



**COLD WATER PRESSURE BOOSTER SETS**  
WITH MULTISTAGE FIXED SPEED PUMPS



**AQUAMATIC 'AMF' SERIES**



Pressure Equipment Directive Compliant

# COLD WATER PRESSURE BOOSTER SET

## 'AMF' 2020PLUS SERIES

### OVERVIEW

The Aquamatic "AMF" range of quality assured cold water pressure booster sets is designed to increase the pressure of cold water services within a building. Where, for example, the mains water pressure is insufficient to feed rooftop storage tanks, or where water is stored at low level and needs to be distributed to the upper floors of a building.

Our 'AMF' 2 & 3 pump sets are manufactured to allow all of the pumps to run together if required. So pumps may be sized for Duty/Standby or Duty/Assist arrangements in the case of two pump units and Duty/Assist/Standby or Duty/Assist/Assist in the case of three pump units. All are programmed to run in staged cascade operation as the flow demand increases and similarly as demand decreases. All pumps are assembled on a common base frame with a Microprocessor, control panel and all necessary valves and fittings to ensure ease of installation and efficient, reliable operation.

### Features

- High efficiency fixed speed pumps with Blueflux® motors to EuP IE2
- '2020Plus' Microprocessor/Transducer Control for long term reliability and accuracy with 'REPRESS' hydraulic shock system protection
- Automatic Cascade Control for all pumps
- User Friendly Keypad & illuminated 2 line LCD Display for 'Plain English' information for both system status and system pressure
- Electronic Low Water Cut-Out for pump dry running protection, with auto re-start upon water restoration.
- All pumpsets are WRAS approved and are ECA Energy Technology Listed Product.
- BMS Volt Free Enhanced package fitted as standard
- Built to Latest CE Requirements and in accordance with ISO9001
- 304 Stainless steel pipework as standard

### SPECIFICATION

Cold Water Pressure Booster Pump Set arranged for operation as duty pump with assist standby pump(s) all under fixed speed motor control via AquaTech Pressmain 2020Plus microprocessor control panel requiring single/three phase electrical supply (as appropriate - see below). Complete with interconnecting wiring and all necessary valves and fittings which form the suction and discharge manifolds. All complete on a steel base frame.

Designed, manufactured and tested in accordance with ISO9001 quality assurance procedures, using PED and WRAS approved components suitable for potable water specification. Compliant with all relevant European Community Directives as required by UK law and CE marked.

Automatic variable speed pump motor control by AquaTech Pressmain 2020Plus microcontroller for long term reliability and accurate pressure measurement by 392 transducer. Automatic alternations of all pumps to even run times with adjustable pump running time. Sequential pump starting to avoid overloading electric supply. Hand/off/auto switches for each pump on panel fascia. Motor overload protection. Electronic low water protection, interlocked door isolator, RS232/485 serial communication port. Data logging function, indicators for pumps run, hand, off and auto. "User Friendly" fascia mounted keypad for entering/retrieving data and system parameters, with illuminated 2 line LCD display for pressure, faults and information in plain English.

Also indicating: Power on, System Working Pressure, System status, twin Low and High Water Level in feed tank (where fitted - see page 4), Low System Pressure, High System Pressure, Pump Hours run, Pump Failed, Transducer Failed and service reminder. Our 2020plus enhanced micro software also features the RE-PRESS power restoration electronic safety system, offering the end user a controlled system refill following electrical supply failure, protecting against hydraulic shock.

In addition to the above there is the "BMS Enhanced" package fitted which gives 8 volt free relay outputs, pump tripped lights on panel fascia. The above equipment is complete with all necessary terminals, labels and interconnections, enclosed in a sheet steel, dust and damp proof housing with lockable door to IP55.

### Finish

Pump bodies are finished in electrophoresis coating. Panel is powder coated. Stainless steel pipework is left unpainted for effect.

## HYDRAULIC ACCUMULATORS

To ensure reliable and economic operation of fixed speed hydro-pneumatic water booster sets, an auxiliary hydraulic accumulator pressure vessel must be an integral part of the boosted system.

As standard supply, Aquatech Pressmain provides a 100ltr hydraulic accumulator vessel for the AMF range of booster units. The vessel is supplied free standing with WRAS approved flexible hose for connection to the booster set

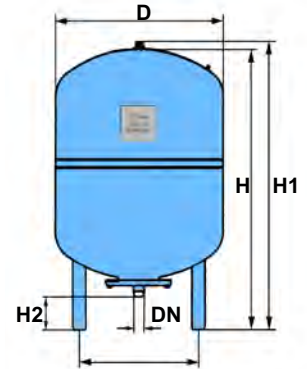
| HYDRAULIC ACCUMULATORS 60 VR → 500 VR |       |        |        |        |        |
|---------------------------------------|-------|--------|--------|--------|--------|
| TYPE                                  | 60 VR | 100 VR | 200 VR | 300 VR | 500 VR |
| Nominal Content –litres               | 60    | 100    | 200    | 300    | 500    |
| D mm                                  | 409   | 480    | 634    | 634    | 740    |
| H mm                                  | 740   | 840    | 980    | 1280   | 1485   |
| Water Connection DN BSP               | 1"    | 1"     | 1¼"    | 1¼"    | 1¼"    |
| Weight Kg                             | 25    | 32     | 50     | 55     | 85     |
| Max. working Pressure-bar             | 10    | 10     | 10     | 10     | 10     |

on site. A connection with isolating valve is provided on the booster set discharge manifold for this purpose.

Increasing the size of the vessel will increase the residual reserve of stored water available to the system, thus reducing the number of pump starts and therefore reduce energy consumption. Optional larger hydraulic accumulator vessels are available on request.

### 60 VR → 500 VR

DRAWING NOT TO SCALE - Hydraulic Accumulators are supplied free standing with flexible hose and drain-off for connecton to booster set on site. A connection with isolating valve is also fitted on the discharge manifold of the booster set for this purpose.



## AMF OPTIONAL FEATURES & ANCILLARIES

### Pipework Material Options

AquaTech Pressmain will supply stainless steel pipework manifolds as standard, however we can provide Galvanised, ABS, UPVC and Stainless Steel in both 304 & 316 standards.

### Flexible Connections

Made from EPDM rubber suitable for potable water applications, this spherical bellows type flexible coupling joint will absorb pipe movements, isolate vibration, reduce system noise and protect plant against start up surge forces. Gaskets are not required and the joints are easily and speedily installed. System pipework mating flanges are available upon request.

### Anti Vibration Mountings

When fitted this turret type mount will isolate the pump package from the ground or floor-mounting surface. The mounting will arrest and reduce pump rotation starting inertia and associated vibration being transmitted through the ground or floor-mounting surface, which could potentially cause a noise problem.

### High Level Feed Tank Alarm Probe

This probe is available for side and top mounting and provides a visual warning of tank high level via the control panel fascia. BMS link is also provided via the shared level volt free output.

### Twin Feed Tank Low Water Switch

Designed to replace the suction mounted manifold low water protection probe, which AquaTech Pressmain fit as standard. The LSM-TT-B twin feed tank low water switch is supplied with two level sensors, one per tank, and a tank switch box. This arrangement enables each tank level probe to be isolated while tank cleaning or maintenance is in progress and retaining water supply via the booster pump set to the building. The arrangement is also available in a high water level version. Side and top mounted probe assemblies are available to suit the application.

### GRP Weather Proof Enclosure

Where internal plant room space is at a premium or where a unit needs to be remotely located this fully encapsulated 25mm pre-insulated GRP enclosure may provide the ideal solution. It is supplied with an internal frost stat, heater, natural vents and access door with Yale lock.

Please see separate data sheet DS118 for further details.

### Acoustic Attenuator Enclosure

Although the standard package meets stringent EC noise levels, this enclosure is specifically designed for noise sensitive applications. Typically an insertion loss of approximately 30bdb(A) can be achieved in most applications. Enclosures are supplied complete with naturally ventilated acoustic louvres, removable panels for easy pump maintenance and glazed vision panel for viewing pump controls fascia.

### Remote Alarm Panel

Suitable for wall mounting where indications of warning and alarm conditions are required remote for the unit's location.

### Variable Speed

Inverter/Variable speed motor control is also available, Please see AMV range (Datasheet 123).

### Control Panel Options

In addition to the standard features listed we can provide and are not limited to the following options;

- Emergency Stop Button; Pump run volt free contacts;
  - Individual pump isolators;
  - Anti-Condensation panel heater; Volt meter & switch;
  - 4-20ma pressure output.
- Form 2 and Form 4 compartmented control panel systems can also be accommodated.

# INDIVIDUAL PUMP SELECTION CURVES SERIES 1 & 3

## QH curve for the individual pump

The bold curves indicate the recommended performance range for best efficiency.

The Eta curve shows the efficiency of the pump. This is an average of all the pump types shown in the chart.

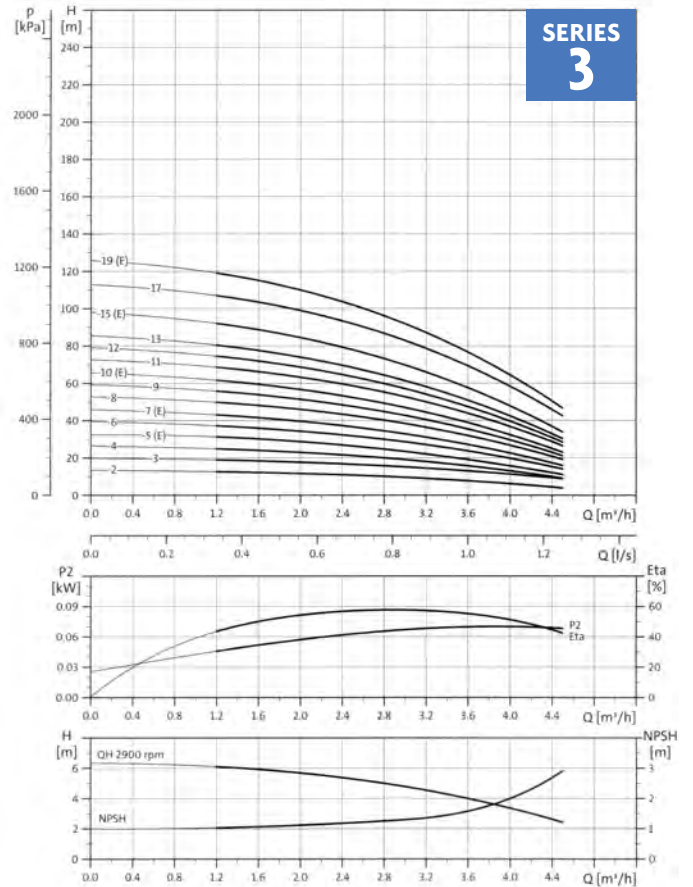
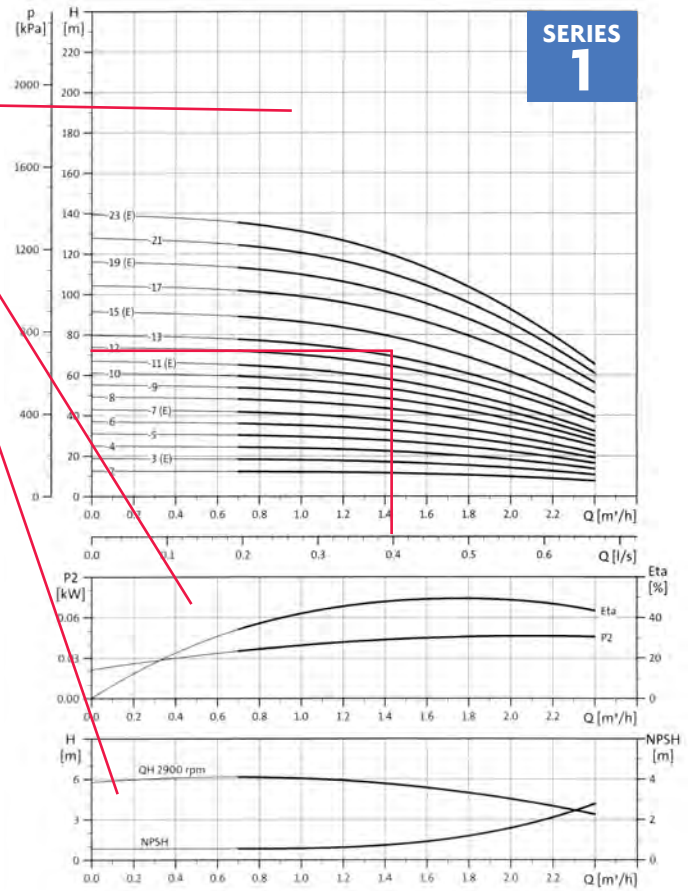
The NPSH curve is an average curve for all the variants shown. When sizing pumps add a safety margin of at least 0.5m.

## Selection Example

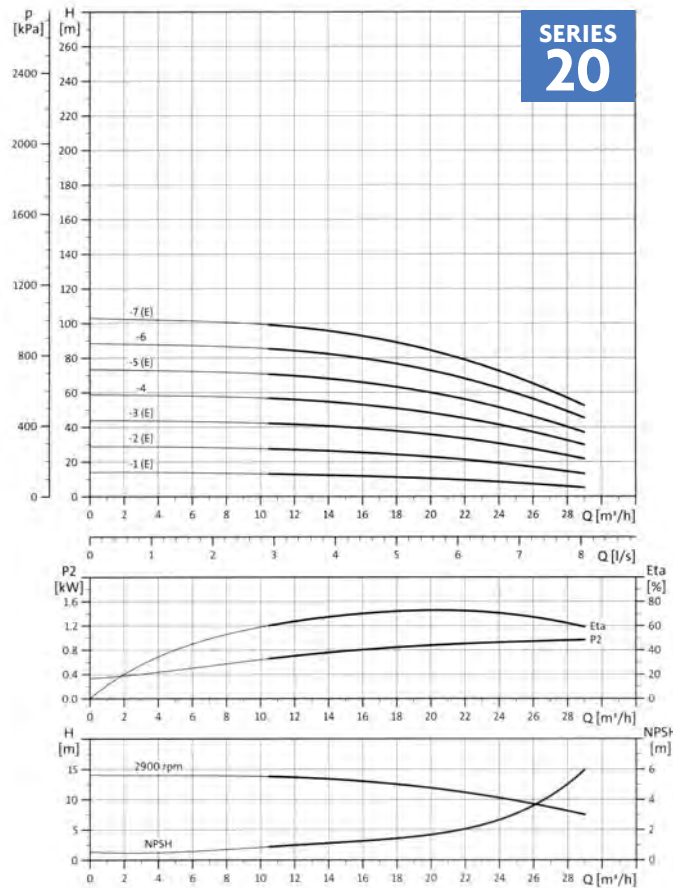
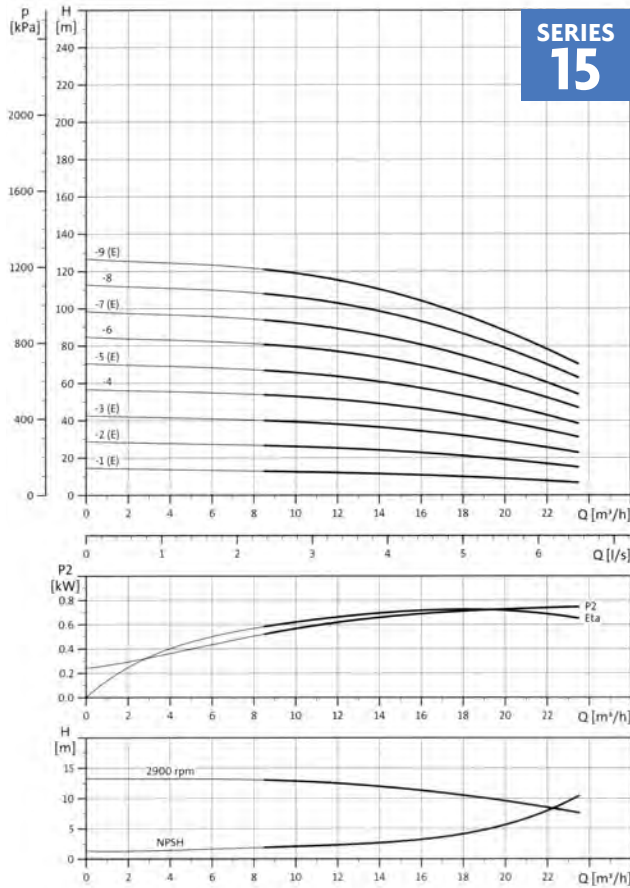
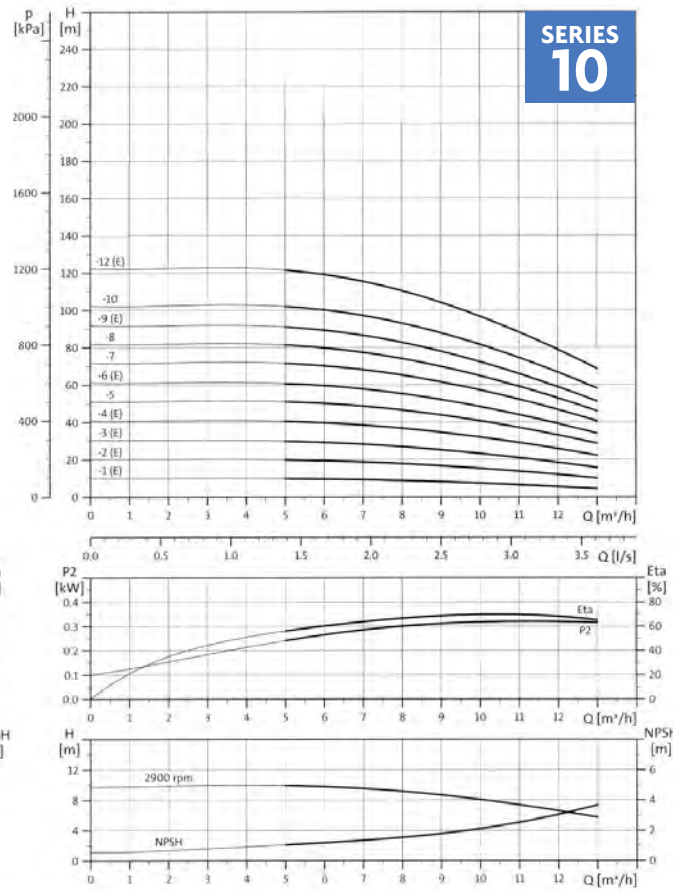
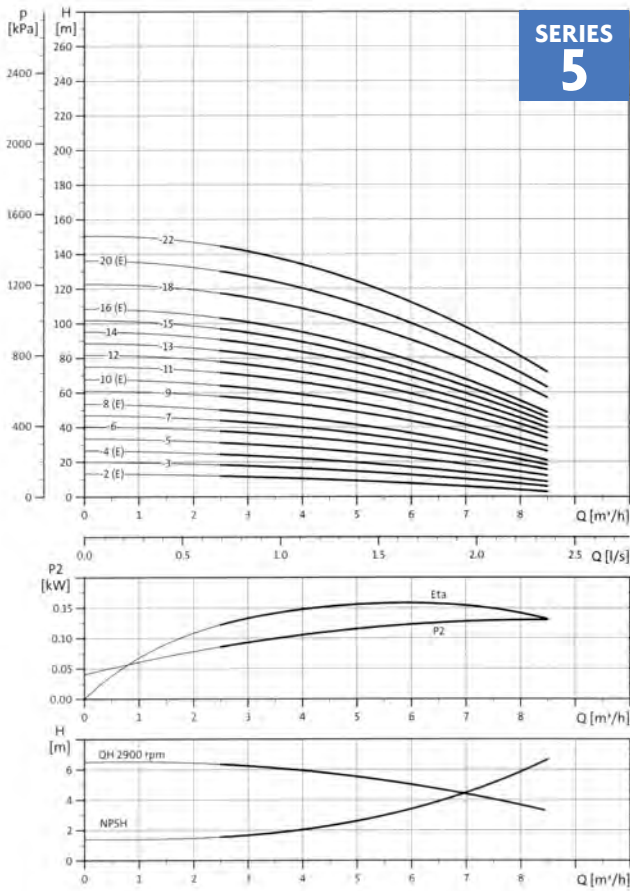
Required duty point flow rate 0.4 l/s at a constant duty pressure of 70 metres (7 bar). Using pump performance curves, cross reference 0.4 l/s at 70 metres, and this gives selected pump 1-15. For a twin pump unit (duty/standby arrangement) select model reference Aquamatic AMF2-1-15, see page 6 for dimension data.

AquaTech Pressmain are happy to assist in the correct selection of pumps, please contact AquaTech Pressmain sales office.

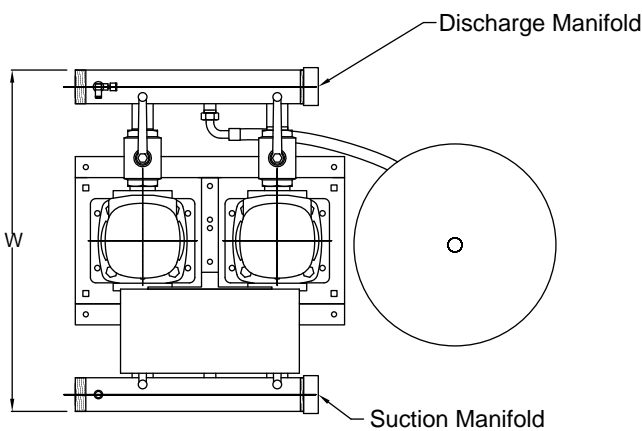
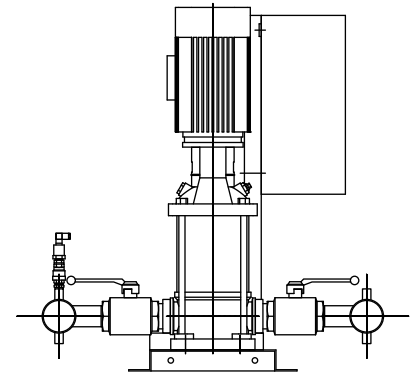
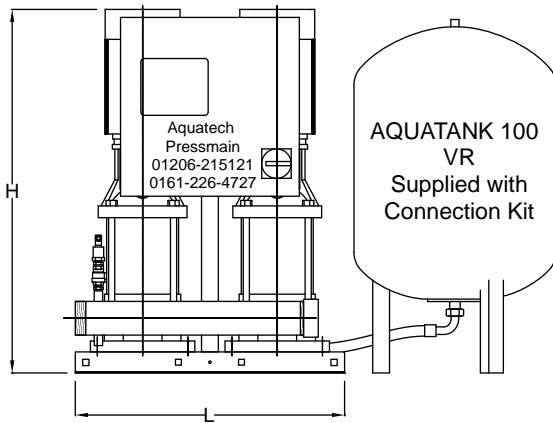
Pump curves shown with an (E) signify that this size of pump is also available in a Variable Speed option. See datasheet 123 (AMV) for details.



# INDIVIDUAL PUMP SELECTION CURVES SERIES 5, 10, 15 & 20



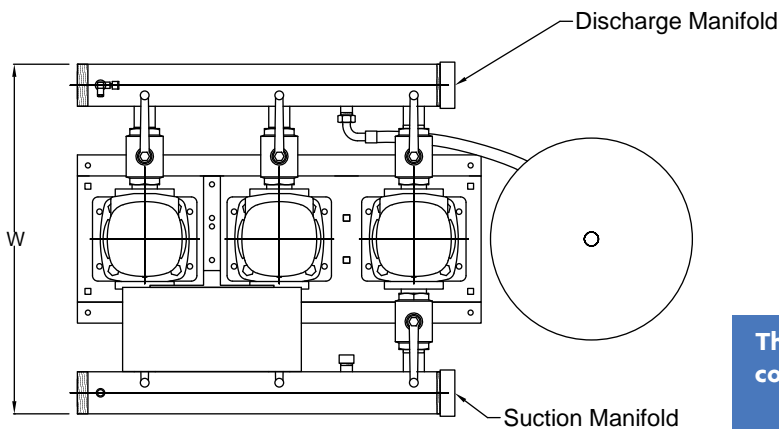
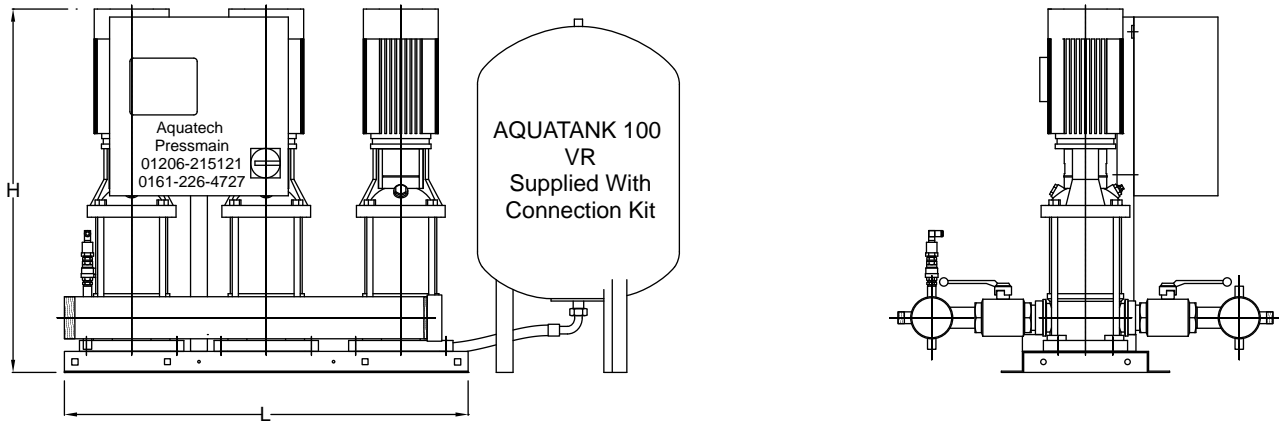
## TWO PUMP MODEL 'AMF2' DIMENSIONS



The Hydraulic Accumulator must be fitted for correct operation. For Hydraulic Accumulator dimensions please see table on Page 3

| AQUAMATIC AMF2 VARIABLE SPEED |            |             |  |  |               |                                     |                        | ALL DIMENSIONS IN MM UNLESS STATED OTHERWISE |      |                                   |   |                   |          |                     |                     |
|-------------------------------|------------|-------------|--|--|---------------|-------------------------------------|------------------------|--|------|-----------------------------------|---|-------------------|----------|---------------------|---------------------|
| PUMP SERIES                   | PUMP MODEL | KW PER PUMP | FULL LOAD CURRENT PER PUMP 1Ph 240V AMPS | FULL LOAD CURRENT PER PUMP 3Ph 415V AMPS | DRY WEIGHT KG | SOUND LEVEL IF GREATER THAN 70dB(A) | BOOSTER SET DIMENSIONS |  |      | STANDARD THREADED CONNECTION SIZE | FLANGE SIZE WITH FLEXIBLE COUPLING OPTION | VESSEL DIMENSIONS |          | 1 PH 240V STOCKCODE | 3 PH 415V STOCKCODE |
|                               |            |             |  |  |               |                                     | L                      | W  | H    |                                   |   | HEIGHT            | DIAMETER |                     |                     |
| 1                             | 2 TO 7     | 0.37        | 3.7                                      | 1.0                                      | 80            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-2201XX          | BKS-2401XX          |
| 1                             | 8 TO 11    | 0.55        | 5.2                                      | 1.4                                      | 84            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-2201XX          | BKS-2401XX          |
| 1                             | 12 TO 15   | 0.75        | N/A                                      | 1.9                                      | 92            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2401XX          |
| 1                             | 17 TO 23   | 1.1         | N/A                                      | 2.6                                      | 104           | -                                   | 640                    | 740  | 904  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2401XX          |
| 3                             | 2 TO 5     | 0.37        | 3.7                                      | 1.0                                      | 78            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-2203XX          | BKS-2403XX          |
| 3                             | 6 TO 7     | 0.55        | 5.2                                      | 1.4                                      | 82            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-2203XX          | BKS-2403XX          |
| 3                             | 8 TO 10    | 0.75        | N/A                                      | 1.9                                      | 88            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2403XX          |
| 3                             | 11 TO 15   | 1.1         | N/A                                      | 2.6                                      | 96            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2403XX          |
| 3                             | 17 TO 19   | 1.5         | N/A                                      | 3.2                                      | 112           | -                                   | 640                    | 740  | 898  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2403XX          |
| 5                             | 2          | 0.37        | 3.7                                      | 1.0                                      | 76            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-220502          | BKS-240502          |
| 5                             | 3 TO 4     | 0.55        | 5.2                                      | 1.4                                      | 80            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-2205XX          | BKS-2405XX          |
| 5                             | 5          | 0.75        | N/A                                      | 1.9                                      | 86            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-240505          |
| 5                             | 6 TO 8     | 1.1         | N/A                                      | 2.6                                      | 94            | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2405XX          |
| 5                             | 9 TO 10    | 1.5         | N/A                                      | 3.2                                      | 108           | -                                   | 640                    | 740  | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2405XX          |
| 5                             | 11 TO 16   | 2.2         | N/A                                      | 4.5                                      | 116           | -                                   | 640                    | 740  | 1028 | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2405XX          |
| 5                             | 18 TO 20   | 3           | N/A                                      | 6.3                                      | 130           | -                                   | 640                    | 740  | 1155 | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-2405XX          |
| 5                             | 22         | 4           | N/A                                      | 8.0                                      | 154           | -                                   | 640                    | 740  | 1246 | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-240522          |
| 10                            | 1          | 0.37        | 3.7                                      | 1.0                                      | 106           | -                                   | 640                    | 825  | 845  | 3" BSP                            | DN80 PN16                                 | 840               | 480      | BKS-221501          | BKS-241001          |
| 10                            | 2          | 0.75        | N/A                                      | 1.9                                      | 106           | -                                   | 640                    | 825  | 845  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-241002          |
| 10                            | 3          | 1.1         | N/A                                      | 2.6                                      | 112           | -                                   | 640                    | 825  | 845  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-241003          |
| 10                            | 4          | 1.5         | N/A                                      | 3.2                                      | 128           | -                                   | 640                    | 825  | 845  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-241004          |
| 10                            | 5 TO 6     | 2.2         | N/A                                      | 4.5                                      | 134           | -                                   | 640                    | 825  | 864  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-2410XX          |
| 10                            | 7 TO 9     | 3           | N/A                                      | 6.3                                      | 150           | -                                   | 640                    | 825  | 973  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-2410XX          |
| 10                            | 10 TO12    | 4           | N/A                                      | 8.0                                      | 178           | -                                   | 640                    | 825  | 1100 | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-2410XX          |
| 15                            | 1          | 1.1         | N/A                                      | 2.6                                      | 112           | -                                   | 640                    | 825  | 845  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-241501          |
| 15                            | 2          | 2.2         | N/A                                      | 4.5                                      | 128           | -                                   | 640                    | 825  | 845  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-241502          |
| 15                            | 3          | 3           | N/A                                      | 6.3                                      | 140           | -                                   | 640                    | 825  | 848  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-241503          |
| 15                            | 4 TO 5     | 4           | N/A                                      | 8.0                                      | 168           | 76                                  | 640                    | 825  | 975  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-2415XX          |
| 15                            | 6 TO 7     | 5.5         | N/A                                      | 11.2                                     | 216           | 76                                  | 640                    | 825  | 1116 | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-2415XX          |
| 15                            | 8 TO 9     | 7.5         | N/A                                      | 14.8                                     | 250           | 76                                  | 640                    | 825  | 1194 | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-2415XX          |
| 20                            | 1          | 1.1         | N/A                                      | 2.7                                      | 112           | -                                   | 640                    | 825  | 845  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-242001          |
| 20                            | 2          | 2.2         | N/A                                      | 4.8                                      | 128           | -                                   | 640                    | 825  | 845  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-242002          |
| 20                            | 3          | 4           | N/A                                      | 8.0                                      | 162           | 76                                  | 640                    | 825  | 885  | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-242003          |
| 20                            | 4 TO 5     | 5.5         | N/A                                      | 11.2                                     | 208           | 76                                  | 640                    | 825  | 1026 | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-2420XX          |
| 20                            | 6 TO 7     | 7.5         | N/A                                      | 14.8                                     | 244           | 76                                  | 640                    | 825  | 1104 | 3" BSP                            | DN80 PN16                                 | 840               | 480      |                     | BKS-2420XX          |

## THREE PUMP MODEL 'AMF3' DIMENSIONS



The Hydraulic Accumulator must be fitted for correct operation. For Hydraulic Accumulator dimensions please see table on Page 3

| AQUAMATIC AMF3 VARIABLE SPEED |            |             |  |  |               |                                     | ALL DIMENSIONS IN MM UNLESS STATED OTHERWISE |     |      |                                   |   |                   |          |                     |                     |
|-------------------------------|------------|-------------|--|--|---------------|-------------------------------------|--|-----|------|-----------------------------------|---|-------------------|----------|---------------------|---------------------|
| PUMP SERIES                   | PUMP MODEL | KW PER PUMP | FULL LOAD CURRENT PER PUMP 1Ph 240V AMPS | FULL LOAD CURRENT PER PUMP 3Ph 415V AMPS | DRY WEIGHT KG | SOUND LEVEL IF GREATER THAN 70dB(A) | BOOSTER SET DIMENSIONS                       |     |      | STANDARD THREADED CONNECTION SIZE | FLANGE SIZE WITH FLEXIBLE COUPLING OPTION | VESSEL DIMENSIONS |          | 1 PH 240V STOCKCODE | 3 PH 415V STOCKCODE |
|                               |            |             |  |  |               |                                     | L  | W   | H    |                                   |   | HEIGHT            | DIAMETER |                     |                     |
| 1                             | 2 TO 7     | 0.37        | 3.7                                      | 1.0                                      | 106           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-3201XX          | BKS-3401XX          |
| 1                             | 8 TO 11    | 0.55        | 5.2                                      | 1.4                                      | 112           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-3201XX          | BKS-3401XX          |
| 1                             | 12 TO 15   | 0.75        | N/A                                      | 1.9                                      | 124           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3401XX          |
| 1                             | 17 TO 23   | 1.1         | N/A                                      | 2.6                                      | 142           | -                                   | 960  | 740 | 904  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3401XX          |
| 3                             | 2 TO 5     | 0.37        | 3.7                                      | 1.0                                      | 103           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-3203XX          | BKS-3403XX          |
| 3                             | 6 TO 7     | 0.55        | 5.2                                      | 1.4                                      | 109           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-3203XX          | BKS-3403XX          |
| 3                             | 8 TO 10    | 0.75        | N/A                                      | 1.9                                      | 118           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3403XX          |
| 3                             | 11 TO 15   | 1.1         | N/A                                      | 2.6                                      | 130           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3403XX          |
| 3                             | 17 TO 19   | 1.5         | N/A                                      | 3.2                                      | 154           | -                                   | 960  | 740 | 898  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3403XX          |
| 5                             | 2          | 0.37        | 3.7                                      | 1.0                                      | 100           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-320502          | BKS-340502          |
| 5                             | 3 TO 4     | 0.55        | 5.2                                      | 1.4                                      | 106           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      | BKS-3205XX          | BKS-3405XX          |
| 5                             | 5          | 0.75        | N/A                                      | 1.9                                      | 115           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-340505          |
| 5                             | 6 TO 8     | 1.1         | N/A                                      | 2.6                                      | 127           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3405XX          |
| 5                             | 9 TO 10    | 1.5         | N/A                                      | 3.2                                      | 148           | -                                   | 960  | 740 | 845  | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3405XX          |
| 5                             | 11 TO 16   | 2.2         | N/A                                      | 4.5                                      | 160           | -                                   | 960  | 740 | 1028 | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3405XX          |
| 5                             | 18 TO 20   | 3           | N/A                                      | 6.3                                      | 181           | -                                   | 960  | 740 | 1155 | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-3405XX          |
| 5                             | 22         | 4           | N/A                                      | 8.0                                      | 217           | -                                   | 960  | 740 | 1246 | 2" BSP                            | DN50 PN16                                 | 840               | 480      |                     | BKS-340522          |
| 10                            | 1          | 0.37        | 3.7                                      | 1.0                                      | 145           | -                                   | 960  | 845 | 845  | 4" BSP                            | DN100 PN16                                | 840               | 480      | BKS-321501          | BKS-341001          |
| 10                            | 2          | 0.75        | N/A                                      | 1.9                                      | 145           | -                                   | 960  | 845 | 845  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-341002          |
| 10                            | 3          | 1.1         | N/A                                      | 2.6                                      | 154           | -                                   | 960  | 845 | 845  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-341003          |
| 10                            | 4          | 1.5         | N/A                                      | 3.2                                      | 178           | 70                                  | 960  | 845 | 845  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-341004          |
| 10                            | 5 TO 6     | 2.2         | N/A                                      | 4.5                                      | 187           | 70                                  | 960  | 845 | 864  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-3410XX          |
| 10                            | 7 TO 9     | 3           | N/A                                      | 6.3                                      | 211           | 70                                  | 960  | 845 | 973  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-3410XX          |
| 10                            | 10 TO 12   | 4           | N/A                                      | 8.0                                      | 253           | 71                                  | 960  | 845 | 1100 | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-3410XX          |
| 15                            | 1          | 1.1         | N/A                                      | 2.6                                      | 154           | -                                   | 960  | 845 | 845  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-341501          |
| 15                            | 2          | 2.2         | N/A                                      | 4.5                                      | 178           | 70                                  | 960  | 845 | 845  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-341502          |
| 15                            | 3          | 3           | N/A                                      | 6.3                                      | 196           | 70                                  | 960  | 845 | 848  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-341503          |
| 15                            | 4 TO 5     | 4           | N/A                                      | 8.0                                      | 238           | 71                                  | 960  | 845 | 975  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-3415XX          |
| 15                            | 6 TO 7     | 5.5         | N/A                                      | 11.2                                     | 310           | 78                                  | 960  | 845 | 1116 | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-3415XX          |
| 15                            | 8 TO 9     | 7.5         | N/A                                      | 14.8                                     | 361           | 78                                  | 960  | 845 | 1194 | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-3415XX          |
| 20                            | 1          | 1.1         | N/A                                      | 2.7                                      | 154           | -                                   | 960  | 845 | 845  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-342001          |
| 20                            | 2          | 2.2         | N/A                                      | 4.8                                      | 178           | 70                                  | 960  | 845 | 845  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-342002          |
| 20                            | 3          | 4           | N/A                                      | 8.0                                      | 229           | 71                                  | 960  | 845 | 885  | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-342003          |
| 20                            | 4 TO 5     | 5.5         | N/A                                      | 11.2                                     | 298           | 78                                  | 960  | 845 | 1026 | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-3420XX          |
| 20                            | 6 TO 7     | 7.5         | N/A                                      | 14.8                                     | 352           | 78                                  | 960  | 845 | 1104 | 4" BSP                            | DN100 PN16                                | 840               | 480      |                     | BKS-3420XX          |

# AQUAMATIC 'AMF' SERIES INSTALLATION GUIDANCE NOTES

## ELECTRICAL

Units are designed for a 240 volt AC 1Phase 50Hz electrical supply for motors up to 1.1 kW and 415 volt AC 3phase 50 Hz electrical supply for motors above 1.1 kW. Electrical design and equipment conforms to BSEN 60204-1-1993 regulations, it is important that all subsequent wiring and protection equipment reflects this.

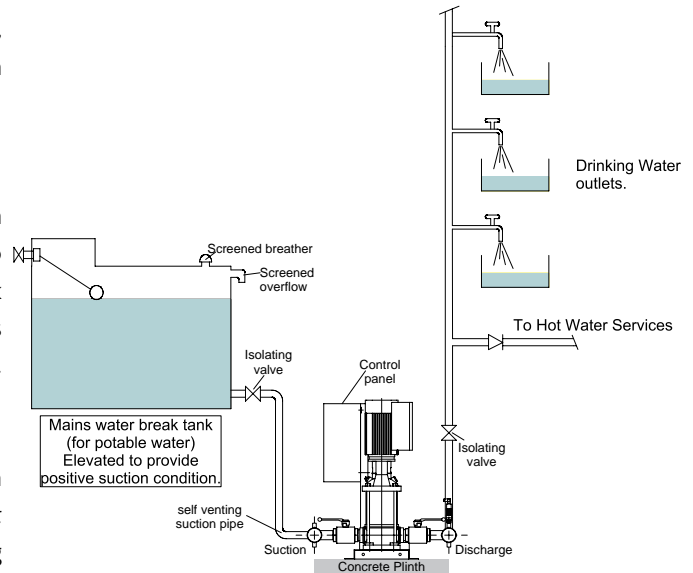
## HYDRAULIC

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 valves on break tank supply and riser to system. Note: Additional check valve/s should not be fitted on the suction or 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 of the optional extras may be considered.

**Typical pipework arrangement using variable speed cold water pressure booster set feeding hot & cold water services.**



## COMMISSIONING

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

## CONSTRUCTION STANDARDS FOR AMF PRESSURE BOOSTER SETS

| COMPONENT                     | MODEL/SERIES           | STANDARDS/CLASS                         | REMARKS                 |
|-------------------------------|------------------------|---|-------------------------|
| Pumps                         | 1 to 20                | Vertical Multi-stage                    | WRAS Approved           |
| Mechanical Seal               | Carbon / Ceramic       | DIN 24960                               | WRAS Approved           |
| Motor for Pumps               | TEFC                   | IP55, Class F Insulation                | Continuous Rated        |
| Isolating & Non Return Valves | Ball Valve             | PTFE Ball Seat                          | WRAS Approved           |
| Suction & Discharge Manifolds | Stainless Steel EN1057 | Entire unit WRAS Approved               | Approval Number 0710086 |
| Control Panels                | 2020Plus Series        | IP54, BSEN 60204 part1:1998 89/3366/eec | CE Marked               |
| Microprocessor                | 2020Plus               | 93/68/EEC                               | Designed In House       |
| Hydraulic Accumulators        | 60-500VR               | DIN 4087 BS6144:1990                    | WRAS Approved           |
| Quality System                | ISO 9001               | BSI Registered                          | CERT No. FM33090        |

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.