Senninger®

PRESSURE REGULATOR GUIDE

AGRICULTURAL, RESIDENTIAL & COMMERCIAL IRRIGATION

Low Pressure - High Performance

WHY PRESSURE REGULATORS?

MAINTAIN A MORE UNIFORM APPLICATION AND PRESERVE OVERALL SYSTEM EFFICIENCY WITH PRESSURE REGULATORS.

The basic function of a pressure regulator is to maintain an irrigation system's desired performance. They control excessive and varying inlet pressures to a constant outlet pressure.

Irrigation systems are designed to take a predetermined amount of water and apply it uniformly over an area and all sprinklers are designed to operate within a specific range of flows and pressures.

However, every irrigation system will experience some sort of pressure fluctuation, which also causes unwanted flow deviations. Pressures fluctuate for several reasons including elevation changes within the irrigated area and pressure loss through pipes and fittings.

If pressure fluctuations are controlled, sprinklers will be able to function as designed. This results in even plant growth and quality. Uncontrolled pressure fluctuations can distort sprinkler pattern uniformity and lead to over or under watering issues, as well as misting.

In addition, regulation is imperative to properly meter the application of fertilizers and herbicides through the irrigation system

MEDIUM FLOW

PSR-2

PRODUCT SPECS	PSR-2
Flow Range	0.5 – 15 gpm (114 – 3407 L/hr)
Preset Operating Pressure	6 – 50 psi (0.41 – 3.45 bar)
Maximum Inlet Pressure*	90 - 130 psi (6.20 - 8.27 bar)
Inlet Sizes	¾" F NPT
Outlet Sizes	¾" F NPT

PMR-MF

PRODUCT SPECS	PMR-MF
Flow Range	2 – 20 gpm (454 – 4543 L/hr)
Preset Operating Pressure	6 – 60 psi (0.41 – 4.14 bar)
Maximum Inlet Pressure*	90 -140 psi (6.20 - 8.27 bar)
Inlet Sizes	¾" F NPT, 1" F NPT, 1" F BSPT
Outlet Sizes	¾" F NPT, 1" F NPT, 1" F BSPT

LIMIT VALVE

PRLV

PRODUCT SPECS	PRLV
Flow Max	18 gpm (4088 L/hr)
Preset Operating Pressure	30 – 60 psi (2.07 – 4.14 bar)
Maximum Inlet Pressure	125 psi (8.62 bar)
Inlet Sizes	¾" F NPT, 1" F NPT
Outlet Sizes	¾" F NPT,1" F NPT

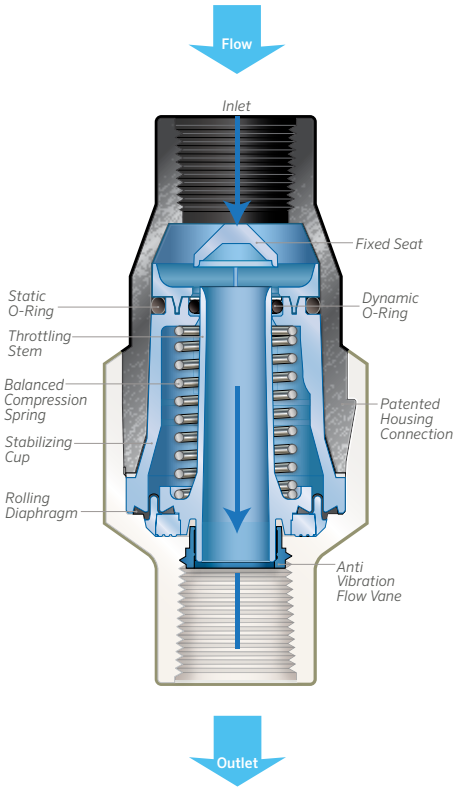
Pressure Regulating Limit Valves are designed to control pressure when there is no water flow. They are generally used where there is a shut-off valve downstream. When this shut-off valve is closed, the t-stem flow-passage closes and seals on the rubber seat, thus limiting the PRLV outlet pressure to only 10 to 15 psi above its normal regulating pressure. This helps protect downstream components from potential damage due to high static upstream water pressure.

PRXF-LV

PRODUCT SPECS	PRXF-LV
Flow Max	75 gpm (17034 L/hr)
Preset Operating Pressure	30 – 60 psi (2.07 – 4.14 bar)
Maximum Inlet Pressure	125 psi (8.62 bar)
Inlet Sizes	3" F slip
Outlet Sizes	3" F slip

With a standard regulator, when the downstream shut-off valve is closed and there is pressure but no flow through the device, the t-stem is unable to completely seal against the harder seat. The high inlet pressure eventually equalizes across the regulator and up to the valve. Upon opening the shut-off valve, a high-pressure surge could possibly damage downstream meters, sprinklers or other plumbing components.

Senninger pressure regulators, PRLV, and PRXF-LV are recommended for outdoor use only. Not NSF cerified.



HOW
SENNINGER PRESSURE REGULATORS WORK

A water pressure regulator is a device that works like an automatic valve to limit higher pressure to a desired constant lower pressure.

An in-line pressure regulator contains a hollow cylindrical housing with a centrally-mounted stationary seat near the inlet. Inside is a movable tubular stem (throttling stem or t-stem) surrounded by a spring with a diaphragm attached near the downstream end. The diaphragm and O-rings isolate the spring to keep it dry. Water flows through the inlet, around the seat and through the t-stem. Water pressure acting on the diaphragm forces the spring to compress, pushing the t-stem toward the seat. The closing of the area between the seat and the t-stem reduces the water pressure on the diaphragm. The balance between the force on the diaphragm and spring resistance establishes the outlet pressure. Senninger uses springs with different compressive loads to deliver various preset water pressures from 6 to 60 psi (0.41 to 4.14 bar).