

Welcome to the latest edition of BWT News. You'll find news and product information from the BWT team.

Exceeding industry standards in fire and building control.

We're excited to share that we have recently been approved to assemble and supply deluge valves from our Melbourne facility. Our supply of valves for the fire and building industry are approved to the UL requirements for fire systems.

This unique compliance allows a local company to build and supply complex deluge valves and trims. This creates the capability to supply the valves within tight timeframes in order to better meet the needs and requirements of fire applications across Australia.



Hot water pressure control valves for high rise buildings.

Product update

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To ensure we meet the requirements for high rise building pressure control valves, we have released a unique build trim to cater for difficult hot water applications for our model: 720-ES-N-HT-ASTD.

The product update is compliant with all Australian standards, and Watermark approvals. The body of the valve is made from 316 grade stainless steel and elastomers that are resistant to high temperatures.

This combination of materials makes it suitable and effective in pressure reducing or relief functions, and within commercial hot water networks. To learn more about this control valve, please [get in touch](#) with our sales team.



Industry spotlight: Irrigation

News

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At Bermad Water Technologies, we have a history of working closely with irrigation trusts and government owned irrigation water companies in the supply and delivery of major Australian infrastructure.

With over 30 years' experience in business, we have supplied over 35 major projects in the control, measurement and protection of water. The irrigation industry is where we have built trust and capability to provide product, service and engineering expertise.



At the core of our success has been our combination of hydraulic control valves, air valves, and our specialty metering products. We also maintain a commitment to Australian standards—with a focus on the NMI product requirements for our mechanical turbine meters and electromagnetic flow meters. In 2019 we hope to continue building upon our relationships with our customers and partners through our effective work in the irrigation industry.



Sensus WP Dynamic pattern approved turbine water meter.

Product feature

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Within the industry, there have been changes to government legislation regarding irrigation meters. The new legislation ensures that water used for irrigation is measured, billed and installed with pattern approval to NMI 10-1.

This requirement of pattern approval needs manufactures to adhere to rigorous guidelines to provide confidence to irrigators that their meters are compliant and accurate in the measurement of non-urban water.

We are proud to announce that we are the only Australian company compliant with government regulations for pattern approved mechanical meters. The product's history proves its long-term reliability and is manufactured from the largest bulk metering company in the world—headquartered in Hannover, Germany.

The WPD meter has a proven, high quality pulse output, making it easy to link to any data logger with a variety of options for further communication via different networks.

The meter is available in sizes from 40mm to 400mm, with a suitable configuration available to suit most irrigation applications.

If you'd like more information on the NMI pattern approval, or our compliant mechanical meter, please visit our [online product page](#) or [get in touch](#) with our team.



Who's who at BWT Meet Christine



Accounts & operations

With nearly 20 years' tenure at Bermad's Victorian branch, Christine offers support across accounts and management for the entire team.

Committed, reliable and professional, Christine has developed her experience in the logistics, construction and manufacturing industries to provide dedicated service to both clients and our internal team. While her expertise lies in accounts, her role encompasses more than just bookkeeping—and she's known as the 'go to' person for all things related to office operations and management.

Having spent over 17 years of her career at Bermad, Christine has watched the company grow in offering, team, and velocity. Her tenure has seen her contribute to all areas of the business, and she cites this diversity as being a key factor in the development of her on-the-job skills and experience. While she has seen many changes in the industry and at Bermad, one thing remains constant: the loyalty, dedication, and expertise of the team she works with day-to-day.

How to minimise water hammer in pumping stations using anti-slam air valves.

How-to

[Read more](#)



Network outages can cause a range of issues in your system, including water hammer. Reduce the impact of power failure by incorporating anti-slam valves for optimal flow.

The issue

When a pump is switched off, and is located on flat topography, column separation can occur. Column separation occurs when air valves draw large amounts of air into a pipeline, which is followed by fast release of air as the column re-joins.

As this can happen very quickly, standard combination air valves can generate water hammer when the large orifice charges up.

The solution

There are many methods to reducing the impact of water hammer, including the addition of surge vessels, pressure relief valves—or more commonly a specialised air release valve such as the CSA anti-slam air valve.

CSA air valves automatically release air pockets and can admit large volumes of air during power loss, preventing any negative pressure from occurring. CSA's anti-slam air valve has the capability to break the vacuum caused by water hammer, this allows air to enter the pipeline unrestricted. This airflow is discharged as the returning wave of water hammer travels towards to pump at a slower calculated flow rate.

This controlled, slow air discharge uses the air bubbles (caused by water hammer) as a shock absorber to dampen the return wave—this prevents the returning column of water from slamming against the closed pump check valves.

To [watch an animation](#) of this, visit the Bermad Youtube Channel to learn more.

Valve installation and sizing

The valve should always be installed on the discharge side of the pump check valve. This could be either on the common manifold, or as close as possible to the bend prior to the pipe re-entering the pipeline.

Typically, the valve is always isolated to the pipeline by use of a butterfly or gate valve to ensure access for valve maintenance.

In relation to choosing a valve size, it is important to understand the flow rates of the pumping station. It's always best to check with our engineering team, as the pipe material and pressure rating play an important role in ensuring that your system doesn't exceed vacuum ratings of pipe under air inflow calculations.

In contrast, being conservative and over sizing the air valve can have the effect of not dampening the return wave sufficiently. Our recommendation is to send the following details to our team for accurate sizing and support:

- Water quality.
- Number of pumps in the system.
- Pump design and motor speed (e.g. Turbine pump at 4 pole 1440 rpm).
- Individual pump flow rate and discharge pressure.
- Pipeline diameter, length, material and PN rating.

If you'd like further design assistance or additional information such as animations, data sheets, manuals and CAD drawings, visit our [online product page](#) or [get in touch](#) with our team.



Wentworth to Broken Hill water supply pipeline.

Case study

[Read more](#)



We partnered with Water NSW to successfully supply, deliver and consult on our range of air release valves for the Wentworth to Broken Hill pipeline project.



Valued at nearly \$500 million, and spanning 270km, the project is one of the region's largest—the Bermad team worked to supply a range of air release valves to help secure long-term water supply for the community.

A pipeline that invests in the community.

The pipeline began works as of February 2018 and runs along the length of the state between Wentworth and Broken Hill. The 270km length pipeline will allow raw water to be sourced near the Murray River, and is being constructed underground following the Silver City Highway corridor to Broken Hill.

The project aims to secure water supply for the region, and according to WaterNSW, will provide immediate benefits to both the Broken Hill and Wentworth communities. Early estimates indicate that spending in the local community could be between \$30 to \$42 million during the construction of the pipeline (WaterNSW).

"The pipeline will supply up to 37.4 megalitres of a peak daily demand of raw water and provide more than 150 local jobs as well as the sourcing of project materials and other support logistics from regional providers."

Project specifications

The pipeline is built from 270km of 762mm Australian rolled steel, and includes surface infrastructure that consists of:

- A water intake pump station by the Murray River.
- Two transfer pumping stations.
- A bulk water pump station alongside a photovoltaic power (solar) generation system and a bulk water storage dam.

The pipeline and associated infrastructure also provides drinking water to both the Wentworth and Broken Hill communities. 20,827 pipes delivered to site via 2315 semi-trailers from Victoria and Western Australia to the outback mining area.

The project was installed and constructed in record time, and seven months in, there has been amazing progress on the total solution.

Bermad Water Technologies were the chosen supplier for more than 450 DN100 PN16 and PN35 air valves for the project. Our range of CSA Fox RFP and Fox AS air release valves were selected to maximise pipe flows and minimise the effect of water hammer along the lengthy pipe network.

Bermad's range of CSA air release valves were selected due to the following reasons:

- Product approval and compliance with AS4956 standards.
- Proven on the field for major projects in large numbers with CSA's renowned reliability
- Ability to supply a huge project within a tight timeline with testing for assurance of in field performance.
- Ability to provide PN35 rated valves to meet engineering performance requirements.
- Ability to provide the correct level of surge protection using Fox-RFP and Fox-AS surge prevention air valves.

For more information or to speak to one of our staff, call the number in your state

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