

Datasheet

Water supplies for domestic and residential fire sprinkler systems explained

It is important for the correct operation of the fire sprinklers that the water supply is capable of providing sufficient quantities of water for the sprinklers to operate effectively.

Our hydraulic design calculations determine the **water supply required** for each installation. Typical domestic applications such as houses or apartments require 50-100 lit/min for the sprinklers, and residential or nursing homes require 100-200 lit/min.

Option 1 – New dedicated mains water

Have a dedicated non-metered water supply installed. The required flow should be available in the street main, **but you have to request a new supply from your local water provider**. The size of the connection will depend on the distance from the street. For short distances a 32mm (OD) MDPE will be OK for 50 lit/min, for longer distances or greater flows a 50mm or 65mm MDPE may be required.

It is possible that a new supply could be shared, which would improve the domestic supply as well. In this case a water meter would have to be fitted on the domestic branch at the property.

Important note - Mains water connections for domestic and residential fire sprinkler systems

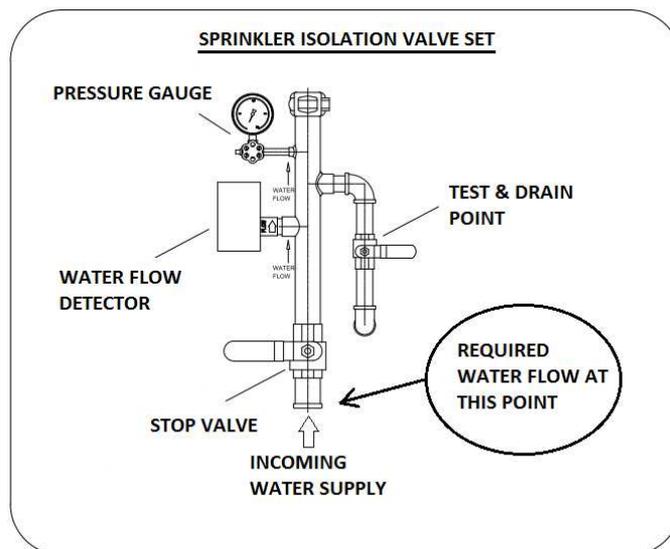
Mains water connections should be sized to supply the flow rate required by the system design. The incoming service pipe may be larger than the sprinkler distribution pipe work.

The connection at the street should be a low friction loss type such as an 'under pressure saddle' to minimise flow restriction at the joint. The MDPE supply pipe to the property should be full bore to minimise friction losses and should avoid bends and directional changes as far as is possible.

All supply pipes must be flushed clear of any debris prior to connection to the sprinkler pipe work.

Option 2 - Tank and pump

For taller buildings, or where a suitable mains water supply is not available, an alternative is a stand-alone tank and pump. The tank can be dedicated or shared, and will be sized to provide sufficient water for a predetermined sprinkler cycle. For domestic application this is generally either 500 or 1000 litres, and for residential homes from 1500 to 6000 litres.



During commissioning, our Engineer will perform a flow and pressure test to ensure that the water supply is adequate.