FLOW VS. PRESSURE

• Pressure regulators control excessive and varying inlet pressures to a constant outlet pressure. Without regulators, sprinkler FLOW would vary.

• On addition to flow, when sprinklers operate outside the recommended pressure range, it affects droplet size, radius of throw, and distribution pattern.

### Design Pressure

<table>
<thead>
<tr>
<th>Pressure Variations (psi)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 psi</td>
<td>5.0</td>
<td>10.0</td>
<td>20.0</td>
<td>40.0</td>
</tr>
<tr>
<td>20 psi</td>
<td>2.5</td>
<td>5.0</td>
<td>10.0</td>
<td>20.0</td>
</tr>
<tr>
<td>30 psi</td>
<td>1.7</td>
<td>3.3</td>
<td>6.7</td>
<td>13.3</td>
</tr>
<tr>
<td>40 psi</td>
<td>1.3</td>
<td>2.5</td>
<td>5.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

% Flow Variation

FLOW DIFFERENCE

• Typically, flows greater than 10% of calculated values are caused by partially plugged nozzles or a problem with pressure regulators.

• Like sprinklers, pressure regulators do not last forever. If you have concerns that your regulators are approaching their usable life, contact your irrigation equipment dealer to have your regulators tested.

• Investing in new pressure regulators is worth the investment when compared with the time and money lost in wasted input costs and potential yield loss.

WHEN GOOD REGS GO BAD

Factors that contribute to pressure regulator wear:

• Poor Water quality
• Unflushed chemicals in the system
• Suspended abrasive materials in the water
• Operating hours

The most common signs of bad or faulty pressure regulators include:

• Leakage between the housings
• Noticeable differences in sprinkler performance
  • Over-watered or under-watered strips beneath the spans

POOR WATER DISTRIBUTION

Worn pressure regulators mean poor water distribution. These over-watered and under-watered areas impact yield. The number of acres affected is greater if they are located on the outer spans of the machine.
PRESSURE REGULATOR FACTS

Senninger manufactures several models of pressure regulators to meet various irrigation needs. These cover flows from 0.5 to 100 gpm and outlet pressures from 6 to 60 psi. Available in NPT, BSPT, and Hose connection threads.

NORMAL PRESSURE VARIATIONS
- Inlet pressure should be at least 5 psi above the pressure rating. For example: a 10 psi pressure regulator should have inlet pressure of at least 15 psi.
- The outlet pressure of all Senninger regulators is designed to be accurate within +/- 6% of its performance curve.

HISTORY
Senninger introduced the first in-line pressure regulator to the irrigation industry in 1966.

WARRANTY
Senninger pressure regulators are backed with a two-year warranty on materials, workmanship, and performance.

QUALITY
Senninger pressure regulators are designed and built to rigorous quality standards and are 100% water-tested before they are shipped.