

Quality People. Building Solutions.

Comfort Systems USA (Arkansas), Inc.
P.O. Box 16620
Little Rock, AR 72231
Phone 501-834-3320
Fax 501-834-5416

Date: 5/17/2024
Return Request: 5/27/2024
Project: CALS Main Library Renovations
Supplier: Sanders Supply
Manufacturer: Bradford White
Submittal: Domestic Water Heater (Electric)
Submittal Number: 22 33 00-01
Drawing # and Installation: Plumbing Drawings

ARCHITECT

Polk Stanley Wilcox
801 South Spring St.
Little Rock, AR 72201
501-378-0878

ENGINEER

Bernhard
1 Allied Drive, Bldg. 2, Suite 2600
Little Rock, AR 72202
501-666-6776

GENERAL CONTRACTOR

CDI
3000 Cantrell Rd.
Little Rock, AR 72202
501-5666-4300

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc.
9924 Landers Rd.
N. Little Rock, AR 72117
501-834-3320

Notes:

CSUSA PROJECT NO.
23-8016
dpierce@comfortar.com

9924 Landers Rd.
No. Little Rock, AR 72117

DWH-1

Large Volume Light Service Commercial Upright Electric Water Heater



Photo is of
SLE265T6

Bradford White Light Service Upright Electric Models Feature:

- **Fully Automatic Thermostat Controls**—Fast acting surface-mount thermostats with a high limit energy cut-off (manual reset) for safety.
- **Direct Heat Transfer With Immersed Elements**—Transfers heat directly and efficiently to the water. Screw-in style. INCOLOY[®] elements standard for all models.
- **Vitraglas[®] Lining with Microban[®]**—An exclusively engineered enamel formula that provides superior tank protection from the corrosive effects of water; and with Microban[®] antimicrobial product protection to help prevent the growth of bacteria, mold and mildew on the surface of the tank lining.
- **Factory-Installed Hydrojet[®] Total Performance System**—Sediment build-up reducing device that also increases first hour rating of hot water while minimizing temperature build-up in tank.
- **Insulation System**—2" (51mm) Non-CFC foam insulation covers the sides and top of the tank, reducing heat loss. This results in less energy consumption, improved efficiencies, and jacket rigidity.
- **Water Connections**—3/4" (19mm) NPT factory-installed true dielectric fittings extend water heater life and simplify water line connections. 1" (25mm) NPT for SLE2120T.
- **Factory-Installed Heat Traps**—Design incorporates a flexible disk that reduces heat loss in piping and eliminates the potential for noise generation.
- **Protective Anode Rod**—Provides added protection against corrosion for long-term, trouble-free service.
- **Steel Tank**—Heavy gauge steel automatically formed, rolled, and welded.
- **Wired at 277V, Single Phase, 12.2kW (6100W/6100W Simultaneous operation) only.**
- **T&P Relief Valve Installed On Top.**
- **NSF 5 kits available.**

FEATURING:



6-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

Microban[®] antimicrobial product protection helps prevent the growth of bacteria, mold and mildew that may affect the product. The built-in antimicrobial properties do not protect users or others from disease-causing organisms. Microban[®] is a registered trademark of Microban Products Company.

Commercial Electric Water Heater

Large Volume (Light Service) Upright Models

Meet or exceed ASHRAE 90.1 (latest edition). C.E.C. Listed

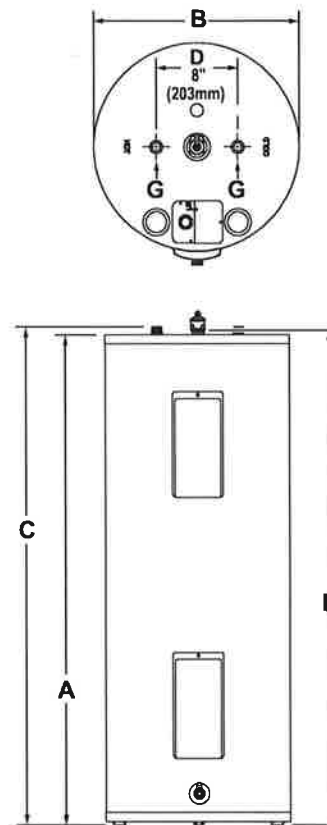
Model Number	Nominal Gal. Capacity		Recovery at 100°F Rise*		A Floor to Top of Heater	B Jacket Dia.	C Floor to Water Conn.	D C/L of Water Conn.	E Floor to T&P Conn.	G Water Conn. NPT	Approx. Shipping Weight
	U.S. Gal.	Imp. Gal.	U.S. GPH	Imp. GPH	in.	in.	in.	in.	in.	in.	lbs.
SLE265T6	65	54	50	42	60	22	61	8	61 ⁹ / ₁₆	3/4	156
SLE280T6	80	67	50	42	60	24	61	8	61 ⁹ / ₁₆	3/4	183
SLE2120T6	119	99	50	42	63	28	64 ¹³ / ₁₆	8	64 ⁹ / ₁₆	1	305

Model Number	Nominal Liter Capacity	Recovery at 56°C Rise*		A Floor to Top of Heater	B Jacket Dia.	C Floor to Water Conn.	D C/L of Water Conn.	E Floor to T&P Conn.	G Water Conn. NPT	Approx. Shipping Weight
		Liters/Hour		mm.	mm.	mm.	mm.	mm.	mm.	kg.
SLE265T6	246	189		1524	559	1549	203	1564	19	71
SLE280T6	303	189		1524	610	1549	203	1564	19	83
SLE2120T6	450	189		1600	711	1646	203	1640	25	138

* Based on 6100/6100, Simultaneous operation. Elements are tripled rated for 277 Volt 6100W/6100W, 240 Volt 4500W/4500W, 208 Volt 3500W/3500W. NSF 5 Kits available when ordering. All models meet DOE's standby loss requirements.

Wattage	Recovery ▲ GPH Temperature Rise °F					Wattage	Recovery ▲ LPH Temperature Rise °C				
	60	80	90	100	120		34	45	50	56	67
12,200W	82	62	56	50	42	12,200W	310	234	212	190	158

▲ GPH based on Simultaneous operation.



General:

All models are compliant with EPA Act. All heaters are wired inter-locking (Simultaneous, Single Phase) 277V with two 6100W elements. All water and electrical connections are 3/4" NPT (19mm) except for SLE2120T (1" NPT (25mm)). All models certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa.)

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

— BRADFORD WHITE IS —



Sales: 800-523-2931 ■ Fax 215-641-1612

24/7 Technical Support: 800-334-3393 ■ Email techserv@bradfordwhite.com

Products made by Bradford White are manufactured in the United States using the finest raw materials and components from around the world.

Built to be the Best

Engineering Specification

Job Name CALS Library
 Job Location LR
 Engineer BTME
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Series PLT Potable Water Expansion Tanks

Series PLT Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system, the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series PLT expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve.

It is a pre-pressurized steel tank with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

Features

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks

Models

PLT-5-M1	3/4" male connection, tank volume 2.1 gal.
PLT-12-M1	3/4" male connection, tank volume 4.3 gal.
PLT-20-M1	3/4" male connection, tank volume 8.5 gal.
PLT-35-M1	1" female connection, tank volume 14.00 gal.

Specifications

The potable water expansion tank shall be of drawn steel construction. It shall have a Butyl diaphragm separating the air chamber from the water containing chamber. Inlet connector shall be Stainless Steel. Materials of manufacture for the diaphragm shall be FDA approved.

The potable water expansion tank shall be a Watts Model PLT.

PLT-20



Standards

Models PLT-5, PLT-12 and PLT-20
are Listed by IAPMO.
Certified to ANSI/NSF 61
Model PLT-35
Certified to ANSI/NSF 61



(73°F/23°C)

Note: The potable water expansion tank shall be installed in the cold water service pipe line on the supply side of the water heater (or water storage tank). A pressure relief valve sized and installed in accordance with local codes must be incorporated in the system.

In those systems requiring a combined temperature and pressure safety relief valve, the temperature and pressure relief valve should be sized and installed in accordance with local codes. Adequate drainage provisions should be provided where water flow will cause damage.

See chart on back

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Selection

This Quick Reference Selection Guide may be used as an alternative to using a formula to determine the correct expansion tank for the system. This table is based upon a relief valve setting of 150psi (10.3 bar), and a maximum of 50°F temperature rise.

To select the correct model PLT series tank, simply go the supply pressure equal to the system supply pressure (for pressures between those shown use next highest supply pressure shown), read across the chart to the correct tank as indicated by the water heater capacity (for capacities between those shown, use next highest capacity).

To accommodate the thermal expansion required for higher temperature and/or higher pressure systems, multiple tanks may be used. Please contact the factory for sizing information.

Materials

Diaphragm: Butyl rubber
Inlet Connection: Stainless Steel

Technical Information

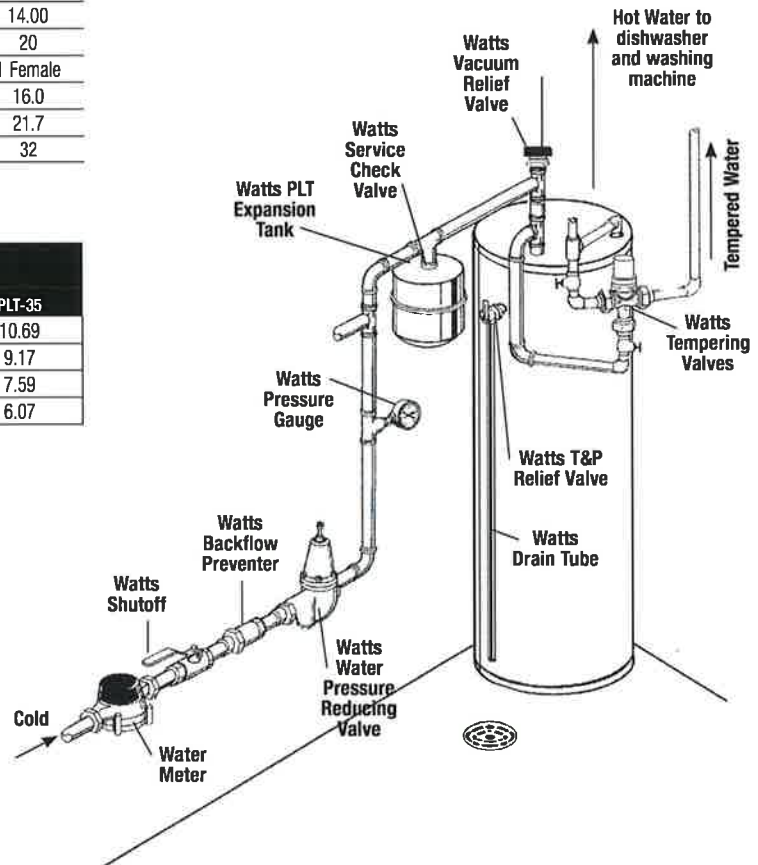
DESCRIPTION	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp. - °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	¾ Male	¾ Male	¾ Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

Acceptance Volume

AIR SIDE PRE-PRESSURE (PSI)	WATER SIDE VOLUME AT 150PSI (GALLONS)			
	PLT-5	PLT-12	PLT-20	PLT-35
20	1.48	3.42	7.102	10.69
40	1.26	2.88	5.882	9.17
60	1.0	2.49	4.705	7.59
80	.8	1.85	4.009	6.07

SUPPLY PRESSURE (PSIG)	WATER HEATER (GALLONS)						
	20	30	40	50	80	100	120
40							
50							
55							
60							
70							
80							
90							
100							
110							
120							

PLT-5 <
 PLT-12
 PLT-20
 PLT-35
 Multiple tanks required - consult factory



USA: T: (978) 689-6066 • F: (978) 975-8350 • Watts.com
Canada: T: (888) 208-8927 • F: (905) 332-7068 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com

For Water Heater/Tank Applications

Job Name CALS Library
 Job Location LR
 Engineer BTME
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Model LFN36-M1 Vacuum Relief Valve

Sizes: 1/2" – 3/4" Male NPT

Features

- Low profile
- All Lead Free* brass body
- Protective cap
- Suitable for low pressure steam and water service
- Tested and rated to ANSI Z21.22
- CSA certified
- The LFN36-M1 features Lead Free* construction to comply with Lead Free* installation requirements.

Applications

- Domestic water heaters and supply tanks
- Table top heaters
- Jacketed steam kettles
- Unit heaters
- Low pressure steam systems
- Steam coil heaters

Note: Vacuum relief valves are not designed or approved as backsiphonage backflow preventers. For protection against backsiphonage install Watts Series 288A vacuum breakers.

Standards

Tested and rated to ANSI Z21.22
 CSA certified

Specifications

A Watts Model LFN36-M1 Vacuum Relief Valve shall be installed on domestic hot water supply tanks/ heaters/ unit heaters/ steam kettles as indicated on plans. The vacuum relief valve shall be ANSI Z21.22 rated and CSA certified. The vacuum relief valve shall have an all brass body and include a protective cap for automatic venting of a closed system to atmosphere when a vacuum is created. The Lead Free* Vacuum Relief Valve shall comply with state codes and standards, where applicable, requiring reduced lead content. The Watts LFN36-M1 Vacuum Relief Valve permits air to enter and prevent vacuum conditions that could siphon the water from the system, resulting in collapse of a tank or water heater or equipment burn out. The valve shall be a Watts Model LFN36-M1.



LFN36-M1

Design certified by



Tested and rated under "ANSI Z21.22
Relief Valves for Hot Water Supply Systems".

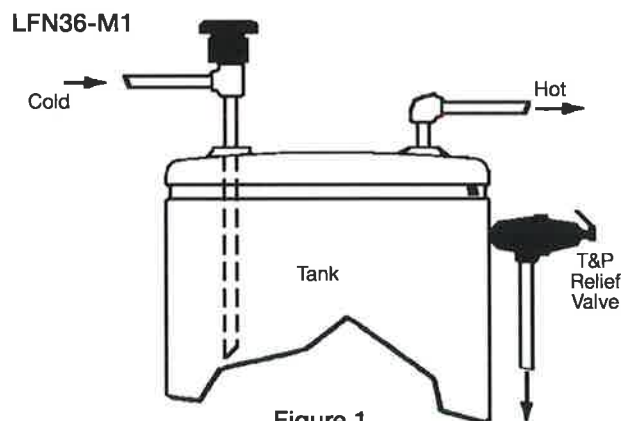


Figure 1

Domestic Hot Water Supply Tanks and Heaters
with Top Supply

NOTICE

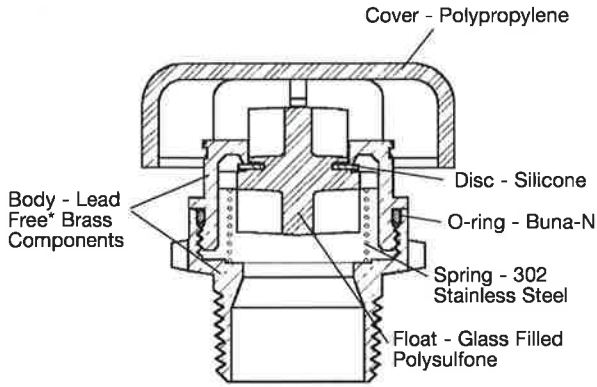
The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

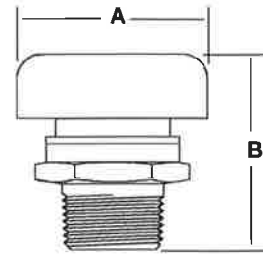
Materials



Pressure – Temperature

Maximum steam working pressure: 15 psi (1.03 bar)
 Maximum temperature: 250°F (121°C)

Dimensions-Weights



SIZE	DIMENSIONS				WEIGHT	
	in.	in.	mm	in.	mm	oz.
1/2	2	50	2	50	4	113
3/4	2	50	2	50	4	113

Capacity

SIZE	MODEL	VENTING CAPACITY	
		CFM	LPM
1/2	LFN36-M1	15	425
3/4	LFN36-M1	15	425

Typical Installations

Water Service

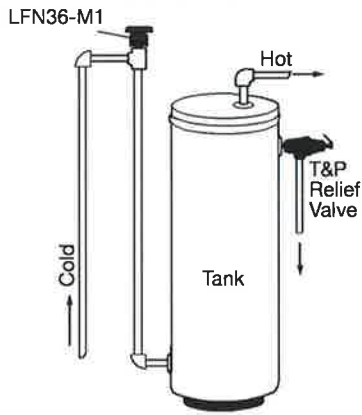


Figure 2

Domestic Hot Water Supply Tanks and Heaters with Bottom Feed

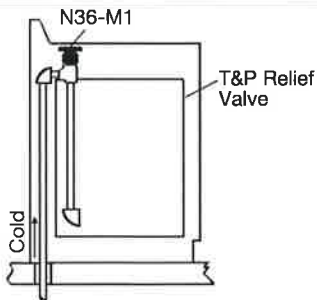


Figure 3

Table Top Heaters

Steam Service

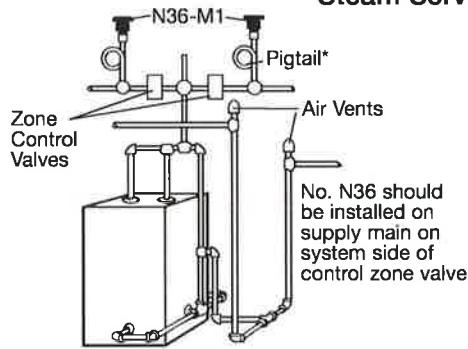


Figure 4

Low Pressure Steam Heating Systems

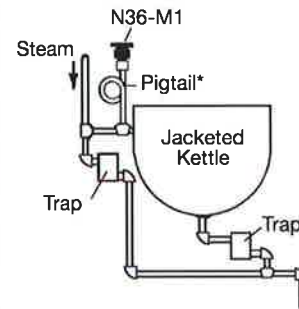


Figure 5

Jacketed Kettles

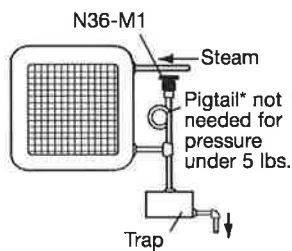


Figure 6
Unit Heaters

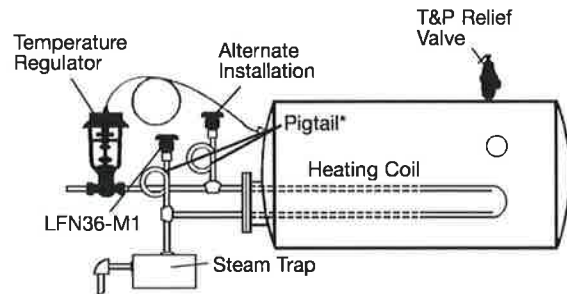


Figure 7
Steam Coil Heaters

*Note: When used for steam service, be sure to use pigtail to prevent live steam from damaging N36 valve.



DWH-2

ElectriFLEX LD™ (Light Duty) Commercial Utility Electric Water Heater

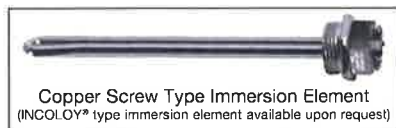


Photo is of
LE112T3-1

Bradford White ElectriFLEX LD™ Utility Electric Models Feature:

- **Fully Automatic Thermostat Controls**—Fast acting surface-mount thermostats with a maximum setpoint of 175°F and a high limit energy cut-off (manual reset) for safety.
- **Direct Heat Transfer With a Single Immersed Element**—Transfers heat directly and efficiently to the water. Screw-in style element.
- **Vitraglas® Lining with Microban®**—An exclusively engineered enamel formula that provides superior tank protection from the corrosive effects of water; and with Microban® antimicrobial product protection to help prevent the growth of bacteria, mold and mildew on the surface of the tank lining).
- **Insulation System**—1" (25mm) Non-CFC foam insulation covers the sides and top of the tank, reducing heat loss. This results in less energy consumption, improved efficiencies, and jacket rigidity.
- **Water Connections**—3/4" (19mm) NPT factory-installed true dielectric fittings extend water heater life and simplify water line connections. Located on the side for easier installation (Fittings packaged separately inside carton).
- **Protective Anode Rod**—Provides added protection against corrosion for long trouble-free service.
- **Steel Tank**—Heavy gauge steel automatically formed, rolled, and welded.
- **Voltages Available**—120V, 208V, 240V, 277V, 380V, 415V, 480V.
- **Single Phase Operation Only.**
- **Field Conversion Kits**—Change voltage, and kW in the field (see options on following page).
- **T&P Relief Valve**—Installed.

FEATURING:



3 or 5-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada, and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

Microban® antimicrobial product protection helps prevent the growth of bacteria, mold and mildew that may affect the product. The built-in antimicrobial properties do not protect users or others from disease-causing organisms. Microban® is a registered trademark of Microban Products Company.



ElectriFLEX LD™ (Light Duty) Commercial Utility Electric Water Heater

ElectriFLEX LD™ Utility Electric Models

C.E.C. Listed

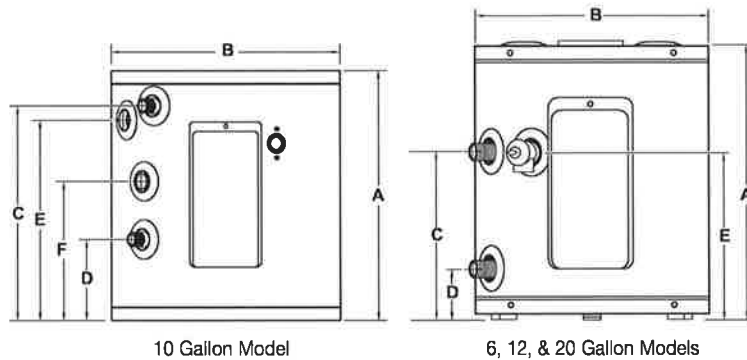
Model Number	Nominal Gal. Capacity		Recovery at 100°F Rise*		A Floor to Top of Heater in.	B Jacket Dia. in.	C Floor to C/L of Hot Water Conn. in.	D Floor to C/L of Cold Water Conn. in.	E Floor to T&P Conn. in.	F Floor to Anode Rod in.	Water Conn. NPT in.	Approx. Shipping Weight lbs.
	U.S. Gal.	Imp. Gal.	U.S. GPH	Imp. GPH								
LE16U3-1†	6	5	6	5	16 1/2	14	10 1/2	3 1/4	10 1/2	N/A	3/4	33
LE110U3-1	10	8	6	5	17 1/2	16	15	5 11/16	14	9 11/16	3/4	48
LE112T3-1†	12	10	6	5	27 3/4	14	21 1/2	3	21 1/2	N/A	3/4	48
LE120U3-1	19	16	6	5	24 3/4	18	18 1/2	3	18 1/2	N/A	3/4	59

Model Number	Nominal Liter Capacity	Recovery 56°C Rise*		A Floor to Top of Heater mm.	B Jacket Dia. mm.	C Floor to C/L of Hot Water Conn. mm.	D Floor to C/L of Cold Water mm.	E Floor to T&P Conn. mm.	F Floor to Anode Rod mm.	Water Conn. NPT mm.	Approx. Shipping Weight kg.
		Liters/Hour									
LE16U3-1†	23	23		419	356	257	79	257	N/A	19	15
LE110U3-1	38	23		445	406	381	144	355	246	19	22
LE112T3-1†	45	23		705	356	537	76	537	N/A	19	22
LE120U3-1	72	23		629	457	470	76	470	N/A	19	27

Specify wattage and voltage when ordering. Use chart below for maximum wattages at certain voltages.

† Maximum wattage at any voltage is 3000W. For 5 year models, change suffix "3" to "5".

Single element only. *Based on 1500W operation. NSF Kits available when ordering.



Wattage	Recovery s GPH Temperature Rise °F					Recovery s LPH Temperature Rise °C					
	60	80	90	100	120	34	45	50	56	67	
1500W	10	8	7	6	5	1500W	38	30	26	23	19
2000W	14	10	9	8	7	2000W	53	38	34	30	26
2500W	17	13	11	10	9	2500W	64	49	42	38	34
3000W	21	15	14	12	10	3000W	79	57	53	45	38
3500W	24	18	16	14	12	3500W	91	68	61	53	45
4000W	28	21	18	16	14	4000W	106	79	68	61	53
4500W	31	23	21	19	15	4500W	117	87	79	72	57
5000W	34	26	23	21	17	5000W	129	98	87	79	64
5500W	38	29	25	23	19	5500W	144	110	95	87	72
6000W	41	31	28	25	21	6000W	155	117	106	95	79

Voltage and Wattage Conversion Kits

Single Element Wattage	Voltage						
	120V	208V	240V	277V	380V	415V	480V
1500W	415-46409-01	415-46409-05	415-46409-13	415-46409-16	415-46409-24	415-46409-41	415-46409-32
2000W	415-46409-02*	415-46409-06	415-46409-05	415-46409-17	415-46409-43	415-46409-24	415-46409-33
2500W	415-46409-03*	415-46409-07	415-46409-06	415-46409-18	415-46409-25	415-46409-43	415-46409-34
3000W	415-46409-04*	415-46409-08	415-46409-14	415-46409-19	415-46409-26	415-46409-25	415-46409-35
3500W	N/A	415-46409-09	415-46409-07	N/A	415-46409-54	415-46409-26	N/A
4000W	N/A	415-46409-49	415-46409-08	415-46409-20	415-46409-56	415-46409-54	415-46409-36
4500W	N/A	415-46409-11	415-46409-09	415-46409-51	415-46409-57	415-46409-55	415-46409-59
5000W	N/A	415-46409-50	415-46409-15	415-46409-52	415-46409-58	415-46409-56	415-46409-38
5500W	N/A	415-46409-65*	415-46409-49	415-46409-61**	415-46409-63	415-46409-57	415-46409-62**
6000W	N/A	415-46409-66*	415-46409-48*	415-46409-53	415-46409-64	415-46409-58	415-46409-60

Wattage Limitations	Voltage						
	120V	208V	240V	277V	380V	415V	480V
1500W	yes	yes	yes	yes	yes	yes	yes
2000W	yes	yes	yes	yes	yes	yes	yes
2500W	yes	yes	yes	yes	yes	yes	yes
3000W	yes	yes	yes	yes	yes	yes	yes
3500W	no	yes	yes	no	yes	yes	no
4000W	no	yes	yes	yes	yes	yes	yes
4500W	no	yes	yes	yes	yes	yes	yes
5000W	no	yes	yes	yes	yes	yes	yes
5500W	no	yes	yes	no	yes	yes	yes
6000W	no	yes	yes	yes	yes	yes	yes

Note: Above chart can be used to determine maximum wattage at certain voltages. **INCOLOY® element only. * 415-46409-02, -03, -04, -48, -65, & -66 contain only one element. These kits cannot be wired as simultaneous. These are non-simultaneous kits only. Except where noted above, each kit will include two replacement elements, two gaskets, a rating plate overlay and one set of instructions. For water heaters with only one element, please retain the extra element and gasket as a service part.

General:

All models are exempt from NAECA requirements and ASHRAE Standard 90.1b. All models UL® listed. These heaters are wired Single Phase, 120V with one 1500W element, unless otherwise specified. All water and electrical connections are 3/4" (19mm) NPT. All models certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa). Applicable models CSA verified for energy performance in accordance with C191.1-M90.

Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.

— BRADFORD WHITE IS —



Sales: 800-523-2931 ■ Fax 215-641-1612

24/7 Technical Support: 800-334-3393 ■ Email techserv@bradfordwhite.com

Products made by Bradford White are manufactured in the United States using the finest raw materials and components from around the world.

Built to be the Best

Engineering Specification

Job Name CALS Library
 Job Location LR
 Engineer BTME
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Series PLT Potable Water Expansion Tanks

Series PLT Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system, the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series PLT expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve.

It is a pre-pressurized steel tank with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

Features

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks

Models

PLT-5-M1	¾" male connection, tank volume 2.1 gal.
PLT-12-M1	¾" male connection, tank volume 4.5 gal.
PLT-20-M1	¾" male connection, tank volume 8.5 gal.
PLT-35-M1	1" female connection, tank volume 14.00 gal.

Specifications

The potable water expansion tank shall be of drawn steel construction. It shall have a Butyl diaphragm separating the air chamber from the water containing chamber. Inlet connector shall be Stainless Steel. Materials of manufacture for the diaphragm shall be FDA approved.

The potable water expansion tank shall be a Watts Model PLT.



Standards

Models PLT-5, PLT-12 and PLT-20
are Listed by IAPMO.
Certified to ANSI/NSF 61
Model PLT-35
Certified to ANSI/NSF 61



Note: The potable water expansion tank shall be installed in the cold water service pipe line on the supply side of the water heater (or water storage tank). A pressure relief valve sized and installed in accordance with local codes must be incorporated in the system.

In those systems requiring a combined temperature and pressure safety relief valve, the temperature and pressure relief valve should be sized and installed in accordance with local codes. Adequate drainage provisions should be provided where water flow will cause damage.

See chart on back

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Selection:

This Quick Reference Selection Guide may be used as an alternative to using a formula to determine the correct expansion tank for the system. This table is based upon a relief valve setting of 150psi (10.3 bar), and a maximum of 50°F temperature rise.

To select the correct model PLT series tank, simply go the supply pressure equal to the system supply pressure (for pressures between those shown use next highest supply pressure shown), read across the chart to the correct tank as indicated by the water heater capacity (for capacities between those shown, use next highest capacity).

To accommodate the thermal expansion required for higher temperature and/or higher pressure systems, multiple tanks may be used. Please contact the factory for sizing information.

Materials

Diaphragm: Butyl rubber

Inlet Connection: Stainless Steel

Technical Information

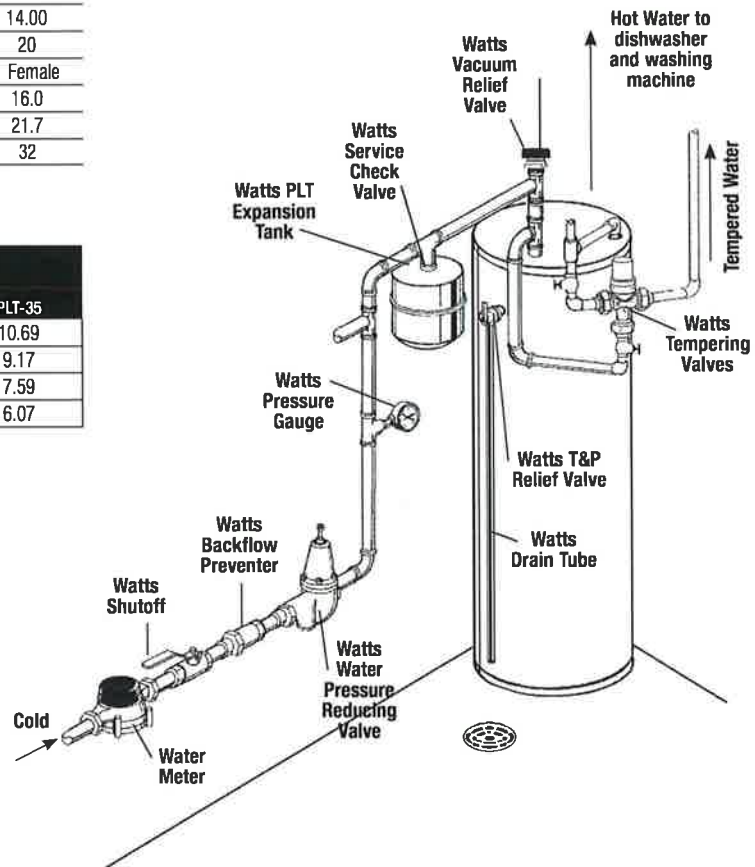
DESCRIPTION	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp. - °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	¾ Male	¾ Male	¾ Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

Acceptance Volume

AIR SIDE PRE-PRESSURE (PSI)	PLT-5	WATER SIDE VOLUME AT 150PSI (GALLONS)		
		PLT-12	PLT-20	PLT-35
20	1.48	3.42	7.102	10.69
40	1.26	2.88	5.882	9.17
60	1.0	2.49	4.705	7.59
80	.8	1.85	4.009	6.07

SUPPLY PRESSURE (PSIG)	WATER HEATER (GALLONS)						
	20	30	40	50	80	100	120
40							
50							
55							
60							
70							
80							
90							
100							
110							
120							

	PLT-5		PLT-20
	PLT-12		PLT-35
	Multiple tanks required - consult factory		



USA: T: (978) 689-6066 • F: (978) 975-8350 • Watts.com

Canada: T: (888) 208-8927 • F: (905) 332-7088 • Watts.ca

Latin America: T: (52) 55-4122-0138 • Watts.com

For Water Heater/Tank Applications

Job Name CALS Library
 Job Location LR
 Engineer BTME
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Model LFN36-M1 Vacuum Relief Valve

Sizes: 1/2" – 3/4" Male NPT

Features

- Low profile
- All Lead Free* brass body
- Protective cap
- Suitable for low pressure steam and water service
- Tested and rated to ANSI Z21.22
- CSA certified
- The LFN36-M1 features Lead Free* construction to comply with Lead Free* installation requirements.

Applications

- Domestic water heaters and supply tanks
- Table top heaters
- Jacketed steam kettles
- Unit heaters
- Low pressure steam systems
- Steam coil heaters

Note: Vacuum relief valves are not designed or approved as backsiphonage backflow preventers. For protection against backsiphonage install Watts Series 288A vacuum breakers.

Standards

Tested and rated to ANSI Z21.22
 CSA certified

Specifications

A Watts Model LFN36-M1 Vacuum Relief Valve shall be installed on domestic hot water supply tanks/ heaters/ unit heaters/ steam kettles as indicated on plans. The vacuum relief valve shall be ANSI Z21.22 rated and CSA certified. The vacuum relief valve shall have an all brass body and include a protective cap for automatic venting of a closed system to atmosphere when a vacuum is created. The Lead Free* Vacuum Relief Valve shall comply with state codes and standards, where applicable, requiring reduced lead content. The Watts LFN36-M1 Vacuum Relief Valve permits air to enter and prevent vacuum conditions that could siphon the water from the system, resulting in collapse of a tank or water heater or equipment burn out. The valve shall be a Watts Model LFN36-M1.



LFN36-M1

Design certified by



Tested and rated under "ANSI Z21.22
Relief Valves for Hot Water Supply Systems".

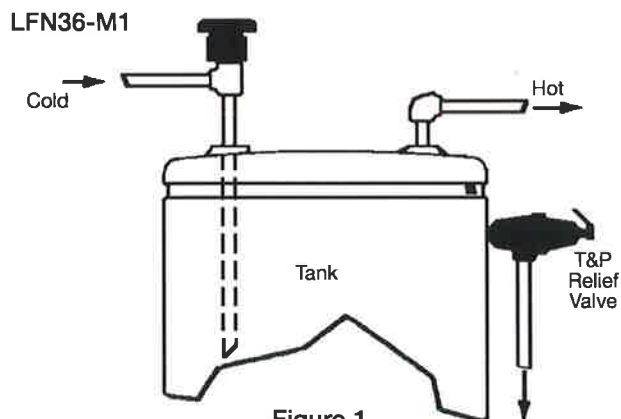


Figure 1

Domestic Hot Water Supply Tanks and Heaters
with Top Supply

NOTICE

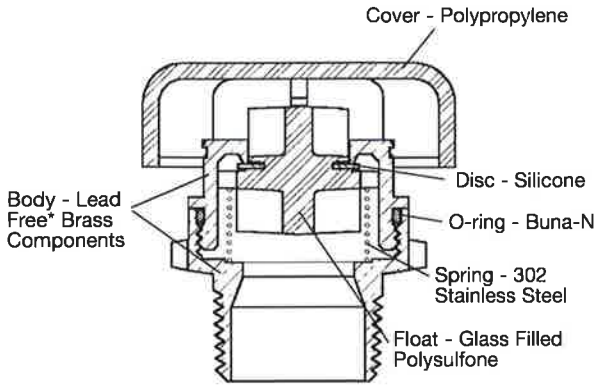
The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Materials



Pressure - Temperature

Maximum steam working pressure: 15 psi (1.03 bar)
 Maximum temperature: 250°F (121°C)

Typical Installations

Water Service

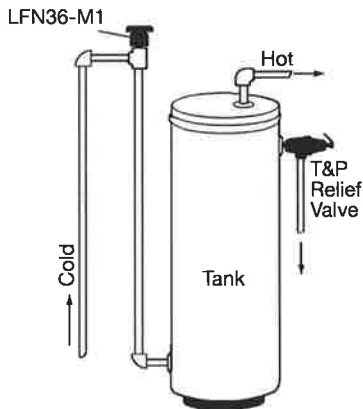


Figure 2

Domestic Hot Water Supply Tanks and Heaters with Bottom Feed

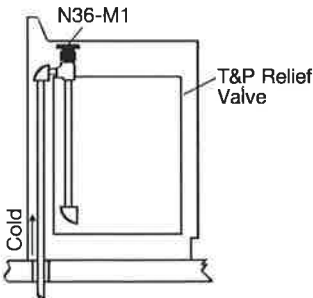
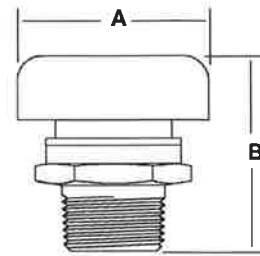


Figure 3

Table Top Heaters

Dimensions-Weights



SIZE	DIMENSIONS				WEIGHT	
	in.	in.	mm	in.	mm	oz.
1/2	2	50	2	50	4	113
3/4	2	50	2	50	4	113

Capacity

SIZE	MODEL	VENTING CAPACITY	
in.		CFM	LPM
1/2	LFN36-M1	15	425
3/4	LFN36-M1	15	425

Steam Service

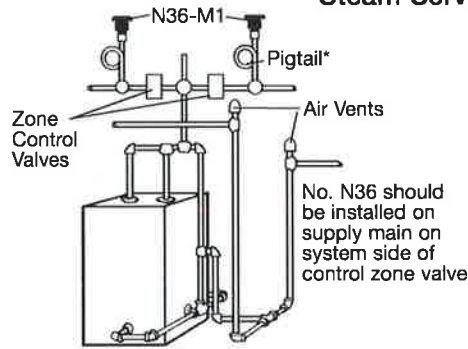


Figure 4

Low Pressure Steam Heating Systems

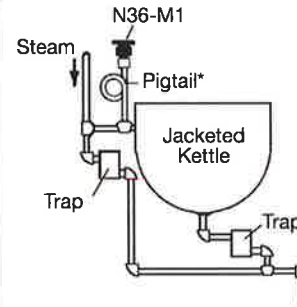


Figure 5

Jacketed Kettles

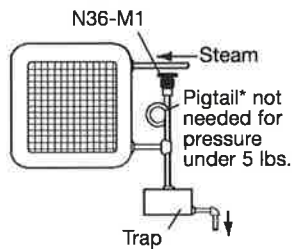


Figure 6
Unit Heaters

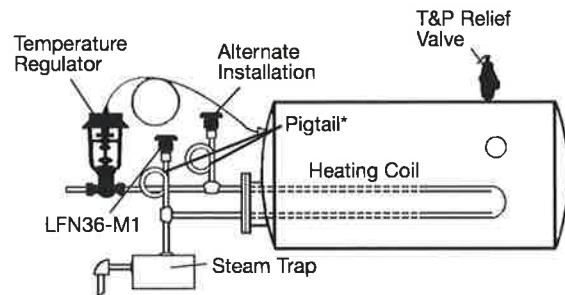


Figure 7
Steam Coil Heaters

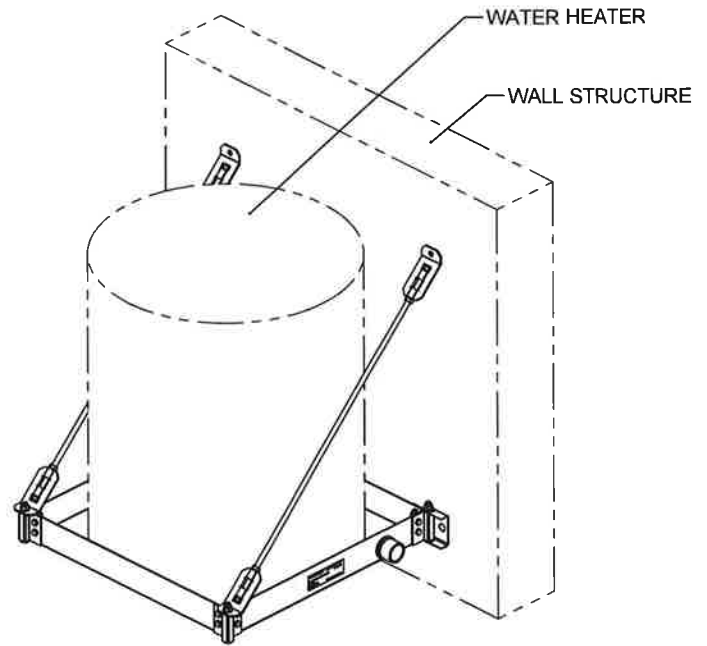
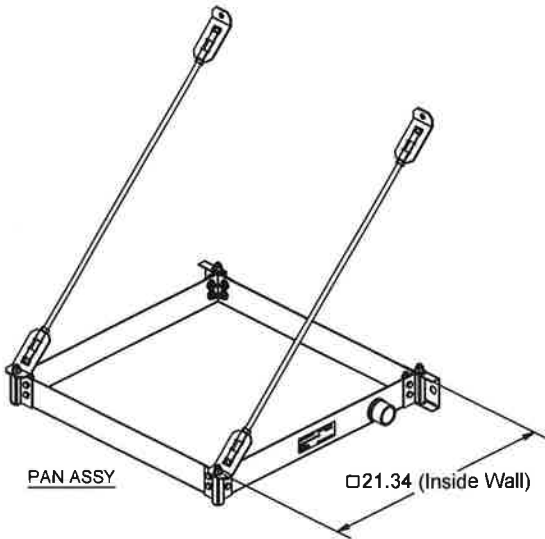
*Note: When used for steam service, be sure to use pigtail to prevent live steam from damaging N36 valve.



PRODUCT SPECIFICATION DRAWING

QUICK STAND™ #40-SWHP-W

Wall Mounted Equipment Platform

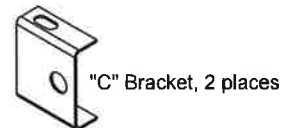


ALL DIMENSIONS IN INCHES

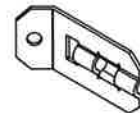
The Wall Mounted Equipment Platform is engineered to support water heaters up to 20 U.S. gallons (or other equipment up to 375 pounds total weight) mounted to a wall. This item also serves as a drain pan.

Product Information:

- **Material:**
 Pan: 14 gage CRS, galvanized
 Corner Brackets (4): 14 gage CRS, galvanized
 C-Brackets (2): 16 gage CRS, galvanized
 45° Brackets (4): 12 gage, CRS, galvanized
 Threaded Rod (2): Low carbon steel, zinc plated, 3/8" x 29-3/4" long
- Wide platform allows water heaters up to 21-1/4" diameter
- Watertight corners and drain fittings eliminate need for additional drain pan
- Static load rating 375 pounds with 2X safety factor (depending on structural anchorage)
- Professional Engineer stamped documentation available
- Includes PVC drain body 1" MIPT x 1" FS
- Galvanized steel construction
- Suspends with user supplied 3/8" hardware to mount to wall, 4 places
- Installation instructions for mounting to concrete or framed wall structure available
- Patent Pending



"C" Bracket, 2 places



45° Bracket, 4 places

Product Submittal	
Job Name:	
Date:	
Part Number:	Qty:
Architect / Owner:	
Contractor:	
Notes:	

.....HUBBARD ENTERPRISES.....
HOLDRITE®
 "Converting Makeshift Methods into Engineered Solutions"™

DWH-3

ElectriFLEX HD™ (Heavy Duty) Commercial Electric Water Heater



Photo is of
CEHD50(kW)3*CF

Bradford White ElectriFLEX HD™ Electric Models Feature:

- **Immersion Thermostats** — Designed to provide outlet water at a thermostatically controlled temperature greater than 180°F (82°C).
- **Conversion Kits**— Design certified by UL® for field conversion. Conversion kits are available to convert any one model to a variety of voltages and kW inputs (Kit part numbers on reverse side). All models are shipped from the factory standard Three Phase, and can be field converted to Single Phase without a conversion kit.
- **Insulation System**— 3" (76mm) Non-CFC foam covers the sides and top of the tank, reducing heat loss. This results in less energy consumption, improved efficiencies, and jacket rigidity.
- **Vitraglas® Lining with Microban®**— An exclusively engineered enamel formula that provides superior tank protection from the corrosive effects of water; and with Microban® antimicrobial product protection to help prevent the growth of bacteria, mold and mildew on the surface of the tank lining.
- **Hydrojet® Sediment Reduction System**— Sediment build-up reducing device that also increases first hour delivery of hot water while minimizing temperature build-up in tank.
- **Water Connections**— 1½" (38mm) NPT factory-installed true dielectric fittings extend water heater life and simplify water line connections.
- **Elements**— Screw in style low watt density incoloy sheathed elements standard. These elements are durable and resistant to lime buildup.
- **Two Protective Anode Rods**— Provide added protection against corrosion for long-term, trouble-free service.
- **Hand Hole Cleanout**— Allows inspection of tank interior and facilitates the removal of sediment deposits.
- **ASME Construction Available.**
- **NSF Kits Available.**
- **Low Restrictive Brass Drain Valve**— Durable tamper proof design.
- **T&P Relief Valve**— Installed.
- **Completely Pre-wired**— With pressure lug terminal block eliminating need for splicing or taping of wires.
- **Voltages Available**— 208v, 240v, 277v, 380v, 415v, 480v and 600v.
- **Internal Fusing**— Standard on all models.

FEATURING:



3 or 5-Year Limited Tank Warranties / 1-Year Limited Warranty on Component Parts.

For more information on warranty, please visit www.bradfordwhite.com

For products installed in USA, Canada, and Puerto Rico. Some states do not allow limitations on warranties. See complete copy of the warranty included with the heater.

Microban® antimicrobial product protection helps prevent the growth of bacteria, mold and mildew that may affect the product. The built-in antimicrobial properties do not protect users or others from disease-causing organisms. Microban® is a registered trademark of Microban Products Company.

MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,682,666; 7,634,976; 5,660,165; 5,954,492; 6,056,542; 6,935,280; 5,372,185; 5,485,879; 5,574,822; 7,971,560; 7,992,526; 6,684,821; 7,334,419; 7,866,168; 7,270,087; 7,007,748; 5,596,952; 6,142,216; 7,699,026; 5,341,770; 7,337,517; 7,665,211; 7,665,210; 7,063,132; 7,063,133; 7,559,293; 7,900,589; 5,943,984; 8,082,888; 5,988,117; 7,621,238; 7,650,859; 5,761,379; 7,409,925; 5,277,171; 8,146,772; 7,458,341; 2,262,174. OTHER U.S. AND FOREIGN PATENT APPLICATIONS PENDING. CURRENT CANADIAN PATENTS: 2,314,845; 2,504,824; 2,108,186; 2,143,031; 2,409,271; 2,548,958; 2,112,515; 2,476,685; 2,239,007; 2,092,105; 2,107,012. Vitraglas® and Hydrojet® are registered trademarks of Bradford White® Corporation. Microban® is a registered trademark of Microban Products Company.

Commercial Electric Water Heater

ElectriFLEX HD™ Electric Models

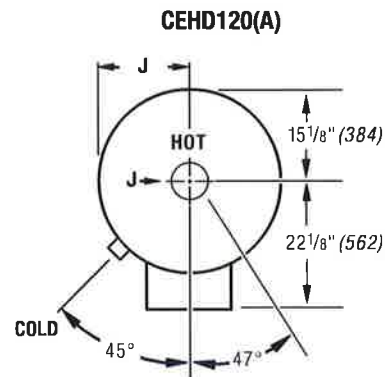
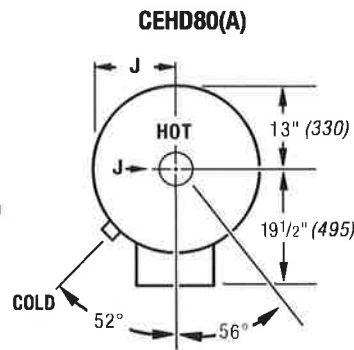
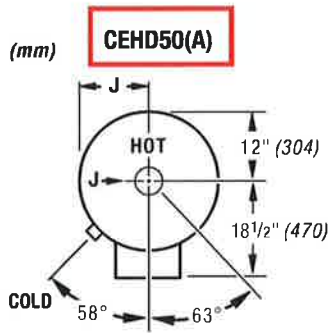
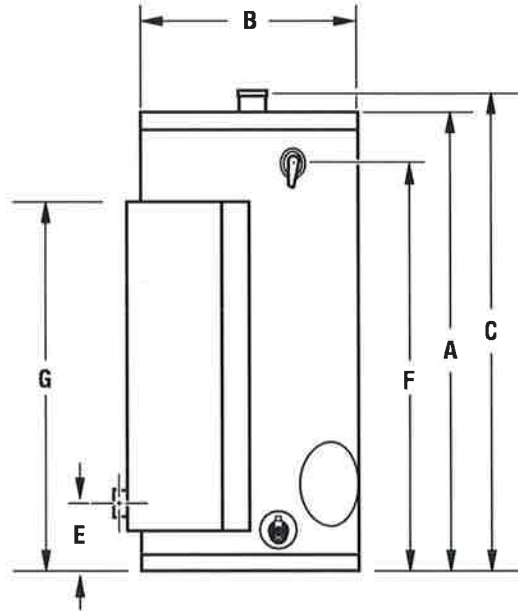
Meet or exceed ASHRAE 90.1 (latest edition). C.E.C. Listed

Model Number	Rated Nominal Capacity		Min. - Max. kW Input Range	A Floor to Top of Heater in.	B Jacket Dia. in.	C Floor to Hot Water Conn. in.	E Floor to C/L of Cold Water Conn. in.	F Floor to T&P Conn. in.	G Floor to Top of Control Box in.	J C/L of Hot Water Conn. in.	Water Conn. NPT in.	Approx Shipping Weight lbs.	
	U.S. Gal.	Imp. Gal.										Std.	ASME
CEHD50(A)(KW)3*CF	50	42	13.5 - 54	50 7/16	24	52 5/8	6 15/16	40 11/16	49 1/8	12	1 1/2	270	302
CEHD80(A)(KW)3*CF	80	67	13.5 - 54	61 1/4	26	65 1/2	7	52 3/16	49 1/8	13	1 1/2	335	378
CEHD120(A)(KW)3*CF	119	100	13.5 - 54	64 11/16	30 1/4	66 3/4	6 15/16	54 3/4	50 9/8	15 1/8	1 1/2	430	485

Model Number	Rated Nominal Capacity		Min. - Max. kW Input Range	A Floor to Top of Heater mm.	B Jacket Dia. mm.	C Floor to Hot Water Conn. mm.	E Floor to C/L of Cold Water Conn. mm.	F Floor to T&P Conn. mm.	G Floor to Top of Control Box mm.	J C/L of Hot Water Conn. mm.	Water Conn. NPT mm.	Approx Shipping Weight kg.	
	Liters											Std.	ASME
CEHD50(A)(KW)3*CF	189		13.5 - 54	1281	610	1337	176	1033	1248	308	38	122	137
CEHD80(A)(KW)3*CF	303		13.5 - 54	1556	660	1664	178	1326	1248	330	38	152	171
CEHD120(A)(KW)3*CF	450		13.5 - 54	1643	768	1695	176	1391	1337	384	38	195	220

* = voltage and phase designator. Voltage and phase must be specified when ordering. Example: CEHD50243*CF, 240 Volt, 3 phase.

(A) ASME Construction available. For ASME construction add "A" to the model number. Example: CEHD50A243*CF.



Commercial Electric Water Heater

Model	Desired Input		Conversion Kit Part Numbers***						
	Total kW	Element kW	208 Volts	240 Volts	277 Volts	380 Volts	415 Volts	480 Volts	600 Volts*
CEHD with 3 Elements	13.5	4.5	415-51043-129	415-51043-64	415-51043-114	415-51043-105	415-51043-95	415-51043-86	415-51043-04
	15	5	415-51043-130	415-51043-122	415-51043-115	415-51043-106	415-51043-96	415-51043-87	415-51043-05
	18	6	415-51043-131	415-51043-123	415-51043-116	415-51043-107	415-51043-97	415-51043-88	415-51043-06
CEHD with 6 Elements	24	4	415-51043-132	415-51043-67	415-51043-55	415-51043-108	415-51043-98	415-51043-19	415-51043-07
	27	4.5	415-51043-133	415-51043-68	415-51043-117	415-51043-109	415-51043-99	415-51043-89	415-51043-08
	30	5	415-51043-134	415-51043-124	415-51043-118	415-51043-110	415-51043-100	415-51043-90	415-51043-09
	36	6	415-51043-135	415-51043-125	415-51043-119	415-51043-111	415-51043-101	415-51043-91	415-51043-10
CEHD with 9 Elements	45	5	415-51043-136	415-51043-126	415-51043-120	415-51043-112	415-51043-110	415-51043-92	415-51043-11
	54	6	415-51043-137**	415-51043-127	415-51043-121	415-51043-113	415-51043-103	415-51043-93	415-51043-12

3 element models may convert 13.5kW thru 18kW ONLY

6 element models may convert 24kW thru 36kW ONLY

9 element models may convert 45kW thru 54kW ONLY

*** Converting 3 Element Configurations (13.5-18kW)			*** Converting 6 or 9 element configurations (24-54kW)		
From	To	Transformer Required	From	To	Transformer Required
208/240/480 Volt	277/380/415 Volt	415-41994-02	208/240/480 Volt	277/380/415 Volt	415-41995-02
277/380/415 Volt	208/240/480 Volt	415-41994-01	277/380/415 Volt	208/240/480 Volt	415-41995-01
208/240/480 Volt	208/240/480 Volt	No Transformer Change Required	208/240/480 Volt	208/240/480 Volt	No Transformer Change Required
277/380/415 Volt	277/380/415 Volt	No Transformer Change Required	277/380/415 Volt	277/380/415 Volt	No Transformer Change Required

* Only kW conversion is allowed for models rated 600V. Models rated 480V and below must not be converted to 600V.

** Only available as a three phase conversion kit.

Input kW	Recovery GPH Temperature Rise °F							Input kW	Recovery LPH Temperature Rise °C										
	40	50	60	70	80	90	100		120	140	23	28	34	40	45	50	56	67	78
13.5	140	112	93	80	70	62	56	47	40	13.5	530	424	352	303	265	235	212	178	151
15	155	124	103	89	78	69	62	52	44	15	587	469	390	337	295	261	235	197	167
18	186	149	124	106	93	83	74	62	53	18	704	564	469	401	352	314	280	235	201
24	248	199	164	142	124	110	99	83	71	24	939	753	621	538	469	416	375	314	269
27	279	223	186	160	140	124	112	93	80	27	1056	844	704	606	530	469	424	352	303
30	310	248	207	177	155	138	124	103	89	30	1173	939	784	670	587	522	469	390	337
36	372	298	248	213	186	165	149	124	106	36	1408	1128	939	806	704	625	564	469	401
45	465	372	310	266	233	207	186	155	133	45	1760	1408	1173	1007	882	784	704	587	503
54	558	447	372	319	279	248	223	186	160	54	2112	1692	1408	1208	1056	939	844	704	606

Input kW	Number of Elements														
	208V Phase		240V Phase		277V Phase		380V Phase		415V Phase		480V Phase		600V Phase		
	1	3	1	3	1	3	3	1	3	3	1	3	3	1	3
13.5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
15	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
18	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
24	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
27	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
30	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
36	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
45	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
54	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

Input kW	Full Load Current Amperes																				
	208V Phase		240V Phase		277V Phase		380V Phase		415V Phase		480V Phase		600V Phase								
	1	3	1	3	1	3	3	1	3	3	1	3	3	1	3						
13.5	64.9	37.5	56.2	32.5	48.7	21.0	19.0	28.1	16.2	13.0	13.5	64.9	37.5	56.2	32.5	48.7	21.0	19.0	28.1	16.2	13.0
15	72.1	41.6	62.5	36.1	54.1	23.0	21.0	31.2	18.0	14.4	15	72.1	41.6	62.5	36.1	54.1	23.0	21.0	31.2	18.0	14.4
18	86.5	50.0	72.0	43.4	64.0	28.0	25.0	37.5	21.6	17.3	18	86.5	50.0	72.0	43.4	64.0	28.0	25.0	37.5	21.6	17.3
24	115.4	66.7	100.0	57.8	86.6	37.0	34.0	50.0	28.9	23.1	24	115.4	66.7	100.0	57.8	86.6	37.0	34.0	50.0	28.9	23.1
27	129.8	75.0	112.5	65.0	97.4	41.0	38.0	56.2	32.5	26.0	27	129.8	75.0	112.5	65.0	97.4	41.0	38.0	56.2	32.5	26.0
30	144.2	83.3	125.0	72.2	108.3	46.0	42.0	62.5	36.1	28.9	30	144.2	83.3	125.0	72.2	108.3	46.0	42.0	62.5	36.1	28.9
36	173.0	100.0	150.0	86.7	129.9	55.0	50.0	75.0	43.3	34.6	36	173.0	100.0	150.0	86.7	129.9	55.0	50.0	75.0	43.3	34.6
45	216.3	125.0	187.5	108.3	162.4	69.0	63.0	93.7	54.1	43.3	45	216.3	125.0	187.5	108.3	162.4	69.0	63.0	93.7	54.1	43.3
54	259.6	150.0	225.0	130.0	194.9	83.0	75.0	112.5	65.0	52.0	54	259.6	150.0	225.0	130.0	194.9	83.0	75.0	112.5	65.0	52.0

3 element models may convert 13.5kW thru 18kW ONLY

6 element models may convert 24kW thru 36kW ONLY

9 element models may convert 45kW thru 54kW ONLY

Sample Specification

The water heater shall be a Bradford White ElectriFLEX HD™ model with a rated storage capacity of not less than _____ gallons (_____ liters), a minimum kW input of _____ kW (_____ BTU/Hr.), a minimum recovery of _____ GPH (_____ LPH). The tank shall be lined with Vitraglas® vitreous enamel with Microban® antimicrobial technology and have a bolted hand hole cleanout. The tank shall have _____ anode rods installed in separate tank head couplings. The heater shall have 3" (76mm) Non-CFC foam insulation, and come equipped with an ASME rated T&P relief valve, a cold water inlet Hydrojet® Sediment Reduction System. It shall be design certified by UL® for 180°F (82°C) application, either with or without a separate storage tank, and comply with state and local codes and ordinances.

General

All electric water heaters are certified at 300 PSI test pressure (2068 kPa) and 150 PSI working pressure (1034 kPa). All models are design certified by UL®, to provide outlet water at a thermostatically controlled temperature greater than 180°F (82°C) as an Automatic Storage Heater, and an Automatic Circulating Tank Heater. As an Automatic Storage Heater, all models are complete, self-contained water heating systems. It needs no separate storage tank, pump, wiring or elaborate piping network. When equipped with a mixing valve, it will supply 180°F (82°C) sanitizing and lower temperature general purpose hot water simultaneously. These models can be used either as a single unit or in multiples connected in series or parallel (recommended). ***Dimensions and specifications subject to change without notice in accordance with our policy of continuous product improvement.***

— BRADFORD WHITE IS —



Sales: 800-523-2931 ■ Fax 215-641-1612

24/7 Technical Support: 800-334-3393 ■ Email techserv@bradfordwhite.com

Products made by Bradford White are manufactured in the United States using the finest raw materials and components from around the world.

Built to be the Best

Engineering Specification

Job Name CALS Library
 Job Location LR
 Engineer BTME
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Series PLT

Potable Water Expansion Tanks

Series PLT Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system, the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series PLT expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve.

It is a pre-pressurized steel tank with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

Features

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks

Models

→ **PLT-5-M1** 3/4" male connection, tank volume 2.1 gal.
PLT-12-M1 3/4" male connection, tank volume 4.5 gal.
PLT-20-M1 3/4" male connection, tank volume 8.5 gal.
PLT-35-M1 1" female connection, tank volume 14.00 gal.

Specifications

The potable water expansion tank shall be of drawn steel construction. It shall have a Butyl diaphragm separating the air chamber from the water containing chamber. Inlet connector shall be Stainless Steel. Materials of manufacture for the diaphragm shall be FDA approved.

The potable water expansion tank shall be a Watts Model PLT.

PLT-20



Standards

Models PLT-5, PLT-12 and PLT-20

are Listed by IAPMO.
 Certified to ANSI/NSF 61

Model PLT-35
 Certified to ANSI/NSF 61



(73°F/23°C)

Note: The potable water expansion tank shall be installed in the cold water service pipe line on the supply side of the water heater (or water storage tank). A pressure relief valve sized and installed in accordance with local codes must be incorporated in the system.

In those systems requiring a combined temperature and pressure safety relief valve, the temperature and pressure relief valve should be sized and installed in accordance with local codes. Adequate drainage provisions should be provided where water flow will cause damage.

See chart on back

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Selection

This Quick Reference Selection Guide may be used as an alternative to using a formula to determine the correct expansion tank for the system. This table is based upon a relief valve setting of 150psi (10.3 bar), and a maximum of 50°F temperature rise.

To select the correct model PLT series tank, simply go the supply pressure equal to the system supply pressure (for pressures between those shown use next highest supply pressure shown), read across the chart to the correct tank as indicated by the water heater capacity (for capacities between those shown, use next highest capacity).

To accommodate the thermal expansion required for higher temperature and/or higher pressure systems, multiple tanks may be used. Please contact the factory for sizing information.

Materials

Diaphragm: Butyl rubber
Inlet Connection: Stainless Steel

Technical Information

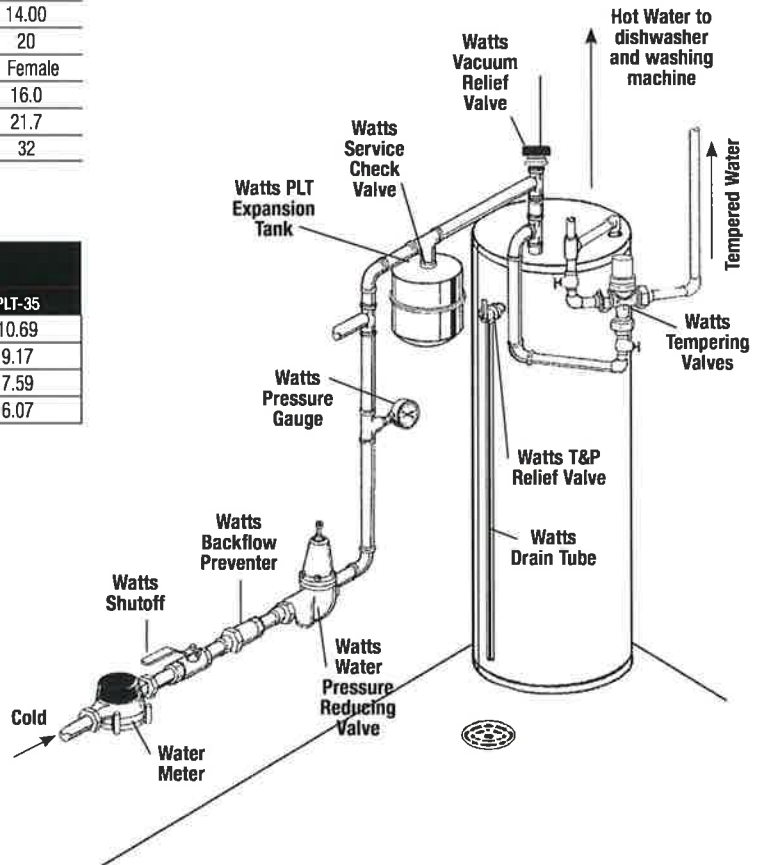
DESCRIPTION	PLT-5	PLT-12	PLT-20	PLT-35
Max. Pressure - PSI	150	150	150	150
Max. Temp. - °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Air Pre-charge - PSI	20	20	20	20
Connections Size - Inches	¾ Male	¾ Male	¾ Male	1 Female
Diameter - Inches	8	10.5	12.5	16.0
Length - Inches	11	13.5	19.2	21.7
Weight - Lbs.	5.5	10	15	32

Acceptance Volume

AIR SIDE PRE-PRESSURE (PSI)	WATER SIDE VOLUME AT 150PSI (GALLONS)			
	PLT-5	PLT-12	PLT-20	PLT-35
20	1.48	3.42	7.102	10.69
40	1.26	2.88	5.882	9.17
60	1.0	2.49	4.705	7.59
80	.8	1.85	4.009	6.07

SUPPLY PRESSURE (PSIG)	WATER HEATER (GALLONS)						
	20	30	40	50	80	100	120
40							
50							
55							
60							
70							
80							
90							
100							
110							
120							

PLT-5 <
 PLT-12 <
 PLT-20
 PLT-35
 Multiple tanks required - consult factory



USA: T: (978) 689-6066 • F: (978) 975-8350 • Watts.com
Canada: T: (888) 208-8927 • F: (905) 332-7068 • Watts.ca
Latin America: T: (52) 55-4122-0138 • Watts.com

For Water Heater/Tank Applications

Job Name CALS Library
 Job Location LR
 Engineer BTME
 Approval _____

Contractor Comfort Systems USA
 Approval _____
 Contractor's P.O. No. _____
 Representative Sanders Supply

LEAD FREE*

Model LFN36-M1 Vacuum Relief Valve

Sizes: 1/2" – 3/4" Male NPT

Features

- Low profile
- All Lead Free* brass body
- Protective cap
- Suitable for low pressure steam and water service
- Tested and rated to ANSI Z21.22
- CSA certified
- The LFN36-M1 features Lead Free* construction to comply with Lead Free* installation requirements.

Applications

- Domestic water heaters and supply tanks
- Table top heaters
- Jacketed steam kettles
- Unit heaters
- Low pressure steam systems
- Steam coil heaters

Note: Vacuum relief valves are not designed or approved as backsiphonage backflow preventers. For protection against backsiphonage install Watts Series 288A vacuum breakers.

Standards

Tested and rated to ANSI Z21.22
 CSA certified

Specifications

A Watts Model LFN36-M1 Vacuum Relief Valve shall be installed on domestic hot water supply tanks/ heaters/ unit heaters/ steam kettles as indicated on plans. The vacuum relief valve shall be ANSI Z21.22 rated and CSA certified. The vacuum relief valve shall have an all brass body and include a protective cap for automatic venting of a closed system to atmosphere when a vacuum is created. The Lead Free* Vacuum Relief Valve shall comply with state codes and standards, where applicable, requiring reduced lead content. The Watts LFN36-M1 Vacuum Relief Valve permits air to enter and prevent vacuum conditions that could siphon the water from the system, resulting in collapse of a tank or water heater or equipment burn out. The valve shall be a Watts Model LFN36-M1.



LFN36-M1

Design certified by



Tested and rated under "ANSI Z21.22
Relief Valves for Hot Water Supply Systems".

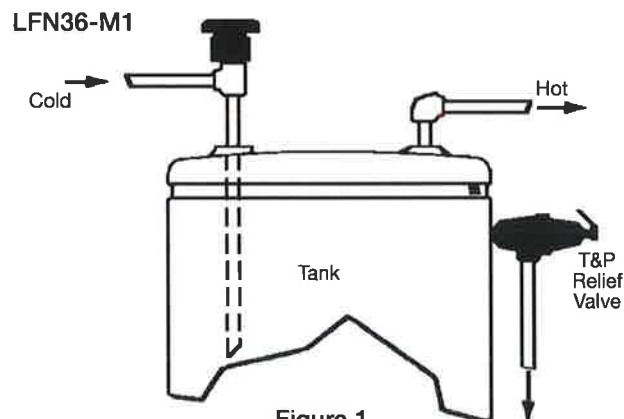


Figure 1

Domestic Hot Water Supply Tanks and Heaters
with Top Supply

NOTICE

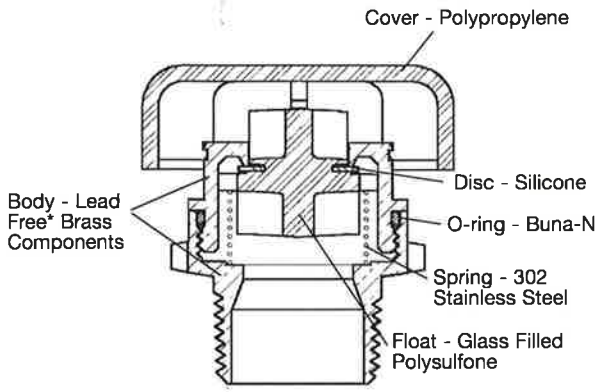
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NOTICE

Inquire with governing authorities for local installation requirements

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

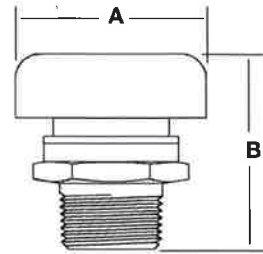
Materials



Pressure - Temperature

Maximum steam working pressure: 15 psi (1.03 bar)
 Maximum temperature: 250°F (121°C)

Dimensions-Weights



SIZE	DIMENSIONS				WEIGHT	
	A		B		oz.	gr
1/2	in.	mm	in.	mm	4	113
3/4	2	50	2	50	4	113

Capacity

SIZE	MODEL	VENTING CAPACITY	
		CFM	LPM
1/2	LFN36-M1	15	425
3/4	LFN36-M1	15	425

Typical Installations

Water Service

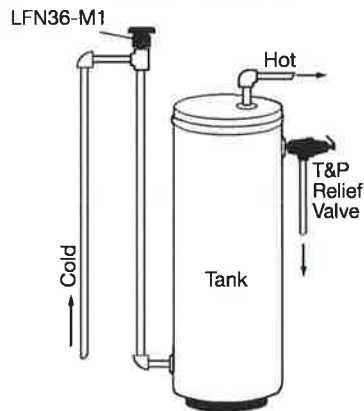


Figure 2

Domestic Hot Water Supply Tanks and Heaters with Bottom Feed

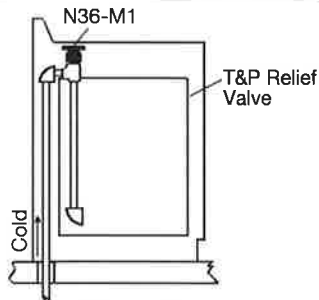


Figure 3

Table Top Heaters

Steam Service

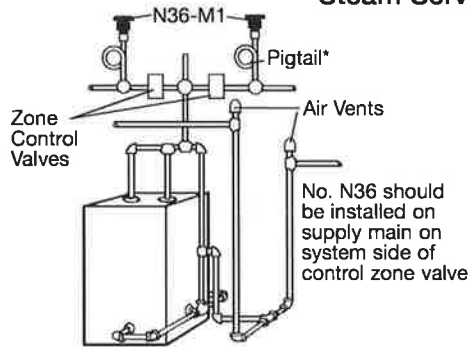


Figure 4

Low Pressure Steam Heating Systems

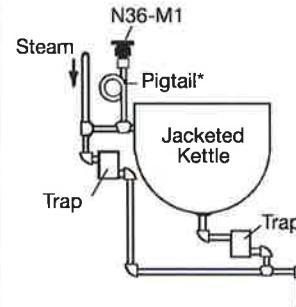


Figure 5

Jacketed Kettles

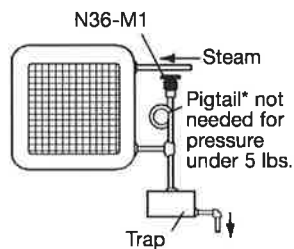


Figure 6
Unit Heaters

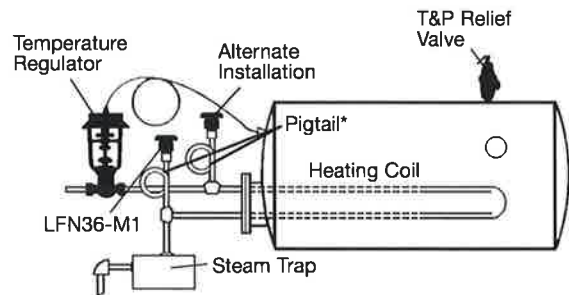


Figure 7
Steam Coil Heaters

*Note: When used for steam service, be sure to use pigtail to prevent live steam from damaging N36 valve.

