WATER CONTROL SOLUTIONS

BERMAD WATERWORKS

As pioneers in water supply protection and efficiency, our proven water & control management solutions include state-of-the-art hydraulic control valves, air valves and advanced water meters. Whether for bulk water supply systems, water distribution network grids, or waste water pumping stations and delivery lines, we offer robust and reliable solutions that help optimize water usage, maximize energy efficiency, reduce costs, protect water supply and distribution systems, and keep water system downtime to a minimum.

Scan for
Product Catalog

Solutions

Municipal Network (Water Distribution)

BERMAD's municipal water supply solutions include hydraulic control valves, air valves, water meters, controllers, and data loggers. Network data is collected, analyzed, and displayed in the BERMAD cloud, enabling engineers to make optimal decisions for consumers and water supply networks.

Water Resources (Bulk Water Transmissions)

BERMAD offers a wide range of solutions and support to ensure that each system, from bulk supply to small distribution networks, can be optimized to efficiently deliver water from the source to the consumer.

Sewage & Wastewater

BERMAD designs, manufactures, optimizes, and supports air valves and water flow meters to enhance, increase efficiency, and protect sewage and wastewater systems.

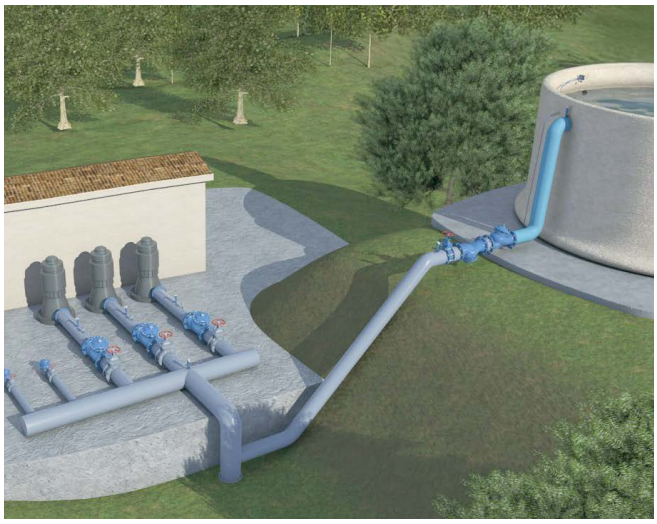
Water Treatment / Desalination

BERMAD designs, manufactures, optimizes, and supports hydraulic control valves, air valves, and water flow meters to enhance, increase efficiency, and protect water treatment and desalination systems.

Applications

Pumping Station

Integrating BERMAD's solutions into pumping stations and water supply systems protects them from surge and water hammer due to power failures and daily startup and shutdown, manages changes in consumption and operating pressure, maintains efficient pump operation, and protects pumps from electrical overload and cavitation damage. Our solutions include air valves, pump control valves (active check valves), circulation valves, quick relief valves, surge anticipating valves, and flow meters.

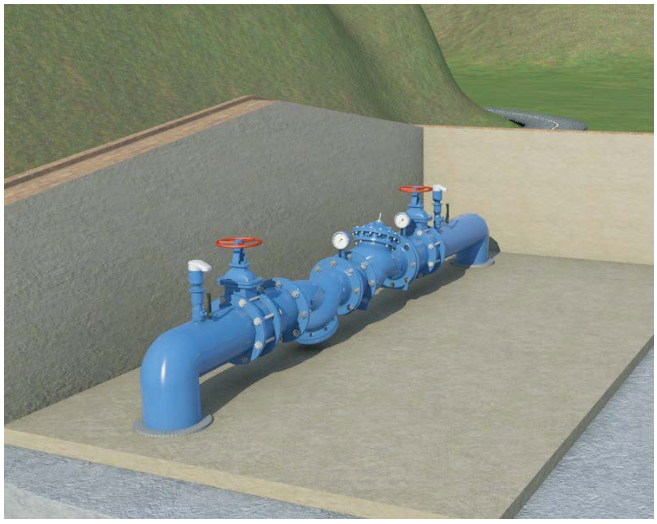


Reservoirs

BERMAD Level and Flow Control Valves combine the advantages of excellent hydraulic control valves with the simplicity of altitude pilots or electric/mechanical floats, hydraulic flow control valves and smart water meters allow controlled reservoir filling. External placement of the main valve eliminates installation and maintenance problems associated with mechanical float valves installed in the reservoir.

Pressure Management

BERMAD provides robust and reliable solutions that operate across the full range of utility assets, controlling pressure and flow. Our valves and digital products allow optimized operation in city centers and/or rural applications. Thanks to their communication capabilities, the DELTA Controller and Epsilon Data Loggers can remotely modify any pressure reducing valve between multiple pressure setting points – according to time or flow sensors. BERMAD ensures accurate and stable pressure control at all flow rates – anytime, anywhere.

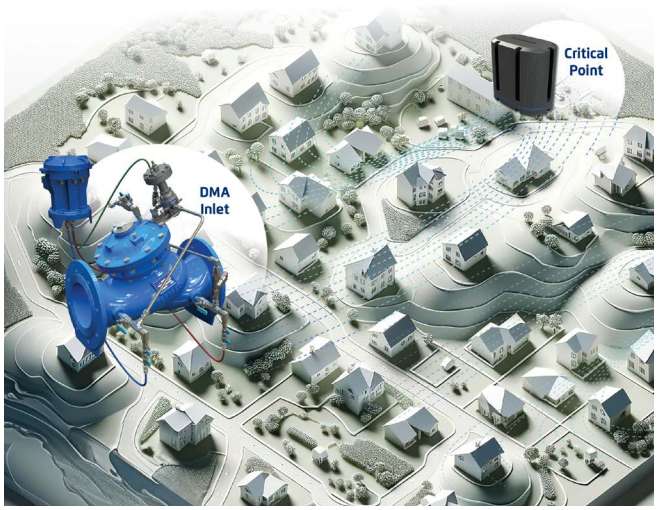


Surge Solutions

BERMAD's application engineers offer surge analysis services, using the most advanced water transient software to support optimal system design with better surge protection. With 60 years of experience, BERMAD provides comprehensive solutions: Quick pressure relief valves, surge anticipating control valves, pump circulation control valves, booster pump control valves, quick active check valves, combination air valves with surge protection, and surge tanks.

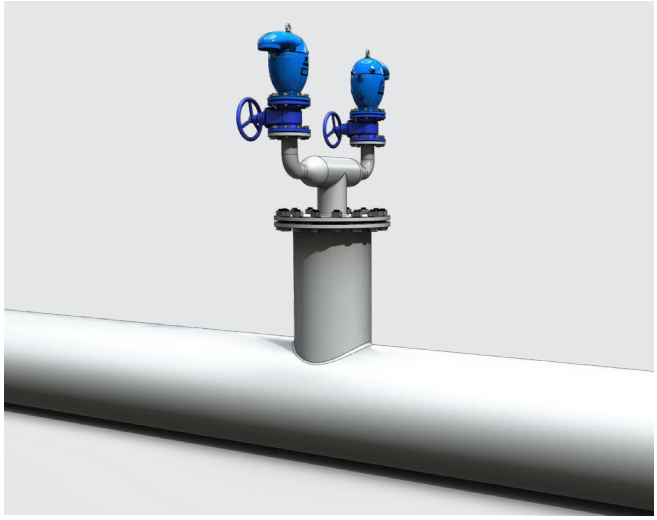
Network Optimization

BERMAD's robust and reliable hydraulic and digital solutions operate across the full range of utility assets, controlling and monitoring pressure and flow. Utility engineers can rely on accurate data and system insights to set pressure supply to guarantee sufficient pressure supply to legitimate customers and reduce leakage to a minimum.



Air Control

BERMAD Air Valves include combination and automatic (air release) valves with metal body construction for a variety of clean water as well as sewage and wastewater pipeline and networks. Our air valves offer higher flow rates during pipeline filling (air relief) and draining / vacuum condition (air intake), prevention of air accumulation at pressurized operation, better surge protection, and improved sealing at low-pressure conditions. Most models are certified to leading functional standards and drinking water standards



Case Studies

Reducing Non-Revenue Water for Water Utilities

Water utilities face a persistent challenge with non-revenue water (NRW). High levels of NRW can lead to significant revenue losses, increased operational costs, and an unnecessary strain on water resources.

In the quest to combat NRW, pressure management is a transformative approach in leakage reduction. Integrating advanced strategies such as BERMAD solutions is crucial for water utilities to effectively address the pervasive challenge of NRW.

BERMAD's pressure management solutions are designed to adapt to varying demand patterns and system dynamics, ensuring consistent pressure levels that minimize leakage and the likelihood of pipe failures. This comprehensive solution improves the financial standing of utilities, ensures the resilience and sustainability of water distribution systems for the future, and showcases their commitment to resource conservation and operational excellence.

Fully Automatic Pressure-Reducing System for a Leading Industrial Plant

Norwegian company Yara International issued a tender for a water pressure control system for high-pressure reduction with 24/7 water supply with high flow rates and no redundancy. The plant's water supply comes from two reservoirs: one at an elevation of 170 meters above the plant, creating enormous pressure of 17 bar.

BERMAD's engineers designed a system that would provide reliability, simplicity, and back-up, and automatically regulate pressure and flow without energy or an external power source. Each branch in the system has two valves to ensure backup and continuous water supply 24/7. Each control valve operates independently and reduces high-inlet pressure to a constant downstream pressure at the entry, despite the demanding range of flows in the system.

In case of malfunctions or extreme pressures in the pipes, the backup systems take control automatically without the need for human intervention. The pressure-reduction system began operation in June 2017. Due to its success, a second plant has been designed by BERMAD.

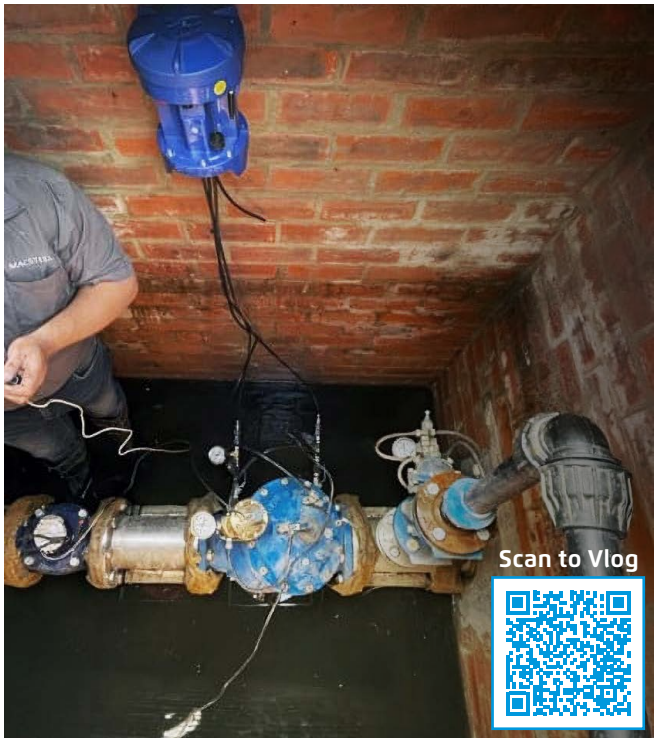
Water Pressure Management Solution – Port Elizabeth, South Africa

In 2022, the city of Port Elizabeth in South Africa implemented BERMAD's DELTA controller to address a severe water crisis. Installed on a 6"-720 valve, the controller enables remote water pressure control based on varying demand.

This solution reduced pressure from 4.0 to 3.2 bar, resulting in a daily savings of 443,000 liters of water.

Additionally, it lowers energy costs and enhances system efficiency.

BERMAD's DELTA controller and 720 Sigma valves provide a comprehensive water pressure management solution, enabling real-time decision-making and reducing water loss.



Establishing the Fifth Water Supply Line to Jerusalem, an Ancient City with Modern-Day Demand

Jerusalem, a city of cultural and spiritual significance, faces rising water demands due to population growth, urbanization, and a semi-arid climate.

Mekorot addressed these challenges with a state-of-the-art pipeline project connecting the coastline to Jerusalem, featuring a pumping system delivering 1.5 million cubic meters of water daily.

In this case study, we explore the solution to these challenges, including a pumping system delivering 1.5 million cubic meters of water a day.

Designed to Deliver

BERMAD's sizing, Bermad Air software and surge analysis design tools enable overall design optimization and selection of best-in-class products for air control, regulation valves, and surge protection solutions.

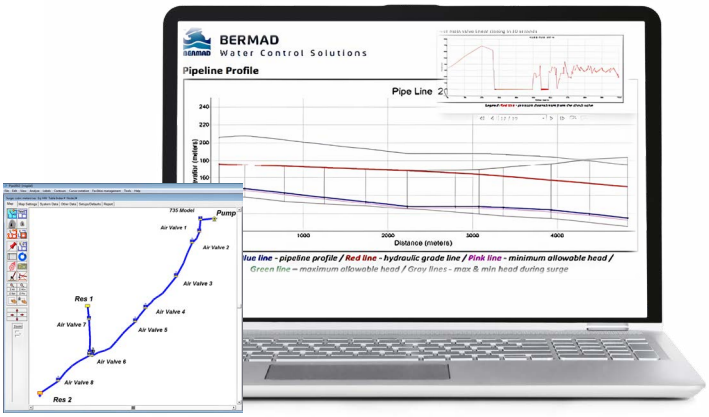
Sizing

Proper valve sizing is a vital factor in designing water supply and irrigation systems. To achieve optimal efficiency, stable operation and system/valve longevity, accurate sizing is imperative.

BERMAD Sizing Software has proven to be one of the most useful design-assistance tools. Based on decades of experience, an advanced algorithm that incorporates various hydraulic calculations and formulas provides a realistic simulation of a hydraulic water control system was developed by Bermad's engineers.

Surge Analysis

Bermad's surge analysis services, using the most advanced water-transient software, support optimal system design with superior surge protection. Based on the KYPipe (or other local software tool), designers obtain a comprehensive analysis report including recommended products and setting values to ensure effective and safe system operation.



KYPipe Model

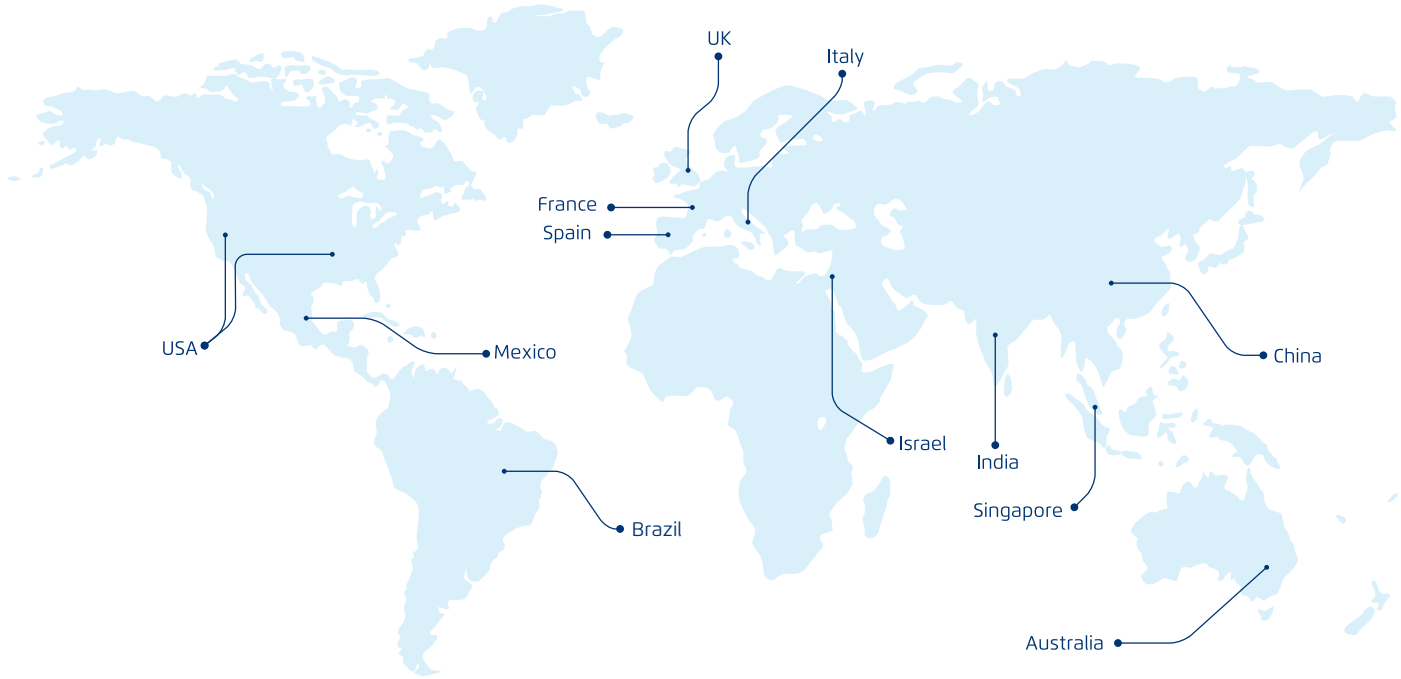
BERMAD Air

BERMAD Air enables designers to optimize air valves design in any project including specific model selection, sizing, and location.

BERMAD is your partner today, tomorrow, and for generations to come.

Local Presence

Due to its local presence, BERMAD supports the project through all the development stages including design, delivery, installation, commissioning, and first runs.



Reliable Service and Support

BERMAD offer ongoing support in integrated solutions, providing protected, efficient, and reliable hydraulic systems for long-term, accurate, and uniform control.

About BERMAD

BERMAD is a leading, privately-owned global company that designs, develops and manufactures tailor-made water & flow management solutions that include state-of-the-art hydraulic control valves, air valves and advanced metering solutions.

Founded in 1965, we have spent over 60 years interacting with the world's major end users, and accumulating knowledge and experience in multiple markets and industries. Today, we are recognized as a pioneer and established world-leading provider of water & flow management solutions that give our customers the unprecedented operational efficiency, and superior quality, durability and performance they need to meet the demanding challenges of the 21st century.

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