

SINGER[®]

a MUELLER brand

CONDENSED PRODUCT CATALOGUE

106/S106

206/S206

306/S306

UL FM FIRE



DETECT



MONITOR



CONTROL

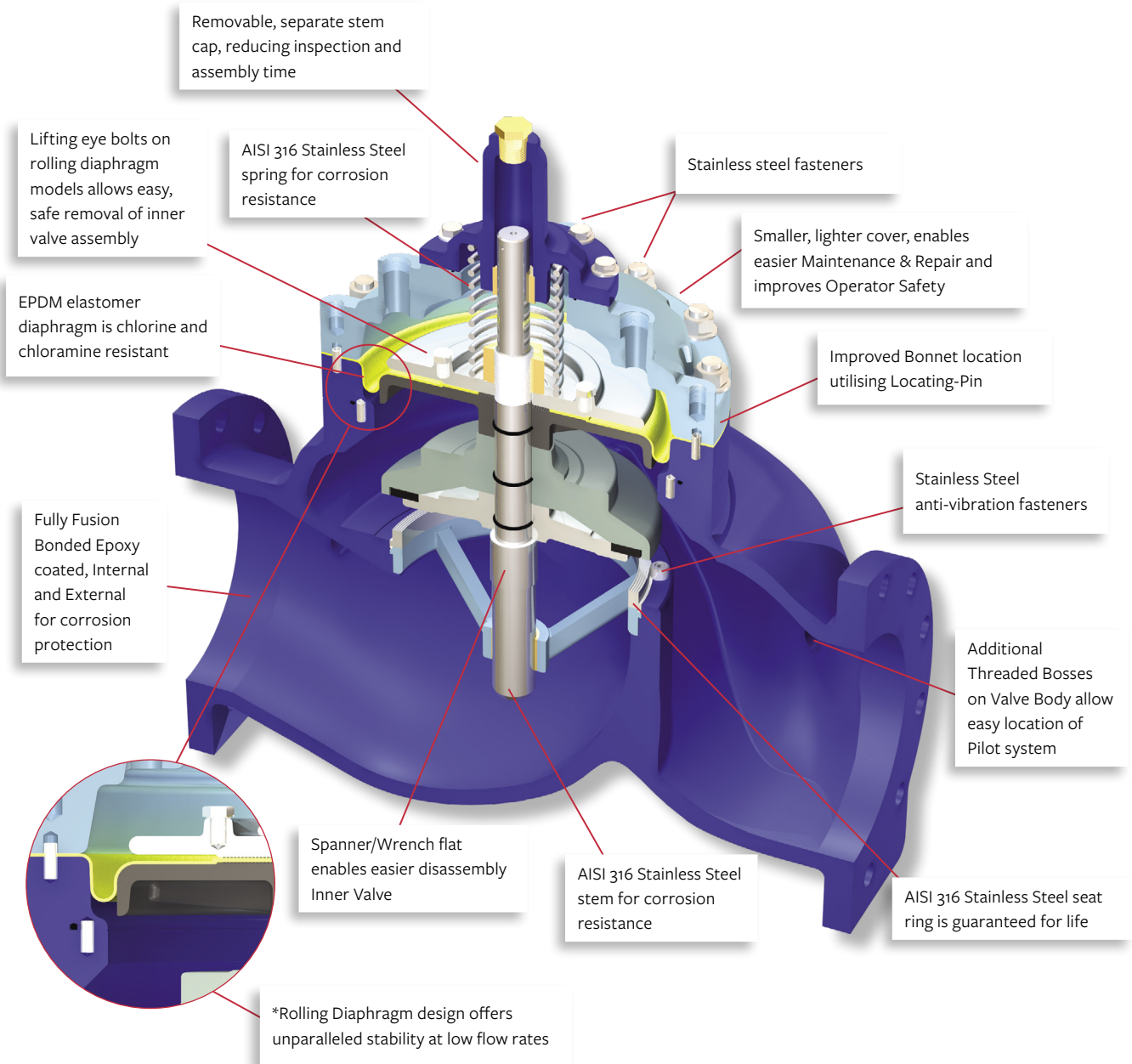


REPAIR

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 Singer Representative

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. Our family of Companies 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.



MUELLER

PRODUCT HIGHLIGHTS

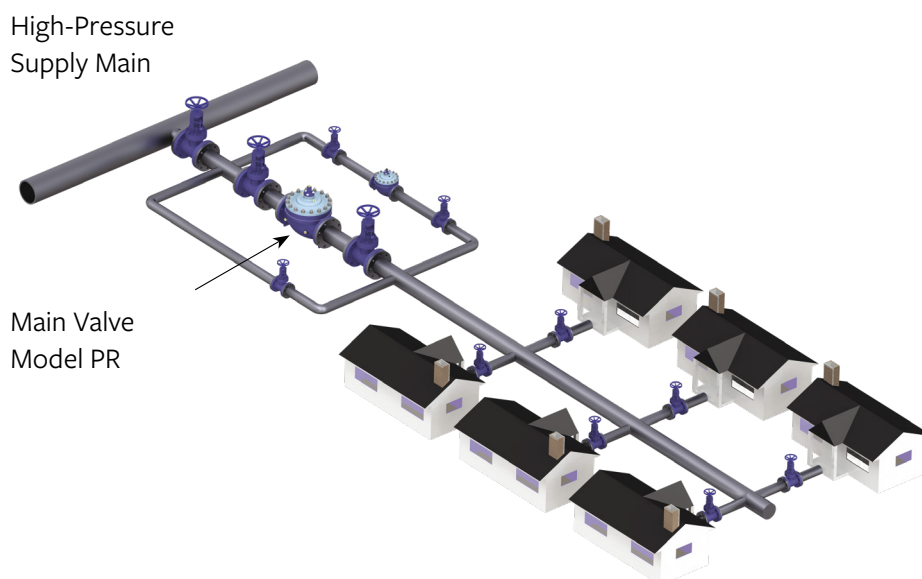
Uniform. Steady. Precise Control.

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



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

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 SINGER application specialist for details.



ANTI-CAVITATION VALVE

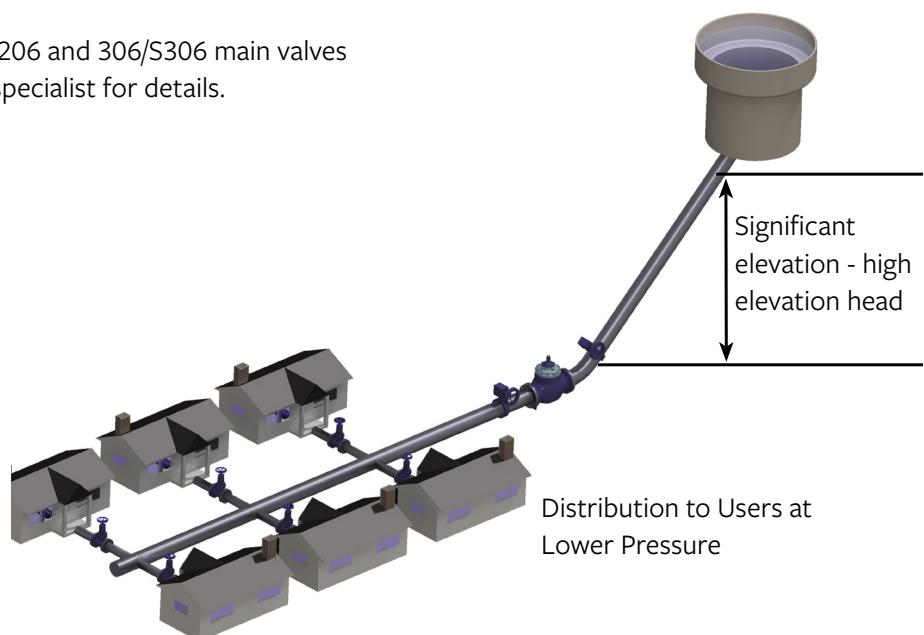


ILLUSTRATION OF A TYPICAL APPLICATION: DISTRIBUTION SYSTEM

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



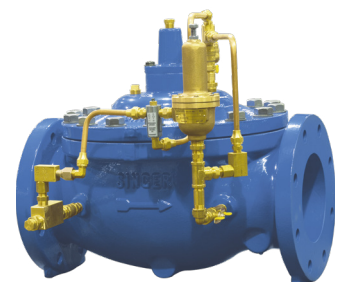
PR-48 – PRESSURE REDUCING VALVE WITH LOW FLOW BY-PASS

- 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

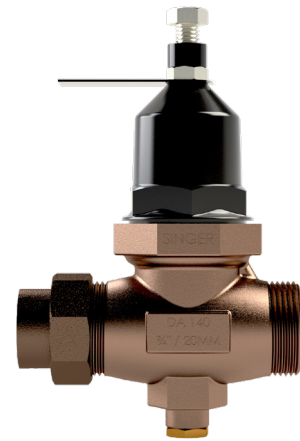


PRESSURE REDUCING

DA140 DIRECT ACTING VALVE

Singer model DA140 is a High Capacity Globe Style Direct Acting Pressure Reducing Valve designed for installation on Potable Water lines, reducing high inlet pressures to a lower regulated outlet pressure, regardless of fluctuation in flow rate. The DA140 is a lead-free valve and it is provided with an integral strainer, to help prevent malfunction caused by debris in the system.

- Sizes: 1/2" – 2" / DN15 – DN50.
- Maximum Working Pressure: 400psig (27.6barg).
- Spring Range: 15-75psig (1-5.15barg) / 15-150psig(1-10.4barg).
- Maximum Working Water Temperature: 180°F (82°C).
- NPT ANSI B 1.20.1 / BSPT BS 21 Threaded Connection.
- Available with BSPT threads (optional).
- May be installed in any position.
- Serviceable in-line.
- ASSE listed 1003, IAPMO listed CUPC certificate, Non-Toxic NSF61, Lead Free NSF372 (in process).



RELIEF / SUSTAINING / SURGE

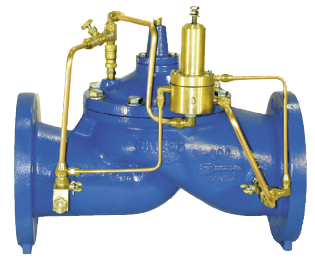
RPS-L&H – SURGE ANTICIPATING RELIEF VALVE

- 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



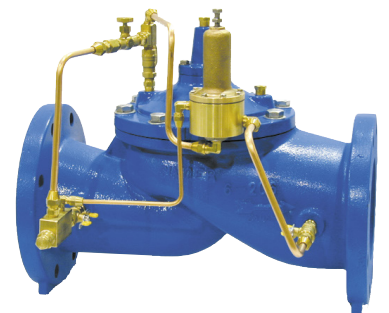
RPS-D – PRESSURE DIFFERENTIAL SUSTAINING VALVE

- 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

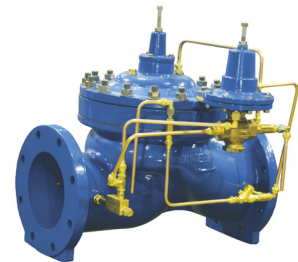
BPC – BOOSTER PUMP CONTROL VALVE

- 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

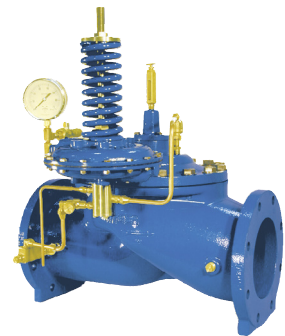
A-TYPE 1 / 3 – TWO-WAY FLOW ALTITUDE CONTROL VALVE

- 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 accurate flow metering
- $\pm 3\%$ accuracy
- Easily retrofitted to existing valves

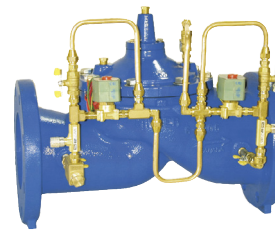
The Electronic Flow Control and Metering System is a PLC-based control panel that is compatible with SCADA and provides $\pm 3\%$ accuracy as certified by NIST (on select sizes). The metering panel has retransmission capabilities and the metering system can be retrofitted to existing valves.



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.

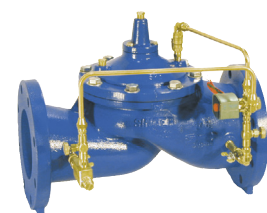


420DC/AC ACTUATOR

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.



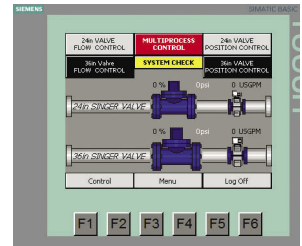
MODEL SC

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

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

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



A106-DL



A106-DL-ET

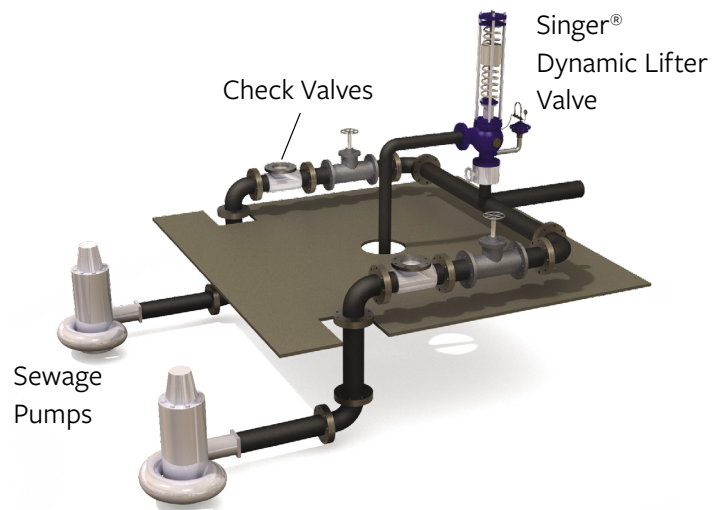


ILLUSTRATION OF A TYPICAL APPLICATION: DYNAMIC LIFTER SPRING PRESSURE RELIEF VALVE

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.



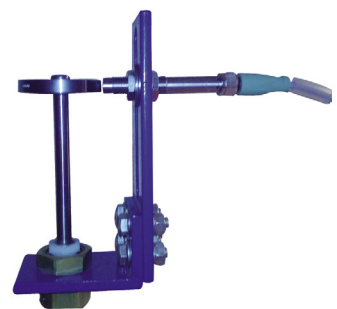
301-4 – ALTITUDE PILOT VALVE

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.



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
- Maintains constant downstream Pressure, regardless of fluctuation in upstream Flow or Pressure.



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



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



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
- 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



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

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.



FIRE PROTECTION

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”



MODEL 18-FR PRESSURE RELIEF VALVE

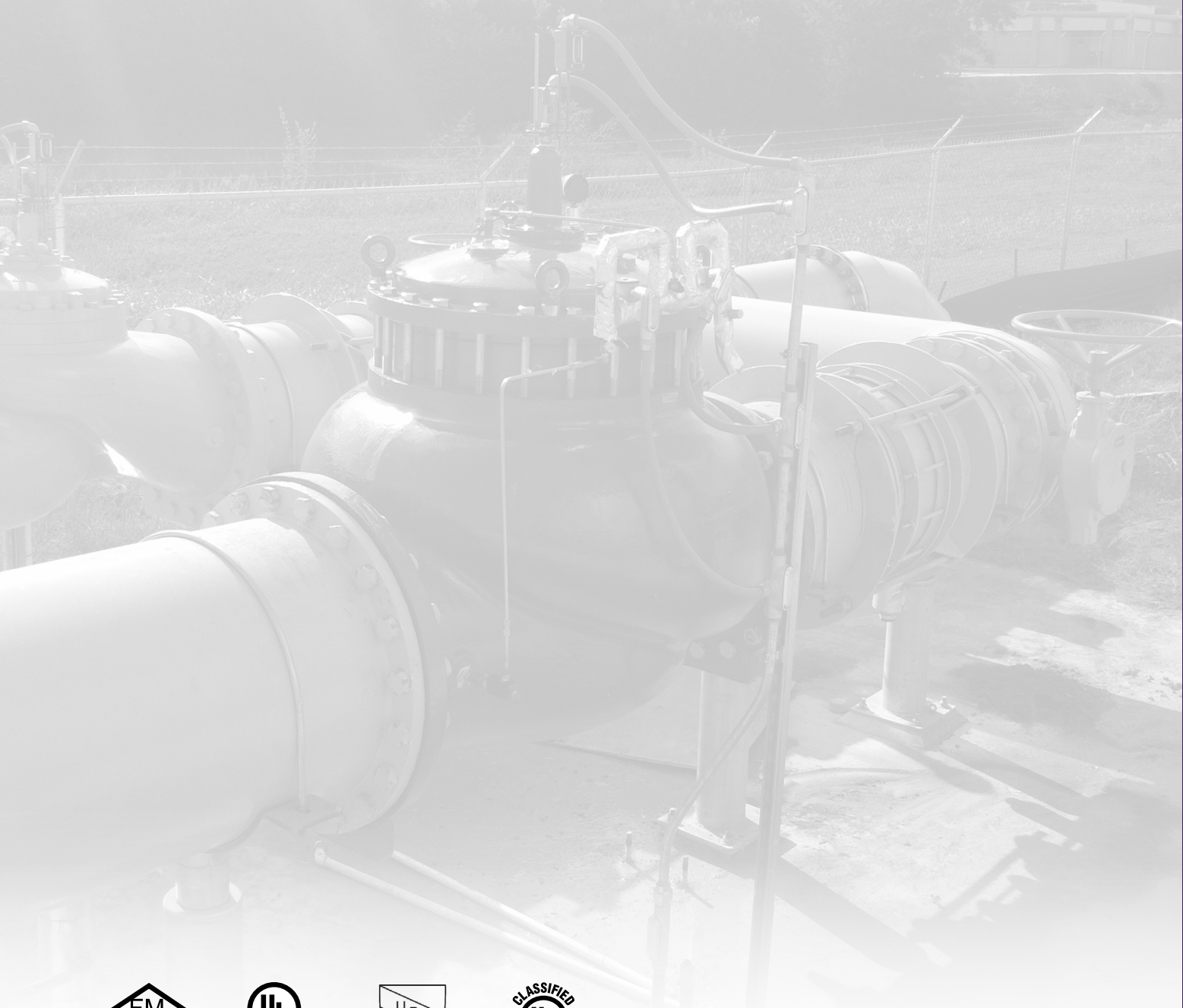
The 18-FR is a remote sensing, high capacity, spring and diaphragm operated, normally closed valve. The inner valve is held closed by the spring. When the sensed pressure increases above the spring setting, the valve opens.

- The normally closed valve shall be of stainless steel construction with a spring to adjust the opening pressure.
- The inner valve shall be of stainless steel 316 construction and the inner valve shall have EPDM resilient compound for seating.
- A separate port will sense pressure to open the valve when system pressure exceeds the valve set-point.
- Maximum working temperature: 180° F / 82° C
- Maximum working pressure: 400 psi / 27.6 bar



SINGER®

a **MUELLER** brand



APPROVED



For more information about us, or to view our full line of products, please visit www.mueller-international.com or call International Customer Service at:

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