



PRODUCT CATALOG 2026



ONE-STOP SHOP FOR ALL YOUR HYDRONIC PRODUCT NEEDS

For more than 12 years, Calefactio has experienced sustained growth and established itself as a leading player in the hydronic heating industry across North America. Founded by Catherine and Jean-Philippe Pichette, an entrepreneurial sibling team, the company has grown around a spirit of innovation, a human-centered approach, and a clear commitment to building lasting relationships based on trust and collaboration.

With over 350 specialized products imagined and designed in Canada, Calefactio supports professionals with reliable, high-performance solutions. This commitment to continuous improvement is reflected not only in product quality, but also in fast, efficient, and flexible service delivered by an accessible and attentive team.



*Catherine
Jean-Philippe*



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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.

STRONG WELDED CONSTRUCTION DESIGNED TO WITHSTAND HIGH PRESSURE LOADS

The water is in the bladder so there is no contact between steel shell and water which eliminates the risk of rust or corrosion.

The Calefactio's expansion tanks line for heating and potable water are indicated for most common installations, in addition to being compatible with glycol.

Welded steel construction is designed to withstand high pressure loads and adds safety to your installation. Tanks are sturdy and built to last while at the same time they are lightweight, easy to handle and simple to install.

Water is in
the bladder

No contact
between steel
shell and water

No rust or
corrosion of the
steel shell



BLADDER EXPANSION TANKS

HEATING



Service Kit for
Heating System

POTABLE



Service Kit for
Potable System

SERVICE KIT FOR HEATING SYSTEM



HEATING

Operation

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.

Features

- ▶ Heating applications
- ▶ EPDM bladder
- ▶ Maximum temperature: 240°F
- ▶ Precharge: 12 PSI
- ▶ Maximum operating pressure: 115 PSI
- ▶ 2 to 74 gallons

Water never comes in contact with the tank



HGT

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

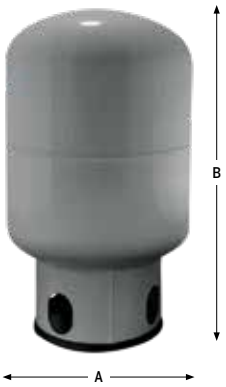
Model#	Volume		Connect.	Dimension				Weight	
	gal	L		A		B			
				in	mm	in	mm	lb	kg
HGT15	2.1	8	½"	7.9	200	13.7	348	5	2
HGT30	4.8	18	½"	10.6	270	16.3	415	9	4
HGT60M	6	23	½"	10.6	270	18.9	480	9.25	4.2
HGT60	8	30	½"	13.8	350	17.9	455	14	6
HGT90	13	50	1"	14.9	380	23.0	585	23	10



HGTV

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

Model#	Volume		Connect.	Dimension				Weight	
	gal	L		A		B		lb	kg
				in	mm	in	mm		
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

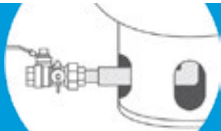


*Service valve for vertical tank available as an option

Optional

New

Service valve for vertical tank
More details on page 52.



HIGH TEMPERATURE

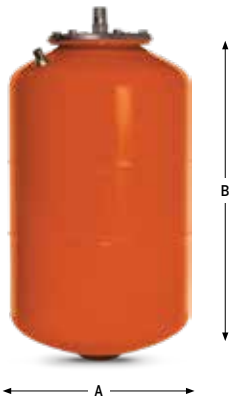
Features

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

#HTS30 Model

Volume		Connect.	A		B		Weight	
gal	L		in	mm	in	mm	lb	kg
6.6	25	½"	10.6	270	21	533	12	5.4

*See the Calefactio engineering department.

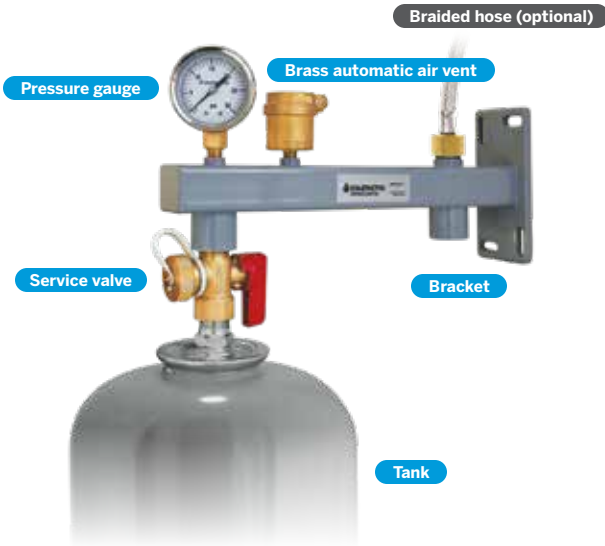


SERVICE KIT

SERVICE KIT FOR HEATING SYSTEM

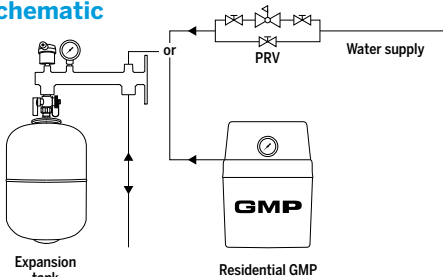
Advantages

- Simplifies purchasing by providing all necessary items in one box
- Safe, practical and easy access installation
- Provides an overview of the state of the system

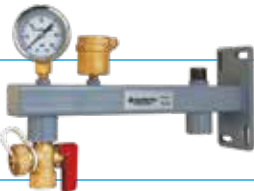


Model#	Content	Weight	
		lb	kg
SERVICEKIT15	HGT15 + HGSC-MULTI + R8818 + HGSV12 + GAGE0-30BOTTOM	10	4.6
SERVICEKIT30	HGT30 + HGSC-MULTI + R8818 + HGSV12 + GAGE0-30BOTTOM	12	5.5
SERVICEKIT60M	HGT60M + HGSC-MULTI + R8818 + HGSV12 + GAGE0-30BOTTOM	15	6.8
SERVICEKIT60	HGT60 + HGSC-MULTI + R8818 + HGSV12 + GAGE0-30BOTTOM	16	7.3

Installation Schematic



Discover all the accessories sold separately on page 15.



The kit includes



Bracket Steel frame

Model#	Length	Height	Width	Weight	
				lb	kg
HGSC-MULTI	10 3/4"	4 1/2"	2 3/8"	2.8	1.27

Pressure Gauge 1/8" MNPT • 0-30 PSI

Model#	Weight	
	lb	kg
GAGE0-30BOTTOM	0.22	0.1



Automatic Brass Vent 1/8" MNPT

Model#	Weight	
	lb	kg
R8818	0.24	0.11



Service Valve with Drain 1/2" MNPT x 1/2" FNPT

Model#	Weight	
	lb	kg
HGSV12	0.66	0.3



Expansion Tank 1/2" Connection

Model#	Volume		Weight	
	gal	L	lb	kg
HGT15	2.1	8	5	2
HGT30	4.8	18	9	4
HGT60M	6	23	9.25	4.2
HGT60	8	30	14	6



Optional

Connection Hose

Braided hose 72"
1/2" FNPT x 1/2" MNPT

Model#	Weight	
	lb	kg
BH72	1.32	0.6



BLADDER EXPANSION TANKS

MASTER KIT JUNIOR

SERVICE KIT FOR HEATING SYSTEM

One box, seven products. Simplify your order!

Advantages

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

Technical Specifications

Model#	Content	Weight	
		lb	kg
MASTERKIT-JR15-72	HGT15 + HGSC-MULTI + GAGE0-30BOTTOM + R8818 + HGSV12 + BH72 + GMP4	21	9.5
MASTERKIT-JR30-72	HGT30 + HGSC-MULTI + GAGE0-30BOTTOM + R8818 + HGSV12 + BH72 + GMP4	23	10.4



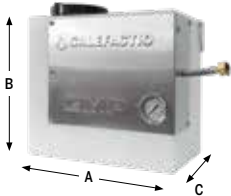
Expansion Tanks

Model#	Volume		Connection	Dimension				Weight	
	gal	L		A		B		lb	kg
				in	mm	in	mm		
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

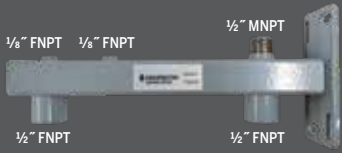


Glycol Make-Up Package

Model#	Volume		Pump	Dimension						Weight	
				A		B		C			
	gal	L		PSI	in	mm	in	mm	in	mm	lb
GMP4	4	15	35	16¼	413	13½	343	7½	191	9.6	4.4



The kit includes



Bracket
Steel frame

Model#	Length	Height	Width	Weight	
				lb	kg
HGSC-MULTI	10 3/4"	4 1/2"	2 3/8"	2.8	1.27

Pressure Gauge
1/8" MNPT • 0-30 PSI

Model#	Weight	
	lb	kg
GAGE0-30BOTTOM	0.22	0.1



Automatic Brass Vent
1/8" MNPT

Model#	Weight	
	lb	kg
R8818	0.24	0.11



Service Valve with Drain
1/2" MNPT x 1/2" FNPT

Model#	Weight	
	lb	kg
HGSV12	0.66	0.3



Connection Hose
Braided hose 72"
1/2" FNPT x 1/2" MNPT

Model#	Weight	
	lb	kg
BH72	1.32	0.6



Expansion Tank

Model#	Description
HGT15	MASTERKIT-JR15-72
HGT30	MASTERKIT-JR30-72



Glycol Make-Up Package

Model#	Volume		Weight	
	gal	L	lb	kg
GMP4	4	15	9.6	4.4



BLADDER EXPANSION TANKS

MASTER KIT

SERVICE KIT FOR HEATING SYSTEM

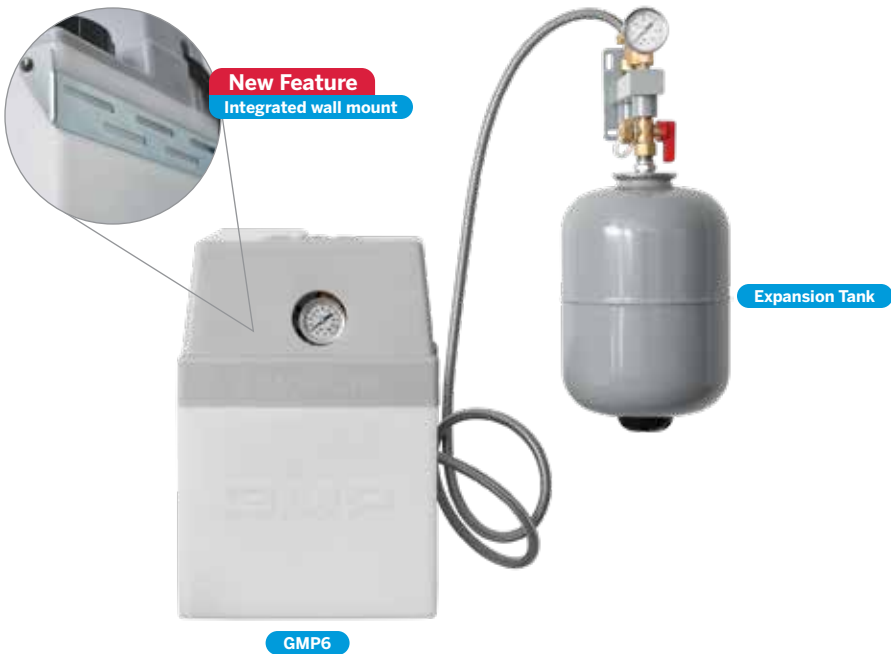
One box, seven products. Simplify your order!

Advantages

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

Technical Specifications

Model#	Content	Weight	
		lb	kg
MASTERKIT15-72	HGT15 + HGSC-MULTI + GAGE0-30BOTTOM + R8818 + HGSV12 + BH72 + GMP6	30.2	13.7
MASTERKIT30-72	HGT30 + HGSC-MULTI + GAGE0-30BOTTOM + R8818 + HGSV12 + BH72 + GMP6	32.2	14.6
MASTERKIT60-72	HGT60 + HGSC-MULTI + GAGE0-30BOTTOM + R8818 + HGSV12 + BH72 + GMP6	33.3	15.1



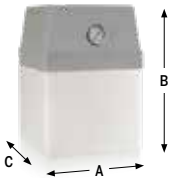
Expansion Tank

Model#	Volume		Connection	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

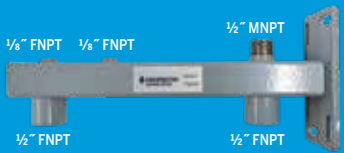


Glycol Make-Up Package

Model#	Volume		Pump	Dimension						Weight	
	gal	L		PSI	A		B		C		
					in	mm	in	mm	in	mm	lb
GMP6	6	22.7	60	12	305	17.5	445	12	305	18.9	8.6



The kit includes



Bracket Steel frame

Model#	Length	Height	Width	Weight	
				lb	kg
HGSC-MULTI	10 3/4"	4 1/2"	2 3/8"	2.8	1.27

Pressure Gauge 1/8" MNPT • 0-30 PSI

Model#	Weight	
	lb	kg
GAGE0-30BOTTOM	0.22	0.1



Automatic Brass Vent 1/8" MNPT

Model#	Weight	
	lb	kg
R8818	0.24	0.11



Service Valve with Drain 1/2" MNPT x 1/2" FNPT

Model#	Weight	
	lb	kg
HGSV12	0.66	0.3



Connection Hose Braided hose 72" 1/2" FNPT x 1/2" MNPT

Model#	Weight	
	lb	kg
BH72	1.32	0.6



Expansion Tank

Model#	Description
HGT15	MASTERKIT15-72
HGT30	MASTERKIT30-72
HGT60	MASTERKIT60-72



Glycol Make-Up Package

Model#	Volume		Weight	
	gal	L	lb	kg
GMP6	6	22.7	18.9	8.6



BLADDER EXPANSION TANKS



Patent pending

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

Advantages

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

Features

- ▶ Coalescent media in stainless steel
- ▶ Minimum loss of pressure (CV22)
- ▶ Brass and copper casing
- ▶ Internal element: stainless steel
- ▶ Joint: EPDM
- ▶ Maximum pressure: 115 PSI
- ▶ Adapted fluids: Water and 50% glycol solution
- ▶ Temperature range: 32-240°F (0-115°C)
- ▶ High efficiency for separation of solids and dirt
- ▶ Superior performance for separation of microbubbles



The ONE^{MD}

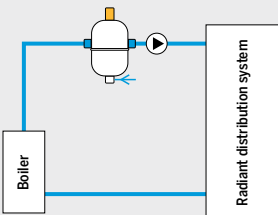
Model#	Total Volume		Net Volume		Maxi. Operating Pressure	Conn. MNPT	Dimension					Weight	
	gal	L	gal	L			A		B			lb	kg
T015	2.7	10	2.7	8	115	1	12.8	325	15.6	395		15	6.82
T030	5.3	20	4.8	18	115	1	12.8	325	22.4	570		19.2	8.73

The kit includes:

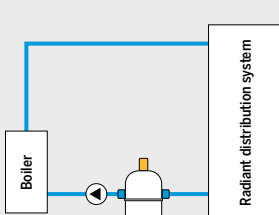


Installation Schematic

Configuration 1



Configuration 2



POTABLE

Features

- ▶ Potable water applications in a domestic system
- ▶ EPDM bladder
- ▶ Maximum temperature: 200°F (93°C)
- ▶ Precharge: 50 PSI
- ▶ Maximum operating pressure: 150 PSI
- ▶ 0.4 to 74 gallons



HGTE

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

Model#	Volume		Connect.	Dimension				Weight	
	gal	L		A		B		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

HGTE1

For tankless water heaters of less than 2 gallons

Model#	Volume		Connect.	Dimension				Weight		Qty/box*
	gal	L		A		B		lb	kg	
HGTE1	0.04	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

#TK075NTE

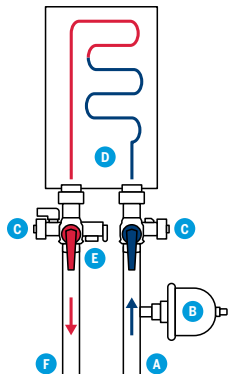
Discover our new all-in-one tankless water heaters service valve with expansion tank on page 50.



Installation Schematic

HGTE1

- A Cold water supply
- B HGTE1 tank
- C Tankless water heater valves (p.51)
- D Tankless water heater
- E Pressure relief valve (p.51)
- F Hot water supply





HGTEV

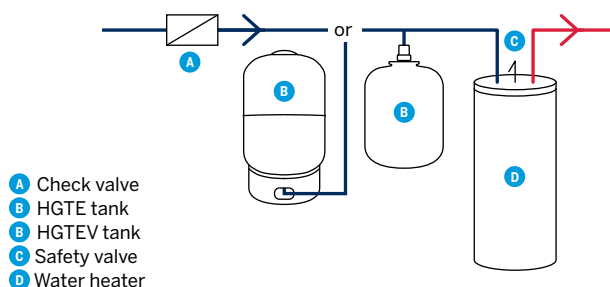
- Expansion tank with replaceable bladder
- FNPT (stainless steel) bottom connection (on base)

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

*Service valve for vertical tank available as an option

Installation Schematic

HGTE/HTEV

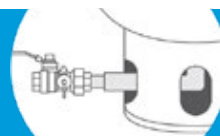


Optional

New

Service valve for vertical tank

More details on page 52.



Scan the QR code to use our selection tool and choose the right tank size.

FLOW-THROUGH POTABLE WATER THERMAL EXPANSION TANK

Thanks to its unique design, exclusive to Calefactio, the FTTE line ensures continuous water circulation throughout the entire tank.

This design eliminates stagnation zones and helps reduce conditions that could promote the potential growth of harmful bacteria. The water is fully contained within an ultra resistant EPDM bladder, preventing contact with the metal shell, limiting tank corrosion, and preventing the accumulation of stagnant water.

Advantages

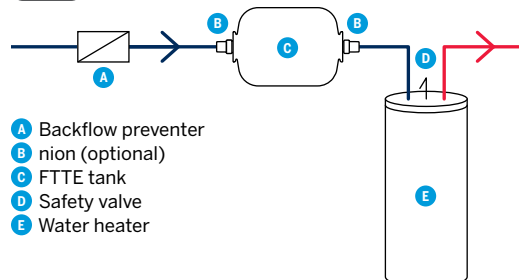
- Avoids stagnant water
- Prevents microbial growth
- Forces water circulation

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
FTTE12	4.7	19	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

FTTE



SERVICE KIT

SERVICE KIT FOR POTABLE SYSTEM

Operation

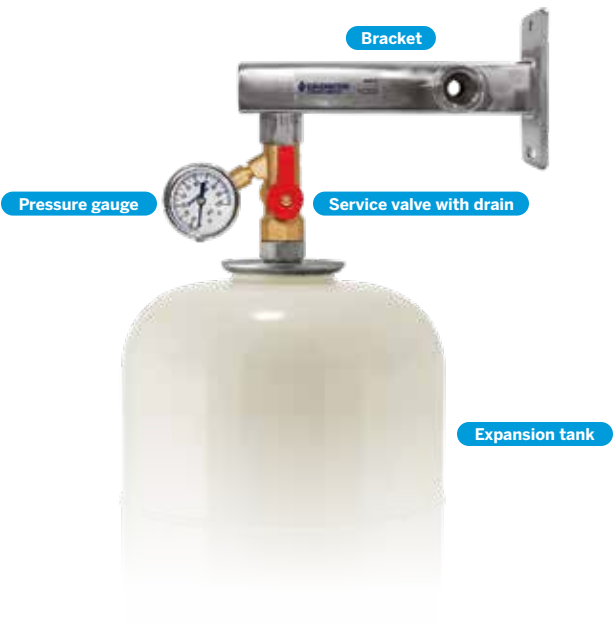
The service kit for potable water systems includes an expansion tank (HGTE-5, HGTE-8, HGTE-12 or HGTE-25), a stainless steel service center (HGSC-SS), and a service valve with pressure gauge (HGSV34). The potable water system service valve from Calefactio combines several functions, one of which allows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

Advantages

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

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



Discover all the accessories sold separately on page 15.



The kit includes



Bracket

Stainless steel housing

Model#	Length	Height	Width	Weight	
				lb	kg
HGSC-SS	9 1/4"	4 3/4"	2 3/8"	2.6	1.2

Service Valve with Drain

3/4" MNPT x 3/4" FNPT
0-100 PSI

Model#	Weight	
	lb	kg
HGSV34	1.1	0.5

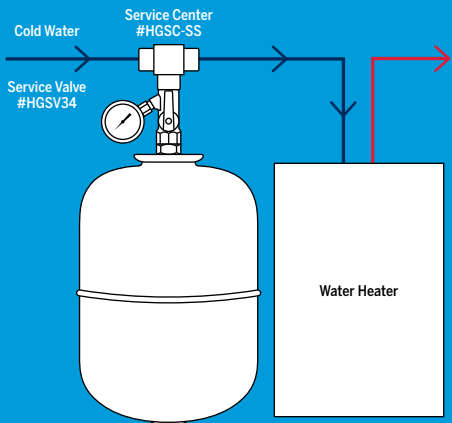


Expansion Tank

Model#	Volume		Weight	
	gal	L	lb	kg
HGTE5	2.1	8	5	2
HGTE8	3.2	12	9	4
HGTE12	4.7	18	11	5
HGTE25	8.0	30	14	6



Installation Schematic



HEATING

**Wall Support**

Compatible with

HGT15

Model#	Weight	
	lb	kg
BRACKET200MM	0.66	0.3

Compatible with

HGT30

HGT60M

TO15

TO30

Model#	Weight	
	lb	kg
BRACKET270MM	0.66	0.3

Service Valve with Drain

Model#	Description	Weight	
		lb	kg
HGSV12	½" MNPT × 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

**Automatic Brass Vent**

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

**Connection Hose**

Braided hose 72"

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

**Bracket for Heating System**

Steel frame

Compatible with

HGT15

HGT30

HGT60M

HGT60



Model#	Length	Height	Width	Weight		Qty/ box*
				lb	kg	
HGSC-MULTI	11"	4¾"	2¾"	2.8	1.27	12

Bracket Kit for Heating System

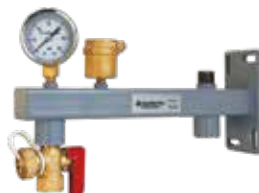
Compatible with

HGT15

HGT30

HGT60M

HGT60



Model#	Length	Height	Width	Weight		Qty/ box*
				lb	kg	
BRACKETKIT-HEAT	11"	7"	2.25"	3.9	1.8	12

POTABLE

**Wall Support**

Compatible with

HGTE5

FTTE5

Model#	Weight	
	lb	kg
BRACKET200MM	0.66	0.3

Compatible with

HGTE5

FTTE5

Model#	Weight	
	lb	kg
BRACKET270MM	0.66	0.3

Service Valve with Drain and Pressure Gauge Included

Compatible with

HGTE5

HGTE8

HGTE12

HGTE25



Model#	Description	Weight	
		lb	kg
HGSV34	¾" MNPT × ¾" FNPT ¼" system gauge 0-100 PSI	1.1	0.5

⅛" MNPT Pressure Gauge

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

**Gauge for Maximum Pressure Test**

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

**Bracket for Potable Water**

Stainless steel housing

Compatible with

HGTE5

HGTE12

HGTE8

HGTE25



Model#	Length	Height	Width	Weight		Qty/ box*
				lb	kg	
HGSC-SS	9¾"	4¾"	3½"	2.6	1.18	20

Bracket Kit for Potable System

Stainless steel housing

Compatible with

HGTE5

HGTE12

HGTE8

HGTE25



Model#	Length	Height	Width	Weight		Qty/ box*
				lb	kg	
BRACKETKIT-POT	9¾"	7"	3½"	3.7	1.7	20

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

VENTS, AIR, DIRT AND HYDRAULIC SEPARATORS

THE PERFECT SOLUTION TO AIR AND DIRT PROBLEMS IN HEATING SYSTEMS

The Cal-X-Tract air and dirt product line from Calefactio reduce the risk of corrosion and damage that could be caused by the oxygen, micro-bubbles and impurities in the systems of heating.



Reduces the risk
of corrosion

Improve system
efficiency

Limits the risk of
pump cavitation

VENTS, AIR, DIRT AND HYDRAULIC SEPARATORS

CAL-X-TRACT

AIR AND DIRT SEPARATOR



CAL-X-TRACT-D
Dirt Separators



CAL-X-TRACT-D-MAG
Dirt Separators with Magnet



CAL-X-TRACT
Air Separators



CAL-X-TRACT-AD
Air and Dirt Separators



CAL-X-TRACT-AD-MAG
Air and Dirt Separators
with Magnet

AUTOMATIC BRASS VENT



CALVENT AUTOMATIC AIR VENT



MAGNET



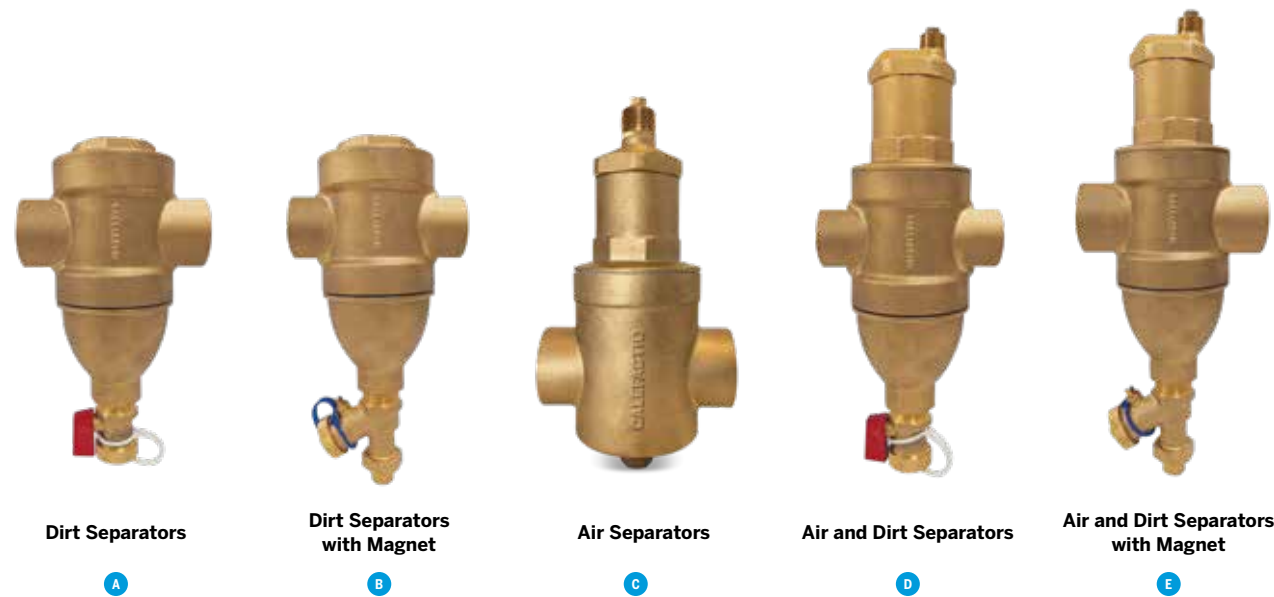
CAL-X-TRACT™

AIR & DIRT SEPARATORS

The Cal-X-Tract air and dirt product line from Calefactio reduce the risk of corrosion and damage that could be caused by the oxygen, micro-bubbles and impurities in the systems of heating.

They are equipped with a stainless steel bristles coalescing media to catch the finest micro-bubbles, air and dirt particles without affecting the flow. The coalescence process produced by the media allows air and micro-bubbles to fusion and then be evacuated through the Calvent automatic vent. As for the dirt, they will collide with each other to then fall to the bottom of the separator to be drained.

Their function allowing a better energetic performance while reducing the costly maintenance frequency. Their sturdy design allows to maintain their efficiency for whole duration of the system's lifetime.



Features

	A	B	C	D	E
Facilitates the separation and accumulation of ferrous impurities in the system		X			X
Reduces the risk of corrosion caused by oxygen			X	X	X
Limits the risk of pump cavitation			X	X	X
Improves system efficiency	X	X	X	X	X
Increases component life	X	X	X	X	X
Eliminates annoying noises in the system	X	X	X	X	X

CAL-X-TRACT™

AIR SEPARATORS

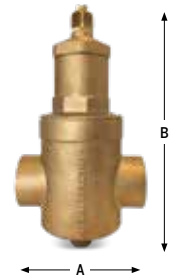
Technical Specifications

- ▶ 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
- ▶ Equipped with a vent pipe connection
- ▶ Calvent automatic air vent
- ▶ Service port ½" NPT installed at the bottom of the unit

NPT

Air separators

Model#	Connect.	Dimension				Weight		Qty/ box [†]
		A		B				
		in	mm	in	mm	lb	kg	
CXT-075NC	¾"	3⅝	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

Air separators

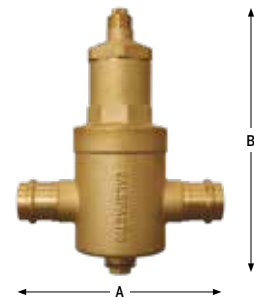
Model#	Connect.	Dimension				Weight		Qty/ box [†]
		A		B				
		in	mm	in	mm	lb	kg	
CXT-075SC	¾"	3⅝	92	6⅞	176	2.0	0.9	21
CXT-100S	1"	4½	115	8½	215	4.0	1.8	8
CXT-125S	1¼"	4½	115	8½	215	3.75	1.7	8
CXT-150S	1½"	5⅝	131	8½	215	4.6	2.1	8
CXT-200S	2"	5⅝	143	8½	215	4.6	2.1	8



Press

Air separators

Model#	Connect.	Dimension				Weight		Qty/ box ¹
		A		B				
		in	mm	in	mm	lb	kg	
CXT-075PC	¾"	6⅝	162	6⅞	176	2.4	1.1	21
CXT-100P	1"	7½	190	8½	215	4.5	2.1	4
CXT-125P	1¼"	8	203	8½	215	4.9	2.2	4
CXT-150P	1½"	8½	216	8½	215	5.7	2.6	4
CXT-200P	2"	9	229	8½	215	6.2	2.8	4



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

CAL-X-TRACT™

DIRT SEPARATORS

Technical Specifications

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

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.



Dirt separators



Dirt separators



Dirt separators

NPT

Model#	Connect.	Dimension				Weight		Qty/ box†
		A		B				
		in	mm	in	mm	lb	kg	
CXTD-075N	¾"	4.5	115	8.3	210	3.7	1.7	8
CXTD-100N	1"	4.5	115	8.3	210	3.7	1.7	8
CXTD-125N	1¼"	4.5	115	8.3	210	3.7	1.7	8
CXTD-150N	1½"	4.5	115	8.3	210	4.1	1.9	8
CXTD-200N	2"	4.5	115	8.3	210	3.9	1.8	8

Sweat

Model#	Connect.	Dimension				Weight		Qty/ box†
		A		B				
		in	mm	in	mm	lb	kg	
CXTD-075S	¾"	4.5	115	8.3	210	3.4	1.6	8
CXTD-100S	1"	4.5	115	8.3	210	3.4	1.6	8
CXTD-125S	1¼"	4.5	115	8.3	210	3.4	1.6	8
CXTD-150S	1½"	5.6	143	8.3	210	4.3	2.0	8
CXTD-200S	2"	5.6	143	8.3	210	4.1	1.9	8

Press

Model#	Connect.	Dimension				Weight		Qty/ box [†]
		A		B				
		in	mm	in	mm	lb	kg	
CXTD-075P	¾"	6.5	166	8.3	210	3.7	1.7	8
CXTD-100P	1"	6.5	166	8.3	210	3.7	1.7	8
CXTD-125P	1¼"	8.0	204	8.3	210	3.7	1.7	8
CXTD-150P	1½"	8.3	211	8.3	210	4.1	1.9	8
CXTD-200P	2"	9.0	229	8.3	210	3.9	1.8	8



Dirt separators

With magnet



Dirt separators

With magnet



Dirt separators

With magnet

NPT

Model#	Connect.	Dimension				Weight		Qty box [†]
		A		B		lb	kg	
		in	mm	in	mm			
CXTD-075N-MAG	¾"	4.5	115	9.3	235	4.3	2.0	8
CXTD-100N-MAG	1"	4.5	115	9.3	235	4.3	2.0	8
CXTD-125N-MAG	1¼"	4.5	115	9.3	235	4.3	2.0	8
CXTD-150N-MAG	1½"	4.5	115	9.3	235	4.8	2.2	8
CXTD-200N-MAG	2"	4.5	115	9.3	235	4.6	2.1	8

Sweat

Model#	Connect.	Dimension				Weight		Qty/ box [†]
		A		B		lb	kg	
		in	mm	in	mm			
CXTD-075S-MAG	¾"	4.5	115	9.3	235	4.1	1.9	8
CXTD-100S-MAG	1"	4.5	115	9.3	235	4.1	1.9	8
CXTD-125S-MAG	1¼"	4.5	115	9.3	235	4.1	1.9	8
CXTD-150S-MAG	1½"	5.6	143	9.3	235	5.0	2.3	8
CXTD-200S-MAG	2"	5.6	143	9.3	235	4.8	2.2	8

Press

Model#	Connect.	Dimension				Weight		Qty/ box
		A		B				
		in	mm	in	mm	lb	kg	
CXTD-075P-MAG	¾"	4.5	115	9.3	235	4.3	2.0	8
CXTD-100P-MAG	1"	4.5	115	9.3	235	4.3	2.0	8
CXTD-125P-MAG	1¼"	4.5	115	9.3	235	4.3	2.0	8
CXTD-150P-MAG	1½"	4.5	115	9.3	235	4.8	2.2	8
CXTD-200P-MAG	2"	4.5	115	9.3	235	4.6	2.1	8

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

CAL-X-TRACT™

AIR & DIRT SEPARATORS

Technical Specifications

- ▶ Coalescent media: 316 stainless steel
- ▶ Connections: NPT, Sweat or Press, 3/4" to 2"
- ▶ Drain valve: 3/4"
- ▶ Magnet connection: 3/4" (optional)
- ▶ Body: brass
- ▶ Adapted fluids: water and 50% glycol solution
- ▶ Maximum temperature: 120°C (250°F)
- ▶ Maximum design pressure: 150 PSI
- ▶ Equipped with a vent pipe connection
- ▶ Calvent automatic air vent

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.



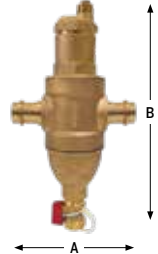
Air and dirt separators



Air and dirt separators



Air and dirt separators



NPT

Model#	Connect.	Dimension				Weight		Qty/ box [†]
		A		B				
		in	mm	in	mm	lb	kg	
CXTAD-075N	¾"	4.5	115	11.6	295	4.5	2.1	8
CXTAD-100N	1"	4.5	115	11.6	295	4.8	2.2	8
CXTAD-125N	1¼"	4.5	115	11.6	295	4.8	2.2	8
CXTAD-150N	1½"	4.5	115	11.6	295	5.2	2.4	8
CXTAD-200N	2"	4.5	115	11.6	295	5.0	2.3	8

Sweat

Model#	Connect.	Dimension				Weight		Qty/ box†
		A		B				
		in	mm	in	mm	lb	kg	
CXTAD-075S	¾"	4.5	115	11.6	295	4.5	2.1	8
CXTAD-100S	1"	4.5	115	11.6	295	4.5	2.1	8
CXTAD-125S	1¼"	4.5	115	11.6	295	4.5	2.1	8
CXTAD-150S	1½"	5.6	143	11.6	295	5.4	2.5	8
CXTAD-200S	2"	5.6	143	11.6	295	5.2	2.4	8

Press

Model#	Connect.	Dimension				Weight		Qty/ box [†]
		A		B				
		in	mm	in	mm	lb	kg	
CXTAD-075P	¾"	6.5	166	11.6	295	4.5	2.1	8
CXTAD-100P	1"	6.5	166	11.6	295	4.8	2.2	8
CXTAD-125P	1¼"	8.0	204	11.6	295	4.8	2.2	8
CXTAD-150P	1½"	9.4	239	11.6	295	5.2	2.4	8
CXTAD-200P	2"	10.1	257	11.6	295	5.0	2.3	8

Air and dirt separators

With magnet



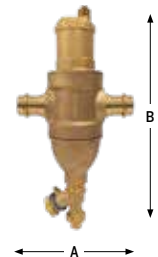
Air and dirt separators

With magnet



Air and dirt separators

With magnet



NPT

Model#	Connect.	Dimension				Weight		Qty/ box [†]
		A		B				
		in	mm	in	mm	lb	kg	
CXTAD-075N-MAG	¾"	4.5	115	12.6	320	5.2	2.4	8
CXTAD-100N-MAG	1"	4.5	115	12.6	320	5.5	2.5	8
CXTAD-125N-MAG	1¼"	4.5	115	12.6	320	5.5	2.5	8
CXTAD-150N-MAG	1½"	4.5	115	12.6	320	5.9	2.7	8
CXTAD-200N-MAG	2"	4.5	115	12.6	320	5.7	2.6	8

Sweat

Model#	Connect.	Dimension				Weight		Qty/ box [†]
		A		B				
		in	mm	in	mm	lb	kg	
CXTAD-075S-MAG	¾"	4.5	115	12.6	320	5.2	2.4	8
CXTAD-100S-MAG	1"	4.5	115	12.6	320	5.2	2.4	8
CXTAD-125S-MAG	1¼"	4.5	115	12.6	320	5.2	2.4	8
CXTAD-150S-MAG	1½"	5.6	143	12.6	320	6.1	2.8	8
CXTAD-200S-MAG	2"	5.6	143	12.6	320	5.9	2.7	8

Press

Model#	Connect.	Dimension				Weight		Qty/ box†
		A		B				
		in	mm	in	mm	lb	kg	
CXTAD-075P-MAG	¾"	4.5	115	12.6	320	5.9	2.7	8
CXTAD-100P-MAG	1"	4.5	115	12.6	320	6.1	2.8	8
CXTAD-125P-MAG	1¼"	4.5	115	12.6	320	6.3	2.9	8
CXTAD-150P-MAG	1½"	5.6	143	12.6	320	7.2	3.3	8
CXTAD-200P-MAG	2"	5.6	143	12.6	320	7.9	3.6	8

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

AIR VENTS

CALVENT AUTOMATIC AIR VENT

Technical Specifications

Material

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

Adapted fluids

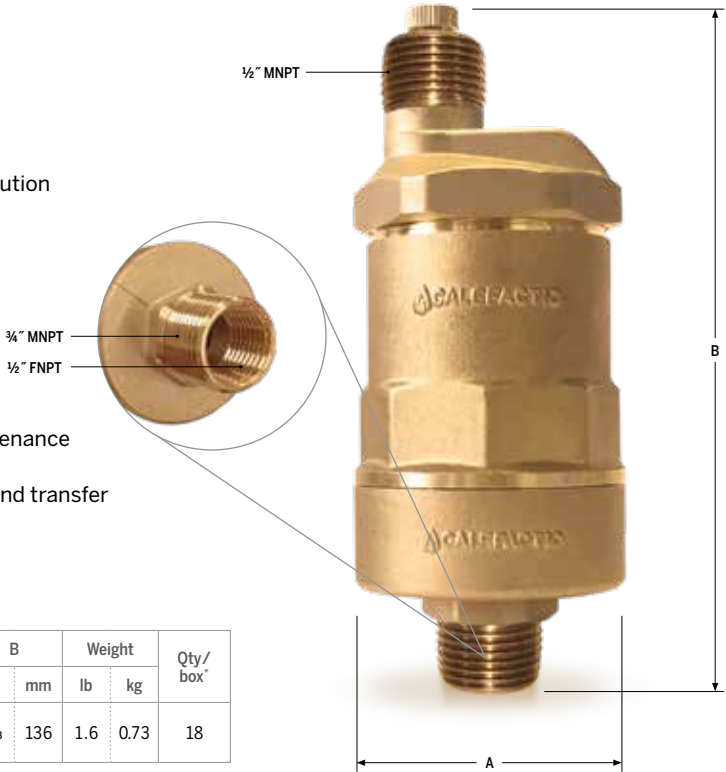
Water and 50% glycol solution

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 1/2" MNPT

Model#	Connection	Maximum Operation Pressure	Temp. Range		A		B		Weight		Qty/box*
			°C	°F	in	mm	in	mm	lb	kg	
CV050	3/4" MNPT	150 PSI	0-121	32-250	2 1/4	56	5 1/2	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	
			Width	Height	lb	kg
R8818	1/8" MNPT	150 PSI	1 3/4"	2"	0.24	0.11
R8814	1/4" MNPT	150 PSI	1 3/4"	2"	0.25	0.11
R8812	1/2" MNPT	150 PSI	1 3/4"	2 1/4"	0.22	0.10



Industrial Air Vent

The Calefactio industrial air vent effectively reduces air accumulation in systems while optimizing their performance. Installed at the highest strategic points of your piping network, it eliminates air pockets and provides a cost-effective solution to maintain a more efficient and durable system.

Model#	Connection	Maximum Pressure	Maximum Temperature	Outlet	Weight	
					lb	kg
MV15	3/4" FNPT	150 PSI/1034 kPa	250°F/121°C	1/2" NPT	5.5	2.5



CALMAN

HEATING DISTRIBUTION MANIFOLD

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.

Technical Specifications

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

Advantages

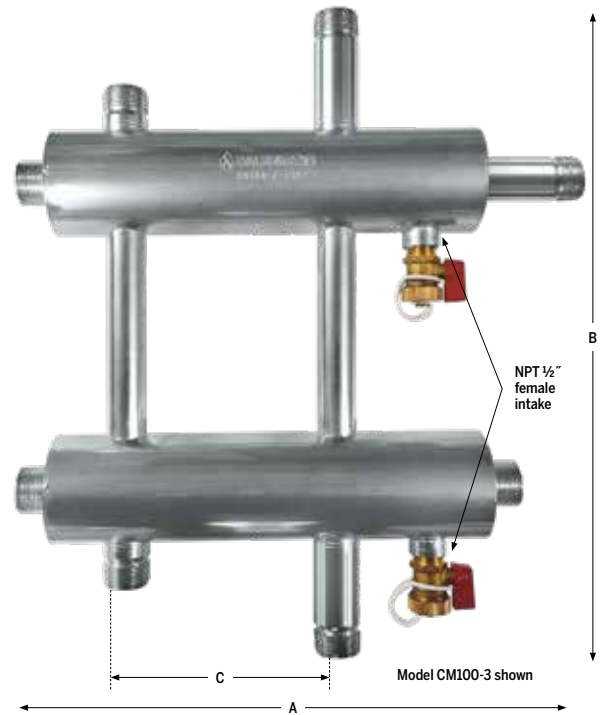
- ▶ Guarantees a uniform temperature
- ▶ Saves time and money
- ▶ Reduces the number of potential leak points
- ▶ Sufficient space planned to accept pumps between each zone
- ▶ Connects directly to the Calbalance hydraulic separator

Model#	Connect.	Zones	A		B		C		Weight	
			in	mm	in	mm	in	mm	lb	kg
CM100-3	1"	3	16½	421	18¾	476	6	152.4	3.8	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

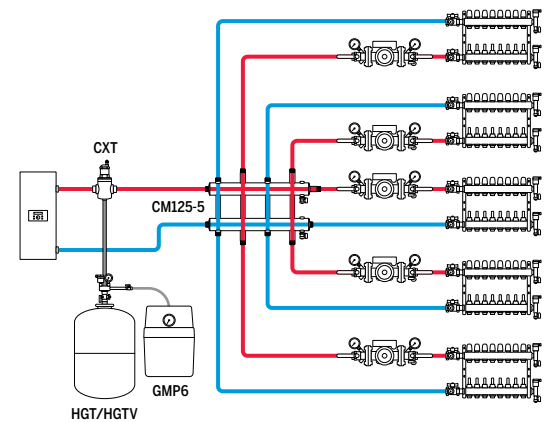
Accessories

Drain Valve

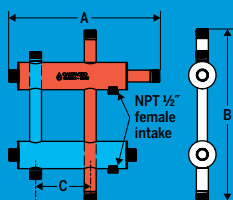
Model#	Description	Weight	
		lb	kg
DV12	½" Connection	0.2	0.1



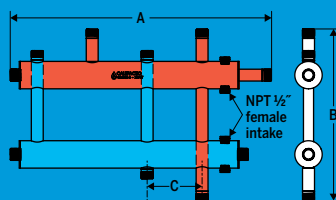
Installation Schematic



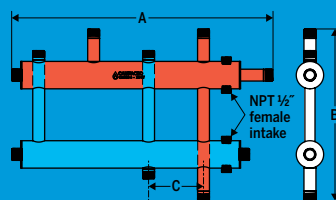
MODELS



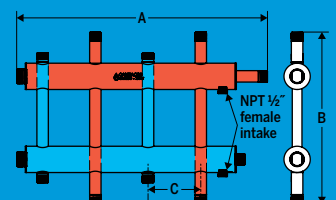
CM100-3



CM100-4



CM125-4



CM125-5

CALBALANCE

HYDRAULIC SEPARATOR



HYDRAULIC SEPARATORS

**4 IN 1 HYDRAULIC SEPARATOR
WITH FLANGE**



**4 IN 1 HYDRAULIC
SEPARATOR**



**BRASS
HYDRAULIC
SEPARATOR**



CALBALANCE

HYDRAULIC SEPARATOR

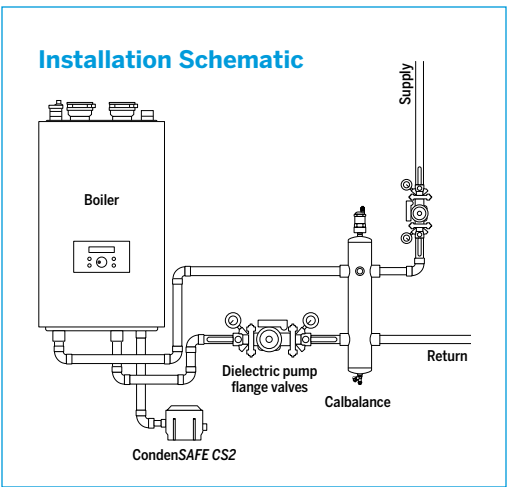
4 IN 1 HYDRAULIC SEPARATOR

4 in 1 hydraulic separator from Calefactio separates water, air, dirt and ferrous debris. The coalescence process produced by the media allows air and micro-bubbles to fuse and then be evacuated through the Calvent automatic air vent.

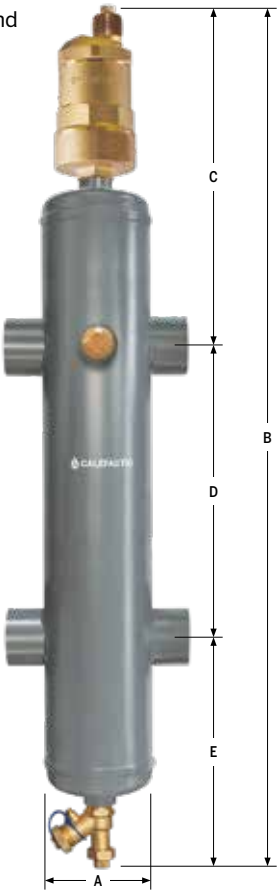
Dirt particles will collide and fall at the bottom of the separator where they can be removed using the drain during service. Magnet will also facilitate the separation and accumulation of ferrous and non-ferrous debris.

Technical Specifications

- ▶ Painted steel frame
- ▶ Coalescing media
- ▶ Thermometer port ½" MNPT
- ▶ Maximum operating pressure: 150 PSI
- ▶ Maximum operating temperature: 100°C (212°F)
- ▶ Connection: NPT, 1" to 2"
- ▶ Adapted fluids: water and glycol solutions up to 50%



Model#	Connect.	Flow		Dimension										Weight	
				A		B		C		D		E			
		GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CB100-4	1"	11	2.5	5.5	136	26.7	677	10.2	259	8%	220	7.8	199	9.5	4.3
CB125-4	1¼"	18	4	6	149	28.4	722	10.7	271	9½	240	8.3	211	11.9	5.4
CB150-4	1½"	26	6	7	174	30.5	774	11.3	287	10¼	260	8.9	227	15.9	7.2
CB200-4	2"	39	9	8	200	32.4	824	11.3	287	11¾	300	9.3	237	21.0	9.5



Included



Magnet
¾" MNPT Connection

Model#	Compatible with	A		Weight	
		in	mm	lb	kg
MAGNET7075	CB100-4 CB125-4	4.9	124	0.8	0.4
MAGNET10075	CB150-4 CB200-4	5.9	150	1.3	0.6

Automatic Air Vent

Model#	Connection	Weight	
		lb	kg
CV050	¾" MNPT	1.6	0.7



Plug

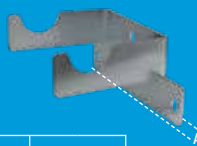
Model#	Connection	Weight	
		lb	kg
PLUG050	½" MNPT	0.07	0.03



Wall Support

Compatible with	A*		Weight	
	in	mm	lb	kg
CB100	2¾	73	0.6	0.3
CB125	3¾	86	0.8	0.4
CB150	3¾	98	1.0	0.5
CB200	4¾	111	1.8	0.8

*Distance to the centre of the wall.



Optional

Available with preformed polyurethane insulation to minimize heat loss.

Preformed Insulation

Model#	Compatible with	Weight	
		lb	kg
CB100-FOAM	CB100-4	0.44	0.2
CB125-FOAM	CB125-4	0.44	0.2
CB150-FOAM	CB150-4	0.66	0.3
CB200-FOAM	CB200-4	0.66	0.3



CALBALANCE

HYDRAULIC SEPARATOR

4 IN 1 HYDRAULIC SEPARATOR WITH FLANGE

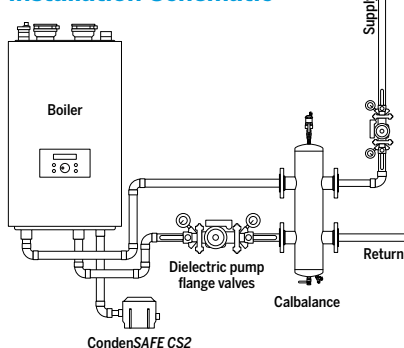
4 in 1 hydraulic separator from Calefactio separates water, air, dirt and ferrous debris. The coalescence process produced by the media allows air and micro-bubbles to fuse and then be evacuated through the Calvent automatic air vent.

Dirt particles will collide and fall at the bottom of the separator where they can be removed using the drain during service. Magnet will also facilitate the separation and accumulation of ferrous and non-ferrous debris.

Technical Specifications

- ▶ Painted steel frame
- ▶ Coalescing media
- ▶ Maximum operating pressure: 150 PSI
- ▶ Maximum operating temperature: 100°C (212°F)
- ▶ Connection: Flange, 2½", 3" and 4"
- ▶ Adapted fluids: water and glycol solutions up to 50%

Installation Schematic



Model#	Connect.	Flow		Dimension												Weight	
				A		B		C		D		E		F			
		GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CB250F-4	2½"	88	20	14	350	42.5	1080	6.6	168	17.5	445	13	330	12	305	63	28.4
CB300F-4	3"	132	30	18	467	46.4	1180	8.6	219	17.1	435	17¼	450	11.6	295	81	36.8
CB400F-4	4"	255	58	18	467	46.4	1180	8.6	219	17.1	435	17¼	450	11.6	295	95	43.2

Included

Automatic Air Vent

Model#	Connection	Weight	
		lb	kg
CV050	¾" MNPT	1.6	0.7



¾" Air Vent Valve

Model#	Connection	Weight	
		lb	kg
11004	¾" FNPT × ¾" FNPT	0.37	0.17



Threaded Nipple

Model#	Connection	Weight	
		lb	kg
CN075	¾" MNPT × ¾" MNPT	0.08	0.04



1" Drain Valve

Model#	Connection	Weight	
		lb	kg
11005	1" FNPT × 1" FNPT	0.55	0.25



Magnet

¾" MNPT Connection

Model#	A		Weight	
	in	mm	lb	kg
MAGNET10075	5.9	150	1.3	0.6



Also available in ASME version
on page 87.



CALBALANCE

HYDRAULIC SEPARATOR

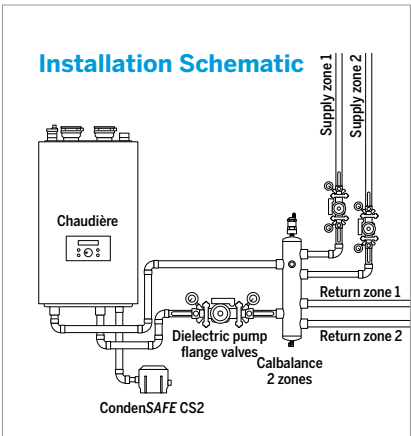
2 ZONES

Hydraulic separators are used to isolate primary circuit flow from secondary circuit flow. Great for heating and snow melting applications with multiple temperature zones

Technical Specifications

- ▶ Painted steel frame
- ▶ Thermometer port ½" FNPT
- ▶ Maximum operating pressure: 150 PSI
- ▶ Maximum operating temperature: 100°C (212°F)
- ▶ Connection: NPT, 1" to 2"
- ▶ Adapted fluids: water and up to 50% glycol solution

Model#	Connect. FNPT	Flow		Dimension										Weight	
				A		B		C		D		E			
		GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CB1002Z	1"	11	2.5	3	76	25.7	653	8.1	206	4.7	120	5	127	8.8	4
CB1252Z	1¼"	18	4	3.5	89	27.5	698	8.6	218	5.5	140	5.5	140	11.2	5.1



Optional

Magnet
¾" MNPT Connection

Model#	A		Weight	
	in	mm	lb	kg
MAGNET7075	4.9	124	0.8	0.4

Included

Automatic Air Vent

Model#	Connection	Weight	
		lb	kg
CV050	¾" MNPT	1.6	0.7

Drain Valve

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

Plug

Model#	Connection	Weight	
		lb	kg
PLUG050	½" MNPT	0.07	0.03



CALBALANCE

HYDRAULIC SEPARATOR

4 IN 1 BRASS HYDRAULIC SEPARATOR

New 4 in 1 brass hydraulic separator from Calefactio separates water, air, dirt and ferrous debris. The coalescence process produced by the media allows air and micro-bubbles to fuse and then be evacuated through the Calvent automatic air vent.

Dirt particles will collide and fall at the bottom of the separator where they can be removed using the drain during service. Magnet will also facilitate the separation and accumulation of ferrous and non-ferrous debris.

Technical Specifications

- ▶ Made in brass
- ▶ Coalescing media
- ▶ Thermometer port ½" MNPT
- ▶ Maximum operating pressure: 125 PSI
- ▶ Maximum operating temperature: 110°C (225°F)
- ▶ Connection: NPT or PRESS (1" to 1¼")
- ▶ Adapted fluids: water and up to 50% glycol solution

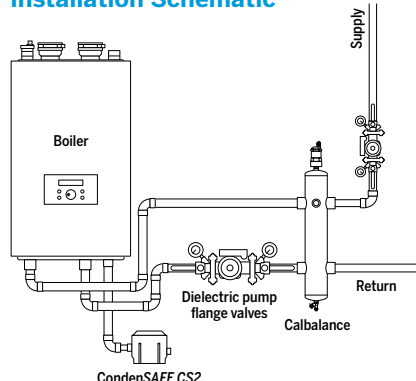
NPT

Model#	Connect.	Flow		Dimension										Weight	
				A		B		C		D		E			
		GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CB100N-4BR	1"	10	2.3	4.5	114	21.4	542	7.9	200	6	152	7.5	189	8.5	3.86
CB125N-4BR	1¼"	16	3.6	4.5	114	21.4	542	7.9	200	6	152	7.5	189	8.5	3.86

PRESS

Model#	Connect.	Flow		Dimension										Weight	
				A		B		C		D		E			
		GPM	m³/h	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
CB100P-4BR	1"	10	2.3	4.5	114	21.4	542	7.9	200	6	152	7.5	189	10.5	4.76
CB125P-4BR	1¼"	16	3.6	4.5	114	21.4	542	7.9	200	6	152	7.5	189	10.5	4.76

Installation Schematic



Included

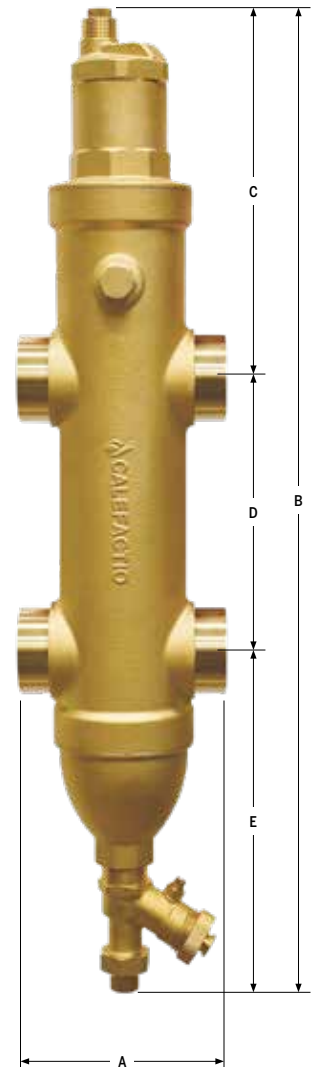
Magnet

¾" MNPT Connection

Model#	A		Weight	
	in	mm	lb	kg
MAGNET7075	4.9	124	0.8	0.4

Plug

Model#	Connection	Weight	
		lb	kg
PLUG050	½" MNPT	0.07	0.03



GLYCOL MAKE-UP PACKAGE

ECONOMICAL, EFFICIENT AND ROBUST

System filling with an independant glycol container is now easier than ever with the 3-way valve and filling kit, unique to Calefactio's GMP design. The optional remote alarm kit also alerts the user if there is a system leak, allowing quick corrective actions.

Easy filling

Provide leak
detection

Prevent major
floods

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.



RESIDENTIAL



GMP4



GMP6

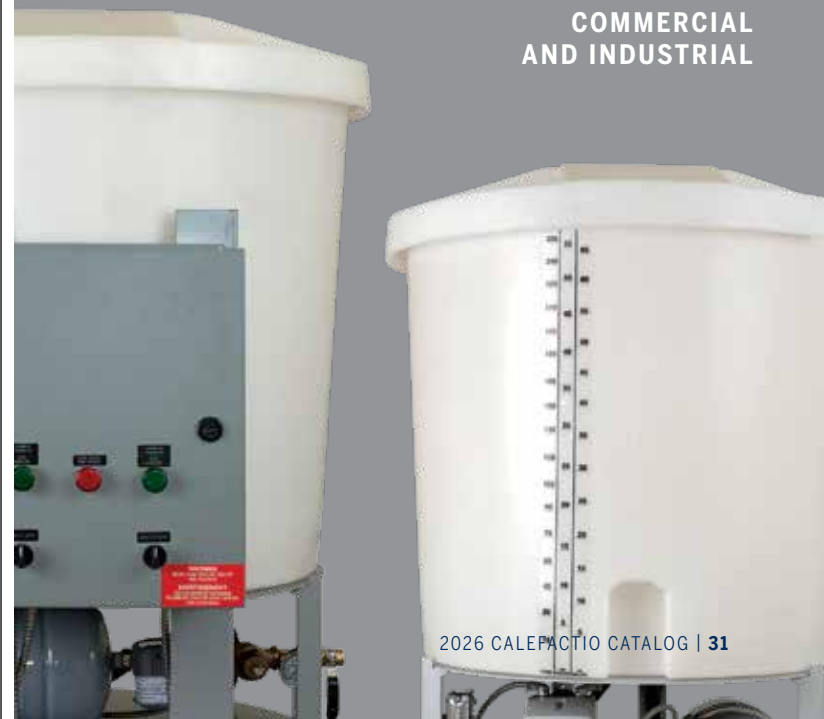


New Feature
Integrated wall mount

RESIDENTIAL AND COMMERCIAL



COMMERCIAL AND INDUSTRIAL





RESIDENTIAL

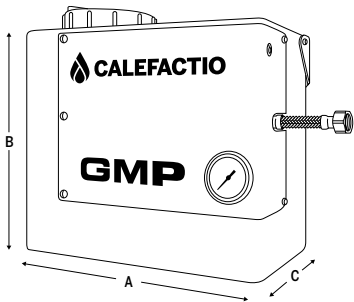
Model#	GMP4
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Calefactio's GMP are economical yet rugged, compact and easy to use fluid feeders for small closed-loop systems.

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.

Advantages

- ▶ No direct connection to potable water supply
- ▶ Provide leak detection
- ▶ Audible alarm available
- ▶ Easy maintenance
- ▶ By-pass valve
- ▶ Self priming pump
- ▶ Braided connection
- ▶ Prevent major floods



Technical Specifications

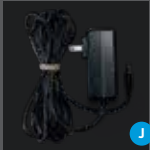
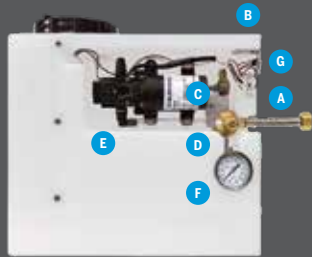
Volume		Pump	Dimension						Weight	
			A		B		C			
gal	L	PSI	in	mm	in	mm	in	mm	lb	kg
4	15	35	13¾	350	11¾	300	7¼	185	8.4	3.8



Discover the Master Kit Junior which includes seven products in a single box 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



- A Braided connection 1/2" FNPT
- B 3/4" opening for relief valve
- C By-pass valve
- D PRV
- E 24V Pump, 35 PSI (241 kPa), 1 GPM (3.8 LPM)
- F Glycerine filled pressure gauge (0-60 PSI)
- G Adaptor plug
- H Integrated wall mount
- I Heavy duty roto-molded tank with embossed graduation for a liquid level indicator that won't fade away
- J 24V Adaptor

Optional

Audible alarm
#GMP4ALARM



RESIDENTIAL

Model#	GMP6
--------	------

The Calefactio GMP6 is now equipped with an integrated wall mount, making installation quick and secure.

Designed for performance and reliability, it automatically maintains pressure in closed-loop hydronic systems.



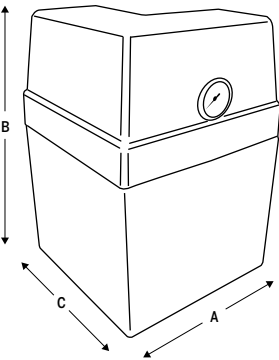
New Feature
Integrated wall mount



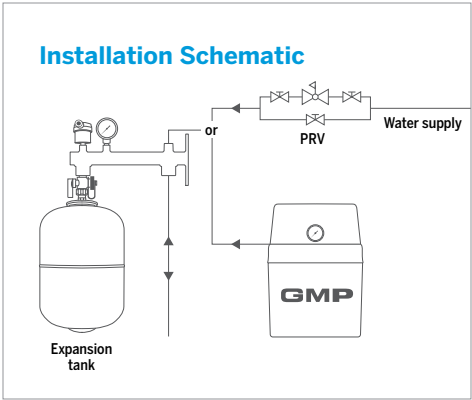
Technical Specifications

Volume		Pump		Dimension						Weight	
				A		B		C			
gal	L	PSI	Ampere	in	mm	in	mm	in	mm	lb	kg
6	22.7	60	0.6 A	12	305	17.5	445	12	305	18.9	8.6

Solar models also available.



Installation Schematic



Discover the Master Kit Junior which includes seven products in a single box on page 11.



Specifications

- ▶ Pump: 1.6 GPM (6 L/m)
60 PSI
- ▶ Discharge connection: 1/2" 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 3/4" Opening for return from the system safety valve
- C By-pass valve
- D Pressure adjustment valve
- E Pump
- F Glycerine pressure gauge
- G 3-way filling valve

Optional

Alarm Panel Kit

Compatible with

- GMP6 GMP18
- GMP6S GMP18S
- GMPLC55
- GMPLC100



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



RESIDENTIAL AND COMMERCIAL



Technical Specifications

Model#	Volume		Pump		Dimension						Weight	
					A		B		C			
	gal	L	PSI	Ampere	in	mm	in	mm	in	mm	lb	kg
GMP18*	18	68.1	60	0.6 A	12	305	39.3	997	12	305	26.6	12.1
GMPLC55*	55	189	100	0.9 A	24	610	48.0	1219	—	—	37.8	17.2
GMPLC100*	100	379	100	0.9 A	33	838	62.0	1575	—	—	51.5	23.4

*Solar models also available.



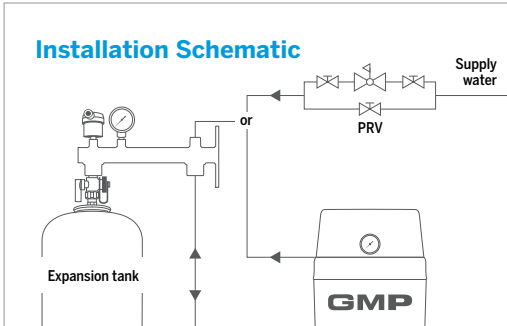
- A Flexible braided hose
- B 3/4" Opening for return from the system safety valve
- C By-pass valve
- D Pressure adjustment valve
- E Pump
- F Glycerine pressure gauge
- G 3-way filling valve*

*GMP18 only.

Specifications

- ▶ Pump : 1.6 GPM (6 L/m) GMP18: 60 PSI
GMPLC55 and GMPLC100 : 100 PSI
- ▶ Discharge connection: 1/2" 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

Installation Schematic



ACCESSORIES

Connection Hose

Compatible with

- GMP4 GMP6 GMP18
- GMP6S GMP18S GMPLC55
- GMPLC100



Model#	Description	Weight	
		lb	kg
BH72	72" Braided hose 1/2" FNPT x 1/2" MNPT	1.32	0.6

Filling Kit

Compatible with

- GMP6 GMP18



Model#	Description	Weight	
		lb	kg
GMPFILLINGKIT	Reusable hose	0.22	0.1

Audible Alarm

Compatible with

- GMP4



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

Float

Compatible with

- GMP6 GMP18 GMP6S
- GMP18S GMPLC55
- GMPLC100



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

Alarm Panel Kit

Compatible with

- GMP6 GMP18
- GMP6S GMP18S
- GMPLC55
- GMPLC100



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

COMMERCIAL & INDUSTRIAL

Simple

- ▶ Tank, 50 or 100 gallons
- ▶ 1 booster pump of 1/3 or 1/2 H.P.
- ▶ 1 pressure regulator
- ▶ Pressure maintained between 10 and 70 PSI

Model#	Motor		Volume		Dimension				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

- ▶ Tank, 50 or 100 gallons
- ▶ 2 booster pumps of 1/3 or 1/2 H.P.
- ▶ 2 pressure regulators
- ▶ Pressure maintained between 10 and 70 PSI

Model#	Motor		Volume		Dimension				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

- ▶ Tank, 50 or 100 gallons
- ▶ 2 booster pumps of 1/3 or 1/2 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		Volume		Dimension				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

120V/1ph/60Hz

Pressure range

10-70 PSI/69-482 kPa

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 gallon

Optional

High Level Alarm

#GMPFO



CONDENSTMSAFE

AN INNOVATION IN CONDENSATE NEUTRALIZER DOMAIN

Engineered media is contained in a bag that can be replaced without having to disconnect the unit. They are economical and environment friendly.



No messy media replacement

Simple to install

Environment friendly

CONDENSATE NEUTRALIZERS

CONDENSATE™ NEUTRALIZER CS2

- ▶ 1 section
- ▶ Treatment capacity: 2.1 GPH

Time indicator included



CONDENSATE™ NEUTRALIZER CS6

- ▶ 3 sections
- ▶ Maximum capacity treatment: 6.3 GPH

Time indicator included



CONDENSATE™ NEUTRALIZER CSNP20

- ▶ 2 sections
- ▶ Maximum treatment capacity: 4.2 GPH
- ▶ Waterproof and dust proof pump (IP65)



Time indicator included

CONDENSATE™ NEUTRALIZER CSC28

- ▶ Commercial
- ▶ Modular
- ▶ Treatment capacity: 10,500 MBH



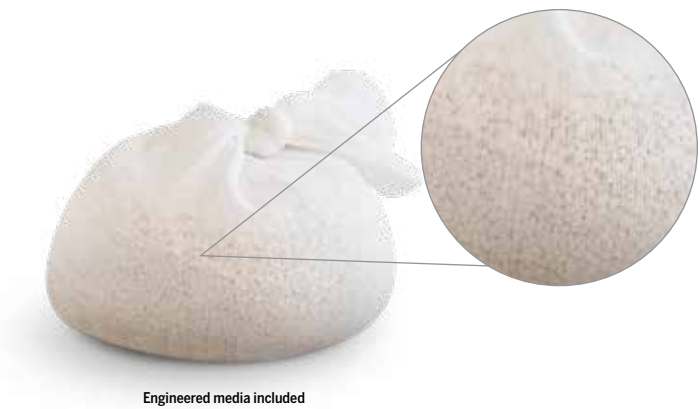
Time indicator included

CONDENSATE NEUTRALIZERS



The condensate neutralizer CondensSAFE product line from Calefactio offers a quick, clean, and convenient solution.

Top lid design provides direct access to the engineering media bag, so no disconnection is required to replace the media.



Time Indicator

To protect the environment and building components, we have included a 12-month time indicator so that the user knows exactly when to replace the media bags.

If they are not changed regularly, water will continue to flow but will no longer be treated. Therefore, it is important to replace the media bags at least once a year or sooner if required, to protect the drain against corrosion.

Installation

- 1 Fully squeeze the button to activate
- 2 Peel off the sheet and install it on the unit cover
- 3 Enter the activation date (month/year)
- 4 Change the media bag every year or when required



Features

	CS2	CSNP20	CS6
Can be connected to hard piped	X	X	X
Time indicator (12 months) included	X	X	X
Number of sections available	1 section	2 sections	3 sections
Engineered media bag included	1 media bag included	1 media bag included	1 media bag included
Maximum treatment capacity	525 MBH	1050 MBH	1575 MBH
Hose/tubing included		Included (20')	Optional (10')
Wall support	X	X	X
Waterproof and dust proof pump (IP65)		X	

CONDENSATE NEUTRALIZERS

CONDENS SAFE™
NEUTRALIZER CS2



One media bag included

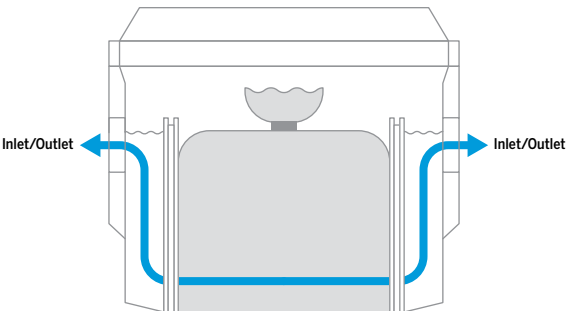
#CS2 Model

A		B		C		D		Inlet Outlet	Weight		Treatment Capacity				Maximum Treatment Volume¹	
											1 Section					
in	cm	in	cm	in	cm	in	cm		lb	kg	MBH	kWh	gal/h	L/h	GPH	LPH
5¾	14.5	4¾	12	5	13	2½	6	¾" FNPT	2.9	1.32	525	154	2.1	8	2.1	8

†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.

Advantages

- ▶ Brackets are included to fix the unit to the wall
- ▶ Engineered media is contained in a replaceable bag
- ▶ No disconnection required to replace media
- ▶ Media bag included
- ▶ Time indicator (12 months) included
- ▶ No by-pass needed
- ▶ Economical and environment friendly
- ▶ Can be connected to hard piped
- ▶ Long-life heavy duty tank and cover



Included

Engineered Media Bag

Model#	Weight	
	lb	kg
CSM2	1.7	0.78



Time Indicator
12 months

Model#	Weight	
	lb	kg
CSTS	0.44	0.002



Straight Fitting
¾" MNPT × ¾" glued
connection



90° Elbow
¾" MNPT × ¾" glued
connection



Time indicator included

Optional

Media Bag

Model#	Weight	
	lb	kg
CSM2	1.7	0.78



CONDENSATE NEUTRALIZERS

CONDENS**SAFE**[™]
NEUTRALIZER CS6



#CS6 Model

A		B		C		D		E		Inlet Outlet	Weight		Qty/ box*
in	cm	in	cm	in	cm	in	cm	in	cm		lb	kg	
12	30.5	4 3/4	12	5 1/2	14	2 1/2	6	3	7.6	1/2" FNPT	4.18	1.9	6

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

Treatment Capacity												Maximum Treatment Volume¹	
1 Section				2 Sections				3 Sections					
MBH	kWh	gal/h	L/h	MBH	kWh	gal/h	L/h	MBH	kWh	gal/h	L/h	GPH	LPH
525	154	2.1	8	1050	308	4.2	16	1575	461	6.3	24	6.3	24

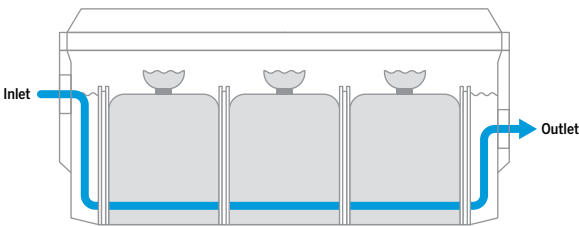
[†] Verify the flow of condensate produced by your device. Generally speaking, a boiler with a capacity of 500,000 BTU/h at 92% efficiency should generate about 1.6 gal/h of condensate.

Advantages

- ▶ Time indicator (12 months) included
- ▶ Economical and environment friendly
- ▶ Long-life heavy duty tank and cover
- ▶ No disconnection required to replace media
- ▶ Brackets are included to fix the unit to the wall
- ▶ No by-pass needed
- ▶ Can be connected to hard piped
- ▶ Engineered media is contained in a replaceable bag
- ▶ One media bag included



Use only the sections that you need



Included

Engineered Media Bag

Model#	Weight	
	lb	kg
CSM2	1.7	0.78



Time Indicator
12 months

Model#	Weight	
	lb	kg
CSTS	0.44	0.002



2 barbed fittings
3/4" MNPT x 3/4" barbed
connection



2 glued fittings
3/4" MNPT x 3/4" glued
connection



Optional



Hose and Clips Kit
Length: 10' • Diameter: 1/2"

Model#	Weight		Qty/ box*
	lb	kg	
CSHK	1.32	0.6	12

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

Media Bag

Model#	Weight	
	lb	kg
CSM2	1.7	0.78



Time indicator
included

CONDENSATE NEUTRALIZERS

CONDENS SAFE™ NEUTRALIZER CSNP20

Waterproof and dust proof pump (IP65)



Complies with UL 778
CSA 22.2 N°108
E114970



One media bag included

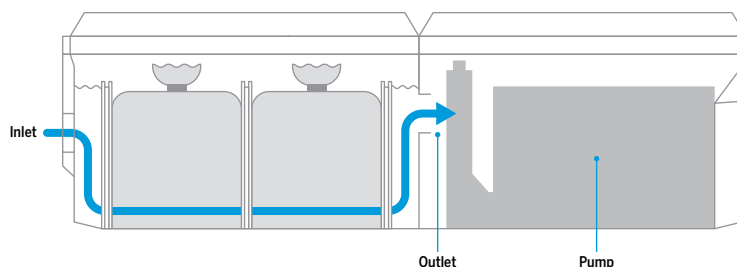
#CSNP20 Model

A		B		C		D		Inlet	Weight	
in	cm	in	cm	in	cm	in	cm		lb	kg
15%	40	5	12.7	4%	12	3	7.6	¾" FNPT	9.43	4.28
Treatment Capacity								Maximum Treatment Volume*		
1 Section				2 Sections						
MBH	kWh	Gal/h	L/H	MBH	kWh	Gal/h	L/H	GPH	L/H	
525	151	2.1	8	1050	308	4.2	16	4.2	16	

*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.

Advantages

- ▶ Time indicator (12 months) included
- ▶ Economical and environment friendly
- ▶ Long-life heavy duty tank and cover
- ▶ Engineered media is contained in a replaceable bag
- ▶ No disconnection required to replace media
- ▶ Waterproof and dust proof pump (IP65)
- ▶ Integrated check valve
- ▶ One media bag included



Included

Engineered Media Bag

Model#	Weight	
	lb	kg
CSM2	1.7	0.78



Time Indicator 12 months

Model#	Weight	
	lb	kg
CSTS	0.44	0.002



Pump (IP65)

Model#	Power			Weight	
	Volt	Hz	Amps	lb	kg
CSP20	120	60	2.0	3.0	1.4

- 20', 3/8" tubing included
- 120 V, 60 Hz, 7.2 ft (2.2 m) power cord
- 1 safety switch
- 3 wall supports

Optional

Alarm Panel

Model#	Weight	
	lb	kg
CAL-AL120	1.98	0.9



Media Bag

Model#	Weight	
	lb	kg
CSM2	1.7	0.78



Time indicator included



PUMP



#CSP20 Model (IP65)

Dimensions						Power			Discharge	Cord	Shut Off	Flow GPH/LPH					Weight	
A		B		C		Volt	Hz	Amps			pi/m	1´	5´	10´	15´	20´	lb	kg
in	mm	in	mm	in	mm													
6.7	170	3.9	100	3.1	80	120	60	2.0	3/8" I.D.	7.2´	20/6.1	114/430	108/410	87/330	58/220	20/75	3.0	1.4

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

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



CONDENSATE NEUTRALIZERS

CONDENSAFE™

NEUTRALIZER CSC28

HIGH CAPACITY NEUTRALIZER

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



Features

- ▶ The entire volume of condensate crosses the entire thickness of the engineering media
- ▶ Treatment optimized by feeding at bottom
- ▶ Integrated overflow protection
- ▶ Easy to clean
- ▶ Supplied with Calefactio engineered media

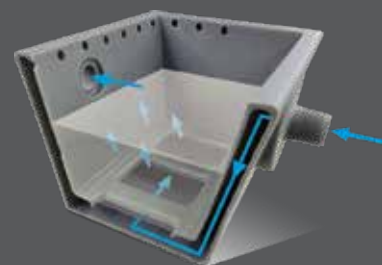
#CSC28 Model

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
3500 MBH 1026 KwH	106	28	7½	190	10½	267	16¼	414	5½	140	1" MNPT	1" FNPT	18	8.18

Treatment capacity can be increased



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 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
12 months

Model#	Weight	
	lb	kg
CSTS	0.44	0.002



Engineered Media
Suitable for #CSC28

Model#	Weight	
	lb	kg
CSM28	10.3	4.7

Accessories



Connection Union
For installation in series

Model#	Weight	
	lb	kg
CSCUK	0.2	0.1

VALVES

UNIQUE AND EXCLUSIVE DESIGN

The Calefactio series of valves offers many benefits in order to protect and facilitate the maintenance of the systems.



Strong and
durable

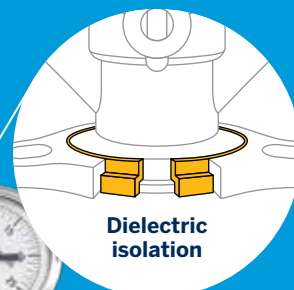
Easy to install

Simplified
maintenance

VALVES



DIELECTRIC PUMP FLANGE VALVE



Dielectric
isolation



ALL-IN-ON TANKLESS WATER HEATER SERVICE VALVES WITH EXPANSION TANK



PUMP FLANGE VALVE 2" WITHOUT DRAIN



BALL VALVE WITH DRAIN

New models

Improved



SERVICE VALVE FOR VERTICAL TANK

New



DIELECTRIC DOUBLE FLANGED CHECK



DIELECTRIC PUMP FLANGE VALVE KIT

A quick overview of the system

Simplify drainage and filling

Ensures a great seal



The only pump flange valve that allows you to quickly monitoring your system. 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 Delta P (ΔP).

Technical Specifications

- ▶ Full port brass ball valve
- ▶ Connections: NPT, Sweat or Press, 3/4" to 1 1/2"
- ▶ Dielectric rotating flange
- ▶ 1 valve with drain and gauge port
- ▶ 1 valve with 2 gauge ports
- ▶ Ball valve isolation for circulating pumps
- ▶ Threaded end complies with ANSI B1.20.1
- ▶ 500 CWP (Cold Working Pressure)

Included



2 gaskets



4 nuts and 4 bolts

Optional



Pressure Gauge

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



Gauge not included

NPT

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034N	3/4"	3.3	1.5	12
PF100N	1"	4.2	1.9	8
PF114N	1 1/4"	5.5	2.5	8
PF112N	1 1/2"	6.4	2.9	4

Gauge not included

Press

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034P	3/4"	3.4	1.6	12
PF100P	1"	4.2	1.9	8
PF114P	1 1/4"	5.7	2.6	8
PF112P	1 1/2"	6.8	3.1	4

Gauge not included

Sweat

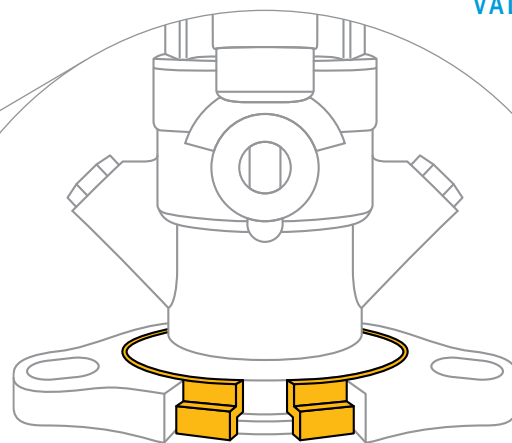
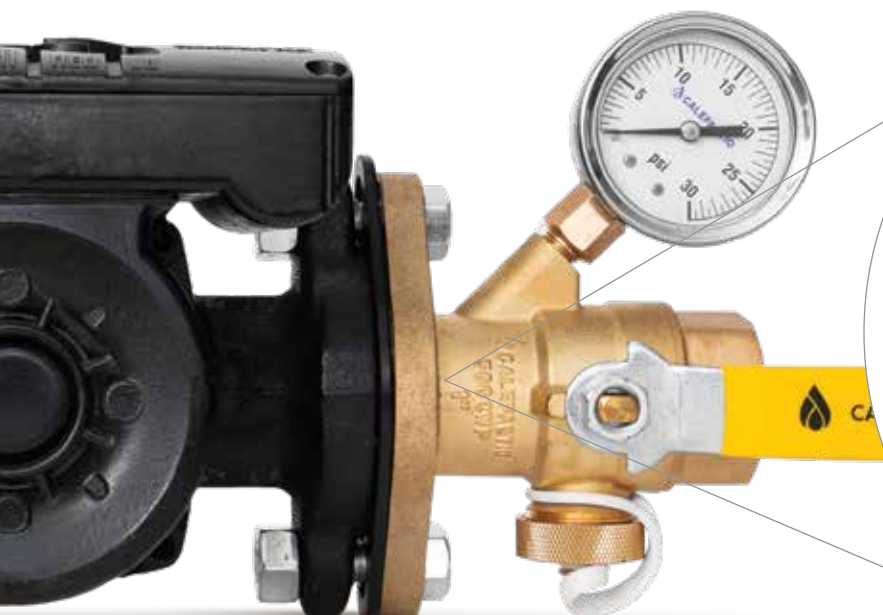
Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034S	3/4"	3.2	1.5	12
PF100S	1"	4.1	1.9	8
PF114S	1 1/4"	5.4	2.4	8
PF112S	1 1/2"	6.2	2.8	4

Gauge not included

PEX F1960

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034F	3/4"	3.3	1.5	12
PF100F	1"	4.2	1.9	8
PF114F	1 1/4"	5.6	2.6	8
PF112F	1 1/2"	6.6	3.0	4

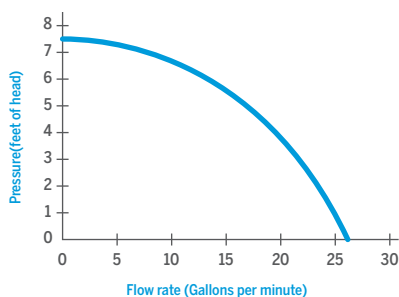
[†]Models without drain only. [†]This product is sold individually, but it can also be sold in a master pack.



Dielectric Isolation

The dielectric isolation sleeve in the rotating flange prevents dissimilar metal corrosion (galvanic corrosion).

Performance Curve of the Pump



How do I get my pump's flow rate in gallons per minute?

1. Read the pressure gauges on each side of the pump;
2. Subtract the lower pressure from the higher pressure to obtain the pressure differential in PSI also called Delta P (ΔP);
3. Convert this measurement to feet of head by multiplying by 2.3;
4. Use the pump performance curve to obtain pump output in gallons per minute.

DIELECTRIC DOUBLE FLANGED CHECK

Upgrade your pump system with our innovative dielectric double flanged check valves, designed to seamlessly integrate with a wide range of pumps from $\frac{3}{4}$ " to $1\frac{1}{2}$ ". Our specialized valves are engineered to accommodate standard flange pump installations, ensuring compatibility and ease of use. Featuring slotted bolt holes, these versatile valves are perfect for both standard and high-velocity pumps, offering unparalleled flexibility in your setup.



Technical Specifications

- Bride: Laiton
- Boulons et écrous: Acier
- Bague diélectrique: Nylon
- Corps: Laiton
- Clapet anti-retour: POM
- Joint de bride: NBR
- Pour bride de pompe de $\frac{3}{4}$ " à $1\frac{1}{2}$ "
- Inclus 1 joint d'étanchéité, 2 écrous et 2 boulons

Model#	Connect.	Cv	Priming pressure (PSI)	Recommended flow rate range (GPM)	Weight	
					lb	kg
DDFC	$\frac{3}{4}$ " to $1\frac{1}{2}$ "	66	0.60	15 to 95	1.63	0.74

VALVES

DIELECTRIC PUMP FLANGE VALVE WITH DRAIN

Technical Specifications

- ▶ Full port brass ball valve
- ▶ Connections: NPT, Sweat or Press, ¾" to 1½"
- ▶ Dielectric rotating flange
- ▶ Drain and gauge port
- ▶ Ball valve isolation for circulating pumps
- ▶ Threaded end complies with ANSI B1.20.1
- ▶ 500 CWP (Cold Working Pressure)

Included



1 gasket

2 nuts and 2 bolts

Optional



Pressure Gauge

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

With drain
Gauge not included



NPT

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034N-D	¾"	1.7	0.8	24
PF100N-D	1"	2.1	1.0	18
PF114N-D	1¼"	2.8	1.3	12
PF112N-D	1½"	3.3	1.5	12

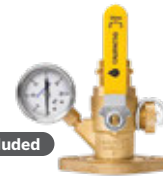
With drain
Gauge not included



Sweat

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034S-D	¾"	1.7	0.8	24
PF100S-D	1"	2.1	0.9	18
PF114S-D	1¼"	2.7	1.2	12
PF112S-D	1½"	3.2	1.4	12

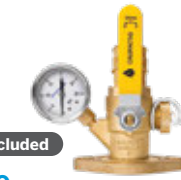
With drain
Gauge not included



Press

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034P-D	¾"	1.8	0.8	24
PF100P-D	1"	2.2	1.0	18
PF114P-D	1¼"	2.9	1.3	12
PF112P-D	1½"	3.4	1.6	12

With drain
Gauge not included



PEX F160

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034F-D	¾"	1.7	0.8	24
PF100F-D	1"	2.1	1.0	18
PF114F-D	1¼"	2.9	1.3	12
PF112F-D	1½"	3.3	1.5	12

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

DIELECTRIC PUMP FLANGE VALVE WITHOUT DRAIN

Technical Specifications

- ▶ Full port brass ball valve
- ▶ Connections: NPT, Sweat or Press, ¾" to 1½"
- ▶ Dielectric rotating flange
- ▶ 2 gauge ports
- ▶ Ball valve isolation for circulating pumps
- ▶ Threaded end complies with ANSI B1.20.1
- ▶ 500 CWP (Cold Working Pressure)

Included



1 gasket

2 nuts and 2 bolts

Optional



Jauge à pression

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

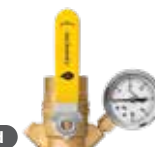
Without drain
Gauge not included



NPT

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034N-D	¾"	1.6	0.7	24
PF100N-D	1"	2.1	0.9	18
PF114N-D	1¼"	2.7	1.2	12
PF112N-D	1½"	3.2	1.4	12

Without drain
Gauge not included



Sweat

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034S-D	¾"	1.6	0.7	24
PF100S-D	1"	2.0	0.9	18
PF114S-D	1¼"	2.6	1.2	12
PF112S-D	1½"	3.1	1.4	12

Without drain
Gauge not included



Press

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034P-D	¾"	1.7	0.8	24
PF100P-D	1"	2.1	1.0	18
PF114P-D	1¼"	2.8	1.3	12
PF112P-D	1½"	3.3	1.5	12

Without drain
Gauge not included



PEX F160

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF034F-D	¾"	1.6	0.7	24
PF100F-D	1"	2.1	0.9	18
PF114F-D	1¼"	2.8	1.3	12
PF112F-D	1½"	3.2	1.5	12

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



2" DIELECTRIC PUMP FLANGE VALVE WITHOUT DRAIN

The Kit

Without drain

Gauge not included

NPT

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF200N	2"	9.7	4.4	3



Gauge not included

Sweat

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF200S	2"	9.5	4.3	3



Gauge not included

Press

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF200P	2"	10.3	4.7	3



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

Included



2 gaskets



4 nuts and 4 bolts

Optional

Pressure Gauge



Model#	PSI	Weight	
		lb	kg
GAGE0-30BOTTOM	0-30	0,22	0,1
GAGE0-100BOTTOM	0-100	0,22	0,1

Unit

Without drain

Gauge not included

NPT

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF200N-ND	2"	4.8	2.2	6



Gauge not included

Sweat

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF200S-ND	2"	4.7	2.2	6



Gauge not included

Press

Model#	Size	Weight		Qty/ box [†]
		lb	kg	
PF200P-ND	2"	5.1	2.3	6



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

Included



1 gasket



2 nuts and 2 bolts

Optional

Pressure Gauge



Model#	PSI	Weight	
		lb	kg
GAGE0-30BOTTOM	0-30	0,22	0,1
GAGE0-100BOTTOM	0-100	0,22	0,1

VALVES

TANKLESS WATER HEATER SERVICE VALVES WITH EXPANSION TANK KIT

Calefactio's all-in-one tankless water heater service valves is designed for water heaters under 2 gallons. It includes two valves with drains, a pressure relief valve, and an expansion tank.

The expansion tank function is to absorb the increased volume of water which results from the heating process, thereby keeping the system's pressure below the relief valve setting. It also acts as a water hammer or shock absorber to absorb a sudden change in fluid velocity after the sudden closing of a faucet.

Model#	TK075NTE
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Advantages

Valves

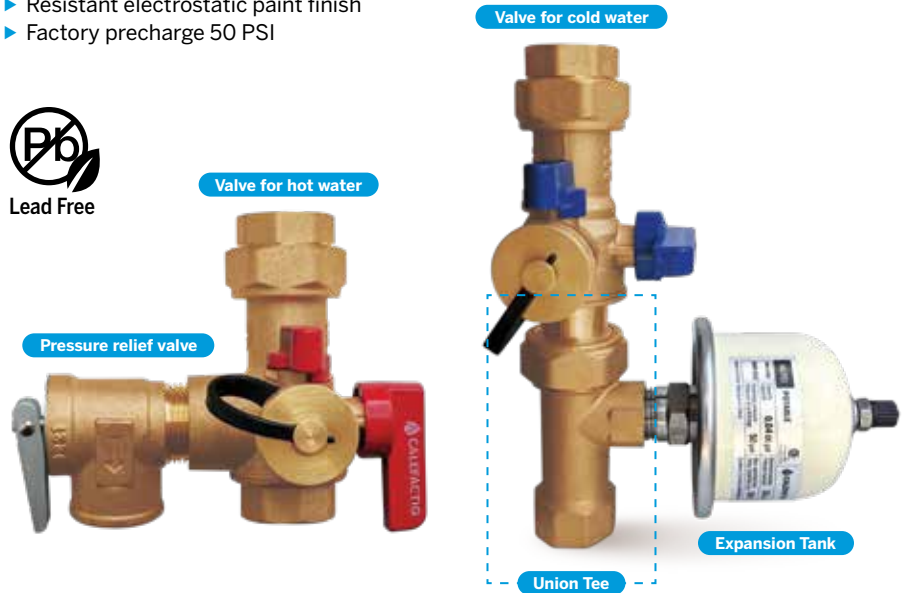
- ▶ Secure seal
- ▶ Lead free
- ▶ Compact
- ▶ Facilitate maintenance with dedicated ports
- ▶ Provided with 150 PSI pressure relief valve (PRV)
- ▶ Easy identification of hot and cold valves

Expansion Tank

- ▶ Water hammer
- ▶ Water never comes in contact with the tank
- ▶ No rust or corrosion of the steel shell
- ▶ Strong welded construction
- ▶ EPDM bladder
- ▶ Resistant electrostatic paint finish
- ▶ Factory precharge 50 PSI



Lead Free



Each kit includes



Expansion Tank #HGTE1 Model

Connection	1/2" MNPT
Volume	0.04 gal (0.16 L)
Precharge	50 PSI
Max. Operating Temperature	180°F (82°C)
Maximum Working Pressure	150 PSI



NSF/ANSI
CAN 372-202261-2022



Tankless Water Heater Valves #TK075N Model

Connection	3/4" FNPT
Maximum Temperature	180°F (82°C)
Maximum Pressure	150 PSI



CSA 4.4
ANSI Z21.22

Pressure Relief Valve #PRV075-150 Model

Connection	3/4" MNPT
Maximum Temperature	180°F (82°C)
Maximum Pressure	150 PSI
Maximum Heating Input	200 000 BTU

Union Tee



TANKLESS WATER HEATER VALVES

Each Calefactio Tankless Water Heater Valve kits includes two isolation valves with drain and a 150 PSI pressure relief valve.

Some kits are also offered with a 30 PSI pressure relief valve. The valves are easy to install and provide secure and tight seals. The drains and handles are designed to simplify maintenance of the system. They are made of brass and certified lead free to ensure lasting durability.

Features

- ▶ Secure seal
- ▶ Lead Free
- ▶ Compact
- ▶ Facilitate maintenance with dedicated ports
- ▶ Pressure relief valve (PRV) included
- ▶ Easy identification of hot and cold valves

Technical Specifications

- ▶ Made in Brass
- ▶ Temperature rating: 40°F to 180°



Included



Model#	Connect.	Width		Height		Weight		Qty/ box [†]
		in	mm	in	mm	lb	kg	
TK075N	¾" NPT	3	76.6	4	102	3.3	1.5	12
TK075P	¾" PRESS	3	76.6	4	102	3.3	1.5	12
TK075S	¾" SWEAT	3	76.6	4	102	3.1	1.4	12
TK075N-30*	¾" NPT	3	76.6	4½	114	4.7	2.1	12

Model#	Connect.	Width		Height		Weight		Qty/ box [†]
		in	mm	in	mm	lb	kg	
TK100N	1" NPT	3	76.6	4½	114	4.4	2.0	8
TK100N-30*	1" NPT	3	76.6	4½	114	4.7	2.1	8

* Included with a 30 PSI pressure relief valve. [†]This product is sold individually, but it can also be sold in a master pack.

PRESSURE RELIEF VALVE

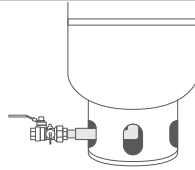
Model#	Connection	Width		Height		Max. Pressure	Max. Temperature	Maximum Heating Input	Certification	Weight	
		in	mm	in	mm					lb	kg
PRV075-30	¾" MNPT	2.4	61	2.6	81	30 PSI	300°F (149°C)	419 000 BTU	ASME IV • ANSI Z21.22 • NSF 372 CSA 4.4 • CRN.0G21972.2CL	0.66	0.3
PRV075-150	¾" MNPT	2.6	66	3.2	66	150 PSI	210°F (99°C)	200 000 BTU	CSA 4.4 • ANSI Z21.22	0.44	0.2



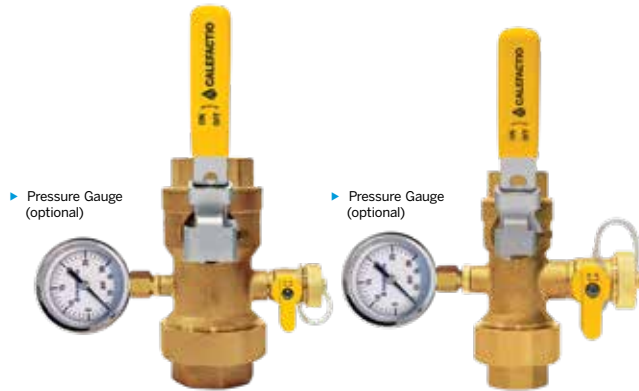
New

Unique and Exclusive to Calefactio

SERVICE VALVE FOR VERTICAL TANK



Designed for vertical expansion tanks, the new Calefactio service valve stands out with its compact design, integrated union, and lockable handle. It reduces the number of joints required during installation, simplifies maintenance, and minimizes the risk of leaks, delivering a reliable and safe all-in-one solution.



Sweat

Model#	Connection
SV075S	¾"
SV100S	1"
SV125S	1¼"
SV150S	1½"

NPT

Model#	Connection
SV075N	¾"
SV100N	1"
SV125N	1¼"
SV150N	1½"

DRAIN VALVES



Drain Valves

Model#	Connect.	Weight	
		lb	kg
DV12	½"	0.2	0.1
DV34	¾"	0.2	0.1



Drain Ball Valve

Model#	Connect.	Weight		Qty/ box [†]
		lb	kg	
DBV034N	¾"	0.7	0.32	8

[†] Ce produit est vendu à l'unité, mais il peut également être vendu en boîte maitresse.

BALL VALVE WITH HIGH-FLOW DRAIN

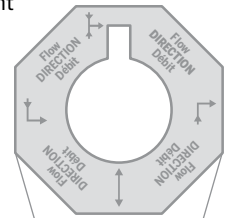


Improved & New Models

Calefactio ball valves with high-flow drain allow the system to be efficiently isolated and drained.

Flow direction indicators integrated directly on the product enable faster and more efficient service interventions.

- ▶ Forged brass body
- ▶ High-flow drain (¾")
- ▶ Handle rotates up to 270°



NPT New

Model#	Connect.	Weight	
		lb	kg
BD075N	¾"	1.1	0.5
BD100N	1"	1.6	0.7
BD125N	1¼"	2.2	1.0
BD150N	1½"	3.0	1.4
BD200N	2"	3.0	1.4



Sweat

Model#	Connect.	Weight	
		lb	kg
BD075S	¾"	1.0	0.4
BD100S	1"	1.3	0.6
BD125S	1¼"	2.0	0.9
BD150S	1½"	2.9	1.3
BD200S	2"	2.8	1.3



New

Press

Model#	Connect.	Weight	
		lb	kg
BD075P	¾"	1.0	0.5
BD100P	1"	1.4	0.6
BD125P	1¼"	2.1	1.0
BD150P	1½"	2.9	1.3
BD200P	2"	3.0	1.4



New

FLOW REGULATORS



FIXED



UNION



INDUSTRIAL



SPECIALIZED

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



FIXED

Features

- ▶ Made of lead-free nickel-plated brass or 316 stainless steel
- ▶ Available in five formats and more than 30 flow rates



Drinking Water
NSF/ANSI 61
NSF/ANSI 372 LLC



Model#	Connect.	Height	GPM	Gallons per Minute (GPM)																												Weight (oz)						
				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†	¾" FNPT	1¾"	0.13 to 4	•	•	•	•	•	•	•	•	•	•	•	•	•																					3.00	
B†	½" FNPT	2"	0.25 to 9			•		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•															3.60
C†	¾" FNPT	2¼"	0.25 to 30			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	6.00
X†	1" FNPT	2¾"	2.5 to 30							•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	10.8	
Z†	1½" FNPT	2¾"	5 to 30																	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	22.6	
SSA*	¾" FNPT	1¾"	0.13 to 4	•	•	•	•	•	•	•	•	•	•	•	•	•	•																				2.90	
SSB*	½" FNPT	2"	0.25 to 9			•		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•															3.30
SSC*	¾" FNPT	2¼"	0.25 to 30			•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	5.50	
SSX*	1" FNPT	2¾"	2.5 to 30							•		•		•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	9.00	
SSZ*	1½" FNPT	2¾"	5.0 to 30																	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	21.0	

† Made of lead-free nickel-plated brass
* Made of 316 stainless steel

UNION

Features

- ▶ Made of lead-free nickel-plated brass
- ▶ Available in four formats and more than 30 flow rates



Drinking Water
NSF/ANSI 61
NSF/ANSI 372 LLC



Model#	Connect.	Height	GPM	Gallons per Minute (GPM)																												Weight (oz)					
				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	¾" FNPT	1½"	0.13 to 4	•	•	•	•	•	•	•	•	•	•	•		•																					0.02
BU	½" FNPT	2½"	0.25 to 9			•		•	•	•	•	•	•	•	•	•	•	•	•		•	•	•														4.00
CU	¾" FNPT	2¼"	0.25 to 30			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	6.40
XU	1" FNPT	2¾"	2.5 to 30						•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	12.8	

Custom requests are welcome (OEM). Contact us at info@calefactio.com

INDUSTRIAL

Features

- ▶ Made of lead-free nickel-plated brass
- ▶ Available in five formats and more than 30 flow rates



Model#	Connection	Height	GPM	Gallons per Minute (GPM)																										Weight (oz)											
				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
T	1½"×1½"MNPT	3"	5 to 30	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•																						13
F	2"×2"MNPT	3"	10 to 30							•	•	•	•	•	•	•	•	•	•																						19
H	2½"×2½"MNPT	4"	30 to 90																	•	•	•	•	•	•	•	•	•	•	•	•	•	•							32	
K	3"×3"MNPT	4"	30 to 120																	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	51	

SPECIALIZED

For irrigation

Model#	Connection	Height	GPM	Gallons per Minute (GPM)																Weight (oz)			
				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



ASME EXPANSION TANKS



ASME EXPANSION TANKS



**EXPAN
VIEW**

HEATING



Optional

New



Service Valve for Vertical Tank

More details
on page 52.

POTABLE



HYDRO-PNEUMATICS



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



HEATING



AL SERIES

- Replaceable bladder
- Bottom connection

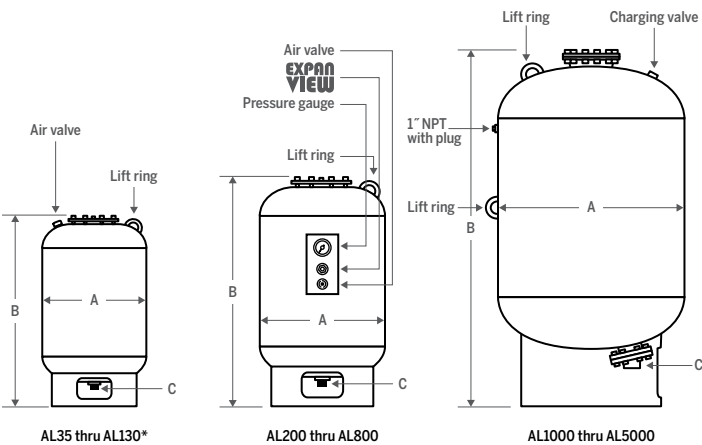
Features

- 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

*Pressure gauge available as an option.



ExpanView tank integrity indicator which changes color in the presence of a leak.

Optional **New**

Service Valve for Vertical Tank
More details on page 52.



Model AL35 thru AL130 shown

Model AL200 thru AL800 shown

Model#	Volume		Dimension				NPT Connection		Weight	
			A		B		C			
	gal	L	in	mm	in	mm	in	mm	lb	kg
AL35*	10	38	12	305	28	711	1	25	54	24
AL50*	13	50	12	305	36	914	1	25	67	30
AL85*	23	87	16	406	37	940	1	25	90	41
AL130*	35	132	16	406	50	1270	1	25	115	52
AL200*	53	200	24	610	43	1092	1½	38	210	95
AL300*	79	299	24	610	55	1397	1½	38	225	102
AL400	106	401	30	762	49	1245	1½	38	300	136
AL500	132	500	30	762	57	1448	2	50	335	152
AL600	158	598	30	762	65	1651	2	50	360	163
AL800	211	798	32	813	76	1930	2	50	475	215
AL1000	264	999	36	914	87	2210	3	76	552	250
AL1200	317	1200	36	914	98	2489	3	76	679	308
AL1400	370	1400	36	914	111	2819	3	76	688	312
AL1600	422	1597	48	1219	84	2134	3	76	1046	474
AL2000	528	1999	48	1219	86	2184	3	76	1150	522
AL2500	660	2498	48	1219	104	2642	4	102	1444	655
AL3000-L	792	2998	48	1219	124	3150	4	102	1658	752
AL3000-S	792	2998	60	1524	83	2108	4	102	1868	847
AL4000	1056	3997	60	1524	105	2667	4	102	2238	1015
AL5000	1320	4996	60	1524	128	3251	4	102	3768	1709

*Service valve for vertical tank available as an option



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.

HEATING



ALT SERIES

Replaceable bladder

Top connection

Features

- ▶ 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

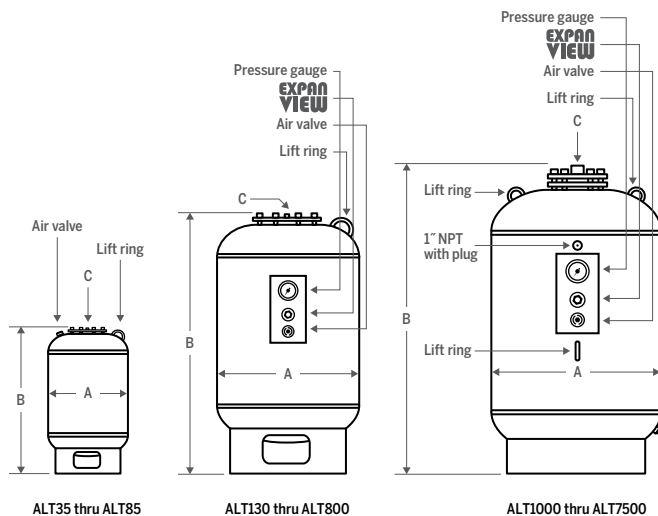
- ▶ Exterior finish in painted primer
- ▶ Maximum temperature 240°F (115°C)
- ▶ Air precharged at factory at 12 PSI (83 kPa)
- ▶ Service pressure 125 PSI (862 kPa)
- ▶ Maximum pressure of 150, 175, 250 and 300 PSI also available



Model ALT35 thru ALT85 shown



Model ALT130 thru ALT800 shown



ALT35 thru ALT85

ALT130 thru ALT800

ALT1000 thru ALT7500

Model#	Volume		Dimension				NPT Connection		Weight	
			A		B		C			
	gal	L	in	mm	in	mm	in	mm	lb	kg
ALT35*	10	38	12	305	28	711	1	25	54	24
ALT50*	13	50	12	305	36	914	1	25	67	30
ALT85*	23	87	16	406	37	940	1	25	90	41
ALT130*	35	132	20	508	37	940	¾	19	125	57
ALT200*	53	200	24	610	43	1092	¾	19	210	95
ALT300*	79	299	24	610	55	1397	¾	19	225	102
ALT400*	106	401	30	762	49	1245	¾	19	300	136
ALT500*	132	500	30	762	57	1448	¾	19	335	152
ALT600*	158	598	30	762	65	1651	¾	19	360	163
ALT800*	211	798	32	813	76	1930	¾	19	475	215
ALT1000*	264	999	36	914	87	2210	1½	38	552	250
ALT1200*	317	1200	36	914	98	2489	1½	38	679	308
ALT1400*	370	1400	36	914	111	2819	1½	38	688	312
ALT1600*	422	1597	48	1219	84	2134	1½	38	1046	474
ALT2000*	528	1999	48	1219	86	2184	1½	38	1150	522
ALT2500	660	2498	48	1219	104	2642	2	51	1444	655
ALT3000-L	792	2998	48	1219	124	3150	2	51	1658	752
ALT3000-S	792	2998	60	1524	83	2108	2	51	1868	847
ALT3500	926	3505	54	1372	83	2108	2	51	2369	1075
ALT4000	1056	3997	60	1524	105	2667	2	51	2238	1015
ALT5000	1320	4996	60	1524	128	3251	2	51	2617	1187
ALT7500	1981	7499	72	1829	131	3327	3	76	3768	1709

*Service valve for vertical tank available as an option

EXPAVIEW

ExpanView tank integrity indicator which changes color in the presence of a leak.

Optional

New

Service Valve for Vertical Tank
More details on page 52.



ExpanView tank integrity indicator which changes color in the presence of a leak.



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.

HEATING



OT SERIES

- Fixed bladder
- Top connection

Features

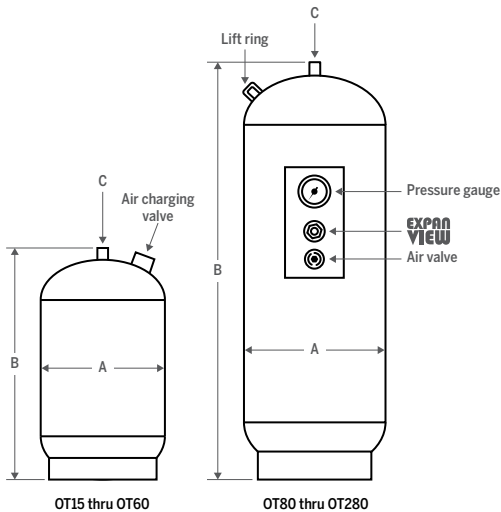
- ▶ Fixed bladder in ultra resistant EPDM
- ▶ Design conforms to ASME, section VIII
- ▶ Air precharged at factory; pressure adjustable on site
- ▶ Water remains permanently separated from air for the duration of the useful life of the installation

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-180: 150 PSI (1034 kPa)
 - Models OT-200 thru OT-280: 125 PSI (862 kPa)
- ▶ Maximum pressure of 175, 250 and 300 PSI also available



Modèle OT200 à OT280 illustré



Model#	Total Volume		Acceptance Volume		Dimension				NPT Connection		Weight	
					A		B		C			
	gal	L	gal	L	in	mm	in	mm	in	mm	lb	kg
OT15*	7.8	30	6.3	24	12	305	21.5	533	¾	19	40	16.2
OT20*	11	42	8.8	33	12	305	26.5	660	¾	19	47	18.3
OT40*	25	95	20.2	76	16	406	35	885	1	25	78	30.7
OT60*	35	132	28	106	16	406	46	1165	1	25	96	37.7
OT80*	45	170	36	136	20	508	38	965	1	25	148	67
OT100*	60	227	48.5	184	20	508	49	1245	1	25	175	79
OT120*	70	265	56.5	214	24	610	46	1168	1½	38	259	117
OT144*	80	303	65	246	24	610	49	1245	1½	38	268	122
OT180*	90	341	73	276	24	610	52	1321	1½	38	283	128
OT200*	115	435	93	352	24	610	66	1676	1½	38	325	147
OT240*	140	530	113.5	430	24	610	78	1981	1½	38	362	164
OT260	158	598	128	485	30	762	63	1600	1½	38	591	268
OT280	211	799	171	647	30	762	81	2032	1½	38	752	341

*Service valve for vertical tank available as an option

Optional

New

Service Valve for Vertical Tank
More details on page 52.

ExpanView tank integrity indicator which changes color in the presence of a leak.



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.

HEATING



NA SERIES

Without bladder

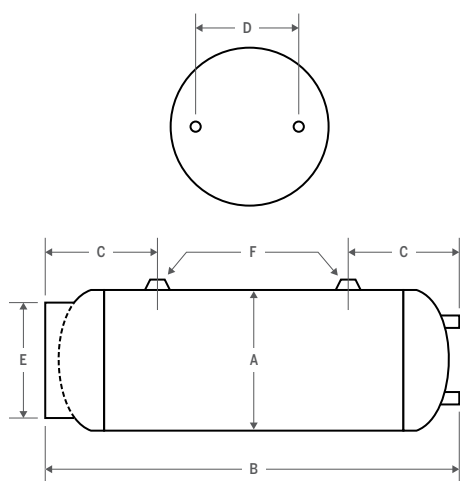
Without membrane

Features

- ▶ 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



*The 505 and 525 gallon tanks are not supplied with a base ring.

†The 525 gallon tanks have an 11" x 15" footprint.

Model	Volume		Dimension												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	11½	283	20	508	18	457	1	25	218	99
24NA72	135	511	24	610	72	1829	11½	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.d.	n.d.	1½	38	810	367
42NA96	525†	1987	42	1067	96	2438	18	457	28	711	n.d.	n.d.	1½	38	895	406



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.

POTABLE



BFA SERIES

Fixed bladder **Top connection**

Features

- ▶ 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

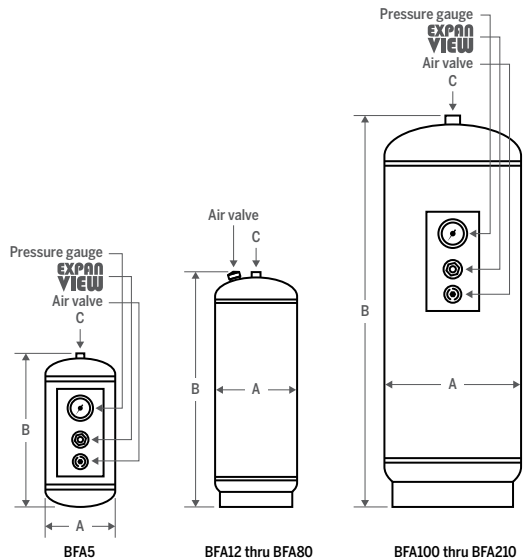
- ▶ Stainless steel connection
- ▶ Exterior finish in painted primer
- ▶ Maximum temperature 240°F (115°C)
- ▶ Air precharged at factory at 40 PSI (275 kPa)
- ▶ Service pressure 150 PSI (1034 kPa)
- ▶ Maximum pressure of 175, 250 and 300 PSI also available



Model BFA12 thru BFA80 shown



Model BFA100 thru BFA210 shown



Model#	Total Volume		Acceptance Volume		Dimension				NPT Connection		Weight	
	gal	L	gal	L	A		B		C		lb	kg
BFA5*	3.5	13	2.3	9	10	254	14	356	¾	19	22	10
BFA12*	5	19	3.3	12	12	305	15	380	¾	19	31	14
BFA20*	8	30	5.3	20	12	305	21	535	¾	19	40	18
BFA30*	15	57	10	38	16	406	25	630	1	25	59	27
BFA42*	22	83	14.5	55	16	406	32	810	1	25	72	33
BFA60*	26	98	17.5	66	16	406	35	885	1	25	78	35
BFA80*	35	132	23.5	89	16	406	46	1165	1	25	97	44
BFA100*	45	170	30	114	20	508	38	965	1	25	148	67
BFA125*	60	227	40	151	20	508	49	1245	1	25	175	79
BFA160*	70	265	47	178	24	610	46	1168	1½	38	259	117
BFA180*	80	303	53	201	24	610	49	1245	1½	38	268	122
BFA210*	90	341	60	227	24	610	52	1321	1½	38	283	128

*Service valve for vertical tank available as an option

Optional **New**

Service Valve for Vertical Tank
More details on page 52.

ExpanView tank integrity indicator which changes color in the presence of a leak.



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.

POTABLE



TXA SERIES

Replaceable bladder

Bottom connection

Features

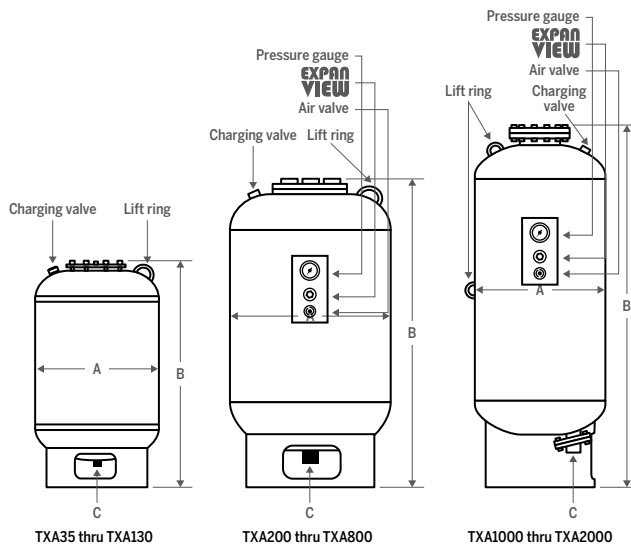
- ▶ Replaceable butyl bladder ultra resistant CSA approved conforms to the NSF61 standard
- ▶ Construction conforms to ASME Section VIII
- ▶ Water remains permanently separated from air for the entire duration of the life of the tank
- ▶ Air precharged at factory; pressure adjustable on site

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 TXA1000 thru TXA2000 shown



Model#	Total Volume		Dimension				NPT Connection		Weight	
			A		B		C			
	gal	L	in	mm	in	mm	in	mm	lb	kg
TXA35*	10	38	12	305	28	711	1	25	54	24
TXA50*	13	49	12	305	36	914	1	25	67	30
TXA85*	23	87	16	406	37	940	1	25	90	41
TXA130*	35	132	16	406	50	1283	1	25	115	52
TXA200*	53	201	24	610	43	1092	1½	38	210	95
TXA300*	79	299	24	610	55	1397	1½	38	225	102
TXA400*	106	401	30	762	49	1245	1½	38	300	136
TXA500	132	500	30	762	57	1448	2	51	335	152
TXA600	158	598	30	762	65	1651	2	51	360	163
TXA800	211	799	32	813	76	1930	2	51	475	215
TXA1000	264	999	36	914	87	2210	3	76	552	250
TXA1200	317	1200	36	914	98	2489	3	76	679	308
TXA1400	370	1401	36	914	111	2819	3	76	688	312
TXA1600	422	1597	48	1219	84	2134	3	76	1046	474
TXA2000	528	1999	48	1219	96	2438	3	76	1150	522

*Service valve for vertical tank available as an option

EXPAVIEW

ExpanView tank integrity indicator which changes color in the presence of a leak.

Optional

New

Service Valve for Vertical Tank

More details on page 52.



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.

POTABLE



FTTE-C SERIES

Replaceable bladder Flow through

Features

- ▶ Shell: carbon steel
- ▶ Heads: carbon steel
- ▶ Connections: stainless steel
- ▶ 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

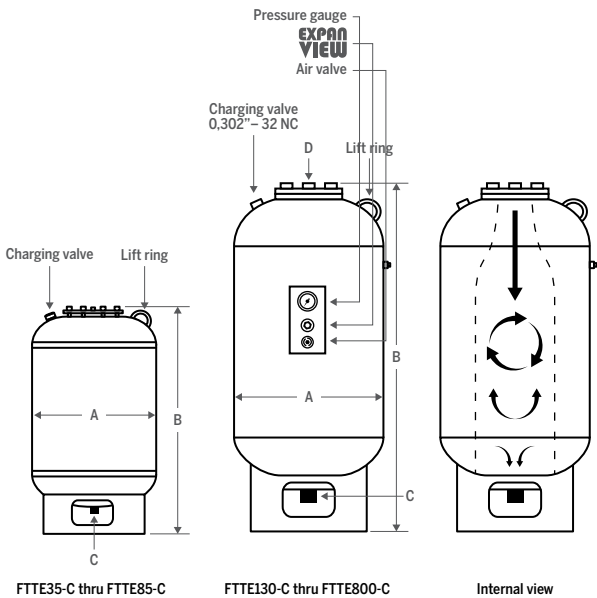
Fonctionnement

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.



Model FTTE130-C thru FTTE800-C shown



Model#	Volume		Dimension				Connection				Weight	
			A		B		C		D			
	gal	L	in	mm	in	mm	in	mm	in	mm	lb	kg
FTTE35-C*	10	38	12	305	23.5	584	1	25	1	25	54	24
FTTE50-C*	13	50	14	356	24	610	1	25	1	25	67	30
FTTE85-C*	23	87	16	406	37	940	1	25	1	25	90	41
FTTE130-C*	35	132	20	508	37	940	1	25	1	25	115	52
FTTE200-C*	53	201	24	610	43	1092	1½	38	1½	38	210	95
FTTE300-C*	79	299	24	610	55	1397	1½	38	1½	38	225	102
FTTE400-C*	106	401	30	762	49	1245	1½	38	1½	38	300	136
FTTE500-C	132	500	30	762	57	1448	2	51	2	51	335	152
FTTE600-C	158	598	30	762	65	1651	2	51	2	51	360	163
FTTE800-C	211	799	32	813	76	1930	2	51	2	51	475	215

*Service valve for vertical tank available as an option

OptionalNew

Service Valve for Vertical Tank

More details on page 52.

EXPAN VIEW

ExpanView tank integrity indicator which changes color in the presence of a leak.



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.

HYDRO-PNEUMATICS



AFX SERIES

Replaceable bladder

Bottom connection

Features

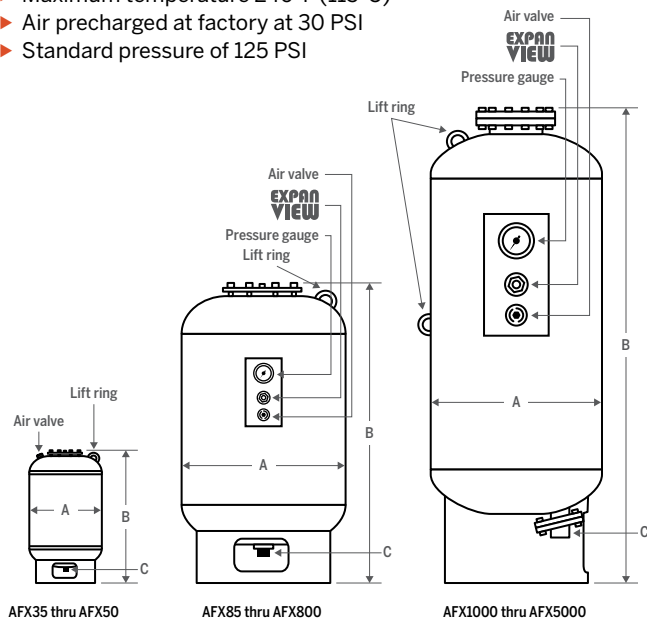
- ▶ Ultra resistant butyl bladder, NSF approved
- ▶ Design conforms to ASME, section VIII
- ▶ Air precharged at factory; pressure adjustable on site
- ▶ Ideal for booster systems
- ▶ Storage tank for drinking and well water

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 AFX85 thru AFX800 shown



AFX35 thru AFX50

AFX85 thru AFX800

AFX1000 thru AFX5000

**EXPAN
VIEW**

ExpanView tank integrity indicator which changes color in the presence of a leak.

Optional

New

**Service Valve
for Vertical Tank**

More details on
page 52.



Model#	Total Volume		Dimension				NPT Connect.		Weight	
			A		B		C			
	gal	L	in	mm	in	mm	in	mm	lb	kg
AFX35*	10	38	12	305	23.5	584	¾	19	54	24
AFX50*	13	49	14	356	24	610	¾	19	67	30
AFX85*	23	87	16	406	37	940	1	25	90	41
AFX130*	35	133	20	508	37	940	1	25	115	52
AFX200*	53	201	24	610	43	1092	1½	38	210	95
AFX300*	79	299	24	610	55	1397	1½	38	225	102
AFX400*	106	401	30	762	49	1245	1½	38	300	136
AFX500	132	500	30	762	57	1448	2	51	335	152
AFX600	158	598	30	762	65	1651	2	51	360	163
AFX800	211	799	32	813	76	1930	2	51	475	215
AFX1000	264	999	36	914	82	2083	3	76	552	250
AFX1200	317	1200	36	914	94	2387	3	76	679	308
AFX1400	370	1401	36	914	107	2718	3	76	688	312
AFX1600	422	1597	48	1219	84	2133	3	76	1046	474
AFX2000	528	1999	48	1219	97	2464	3	76	1150	522
AFX2500	660	2498	48	1219	116	2946	4	102	1444	655
AFX3000-L	792	2998	48	1219	134	3404	4	102	1658	752
AFX3000-S	792	2998	60	1524	97	2464	4	102	1868	847
AFX4000	1056	3997	60	1524	123	3124	4	102	2238	1015
AFX5000	1320	4997	60	1524	146	3708	4	102	3768	1709

*Service valve for vertical tank available as an option



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.

HYDRO-PNEUMATICS



SSA SERIES

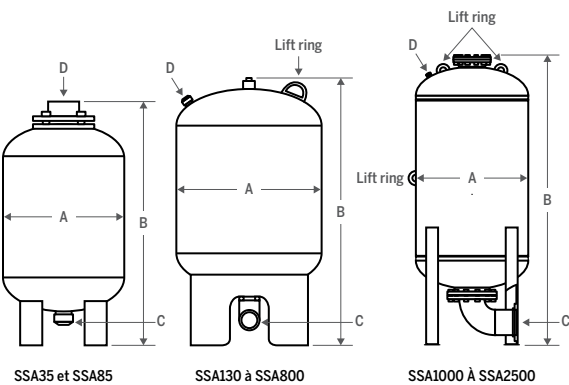
- Replaceable bladder
- Shock and surge arrestors

Features

- ▶ 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 SSA35 and SSA50
- ▶ With large water system connections designed to quickly accept water surge pressures, with minimal pressure drop

Technical Specifications

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



SSA35 et SSA85

SSA130 à SSA800

SSA1000 à SSA2500

Bottom connection for all models except SSA35 and SSA50

Model#	Volume		Dimension								Weight			
			A		B		C		Charging Valve D	E				
	gal	L	in	mm	in	mm	in	mm		in	mm	lb	kg	
SSA35	10	38	12	305	26	660	2½	64	0.302" – 32 NC 7.7 mm – 32 NC	9	229	55	25	
SSA50	13	49	14	356	26	660	2½	64		10	254	65	30	
SSA85	23	87	16	406	30½	775	3	76		12	305	134	61	
SSA130	35	132	20	508	30½	775	3	76		16	406	175	79	
SSA200	53	201	24	610	46½	1181	4	102		20	508	250	113	
SSA300	79	299	24	610	58½	1486	4	102		20	508	341	155	
SSA400	106	401	30	762	52½	1334	4	102		24	610	430	195	
SSA500	132	500	30	762	63	1600	6	152		24	610	596	270	
SSA600	158	598	30	762	71	1803	6	152		24	610	653	296	
SSA700	185	700	30	762	81½	2070	6	152		24	610	726	329	
SSA800	211	799	32	813	82	2083	6	152		26	660	902	409	
SSA1000	264	999	36	914	85	2159	10	254		–	–	1147	520	
SSA1200	317	1199	36	914	107	2718	10	254		–	–	1303	591	
SSA1400	370	1401	36	914	119	3023	10	254		–	–	1447	656	
SSA1600	422	1597	48	1219	92	2337	10	254		–	–	1888	856	
SSA2000	528	1999	48	1219	105	2667	10	254		–	–	2105	955	
SSA2500	660	2498	48	1219	122	3099	10	254		–	–	2425	1100	

Note: Available with mounting clips.



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.

HYDRO-PNEUMATICS



ABM SERIES

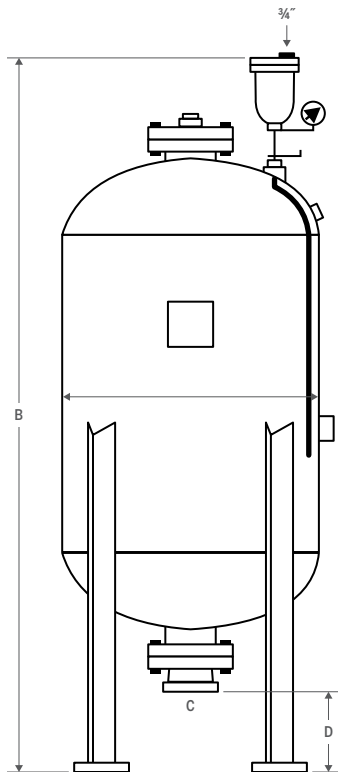
- Replaceable bladder
- Municipal hammer arrestors

Features

- ▶ 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



Model#	Total Volume		Dimension								Weight	
			A		B		C		D			
	gal	L	in	mm	in	mm	in	mm	in	mm	lb	kg
ABM160	43	163	24	610	60	1524	6	152	12	305	250	114
ABM250	66	250	24	610	72	1829	6	152	12	305	300	136
ABM400	106	401	24	610	98	2489	8	203	16	406	365	166
ABM600	158	598	30	760	96	2438	8	203	16	406	590	268
ABM1000	264	999	36	914	101	2565	10	254	24	610	900	409
ABM1600	423	1601	48	1220	105	2667	12	305	30	760	1610	731
ABM2000	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.

NON-CODED HYDRO-PNEUMATICS

FX SERIES

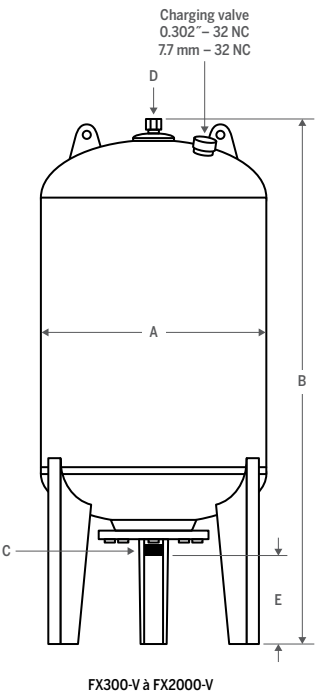
Replaceable bladder NON-ASME Expansion tank

Features

- ▶ NON-ASME Expansion tank
- ▶ Ultra resistant EPDM 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 EPDM
- ▶ Stainless steel connection



Model#	Volume		Dimension				Connection				E		Weight	
			A		B		C		D					
	gal	L	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg
FX300-V	80	303	25	635	55	1397	1½	38	½	13	8.5	216	141	70.0
FX500-V	132	500	31	787	61	1549	1½	38	½	13	9	229	265	120.2



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"
SAD60	60"



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"



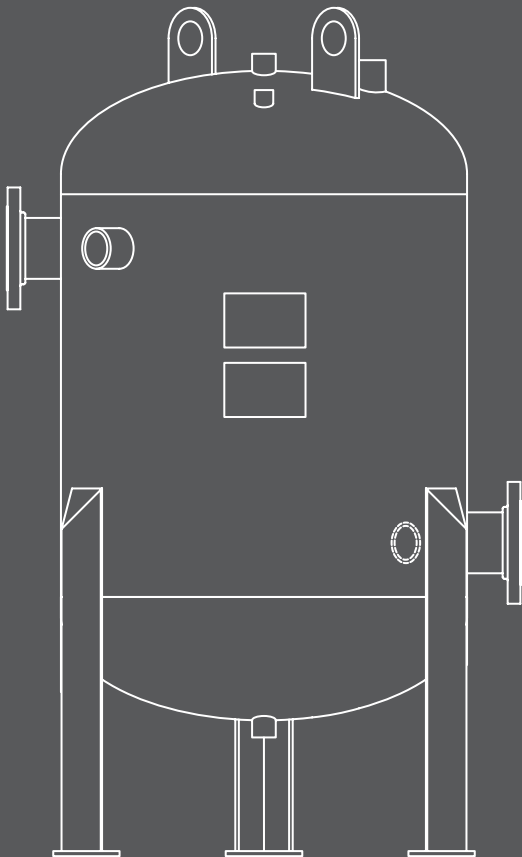
ASME SPECIALIZED TANKS



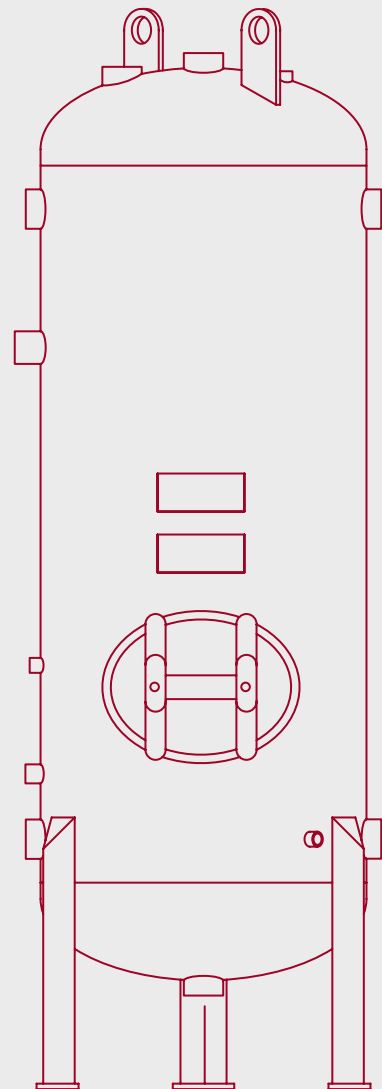
ASME SPECIALIZED TANKS



**ASME STORAGE TANK FOR CHILLED
WATER AND GLYCOL**



**ASME DOMESTIC HOT WATER STORAGE
TANK WITH HYDROPHOBIC CEMENT**

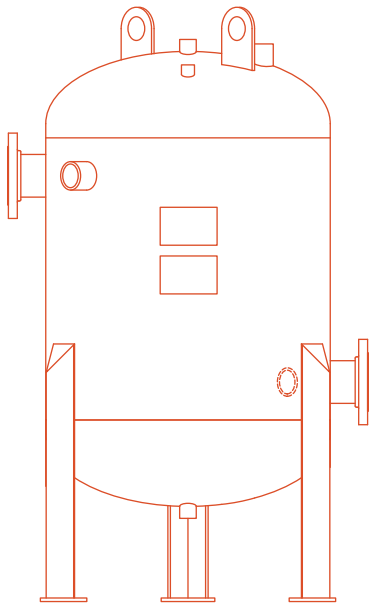


ASME SPECIALIZED TANKS

Technical 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 CBT



Features

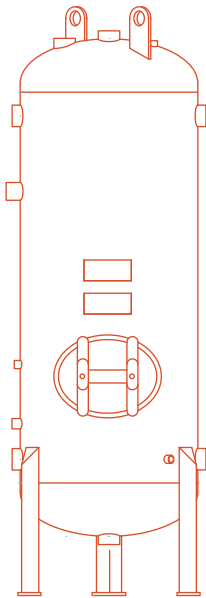
- ▶ Lorem ipsum
- ▶ Lorem ipsum

Options

- ▶ Epoxy coated interior
- ▶ Concrete coated interior
- ▶ Horizontal with steel “floor” saddles

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

ASME DOMESTIC HOT WATER STORAGE TANK WITH HYDROPHOBIC CEMENT STA



Features

- ▶ 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

ASME BUFFER TANK HBT



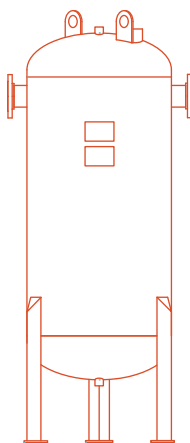
Features

- ▶ 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

Options

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

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



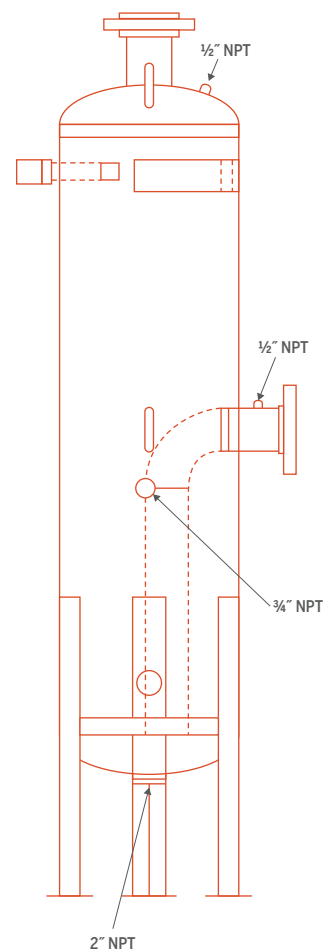
ASME BLOWDOWN TANK EBDT



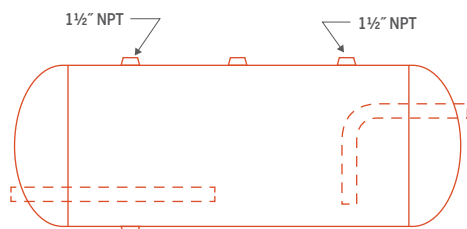
Technical Specifications

- ▶ Conforms to chapter VIII of the ASME code
- ▶ Exterior painted primer
- ▶ Head and shell from 3/8 in material
- ▶ Design temperature 450°F
- ▶ Operating pressure 125 psig

Model#	Description
EBDT	Available from 14" to 72" diameter



ASME FLASH TANK EFTA



Construction

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

Model#	Description
EFTA	Available from 10" to 36" diameter

Conduit d'aspersion, tuyaux de barbotage et trous d'inspections sont disponibles comme équipement en option.

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

ASME AIR, DIRT AND HYDRAULIC SEPARATORS



ASME AIR, DIRT AND HYDRAULIC SEPARATORS



AIR SEPARATORS

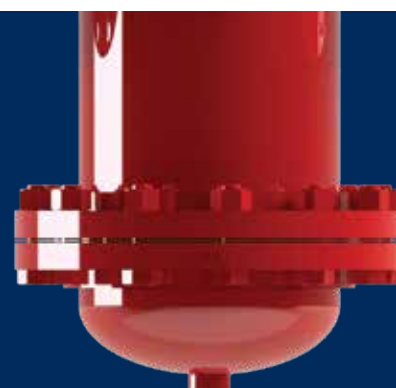


AIR AND DIRT SEPARATORS
WITH MAGNET

HYDRAULIC
SEPARATORS



AIR AND DIRT
SEPARATORS



DIRT
SEPARATORS



TANGENTIAL AIR SEPARATORS



ESPA

Without strainer

Features

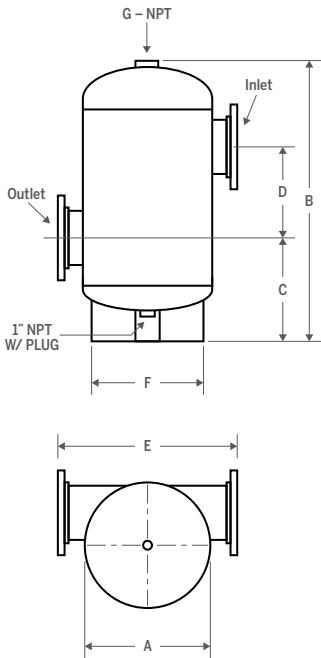
- Design conforms to ASME, section VIII

Technical Specifications

- Carbonized steel housing
- Black oxide primer
- Maximum design temperature: 232°C (450°F)
- Maximum design pressure: 125 PSI
- Pressure of 150, 175, 200, 250 and 300 PSI also available



Industrial vent (MV15)
available in option.



Model#	Max GPM	Connect.		Type	Dimension														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
ESPA2	56	2	51	NPT	12	305	22½	572	9	229	8½	216	16%	422	9½	241	1¼	32	34	15
ESPA2.5	90	2½	64	NPT	12	305	22½	572	9	229	8½	216	16%	422	9½	241	1¼	32	37	17
ESPA3	190	3	76	CLAMPED	12	305	25	635	9¾	248	8	203	19%	502	9½	241	1¼	32	45	20
ESPA4	300	4	102	CLAMPED	14	356	32	813	12⅛	308	10%	273	21%	552	11½	292	1½	38	80	36
ESPA5	530	5	127	CLAMPED	14	356	32	813	12⅛	308	10%	273	21%	552	11½	292	1½	38	125	57
ESPA6	850	6	152	CLAMPED	20	508	44	1118	16¼	413	14½	368	28	711	18	457	2	51	175	79
ESPA8	1900	8	203	CLAMPED	20	508	44	1118	16¼	413	14½	368	28	711	18	457	2	51	210	95
ESPA10	3600	10	254	CLAMPED	30	762	60½	1537	21½	546	20	508	41	1041	24	610	2	51	460	209
ESPA12	4800	12	305	CLAMPED	30	762	60½	1537	21½	546	20	508	41	1041	24	610	2	51	577	262
ESPA14	6100	14	356	CLAMPED	36	914	78	1981	24½	622	31½	800	46%	1178	30	762	2	51	850	386
ESPA16	8000	16	406	CLAMPED	48	1219	108	2743	38	965	40	1016	60	1524	38	965	2	51	1858	843
ESPA18	9700	18	457	CLAMPED	54	1371	124	3150	41	1041	50	1270	66	1676	44	1118	2	51	2490	1129
ESPA20	12000	20	508	CLAMPED	60	1524	137	3480	42½	1080	60	1524	72	1829	50	1270	2	51	3346	1518
ESPA22	15000	22	559	CLAMPED	66	1676	150	3810	46	1168	66	1676	78	1981	56	1422	2	51	3879	1759
ESPA24	17000	24	610	CLAMPED	66	1676	150	3810	46	1168	66	1676	80	1270	56	1422	2	51	4211	1910

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

TANGENTIAL AIR SEPARATORS WITH STRAINER



ESPA-S

With strainer

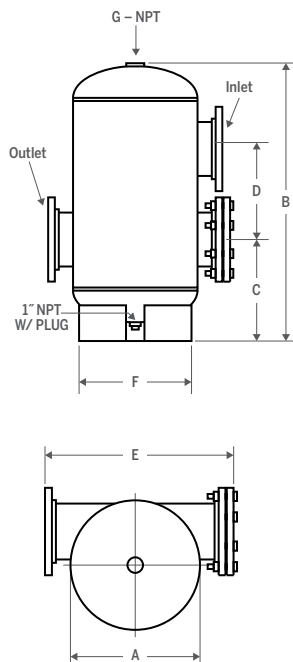
Features

- ▶ Design conforms to ASME, section VIII
- ▶ With strainer allowing debris retention

Technical Specifications

- ▶ Carbonized steel housing
- ▶ Black oxide primer
- ▶ Maximum design temperature: 232°C (450°F)
- ▶ Maximum design pressure: 125 PSI
- ▶ Pressure of 150, 175, 200, 250 and 300 PSI also available

Industrial vent (MV15)
available in option.



Model#	Max GPM	Connect.		Type	Dimension														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
ESPA2-S	56	2	51	NPT	12	305	22½	572	9	229	8½	216	16½	422	9½	241	1¼	32	34	15
ESPA2.5-S	90	2½	64	NPT	12	305	22½	572	9	229	8½	216	16½	422	9½	241	1¼	32	37	17
ESPA3-S	190	3	76	CLAMPED	12	305	25	635	9 ¾	248	8	203	19¾	502	9½	241	1¼	32	45	20
ESPA4-S	300	4	102	CLAMPED	14	356	32	813	12½	308	10¾	273	21¼	552	11½	292	1½	38	80	36
ESPA5-S	530	5	127	CLAMPED	14	356	32	813	12½	308	10¾	273	21¼	552	11½	292	1½	38	125	57
ESPA6-S	850	6	152	CLAMPED	20	508	44	1118	16¼	413	14½	368	28	711	18	457	2	51	175	79
ESPA8-S	1900	8	203	CLAMPED	20	508	44	1118	16¼	413	14½	368	28	711	18	457	2	51	210	95
ESPA10-S	3600	10	254	CLAMPED	30	762	60½	1537	21½	546	20	508	41	1041	24	610	2	51	460	209
ESPA12-S	4800	12	305	CLAMPED	30	762	60½	1537	21½	546	20	508	41	1041	24	610	2	51	577	262
ESPA14-S	6100	14	356	CLAMPED	36	914	78	1981	24½	622	31½	800	46¾	1178	30	762	2	51	850	386
ESPA16-S	8000	16	406	CLAMPED	48	1219	108	2743	38	965	40	1016	60	1524	38	965	2	51	1858	843
ESPA18-S	9700	18	457	CLAMPED	54	1371	124	3150	41	1041	50	1270	66	1676	44	1118	2	51	2490	1129
ESPA20-S	12000	20	508	CLAMPED	60	1524	137	3480	42½	1080	60	1524	72	1829	50	1270	2	51	3346	1518
ESPA22-S	15000	22	559	CLAMPED	66	1676	150	3810	46	1168	66	1676	78	1981	56	1422	2	51	3879	1759
ESPA24-S	17000	24	610	CLAMPED	66	1676	150	3810	46	1168	66	1676	80	2032	56	1422	2	51	4211	1910

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

COALESCING AIR SEPARATORS



EWVAA

Features

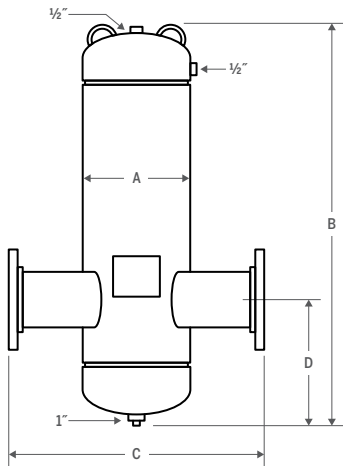
- ▶ Design conforms to ASME, section VIII
- ▶ Non-replaceable media

Technical Specifications

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



Industrial vent (MV15)
available in option.



Model#	Connection		Maximum Flow		Dimension								Weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAA2	2	51	69	261	4	102	18½	470	15¼	387	7	178	35	16
EWVAA2-NPT	2	51	69	261	4	102	18½	470	10¾	264	7	178	26	12
EWVAA2.5	2½	64	108	409	5	127	18½	470	15¼	400	7	178	61	28
EWVAA2.5-NPT	2½	64	108	409	5	127	18½	470	11	279	7	178	38	17
EWVAA3	3	76	144	545	6	152	23	584	20¼	514	8½	216	71	32
EWVAA3-NPT	3	76	144	545	6	152	23	584	12½	318	8½	216	56	25
EWVAA4	4	102	255	965	8	203	23	584	20¾	524	8½	216	105	48
EWVAA5	5	127	398	1507	10	254	31	787	27¾	705	11½	292	92	42
EWVAA6	6	152	570	2158	12	305	31	787	27¾	705	11½	292	129	59
EWVAA8	8	203	945	3577	16	406	36	914	33¾	854	11½	292	225	102
EWVAA10	10	254	1440	5451	20	508	46	1168	37½	953	13½	343	375	170
EWVAA12	12	305	2100	7949	24	610	54	1372	42½	1080	16	406	564	256

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

COALESCING AIR SEPARATORS



EWVAA-HV

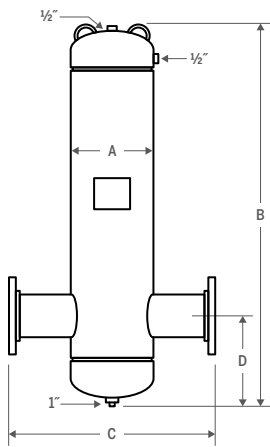
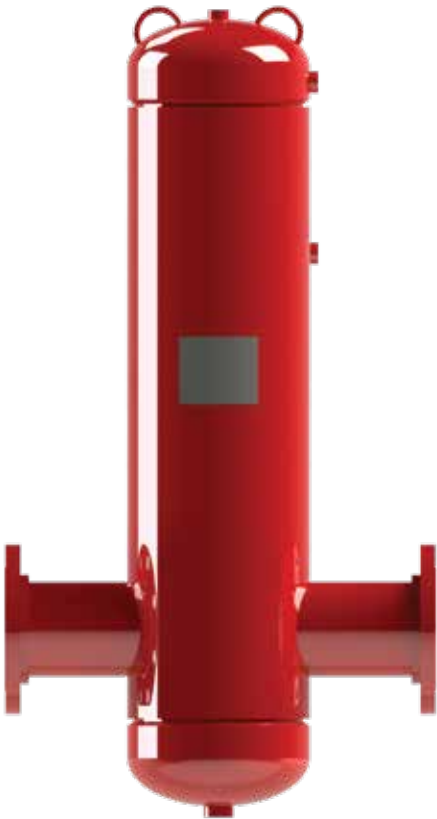
High velocity

Features

- Design conforms to ASME, section VIII
- Non-replaceable media

Technical Specifications

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



Model#	Connection		Maximum Flow		Dimension								Weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAA2-HV	2	51	105	397	4	102	23	584	15¼	387	6½	165	40	18
EWVAA2-HV-NPT	2	51	105	397	4	102	23	584	10¾	264	6½	165	31	14
EWVAA2.5-HV	2½	64	155	587	5	127	23	584	15¾	400	6½	165	68	31
EWVAA2.5-HV-NPT	2½	64	155	587	5	127	23	584	11	279	6½	165	45	20
EWVAA3-HV	3	76	225	852	6	152	30	762	20¾	514	9	229	82	37
EWVAA3-HV-NPT	3	76	225	852	6	152	30	762	12½	318	9	229	68	31
EWVAA4-HV	4	102	405	1533	8	203	30	762	20¾	524	9	229	122	55
EWVAA5-HV	5	127	630	2385	10	254	41	1041	27¾	705	11½	292	128	58
EWVAA6-HV	6	152	910	3445	12	305	41	1041	27¾	705	11½	292	140	64
EWVAA8-HV	8	203	1610	6094	16	406	49	1245	33¾	854	11½	292	245	111
EWVAA10-HV	10	254	2450	9274	20	508	60	1524	37½	953	14	356	407	185
EWVAA12-HV	12	305	3500	13249	24	610	71	1803	42½	1080	16	406	612	278

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

COALESCING AIR AND DIRT SEPARATORS



EWVA

Replaceable media

Feature

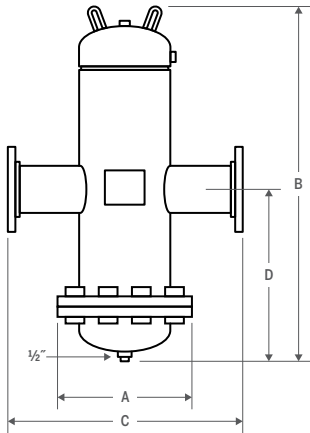
- Design conforms to ASME, section VIII
- The media can be removed for maintenance or replacement

Technical Specifications

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



Industrial vent (MV15)
available in option.



Model#	Connection		Flow		Dimension								Weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVA2	2	51	69	261	9	229	23	584	15¼	387	11½	292	100	45
EWVA2-NPT	2	51	69	261	9	229	23	584	9	227	11½	292	90	41
EWVA2.5	2½	64	108	409	10	254	23	584	15¾	400	11½	292	125	57
EWVA2.5-NPT	2½	64	108	409	10	254	23	584	10½	267	11½	292	115	52
EWVA3	3	76	144	545	11	279	29	737	20¼	514	14½	368	150	68
EWVA3-NPT	3	76	144	545	11	279	29	737	12½	318	14½	368	130	59
EWVA4	4	102	255	965	13½	343	29	737	20¾	524	14½	368	250	113
EWVA5	5	127	398	1507	16	406	39	991	27¾	705	19½	495	310	141
EWVA6	6	152	570	2158	19	483	39	991	27¾	705	19½	495	375	170
EWVA8	8	203	945	3577	23½	597	49	1245	35¾	905	24½	622	700	318
EWVA10	10	254	1440	5451	27½	699	65	1651	37½	953	32½	826	1000	454
EWVA12	12	305	2100	7949	32	813	76	1930	42½	1080	38	965	1500	680

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

COALESCING AIR AND DIRT SEPARATORS



EWVA-HV

High velocity Replaceable media

Feature

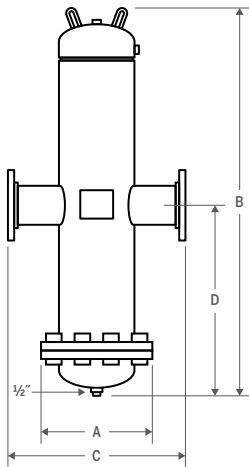
- ▶ Design conforms to ASME, section VIII
- ▶ The media can be removed for maintenance or replacement

Technical Specifications

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



Industrial vent (MV15)
available in option.



Model#	Connection		Flow		Dimension								Weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVA2-HV	2	51	105	397	9	229	33	838	15¼	387	16½	419	110	50
EWVA2.5-HV	2½	64	155	587	9	229	33	838	15¼	400	16½	419	140	64
EWVA3-HV	3	76	225	852	11	279	42	1067	20¼	514	21	533	175	79
EWVA4-HV	4	102	405	1533	13½	343	42	1067	20¾	524	21	533	275	125
EWVA5-HV	5	127	630	2385	16	406	59	1499	27¼	705	29½	749	475	215
EWVA6-HV	6	152	910	3445	19	483	59	1499	27¼	705	29½	749	525	238
EWVA8-HV	8	203	1610	6095	23½	597	75	1905	33¾	854	37¼	959	825	374
EWVA10-HV	10	254	2450	9274	27½	699	92	2337	37½	953	46	1168	1275	578
EWVA12-HV	12	305	3500	13249	32	813	110	2794	42½	1080	55	1397	2050	930

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

COALESCING AIR AND DIRT SEPARATORS



EWVAN

Features

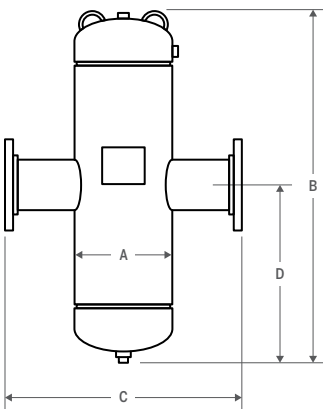
- Design conforms to ASME, section VIII
- Non-replaceable media

Technical Specifications

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



Industrial vent (MV15)
available in option.



Model#	Connection		Maximum Flow		Dimension								Weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAN2	2	51	69	261	4½	114	23	584	15¼	387	11½	292	76	35
EWVAN2-NPT	2	51	69	261	4½	114	23	584	9	229	11½	292	70	32
EWVAN2.5	2½	64	108	409	5½	140	23	584	15¼	400	11½	292	99	45
EWVAN2.5-NPT	2½	64	108	409	5½	140	23	584	10½	267	11½	292	90	41
EWVAN3	3	76	144	545	6½	165	29	737	20¼	514	14½	368	114	52
EWVAN3-NPT	3	76	144	545	6½	165	29	737	12¼	324	14½	368	100	46
EWVAN4	4	102	255	965	8½	216	29	737	20¾	524	14½	368	194	88
EWVAN5	5	127	398	1507	10	254	39	991	27¼	705	19½	495	230	105
EWVAN6	6	152	570	2158	12	305	39	991	27¼	705	19½	495	255	116
EWVAN8	8	203	945	3577	16	406	49	1245	33¾	854	24½	622	514	234
EWVAN10	10	254	1440	5451	20	508	65	1651	37½	953	32½	826	770	350
EWVAN12	12	305	2100	7949	24	610	76	1930	42½	1080	38	965	1080	491

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

COALESCING AIR AND DIRT SEPARATORS



EWVAN-HV

High velocity

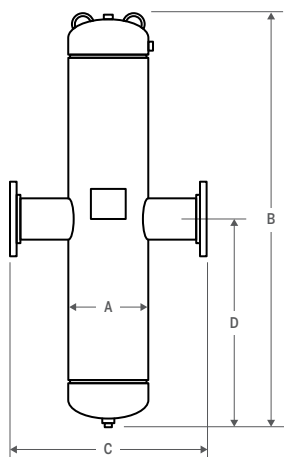
Features

- Design conforms to ASME, section VIII
- Non-replaceable media

Technical Specifications

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

Industrial vent (MV15)
available in option.



Model#	Connection		Maximum Flow		Dimension								Weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAN2-HV	2	51	105	397	4½	114	33	838	15¼	400	16½	419	100	45
EWVAN2-HV-NPT	2	51	105	397	4½	114	33	838	9	229	16½	419	90	41
EWVAN2.5-HV	2½	64	155	587	5½	140	33	838	15¼	400	16½	419	125	57
EWVAN2.5-HV-NPT	2½	64	155	587	5½	140	33	838	10½	267	16½	419	115	52
EWVAN3-HV	3	76	225	852	6½	165	42	1067	20¼	514	21	533	150	68
EWVAN3-HV-NPT	3	76	225	852	6½	165	42	1067	12¾	324	21	533	130	59
EWVAN4-HV	4	102	405	1533	8½	216	42	1067	20¾	524	21	533	250	114
EWVAN5-HV	5	127	630	2385	10	254	59	1499	27¼	705	29½	749	310	141
EWVAN6-HV	6	152	910	3445	12	305	59	1499	27¾	705	29½	749	375	170
EWVAN8-HV	8	203	1610	6094	16	406	75	1905	33¾	854	37½	953	700	318
EWVAN10-HV	10	254	2450	9274	20	508	92	2337	37½	953	46	1168	1000	455
EWVAN12-HV	12	305	3500	13249	24	610	110	2794	42½	1080	55	1397	1500	682

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

COALESCING AIR AND DIRT SEPARATORS WITH MAGNET



EWVA-MAG

Replaceable media

Features

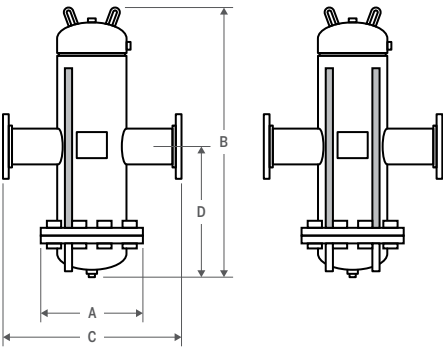
- ▶ Design conforms to ASME, section VIII
- ▶ The media can be removed for maintenance or replacement
- ▶ Supplied with one or two removable magnets

Technical Specifications

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



Industrial vent (MV15)
available in option.



EWVA2-MAG thru EWVA8-MAG

EWVA10-MAG and up

Model#	Conn.	Flow		Dimension								Weight	
				A		B		C		D			
	in	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVA2-MAG	2	69	261	9	229	23	584	15¼	387	11½	292	110	243
EWVA2-NPT-MAG	2	69	261	9	229	23	584	9	229	11½	292	100	221
EWVA2.5-MAG	2½	108	409	10	254	23	584	15¾	400	11½	292	138	304
EWVA2.5-NPT-MAG	2½	108	409	10	254	23	584	10½	267	11½	292	128	282
EWVA3-MAG	3	144	545	11	279	29	737	20¼	57	14½	368	165	364
EWVA3-NPT-MAG	3	144	545	11	279	29	737	12¾	324	14½	368	155	342
EWVA4-MAG	4	255	965	13½	343	29	737	20¾	524	14½	368	270	595
EWVA5-MAG	5	398	1506	16	406	39	991	27¾	705	19½	495	335	739
EWVA6-MAG	6	570	2157	19	483	39	991	27¾	705	19½	495	405	893
EWVA8-MAG	8	945	3577	23½	597	49	1245	33¾	854	24½	622	740	1632
EWVA10-MAG	10	1440	5450	27½	699	65	1651	37½	953	32½	826	1050	2315
EWVA12-MAG	12	2100	7949	32	813	76	1930	42½	1080	38	965	1560	3440

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

COALESCING AIR AND DIRT SEPARATORS WITH MAGNET



EWVA-HV-MAG

High velocity

Replaceable media

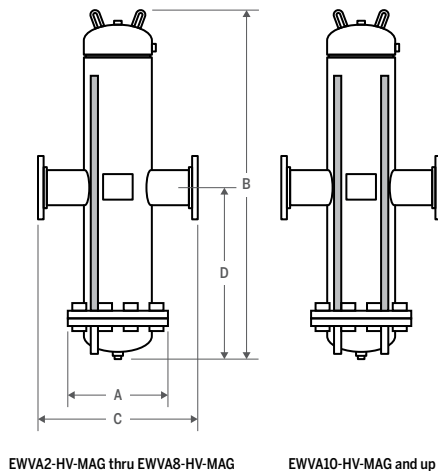
Features

- ▶ Design conforms to ASME, section VIII
- ▶ The media can be removed for maintenance or replacement
- ▶ Supplied with one or two removable magnets

Technical Specifications

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

Industrial vent (MV15)
available in option.



EWVA2-HV-MAG thru EWVA8-HV-MAG

EWVA10-HV-MAG and up

Model#	Conn.	Flow		Dimension								Weight	
				A		B		C		D			
	in	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVA2-HV-MAG	2	105	397	9	229	33	838	15¼	387	16½	419	110	243
EWVA2-HV-NPT-MAG	2	105	397	9	229	33	838	9	229	16½	419	100	221
EWVA2.5-HV-MAG	2½	155	587	10	254	33	838	15¼	400	16½	419	138	304
EWVA2.5-HV-NPT-MAG	2½	155	587	10	254	33	838	10½	267	16½	419	128	282
EWVA3-HV-MAG	3	225	852	11	279	42	1067	20¼	57	21	533	165	364
EWVA3-HV-NPT-MAG	3	225	852	11	279	42	1067	12¾	324	21	533	155	342
EWVA4-HV-MAG	4	405	1533	13½	343	42	1067	20¾	524	21	533	270	595
EWVA5-HV-MAG	5	630	2385	16	406	59	1499	27¼	705	29½	749	335	739
EWVA6-HV-MAG	6	910	3444	19	483	59	1499	27¼	705	29½	749	405	893
EWVA8-HV-MAG	8	1610	6094	23½	597	75	1905	33¾	854	37¼	959	740	1632
EWVA10-HV-MAG	10	2450	9273	27½	699	92	2337	37½	953	46	1168	1050	2315
EWVA12-HV-MAG	12	3500	13248	32	813	110	2794	42½	1080	55	1397	1560	3440

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

COALESCING DIRT SEPARATORS



EWVAD

Replaceable media

Features

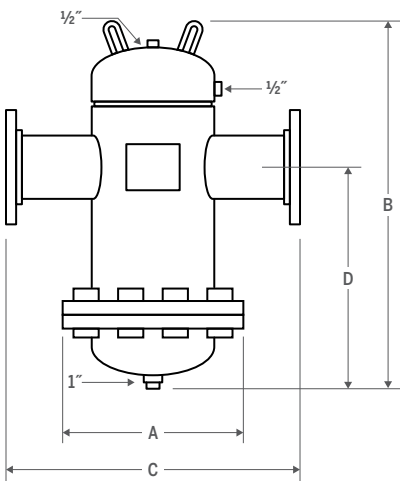
- Design conforms to ASME, section VIII
- The media can be removed for maintenance or replacement

Technical Specifications

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



Industrial vent (MV15)
available in option.



Model#	Connection		Maximum Flow		Dimension								Weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAD2	2	51	69	261	9	229	18½	470	15¼	387	11½	292	64	29
EWVAD2-NPT	2	51	69	261	9	229	18½	470	10¾	264	11½	292	55	25
EWVAD2.5	2½	64	108	409	10	254	18½	470	15¾	400	11½	292	82	37
EWVAD2.5-NPT	2½	64	108	409	10	254	18½	470	11	279	11½	292	70	32
EWVAD3	3	76	144	545	11	279	23	584	20¼	514	14½	368	113	51
EWVAD3-NPT	3	76	144	545	11	279	23	584	12½	318	14½	368	198	90
EWVAD4	4	102	255	965	13½	343	23	584	20¾	524	14½	368	168	76
EWVAD5	5	127	398	1507	16	406	31	787	27¾	705	19½	495	245	111
EWVAD6	6	152	570	2158	19	483	31	787	27¾	705	19½	495	347	158
EWVAD8	8	203	945	3577	23½	597	36	914	33¾	854	24½	622	451	205
EWVAD10	10	254	1440	5451	27½	699	46	1168	37½	953	32½	826	711	323
EWVAD12	12	305	2100	7949	32	813	54	1372	42½	1080	38	965	1121	510

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

COALESCING DIRT SEPARATORS



EWVAD-HV

High velocity

Replaceable media

Features

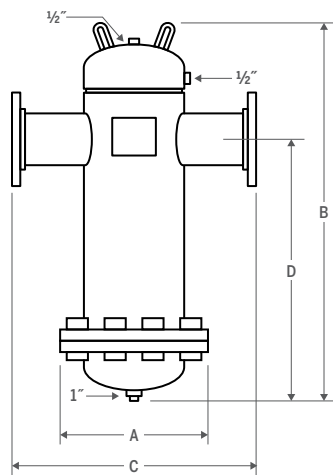
- Design conforms to ASME, section VIII
- The media can be removed for maintenance or replacement

Technical Specifications

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



Industrial vent (MV15)
available in option.



Model#	Connection		Maximum Flow		Dimension								Weight	
					A		B		C		D			
	in	mm	GPM	LPM	in	mm	in	mm	in	mm	in	mm	lb	kg
EWVAD2HV	2	51	105	397	9	229	23	584	15¼	387	16½	419	69	31
EWVAD2HV-NPT	2	51	105	397	9	229	23	584	10⅜	264	16½	419	60	27
EWVAD2.5HV	2½	64	155	587	10	254	23	584	15¾	400	16½	419	89	40
EWVAD2.5HV-NPT	2½	64	155	587	10	254	23	584	11	279	16½	419	77	35
EWVAD3HV	3	76	225	852	11	279	30	762	20¾	514	21	533	125	57
EWVAD3HV-NPT	3	76	225	852	11	279	30	762	12½	318	21	533	110	50
EWVAD4HV	4	102	405	1533	13½	343	30	762	20⅝	524	21	533	185	84
EWVAD5HV	5	127	630	2385	16	406	41	1041	27¾	705	29½	749	280	127
EWVAD6HV	6	152	910	3445	19	483	41	1041	27¾	705	29½	749	390	177
EWVAD8HV	8	203	1610	6094	23½	597	49	1245	33⅝	854	37¾	959	472	215
EWVAD10HV	10	254	2450	9274	27½	699	60	1524	37½	953	46	1168	744	338
EWVAD12HV	12	305	3500	13249	32	813	71	1803	42½	1080	55	1397	1169	531

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

HYDRAULIC SEPARATORS



ASME CALBALANCE WITH FLANGE

Features

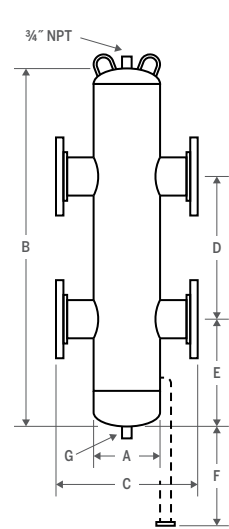
- Design conforms to ASME, section VIII
- Reduces energy consumption as the pumps are only used in required zones
- 6" or larger connection models supplied on stand

Technical Specifications

- Carbonized steel housing
- Exterior finish in painted primer
- Maximum design temperature: 299°C (550°F)
- Maximum design pressure: 150 PSI
- Pressure of 175, 200, 250 and 300 PSI also available



Industrial vent (MV15)
available in option.



Model#	Connect.	Flow		Dimension														Weight	
				A		B		C		D		E		F		G			
		in	GPM	LPM	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb
CB200A	2	34	129	6%	168	34	864	14	356	16	406	9	229	-	-	0.75	19	116	53
CB250A	2½	90	341	8%	219	34	864	14	356	16	406	9	229			0.75	19	153	70
CB300A	3	130	492	10%	273	48	1219	18	457	24	610	12	305			0.75	19	247	112
CB400A	4	255	965	12%	324	49	1245	20	508	25	635	12	305			1	25	307	140
CB500A	5	398	1507	16	406	68	1727	24	610	32	813	18	457			1	25	352	160
CB600A	6	570	2158	18	457	89	2261	28	711	41	1041	24	610	14	356	1	25	532	242
CB800A	8	945	3577	24	610	115	2921	36	914	55	1397	30	762	14	356	1	25	915	416
CB1000A	10	1440	5451	30	762	144	3658	42	1067	72	1829	36	914	14	356	1	25	1424	647
CB1200A	12	2100	7949	30	762	157	3988	42	1067	73	1854	42	1067	14	356	2	51	2090	950
CB1400A	14	2550	9653	42	1067	211%	5378	54	1371	131¼	3334	42	1067	14	356	2	51	2430	1102
CB1600A	16	3330	12492	48	1220	236%	6013	60	1524	150	3810	45%	1146	14	356	2	51	3260	1479

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

3 IN 1 HYDRAULIC SEPARATORS



ASME CALBALANCE WITH FLANGE

Water, Air and Dirt Separator

Features

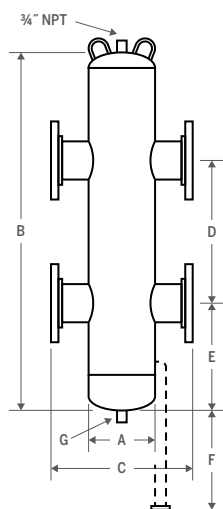
- ▶ Design conforms to ASME, section VIII
- ▶ Reduces energy consumption as the pumps are only used in required zones
- ▶ Coalescent media that allows air, micro-bubbles, and dirt particles to adhere to it
- ▶ Non-replaceable media
- ▶ 6" or larger connection models supplied on stand

Technical Specifications

- ▶ Coalescent media: stainless steel
- ▶ Carbonized steel housing
- ▶ Exterior finish in painted primer
- ▶ Maximum design temperature: 299°C (550°F)
- ▶ Maximum design pressure: 150 PSI
- ▶ Pressure of 175, 200, 250 and 300 PSI also available



Industrial vent (MV15)
available in option.



Model#	Connect.	Flow		Dimension														Weight	
				A		B		C		D		E		F		G			
		in	GPM	LPM	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lb
CB200AV	2	69	261	6%	168	34	864	14	356	16	406	9	229	-	-	0.75	19	122	55
CB250AV	2½	108	409	8%	219	34	864	14	356	16	406	9	229			0.75	19	161	73
CB300AV	3	144	545	10%	273	48	1219	18	457	24	610	12	305			0.75	19	259	118
CB400AV	4	255	965	12%	324	49	1245	20	508	25	635	12	305			1	25	322	146
CB500AV	5	398	1507	16	406	68	1727	24	610	32	813	18	457			1	25	370	168
CB600AV	6	570	2158	18	457	89	2261	28	711	41	1041	24	610	14	356	1	25	560	255
CB800AV	8	945	3577	24	610	115	2921	36	914	55	1397	30	762	14	356	1	25	961	437
CB1000AV	10	1440	5451	30	762	144	3658	42	1067	72	1829	36	914	14	356	1	25	1495	680
CB1200AV	12	2100	7949	30	762	157	3988	42	1067	73	1854	42	1067	14	356	2	51	2195	998
CB1400AV	14	2550	9653	42	1067	211¾	5378	54	1371	131¼	3334	42	1067	14	356	2	51	2430	1102
CB1600AV	16	3300	12492	48	1220	236¾	6013	60	1524	150	3810	45½	1146	14	356	2	51	3260	1479

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

SIZING GUIDE



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.

AL/ALT/OT SERIES

ASME Expansion Tanks
With Fixed or Replaceable Bladder

Job Name: _____

Submitted by: _____

Date: _____

Location: _____

Approved by: _____

Date: _____

Engineer: _____

Order No.: _____

Date: _____

Contractor: _____

Notes: _____

Sales Rep.: _____

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 91), 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 99 and 100), determine the acceptance factor.	(9)	PSI	kPa
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) 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	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	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	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	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	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	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 in	¾ in	1 in	1 ¼ in	1 ½ in	2 in	2 ½ in
Steel pipe (Sch. 40) Copper tube	0.0157 0.0121	0.0277 0.0251	0.0449 0.0429	0.0779 0.0653	0.106 0.0924	0.174 0.161	0.249 0.248

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

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

(P _o) Maximum Operating Pressure		P _f – 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	0.668	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	0.763	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	0.844	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

(P ₀) Maximum Operating Pressure		P _f – Minimum Operating Pressure at Tank (psig)/kPa											
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	105 723.9	110 758.4	115 792.9
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	0.194	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	0.406	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

Acceptance Factor = $1 - \frac{P_f}{P_0}$

P_f = minimum absolute pressure, P₀ = maximum absolute pressure

BFA/TXA/FTTE-C SERIES

ASME Expansion Tanks
for Potable Water

Job Name: _____
 Location: _____
 Engineer: _____
 Contractor: _____
 Sales Rep.: _____

Submitted by: _____ Date: _____
 Approved by: _____ Date: _____
 Order No.: _____ Date: _____
 Notes: _____

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 94).	(6)		
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 99 and 100).	(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 page 91

Acceptance Factors Table

Table 2
Acceptance factors (use gauge pressures)

Maximum Pressure (psig / kPa)		Minimum tank operating pressure (psig / kPa)															
		psig	kPa	psig	kPa	psig	kPa	psig	kPa	psig	kPa	psig	kPa	psig	kPa	psig	kPa
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	



AFX SERIES

Hydro-Pneumatic Tanks

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. Let's examine each approach separately.

AFX SERIES

Hydro-Pneumatic Tanks

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.

* Consult the appropriate technical datasheets to obtain the tank dimensions.

AFX SERIES

Hydro-Pneumatic Tanks

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

- ▶ La capacité de la pompe est de 10 gallons par minute.
- ▶ La demande de l'Installation est de 5 gallons par 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. $50 \times .66666 = 33.33$ gallons required by the system per cycle, this would be the tank drawdown for the application:

$$33.33 \text{ gal} = 10 \text{ gal per min. pump capacity} \\ = 3.333 \text{ min. pump run time.}$$

$$33.33 \text{ gal} = 5 \text{ gal per min. system demand} \\ = 6.666 \text{ min. system demand/cycle} \\ 10.0 \text{ minutes cycle time.}$$

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.*

VOLUME CALCULATION

Hydro-Pneumatic Tanks

Job Name: _____

Submitted by: _____

Date: _____

Location: _____

Approved by: _____

Date: _____

Engineer: _____

Order No.: _____

Date: _____

Contractor: _____

Notes: _____

Sales Rep.: _____

Required Information

1	Drawdown (tank must supply)	(1)	gal	L
2	Minimum pressure (pump turn-on pressure)	(2)	°F	°C
3	Maximum pressure (pump shut-off pressure)	(3)	°F	°C

Model Selection: Bladder Type Tanks

4	Enter required drawdown from line (1).	(6)	gal	L
5	Using the Acceptance Factors table (see page 99 and 100), enter acceptance factor.	(7)		
6	Divide line (4) by line (5), enter total tank volume.	(8)	gal	L

Example from page 96

1	Drawdown	50 gal
2	Minimum pressure	30 PSI
3	Maximum pressure	45 PSI
4	Drawdown from line (1)	50 gal
5	Acceptance Factor from chart	0.251
6	Divide line (4) by line (5). Enter total tank volume.	199.2 gal

NA SERIES

Plain Steel Expansion Tanks Without Membrane

Job Name: _____

Submitted by: _____

Date: _____

Location: _____

Approved by: _____

Date: _____

Engineer: _____

Order No.: _____

Date: _____

Contractor: _____

Notes: _____

Sales Rep.: _____

Required Information

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 91), 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 $(Pa \div Pf)$ ($Pa \div Po$) and enter the result. Where Pa = Pressure (atmospheric) Pf = Pressure at fill (atmospheric) Po = Pressure at operation (atmospheric)	(9)	PSI	kPa
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 59).

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.

CONVERSION

From an Expansion Tank without Membrane
to an Expansion Tank with Membrane

Job Name: _____

Submitted by: _____

Date: _____

Location: _____

Approved by: _____

Date: _____

Engineer: _____

Order No.: _____

Date: _____

Contractor: _____

Notes: _____

Sales Rep.: _____

Required Information

1	Determine plain steel tanks volume (table 2, page 92)	(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 $(Pa \div Pf) (Pa \div Po)$ and enter the result. Where Pa = Pressure (atmospheric) Pf = Pressure at fill (atmospheric) Po = Pressure at operation (atmospheric)	(6)	PSI	kPa
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 the answer.	(8)		
9	Using Acceptance Factors table (see pages 99 and 100), and enter the acceptance factor.	(9)	gal	L
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.

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