

Helping kiwis get SMART with water

New Zealand has one of the highest rates of available water per head of population in the developed world. Sure, the rain doesn't always fall where needed and a lot flows straight out to sea. But overall, Godzone isn't generally perceived as being a dry country.

Town water supplies are readily available and not too expensive (if charged for at all). Irrigation water, while tightly controlled, is available in huge volumes to those who hold the rights. Good irrigators and large commercial operators are focussed on using water efficiently but there is still huge wastage and over-watering occurring nationwide.

Irrigation New Zealand launched a SMART Irrigation campaign in 2010 to help minimise the environmental footprint of irrigation through efficient water use. SMART stands for Sustainably Managed, Accountable, Responsible and Trusted irrigation. The five elements of SMART irrigation are:

1. Design to ensure water is only applied where necessary and application rates are suitable for the soil type to prevent run-off.
2. Installation using high-quality components to meet the design requirements and provide long-term reliable operation.
3. Commissioning and handover to ensure design objectives are met and equipment is installed correctly.

4. Operation within design parameters using good-quality soil and climate data to prevent unnecessary water application.
5. Maintenance to keep the irrigation system running and performing as specified to avoid wasteful failures.

So far, the message has been delivered to commercial irrigators, re-sellers and contractors who are members of Irrigation New Zealand via its website, press releases and newsletters.

The time has come to spread the message to the wider population. A promotional campaign will be launched in Mid and South Canterbury in November in collaboration with local authorities and inaugural industry partners including WSP. This pilot scheme will highlight irrigation industry products, methods and technologies that can help both home gardeners and irrigating farmers embrace water-efficient practices.

The campaign will involve a series of media events plus press releases and SMART Irrigation e-Newsletters to be distributed between December and February. WSP is pleased to support

this campaign and we urge all of our clients to help promote this message to the target audience.

The easiest thing you can do is sign up for the newsletters and forward them to your client base. Please visit the [Irrigation NZ website](#) or Facebook page for more information.

Martin Payne - General Manager



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Garden hoses and Orbit pistols



Top: Orbit Pistols - Mini XL Firehose Nozzle (96884).
Bottom: D-Grip Contractor Pistol.

WSP has a range of high-quality garden hoses and Orbit hose pistols suitable for the residential and landscape markets. These are great for point-of-sale displays.

WSP garden hoses (page 70) come with significant warranties and are available in different grades depending on how fancy your customer wishes to get. They are available in 12mm and 18mm diameter and in various roll lengths. If you stock garden hoses, why not stock quality ones that offer a point of difference from your competition?

Likewise, our range of Orbit pistols (page 64-65) are solidly manufactured and come in a range of colours to impress your customers. A useful hose pistol (code 96884)

incorporates a mini firehose-type trigger which is much easier on your hands when holding it for long periods.

We also have a range of shower wands for watering hanging baskets and sprinkler bases for watering lawns and gardens. These will be good sellers throughout summer. Professional point-of-sale displays are available if you purchase pack quantities.

See WSP's Pricebook – pages 64-70

Choose the correct air release valve

Air in your pipelines can cause big headaches. Water can't be significantly compressed (because it's a liquid) but air will compress if subjected to high pressures or sudden changes in the system's pressure (because it's a gas). This will cause the air to compress and bounce back out like a spring. The subsequent shock wave will hurtle through the pipeline and can cause significant damage.

Air also takes up space in pipelines, especially at high points where it can impede water-flow. Since air naturally accumulates at high points, we can install an air release valve (ARV) to remove the air automatically without letting any water out.

WSP offers three different types of ARVs:

- Kinetic,
- Automatic
- and Combination.

A kinetic ARV valve allows the air to escape while the pipe is filling with water. It will let all the air out until the water hits; then it will close. It will also let air back into the pipeline in a vacuum or draining situation. This is great for filling a pipeline for the first time or emptying it.



DAV-P-A (Automatic), DAV-P-KA (Combination) and DAV-P-K (Kinetic).

It's important to fill the pipelines slowly enough for the air to escape; if the air velocity gets too high it will make the kinetic ARV slam shut. Choose big enough kinetic ARVs to ensure they can release air quickly during system priming. Install an ARV at the end of every pipeline branch on big systems.

Once the pipes are full of water and under pressure, the kinetic ARV will not let any more air out. So what happens if you need to remove air? An automatic ARV valve allows

air to escape from a pipeline that is already full and under pressure. As you can imagine, removing pressurised air from a pipeline full of water is not easy.

The third type is the Combination ARV. This does the job of both the kinetic and automatic ARVs. It lets large volumes of air out of a pipeline that's filling, then small air

bubbles out under pressure. It will also let large volumes of air back in under vacuum.

So choose the valve that's right for your application. If you're not sure, give us a call.

See WSP's Pricebook – pages 113-114

Hunter Irrigation going strong

WSP has represented Hunter in New Zealand since we first began. It is a leading range we are fanatical about – innovative, reliable and environmentally-conscious products. WSP has always been fully committed to Hunter with a trained sales team, marketing support, design assistance, competitive pricing and a stock holding second-to-none in New Zealand. We have massive stocks in both the North and South Islands to ensure overnight supply wherever possible and keep back-orders to a minimum.

Concerned about warranties?

WSP has always been fully committed to supporting Hunter in New Zealand. If you are having warranty issues or concerns with Hunter products that you purchased from another NZ-based company, please give us a call. We will honour the warranty for any Hunter product originally purchased in New Zealand.

The manufacture date and batch is printed inconspicuously on every product but even if this date

falls outside warranty period, just include a copy of your original invoice regardless of who it was from. Warranties vary for different products. This is written on the last page of the Hunter Product Catalogue (let us know if you want one sent out) or you can find it online at www.hunterindustries.com.

Ongoing Support

You can't beat Hunter for landscape irrigation, especially with the range of MP rotators and gear-driven pop-up

rotors, quality solenoid valves and user-friendly controllers.

If you need help choosing the right Hunter sprinkler or controller for the job, give us a call. We have plenty of staff trained to help you choose from the range.

If you want help with sports field projects or sales into golf courses, give us a call. We have some very nice golf course irrigation gear. For larger projects we offer an Irricad design service. If in doubt, get in touch and we'll get you sorted.



Above: One of Hunters Golf Rotors - G995.

Left: Hunter's MP Rotator pop-up sprinkler heads that spray the landscape.

Photos courtesy of Hunter Industries Incorporated.

PROJECT PROFILE

Filtration of dam water for vineyard



Liquid Action Ltd was asked to offer a filtration solution for a prominent vineyard in Marlborough's Awatere Valley. They in turn, asked our technical representative, Iain Holdaway, to design a new filtration system for the vineyard's man-made dam. The dam is filled by run-off, so water quality can be poor with lots of suspended solids, organic matter and debris.

An existing filtration system (not one of ours) was causing a number of headaches for the owner. The existing filters included 6" scanning screens but they were unreliable and regularly blocked because the water quality was beyond their capability. The existing system was becoming more labour-intensive by the day.

A design flow rate of around 270m³/hour (4500 litres per minute) was required, with filtration down to 130 micron (120 mesh) to protect the drip emitters and the solenoid valves in the irrigation system. No AC power was available.

Iain recommended two Arkal SpinKlin disc filtration systems (see page 136 of our WSP pricebook). The disc filters will remove both particle matter and organic matter. The Arkal SpinKlin systems are fully automatic and will backflush themselves. The disc sets have a massive surface area. They also have great reliability, plus good service and parts back-up from Amiad. The bodies are constructed of plastic to prevent rust.

The 80mm diameter SpinKlin system Iain chose included a bank of 7 double-spined filters and a second bank of 5 filters installed in an adjacent shed. The filter banks were

connected to an Arkal DC-powered filter controller which automatically backflushes each filter.

The two systems have a combined capability of 390m³/hour for clean water – well in excess of the required flow rate. However, actual flows are expected to be significantly reduced when subjected to dirty water. The number of individual 80mm filters was determined by ensuring each filter did not exceed 15m³/hr flow rate, which Iain's experience has shown works well in dirty water situations.

The systems were designed so when a filter is being backflushed the remaining filters can still maintain the required irrigation flow rate. During backflushing not only is a filter out of commission, it is drawing water for flushing (about 20m³/hr), so these parameters need to be taken into account.

To ensure the filters have enough pressure to backflush when the irrigation system is in full flow, a 150mm Dorot normally-open pressure sustaining valve was installed downstream of each filter system (see photo). This ensures the filters always have at least 3 bar pressure so they can backflush effectively.

STAFF PROFILE SNAPSHOT

Mike Stapleton

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If you have phoned WSP's Auckland office and asked a tricky question about hydraulic valves, backflow prevention or filtration, chances are you spoke to Mike. He is a guru of the industrial water industry, having spent 30 years working in this field (the past 10 years at WSP).

Mike gets immense satisfaction from helping others resolve their hydraulic pipeline and filtration quandaries. When not fielding technical phone calls, Mike enjoys golf (although he confesses he is his own handicap), fishing, and motorsport. He's a bit of an old-time V8-style motor head and annoyingly has ACDC's Thunder as his ringtone. He likes to watch rugby and follows his local Manurewa football team.

He says his wife is astute (for choosing him), and he has three adult sons who are finding it difficult to break away from his cheque book.

If you ever have an industrial or hydraulic issue you'd like to discuss, give Mike a call or email. You'll make his day.



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