactio representative for other concentrations.

ASME EXPANSION TANKS / WITH FIXED OR REPLACEABLE BLADDER

AL / ALT / OT SERIES

Job Name: _____ Date: _____

Job Location: _____ Model #: _____

Contact Name: _____ Date submitted: _____

Engineer: _____ Approved by: _____

Contractor: _____ Date of approval: _____

INFORMATION REQUIRED

1. Total system water content	**(1)** _____ gal	_____ L
2. Temperature of water when system is filled	**(2)** _____ °F	_____ °C
3. Maximum operating temperature	**(3)** _____ °F	_____ °C
4. Minimum operating pressure (typically fill pressure)	**(4)** _____ psi	_____ kPa
5. Maximum operating pressure (10% below relief valve)	**(5)** _____ psi	_____ kPa

SIZING FOR HYDRONIC HEATING/COOLING SYSTEMS

6. Enter total system water content from line **(1)**.	**(6)** _____ gal	_____ L
7. Using the Expansion Factor table, (see page 83), find and enter the expansion factor.	**(7)** _____	_____
8. Multiply line **(6)** by line **(7)**. Enter expanded water volume.	**(8)** _____ gal	_____ L
9. Using the Acceptance Factors table (see pages 91 and 92), determine the acceptance factor.	**(9)** _____	_____
10. Divide line **(8)** by line **(9)**; and enter tank size.	**(10)** _____ gal	_____ L

Line **(8)** _____, expanded water (acceptance volume)

Line **(10)** _____, total tank volume

MODEL SELECTION

Select expansion tank model from chart on fixed/replaceable bladder section.

- HGT (non-code) or OT models must satisfy both lines **(8)** et **(10)**.
- AL models are selected by total volume only from line **(10)**.

Dans le cas de systèmes de grande envergure, plusieurs réservoirs d'expansion peuvent être raccordés ensemble.

CAUTION: The expansion chart is for water only. Add 60% to the expansion factors for 50/50 glycol/water solutions

CONVERSION

From an expansion tank without membrane to an expansion tank with membrane

Job Name: _____ Date: _____

Job Location: _____ Model #: _____

Contact Name: _____ Date submitted: _____

Engineer: _____ Approved by: _____

Contractor: _____ Date of approval: _____

INFORMATION REQUIRED

1. Determine plain steel tanks volume (table 2, p. 84)	**(1)** _____ gal	_____ L
2. Temperature of water when system is filled	**(2)** _____ °F	_____ °C
3. Maximum operating temperature	**(3)** _____ °F	_____ °C
4. Minimum operating pressure (usually fill pressure)	**(4)** _____ psi	_____ kPa
5. Maximum operating pressure (10% below relief valve)	**(5)** _____ psi	_____ kPa

SIZING FOR HYDRONIC HEATING/COOLING SYSTEMS

6. Determine the acceptance by $(P_a \div P_f)$ $(P_a \div P_o)$,
where P_a = Pressure (atmospheric)
P_f = Pressure at fill (atmospheric)
Po = Pressure at operation (atmospheric)
et inscrivez le résultat. **(6)** _____ _____

7. Enter volume of plain steel tank line **(1)**. **(7)** _____ gal _____ L

8. Calculate expanded water volume.
Multiply line **(6)** by line **(7)** and enter. **(8)** _____ gal _____ L

9. Using Acceptance Factors table (see pages 91 and 92),
and enter the acceptance factor. **(9)** _____ _____

10. Divide line **(8)** by line **(9)**,
enter tank volume required. **(10)** _____ gal _____ L

Line **(8)** _____, expanded water (acceptance volume)

Line **(10)** _____, total tank volume

MODEL SELECTION

Select expansion tank model from fixed/replaceable bladder section.

- HGT (non-code) or OT models must satisfy both lines (8) and (10).
- AL models are selected by total volume only from line (10).

For large systems, multiple tanks can be manifolded together.

CAUTION: The expansion chart is for water only. Add 60% to the expansion factors for 50/50 glycol/water solutions or contact your local Calefactio representative for other concentrations.

EXPANSION FACTORS TABLE

Final temp.		Initial temperature												
°F	°C	40 °F 4.4 °C	45 °F 7.2 °C	50 °F 10 °C	55 °F 12.7 °C	60 °F 15.5 °C	65 °F 18.3 °C	70 °F 21.1 °C	75 °F 23.8 °C	80 °F 26.6 °C	85 °F 29.4 °C	90 °F 32.2 °C	95 °F 35 °C	100 °F 37.7 °C
50	10	0.00008	0.00006	–										
55	12.7	0.00027	0.00025	0.00019	–									
60	15.5	0.00057	0.00055	0.00049	0.00030	–								
65	18.3	0.00095	0.00093	0.00087	0.00068	0.00038	–							
70	21.1	0.00151	0.00149	0.00143	0.00124	0.00094	0.00056	–						
75	23.8	0.00194	0.00194	0.00188	0.00169	0.00139	0.00101	0.00045	–					
80	26.6	0.00260	0.00260	0.00254	0.00235	0.00205	0.00167	0.00111	0.00066	–				
85	29.4	0.00326	0.00326	0.00320	0.00301	0.00271	0.00233	0.00177	0.00132	0.00066	–			
90	32.2	0.00405	0.00405	0.00399	0.00380	0.00350	0.00312	0.00256	0.00211	0.00145	0.00079	–		
95	35	0.00485	0.00485	0.00479	0.00460	0.00430	0.00392	0.00336	0.00291	0.00225	0.00159	0.00080	–	
100	37.7	0.00577	0.00575	0.00569	0.00550	0.00520	0.00482	0.00426	0.00381	0.00315	0.00249	0.00170	0.00090	–
105	40.5	0.00673	0.00671	0.00655	0.00646	0.00616	0.00578	0.00522	0.00477	0.00411	0.00345	0.00266	0.00186	0.00096
110	43.3	0.00773	0.00771	0.00765	0.00746	0.00716	0.00678	0.00622	0.00577	0.00511	0.00445	0.00366	0.00286	0.00196
115	46.1	0.00881	0.00879	0.00873	0.00854	0.00824	0.00786	0.00730	0.00685	0.00619	0.00553	0.00474	0.00394	0.00304
120	48.8	0.01006	0.01004	0.00998	0.00979	0.00949	0.00911	0.00855	0.00810	0.00744	0.00678	0.00599	0.00519	0.00429
125	51.6	0.01113	0.01111	0.01105	0.01086	0.01056	0.01018	0.00962	0.00917	0.00851	0.00785	0.00706	0.00625	0.00536
130	54.4	0.01238	0.01236	0.01230	0.01211	0.01181	0.01143	0.01087	0.01042	0.00976	0.00910	0.00831	0.00751	0.00661
135	57.2	0.01370	0.01368	0.01362	0.01342	0.01313	0.01275	0.01219	0.01174	0.01108	0.01042	0.00963	0.00883	0.00793
140	60	0.01503	0.01501	0.01495	0.01476	0.01446	0.01408	0.01352	0.01307	0.01241	0.01175	0.01096	0.01016	0.00926
145	62.7	0.01645	0.01643	0.01637	0.01618	0.01588	0.01550	0.01494	0.01449	0.01383	0.01317	0.01238	0.00158	0.01068
150	65.5	0.01787	0.01787	0.01779	0.01760	0.01730	0.01692	0.01636	0.01591	0.01525	0.01459	0.01330	0.01300	0.01210
155	68.3	0.01939	0.01937	0.01931	0.01912	0.01882	0.01844	0.01788	0.01743	0.01677	0.01611	0.01532	0.01452	0.01362
160	71.1	0.02094	0.02092	0.02086	0.02067	0.02037	0.01999	0.01943	0.01877	0.01811	0.01732	0.01652	0.01572	0.01482
165	73.8	0.02254	0.02252	0.02246	0.02227	0.02197	0.02159	0.02103	0.02058	0.01992	0.01926	0.01847	0.01767	0.01677
170	76.6	0.02420	0.02418	0.02412	0.02393	0.02363	0.02325	0.02269	0.02224	0.02158	0.02092	0.02013	0.01933	0.01843
175	79.4	0.02590	0.02588	0.02582	0.02563	0.02533	0.02495	0.02439	0.02394	0.02328	0.02262	0.02183	0.02103	0.02013
180	82.2	0.02765	0.02763	0.02757	0.02738	0.02708	0.02670	0.02614	0.02569	0.02503	0.02437	0.02358	0.02278	0.02188
185	85	0.02943	0.02941	0.02935	0.02916	0.02886	0.02848	0.02792	0.02747	0.02681	0.02615	0.02536	0.02456	0.02366
190	87.7	0.03129	0.03127	0.03121	0.03102	0.03072	0.03034	0.02978	0.02933	0.02867	0.02801	0.02722	0.02642	0.02552
195	90.5	0.03316	0.03314	0.0330	0.03289	0.03259	0.03221	0.03165	0.03120	0.03054	0.02988	0.02909	0.02829	0.02739
200	93.3	0.03512	0.03510	0.03504	0.03485	0.03455	0.03417	0.03361	0.03316	0.03250	0.03184	0.03105	0.03025	0.02935
205	96.1	0.03709	0.03707	0.03701	0.03682	0.03652	0.03614	0.03558	0.03513	0.03447	0.03381	0.00302	0.03222	0.03132
210	98.8	0.03913	0.03911	0.03905	0.03885	0.03856	0.03818	0.03762	0.03717	0.03651	0.03585	0.03506	0.03426	0.03336
215	101.6	0.04122	0.04120	0.04114	0.04095	0.04065	0.04027	0.03971	0.03926	0.03860	0.03794	0.03715	0.03635	0.03545
220	104.4	0.04337	0.04335	0.04329	0.04310	0.04280	0.04242	0.04186	0.04141	0.04075	0.04009	0.03930	0.03850	0.03760
225	107.2	0.04551	0.04549	0.04543	0.04524	0.04494	0.04456	0.04400	0.04355	0.04289	0.04223	0.04144	0.04064	0.03974
230	110	0.04764	0.04762	0.04756	0.04737	0.04707	0.04669	0.04613	0.04568	0.04502	0.04436	0.04357	0.04277	0.04187
235	111.7	0.04993	0.04991	0.04985	0.04966	0.04936	0.04898	0.04842	0.04797	0.04731	0.04665	0.04586	0.04506	0.04416
240	115	0.05222	0.05220	0.05214	0.05195	0.05165	0.05127	0.05071	0.05026	0.04960	0.04894	0.04815	0.04735	0.04645
245	118.3	0.05451	0.05449	0.05443	0.05424	0.05394	0.05356	0.05300	0.05255	0.05189	0.05123	0.05044	0.04964	0.04874

SYSTEM VOLUME CALCULATION

Add the total pipe fluid volume in gallons (from table 1) to the total fluid volume of all system components in gallons. Boilers,heat exchangers, etc.:

Table 1

PIPE VOLUME IN GALLONS PER FOOT

Pipe diameter	½"	¾"	1"	1 ¼"	1 ½"	2"	2 ½"
Steel pipe (Sch. 40)	0.0157	0.0277	0.0449	0.0779	0.106	0.174	0.249
Copper tube	0.0121	0.0251	0.0429	0.0653	0.0924	0.161	0.248

Pipe diameter	3"	4"	5"	6"	8"	10"	12"
Steel pipe (Sch. 40)	0.384	0.66	1.04	1.51	2.61	4.11	5.82
Copper tube	0.354	0.622	0.971	1.39	2.43	3.78	5.46

Table 2

PLAIN STEEL TANK VOLUME IN GALLONS FROM TANK DIMENSIONS

Diameter (in)	Length (in)	Volume (gallons)	Gallons per each additional inch
12	33	15	0.49
14	48	30	0.67
16	72	60	0.87
20	78	100	1.36
24	72	135	1.96
30	84	240	3.06
36	93	400	4.41
42	96	525	6.00

Table 3

WATER CONTENT IN HEAT EXCHANGERS

Shell diameter (in)	Gallons per foot for shell length	
	In shell	In tubes
4	0.425	0.225
6	1.00	0.50
8	1.85	1.00
10	2.40	1.20
12	4.00	2.20
14	5.00	2.50
16	6.50	3.50
18	8.00	4.50
20	10.00	5.50
24	15.00	7.50

ASME EXPANSION TANKS FOR POTABLE WATER

BFA / TXA / FTTE-C SERIES

Job Name: _____ Date: _____

Job Location: _____ Model #: _____

Contact Name: _____ Date submitted: _____

Engineer: _____ Approved by: _____

Contractor: _____ Date of approval: _____

INFORMATION REQUIRED

1. Total volume of hot water tank	**(1)** _____ gal	_____ L
2. Water temperature setting	**(2)** _____ °F	_____ °C
3. Minimum operating pressure at the tank	**(3)** _____ psi	_____ kPa
4. Maximum allowable pressure or relief valve setting	**(4)** _____ psi	_____ kPa

SIZING ASME THERMAL EXPANSION TANKS FOR POTABLE WATER

5. Enter the total volume of hot water tank from line **(1)**.	**(5)** _____ gal	_____ L
6. Find and enter the "Expansion Factor". (Refer to the table on page 86)	**(6)** _____ °F	_____ °C
7. Multiply line **(5)** by line **(6)** to determine the quantity of expanded water.	**(7)** _____ gal	_____ L
8. Find and enter the "Acceptance Factor" according to the pressures on line **(3)** and **(4)**. (Refer to the tables on pages 91 and 92)	**(8)** _____ psi	_____ kPa
9. Divide line **(7)** by line **(8)** to obtain the minimum tank volume required	**(9)** _____ gal	_____ L

MODEL SELECTION

Refer to the appropriate submittal datasheet (BFA, FTTE-C or TXA models) and select the model which is equal to or greater than the minimum volume required **(9)** and the minimum acceptance volume required **(7)**.

ASME EXPANSION TANKS FOR POTABLE WATER

EXPANSION FACTORS TABLE

TABLE 1

Expansion Factors based on 40 °F / 4.4 °C minimum water temperature

Expansion Factors Different level of maximum temperature				
120 °F / 48.8°C	140 °F / 60 °C	160 °F / 71.1 °C	180 °F / 82.2 °C	200 °F / 93.3°C
0.01006	0.01503	0.02094	0.02765	0.03512

For other temperatures, please refer to table on p. 83

ACCEPTANCE FACTORS TABLE

TABLE 2

Acceptance factors (use gauge pressures)

Pression maximale (psig / kPa)	Pression minimale de fonctionnement au réservoir (psig / kPa)							
	60 / 413.7	65 / 448.2	70 / 482.6	75 / 517.1	80 / 551.6	85 / 586.1	90 / 620.5	95 / 655.0
100 / 689.5	0.347	0.305	0.261	0.218	0.174	0.131	0.087	0.043
125 / 861.8	0.465	0.429	0.394	0.358	0.322	0.286	0.250	0.215

HYDRO-PNEUMATIC TANKS
AFX SERIES

A) Hydro-pneumatic tanks functions

There are several different functions that an hydro-pneumatic tank can perform. In a booster pump application, it can provide water to the system during periods of no flow shutdown of the booster pump or it can provide water to replace leak loads. In a well water application, it can provide the desired volume of water required between the pump shut down pressure and the pump turn on pressure.

In a sprinkler or irrigation pump application the tank may provide a cushion to maintain necessary pressure so the jockey pump will not short cycle. In any case, the amount of water that the tank will be required to supply to the system during any given cycle is called the drawdown. Drawdown must first be determined to properly size the hydro-pneumatic tank.

There are two types of hydro-pneumatic tanks, plain steel and bladder/diaphragm style. Both styles perform the same function in the system. The bladder style will be smaller in size and require less floor space, while the plain steel will have a lower initial cost.

The bladder/diaphragm style also incorporates a rubber barrier which eliminates the common water/air interface that promotes water logging of the plain steel tanks. The sizing of these two styles of tanks is different and care must be taken to ensure that the proper sizing procedure is followed.

B) Determining drawdown

Well Water

In this application a pump is supplying water to a system and the hydropneumatic tank is to provide two functions.

First, it is to supply water to the system while the pump is off and second, it is to keep the pump from short cycling.

Cycle Time

Cycle time is the time elapsed between pumps starts. If the cycle time of the pump is to be controlled by the hydro-pneumatic tank, first determine how frequently the pump is to start.

This is a judgment call by the designer. Some pump or motor manufacturers recommend the pump to be controlled so as not to start more than six (6) times per hour. There are two approaches to determine the hydro-pneumatic tank that will serve this system pump capacity and system demand. Lets examine each approach separately.

HYDRO-PNEUMATIC TANKS
AFX SERIES

Pump Capacity

The pump is usually sized to be somewhat larger than the system requirements and the hydro-pneumatic tank can be selected to work properly by using the pump capacity. If the cycle time is determined to be ten (10) minutes we can say that the shortest cycle time will be determined by a combination of when the pump is running and there is no system demand, followed by a period when the system demand is 100% and the pump is not running.

Thus if the pump ran for five (5) minutes with no system demand, all the water would enter the hydro-pneumatic tank and if the system demand was then at 100% for the next five (5) minutes and the pump was off, all the water would exit the tank and the system would be ready for the next cycle to begin.

This would give us ten (10) minute cycle time, six (6) times per hour we are looking for; but as you can readily see, that it is not practical to imagine the pump running with no system demand or for the system to always operate only when the pump is off. Any combination of the pump and the system operating simultaneously will always increase the cycle time.

EXAMPLE

- The pump capacity is 10 gallons per minute.
- The drawdown would be 50 gallons.
- If the pump starts at 30 psi and shuts off at 45 psi.
- A bladder style hydro-pneumatic tank with a 200 gallons total capacity would be required.*

System Demand

If the system demand is less than the pump capacity, the tank size can be reduced to reflect this difference.

EXAMPLE

- The pump capacity is 10 gallons per minute.
- The system demand is 5 gallons per minute.

A ten (10) minute cycle time would generate a system that would require a total of fifty (50) gallons per cycle. The pump at 10 gal/min. would run for five (5) minutes to produce this fifty (50) gallons, and this would be a fifteen (15) minute cycle time.

Since we are looking for a ten (10) minute cycle time, we divided ten (10) minutes by fifteen (15) minutes and determine a .66666 ratio factor. 50 x .66666 = 33.33 gallons required by the system per cycle, this would be the tank drawdown for the application:

33.33 gal = 10 gal per min. pump capacity
= 3.333 min. pump run time.

33.33 gal = 5 gal per min. system demand

= 6.666 min. system demand/cycle
10.0 minutes cycle time.

The tank drawdown is now 33.33 gallons if the pump starts at 30 psi and shuts off at 45 psi.

A bladder type hydro-pneumatic tank with a 133 gallons total capacity would be required.*

Refer to the appropriate submittal data sheet to get the tank's dimensions.

HYDRO-PNEUMATIC TANKS
AFX SERIES

C) Booster pump systems

In a booster pump application, the tank may perform in many different ways.

(1) It may be used to provide the system with a constant supply of water, when the water usage is erratic and the pump is not to run constantly. An example of this would be an office complex where no specific water demand pattern can be established. Establishing drawdown for this application would be the same as for a well water application.

(2) The tank may provide water to a system when the pump is to be shut down for prolonged periods of time, such as during the night when the building is normally not occupied. Drawdown here would be determined by the anticipated demand on the booster system during the shutdown period, system leakage (dripping faucets), cleaning personnel in the building (buckets of water required) or flushing of water closets.

If the system in one above is large enough, say like a public school, controlling the run period with a time clock may reduce the size of the tank required. In this case, the pump runs continuously when the demand is fairly constant, but when the building is unoccupied during the night, the time clock would allow the booster system to operate as in two above. The drawdown could then be determined by the anticipated night time demand.

(3) In variable speed pumping systems the pressure and water flows are controlled by the booster pump and a hydro-pneumatic tank would only be required when the pump goes into a no-flow shut down mode. The tank would then provide water for system leaks to keep the booster pump from short cycling. For this tank to function, a pressure differential between the pump shut off point and the start point must be present. With this pressure differential and the required drawdown volume, the hydro-pneumatic tank can be properly sized.

D) Sprinkler systems

Many fire sprinkler systems incorporate a jockey pump to maintain the required pressure on the system. If there are leaks in the system, the jockey pump may start to short cycle since the water is not compressible. Placing a hydro-pneumatic tank after the jockey pump will provide a cushion that will eliminate the short cycling of the pump and still maintain the required system pressure. Drawdown would be determined by the allowable system leakage.

E) Irrigation systems

This application is the same as for a sprinkler system detailed above and the hydro-pneumatic tank would be sized in the same way. Here the jockey pump may also supply water for incidental use throughout the distribution piping.

HYDRO-PNEUMATIC TANKS

VOLUME CALCULATION

Job Name: _____ Date: _____

Job Location: _____ Model #: _____

Contact Name: _____ Date submitted: _____

Engineer: _____ Approved by: _____

Contractor: _____ Date of approval: _____

INFORMATION REQUIRED

1. Drawdown (tank must supply) **(1)** _____ gal _____ L

2. Minimum pressure (pump turn-on pressure) **(2)** _____ psi _____ kPa

3. Maximum pressure (pump shut-off pressure) **(3)** _____ psi _____ kPa

MODEL SELECTION: BLADDER TYPE TANKS

4. Enter required drawdown from line **(1)**. **(4)** _____ gal _____ L

5. Using the Acceptance Factors table (see pages 91 and 92), enter acceptance factor. **(5)** _____ _____

6. Divide line **(4)** by line **(5)**, enter total tank volume. **(6)** _____ gal _____ L

EXAMPLE FROM PAGE 88

1. Drawdown.....50 gal

2. Minimum pressure.....30 psi

3. Maximum pressure.....45 psi

4. Drawdown from line **(1)**.....50 gal

5. Acceptance Factor frorm chart.....0,251

6. Divide line **(4)** by line **(5)**
Enter total tank volume.....199.20 gallons

ACCEPTANCE FACTORS TABLE

For ASME expansion tanks with fixed or replaceable bladder, ASME expansion tanks for potable water and hydro-pneumatic tanks

Use gauge pressure

(Po) Maximum operating pressure		Pƒ – Minimum operating pressure at tank (psig)/kPa											
psig	kPa	5 34.5	10 68.9	12 82.7	15 103.4	20 137.9	25 172.4	30 206.8	35 241.3	40 275.8	45 310.3	50 344.7	55 379.2
10	68.9	0.202	–										
12	82.7	0.262	0.075	–									
15	103.4	0.337	0.168	0.101	–								
20	137.9	0.432	0.288	0.231	0.144	–							
25	172.4	0.504	0.378	0.328	0.252	0.126							
27	186.1	0.527	0.408	0.360	0.288	0.168	–						
30	206.8	0.560	0.447	0.403	0.336	0.224	0.112	–					
35	241.3	0.604	0.503	0.463	0.403	0.302	0.202	0.101	–				
40	275.8	0.640	0.548	0.512	0.457	0.366	0.274	0.183	0.091	–			
45	310.3	0.670	0.586	0.553	0.503	0.419	0.335	0.251	0.168	0.084	–		
50	344.7	0.696	0.618	0.587	0.541	0.464	0.386	0.309	0.232	0.155	0.078	–	
55	379.2	0.717	0.646	0.617	0.574	0.502	0.430	0.359	0.287	0.215	0.144	0.072	–
60	413.7	0.736	0.669	0.643	0.602	0.536	0.469	0.402	0.335	0.268	0.201	0.134	0.067
65	448.2	0.753	0.690	0.665	0.627	0.565	0.502	0.439	0.376	0.314	0.251	0.188	0.125
70	482.6	0.767	0.708	0.685	0.649	0.590	0.531	0.472	0.413	0.354	0.295	0.236	0.177
75	517.1	0.780	0.725	0.702	0.669	0.613	0.558	0.502	0.446	0.390	0.333	0.279	0.223
80	551.6	0.792	0.739	0.718	0.686	0.634	0.581	0.528	0.475	0.422	0.370	0.317	0.264
85	586.1	0.802	0.752	0.732	0.702	0.652	0.602	0.552	0.502	0.451	0.401	0.351	0.301
90	620.5	0.812	0.764	0.745	0.716	0.669	0.621	0.573	0.525	0.478	0.430	0.382	0.335
95	655.0	0.820	0.775	0.757	0.729	0.684	0.638	0.593	0.547	0.501	0.456	0.410	0.365
100	689.5	0.828	0.785	0.767	0.741	0.698	0.654	0.610	0.567	0.523	0.479	0.436	0.392
105	723.9	0.835	0.794	0.777	0.752	0.710	0.668	0.626	0.585	0.543	0.501	0.459	0.418
110	758.4	0.842	0.802	0.786	0.762	0.723	0.682	0.642	0.601	0.561	0.521	0.481	0.441
115	792.9	0.848	0.810	0.794	0.771	0.734	0.694	0.655	0.617	0.578	0.540	0.501	0.463
120	827.4	0.854	0.817	0.802	0.780	0.742	0.705	0.668	0.631	0.594	0.557	0.520	0.483
125	861.8	0.859	0.823	0.809	0.787	0.752	0.716	0.680	0.644	0.608	0.573	0.537	0.501
130	896.3	0.864	0.829	0.815	0.795	0.760	0.726	0.691	0.657	0.622	0.586	0.553	0.519
135	930.8	0.868	0.835	0.822	0.802	0.768	0.735	0.701	0.6&8	0.635	0.601	0.563	0.534
140	965.3	0.873	0.840	0.827	0.808	0.776	0.743	0.711	0.679	0.647	0.614	0.582	0.550
145	965.3	0.877	0.845	0.833	0.814	0.783	0.751	0.720	0.689	0.658	0.626	0.595	0.564
150	1034.2	0.880	0.850	0.838	0.820	0.789	0.759	0.729	0.699	0.668	0.638	0.608	0.577
155	1068.7	0.884	0.854	0.843	0.825	0.795	0.766	0.736	0.707	0.677	0.648	0.618	0.589
160	1103.2	0.887	0.859	0.847	0.830	0.801	0.773	0.744	0.716	0.687	0.658	0.630	0.601
165	1137.6	0.890	0.863	0.851	0.835	0.807	0.779	0.751	0.724	0.696	0.668	0.640	0.612
170	1172.1	0.893	0.866	0.855	0.839	0.812	0.785	0.758	0.731	0.704	0.677	0.649	0.622
175	1206.6	0.896	0.870	0.859	0.843	0.817	0.791	0.764	0.738	0.711	0.685	0.659	0.632
180	1241.1	0.899	0.873	0.863	0.847	0.822	0.796	0.770	0.745	0.719	0.693	0.668	0.642
185	1275.5	0.901	0.876	0.866	0.851	0.826	0.801	0.776	0.751	0.726	0.701	0.676	0.651
190	1310.0	0.904	0.879	0.870	0.855	0.831	0.806	0.782	0.757	0.733	0.709	0.684	0.660
195	1344.5	0.906	0.882	0.873	0.858	0.835	0.811	0.787	0.7&3	0.739	0.716	0.692	0.668
200	1379.0	0.908	0.885	0.876	0.862	0.838	0.815	0.792	0.768	0.745	0.722	0.699	0.675
205	1413.4	0.910	0.888	0.878	0.865	0.842	0.819	0.796	0.774	0.751	0.728	0.705	0.682
210	1447.9	0.912	0.890	0.881	0.868	0.845	0.823	0.801	0.779	0.756	0.734	0.712	0.689
215	1482.4	0.914	0.892	0.884	0.871	0.849	0.827	0.805	0.783	0.762	0.740	0.718	0.696
220	1516.8	0.916	0.895	0.886	0.873	0.852	0.831	0.810	0.788	0.767	0.746	0.724	0.703
225	1551.3	0.918	0.897	0.889	0.876	0.855	0.834	0.813	0.792	0.772	0.751	0.730	0.709
230	1585.8	0.919	0.899	0.891	0.879	0.858	0.838	0.817	0.797	0.777	0.756	0.736	0.715
235	1620.3	0.921	0.901	0.893	0.881	0.861	0.841	0.821	0.801	0.780	0.760	0.740	0.720
240	1654.7	0.923	0.903	0.895	0.883	0.864	0.884	0.825	0.805	0.785	0.766	0.746	0.727
245	1654.7	0.924	0.905	0.897	0.886	0.866	0.847	0.828	0.808	0.789	0.770	0.751	0.731
250	1723.7	0.926	0.907	0.899	0.888	0.869	0.850	0.831	0.812	0.793	0.774	0.755	0.737

ACCEPTANCE FACTORS TABLE

For ASME expansion tanks with fixed or replaceable bladder, ASME expansion tanks for potable water and hydro-pneumatic tanks

Use gauge pressure

(Po) Maximum operating pressure		Pƒ – Minimum operating pressure at tank (psig)/kPa											
psig	kPa	5 34.5	10 68.9	12 82.7	15 103.4	20 137.9	25 172.4	30 206.8	35 241.3	40 275.8	45 310.3	50 344.7	55 379.2
60	413.7	–											
65	448.2	0.062	–										
70	482.6	0.118	0.059	–									
75	517.1	0.167	0.111	0.056	–								
80	551.6	0.211	0.158	0.106	0.053	–							
85	586.1	0.251	0.201	0.151	0.101	0.050	–						
90	620.5	0.287	0.239	0.191	0.143	0.096	0.048	–					
95	655.0	0.319	0.273	0.228	0.182	0.137	0.091	0.045	–				
100	689.5	0.347	0.305	0.261	0.218	0.174	0.131	0.087	0.043	–			
105	723.9	0.376	0.334	0.292	0.250	0.208	0.167	0.125	0.083	0.041	–		
110	758.4	0.401	0.361	0.321	0.281	0.241	0.200	0.160	0.120	0.080	0.040	–	
115	792.9	0.424	0.386	0.347	0.309	0.270	0.232	0.193	0.155	0.116	0.007	0.039	–
120	827.4	0.446	0.408	0.371	0.334	0.297	0.260	0.223	0.186	0.149	0.111	0.074	0.037
125	861.8	0.465	0.429	0.394	0.358	0.322	0.286	0.250	0.215	0.179	0.143	0.107	0.071
130	896.3	0.484	0.450	0.415	0.381	0.346	0.312	0.277	0.243	0.208	0.173	0.138	0.104
135	930.8	0.501	0.468	0.439	0.401	0.367	0.334	0.301	0.267	0.234	0.200	0.167	0.134
140	965.3	0.517	0.485	0.453	0.420	0.388	0.356	0.324	0.291	0.259	0.226	0194	0.162
145	999.7	0.532	0.501	0.470	0.438	0.407	0.376	0.344	0.313	0.282	0.250	0.219	0.188
150	1034.2	0.547	0.517	0.486	0.456	0.426	0.396	0.365	0.335	0.305	0.273	0.243	0.213
155	1068.7	0.559	0.530	0.500	0.471	0.441	0.412	0.382	0.353	0.323	0.295	0.265	0.236
160	1103.2	0.573	0.544	0.515	0.487	0.458	0.430	0.401	0.372	0.344	0.315	0.286	0.258
165	1137.6	0.585	0.557	0.529	0.501	0.473	0.446	0.418	0.390	0.362	0.334	0.306	0.278
170	1172.1	0.595	0.568	0.541	0.514	0.487	0.460	0.433	0.460	0.378	0.352	0.325	0.298
175	1206.6	0.606	0.579	0.553	0.527	0.500	0.474	0.447	0.421	0.395	0.369	0.343	0.316
180	1241.1	0.616	0.590	0.565	0.539	0.513	0.488	0.462	0.436	0.411	0.385	0.360	0.334
185	1275.5	0.626	0.601	0.576	0.551	0.526	0.501	0.476	0.451	0.426	0.401	0.376	0.351
190	1310.0	0.635	0.611	0.587	0.562	0.538	0.513	0.489	0.465	0.440	0.415	0.391	0.366
195	1344.5	0.644	0.620	0.597	0.573	0.549	0.525	0.501	0.478	0.454	0.429	0.405	0.381
200	1379.0	0.652	0.629	0.605	0.582	0.559	0.535	0.512	0.489	0.466	0.443	0.419	0.396
205	1413.4	0.660	0.637	0.614	0.591	0.568	0.546	0.523	0.450	0.477	0.455	0.432	0.410
210	1447.9	0.667	0.645	0.622	0.600	0.578	0.556	0.533	0.510	0.489	0.467	0.445	0.423
215	1482.4	0.674	0.653	0.631	0.609	0.587	0.565	0.544	0.522	0.500	0.479	0.457	0.435
220	1516.8	0.682	0.660	0.639	0.618	0.597	0.575	0.554	0.533	0.511	0.490	0.469	0.447
225	1551.3	0.688	0.667	0.646	0.625	0.604	0.583	0.563	0.542	0.521	0.501	0.478	0.459
230	1585.8	0.695	0.675	0.654	0.634	0.613	0.593	0.573	0.552	0.532	0.511	0.490	0.470
235	1620.3	0.700	0.680	0.660	0.640	0.620	0.600	0.579	0.559	0.539	0.521	0.501	0.481
240	1654.7	0.707	0.687	0.668	0.648	0.629	0.609	0.589	0.570	0.550	0.530	0.510	0.491
245	1689.2	0.712	0.693	0.673	0.654	0.635	0.615	0.596	0.577	0.558	0.539	0.520	0.501
250	1723.7	0.718	0.699	0.680	0.661	0.642	0.623	0.604	0.585	0.566	0.548	0.529	0.510

$$\text{Acceptance Factor} = 1 - \frac{P_f}{P_o}$$

P_f = minimum absolute pressure, P_0 = maximum absolute pressure

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