

## MICROMATIC HM2AV



**PRESSURE BOOSTER SET WITH E-SPEED INVERTER CONTROL**

# MICROMATIC HM2AV WATER PRESSURE BOOSTER

## WATER BOOSTER SET SERIES

### OVERVIEW

The new Micromatic HM2AV range of variable speed 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. Sets are fully packaged units with twin variable speed pumps, arranged in operation as Duty with Standby or Duty and Assist configuration. All assembled on a fabricated galvanised steel base frame complete with 304 stainless steel suction and delivery manifolds.

### Features

- Automatic constant pressure control via integral variable E-speed motor controller
- Transducer pressure sensor per pump for long term reliability and accuracy
- Automatic duty change over of each pump
- Electronic low water cut-out Interface for pump dry running protection and outlet pipe burst alarm
- 2 individual BMS volt free contacts per pump for run and alarm condition
- Individual pump information via four line LED display for pressure, power consumption and alarm conditions
- Power, Run & Alarm LEDs, Stop and Auto Buttons
- Information logs for hours run & number of starts and last 20 alarms with Date & Time Stamp
- Start up wizard for easy initial set up
- Pump wetted parts and pipework manifolds in 304 stainless steel
- IE3 high efficiency pump motors
- Built to latest CE requirements and in accordance with ISO9001
- WRAS approved pumps and components
- Max flows to 7 litre per second at 2.5 bar.
- Max pressures to 6.5 bar at 1 litre per second.

### Pumps

Horizontal multistage centrifugal pumps in AISI 304 and WRAS approved.

Pump casing, impellers, intermediate stages, seal housing disc and shaft (parts in contact with water) EN 1.4301/AISI 304.

Mechanical seal in Ceramic/Carbon/EPDM.

Motors IE3 high energy efficiency, self-ventilated 2 pole asynchronous motor, class F insulation, IP55 protection degree.

Temperature range -15°C to 80°C and maximum working pressure 10 bar.

### Control

Automatic control by pump motor mounted E-Speed variable speed frequency drive with accurate pressure measurement by transducer. Initial set up of the unit is via a simple configuration Start up Wizard, after which the control system provides automatic alternation of duty pump, electronic low water protection, motor overload protection. The controls has an Illuminated 4 line digital display for setup, output pressure, pump running speed frequency and motor current in amps, with time and faults alarm notification.

Other features include, pipe burst alarm, over current alarm, motor fault alarm, operational 7 day on/off schedule program, chronological date stamped alarm log, parameter program lock. LED's are also provided for power, pump run and alarm conditions, a key pad for set up and an auto/stop button and also provided. 2 programmable volt-free relay alarm outputs for remote BMS monitoring.

### Pipework

Standard manifolds in 304 stainless steel, individual pump isolating valves on suction and discharge, with non-return valves on each pump. For flexibility of installation both ends of the manifolds have screwed connections to allow alternative and opposite inlet and outlet.

### Control Accumulator

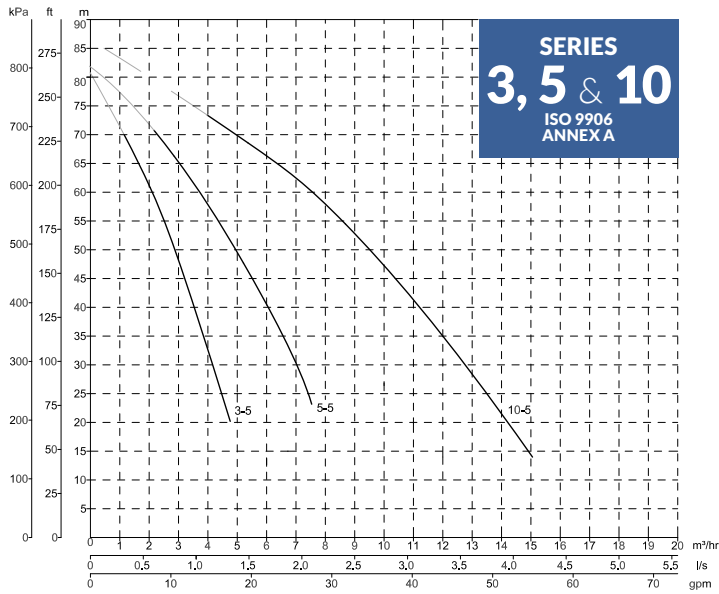
To assist with the constant pressure control a 12 litre inline flow-through design pressure vessel is provided complete with a flow jet combined isolating and drain valve and is WRAS approved. Manufactured from high grade steel automatically welded, the stored water is contained within a rubber membrane so that the steel shell is never in contact with the water.

### Finish

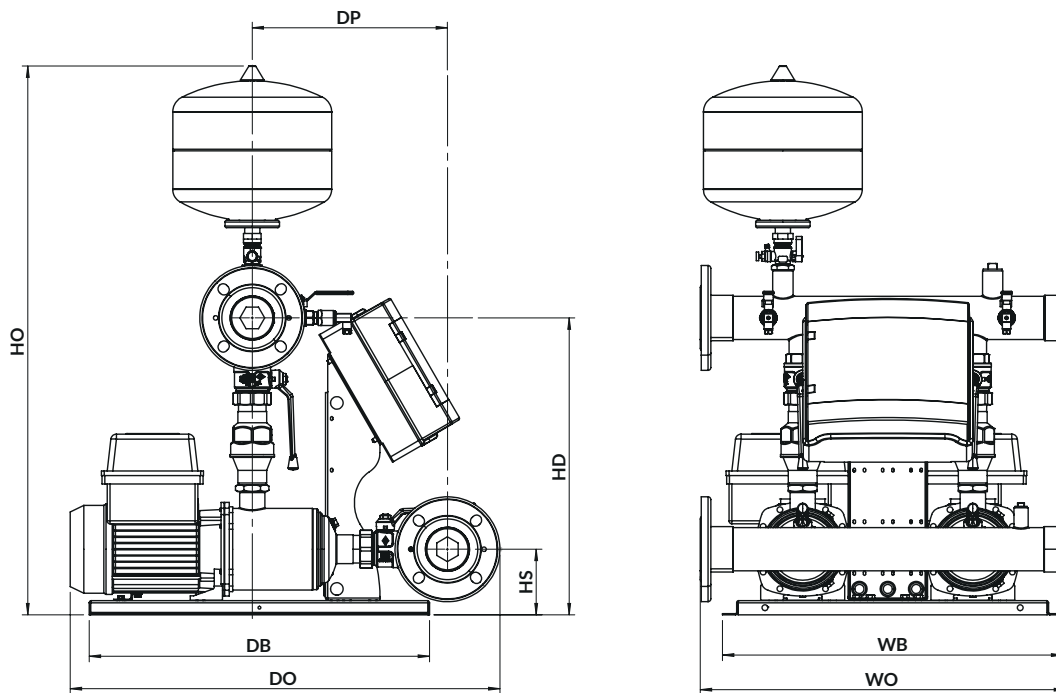
Pump motors are finished in electrophoresis coating, pump bodies in stainless steel and pipework manifolds are left unpainted for effect.



# HM2AV PUMP CURVES



# HM2AV PUMP DIMENSIONS



## MICROMATIC HM2AV VARIABLE SPEED FLOW-THROUGH COLD WATER BOOSTER

PUMP TYPE	kW PER PUMP	VOLTS/ PHASES/Hz	PUMP SET SUPPLY CURRENT (Amps)	APPROX DRY WEIGHT OF UNIT (kg)	SOUND LEVEL PER PUMP dB(A)	BOOSTER SET DIMENSIONS (+/- 10mm)								CONNECTION SIZE FLANGED PN16	VESSEL	STOCKCODE
						WB	DB	WO	DO	HO	HS	HD	DP			
3-5	0.75	230/1/50	25	57	62	600	600	616	670	849	116	421	312	DN40	1X 12 LTR	BMV-220305
3-5	0.75	400/3/50	20	60	62	600	600	616	670	849	116	421	312	DN40	1X 12 LTR	BMV-240305
5-5	1.3	230/1/50	25	64	64	600	600	613	696	861	116	427	297	DN50	1X 12 LTR	BMV-220505
5-5	1.3	400/3/50	20	67	64	600	600	613	696	861	116	427	297	DN50	1X 12 LTR	BMV-240505
10-5	2.2	230/1/50	40	76	65	600	600	644	758	967	116	523	344	DN65	1X 12 LTR	BMV-221005
10-5	2.2	400/3/50	20	79	65	600	600	644	758	967	116	523	344	DN65	1X 12 LTR	BMV-241005

# HM2AV PUMP FASCIA & INSTALLATION GUIDANCE NOTES

## Electrical

Electrical design and equipment conforms to BSEN 60204-1 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 plantroom with the minimum of inconvenience to pipework layout.

Installer to fit isolating valves on break tank supply and riser to system. Note: No further check/non return valve should be fitted on suction or delivery pipework.

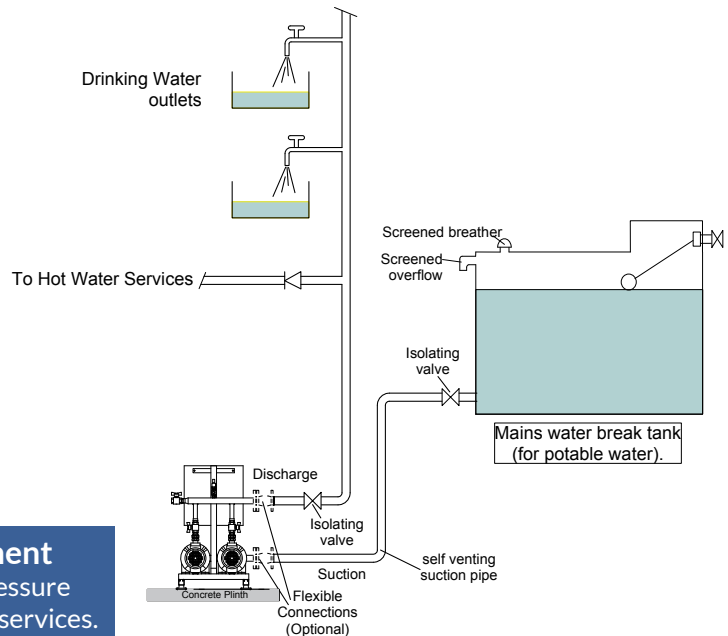
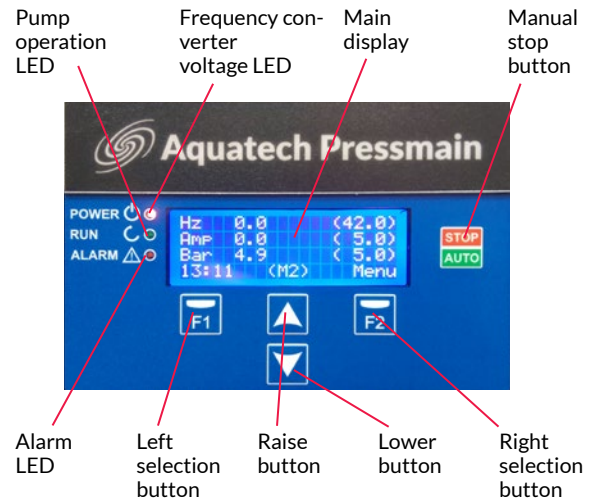
## Mechanical

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

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.

## Commissioning

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



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

## MICROMATIC HM2AV TECHNICAL DETAILS

COMPONENT	MODEL	STANDARD	REMARKS
Pumps	Matrix 3, 5, 10	Horizontal Multistage	WRAS Approved
Pump Mechanical Seal	Ceramic/Carbon/EPDM	-15°C to +85°C	WRAS Approved
Pump Motor	Self-ventilated 2 Pole Asynchronous	Class F Insulation, IP55 Protection	IE3 HIGH ENERGY EFFICIENCY
Pump Wet End	Stainless Steel	EN 1.4301 (AISI 304)	Case, Impellers, Stages, Seal Housing & Shaft
Manifolds	Stainless Steel	EN 1.4301 (AISI 304)	Threaded Connections
Isolating Valves	Brass	EN 1.4301 (AISI 304)	WRAS Approved
Non-Return Valve	Stainless Steel	EN 1.4301 (AISI 304)	WRAS Approved
Controller	E-Speed with Transducer	CE	Inverter/Variable Speed
Control Vessel	12 litre with Flow Jet Valve	97/23/EC 10 Bar Rated	WRAS Approved



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