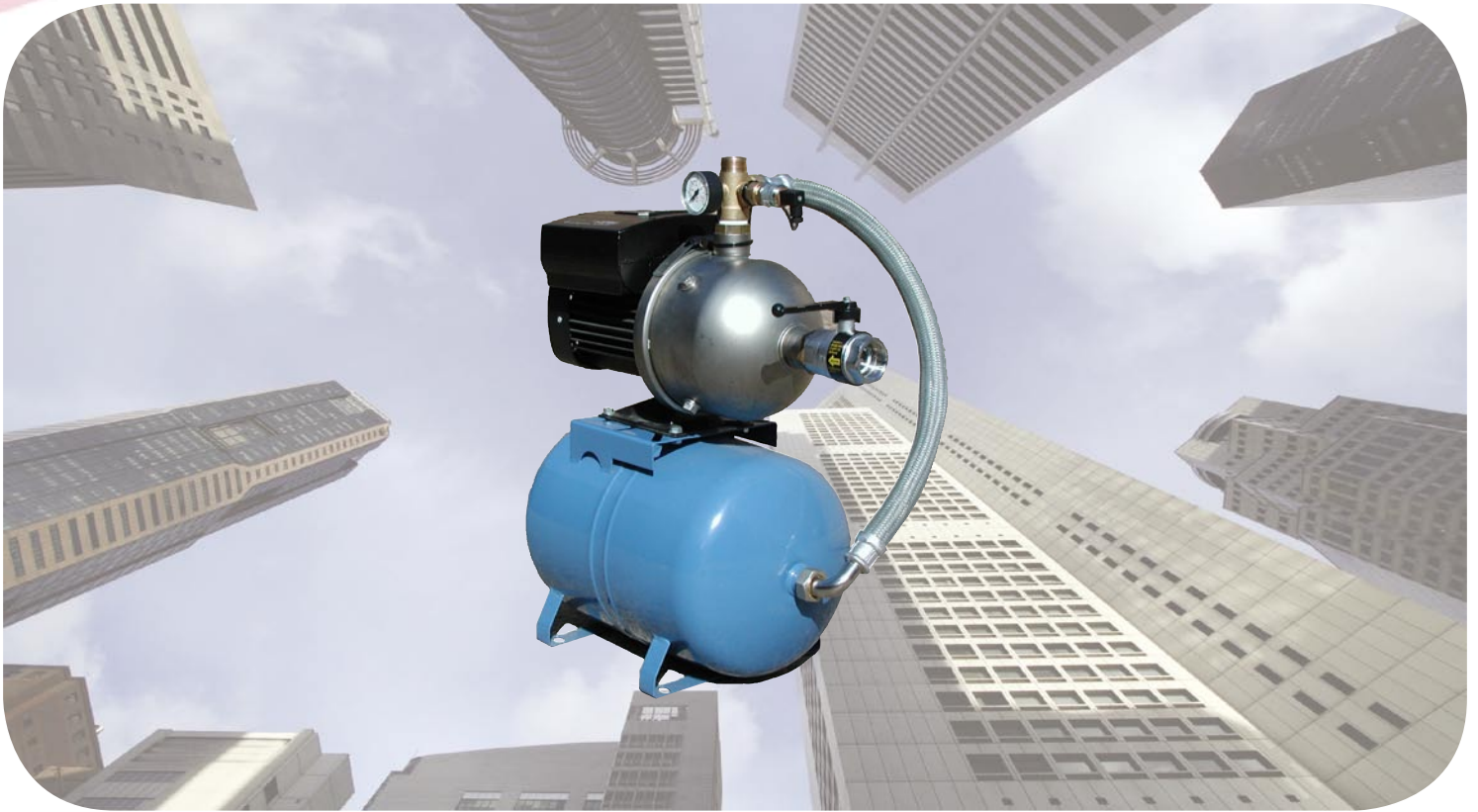




AquaTech Pressmain

**SINGLE PUMP FIXED OR VARIABLE SPEED COLD WATER
PRESSURE BOOSTER SETS**



MONOMATIC 'MM' SERIES

GENERAL

The MM Range of compact horizontal booster pumps are designed for a wide range of applications including industrial, commercial and domestic water pressure boosting and distribution, horticultural irrigation, general transfer duties as well as many specialised applications on packaged equipment.

Both pump and continuously rated motor unit are of integral design and particular attention has been paid to quietness and smooth operation - a vital factor in many installations.

All pump wetted parts are stainless steel whilst carbon/ceramic is used for seal faces. These provide high efficiency and reliability without need for routine maintenance.

Performance range covers flows upto 1.5 l/s and heads up to 50m (see below)

Fixed speed (FS) models are pressure switch controlled while the variable speed (VS) models use accurate and reliable electronic transducer control in conjunction with inverter motors to ensure accurate output pressure is always maintained.

- Operating pressures from 1.5 bar upto 5.0 bar
- Flow Rates 0.4 to 1.5 l/s
- Single Horizontal Pump
- Transducer / Inverter Motor Control (VS only)
- Volt-free inverter fault relay (VS only)
- Compact design
- Suitable for temperatures upto 60°C
- Optional Low water sensors
- CE marked and Compliant with all Applicable Directives

MM-FS SPECIFICATION

AquaTech Pressmain MM-FS Series Cold Water Booster Pump Unit arranged for single pump with single or 3 phase motor (please specify). Pressure switch controlled in conjunction with enclosed motor starter (supplied loose) and fully assembled including 25 litre hydraulic accumulator.

Designed and manufactured in accordance with ISO 9001 quality assurance procedures, using WRAS approved components suitable for potable water. Compliant with all relevant European Community Directives as required by law. CE marked.

MM-VS SPECIFICATION

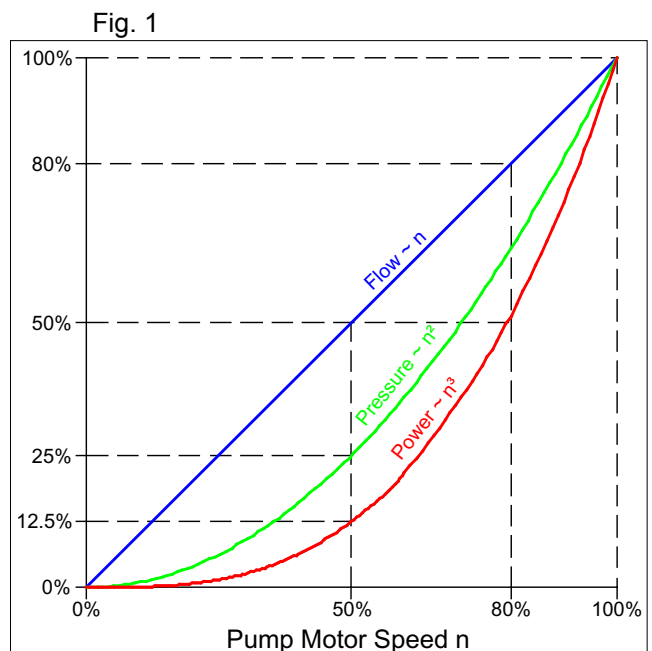
AquaTech Pressmain MM-VS Series Cold Water Booster Pump Unit arranged for single pump operation with single phase inverter motor in conjunction with accurate electronic transducer control. Includes 25 litre control vessel .

Designed and manufactured in accordance with ISO 9001 quality assurance procedures, using WRAS approved components suitable for potable water. Compliant with all relevant European Community Directives as required by law. CE marked.

VARIABLE SPEED PRINCIPLE

The basic concept is to alter the pump speed to match exactly the required demand of water to the system, using the principle that flow rate is directly proportional to pump speed. The electricity consumed by the pump motor is proportional to the cube of the pump speed. It can be shown (Fig. 1) that a 20% reduction in flow rate from the peak demand will reduce the power consumed by the motor by 50%. As the flow demand continues to decrease further savings in pump motor power consumption can be achieved.

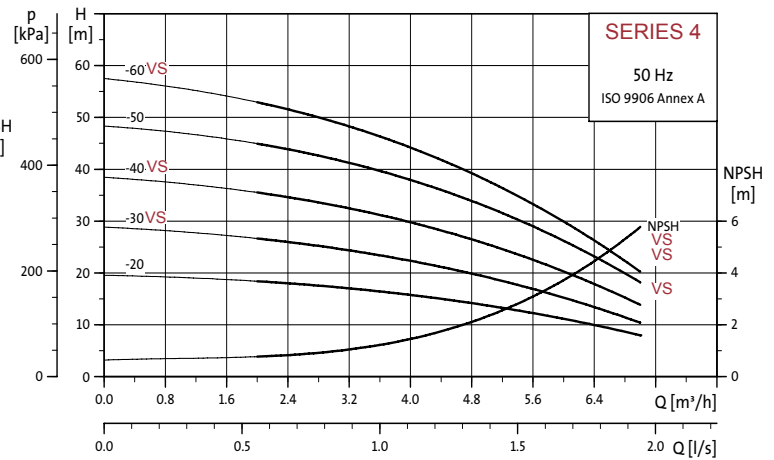
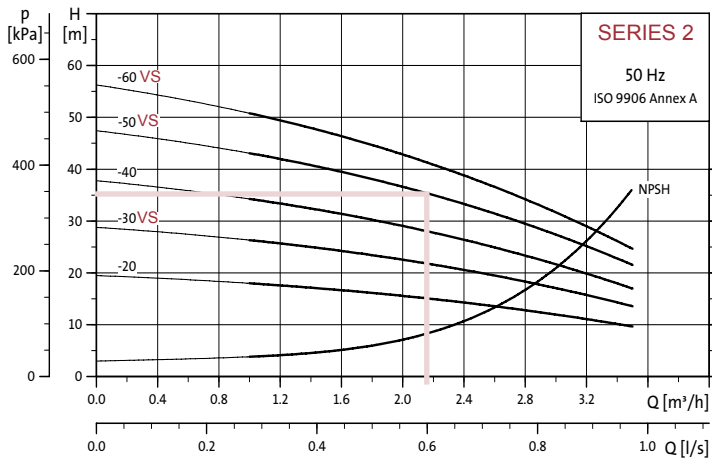
Not only does this produce a saving in electricity consumption but it also provides other benefits such as reduced strain on the pumpset and system components by excessive pressure and water hammer, smoother and quieter operation through “ramped” acceleration and deceleration of the pump. Also constant pressure output is available where over-pressure could have an adverse effect on the system such as when refurbishing old buildings using the existing pipework or where calorifiers have a limited pressure rating.



PUMP PERFORMANCE CURVES

Pump Curve Explanation

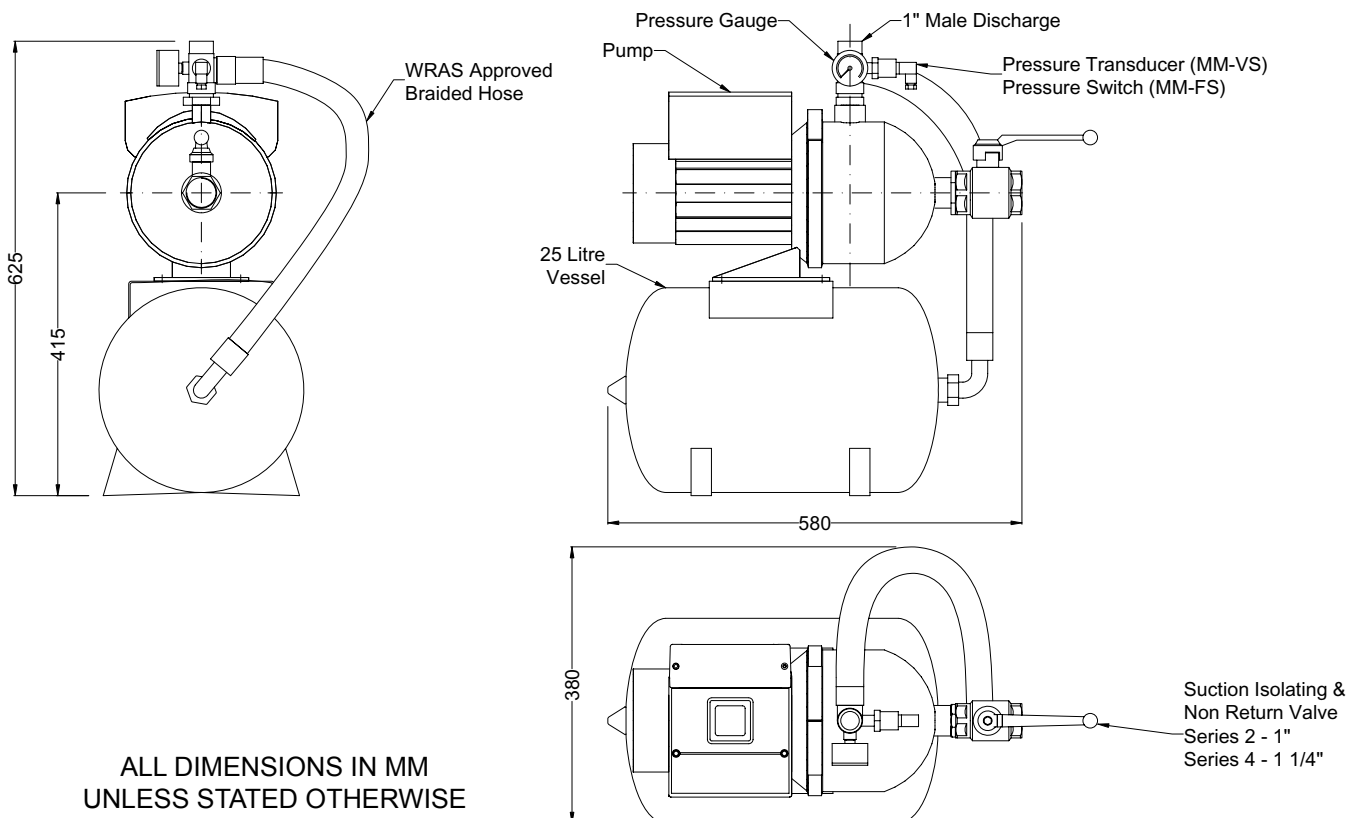
QH curve for the individual pump. The bold curves indicate the recommended performance range for best efficiency.



Selection Example: 0.6l/s @ 3.5 Bar

Using pump performance curves, cross reference 0.6 l/s at 35 metres, and this gives selected pump 2-30. The fixed speed model reference would be: MM-FS-2-50, and the variable speed model reference would be: MM-VS-2-50. The AquaTech Pressmain sales team would be happy to assist with pump selections, please contact one of our sales offices.

DIMENSIONS



TYPICAL PIPEWORK & ELECTRICAL CONNECTIONS

ELECTRICAL

Fixed speed units are designed for single phase 220-240VAC 50Hz or three phase 380-415VAC 50Hz (please specify when ordering). Variable speed units are designed for 200-240VAC 50 Hz.

Electrical design and equipment conforms to BSEN 60204-1-1993 regulations. It is important that all subsequent wiring and protection equipment reflects this.

HYDRAULIC

The design of this unit enables it to be located in any position in a plant room with the minimum of inconvenience to pipework layout.

Installer to fit isolating valve on discharge in order to allow unit to be isolated from the system. Note: Swing check valve/s should not be fitted on the discharge pipework.

MECHANICAL

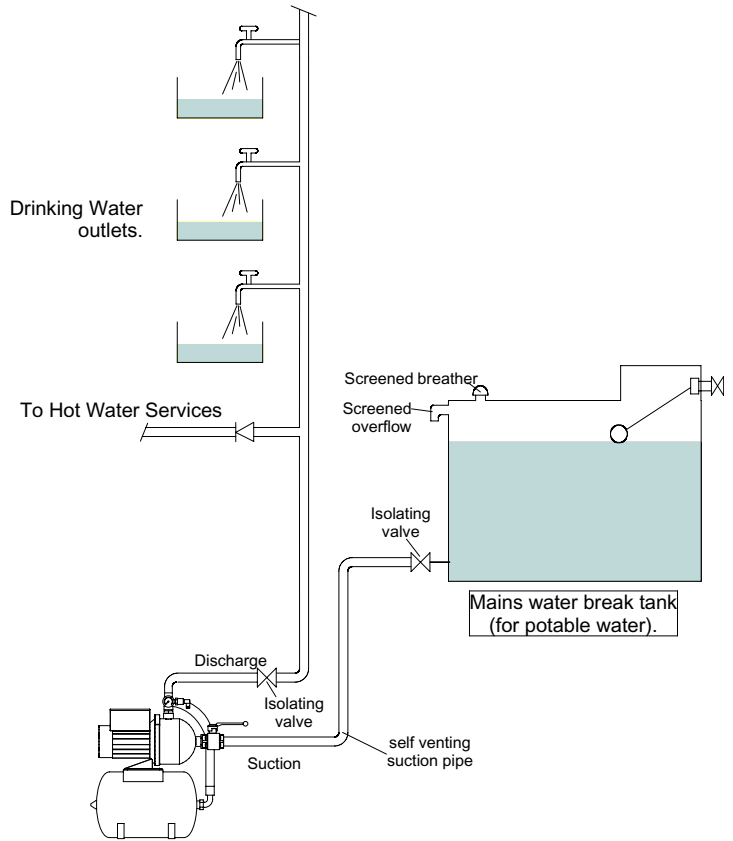
The unit should be mounted on a flat, slightly raised plinth and bolted down.

AquaTech Pressmain recommend that when the unit is installed adequate room for servicing access is left around the unit. A gap of around 500mm is preferable.

The selected pumps are designed for quiet operation and are virtually vibration free. Where silent operation is essential the possibility of using a combination of some optional extras anti-vibration mounts and/or flexible connections may be considered.

COMMISSIONING

Following electrical, hydraulic and mechanical installation as above, all units should be commissioned by AquaTech Pressmain Limited.



CONSTRUCTION STANDARDS FOR 'MONOMATIC' MM-FS & MM-VS SERIES			
ITEM		STANDARD/CLASS	REMARKS
Quality System	Design / Manufacturing	ISO 9001	Cert. No. FM33090
Wiring Standards		BSEN 60204 part 1	
Pumps		CE Marked WRAS Approved	Integral Non-Return Valve
Vessel	25 Litre	CE Marked WRAS Approved	
Non-Return Valve	Isolating / Non-Return	WRAS Approved	
Pump Motors	Class F IP55	FS - 1/3 Ph. DOL, VS - 1 ph. Inverter Motor	IEC 34-5 IEC 85
CE Marked		PED, EMC Directives, Safety of Machinery	PED Notified Body - BSI

The information in this specification is correct at time of issue; as 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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Leaders in the design, manufacture and assembly of packaged fluid pumping equipment and control systems.
Applications: Cold Water Supply; Fire Fighting; Heating & Chilled System Pressurisation; Tank Level Monitoring.