

Ref: The Water Supply (Water Fittings) Regulations 1999

LWS Interpretations of regulations relating to domestic and commercial irrigation installations (please use as a guide only)

General

The old Water Bylaws are no longer in force (as of 1 July 1999) and the Water Supply (Water Fittings) Regulations 1999 are the current standards.

It is a requirement that NO garden watering system installation, other than a hand held hose, is started without consent of the local water authority (ultimate responsibility would seem to lie with the homeowner although contractors should theoretically request to see certificate of consent before commencing works).

Notification to the water authority would also normally result in the installation of a water meter to the property (if not already installed).

Fluid Category 1

Water from the mains

Fluid Category 2

Water where temperature changes, and/or substances change taste, odour, appearance, etc. eg water softeners, air con units, fire sprinklers, vending machines, etc

Fluid Category 3

Water that represents a slight hazard to health, low toxicity.

- Domestic hand held hoses with flow control or shut-off valve
- Hand held fertiliser sprays in domestic situations
- Domestic or commercial irrigation systems, without insecticide or fertiliser applicators, with fixed sprinkler heads not less than 150mm above ground level

Valve types to use:

1. EC - verifiable double check valve
2. ED - non-verifiable double check valve
3. HUK1 - hose union tap that incorporates a double check valve. Only permitted for replacement of existing hose union taps in house installations. If new installation, fit double check valve internally to house, and standard bib tap external.

Fluid Category 4

Water that represents a significant hazard to health due to concentrations of toxic substances, eg. chemicals (insecticides, herbicides) and environmental organisms

- Mini domestic irrigation systems, without insecticide applicators, such as fixed mini-sprays or permeable hoses at soil level (not buried in soil)
- Irrigation systems such as pop up sprinklers or permeable hoses with no greater risk than a domestic garden

Valve types to use:

1. Dripline/leaky/porous hose in domestic gardens only - As per Fluid Category 3 (double check valve) in conjunction with a type DB pipe interrupter with atmospheric vent and moving element device at the connection of the hose to the hose union tap, or not less than 300mm above the highest point of the delivery point of the mini-spray outlet or the perforated surface of the porous hose, whichever is the highest.

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Arrangements incorporating a Type DB device shall have **no** control valves on the downstream side of the device (solenoid valves, isolation valves, etc.) and should discharge vertically downwards. Pop-up sprinklers are not permitted with this arrangement.

2. BA - verifiable backflow preventer with reduced pressure zone. Domestic installations incorporating pop-up sprinklers are permitted with this type of valve, or no less effective.

Fluid category 5

Fluids which represent a serious hazard to health due to pathogenic organisms, radioactivity or very toxic substances, and including sewage waste, etc

- Non-domestic hose union taps
- Permeable pipes in other than domestic garden, laid below or at ground level, with or without chemical additives.
- Grey water recycling
- Water storage for agricultural purposes
- Commercial irrigation outlets below or at ground level including pop up sprinklers and/or permeable pipe, with or without chemical additives considered to be greater than risk of domestic garden
- Commercial insecticide or fertiliser applicators
- Commercial hydroponics systems

Valves types to use:

1. **None permissible** - use Type AA, AB or AD air gap - typically use pump and tank.

Notes

Mechanical backflow prevention devices should be installed with the following in mind:

- They should be readily accessible for inspection, maintenance and renewal
- They should not be located outside the premises, except for types HA and HUK1 (hose union bib taps and adapters)
- They should not be buried!
- Vented, verifiable (test ports fitted) or devices with relief ports should not be installed in underground chambers or where liable to flooding. This would apply to double check valves.
- Line strainers should be fitted upstream of all devices required for category 4 fluids. Where fitted, servicing valves should be fitted upstream of the line strainer and downstream of the backflow prevention device.

LWS SUMMARY

Domestic gardens - minimum requirements

Drip irrigation eg baskets/pots etc.

Category 3 – fixed heads/emitters not less than 150mm above ground/soil level.

Use double check valve.

Microsprays

Category 3 – sprays on riser stakes fixed not less than 150mm above ground/soil level.

Use double check valve.

Dripline/porous/leaky pipe

Category 4

Use double check valve and Type DB pipe interrupter.

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Pop-up sprinklers
Category 4
Use RPZ valve or Type AA (Pump and Tank)

Commercial Installations - minimum requirements

All above and below ground taps and watering points
Category 5
Use Type AA (Pump and Tank)

Small drip irrigation scheme eg baskets etc.
Category 3 – fixed heads not less than 150mm above ground/soil level.
Use double check valve.

Small micro spray systems
Category 3 - eg sprays on riser stakes fixed not less than 150mm high
Use double check valve.

Dripline/leaky/porous pipe
Category 4
Use RPZ valve or Type AA (Pump and Tank)

Pop-up sprinklers
Category 4
Use RPZ valve or Type AA (Pump and Tank)

Any systems using fertilisers or pesticides are minimum Category 5

RPZ Valves

The installation of an RPZ valve must be notified in advanced to the water supplier and whilst they can be installed by any contractor the product and installation method must conform to regulations. Once installed they must be commissioned and tested by an approved RPZ contractor, this testing and servicing procedure must then be repeated annually.

RPZ valves create a pressure drop across the device so therefore may not be suitable in areas of low pressure. Also consider general fluctuations in the pressure of the mains water supply which may have a detrimental effect on the performance of the system at a later date. The difference in cost between an RPZ valve and a pump/tank arrangement is minimal and therefore the guaranteed duty of the pump is often the best option.

Please contact The Water Regulations Advisory Scheme for confirmation or clarification.

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