SINGER VALVE

Result-Based Solutions. Globally.™

Condensed Product Catalogue

About Singer Valve

Water Loss Specialists

Singer Valve Inc. designs and manufactures automatic control valves for the global water industry. Since 1957, our pilot operated diaphragm control valves have been installed on virtually every continent around the world. Whether it is water loss management in Southeast Asia, water conservation concerns in Saudi Arabia or urban distribution demands in the United States, we provide water management solutions to governments, cities, companies and contractors around the world.

Many of our innovative products are ones that have been born out of our inherent desire to solve an application challenge. Presented with a problem, our team of electronic, instrumentation and control valve specialists are relentless in their research and design until they find a solution.

Some of our innovative products include:

- Pressure Reducing Valve with Integral, Secondary Back-up System - PR-SM
- Patented Hydraulically Controlled Pressure Flow (Modulation) Valve - PFC
- Surge Anticipating on Rate of Rise Pressure Relief Valve - RPS-RR
- Single Rolling Diaphragm Technology - SRD
- Anti-Cavitation Trim - AC
- Dynamic Lifter Pressure Relief Valve - DL

PR-SM

PFC

RPS-RR

SRD

AC

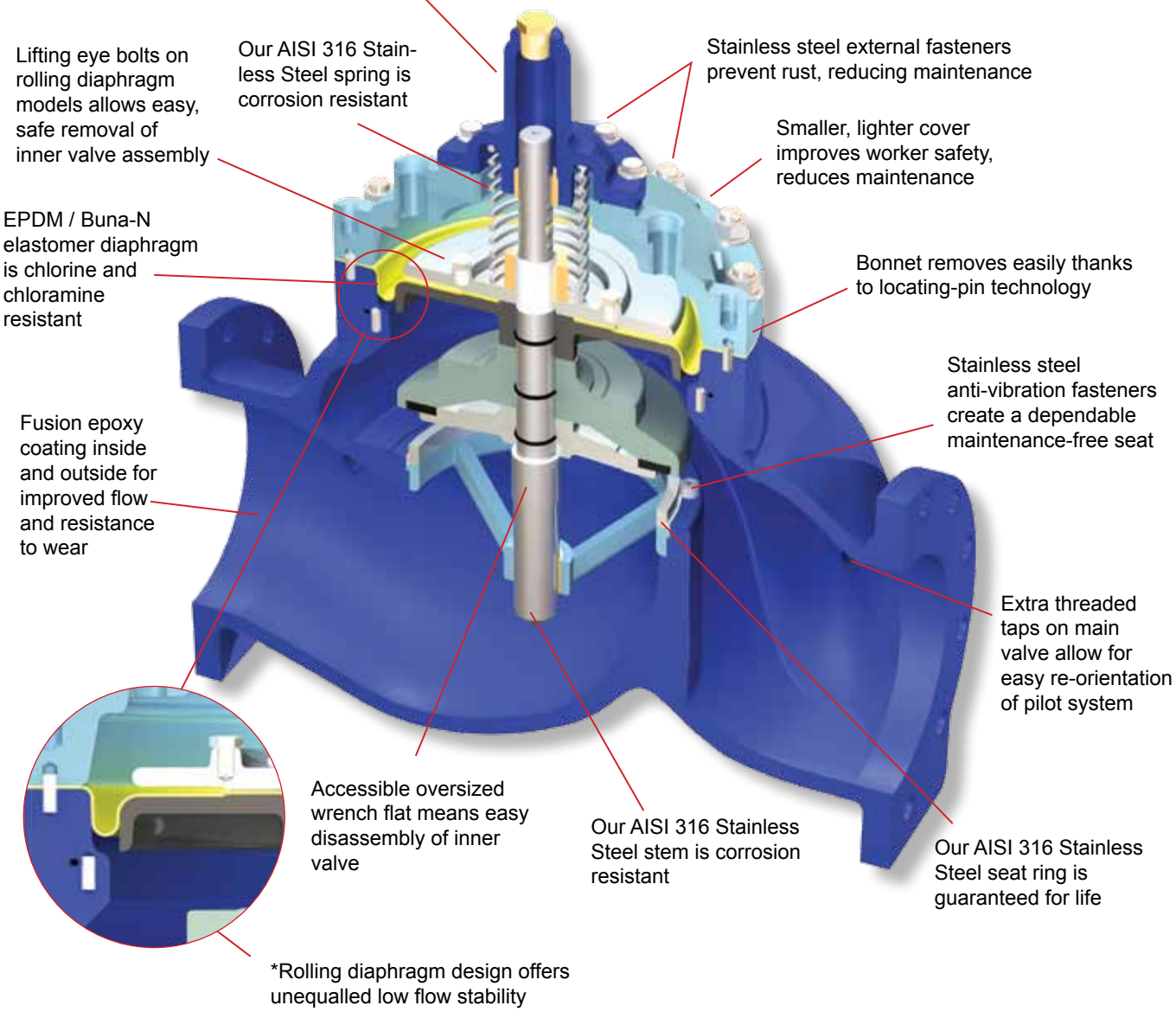
A106-DL-ET

Our Vision

To be the preferred provider of the most innovative, reliable water control solutions in the world.

Our Mission

We are innovative designers and manufacturers of high quality differentiated control valves with excellent technical support and service to our customers



Valve Sizes: 1/2 in to 40" / 15 mm to 1000 mm
Flows from: 0.5 to 55,470 USGPM / 0.03 to 3,500 L/s
*Not available in all size/model combinations. Consult with Singer Valve.

When you need extra security.

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 unnecessary maintenance

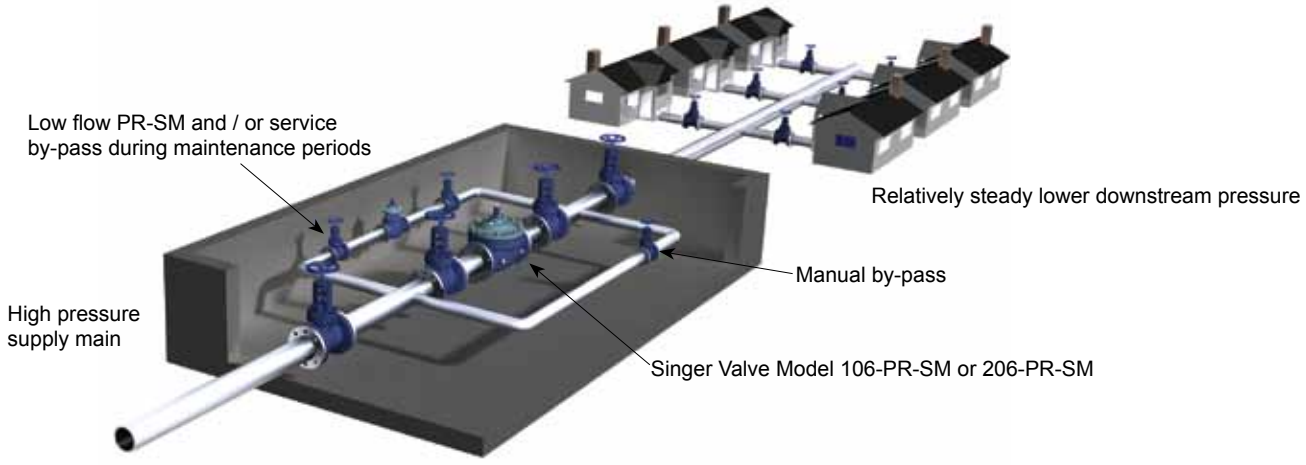
106-PR-SM Globe

Product Overview

Our PR-SM valve maintains constant downstream pressure, regardless of fluctuations in upstream flow or pressure. If the main diaphragm or primary pilot system fails, the secondary system takes over but at a slightly higher pressure. This valve provides surge protection and guarantees safe, continuous delivery.

Ideal for:

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



Delivers steady pressure under any flow condition.

PFC :: Pressure Flow (Modulation) Valve

- Reduces pressure when demand is lower (night-time flows) resulting in reduced leakage and pipe breaks
- Delivers virtually 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

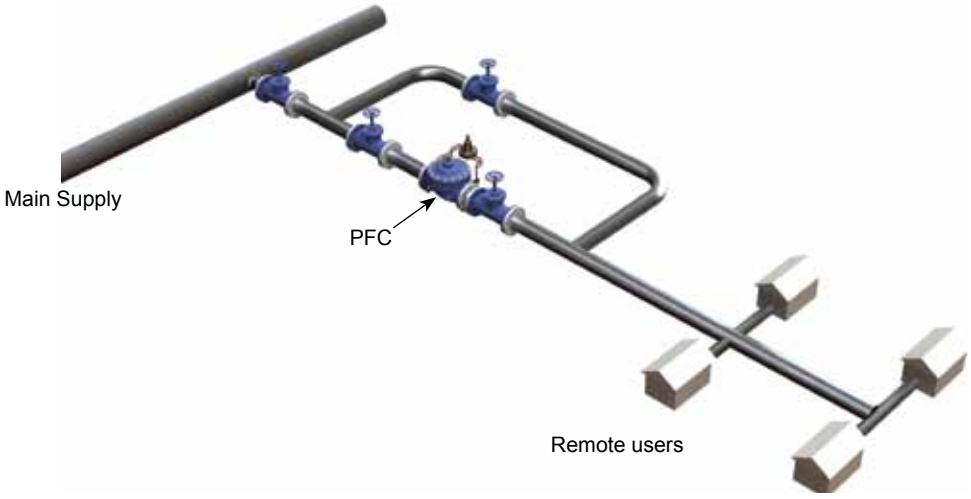
106-PFC-Globe

Product Overview

Using hydraulics, this patented pressure reducing valve supplies water at preferred pressures regardless of flow conditions. It can increase the controlled downstream pressure as flow increases, it can reduce downstream pressure as flow decreases or it can maintain virtually constant pressure at a critical remote location. This is accomplished mechanically with no power or batteries required.

Ideal for:

- Reducing water loss or leakage in aging systems
- Maintaining virtually constant pressure at a critical remote location
- Lowering high night-time pressures and associated leakage



Need protection from power failure surges?

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

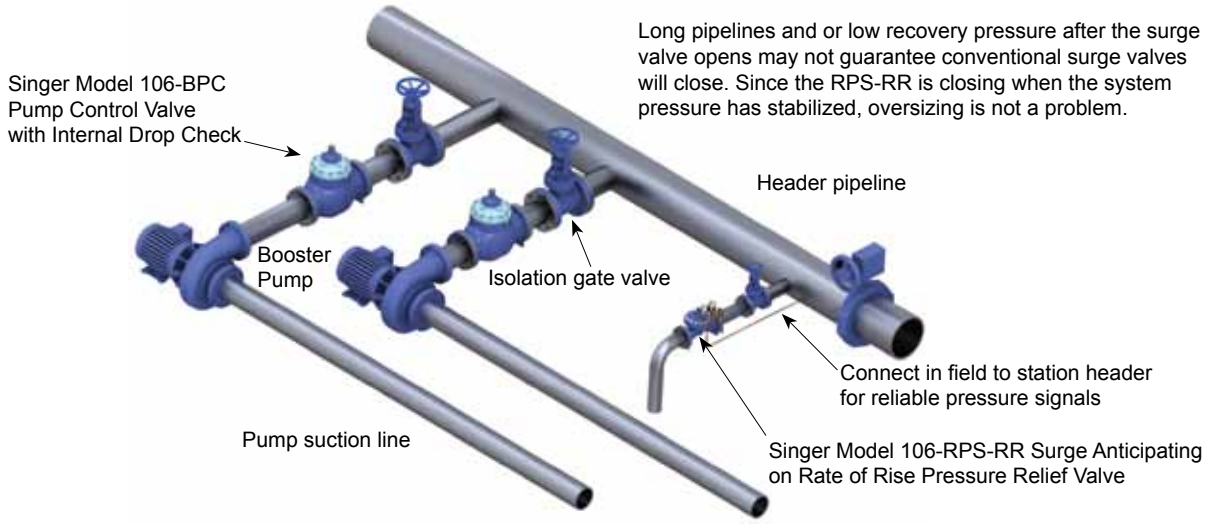
106-RPS-RR-Globe

Product Overview

Our RPS-RR valve opens quickly in response to an abnormal rate of rise in the system pressure, which is indicative of an approaching surge wave. How? Because the system is comprised of two separate pilots, each of which senses pressure through a connection to the header pipe. Our 81-RP high pressure pilot acts as a standard relief pilot, opening on excessive pressure and our 81-RPD differential pilot responds to the pressure differential across its diaphragm. Because the pilot senses the pressure difference between this lower pressure and the header pressure, the difference 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.

Ideal for:

- Applications with limited or very low downstream static pressure
- Long pipelines



Smooth. Steady. Precise.

SRD :: Single Rolling Diaphragm

- Ideal for maintaining stable low flow down to virtually zero flow
- Buna-N diaphragm for improved stability and longer life
- Eliminates the need for a low flow bypass valve

S106-PR

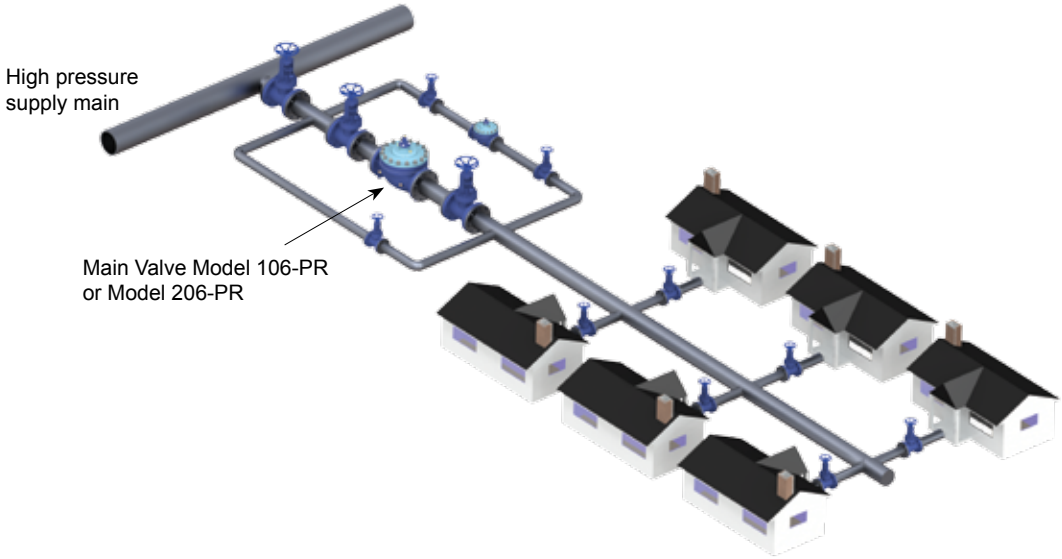
*S106-PG

Product Overview

Our Single Rolling Diaphragm (SRD) Pressure Reducing Valves provide smooth, steady and precise pressure control from maximum to virtually zero flow without the need for low-flow bypass valves. By eliminating the seat chatter at low flows, the SRD avoids injecting small pressure pulses into the piping, which, over time, may increase leakage, losses or pipe bursts.

Ideal for:

- Managing low flow situations
- Preventing water loss and leakage
- Precise pressure management



*Some accessories shown are not standard.

Eliminates Cavitation Damage!

AC :: Anti-Cavitation Trim

- Minimizes vibrations
- Solves high pressure drop problems
- Controls continuous/variable flows
- Reduces noise significantly

S106-PR-AC

106-PG-AC

Product Overview

With Singer Valve's Anti-Cavitation Trim, each stainless steel cage is engineered to meet the flow / pressure differential of each application, which makes orifice plates unnecessary. The first cage directs and contains the cavitation recovery, allowing it to dissipate harmlessly. The second cage allows further control to a level as low as atmospheric pressure downstream.

We guarantee that our valves work 24 hours a day, through all flow rates, even at very low flow such as off peak times or night-time usage. That means no cavitation damage regardless of the flow rate. It's the ideal solution in one reliable valve.

Ideal for:

- Distribution systems
- High rise buildings
- Reservoir filling
- Continuous pressure relief

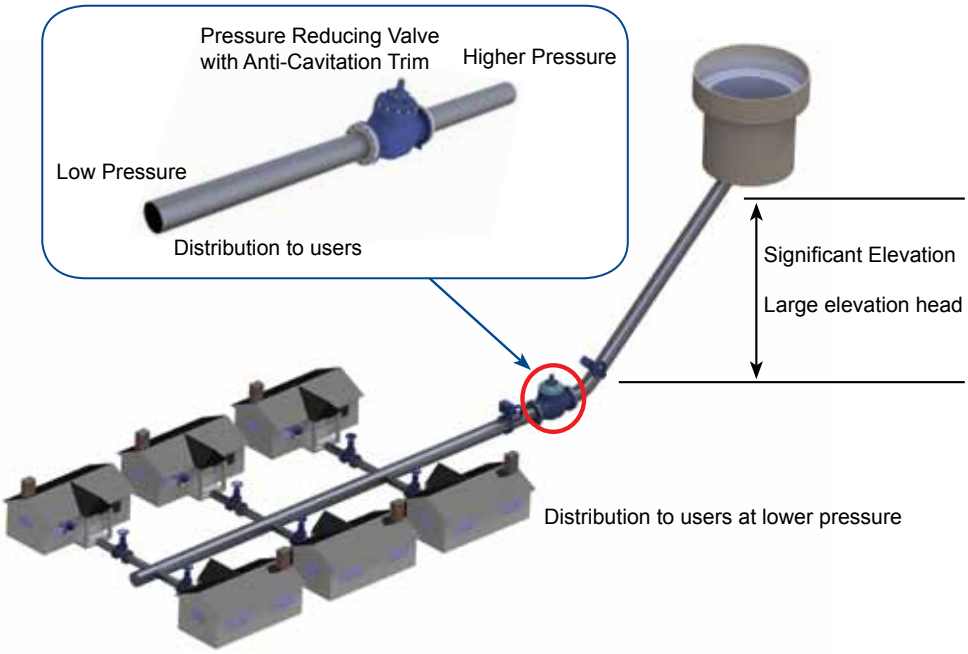


Illustration of a typical application: Distribution System

100% Surge Protection for Dirty Water or Wastewater!

A106-DL

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-ET

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 patented Dynamic Lifter® is a direct-acting spring-loaded relief valve that 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 pressurized air actuation is preferred. Also, because of its smaller profile, it is ideal for applications with space limitations.

Ideal for:

- Discharging sewage safely back to the sump
- Eliminating surges as a result of pump stops or power failures
- Increasing the life expectancy of a piping network

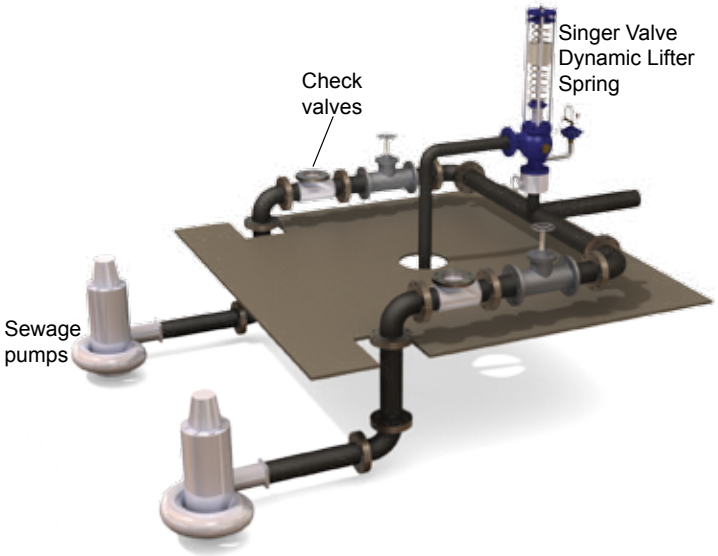


Illustration of a typical application: Dynamic Lifter Spring Pressure Relief Valve

Pressure Reducing

PR :: Pressure Reducing Valve

106-PR Globe

- Maintains accurate downstream pressure
- Responds quickly and effectively

The Pressure Reducing Valve is ideal for maintaining accurate downstream pressure. The valve senses the downstream pressure through a connection at the valve outlet and the pilot reacts to small changes in pressure to control the valve position by modulating the pressure above the diaphragm.

PR-R :: Pressure Reducing and Pressure Sustaining Valve

106-PR-R Globe

- Ensures minimum upstream pressure
- Excellent low flow stability

The Pressure Reducing and Sustaining Valve utilizes two pilots to modulate the downstream and upstream pressures to ensure 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

106-PR-48 Globe

- Maintains stable flow right down to zero
- Precise and reliable pressure setting
- Ideal for high rise applications

The Pressure Reducing Valve with Low Flow By-Pass is a 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 right down to zero without seat chatter.

PR-C :: Pressure Reducing and Check Valve

106-PR-C Globe

- Excellent low flow stability
- Drip-tight closing on return flow
- Easily and precisely set downstream pressure

The Pressure Reducing and Check Valve combines the pressure reducing functionality on the upstream along with the check function which closes the valve to prevent reverse flow on pressure reversal.

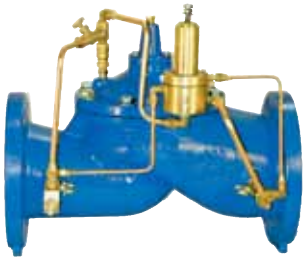
RPS-L&H :: Surge Anticipating Relief Valve

106-RPS-L&H Globe

- Protects against surges and pressure waves
- Quick opening relief

The Surge Anticipating Relief Valve protects against power failure surges or pressure waves caused by velocity changes. It automatically opens to dissipate the excess energy from a surge and remains drip-tight when the system pressure is operating in the normal range.

RPS-D :: Pressure Differential Sustaining Valve



206-RPS-D Globe

- Maintains a minimum pressure differential
- Valve closes drip-tight

The Pressure Differential Sustaining Valve modulates to maintain a maximum pressure differential between two sensing connections. It is 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

206-RPS Globe

- Easily adjustable pressure setting
- Accurately maintains pressure to set-point

This valve can be used for either Pressure Relief or Pressure Sustaining applications.

The 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.

The Pressure Sustaining Valve is mounted in-line. The valve senses the upstream pressure and modulates the valve to maintain the upstream set-point.

Pump & Flow Control

BPC :: Booster Pump Control Valve

106-BPC Globe

- Prevents surges from pump starting and stopping
- Built-in non-slam mechanical check to reduce power failure surges

The Booster Pump Control Valve is installed in-line directly downstream of the pump discharge. The double-chamber model is designed to open fully and minimize losses. Ideal for preventing surges associated with the starting and stopping of pumps.

EF-8837BX :: Excess Flow (Burst Control) Valve

206-EF-8837BX Globe

- Tight shut-off
- Fast closing in events of catastrophe

The Excess Flow (Burst Control) Valve is designed to shut off tightly when flow exceeds a pre-determined amount. It also prevents water loss in pipe systems or reservoirs in the event of a catastrophic downstream pipe break. Electronic failure signals are optional add-ons to this valve.

DW :: Deep Well Pump Control Valve

206-DW Angle

- Prevents surges from pump starting or stopping
- Discharges initial air/water silt to waste on well applications

The Deep Well Pump Control Valve is installed in a tee between the pump discharge and the check valve. It prevents pump starting and stopping surges and with no energy loss while the pump is running.

RF :: Rate of Flow Control Valve

106-RF Globe

- Accurately limits flow to a pre-set maximum
- Easily adjustable flow limit

The Rate of Flow Control Valve accurately limits flow to a pre-set maximum by maintaining a continuous pressure differential across an orifice.

A-Type 1 / 3 :: Two-Way Flow Altitude Control Valve

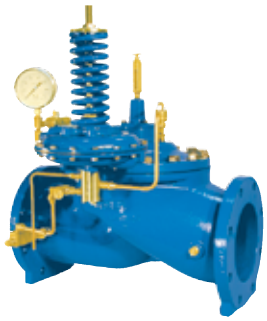
206-A-Type 1 Globe

- No overflows
- Superior repeatability
- Positive shut-off

The A-Type 1 / 3 valves are ideal for maintaining a pre-set maximum water level and function either fully open or fully closed.

The A-Type 1 valve allows normal forward flow to fill the reservoir to the maximum level and then closes drip-tight at the set-point. While the A-Type-3 has the additional feature of differential control for adjustable draw-down which is the reverse flow through the valve when the supply pressure drops an adjustable amount below the reservoir head.

A-Type 2 / 4 :: One-Way Flow Altitude Control Valve



206-A-Type 2 Globe

- No overflows - high level shut-off maintained to close tolerances
- Superior repeatability

The A-Type 2 / 4 valves are ideal for maintaining a pre-set maximum water level and function fully open or fully closed.

The A-Type 2 valve allows normal forward flow to fill the reservoir to the maximum level and then closes drip-tight at the set-point. It opens to refill the tank once the level drops below a fixed distance below the high water level. While the A-Type-4 has the additional feature of differential control for adjustable draw down to help improve water cycling.

F-Type 4 :: Modulating Float Valve

206-F-Type 4 Globe

- Maintains relatively constant level
- Automatic compensation for level draw-down
- Standard integral damping reduces hunting

The Modulating Float Valve is 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

206-F-Type 5 Globe

- No overflow, closes drip-tight
- Adjustable draw-down

The Non-Modulating Float Valve allows normal forward flow to fill water reservoirs to a desired high level. The pilot has adjustable draw-down and will close tightly on high water level and will re-open at the low level set-point.

Electronics

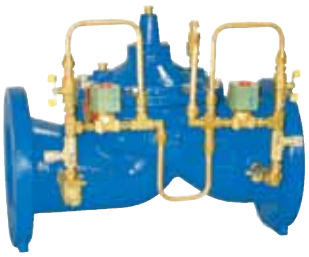
2SC-MV :: Electronic Flow Control and Metering System

106-2SC-MV Globe

- Combines precise flow control with relatively accurate flow 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.

2SC-PCO :: Dual Solenoid Control for Positioning & SCADA Controls



206-2SC-PCO Globe

- Precise control from remote locations
- Process controller compatible

The Dual Solenoid Valve 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.

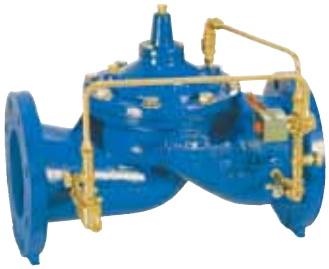
420-DC :: Automated Pilot Control

420-DC

- Reliable and cost effective automation of water systems
- Predictable and repeatable accuracy

The Electronic Pilot Actuator enables remote electronic adjustment of most Singer pilots via 4-20mA signal. It is a simple and cost efficient way to add automation. It has superior predictability, repeatability and accuracy and is available in IP67 (temporary submersion) or IP68 (continuous submersion up to 7 ft / 2.2 m).

SC :: Solenoid Control Valve



206-SC Globe

- 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.

MCP-TP :: Multi Process Control Panel Series

MCP-TP

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

The Multi-Process Control Panel incorporates an industrial PLC to provide control of multiple processes, such as pressure reducing, flow control, level and sustaining. Singer will customize the program to match your specific application needs.

EPC :: Single Process Controller

EPC

- Quick configuration for any single process application
- Capable of remote 4 to 20 mA SCADA process set-point(s) adjustment

The Single Process Controller is a simplified loop process controller designed to complement the Dual Solenoid Control Valve. It offers quick and easy configuration for any single process application such as flow and pressure.

SPC :: Pump Control Panel

SPC

- Simple to install
- Automatically interfaces pump and control valve to avoid starting and stopping surges
- 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 surges. It is equipped with delay timers and emergency fault contacts to provide the customer with local and remote indication for various operational failure conditions.

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.

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 Teflon Hose

Standard:

Copper

Optional Upgrade:

Stainless Steel

Stainless Steel Braided Teflon®

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 Teflon are optional upgrades. Both offering significantly improved strength and durability over copper and resist oxidation. The braided Teflon tubing offers the added value of flexibility.

Fire Protection

Because we have an insatiable desire to find solutions that work, it's only logical that we would apply our knowledge and expertise to other industries such as fire protection. To help save people and property from the ravages of fire, we design and manufacture fire protection valves you can rely on. A perfect example of our innovative design, expert engineering and Singer quality working together for life-saving applications.

RPS-8700A :: UL / FM Pressure Relief Valve

106-RPS-8700A Globe

- UL / FM approved for fire extinguishing systems
- Automatically modulates to relieve excess pump capacity
- Class 150 and 300 flanges

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 extinguishing systems.

PR-8702A :: ULC Pressure Reducing Valve

- ULC approved for fire extinguishing systems
- Reliable diaphragm actuated design
- Class 150 and 300 flanges

The Pressure Reducing Control Valve is ideal for automatically reducing a higher inlet pressure to a steady lower discharge pressure, regardless of fluctuations in flow or inlet pressure. It is ULC approved for fire extinguishing systems.

106-PR-8702A Globe

SPS :: Singer Packaged Systems



Designed and tailored for you.

At Singer Valve, we know that unique applications demand a unique solution. That's why we customize a packaged system to meet your specific application needs without bursting your budget. Whatever your problem, whatever the application, we can solve it. We welcome the challenge and we guarantee that our recommended solution will meet the agreed-upon functional and performance requirements of your application.

With a Singer Packaged System, you SAVE:

- ✓ **Money:** Save capital costs compared with on-site construction.
- ✓ **Labor:** Designed and packaged to suit the customer.
- ✓ **Hassle:** Tested and calibrated to ensure easy installation.
- ✓ **Time:** One-day installation with minimal service and site disruption.
- ✓ **Worry:** Single source accountability means we take care of the details.

Every Singer Packaged System features:

- Complete and accurate AutoCAD drawings
- Pre-assembled and factory tested valve piping arrangements
- Fusion epoxy coating on piping, components and Singer valves
- AWWA approved components
- Guaranteed field performance
- Customer-preferred vendors for options and accessories

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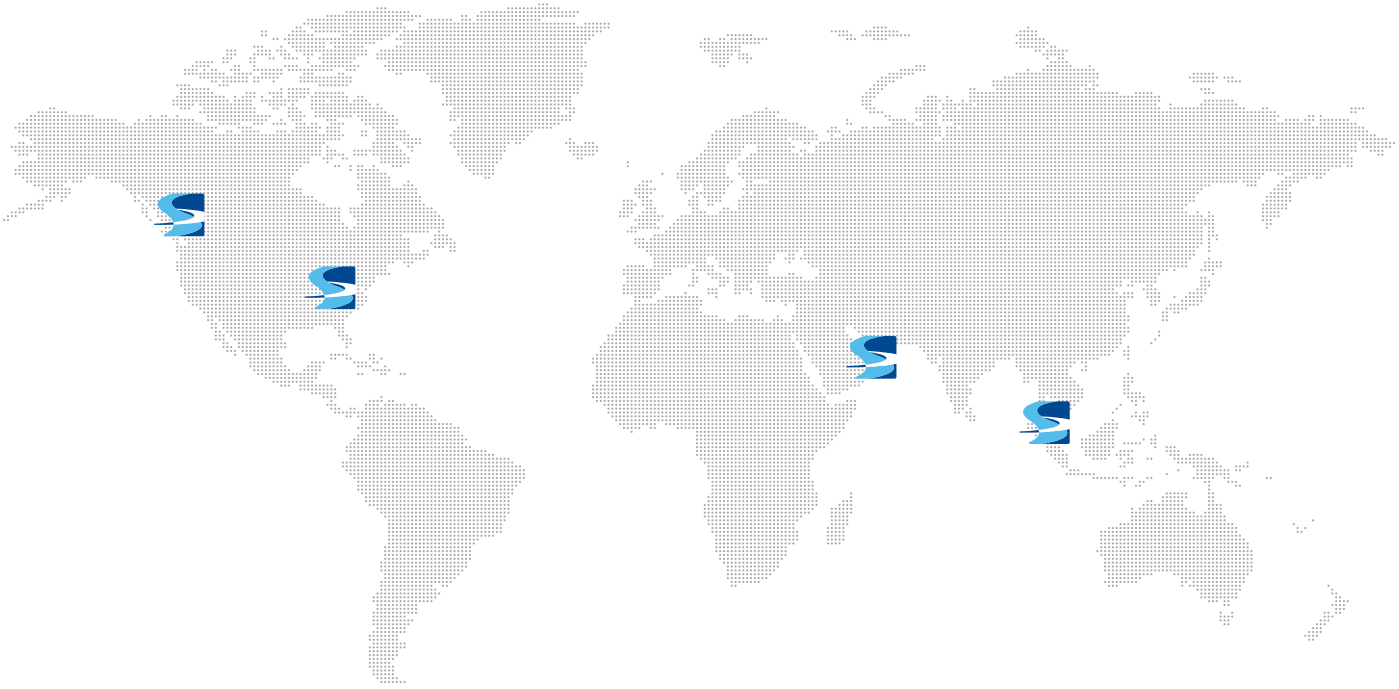

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