

## **INSTALLATION, OPERATION, MAINTENANCE INSTRUCTIONS FOR GMS PEAKLINE PRESSURISATION UNITS**

### **1. POSITIONING**

The hydro-pneumatic expansion vessel is the only component in a closed heating system that is unaffected by the system circulating pump - the only time pressure at the vessel varies is when system temperature changes and expanded water flows to or from it, thereby changing the volume of the captive air cushion.

To ensure that all pressure effect from the system pump is additive, with the magnitude of pressure effect on each component and pipework equal to the friction loss of the system, the connection of the unit plus any additional expansion vessels and intermediate/buffer vessels must be made as close to the suction side of the system circulation pump as possible.

### **2. INSTALLATION**

1. Connect the cold water mains supply to the break tank, having previously ensured that the ball valve is connected.
2. Pipe the overflow to drain.
3. Make the connection from the system isolating valve to the system as detailed above. If an intermediate vessel is to be installed (to prevent high temperature water reaching the expansion vessel bladder) this should be piped in with the Peakline connected to the bottom of the vessel and the system to the top of the vessel.
4. Standard units require a power supply of 230V/1ph/50 Hz connected in accordance with the appropriate wiring diagram.
5. Wire the high and low system pressure switches (if fitted) in series with the boiler controls.

#### **ENSURE THE SET IS EFFICIENTLY EARTHED**

8. If an airlock develops when starting the pump for the first time, open the drain valve and allow water to flow until the pump picks up.
9. If twin pumps are fitted, ensure the standby pump is free of air by repeating (8). Change the duty select switch on the control panel to the appropriate position.
10. Set the low pressure switch at 0.3 BarG below the cold fill pressure. This can be calibrated using the pressure gauge and allowing the system to drain until the switch operates.
11. Set the high pressure switch at 0.3 BarG above the final system working pressure or a minimum of 0.3 BarG below the system safety valve setting. This setting is to be checked and finally calibrated when the system is in its final 'hot' running condition.
12. Slowly open the system isolating valve and allow the Peakline to pressurise the system. If the pump runs continuously or frequently then check for system leaks.

### **3. OPERATION**

The boilers can now be switched on. The expanded water generated will flow into the expansion vessel(s) causing a gradual system pressure increase to the final operating pressure shown on the nameplate. Check that this pressure is correct and within the boiler safety valve range and that this has not lifted. Re-check the high pressure switch setting.

On a chilled water system, the water will contract when the chillers are brought into operation, bringing the pump into action. When the chillers are switched off, the temperature will rise allowing the expanded water to pass into the expansion vessel. The highest system pressure occurs with the chillers switched off and the system at ambient temperature.

#### **4. MAINTENANCE**

Fortnightly:

Ensure free rotation of the pump(s).

Change the duty selector switch on twin pump units.

Six Monthly:

Isolate from the system, drain and check pressure vessel and switch settings.