ARMSTRONG®

FILE NO.:	37.870
DATE:	Sept. 5, 2003
SUPERSEDES:	New
DATE:	New

INSTALLATION AND OPERATING INSTRUCTIONS

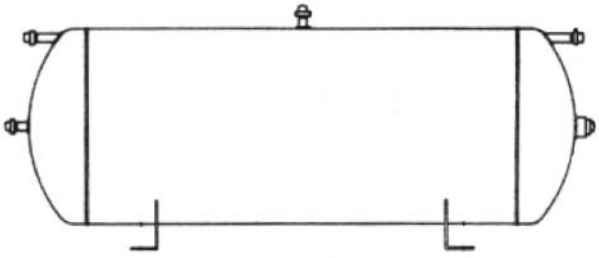
AX (Horizontal) and AX-V Series

ASME PRE-PRESSURIZED DIAPHRAGM EXPANSION TANKS FOR HEATING & COOLING SYSTEMS

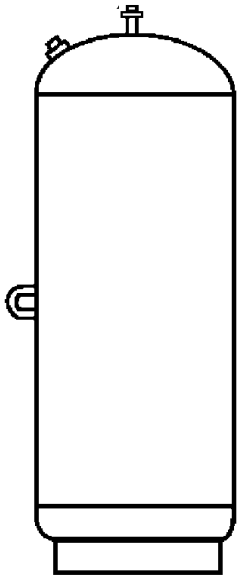
VESSEL DESCRIPTION

Armstrong AX Series Tanks are ASME constructed, pre-charged expansion tanks. They are designed to absorb the expansion forces and control the pressure in heating/cooling systems. The system's expanded water (is contained behind a heavy-duty diaphragm fully compatible with water/glycol mixtures) preventing tank corrosion and waterlogging problems.

The factory set pre-charge for these tanks is **12 psig (83 kPa).**



AX Series –
Fixed Diaphragm



AX-V Series –
Fixed Diaphragm

CONSTRUCTION DETAILS

MATERIALS OF CONSTRUCTION	
Shell	Carbon Steel
Diaphragm	Heavy Duty Butyl

MAXIMUM OPERATING CONDITIONS	
Working Temperature	240°F (115°C)
Working Pressure	125 psi (862 kPa)

STEPS & PROCEDURE

- Visually inspect tank for damage, which may occur during transit.
- Factory pre-charge pressure may not be correct for the installation. Tank MUST be pre-charged to system design fill pressure BEFORE placing into operation. Remove pipe plug covering the valve enclosure. Check and adjust the charge pressure by adding or releasing air for each application.
- If the system has been filled, the tank must be isolated from the system and the tank emptied before charging. This ensures all fluid has exited the diaphragm area and proper charging will occur.
- If the pre-charge adjustment is necessary, oil and water free compressed air or nitrogen gas may be used. Check the pre-charge using an accurate pressure gauge at the charging valve and adjust as required. Check air valve for leakage. If evident, replace the Schrader-type tire valve core. Do not depend on the valve cap to seal the leak. After making sure air charge is correct, replace pipe plug over the charging valve for protection.
- Set tank in place and pipe system connection to system. Be sure to include isolation valve(s) and drain.
- Purge air from system BEFORE placing tank into operation. All models have system water contained behind diaphragm.
- When filling the system with water, open valves to tank to ensure that any residual air in the tank is displaced by water.
- It is recommended that the pre-charge be checked annually to ensure proper system protection and long life for the vessel.

Armstrong Pumps Inc.
93 East Avenue
North Tonawanda, New York
U.S.A. 14120-6594
Tel: (716) 693-8813
Fax: (716) 693-8970

S.A. Armstrong Limited
23 Bertrand Avenue
Toronto, Ontario
Canada, M1L 2P3
Tel: (416) 755-2291
Fax: (416) 759-9101

Armstrong Pumps Limited
Peartree Road, Stanway
Colchester, Essex
United Kingdom, CO3 0LP
Tel: +44 (0) 1206 579491
Fax: +44 (0) 1206 760532

Armstrong Darling
9001 De L'Innovation, Suite 200
Montreal, Quebec
Canada, H1J 2X9
Tel: (514) 352-2424
Fax: (514) 352-2425

www.armstrongpumps.com