



# TK300 & XPS SERIES

## CLOSED HEATING SYSTEM TANKS DIAPHRAGM EXPANSION TANKS

### INSTALLATION INSTRUCTIONS

The Diaphragm Expansion Tank is designed to absorb the expansion of water in a closed, hot water heating or solar system. Maximum operating temperature is 240 °F (116 °C); maximum operating pressure is 100 PSI (690 KPA).

The tank is precharged at 12 PSI. The diaphragm separates the air cushion from the water and prevents absorption of the air cushion by the water, thus avoiding water logging. The Expansion Tank maintains pressure in the system and utilizes the smallest possible space.

### PRODUCT INFORMATION

| Model No. | Total Volume | Max. Acceptance Volume | Dimensions |         | System Connection |
|-----------|--------------|------------------------|------------|---------|-------------------|
|           |              |                        | Diameter   | Length  |                   |
| TK300-15  | 2.0 Gal.     | 1.0 Gal.               | 8"         | 12 5/8" | 1/2"M             |
| TK300-30  | 4.4 Gal.     | 2.5 Gal.               | 11"        | 15 1/2" | 1/2"M             |
| TK300-60  | 7.6 Gal.     | 2.5 Gal.               | 11"        | 23"     | 1/2"M             |
| TK300-90  | 14.0 Gal.    | 11.5 Gal.              | 15 3/8"    | 21"     | 1/2"M             |
| XPS-030V  | 14.0 Gal.    | 11.3 Gal.              | 15 3/8"    | 23 7/8" | 1"F               |
| XPS-040V  | 20.0 Gal.    | 11.3 Gal.              | 15 3/8"    | 31 5/8" | 1"F               |
| XPS-060V  | 32.0 Gal.    | 11.3 Gal.              | 15 3/8"    | 46 1/2" | 1"F               |
| XPS-090V  | 44.0 Gal.    | 34.0 Gal.              | 22"        | 36"     | 1 1/4"F           |
| XPS-110V  | 62.0 Gal.    | 34.0 Gal.              | 22"        | 46 3/4" | 1 1/4"F           |
| XPS-160V  | 86.0 Gal.    | 46.0 Gal.              | 26"        | 47 1/4" | 1 1/4"F           |

Connections: M = Male NPT F = Female NPT

### INSTALLATION

We recommend installing the Expansion Tank by screwing it onto the 1/2" connection at the bottom of an Air Eliminator or Air Purger located on the main hot water supply pipe close to the boiler. See Fig. 1. The installation of an Air Eliminator assures automatic removal of all air and microbubbles from the system. The Expansion Tank may also be screwed onto any convenient fitting such as a tee anywhere on a hot water heating system, or it may be remotely located and piped to any convenient connection. The tank should be installed in a vertical position. Series XPS tanks are provided with a stand for floor mounting. Pipe the tank to the inlet side of the circulating pump.



#### WARNING

The expansion tank shall not be installed on a dead-end pipe.



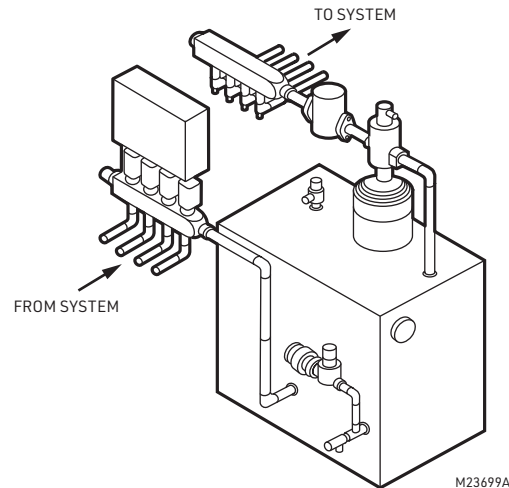


Fig. 1.

## OPERATION

After the Expansion Tank is installed on the system, fill the system and establish circulation. The Air Eliminator will automatically vent the air from the system. Operate the boiler to bring the system temperature up to the high-limit shut-off temperature. Observe the system pressure to assure that it does not exceed the relief valve setting. If the system pressure is too high, reduce to the desired pressure by drawing a small amount of water from the system, or by installing the next larger Expansion Tank. Do not release air from tank. Air charge in tank should equal the setting of the reducing valve (12 PSI standard, 83 KPa).

## SERVICE

If the system pressure is too high, check the pressure reducing valve (fill valve) for a malfunction (i.e. dirt on the valve seat). Check to see if the Expansion Tank has lost air by reducing system pressure to zero and reading the tank pressure with a tire gauge. Check for possible tankless heater leak by shutting off water supply to fill valve, reducing system pressure and observing pressure increase which would indicate a leak. If the relief valve drips water after excess system pressure condition has been corrected, flush relief valve by quickly raising lever several times. If dripping continues after flushing, replace relief valve.



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1985 Douglas Drive North, Golden Valley, MN 55422  
1-800-468-1502  
33-00530-03 M.S. Rev. 09-20 | Printed in United States

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