

EXTERNAL SPRINKLER SYSTEMS



**DURAL
IRRIGATION
& PUMPS**

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BUSHFIRE FIREWISE - EXTERNAL SPRINKLER SYSTEM

SPRINKLER SYSTEM

Sprinkler Systems, also known as external water spray systems, will add considerable protection to a well prepared property.

A Sprinkler System is used to cover the property with water and at the same time can be designed as a Fire Fighting Resource. Apart from sprinkler heads, hose outlets can be incorporated into the system – (when there is enough pump capacity), hoses can then be attached and used to put out spot fires.

If there is a bushfire in your area and your property is well prepared it is important that you stay at home to start the Sprinkler System manually and help fire-fighters protect your property, for as long as it is safe.

EFFECTIVE SPRINKLER SYSTEMS SHOULD MEET THE FOLLOWING CRITERIA:

1. As Mains Water Pressure is likely to be lost during bushfires, connect the Sprinkler System to an independent water supply.
2. The independent water supply could be a swimming pool, a rainwater tank, a detention tank or dam and should be at least 22,000 litres.

PUMP SYSTEM

- Your system will require a petrol (or diesel) powered pump as power is likely to be lost during bushfires. Only use an electric pump if you have a backup power supply such as a generator.
- Locate your pump as close as possible to the water supply.

- Use 40mm or 50mm foot valve when drawing water from an underground tank or dam. Always make sure all fittings are tight around the suction hose.
- Keep the pump out of the weather and protected from the elements.
- Prime pump before starting (fill pump with water).
- Check pump for oil and fuel before starting.
- Make sure pump is sitting level. A pump stand with rubber feet is ideal.
- Dural Irrigation will advise you on the correct pump and fittings for your needs.
- Always empty pump through the drainage hole when not in use for longer periods, to avoid rust and corrosion of inner pump.
- Do not keep fuel in pump unit over winter as old fuel will deteriorate pump performance.

DAVEY FIREFIGHTERS



POWERED by
HONDA™

SPRINKLER HEADS

- Metal Impact and Butterfly Sprinklers should be used for this type of System.
- Each sprinkler head should be located so that its spray overlaps the next adjoining sprinkler (called head to head) this helps to allow for wind as well as providing a more even coverage.

- Metal Impact Sprinklers should be placed on the ridge of the house & spaced 10m apart. They can also be placed in the garden / lawn on the side or front of the house whichever is likely to be impacted by bush fires. Impact Sprinklers cover about a 15m radius and use approximately 20 litres of water per minute.
- Metal Butterfly Sprinklers should be fixed to eaves on a 45° angle below gutters. They have a 5 metre radius and should be installed 5m apart. They use approximately 10 litres of water per minute. The Butterfly Sprinkler Heads should spray in front of the house, creating a curtain of water.



PIPEWORK FOR PUMPS & SPRINKLERS

- The pipe from the pump to the house should be 375mm below ground level and 50mm diameter poly pipe is recommended (1½” Rural-B or 50mm PN12 Blueline) Use compression fittings for pipe and pump connections.
- Due to radiant heat all above ground piping should be copper. Copper pipe is very easy to work with and joins should be silver soldered. (Note: soft solder could fail in a fire due to its low melting point).
- Compression fittings for copper are not recommended.
- A stainless vibration eliminator should be fitted when copper is used as delivery pipe to take out vibrations and water hammer. (Water hammer and / or vibrations could damage welds or fittings).
- To maintain water volume and pressure to all sprinkler heads contact Dural Irrigation to work out an hydraulic drawing. (Note: never decrease pipework as you will lose pressure and flow over distance).

- Consider fitting ball valves in main pipe and takeoffs in order to re-direct the water flow where it is needed at any one time. Using ball valves can also give you points at which you can connect a hose or hose reel to fight spot fires.
- We recommend Stortz fittings & perculating Fire Fighting Hose, as used by your local Bush Fire Authority.

TESTING AND MAINTENANCE

- Before the bush fire season starts test the pump and sprinklers and thereafter start the pump for 1 minute each week during the season and once or twice in the non-fire season. Experience shows that mud wasps, spider webs, and dust can be a problem in sprinkler heads and a regular flush is therefore required.
- If you depend on a water tank, it is most important that when flushing your sprinkler system you don't contaminate your drinking water with pool or dam water. Block stormwater pipes or divert run-off water away from tanks.
- Clear out any leaves from gutters as they could fuel a fire and or block up your pump.
- Please note salt or chlorine is not good for plants – so it is a good idea to wash down all your plants after testing the sprinkler system if you pump water from a swimming pool.
- If you are drawing water from a swimming pool it is advisable to wash down your roof & walls with town or tank water after a full system test to prevent long term staining or corrosion by the chlorine in the swimming pool water.

We at Dural Irrigation will design your external Sprinkler System for you.

You can install the System yourself with detailed explanation from our staff or we can put you in contact with an experienced installer. All we need you to do is draw your house & surrounding area and include measurements before coming in to see us.

[Dural Irrigation Pty Ltd](#)

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