

INSTALLATION, OPERATION, MAINTENANCE INSTRUCTIONS FOR GMS GLV EXPANSION VESSELS

The connection on top of the vessel needs to be either plugged or valved off (if a vent is required) before operation of the expansion vessel.

1. COMMISSIONING:

- (1) Close the system isolating valve.
- (2) Ensure that the vessel is empty of water by gradually draining it.

SAFETY WARNING: The maximum working pressure of the vessel MUST NOT BE EXCEEDED. The working pressure will increase above the pre-charged pressure as a system warms up. Correct selection of pre-charge pressure is essential - if you have any doubts please contact our sales office for guidance.

- (3) Check the air pressure in the vessel and adjust accordingly to the fill pressure of the system. If the fill pressure exceeds 4.0 bar then follow steps 3a) & 3b) otherwise continue to step 4.
- (3a) Initially, pre-charge to 4.0 BarG. Introduce water at 4.0 BarG to the vessel inlet connection. This prevents excess differential pressure across the sieve, which if exceeded could cause damage to the bladder by forcing it against the protective sieve.
- (3b) Introduce air gradually up to the required fill pressure.
- (4) Open the system isolating valve.

2. OPERATION

When used for expansion, the vessel will exert pressure onto the system by virtue of the expanded water compressing the air in the vessel. The working pressure will be reached after the system has heated up and expanded.

When used on a chilled system, the vessel is a fail safe device so that should the chillers trip for any reason then the resulting expansion of water is taken into the expansion vessel, increasing the system pressure to a safe pre-determined maximum.

3. MAINTENANCE

When the system is switched off check the pre-charge pressure on a regular basis and top up as necessary.

The bladder should be checked for leaks by examining for signs of water on the airside. If the bladder is damaged it (or the complete vessel) must be replaced.

If the unit is of the replaceable bladder type then it may be necessary to tighten the bolts on the flange from time to time as the material of the bladder beds in. This should only be for a short period of time when the unit is new.