



AquaTech Pressmain

HEATING & CHILLED SYSTEM PRESSURISATION UNITS



TA100 and GV100 SERIES

GENERAL

Equipment would be sized by Pressmain, based on system conditions.

Pressure vessels having rating of 10 Bar maximum would be offered.

This unit is suitable for systems of up to 150°C maximum.

With flow temperatures of 100°C and above, buffer – conservation vessels would be included. These would be installed between the pressure unit and the system return header. These vessels have two functions:

- a) To store the high temperature water until returned to the system on contraction.
- b) To prevent high temperature water returning to the pressure unit and so eliminating the possibility of damage to the vessel diaphragm.

All pressure vessels are charged with nitrogen.

OPERATION

Pressure is maintained by the two pumps, acting as duty and automatic standby, controlled by pressure switches. With expansion on the system and pressure increase, a high temperature solenoid allows water to discharge into the spill tank through suitable sparge arrangements to dissipate the velocity and maintain the unbroken water surface. Minimum safety controls include, low pressure and high pressure alarm switches wired to clean terminals. On all MTHW and HTHW systems a full alarm circuit is provided including lock out relays, reset button, alarm light and bell, and remote interlocks. Additional circuitry can be included for interfacing etc, of central systems. All buffer vessels have a minimum rating of 10 Bar working pressure. Hydraulic and performance test certificates are issued for all equipment. Additional pumps/pressure vessels can be supplied as required or specified.

SPECIFICATION

UNIT BASE

All welded steel construction, primed and finished with paint

SPILL TANK

Normally galvanised, with exterior gloss painted. Larger tanks are treated internally with special etching primer and high temperature polyurethane paint.

PRESSURE VESSEL

Heavy duty welded vessel, with high temperature diaphragm, charged with nitrogen. Fully tested and manufactured to BS standards.

PUMPS

Centrifugal type, 415/3/50 as standard. Type and manufacture of pumps may vary, dependent upon system requirements.

VALVES

All bronze, including pump suction and delivery, isolating valves, non-return valves, system valve and drain valve.

CONTROL PANEL

Dust-proof enclosure with hinged lid, containing pump motor and control fuses; two pump starters with single phase prevention.

The circuit will include an automatic pump changeover unit to rotate each pump as duty pump after each start. Indicator lights and all terminals for alarm interlocks and remote indications.

PRESSURE SWITCHES

Heavy duty brass body, diaphragm type, with single pole changeover switches.

GAUGE

100mm diameter, indicating in bar and p.s.i.g.

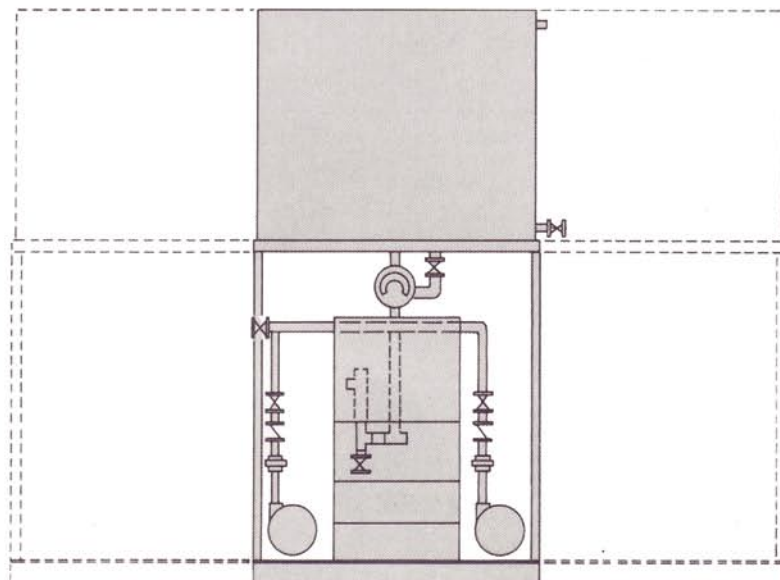
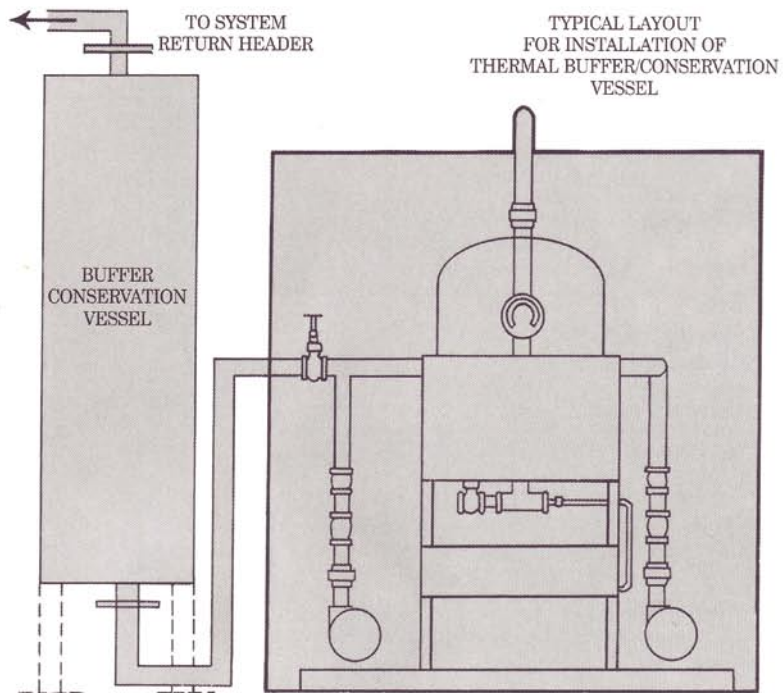
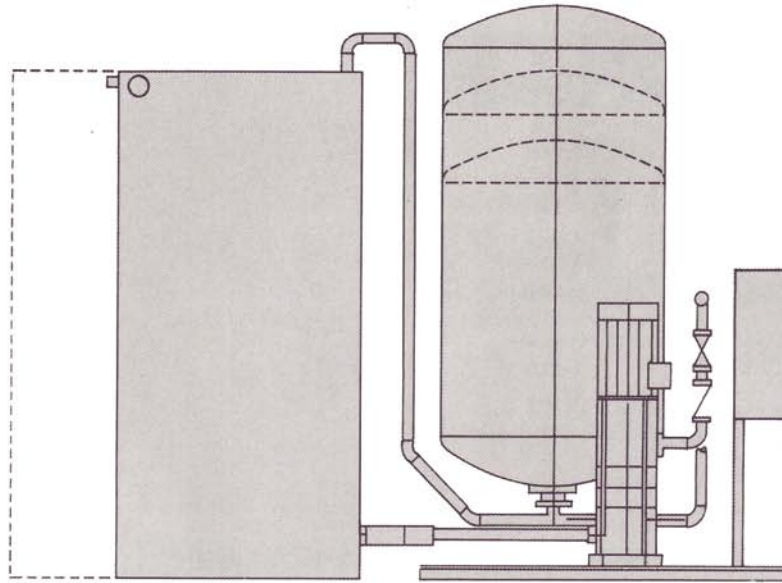
SOLENOID

Suitably sized for the expansion of the system. WRC approved and suitable for a maximum temperature of 100°C.

FINAL FINISH

To a high standard, with equipment full tested and preset prior to despatch.

LAYOUT OPTIONS



ON SITE INSTALLATION

- a) Bolt base/s to plinth.
- b) Connect an appropriate size mains water supply to float valve.
- c) Connect system connection lockshield isolating valve to heating system making sure that it is made to the underside of the main Return header.
- d) Provide and fit overflow pipe from Spilltank to a suitable drain.
- e) Wire a fused single or three phase supply (as appropriate) onto terminals provided. Connect boiler/chiller thermostat control circuits onto volt free relay connections provided within the control panel.
- f) Ensure all work is carried out in accordance with Aquaspill installation instructions provided with the unit.

OPTIONAL EXTRAS

ENHANCED MODELS:

As above but in addition has: Hand-Off-Auto switches for each pump, Power on, Pump Run & Tripped L.E.D.s, hours run meters, interlocked door isolator, low water level sensing in breaktank coupled to volt free relay.

AQUASPHERE BLANKET

This is a single layer ball blanket which floats on the spill tanks surface, which will significantly reduce moisture & oxygen ingress. Problems associated with absorption from the atmosphere are not exclusively limited to the adsorption of water. The absorption of free oxygen into hot water contained in boiler feed tanks can lead to serious corrosion of pipes, valves and boiler jackets. Tests have shown that a single layer blanket can reduce water absorption from the atmosphere by up to 60% and oxygen absorption by up to a factor of 42. The Aquasphere Blanket system can therefore be seen as a highly effective two way barrier preventing both evaporation from and absorption into a liquid.

AquaTech Pressmain design and development programmes are continuous; we reserve the right to make any changes to this specification without prior notice.



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