
SPILLPRESS SP2ET



**TWIN PUMP SEALED SYSTEM SPILL-BACK PRESSURISATION UNIT
with 2020+Microprocessor Controller**

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OVERVIEW

The Spillpress system pressurisation unit automatically maintains pressure in sealed heating systems which have total water content between 120,000 litres at 60°C boiler flow temperature, and 35,000 litres at 120°C.

A Modular system offering Cold Fill pump pressures from 1.2 bar up to 8.5 bar and flexible combinations of spill vessels with or without a cooling vessel. Once the system has been initially filled via a quick filling loop or similar (part No. MAF-200001) the Spillpress will take over and maintain optimum system conditions.

On rising system temperature expanding water is spilled automatically into sealed expansion vessels, and as the system cools the spilled water is automatically pumped back into the system. Any loss of water from the system will be automatically made up. During the above operations the pressure variation does not normally exceed 1.0 bar.

Standard Specification

Spillpress type SP2ET-XX-YY-Z suitable for an estimated system volume of AAAAA litres having a cold fill pressure of BB bar, incorporating 2020+ microprocessor and pressure transducer control, with twin regenerative turbine 1 phase (or 3 phase) bronze pumps having automatic alternation of duty pump & anti seizure pulsing, delayed initiation of high and low system pressure cut outs both linked to single pole volt free relay, alarm buzzer, alarm mute and reset buttons/ indicators, digital pressure, fault, fault log and parameter indicator, fused pump drive, 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, 18 litre mains water break tank, float valve with type AA air gap, overflow connection, and low water level protection, electromagnetic spillvalve with strainer & isolating valves, IP55 powder coated controls cabinet, interconnecting piping to spill vessel, all mounted on steel base frame. Set assembled, tested and commissioned in accordance with ISO9001 Standards.

Features

- Maximum expanded volume (acceptance): 2125 litres; maximum system cold fill pressure: 8.5 bar
- An intermediate cooling vessel can be used if boiler flow temperature exceeds 90 degrees centigrade
- Passive Degassing from the spill vessel(s) giving reduced corrosion, & prolonged system life
- Automatic alternation of duty pump to even wear
- Anti pump-seizure pulsing
- Low and high water level protection switch mounted in breaktank
- Automatic delay on high & low pressure alarms up to 4 minutes to allow circulator pump pressures to stabilise
- Comprehensive fault logging facility
- Ideal for system refurbishment where pressure rise must be minimised, and floor space is at a premium
- Integral automatic water make-up system
- Designed, manufactured & tested to ISO9001 Standards
- Full commissioning and after sales service available nationwide
- CE marked for full compliance with all relevant European Directives



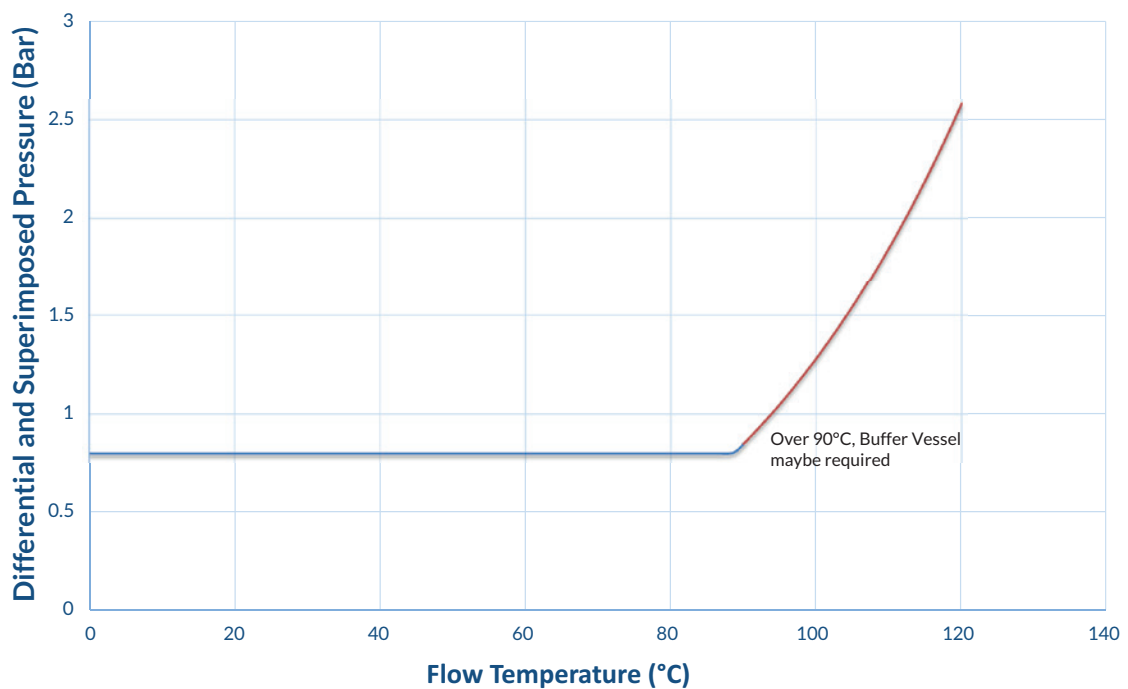
SPILLPRESS SELECTION FOR HEATING SYSTEMS

In order to select the correct pressurisation unit, firstly calculate the required Cold Fill pressure. i.e. the minimum pressure that is required to ensure the entire system is filled with water and does not flash over to steam at higher flow temperatures (the superimposed pressure).

The Cold Fill pressure is calculated by:-

- adding the static height of the system (i.e. height in metres above the pressurisation unit to the highest point of the heating system) then converting this height into Bar (10.2 metres equals 1.0 Bar)
- adding the Superimposed pressure from Table 1 (dependent upon boiler flow temperature)

Spillpress SP2ET Cold Fill Pressures



For example: 30m static with flow temperature of 82°C Cold Fill pressure = $(30\text{m} \div 10) + 0.8 = 3.8$ Bar

Maximum Working Pressure

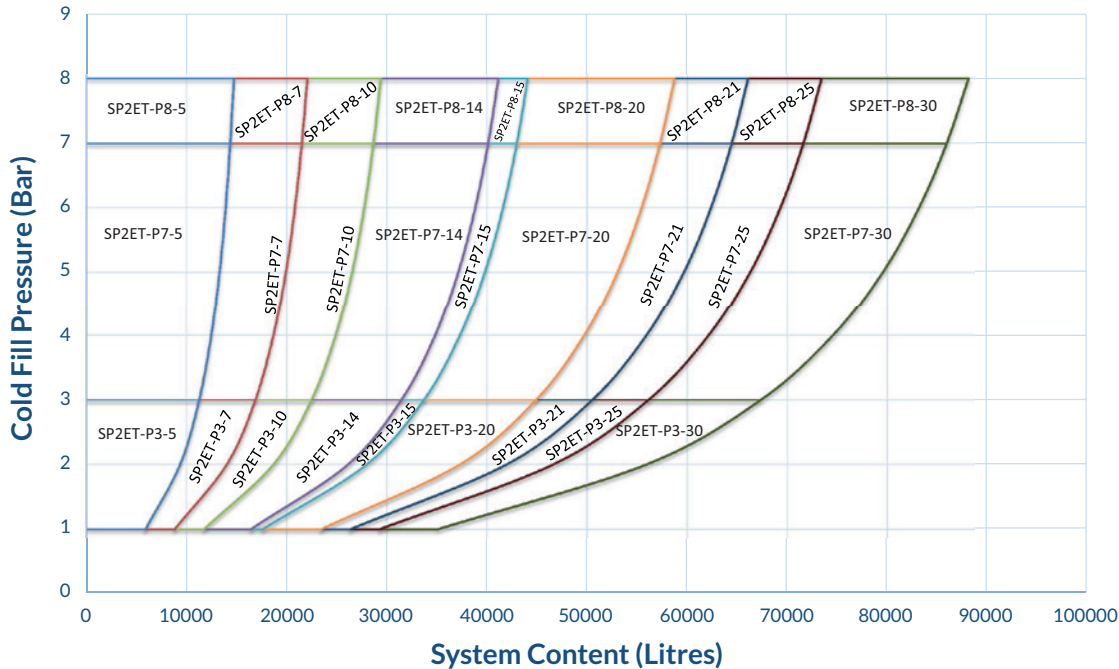
The Maximum pressure is normally 0.6 Bar above the Cold fill pressure

High Pressure Alarm

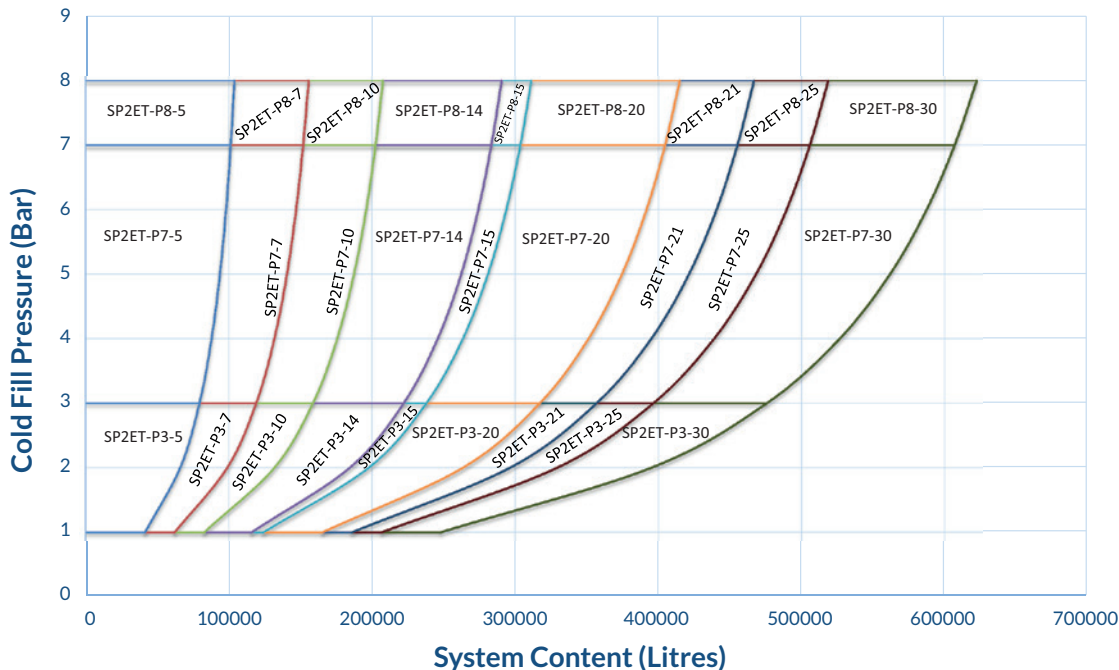
The high pressure alarm is normally set 1.0 Bar Above the cold fill pressure

SELECTION CHARTS FOR SP2ET UNITS

Spillpress SP2ET Selection Chart LTHW (80°C)

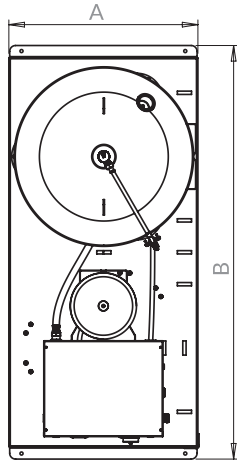


Spillpress SP2ET Selection Chart CHW (4-30°C)

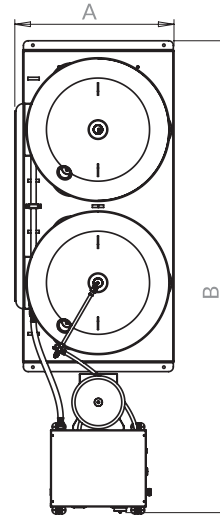


GENERAL ARRANGEMENTS AND DIMENSIONS FOR SP2ET UNITS

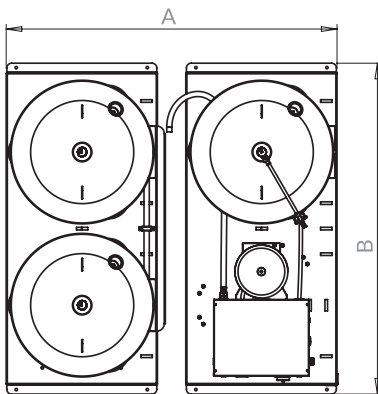
Layout A



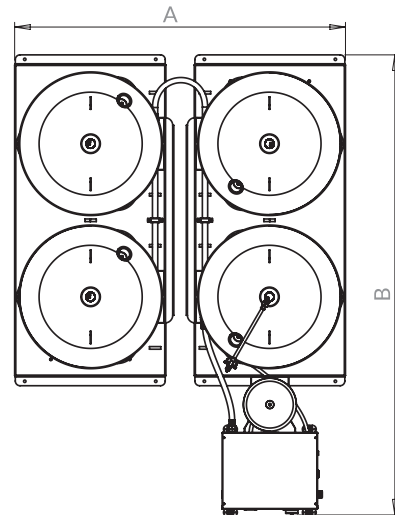
Layout B



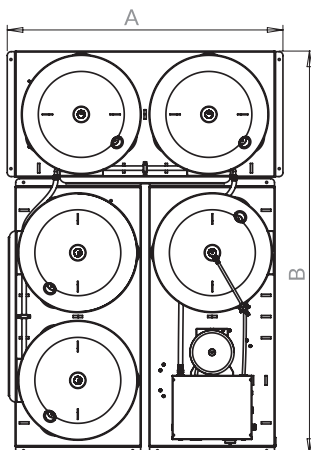
Layout C



Layout D



Layout E



SPILLPRESS SP2ET PRESSURISATION UNIT

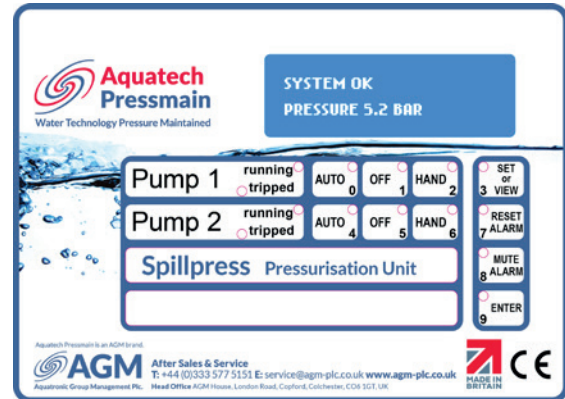
Pump Type	Layout	Pressurisation Unit Dims [+/- 10mm]			Vessel(s)	Approx Dry Weight of Unit [kg]
		A	B	Height		
SP2ET-P#-5	A	800	1750	1865	1x 500 L	239
SP2ET-P#-7	A	800	1750	2380	1x 750 L	260
SP2ET-P#-10	B	850	2500	1865	2x 500 L	327
SP2ET-P#-14	B	850	1750	2380	2x 750 L	369
SP2ET-P#-15	C	850	1750	1865	3x 500 L	508
SP2ET-P#-20	D	1750	2500	1865	4x 500 L	596
SP2ET-P#-21	C	1750	1750	2380	3x 750 L	571
SP2ET-P#-25	E	1750	2560	1865	5x 500 L	777
SP2ET-P#-30	D	1750	2500	2380	4x 750 L	680

SPILLPRESS SP2ET ELECTRICAL CONNECTION & FASCIA

Control Panel

All SP2ET units utilise our proven 2020+ Micro controller.

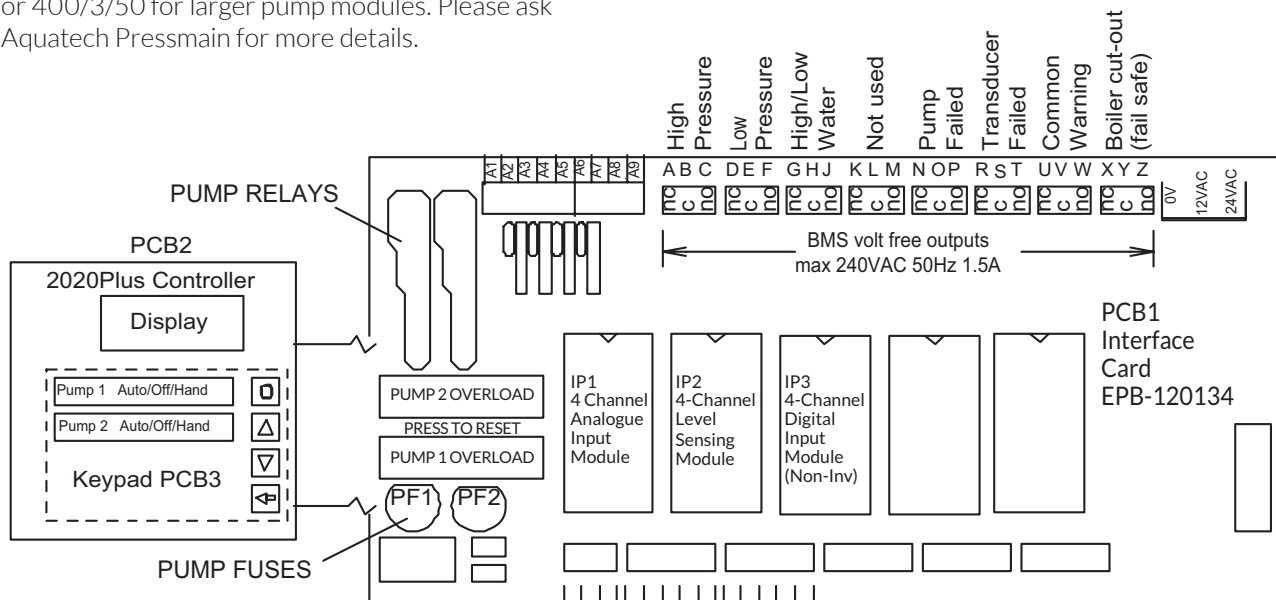
- Easy to operate keypad with Hand-Off-Auto controls
- Run / Trip Indication
- All alarm messages in plain english
- 8 Volt-free BMS outputs
- Fully site adjustable



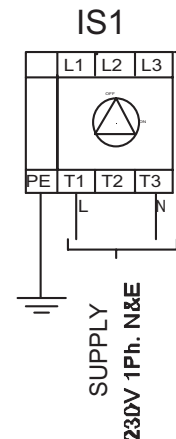
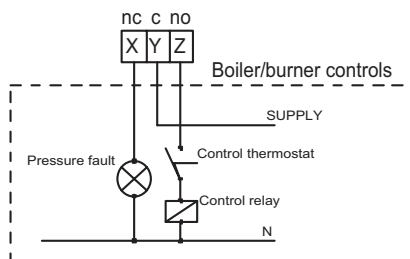
Electrical Connections

Typical electrical connections for single phase SP2ET.

Electrical supply: Single Phase, 230 Volt AC, 50Hz, or 400/3/50 for larger pump modules. Please ask Aquatech Pressmain for more details.



Typical Boiler Interrupt Circuit
(Wiring by controls contractor)



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