

## For Water Heater and Hot Water Storage Tank Applications

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# 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 has 3/4" male connection, tank volume 2.1 gal.

PLT-12-M1 has 3/4" male connection, tank volume 4.5 gal.

PLT-20-M1 has 3/4" male connection, tank volume 8.5 gal.

PLT-35-M1 has 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.

**\*The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.**

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

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.

# WATTS®

## 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.

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		

## Materials

Diaphragm: Butyl rubber

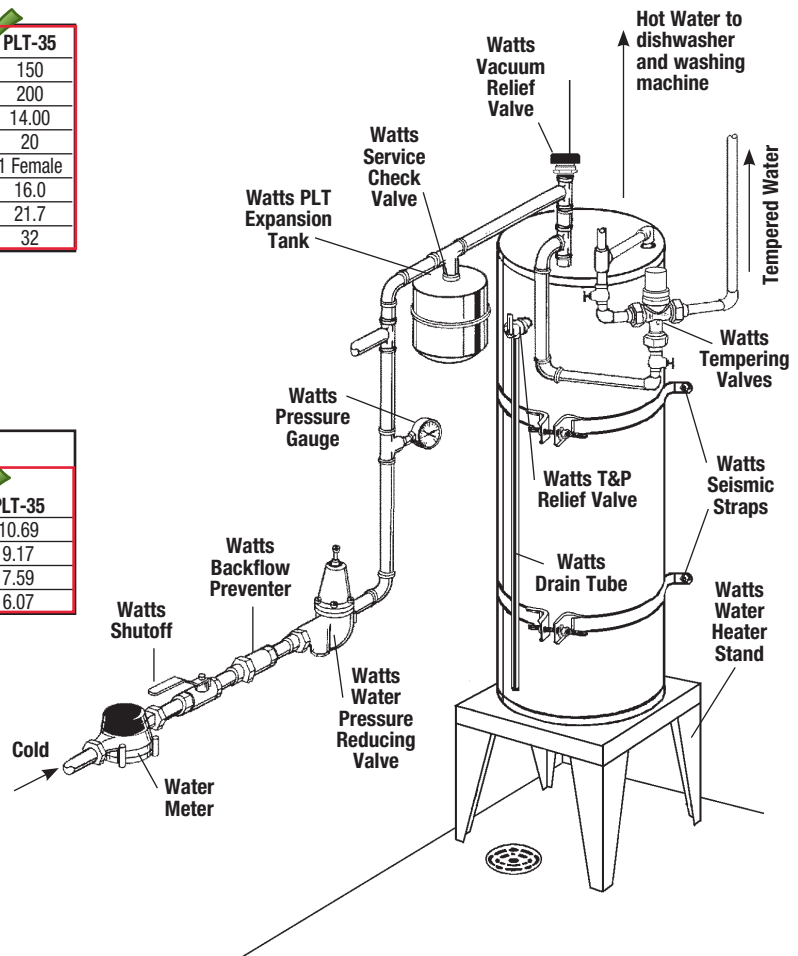
Inlet Connection: Stainless Steel

## 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



# WATTS®

A Watts Water Technologies Company



**ISO 9001-2008**  
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# EXTROL®

## Hydronic Expansion Tanks: Vertical AX Series ASME

### 125 PSIG Working Pressure

### Construction

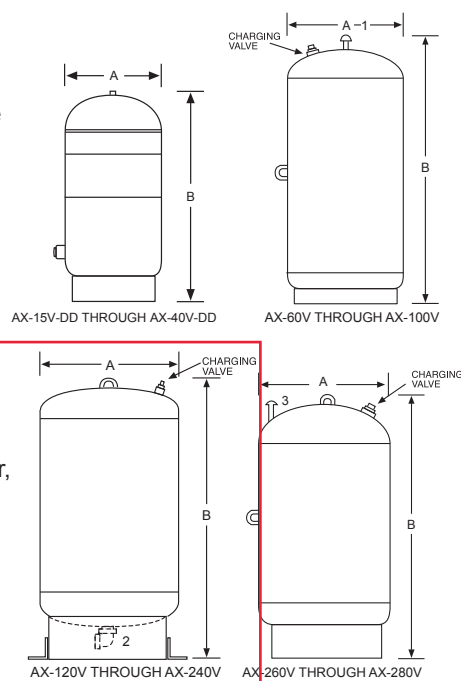
Shell	ASME Approved Steel
Diaphragm	Heavy Duty Butyl/EPDM
System Connection	NPTF <sup>1</sup> Malleable Iron Center NPTM <sup>2</sup> Steel Pipe, Top Offset
Finish	Red Oxide Primer
Air Valve	Schrader Valve w/EPDM Seats
Factory Precharge	12 PSIG (.8 bar)

### Performance

Maximum Operating Temperature	240°F (115°C)
Maximum Working Pressure	125 PSIG (8.6 bar)
Warranty	3-Years

### Application

- For use in closed, non-potable hydronic heating and chilled water systems.
- Designed to meet all ASME Code Section VIII, Division 1 standards.
- Available with optional sight glass and seismic restraints.
- Suitable in propylene glycol applications with mixtures up to 50%.
- Deep drawn models are lighter, stronger and more compact than traditional head and shell construction.



### Deep Drawn ASME Models

Model Number	Tank Volume		Max. Accept. Volume		A Tank Diameter		B Tank Height		Sys. Conn	Shipping Weight	
	Gal	Lit	Gal	Lit	In	mm	In	mm	In	Lbs	Kg
AX-15V-DD	8.6	33	3.2	12.1	12	305	22	559	3/4" <sup>1</sup>	38	17
AX-20V-DD	16.5	63	11.3	43	15	381	25	636	3/4" <sup>1</sup>	51	23
AX-40V-DD	23	88	11.3	43	15	381	33	838	3/4" <sup>1</sup>	72	34

### Head & Shell ASME Models

Model Number	Tank Volume		Max. Accept. Volume		A Tank Diameter		B Tank Height		Sys. Conn	Shipping Weight	
	Gal	Lit	Gal	Lit	In	mm	In	mm	In	Lbs	Kg
AX-60V	33.6	127.2	11.3	42.8	16	356	45	1143	1/2" <sup>1</sup>	99	45
AX-80V	44.4	168.1	22.6	85.5	24	610	29	737	1" <sup>1</sup>	166	75
AX-100V	55.7	211.8	22.6	85.5	24	610	34	863	1" <sup>1</sup>	178	81
AX-120V	68.0	257.4	34.0	128.7	24	610	47	1194	1" <sup>2</sup>	220	100
AX-144V	77.0	291.5	34.0	128.7	24	610	52	1321	1" <sup>2</sup>	232	105
AX-180V	90.0	340.7	34.0	128.7	24	610	60	1524	1" <sup>2</sup>	241	109
AX-200V	110.0	416.4	34.0	128.7	24	610	66	1676	1" <sup>2</sup>	269	122
AX-240V	132.0	500.0	46.0	174.0	30	762	58	1473	1" <sup>2</sup>	432	196
AX-260V	159.0	600.0	56.0	212.0	30	762	65	1651	1 1/4" <sup>3</sup>	475	215
AX-280V	211.0	800.0	84.0	318.0	30	762	82	2083	1 1/4" <sup>3</sup>	599	272

All dimensions and weights are approximate.

### Optional Seismic Restraints

Tank Diameter	Bolt Circle	Dim.	Dim.	Hole Size
B	D	E	F	G
12	12 3/4	2	2	9/16
16 1/4	14 3/4	2	2	9/16
24	18	2	2	9/16
30	27	3	3	3/4

Job Name _____	Notes _____
Engineer _____	_____
Contractor _____	_____
P.O. No. _____	_____
Sales Rep. _____	_____
Model No. _____	_____

