

3P BPM1202/1202L Pump Sets

Advanced Low-noise Pressure Booster Sets

- **Automatic Pump Control**
- **Adjustable Pressure**
- **Intuitive Menu System**
- **Advanced Fault Tracking**
- **Designed, Built, Programmed and Assembled in the UK**
- **Quiet Running**

Overview

3P BPM series pressure booster sets are designed to supply water under pressure to multiple points of use.

Multi-Point Pressure Control manages both the start and stop pressure of each pump, achieving high efficiency without the increased cost of variable speed sets, but with enhanced reliability, reduced component count, and lower cost. Pressure is measured at the outlet manifold by an electronic pressure sensor with greater reliability than mechanical switches.

Features include adjustable pressure, duty standby/assist with alternation at each pump cycle, and BMS output, whilst remaining extremely compact. Pressure control is achieved by modulation of the pumps which are run as required to maintain pressure within a specified range.

An optional level sensor probe can be situated in a break tank or well and indicates the current water level, as well as providing an adjustable safety shut-off level which can be adjusted from the control panel.

BPM Series booster sets are controlled by the 3P Technik P Series Controller. This does not need to be attached to the top of each pump, so only 1 control panel and



pressure sensor are needed to operate up to 4 pumps, reducing complexity and allowing for remote siting of the control panel if required.

Pumps can be replaced with other makes and models at any time and don't need to be matched. Downtime due to reprogramming or lead times for a specific pump are therefore totally eliminated.

Models with level sensing (optional) use a precise pressure transmitter to determine the exact level of water in the break tank / collection tank. This provides the added flexibility of being able to adjust the pump shut-off level from the control panel, with no need to access the tank, and also provides a digital level display alongside the pressure reading. Tank level calibration is automatic (self learning).

All systems have intuitive menu driven settings.

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There are no hidden menus, and almost all parameters are adjustable, including pump cut-in and cut-out pressures, overpressure alarm, pump failure pressure, etc. A reset function allows the system to return to safe default settings (3 bar) if necessary.

The P Series controller used in BPM pump sets includes Advanced Fault Tracking. Fault codes are stored in memory until you choose to erase them, allowing easy identification of intermittent and historical faults. Logged faults and all other parameters are retained even through a power outage.

The control panel is specifically designed to be best suited to commercial and industrial installations, and is one of the most robust unit on the market today, with overvoltage and brownout protection, immediate recovery from power failures with no loss of setting and auto reboot, individually fused outputs, oversized power supply to electronics, removable MCU chip (software) for easy upgrades, automatic failover of pumps, and automatic search for spare pumps even if not configured for twin pump use.

Rapid servicing is part of the design. Modular connectors and tolerant software allows pumps to be 'hot-swapped' without switching off the controller or remaining pump. Pumps and control equipment are bolted from one side for easy



removal without having to lift the base or reach behind with a second spanner. The MCU (software chip) and PCB are both individually and quickly removable.

Designed, programmed, built and assembled in the UK. With full UK based technical support, rapid spares availability, and spare parts supply from UK stocks. Full repair/recon service to component level.

Please note - it is not necessary to add concrete weights to the base plate to reduce vibration. The anti-vibration dampers, low vibration pumps, and pendulum damper design provide very effective vibration reduction.



Reliable Electronic Sensors



All electrics to IP65 ingress protection

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Features

- Adjustable pressure control
- *Duty Standby/Duty Assist with alternation*
- *Quiet water cooled pumps fixed on anti-vibration mounts for extremely quiet operation*
- *Single sided bolt removal (no need to reach backnut on other side)*
- *Integral lifting point for ease of installation*
- *Twin pressure vessels*
- *Highly Accurate Digital Pressure Display*
- *Break Tank Level Display (optional)*
- *Control Panel Failover to Automatic pumps (optional)*
- *Adjustable viewing angle Control Panel*
- *Modular 'hot swap' of pumps and solenoids*
- *Lockable isolator switch*
- *Automatic Tank Level Calibration*
- *Multiple pump model support at 230Vac 50Hz or any supply voltage/phase via contactors/overloads*
- *BMS Switched output*
- *Optional BMS serial output*
- *Advanced Fault Tracking*
- *Fault Warning LED*
- *Auto hunt for redundant spare pump during pump failure in single pump mode*

- *Swappable MCU chip (software)*
- *System Overpressure Alarm - protects pipework and attached appliances (UV system, etc) from overpressure due to faulty installation or incorrect pressure setting.*
- *Overvoltage protection*
- *Automatic pump test / anti-blocking cycle*
- *Brownout protection*
- *Watchdog timer*
- *Fused Outputs*

Adjustable Settings

- *Pump cut-in/cut-out pressure (for each pump)*
- *System Overpressure Alarm*
- *Pump failure pressure*
- *Pump Mode (Pump1, Pump2, Twin pump assist/standby)*
- *Minimum Water Level (dry run prevention)*
- *Pump restart delay*
- *Fault code display*
- *Fault code erase*
- *Input test diagnostic screen*
- *Output test diagnostic screen*
- *Manual Stop - with BMS activation*
- *Restore Factory Default Settings*

OEM Solutions

3P Pump Sets are supplied either as a complete unit, individual component parts, or as a kit (add your own pumps).

We work with our customers to provide specific product bundles, with panel and software branded to your requirements.

We provide full training, design and technical support, and will customise the product and accessories to your requirements, and full UK based support and spare parts availability.

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Technical Specifications

Physical		Controls	
Width	600mm	Display	LCD 4 x 20 Monochrome
Height	1050mm	Backlight	Green
Depth	mm	Keypad	Membrane
Material - Control Panel	ABS	BMS	Volt-free contact
Material - Chassis	Mild Steel	BMS (optional)	RS-232 Serial
Material - Pump Body	Stainless 304	Operation	
Material - Impellers	Stainless 304	Pressure Control	Multi-point pressure control via closed loop fixed speed duty cycling
Material - Diffusers	Noryl	Pressure adjustment	Digital via control panel
Material - Venturi	Noryl	Duty Standby	Yes, with alternation per startup
Material - Pump Shafts	Stainless 420	Duty Assist	Yes
Material - Shaft Seals	Ceramic/Graphite	Fault detection	Yes
Material - Body Seals	NBR 70	Fault History Log	10 faults
Weight (empty)	68kg	Pressure Sensing	Electronic, solid state, absolute 0-10bar 4-20mA, Replaceable.
Electrical		Level Sensing (BPM1202)	Mechanical float switch
Supply Voltage	230VAC	Level Sensing (BPM1202L)	Submersible electronic pressure sensor, solid state, relative 0-6 metres, with vented cable.
Power Consumption	1807W	Operating Temp Range	0 - 40°C
Overvoltage/Surge Protection	Metal Oxide Varistor, fused crowbar circuit 275V	Protection Class - Pumps	IP68 (submersible)
Electronic Circuit Protection	Fused 125mA mains side, 500mA DC side	Protection Class - Controls	IP65 (IP68 available on request)
Pump Output Protection	Individually Fused 10A, replacable cartridge fuse, 1 per output.		
Fuse Type	20x5mm Ceramic Cartridge, High Rupture Current (1250A)		
Acoustic			
Sound Level - Both Pumps Operating	Approx 60 db @1m		