HYNDSwater

SINGER®

a MUELLER brand

Control Valve Catalogue

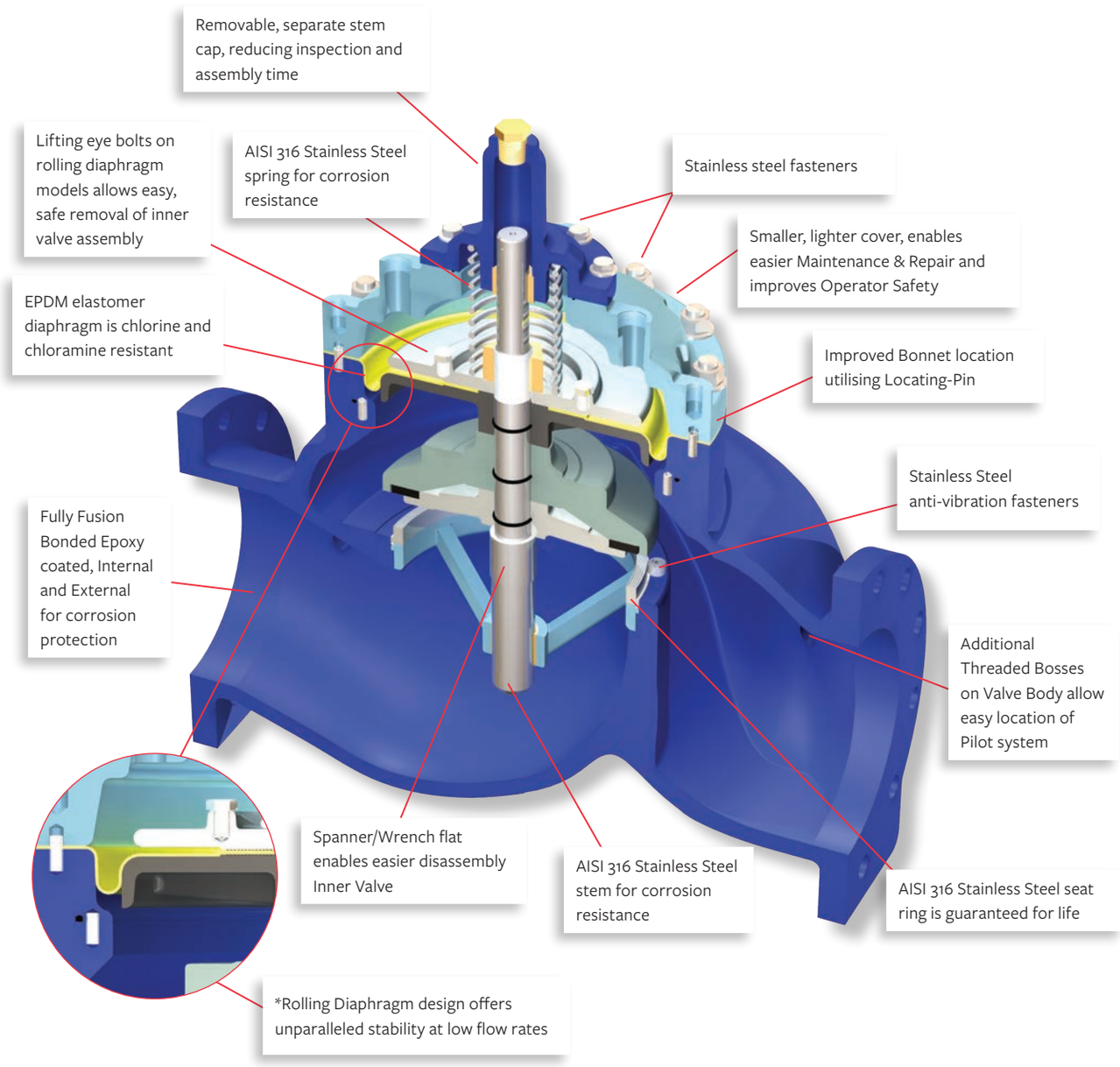
106/S106
206/S206
306/S306
UL FM FIRE

DETECT | MONITOR | CONTROL | REPAIR

MUELLER

THE SINGER® ADVANTAGE

Features & Benefits



Valve Sizes: DN15 to DN1200 / ½" to 48". 106/S106, 206/S206 and 306/S306
Flow rate from: 0.03 to 3,500 L/s / 0.5 to 55,470 USGPM
*Not available in all size/model combinations. Consult your Hynds Water

ABOUT US

Water Loss Specialist

WATER LOSS SPECIALISTS

From life-saving fire protection to data intelligence, we are committed to developing products and solutions that help cities and water utilities deliver clean, safe drinking water. The Mueller family of Companies in conjunction with the Hynds Group, offer a broad product and service portfolio that includes engineered valves, fire hydrants, pipe connection and repair products, metering products, leak detection, pipe condition assessment and software technology that provides critical water data.

Our important mission to help deliver clean, safe drinking water guides our corporate commitment and the daily work of each of our employees. This purpose has become even more critical as infrastructures around the world continue to age and the consequences of water contamination and water loss grow. We are uniquely positioned with our products and technology solutions to help cities and water utilities address their aging infrastructures, as well as water quality and scarcity.

PRODUCT HIGHLIGHTS

Uniform. Steady. Precise Control.

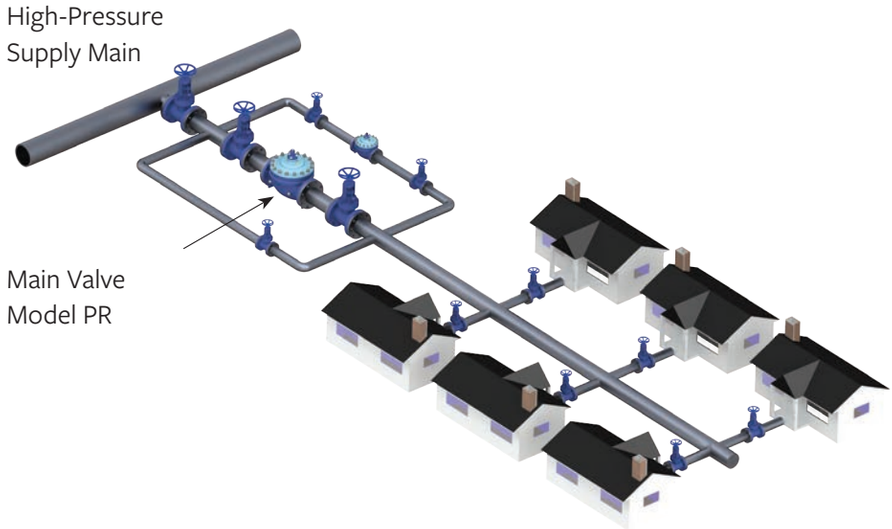
SRD – SINGLE ROLLING DIAPHRAGM

- Precise, stable control even in low flow conditions
- EPDM diaphragm for improved stability and longer life
- Eliminates the need for a low flow bypass valve
- By eliminating seat chatter at low flows, the SRD avoids creating small pressure pulses in the pipe, which, over time, may increase leakage, losses or pipe bursts.
- Controlling Water loss and leakage
- Precise Pressure Management

PRESSURE REDUCING VALVE

Codes:

- VC150PRV106S/206S Valve Control DN150 Pressure Reducing 106/206 1.38-13.8 PN16
- VC200PRV106S/206S Valve Control DN200 Pressure Reducing 106/206 1.38-13.8 PN16
- VC250PRV106S/206S Valve Control DN250 Pressure Reducing 106/206 1.38-13.8 PN16
- VC300PRV106S/206S Valve Control DN300 Pressure Reducing 106/206 1.38-13.8 PN16
- VC400PRV106S/206S Valve Control DN400 Pressure Reducing 106/206 1.38-13.8 PN17
- VC450PRV206S Valve Control DN450 Pressure Reducing 206 1.38-13.8 PN16



Available in S106, S206 and S306.

PRODUCT HIGHLIGHTS

Uniform. Steady. Precise Control.

AC – ANTI-CAVITATION TRIM

- Minimises vibration
- Resolves high pressure drop applications
- Controls continuous / variable flows
- Reduces noise
- Prevents cavitation damage
- Ensures performance through all flow rates, including very low flow rates
- Each cavitation assembly is designed to the specific flow requirements and pressure drop of your application
- Each cavitation assembly is designed to the specific flow requirements and pressure drop of your application

ANTI-CAVITATION VALVE

APPLICATIONS:

- Distribution systems
- High rise buildings
- Reservoir Control
- Continuous Pressure Relief

Available in most 106/S106, 206/S206 and 306/S306 main valves consult your Hynds Water application specialist for details.

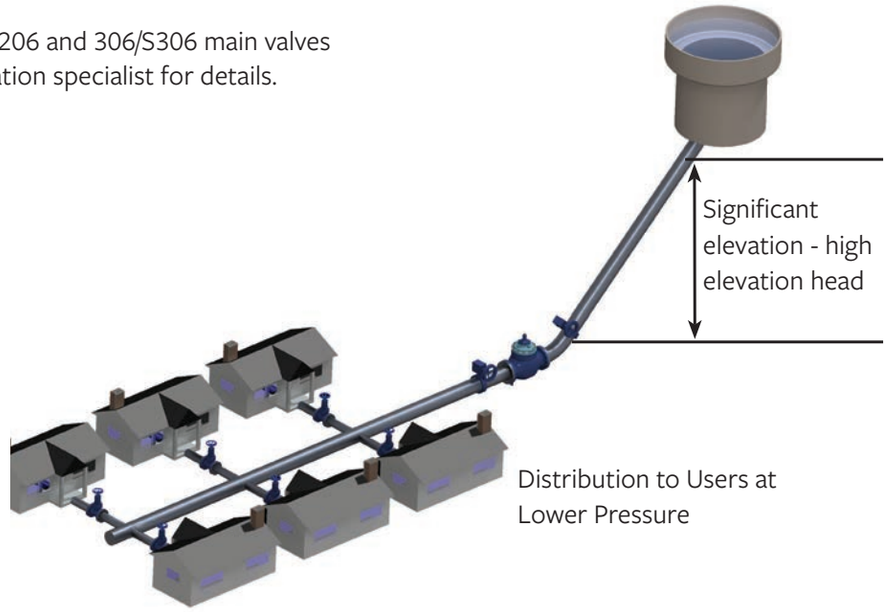


ILLUSTRATION OF A TYPICAL APPLICATION: DISTRIBUTION SYSTEM

PRESSURE REDUCING

PR – PRESSURE REDUCING VALVE

- Maintains accurate downstream pressure
- Senses downstream pressure through a connection at the valve outlet
- Pilot Valve reacts to small changes in pressure by modulating the pressure above the Diaphragm

PR-R – PRESSURE REDUCING AND PRESSURE SUSTAINING VALVE

- Ensures minimum upstream pressure
- Excellent low flow stability
- Pressure Reducing and Sustaining Valve utilises two pilots to modulate downstream and upstream pressures, ensuring that it maintains the desired set-point.
- The sustaining option maintains a minimum upstream pressure while the pressure reducing option reduces pressure downstream only when upstream pressure exceeds the set-point

PR-48 – PRESSURE REDUCING VALVE WITH LOW FLOW BY-PASS

- Maintains stable flow right down to zero
- Precise and reliable pressure setting
- Ideal for high rise applications
- Direct Acting, Pressure Reducing Valve piped in parallel, which makes it ideal for applications with space restrictions
- Under low flow conditions, the main Valve will close and the by-pass will stay open to control the pressure at very low flows without seat chatter

PR-C – PRESSURE REDUCING AND CHECK VALVES

- Excellent low flow stability
- Drip-tight closing on return flow
- Easily and precisely set downstream pressure
- Combines Pressure Reducing functionality on the upstream along with the Check function which closes the Valve, to prevent reverse flow on pressure reversal

RELIEF / SUSTAINING / SURGE

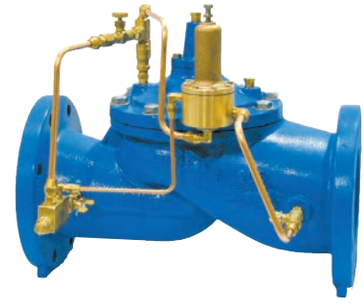
RPS-L&H – SURGE ANTICIPATING RELIEF VALVE

- Protects against Surge and pressure waves
- Quick opening relief
- Protects against power failure Surge or pressure waves caused by velocity changes
- Automatically opens to dissipate excess energy from a Surge
- Remains drip-tight when the system pressure is operating in the normal range

RPS-D – PRESSURE DIFFERENTIAL SUSTAINING VALVE

- Maintains a minimum pressure differential
- Valve closes drip-tight
- Modulates to maintain a maximum pressure differential between two sensing connections
- Installed in-line and maintains the head on a pump or in parallel limits pressure differential across a device, such as air conditioner chillers

RPS – PRESSURE RELIEF / SUSTAINING VALVE



- Easily adjustable pressure setting
- Accurately maintains pressure to set-point
- Can be used for either Pressure Relief or Pressure Sustaining applications
- Pressure Relief Valve is mounted in a tee off the main pipeline and limits system pressure by relieving excess flow on overpressures above the set-point
- Pressure Sustaining Valve is mounted in-line, senses the upstream pressure and modulates to maintain the upstream set-point

PUMP & FLOW CONTROL

BPC –BOOSTER PUMP CONTROL VALVE

- Prevents Surge from Pump start/stop
- Built-in non-slam mechanical Check to reduce power failure Surge
- Installed in-line directly downstream of the Pump discharge
- The double-chamber model is designed to open fully and minimise losses
- Ideal for preventing Surge associated with the Pump start/stop

EF-8837BX – EXCESS FLOW (BURST CONTROL) VALVE

- Tight shut-off
- Fast closing in events of catastrophe
- Designed to shut off tightly when flow exceeds a pre-determined amount
- Prevents Water loss in pipe systems or reservoirs in the event of a catastrophic downstream pipe break
- Electronic failure signals are optional add-ons

DW – DEEP WELL PUMP CONTROL VALVE

- Prevents Surge from Pump start/stop
- Discharges initial Air/Water to waste in Well applications
- Installed in a tee between the Pump discharge and the Check Valve
- Prevents Pump start/stop Surge with no energy loss while the Pump is running

RF – RATE OF FLOW CONTROL VALVE

- Accurately limits flow to a pre-set maximum
- Easily adjustable flow limit
- Accurately limits flow to a pre-set maximum by maintaining a continuous pressure differential across an orifice

LEVEL CONTROL

A-TYPE 1 / 3 – TWO-WAY FLOW ALTITUDE CONTROL VALVE

- Prevents Tank/Tower/Reservoir overflow
- Exceptional repeatability
- Positive shut-off
- Maintains a pre-set maximum water level and function either fully open or fully closed
- Allows normal forward flow to fill the reservoir to the maximum level and then closes drip-tight at the set-point
- Differential control for adjustable draw-down when supply pressure drops below the reservoir head

A-TYPE 2 / 4 – ONE-WAY FLOW ALTITUDE CONTROL VALVE

- Prevents overflow, high level shut-off maintained to close tolerances
- Exceptional repeatability
- Maintains a pre-set maximum water level and function fully open or fully closed
- Allows normal forward flow to fill the reservoir to the maximum level
- Opens to refill the tank once the level drops below a fixed distance below the high water level
- Differential control for adjustable draw down to help improve water cycling

F-TYPE 4 – MODULATING FLOAT VALVE

- Maintains constant level
- Automatic compensation for level draw-down
- Standard integral damping reduces hunting
- Designed to balance the inflow and outflow demand into the reservoir and maintain water level within close limits at a pre-set maximum

F-TYPE 5 – NON-MODULATING FLOAT VALVE

- Prevents overflow, closes drip-tight
- Adjustable draw-down
- Allows normal forward flow to fill water reservoirs to a desired high level
- Adjustable pilot draw-down and close tightly on high water level and re-open at the low level set-point

ELECTRONICS

2SC-MV – ELECTRONIC FLOW CONTROL AND METERING SYSTEM

- Combines precise flow control with relatively accurateflow metering
- ± 3% accuracy
- Easily retrofitted to existing valves

The Electronic Flow Control and Metering System is a PLC-based control panel that is compatible with SCADA and provides ± 3% accuracy as certified by NIST (on select sizes). The metering panel has retransmission capabilities and the metering system can be retrofitted to existing valves.

MODEL 2SC-MV

2SC-PCO – DUAL SOLENOID CONTROL FOR POSITIONING & SCADA CONTROLS

- Precise control from remote locations
- Process controller compatible
- Interfaces with controllers to provide electronic control of flow, pressure or level
- Designed to be accurately positioned anywhere within the full stroke of the valve
- It provides precise control remotely with minimal power needed during stand-by operation

MODEL 2SC-PCO

420-DC/AC – AUTOMATED PILOT CONTROL

- 4-20 mA setpoint input
- Reliable and cost-effective automation of water systems
- Easily programmable range via USB cable and custom software

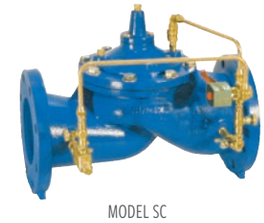
A 24 VDC motor actuator drive that can be installed on a variety of Singer® pilots. The motor actuator responds to a 4-20 mA signal, rotating the Pilot adjusting screw corresponding to the change in signal. It has superior predictability, repeatability and accuracy and is available in IP68 2.134m/24 hours (7ft/24 hours). It is a reliable, simple and cost efficient way to automate today's water systems.

420DC/AC ACTUATOR

SC – SOLENOID CONTROL VALVE

- Positive, drip-tight shut-off
- Simple on/off operation

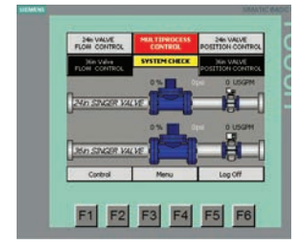
The Solenoid Control Valve responds to an electrical signal to provide two-position (On/Off) operation. The solenoid either admits inlet pressure into the main Valve operating chamber or releases pressure from the operating chamber. A variety of voltage options are available and solenoids can be normally open or normally closed.



MODEL SC

ELECTRONICS

MCP-TP – MULTI-PROCESS CONTROL PANEL SERIES



- Versatility in programming for custom applications
- Compatibility with remote SCADA , Hardwired 4 to 20mA or local set-point(s) adjustment

The Multi-Process Control Panel incorporates a high performance PLC-based control with P.I.D. optimisation to provide control of multiple processes, such as pressure reducing, flow control, level and sustaining. We will customize the program to match your specific application needs. Optional alarm outputs for SCADA are available.

SPC-TP – SINGLE-PROCESS CONTROL PANEL

- Quick configuration for any single process application
- Compatibility with remote SCADA Modbus, Hardwired 4 to 20 mA or local set-point adjustment

The SCP-TP is a simplified process controller designed to complement the Dual Solenoid Control Valve. It offers quick and easy configuration for any single process application as well as on/off applications. The SCP-TP is equipped to be configured to control the Singer® 420-DC Motor, and has data logging features when enabled.

SPC – SINGER PUMP CONTROL PANEL

- Automatically interfaces Pump and Control Valve to avoid Pump start/stop Surge
- Simple to install and reduces field wiring costs
- Suitable for use with either in-line booster or deep well by-pass pump control valves

The SPC Pump Control Panel provides the interface between the pump motor starter and the Singer Pump Control Valve. The SPC ensures that the Pump starts and stops without causing line Surge. It is equipped with delay timers and emergency fault contacts to provide the customer with local and remote indication for various operational failure conditions.

± 2% of flow rate accuracy, NIST traceable

PRESSURE MANAGEMENT

REMOTE CONTROL AND AUTOMATIC PRESSURE OPTIMISATION

Mueller Advanced Pressure Management enables remote control and automatic optimisation of pressure at PRVS across your entire network.

The system enables monitoring of PRV performance and condition or remote control of the PRV or automatic optimisation. It can be installed in three stages to obtain incremental benefits or all at once.

The i2O control system uses a dedicated pilot valve – a high-precision, patent-protected device designed for continuous actuation – providing precise and smooth control and minimising battery power required to drive it.

The advanced pilot valve (APV) is usually installed in parallel with the existing pilot. This ensures control is maintained when maintenance is carried out.

- Leakage and non-revenue water (NRW) reduction
- Intermittent supply
- Energy cost reduction
- Scheduling for predictable variances
- Asset life increase
- Operating cost reduction
- Improved customer service
- Water conservation
- Drought risk mitigation
- Reduced carbon emissions

MONITORED PRV

CONTROL LOGGER

REMOTELY CONTROLLED PRV

ADVANCED
PILOT VALVE (APV)

AUTOMATICALLY OPTIMISED PRV

CONTROL
POINT LOGGER

PRODUCT HIGHLIGHTS

100% Surge Protection for Wastewater Applications

A-106-DL – DYNAMIC LIFTER® SPRING PRESSURE RELIEF VALVE

- Low maintenance, easily flush out unwanted build-up / dry-pack
- Hygienic and minimal time to flush and test operations
- Closes drip-tight

A106-DL

A-106-DL-AIR – DYNAMIC LIFTER AIR OPERATED PRESSURE RELIEF VALVE

A-106-DL-AIR-ET – SURGE ANTICIPATING ELECTRONICALLY TIMED DL PRESSURE RELIEF VALVE

- Ideal for handling higher pressure applications
- Smaller profile allows installation into limited space
- Solenoid adds surge anticipating function

A106-DL-ET

PRODUCT OVERVIEW

The Dynamic Lifter® is a Direct Acting, Spring-Loaded Relief Valve which opens when the inlet pressure exceeds the set-point. It closes drip-tight when pressure falls below the set-point. The Valve can be serviced easily by applying external pressure (such as a hand pump) to the test connection, opening the Valve for routine maintenance. Available in two versions: Spring or Air Operated. The air actuated design is used for higher relief pressures or when pressurised air actuation is preferred. Also, because of its smaller profile, it is ideal for applications with space limitations.

APPLICATIONS:

- Discharging sewage safely back to the sump
- Eliminating Pump start/stop Surge or power failures
- Increasing the life expectancy of a piping network

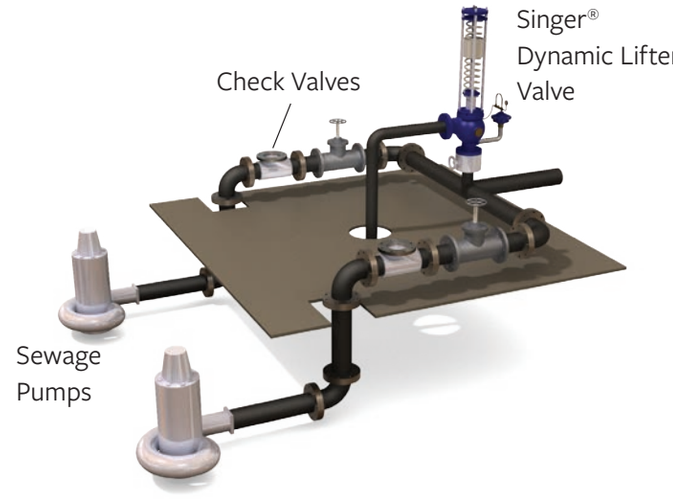


ILLUSTRATION OF A TYPICAL APPLICATION: DYNAMIC LIFTER SPRING PRESSURE RELIEF VALVE

PRODUCT HIGHLIGHTS

Uniform. Steady. Precise Control

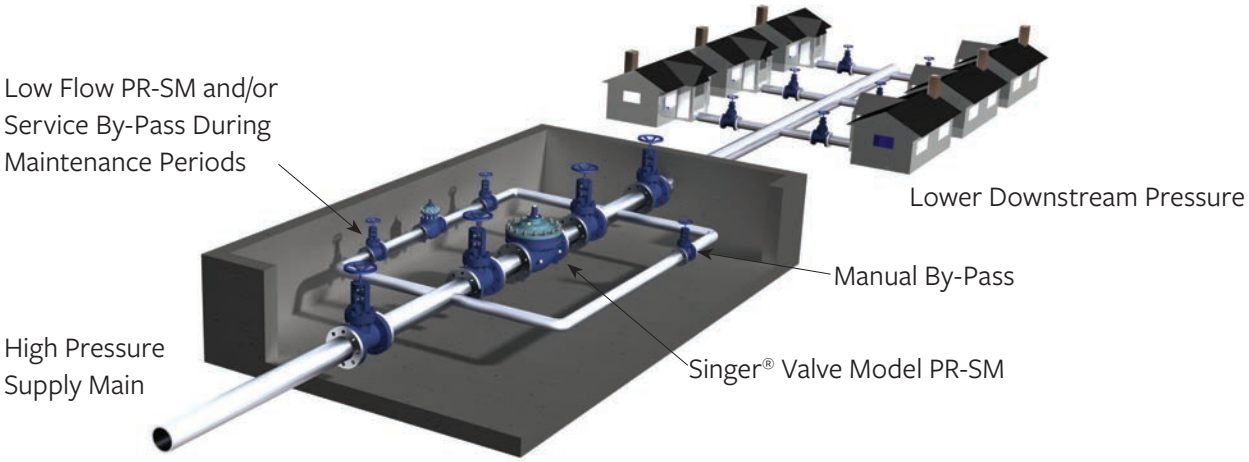
PR-SM – PRESSURE REDUCING CONTROL VALVE WITH INTEGRAL BACK-UP

- Includes a back-up pilot system to protect against Diaphragm or Pilot System failure
- Provides downstream surge protection
- Reduces maintenance
- Maintains constant downstream Pressure, regardless of fluctuation in upstream Flow or Pressure. If the main Diaphragm or Pilot System fails, the Secondary System takes over, providing continuous Surge Protection and guaranteeing safe, ongoing Water delivery.

APPLICATIONS IDEAL FOR:

- Situations where failure is not an option
- Remote or sensitive locations

PRESSURE REDUCING CONTROL VALVE



PRODUCT HIGHLIGHTS

Uniform. Steady. Precise Control

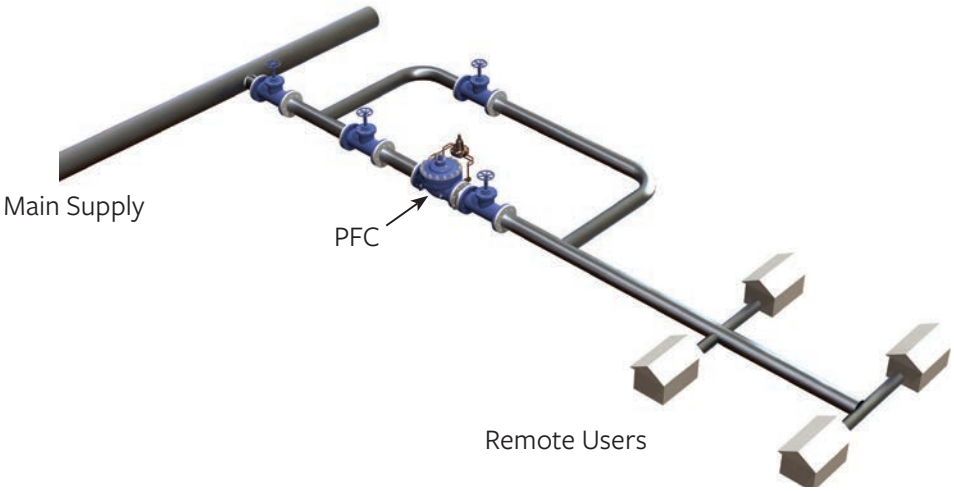
PFC – PRESSURE FLOW (MODULATION) VALVE

- Reduces Pressure when demand is lower (night-time flows) resulting in reduced leakage and pipe breaks
- Delivers constant pressure at all times at a critical remote location
- Automatically provides higher pressures for urgent situations such as fire or flushing needs
- Simple to set-up and adjust

APPLICATIONS:

- Reducing Water loss in aging systems
- Maintaining constant Pressure at critical remote locations
- Lowering high night-time pressures and associated leakage

PRESSURE/FLOW CONTROL VALVE



PRODUCT HIGHLIGHTS

Uniform. Steady. Precise Control

RPS-RR – SURGE ANTICIPATING ON RATE OF RISE PRESSURE RELIEF VALVE

- Installed downstream from pump check valve
- Closing unaffected by header pressure
- No electrical services required
- Minimal space required
- Not affected by oversizing

HOW DOES IT WORK?

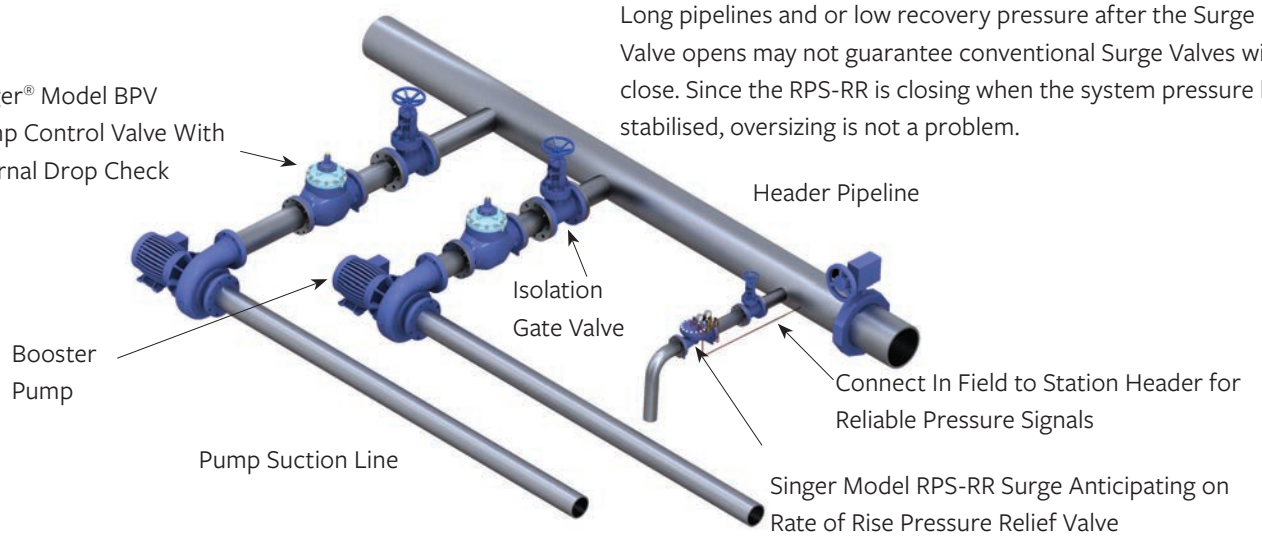
The RPS-RR valve opens quickly in response to an abnormal rate of rise in the system pressure, which is indicative of an approaching surge. The system is comprised of two separate Pilot Valves, each of which senses pressure through a connection to the header pipe. The 81-RP high pressure Pilot acts as a standard Relief Pilot, opening on excessive pressure and the 81-RPD differential Pilot responds to pressure differential across the Diaphragm. The Pilot senses the pressure difference between the lower pressure and the header pressure, which occurs at the initiation of the pressure surge. As a result, there is sufficient time for the Valve to open in anticipation of the high pressure, offering ideal protection against power failure surges.

MODEL RPS-RR-GLOBE

APPLICATIONS:

- Very low downstream static pressure
- Long pipelines

Long pipelines and or low recovery pressure after the Surge Valve opens may not guarantee conventional Surge Valves will close. Since the RPS-RR is closing when the system pressure has stabilised, oversizing is not a problem.



PRODUCT HIGHLIGHTS

Uniform. Steady . Precise Control

SPI-MV – SINGLE POINT INSERTION FLOW METERING VALVE

- Singer Single System Valves operates in conjunction with a Point Insertion Electromagnetic Flow Meter
- Saves space / cost
- Supplied with Flow Converter for local display and 4-20mA output measurements or can be combined with PLC-based control panel for flow control applications
- ± 2% of flow rate accuracy, NIST traceable
- Can be utilized with the Metering Valve as a standalone option built into a 106-2SC-PCO pilot system to provide complete flow-based valve control.
- Fits in confined spaces and offers complete accessibility. The Flow Meter can be removed for easy inspection, cleaning, calibrating or verification

INSERTION FLOW METER - SPI

APPLICATIONS:

- Installations with limited upstream straight runs of pipe – only requires 3 pipe diameters
- Applications where a Flow signal and a Control Valve are required. Can be combined with any Singer full port / globe style control valve
- Where valve needs to be positioned for a variety of Flow ranges. Can all be achieved in one simple solution, eliminating the need for multiple components

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FIRE PROTECTION

To help save people and property from the ravages of fire, Singer designs and manufactures fire protection valves you can rely on. A perfect example of our innovative design, expert engineering and quality working together for life-saving applications.

DELUGE VALVES: ELECTRONIC (EDV), PNEUMATIC (PDV), AND ELECTRONICS/PNEUMATIC (EPDV)

- UL listed for Fire Protection systems
- Reliable Diaphragm actuated
- Hydraulically operated design
- Available with ANSI Class 150 or 300 flanges, ANSI, PN or AS drilled and Grooved Ends
- Stainless Steel fasteners
- Red Fusion Bonded Epoxy Coating
- Available in Globe Style, DN80/3" to DN300/ 12"

RPS-8700A – UL / FM PRESSURE RELIEF VALVE

- UL / FM approved for fire extinguishing systems
- Automatically modulates to relieve excess pump capacity
- Available with ANSI Class 150 or 300 flanges, ANSI, PN or AS drilled and Grooved Ends

The Pressure Relief Control Valve is hydraulically operated to automatically relieve excess pressure in the Fire Protection system to discharge. It is UL / FM approved for Fire Protection systems.

106-PR-10159 – UL/ULC PRESSURE REDUCING VALVE

- Reliable Diaphragm actuated
- Hydraulically operated design
- Stainless Steel fasteners
- Available with ANSI Class 150 or 300 flanges, ANSI, PN or AS drilled, Grooved and Threaded Ends
- Red Fusion Bonded Epoxy Coating
- Available in Globe and Angle style, DN40/1½" to DN200/8"

ACCESSORIES & OPTIONS

X156 – LINEAR INDUCTIVE VALVE POSITION TRANSMITTER

The Linear Inductive Valve Position Transmitter utilizes 24VDC power to electronically indicate the position of the Valve. The zero and span are fully adjustable over the complete range of stroke which is ideal for applications where precision and accuracy is required.

OX –OXY-NITRIDE STEM

The Oxy-Nitride Stem is ideally suited to reclaimed Water applications and in other applications where mineral build-up is a concern. It's treated in a proprietary aerated salt bath to reduce or prevent mineral build-up allowing the stem to stroke freely as it passes through the guide bushing.

TUBING – COPPER / STAINLESS STEEL / STAINLESS STEEL BRAIDED HOSE

Copper tubing is the standard material on all Singer® Control Valves. It is resistant to corrosion and provides reliable long-term performance. Stainless Steel and Stainless Steel Braided PTFE are optional upgrades. Both offering improved strength and durability over Copper and with improved resistance to oxidation. The Braided tubing offers the added value of flexibility.

STANDARD:
COPPER

OPTIONAL UPGRADE:
STAINLESS STEEL

STAINLESS STEEL BRAIDED

ACCESSORIES & OPTIONS

160-PR – PRESSURE REDUCING PILOT (NORMALLY OPEN)

The Pressure Reducing Pilot is a Spring and Diaphragm, normally open pilot. It is the standard Pressure Reducing Pilot on all full port and reduced port series Pressure Reducing Valves.

301-4 – ALTITUDE PILOT VALVE

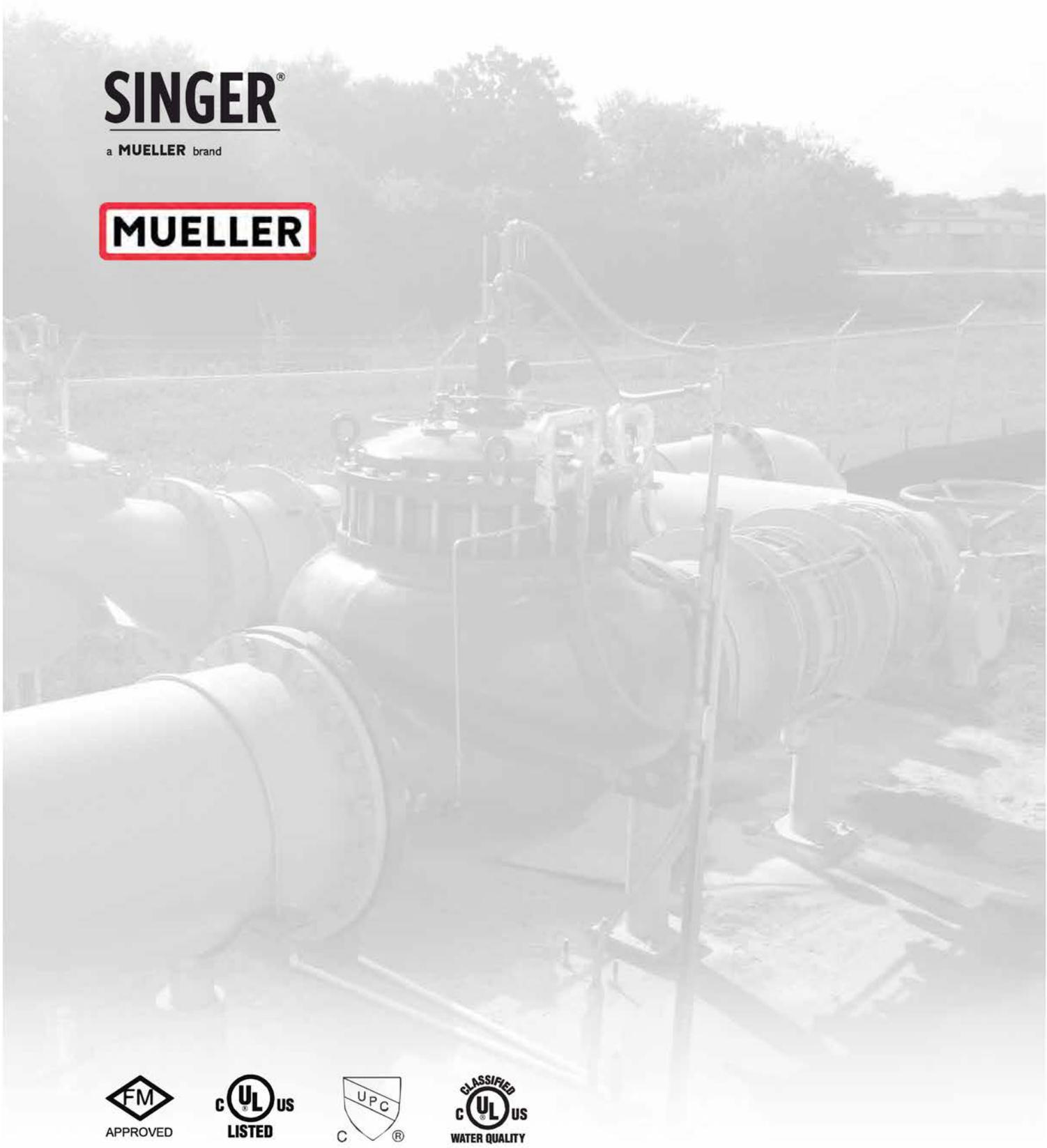
The Altitude Pilot is Spring and Diaphragm operated and controls the Water level in a reservoir by sensing the hydrostatic head. It is the standard Pilot used on all full port and reduced port series Altitude Valves.

X149 – PROXIMITY LIMIT SWITCH

The Proximity Limit Switch assembly is a non-contact position sensor which is actuated by the opening / closing of a main Valve. Layout variations allow up to four separate switches to be mounted and actuated off the same stem.

J1521G / J1521M – ARION STRAINER

The Arion Strainer is an optional accessory for dirty water applications. The mesh screen traps dirt and collects it in a bowl which can be easily flushed directly to the drain through the blowdown. It also has double port construction of the housing to prevent particles from re-entering the flow stream.



SINGER®

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MUELLER

FM APPROVED

c UL us LISTED

UPC C ®

CLASSIFIED c UL us WATER QUALITY

Branches Nationwide *Support Office & Technical Services 0800 93 7473*