

NITROPRESS MKII

HEATING AND CHILLED WATER SYSTEM PRESSURISATION SETS



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Section

2

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The Nitropress MkII has been introduced to give improved system cover in the event of a power failure to the set, to remove the necessity of using anti-gravity vessels and to give a more compact unit for any given system.

The function of these sets is to control between safe limits the operating pressure of closed loop heating systems where temperatures vary between fixed limits and to enable higher working temperatures within the system without producing steam. They do this by:-

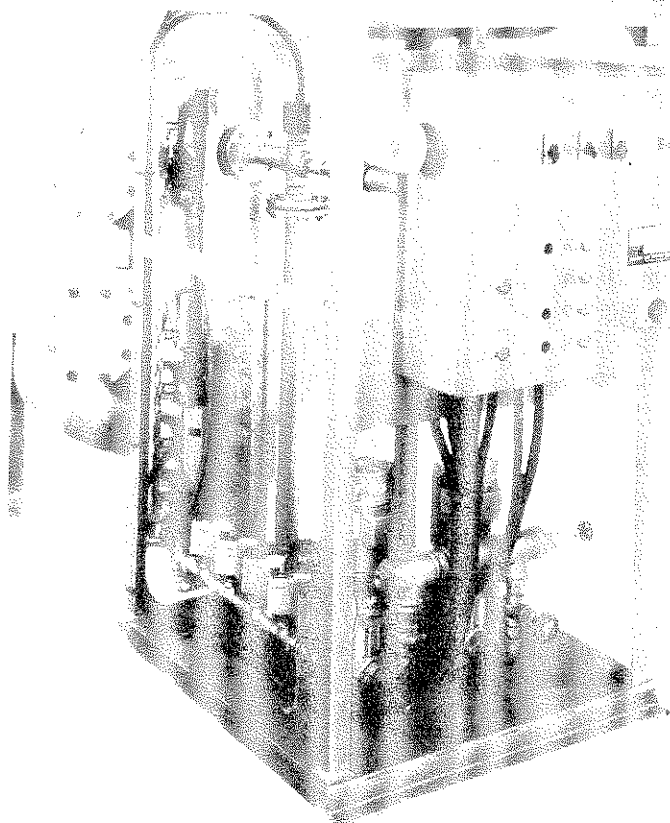
1. Controlling the minimum pressure to that at which the system can safely work.
2. Providing controlled expansion space for the water in the system.
3. Providing the water make-up system to cover the total system demand.
4. Providing alarms with pressure and level switches which operate to control the system should any of the limiting parameters be exceeded.
5. Providing a fail safe facility which will allow the system to return to a fail safe condition under indefinite total power failure.

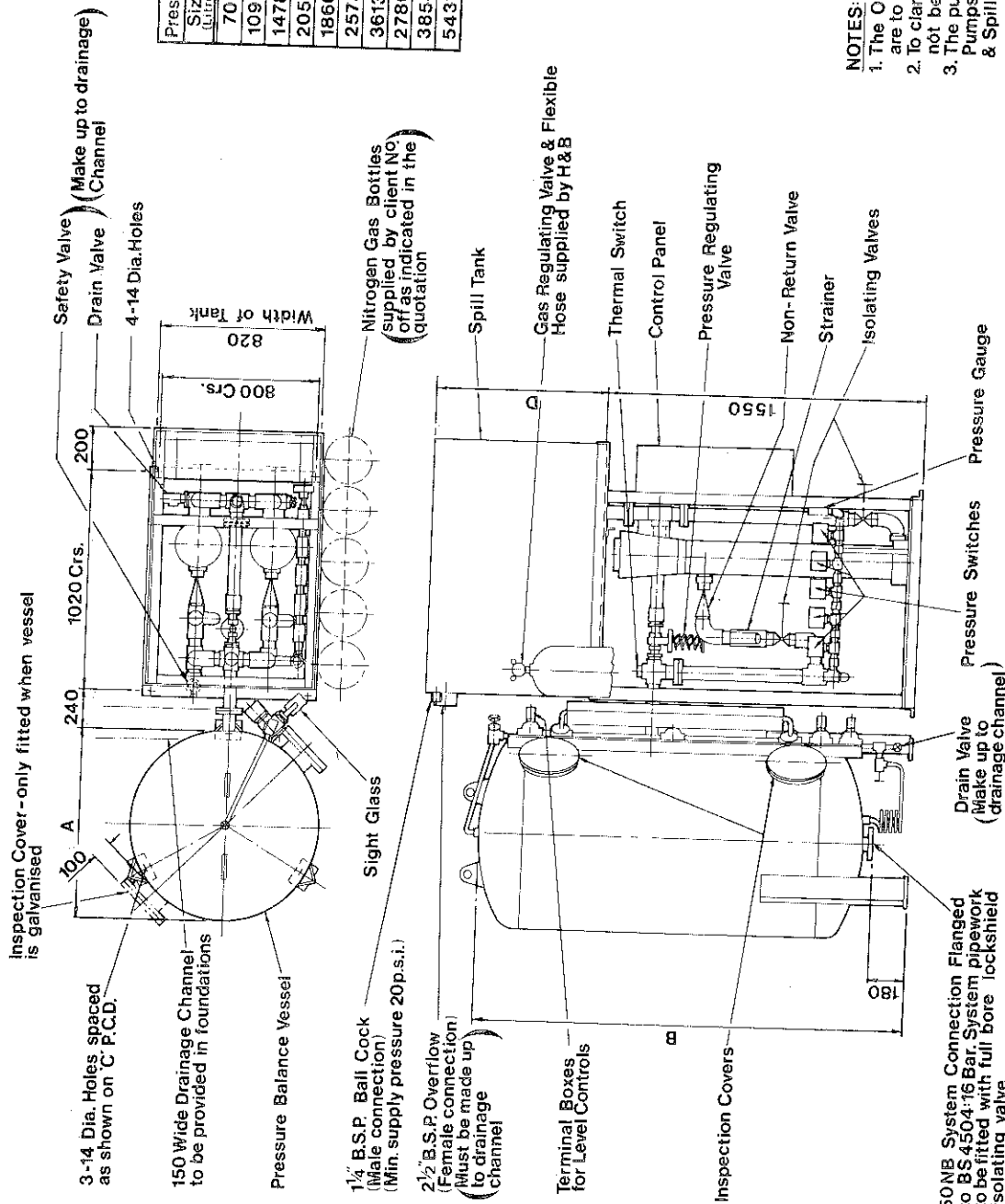
DESCRIPTION

The set consists of pumps, balance vessel and spill tank, each being generously sized to meet the needs of the system. They are designed to meet the requirements of the Department of Environment's Specification M & E 3 1986 and Health and Safety Executive PM 5 category B with recommended anti flash margin of 17°C and contains all recommended controls.

OPERATION

To maintain the operating pressure of the system above the safe pressure as defined by the Health and Safety Executive PM 5 and below the maximum working pressure of the system. As the system heats up the expanded water will pass into a balance vessel causing the level and pressure in the vessel to rise. In due course the pressure regulating valve will open and excess expansion water will pass into the spill tank which in turn will fill and on some sets occasionally overflow dumping any excess to waste. If the boilers are switched off the water in the balance vessel returns to the system with a corresponding pressure reduction until the duty pump operates. The pump (s) take water from the spill tank and pump it into the balance vessel thereby maintaining pressure as the system cools.





Pressure Balance Vessel Size (Litres)	Pressure Balance Vessel			Weight (Kg)	
	A	B	C	Full Of Water	Empty
700		4540		1150	450
1090	915	2110	880	1665	575
1478		2720		2188	710
2057		3635		2967	910
1860		2110		2615	715
2573	1220	2720	1190	3508	935
3613		3635		4818	1205
2780		2110		3770	990
3858	1524	2720	1490	5128	1270
5431		3635		7121	1690

Spill Tank Size (Litres)	Weight (Kg)	
	Full Of Water	Empty
500	1000	232
1000	1500	312
1500	2000	393

Pump Unit	Weight (Kg)	
	Full Of Water	Empty
N2	350	250
N4	370	270
N8	610	510

- NOTES:-**
1. The Overflow, Safety Valve & Drain Valves are to be piped to the drainage channel.
 2. To clarify the plan view the Spill Tank has not been shown.
 3. The pump unit consists of:- Pumps, Delivery & Suction Manifolds, Bedplate & Spill Tank Support.

Note:- Improvements in general design and modifications will be embodied for the benefit of clients as and when introduced ; consequently the specification is subject to alteration as may be necessary, without notification. Certified drawings supplied on application.

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