

# Priority Demand Valves (WRAS APPROVED)

The SEP Priority Demand Valve (PDV) – launched in 2021 – acts to **isolate the domestic/ancillary water supply in the event of a fire sprinkler activation**, or in the event of a power loss.

## The Requirement

BS9251 – the standard for ‘fire sprinkler systems for domestic and residential occupancies’ – states in broad terms that IF:

- the mains water supply flow rate available to the fire sprinkler system is liable to be affected by domestic water usage (e.g. shower, washing machine etc).
- THEN a valve must be fitted to cut off supply for domestic use in the event of a sprinkler activation.
- AND that valve must close in the event of a power loss (otherwise known as ‘normally closed’).
- PLEASE NOTE that our PDVs are ‘**normally closed**’ as standard. However, if you require a ‘**normally open**’ valve, for example for a watermist system which is NOT subject to BS9251, then this is not a problem – just ask us!

## One Solution - Three Options

- For pipe sizes from 15mm/½" up to 50mm/2" BSP, either of the below (refer to table overleaf to see which is best for your project, as each type has different features and benefits):
  - Solenoid valve, or
  - Actuated Ball Valve
- For pipe sizes from 65mm/2½" up to 150mm/6" we use an electrically actuated butterfly valve for flanged connections.

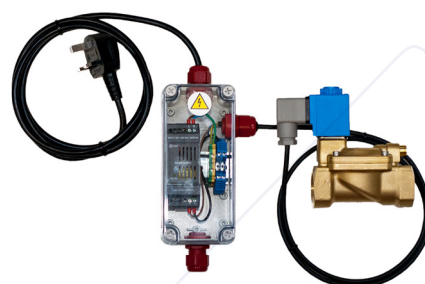
## The Benefits of our product

- All valves are WRAS-approved and therefore can be fitted directly to the mains water supply.
- 24-volt control circuits for all types avoid the need for dangerous 240-volt power outside the IP-rated enclosure, in a domestic environment.
- LED indicator to confirm that power is present.
- LED and position indicators on butterfly valve and ball valve models.
- Fail-safe – the valve closes if a signal is received from the sprinkler system flow switch, BUT it will also close in the event of power loss OR flow switch connection is lost, ensuring that the fire sprinkler is always safe.
- High IP rating means more flexibility when positioning the easy-mount enclosure and the valve itself.
- Small enclosure for Solenoid and ball valve (just 170x80x85mm).
- The fail-safe functionality does not preclude the installation of a (restricted/15mm/½") bypass around the PDV (complete with lockable and/or monitored isolation valve) to allow the provision of emergency water supplies in the event of a power loss which is not caused by a fire event.

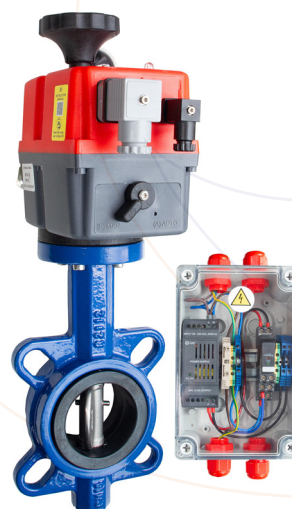
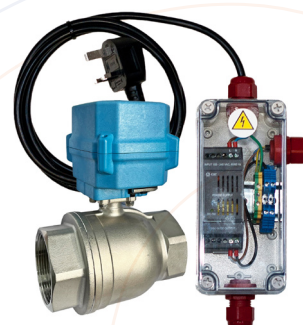
## Workings and features

- The flow switch (water flow detector) is connected into the IP-rated enclosure, creating a circuit that maintains the valve in the open position. If the flow switch is activated then the circuit is broken which closes the valve and shuts off the domestic water supply.
- It is strongly recommended that an **approved flow switch** with Normally Closed (NC) contacts is used with this installation, which gives added benefits of false alarm protection and two sets of contacts, as well as the peace of mind which comes with using proven globally-approved products.
- The unit is provided with a fitted plug for ease; however, this is easily removed, should the preference be to cable directly into a fused spur.
- Although designed for flow switch activation, the valves can be used with alarm panels or other methods.

FOR DETAILED TECHNICAL INFORMATION, PLEASE SEE OVERLEAF



WRAS APPROVED VALVES



## Which valve is best for my project, plus Technical Information

	Solenoid	Actuated Ball	Actuated Butterfly
Pipe sizes available	Up to 50mm/2"	Up to 50mm/2"	65mm/2½" upwards
WRAS-approved valve?	✓	✓	✓
Fail-safe closed?	✓	✓	✓
Visual position indicator?	✗	✓	✓
Manual override?	✗	✓	✓
Constant power-on?	✓	✗	✓ (charge only)
Open/close cycle time	0 sec	10 sec	10-30 sec
Maximum system pressure	16 bar	10 bar	16 bar
Minimum operating pressure	Inlet >0.35 bar required	0 bar	0 bar
Electrical – enclosure	230VAC / 24W / <1A	230VAC / 24W / <1A	230VAC / 24W / <1A
Electrical – valve	24VDC / 15W / <1A	24VDC / 10W / <1A	230VAC / 36-48W / <1A
IP rating of assembly	Min IP65	Min IP65	Min IP65
Enclosure size	170x80x85mm	170x80x85mm	190x120x90mm
Valve size mm (weight in kg)	15mm: 66x40x82 (0.4) 20mm: 79x50x89 (0.5) 25mm: 105x71x106 (1.1) 32mm: 113x81x130 (1.6) 40mm: 140x110x140 (2.5) 50mm: 157x110x150 (3.0)	15mm: 63x65x100 (0.4) 20mm: 72x65x107 (0.5) 25mm: 81x65x119 (0.7) 32mm: 102x93x153 (1.4) 40mm: 115x93x166 (1.7) 50mm: 130x93x186 (2.3)	65mm: 46x408 (5.0) 80mm: 46x422 (5.7) 100mm: 52x485 (6.9) 125mm: 56x513 (10.0) 150mm: 56x605 (13.1)

**Note:** Due to availability of specific components, or ongoing design improvements, the technical or design specification may change at any time – if anything is critical then please contact us to confirm prior to ordering.

### Options

Valves are available as a non-fail-safe option, by special order, if there is concern about loss of domestic water supply in the event of a power loss; however, these valves will not be able to shut off the domestic supply if there is a fire sprinkler activation during such power loss and therefore may not be compliant with BS9251.

Longer cables available, if required, by special order.

### Related Products

For domestic/residential fire sprinkler systems, **we also supply:**

- **Residential valve sets** ('resi risers') complete with approved Potter flow switch (with two sets of contacts – one for the alarm panel, one of which can be used for the valve)
- Approved **Potter flow switches**
- As a nominated distributor, **BS9251-compliant booster pump sets** manufactured in the UK by global pump specialist Grundfos.