

# Models: DET-5-M1, DET-12-M1, DET-20-M1

## Potable Hot Water Expansion Tank

### Installation Instructions

#### **⚠ WARNING!**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, serious bodily injury or death. Read instructions completely before proceeding with installation. Only qualified personnel may install or service this equipment in accordance with local codes and ordinances.

Do not exceed 80psi (5.5 bar) air charge. Air charge pressure exceeding 80psi (5.5 bar) could become hazardous and will void any and all warranties, either written or implied. Failure to follow these instructions will result in the possibility of property damage, serious bodily injury or death.

This Expansion Tank is designed and intended for water storage at a maximum pressure of 150psi (10.3 bar) and a maximum temperature of 200°F (93°C). Any use other than for potable water or a sustained or instantaneous pressure in excess of 150psi (10.3 bar) or 200°F (93°C) is **UNSAFE** and can cause property damage, serious bodily injury or result in death.



Certified to ANSI/NSF 61  
(73°F/23°C)



Listed by IAPMO

**Disclaimer:** The manufacturer of this tank does not accept any liability or other responsibility for personal injury or property damage resulting from improper use, installation or operation of this tank or the system of which it is a part.

**Notice:** The expansion tank, piping and your connections may in time leak. Select a location to install the expansion tank where a water leak will not damage the surrounding area. The manufacturer is not responsible for any water damage in connection with this expansion tank.

### Acceptance Volume

Air Side Pre-pressure (psi) (bar)	Water Side Volume at 150psi (10.3 bar) (gallons)		
	DET-5-M1	DET-12-M1	DET-20-M1
20 (1.4)	1.500	2.801	7.102
40 (2.8)	1.272	2.208	5.882
60 (4.1)	.996	2.076	4.705
80 (5.5)	.720	1.716	4.009

	DET-5-M1	DET-12-M1	DET-20-M1
<b>Description</b>	Order No. 0067700	Order No. 0067701	Order No. 0067702
Max. Pressure - psi	150	150	150
Max. Temp. - °F	200	200	200
Tank Volume - gal.	2.1	4.5	8.5
Tank Acceptance - gal.	.85	1.8	3.4
Air Pre-charge - psi	20	20	20
Connections Size - in.	¾ male	¾ male	¾ male
Diameter - in.	8½	10	12½
Length - in.	11½	15	19¾
Weight - lbs.	7	10	15

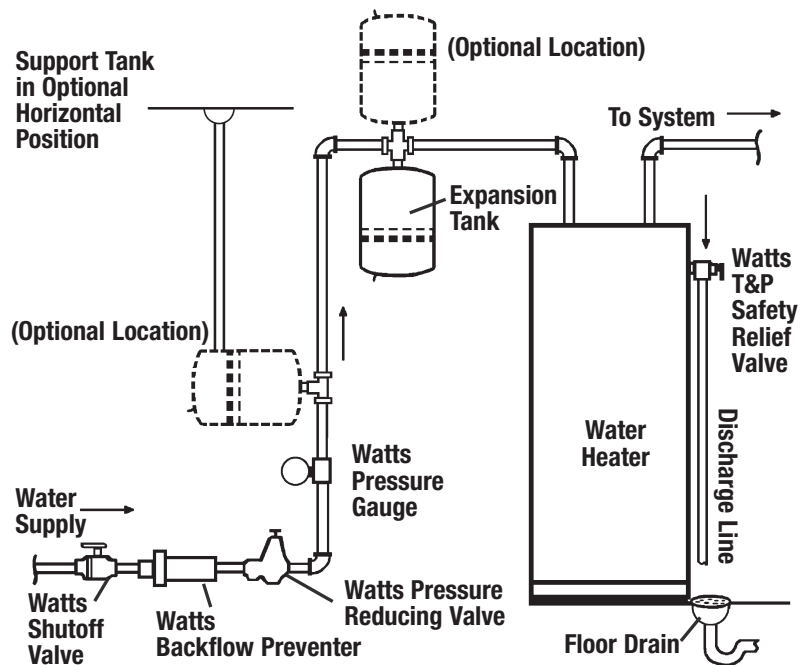


Figure 1

## Installation

- Before beginning installation determine the system pressure.
  - Open a faucet to allow the system pressure to equalize.
  - Close faucet.
  - Read the system pressure at the pressure gauge (Figure 1).
- The expansion tank pre-charge must be set to the system pressure as determined in Step 1. Pre-charge prior to installation in the system.

**Caution:** Pre-charge prior to installation in the system. Do not adjust the air pre-charge of the expansion tank with the system under pressure. The air pre-charge should only be adjusted under zero system pressure.

**Note:** The normal pre-charge is 20psi (138 kPa).

**Do not exceed 80psi.** If system pressure exceeds 80psi (5.5 bar) it will be necessary to either: **A.** Add a pressure reducing valve to the system or, **B.** Locate the expansion tank in a riser where the static pressure is below 80psi (5.5 bar).

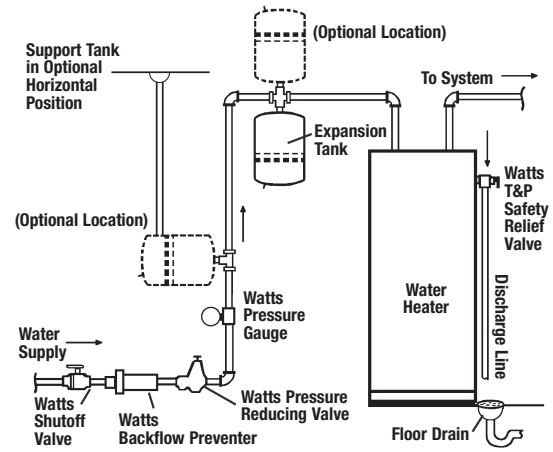
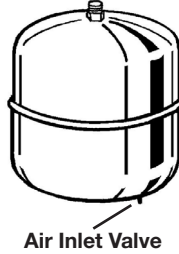


Figure 1

- Unscrew the protective cap from the air inlet valve.
  - Using a tire pressure gauge, check the tank pre-charge pressure.
  - If necessary, pressurize the tank to the proper setting using a manual bicycle tire pump. **Caution do not exceed 80psi.**
  - Replace the protective air cap.
- Shut off the water supply valve.
  - Shut off power source to the water heater, (electricity, gas, oil burner switch) and drain system following water heater manufacturer recommendations.
  - Install the expansion tank in the system (refer to Figure 1).
    - The weight of the expansion tank filled with water is supported by the system piping. Therefore, it is important that, where appropriate, the piping has suitable bracing (strapping, hanger, brackets).
    - The expansion tank may be installed vertically (preferred method) or horizontally. **Caution: The tank must be properly supported in horizontal applications.**
    - This expansion tank, as all expansion tanks, may eventually leak. **Do not install without adequate drainage provisions.**
  - Turn on the water supply valve.
  - Open a hot water fixture and allow water flow until all air is removed from the system.
  - Reapply power to the water heater.
  - Open a hot water fixture to allow a slight flow until the hot water has reached operating temperature.
  - Recheck system pressure following Step 1.a through c.

**Caution:** Pre-charge prior to installation in the system. Do not adjust the air pre-charge of the expansion tank with the system under pressure. The air pre-charge should only be adjusted under zero system pressure.

If necessary, adjust the pressure reducing valve to the expansion tank pre-charge as determined in Step 2.

### Important!

- A pressure relief valve sized and installed in accordance with local codes must be incorporated in the systems requiring a combined temperature and pressure safety relief valve. The temperature and pressure safety relief valve should be sized and installed in accordance with local codes.
- Never plug a safety Relief Valve.

#### CALIFORNIA PROPOSITION 65 WARNING

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)

For more information: [www.watts.com/prop65](http://www.watts.com/prop65)

**Limited Warranty:** Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

**THE WARRANTY SET FORTH HEREIN IS GIVEN EXPRESSLY AND IS THE ONLY WARRANTY GIVEN BY THE COMPANY WITH RESPECT TO THE PRODUCT. THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE COMPANY HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product.

Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights. **SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.**



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