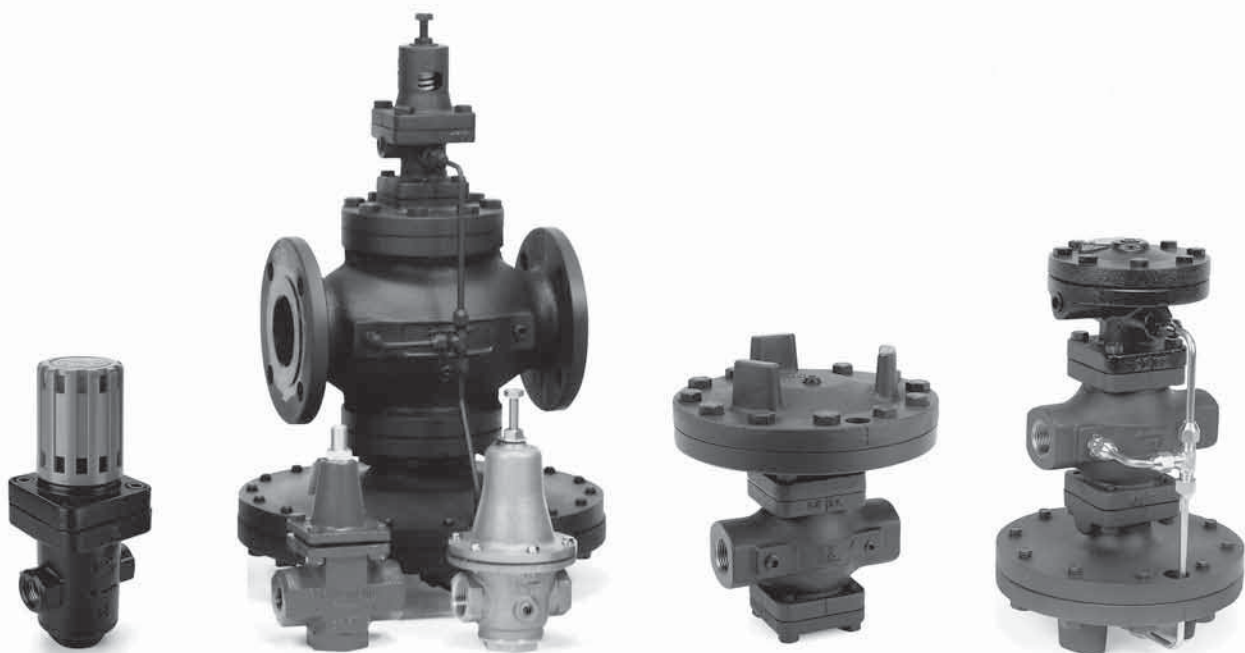


PRV Types

Steam, liquids and gases usually flow at high pressures to the points of final use. At these points, a pressure reducing valve lowers the pressure for safety and efficiency and to match the requirements of the application. There are two types of pressure reducing valves offered by Armstrong:

Direct Acting. The simplest of PRVs, the direct acting type operates with convoluted bellows. Since it is self-contained, it does not need an external sensing line downstream to operate. It is the smallest and most economical of the two types and is designed for low to moderate flows. Accuracy of direct acting PRVs is typically $\pm 10\%$ of the downstream set point.

Externally Piloted. This type of PRV incorporates two valves - a pilot and a main valve - in one unit. The pilot valve has a design similar to the direct acting valve. The discharge from the pilot valve acts on a set of double diaphragms, which controls through a piston the opening of the main valve. This high diaphragm area can open a larger main valve, allowing a greater capacity per line size than the direct acting regulators. In addition, the diaphragms are more sensitive to pressure changes, and that means accuracy of $\pm 1\%$. This greater accuracy is also due to the location of the sensing line outside of the valve, where there is less turbulence. This valve also offers the flexibility to use different types of pilot valves: pressure, temperature, air loaded, solenoid or combinations.

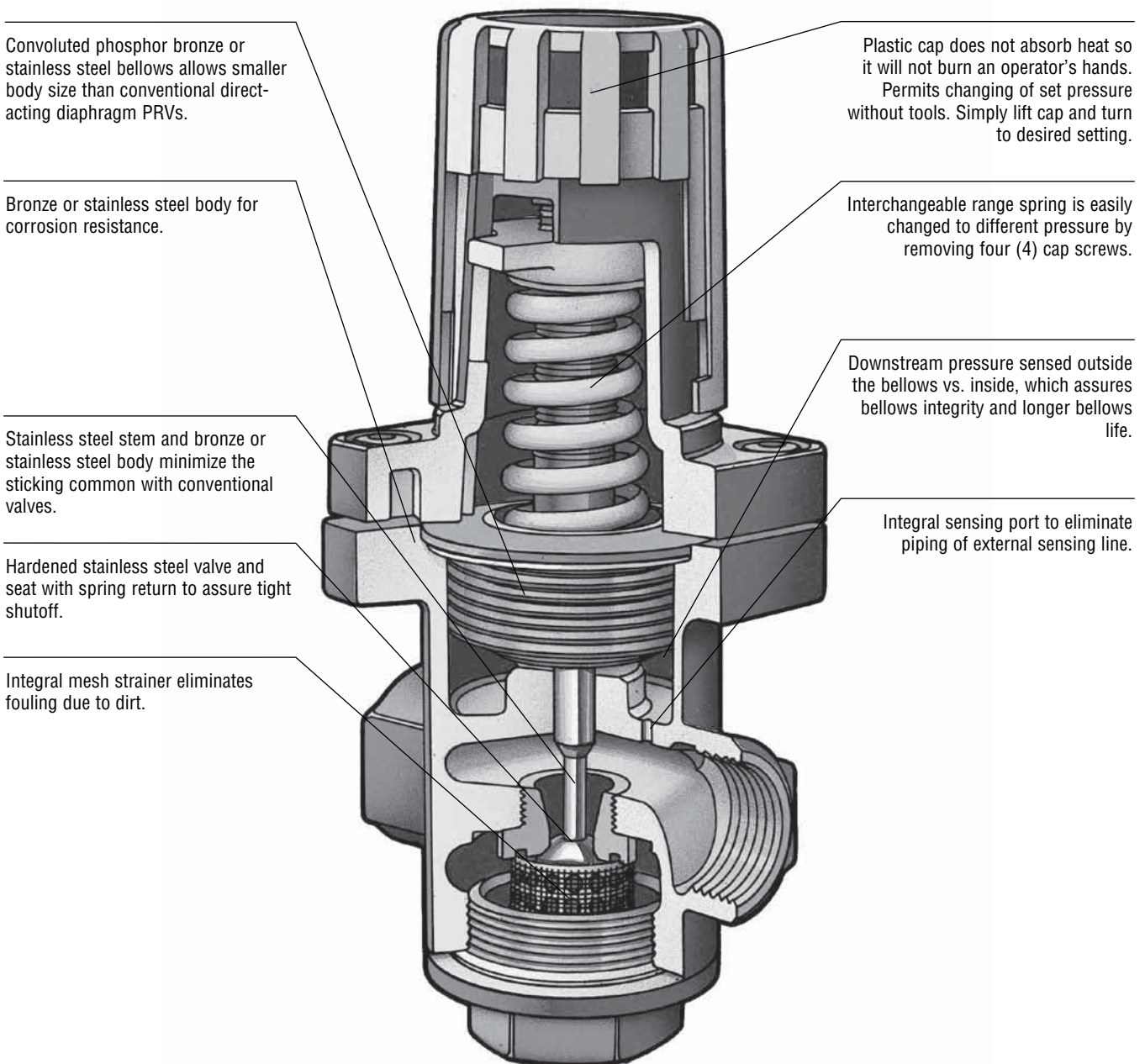


Direct Acting

For Steam, Air and Non-Corrosive Gas Service

The simplest of all pressure reducing valves, the direct acting type operates with convoluted bellows. Since it is self-contained, it does not need an external sensing line downstream to operate.

It is the smallest and most economical of the two types and is designed for low to moderate flows. Accuracy of direct acting PRVs is typically $\pm 10\%$.



Convoluted phosphor bronze or stainless steel bellows allows smaller body size than conventional direct-acting diaphragm PRVs.

Bronze or stainless steel body for corrosion resistance.

Stainless steel stem and bronze or stainless steel body minimize the sticking common with conventional valves.

Hardened stainless steel valve and seat with spring return to assure tight shutoff.

Integral mesh strainer eliminates fouling due to dirt.

Plastic cap does not absorb heat so it will not burn an operator's hands. Permits changing of set pressure without tools. Simply lift cap and turn to desired setting.

Interchangeable range spring is easily changed to different pressure by removing four (4) cap screws.

Downstream pressure sensed outside the bellows vs. inside, which assures bellows integrity and longer bellows life.

Integral sensing port to eliminate piping of external sensing line.

Pressure and Temperature Controls