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

LOW FLOW

PRLG

PRODUCT SPECS	PRLG
Flow Range	0.5 – 7 gpm (114 – 1590 L/hr)
Preset Operating Pressure	10 – 40 psi (0.69 – 2.76 bar)
Maximum Inlet Pressure*	90 - 120 psi (6.20 - 8.27 bar)
Inlet Sizes	¾" F hose, ¾" F NPT
Outlet Sizes	¾" M hose,¾" M NPT

PRL

PRODUCT SPECS	PRL
Flow Range	0.5 – 8 gpm (114 – 1817 L/hr)
Preset Operating Pressure	6 – 40 psi (0.41 – 2.76 bar)
Maximum Inlet Pressure*	90 - 120 psi (6.20 - 8.27 bar)
Inlet Sizes	¾" F NPT, ¾" F hose
Outlet Sizes	¾" F NPT

HIGH FLOW

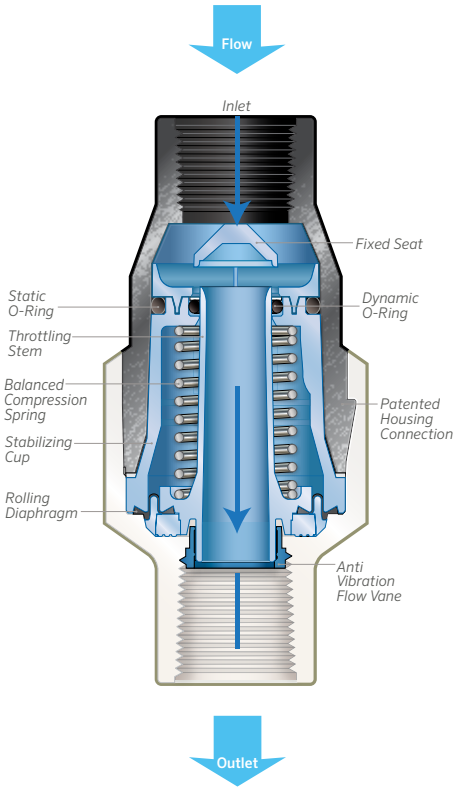
PRHF

PRODUCT SPECS	PR-HF
Flow Range	10 – 32 gpm (2271 – 7268 L/hr)
Preset Operating Pressure	10 – 50 psi (0.69 – 3.45 bar)
Maximum Inlet Pressure*	90 - 130 psi (6.20 - 8.96 bar)
Inlet Sizes	1 ¼" F NPT, 1 ¼" F BSPT
Outlet Sizes	1" F NPT, 1 ¼" F NPT, 1" F BSPT, 1 ¼" F BSPT

PRU

PRODUCT SPECS	PRU
Flow Range	20 -100 gpm (4543 - 22713 L/hr)
Preset Operating Pressure	10 – 60 psi (0.69 – 4.14 bar)
Maximum Inlet Pressure*	90 - 140 psi (6.20 - 9.65 bar)
Inlet Sizes	2" F NPT, 2" F BSPT
Outlet Sizes	2" F NPT, 2" F BSPT

Senninger pressure regulators are recommended for outdoor use only. Not NSF certified.
** Maximum recommended inlet pressure not to exceed 80 psi (5.52 bar) above nominal model pressure.*



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).