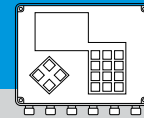


BERMAD Cloud based pressure control solution

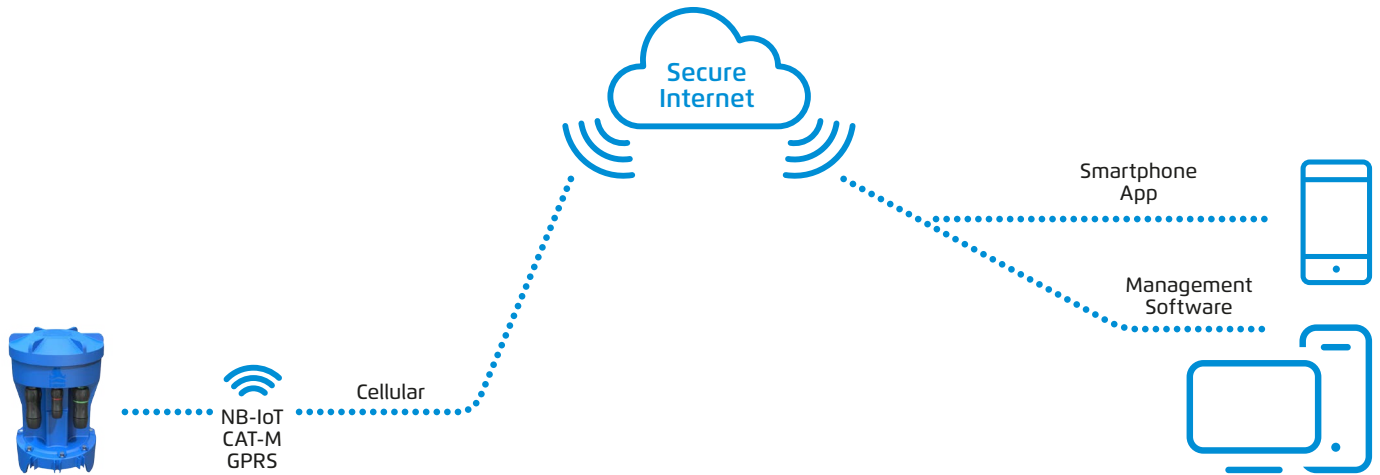


The **DELTA** is a stand-out pressure management controller for system optimization. It provides a calmer network, an improved efficiency and a reduction of leakage and bursts. The end result is a reliable water supply and better service for the client.

The **DELTA** is a fully remote controlled fail safe battery operated controller. The **DELTA** logs the data and uses cyber secured technology to transmit the data to a user-friendly cloud platform.



REAL-TIME CONTROL ANYWHERE ANYTIME



Features and Benefits

- Up to 16 time or flow windows
- Highly accurate and stable regulation
- Latch override to fully open the valve at insufficient pressure supply, or fully close in event of pipe burst
- 5 years internal battery operated or external power
- Large capacity data logging
- Full communication via cloud for monitoring and remote setting
- Intuitive and user friendly platform
- Advanced modern graphs and reports
- Alert and notifications via: E-mail, WhatsApp, SMS

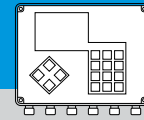
Applications

- **Full modulation pressure reducing** with the DELTA internal solenoids and a BIAS chamber
- **2 pressure regimes** by switching between "Low" to "High" set points according to flow rate or time windows

BERMAD DELTA Series

MODEL	LOCAL I/O			Communication	
	Outputs Latch	Inputs		Cellular	Bluetooth
		Digital	Analog		
DELTA 1.0	1	3	2	✓	✓





Technical Specifications

Main features:

- Valve is "Normally Low" in event of mechanical failure
- Manual override to open and close the valve
- For optimal operation allow to set
 - Fast & slow regulation intervals
 - Dead-band from set-point
- Sensors calibration for all physical units
- Internals
 - 2 clog free high speed internal solenoids for BIAS chamber operation
 - 2 accurate internal pressure sensors +/- 0.1%
- Local I/O:
 - 1 Latch outputs (16V DC; 100 mS pulse) for Day/Night control or venting the valve chamber
 - 3 digital inputs for metering and discrete sensors
 - 2 analogue inputs for 4-20mA or 0-10VDC sensors for pressure, level, and metering

Connectivity:

- Built in 4G Modem with 2G fallback
 - Global data sim card for worldwide plug-and-play internet connectivity
 - Supports NB-IoT, CAT-M & GPRS communication protocols
- Bluetooth communication for technician mode tasks

Operation modes:

- Online mode: 24/7 connection between controller and cloud (require external power source)
- Offline mode:
 - Autonomous control operation, predefined cloud communication and real time alerts
 - Designed for power saving when using internal batteries

Power source:

- 2 Lithium batteries for operation in offline mode
- 9-24VDC external power input for online mode operation (solar panel, grid power, etc.)

Integral data logger with more than 150K records, enables comprehensive log registry that can cover long periods of offline operation

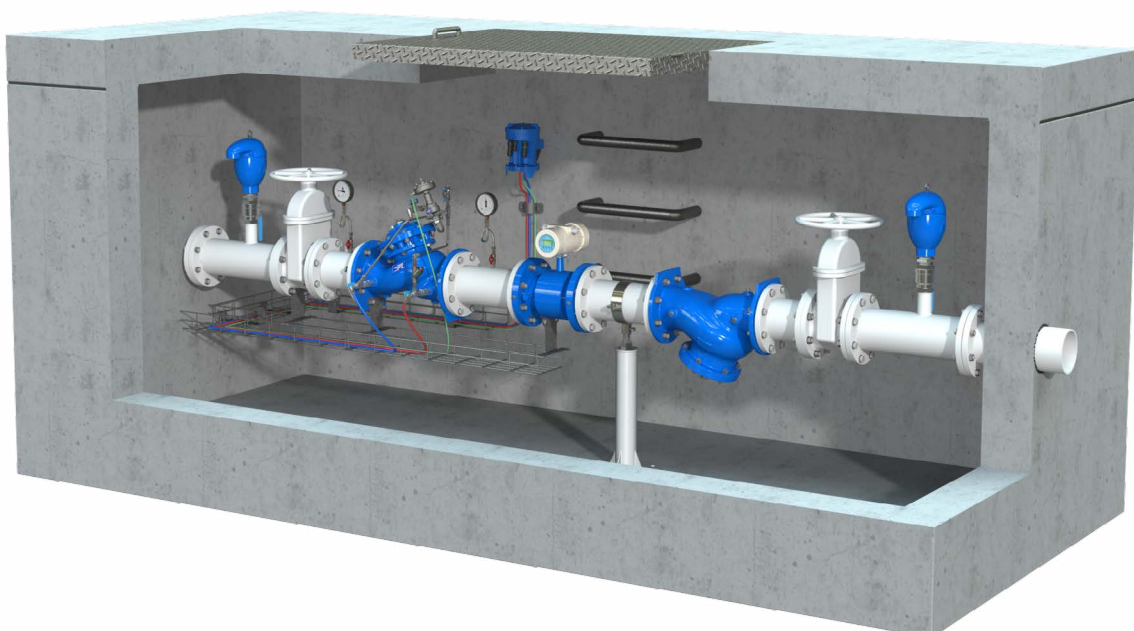
Periodic over the air firmware upgrades (FOTA)

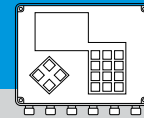
Outdoor installation: IP68 rated with UV protection

Standard compliance: CE

Industrial grade electronic components: -35°C to 75°C

Push type connectors for quick and easy wiring without need for special tools





BERMAD Cloud

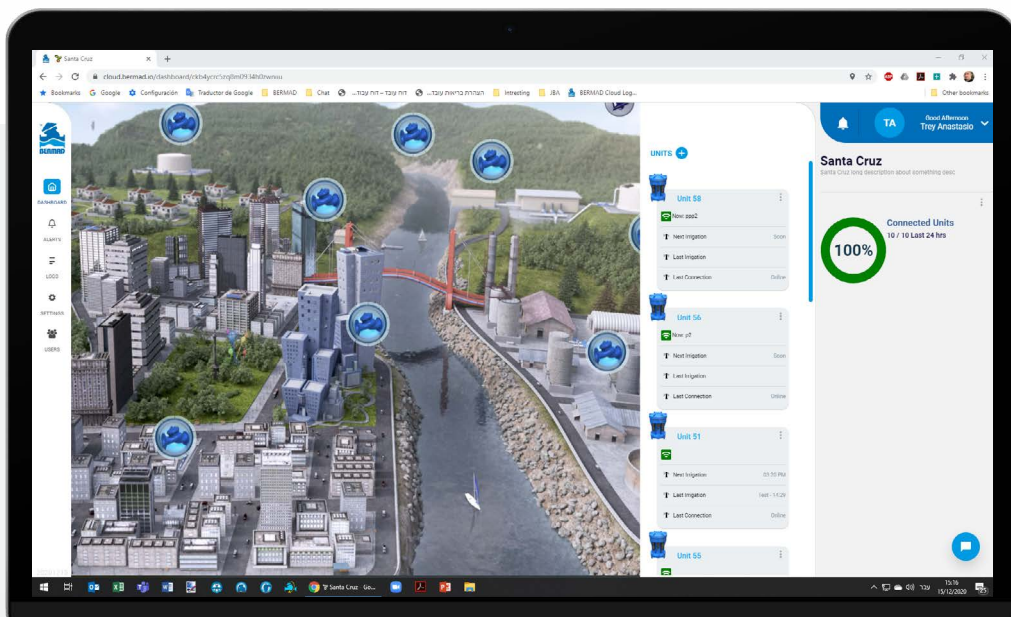
BERMAD Cloud offers web-based internet access to your pressure management system:

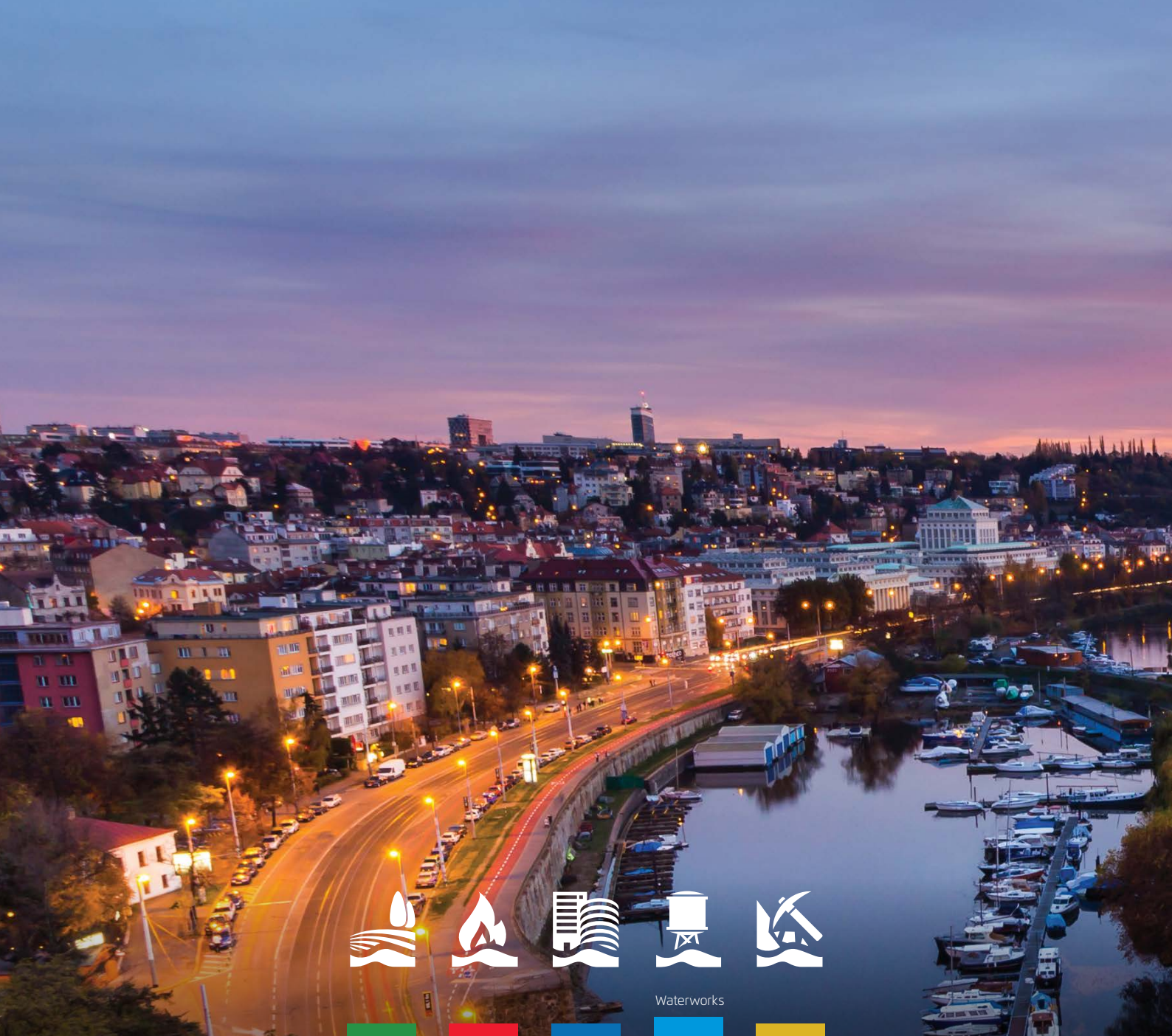
- Global management of all your DELTA controllers
- User friendly and intuitive control features
- Real time status and monitoring

BERMAD Cloud Features:

- **Cyber protected login:**
 - Multi-user connectivity for enhanced management and technical support
 - Individual access level authorization
- **Global Account management:**
 - Language and time zone selection
 - User privileges
 - Unit selection (Metric, Imperial)
- **Dynamic dashboard:**
 - Geo-referenced map with global view of your pressure management project
 - Current status of DELTA controllers
 - Up-to-date pressure & flow settings
 - Quick access to the DELTA management tools
 - Setup and programming
 - Wizard for guided unit config
- **Alert control:**
 - Alert status log and WhatsApp, email, SMS notification
 - Alert management tools:
 - Controller reaction to each type of alert
 - Alert notification settings per user
- **Log information:**
 - System state, operation events & alerts
 - Periodic sensor data acquisition
 - Watermeter flow & accumulations
 - Pressures
 - Analogue sensor data
 - Battery voltage level
- **Report generator:**
 - Personalized reports for operation and traceability
 - Export to Excel and PDF

Dynamic dashboard





Waterworks

