

# MPV Control Systems

*Simple, direct control of multiple systems*



- Constant pressure with variable speed control
- Up to 4 pumps
- Easy to install and operate
- Customisable options

## Applications

- Agriculture & viticulture
- Irrigation & turf watering
- Industrial & commercial water supply
- Building services

**CAP Industries' MPV control system is a robust, easy-to-use solution for maintaining constant operating pressure with variable speed control in multiple pump systems.**

Each system features our trademark practical design and is purpose-built to include your choice of Variable Speed Drive (VSD). MPV systems are suitable for use with any type of pump and offer a range of customisable options. This ensures that the MPV control system is a versatile, cost-effective solution for a wide range of applications.

## Enhanced performance

The MPV control system is designed to enhance the operation and useability of your pump system.

Key system benefits include:

- operates with Danfoss, ABB or Sinus Penta VSDs
- controls up to 4 main pumps with independent pressure settings
- simple auto-off-manual selector switch
- automatic rotation of lead pump based on hours run
- automatic skip of failed or isolated pump
- adjustable time menus
- external reset switch
- dual acceleration zones allowing fast acceleration on initial start up/varying system demand and smoother acceleration with constant demand
- adjustable friction loss compensation
- large LEDs for notification of system status and fault conditions
- programmable, automatic testing of no-flow condition
- adjustable cut-in pressure to reduce system cycling on low flow

- manual backup control
- data logging of system status and operation
- customisable output relays for external communications including BMS systems.

## Improved system protection

The MPV control system delivers both system and individual pump protection to maintain system integrity and maximise the lifespan of your investment.

Benefits include:

- high and low pressure protection is set as an actual value and can be adapted to suit pump requirements
- automatic, programmable flow test to ensure positive system shut down on no-flow condition
- programmable minimum pump speed allowing for better system control and faster reaction to changing demand
- additional cooling fan with adjustable thermostat control.

## Ease of installation

The MPV system was designed with usability in mind. We use only standard, field-proven electrical components and switches to ensure:

- maximum reliability and flexibility
- improved operator confidence
- reduced downtime
- trouble-free commissioning and maintenance.



MPV control system with VSD display mounted on front (option)

### Customisable Options

The flexible design of the MPV control system ensures it can be configured to suit a range of applications or site-specific requirements.

Customisable options include:

- multiple set points (up to 24)
- pipe fill mode – allows for controlled filling of pipework on initial start-up
- can control additional jockey pump to cater for low demand and/or system leaks
- set point potentiometer – allows precise setting of the required operational setpoint within programmable limits to ensure pump does not operate outside performance curves
- set point selector switch
- inlet pressure protection
- low pressure protection via transducer or standard pressure switch
- no flow – via flow switch or flow meter input
- temperature protection
- remote monitoring and control via phone or mobile modem, radio link or internet
- system protection against phase failure/phase loss
- high/low voltage protection.

### Technical Data

Size	Standard model 600x600x300mm Customised switchboards sized to suit
System power supply options	Single phase 1x240V, 1x480V Three phase 3x380-440V or 3x230-240V Other voltages available on request
Control power supply	240V and 24VDC – from VSD
Operating temperature	0 to 40°C, non-condensing Higher temperatures available on request
Frequency	50 or 60 Hz
EMC/EMI filtering	Designed to minimise radiated and conducted emissions
Pressure transducer	Traditional 10 to 20 bar stainless steel pressure transducer Additional ranges available on request
Enclosure protection	IP54+ powder-coated metal switchboard Greater protection and/or stainless steel options on request



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