

Waterworks

Hydraulic Control Valves



For Drinking Water

WD-900 Series

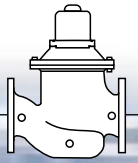
Hydrometers for Pressure Management

900 Series



Water Control Solutions





The BERMAD Model WD-900 is a unique product integrating both a vertical turbine Woltman-type water meter and a diaphragm actuated hydraulic control valve. The vertical turbine impeller drive is magnetically coupled to a vacuum-sealed meter register in the control head. Both the magnetic drive control head and its register are hermetically sealed and are not affected by dirty water nor environmental humidity.

The highly sensitive magnetic drive provides superior accuracy that exceeds all water meter standards.

The available Reed Switch and Opto-Electric 4-20 mA transmitter options provide greater flexibility in electrical pulse generation.



Features and Benefits

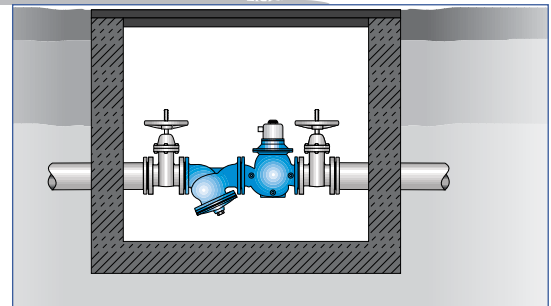
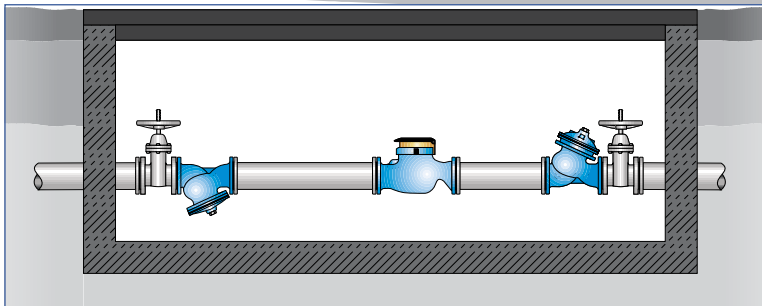
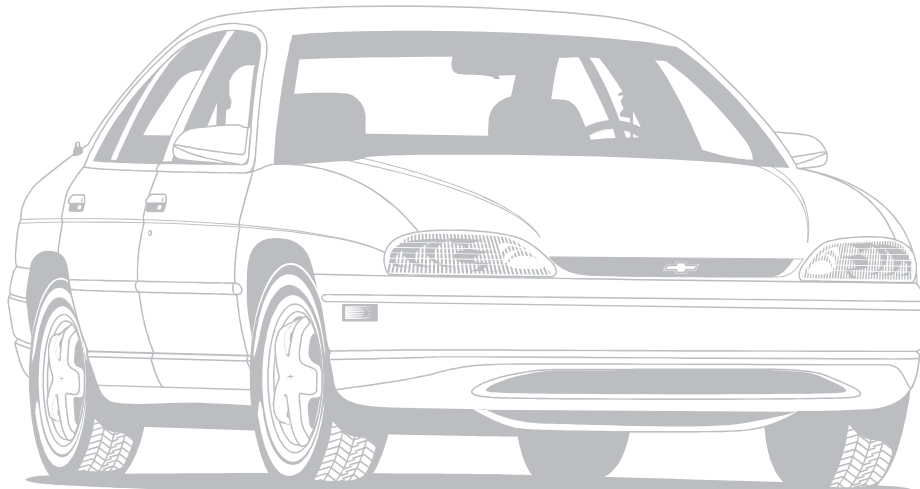
Integrated water meter and control valve - Saves space, cost and maintenance

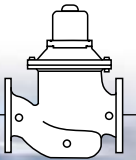
Internal Inlet & Outlet Flow Straighteners - Saves on straightening distances & Ensures accuracy in a wide flow range

Unique internal structure - remarkable cavitation resistance

Integrated Flow Metering Calibration Device - Precise measurement

User-Friendly Design - Easy pressure setting, Simple in-line inspection and service, Easy addition of control features.





Pressure Reducing Hydrometer

WD-920-N

The BERMAD model WD-920-N Pressure Reducing Hydrometer integrates a vertical turbine Woltman-type water meter, with a diaphragm actuated hydraulic control valve. This model is set to maintain a constant low downstream pressure, ensuring sufficient pressure at the systems critical point during peak demand (when line friction head loss is highest).



Pressure Reducing Hydrometer with Panel Mounted Control Trim

WD-920-LI

The BERMAD model WD-920-L1 is a Pressure Reducing Hydrometer with a Remote Panel Mounted Control Trim. This arrangement allows easy on-site installation and replacement, minimizing system down time and confined space entry.



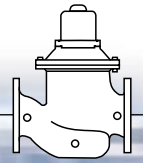
Pressure Reducing Hydrometer with Low Flow By-Pass

WD-920-2B

The BERMAD model WD-920-2B is a Pressure Reducing Hydrometer with a Low Flow By-Pass.

The low flow by-pass capability is achieved by using a direct acting PRV with an equal size flow meter as an integral part of the main hydrometer. By doing this, space is saved and installation and maintenance become much easier. The low flow by-pass is preset to a slightly higher pressure than the hydrometer pilot control. The direct acting PRV responds to pressure changes at the main valve outlet. When the hydrometer closes, it remains open, allowing low flow to by-pass the main hydrometer.





Pressure Reducing Hydrometer

Electrically Selected Two Level Setting

This model enables reducing the pressure to a lower set point during low demand hours (when line friction head loss is minimal). The selection between the two pressure regimes is done using an electric command usually through a dedicated controller.

WD-920-45



Pressure Reducing Hydrometer

Electrically Selected Two Level Setting with Controller

This model integrates a battery operated, pressure regime controller with the model WD-920-45.

Three versions are available:

WD-920-45-4P Two Level Setting Controller – BE-PRV-BC controller.

WD-920-45-4L Two Level Setting Controller & Data Logger with BE-PRV-DL controller.

WD-920-45-4H Two Level Setting Controller – Pilot Switch controller

WD-920-45-4P/4L/4H



Pressure Reducing Hydrometer

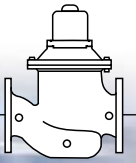
with Electric Override (pressure reducing or fully open)

This model enables two pressure regimes: during low demand hours (when line friction head loss is minimal) it is set to maintain a constant low downstream pressure, ensuring sufficient pressure at the systems critical point. During peak demand (when line friction head loss is highest) it opens fully minimizing its own head loss. The selection between the two pressure regimes is done using an electric command usually through a dedicated controller.

(Models WD-920-59-4P, WD-920-59-4L & WD-920-59-4H are available.)

WD-920-59





Pressure Reducing Hydrometer

with Pilot Control Bias Unit (PCBU) (for two level or multi level setting)

WD-920-4R

This is a Pressure Reducing Hydrometer with a unique Pressure Calibrating Bias Unit (PCBU) installed on its pilot.

When integrated with a BE-PRV controller or a Pilot Switch controller the PCBU operates as a two pressure regimes pilot enables reducing the pressure to a lower set point during low demand hours (when line friction head loss is minimal).

(Models WD-920-4R-4P, WD-920-4R-4L & WD-920-4R-4H are available.)

When integrated with a dynamic pressure controller the PCBU operates as a dynamic pressure pilot responding to a controller continuously correcting the pilot's set point according to a programmed time and flow function.



Pressure Reducing Hydrometer

Multi Level Setting Prepared for Technolog Modulo Controller

WD-920-4T

The Model WD-920-4T integrates a Woltman-type water meter, with a dynamic pressure reducing valve.

A unique Multi-Setting Pneumatic Controlled unit (MSPC), integrated with the pressure reducing pilot, responds to a Modulo controller continuously correcting the pilot's set point according to a programmed time and flow function.

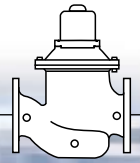


Electronic Control Hydrometer

WD-918-03

The Model WD-918-03 Electronic Control Hydrometer combines the advantages of an excellent modulating, line pressure driven, hydraulic control hydrometer with the advantages of electronic control. This hydrometer responds to signals from the electronic controller BERMAD BE-Super (optional), by changing its opening position according to the set values programmed into the controller.





Pressure Sustaining & Reducing Hydrometer

WD-923

The BERMAD model WD-923 is a Pressure Sustaining & Reducing Hydrometer. This hydrometer controls two independent functions. It sustains minimum pre-set upstream pressure and it prevents downstream pressure from rising above the maximum pre-set pressure.



Flow Control & Pressure Reducing Hydrometer

WD-972-U

In addition to the pressure reducing feature this model also limits the maximum flow rate through the hydrometer. The flow limiting ensures that the hydrometer operates within the recommended maximum flow rate of its turbine Woltman-type water meter.

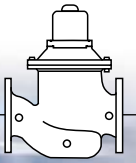


Flow Control & Pressure Reducing Hydrometer Electrically Selected Two Level Setting

WD-972-45-U

This model combines a flow limiting feature that ensures hydrometer operating within the recommended maximum flow rate of its turbine Woltman-type water meter and two downstream pressure reducing regimes: A lower set point during low demand hours and a higher set point during high demand hours. The selection between the two pressure regimes is done using an electric command usually through a dedicated controller. (Models WD-972-45-4P, WD-972-45-4L & WD-972-45-4H are available.)





Two Level Setting Controller – Basic Configuration

BE-PRV-BC

The main function of the BE-PRV-BC controllers is to switch the operating mode of the models WD-920-45, WD-920-59, WD-920-4R (and more) hydrometers from high pressure to low pressure and vice versa, thereby achieving optimal system pressure management.

The operating mode is switched twice a day for low and high pressure regimes.

The switching times can be programmed on a weekly basis, with the addition of individually scheduled special days.

For programming the controller is connected to a PC using a standard RS232 serial port and a dedicated software.

(BE-PRV-BC controller is supplied as a separate unit or installed directly on models WD-920-45-4P, WD-920-59-4P, WD-920-4R-4P, WD-972-45-4P and more.)

Two Level Setting Controller & Data Logger

BE-PRV-DL

In addition to all the features of the BE-PRV-BC the BE-PRV-DL contains a data logger with extra memory for recording pressures and system flow over time.

The log enables correcting the switching time between pressure regimes and leak detection.

Data is downloaded using the RS232 connection.

(BE-PRV-DL controller is supplied as a separate unit or installed directly on models WD-920-45-4L, WD-920-59-4L, WD-920-4R-4L, WD-972-45-4L and more.)

Two Level Setting Controller (Self Programmed)

Pilot Switch

This controller is designed for switching between two pressure regimes a day.

The unit is equipped with an LCD display and a simple key pad allowing programming & manual switching.

(Pilot Switch controller is supplied as a separate unit or installed directly on models WD-920-45-4H, WD-920-59-4H, WD-920-4R-4H, WD-972-45-4H and more.)

Flow, Pressure or Level Controller / Servo Set Point Controller BE-SUPER

Flow, Pressure or Level Controller / Servo Set Point Controller

BE-SUPER

This controller is based on PLC technology.

The controller is programmed to operate a BERMAD WD-918-03 Electronic Controlled Hydrometer in various applications.

Two versions are available:

Controlling a single variable such as pressure, flow or level

Control of one variable as a function of another one, such as pressure reduction as a function of system flow


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