



Valves are for starting or stopping flow, regulating or throttling flow, preventing backflow, or relieving and regulating pressure in fluid or gaseous handling applications.

Since APV valves are used in a variety of applications the following descriptions may provide a basic guideline in the selection of steel valves.

GATE VALVES

Gate valves are efficient stop valves allowing flow in either direction. Gate valves are used where a minimum pressure drop is important. Gate valves are not suitable for throttling as flow characteristics do not facilitate accurate and consistent flow control. Also gate valves may be damaged by the high velocity across the seats when partially open. They function best fully open or fully closed.

GLOBE VALVES

Globe valves are ideal for throttling services. Their flow characteristics do allow accurate and repeatable flow control. However, caution must be exercised to avoid extremely close throttling when the repeatable pressure drop exceeds 20%. Close throttling creates excessive noise, vibration and possible damage to valves and piping. When these conditions are anticipated, consult APV for recommendations.

SWING CHECK VALVES

Swing check valves prevent reversal of flow through pipe lines. Most APV swing check valves can be installed in horizontal or vertical, upward flow, piping. They offer low resistance to flow and are particularly suited to low velocity service.

TILTING DISC CHECK VALVES

Tilting disc check valves are similar to swing check valves but in most installations, slamming is minimised upon reversal of flow so noise and vibration are reduced.

STOP CHECK VALVES (SDNR)

Stop check valves are essentially the same as globe valves, except there is no mechanical connection between the stem and disc. They provide a combination stop valve and a piston choke valve in one valve. However, they are not designed for throttling. They are used in steam boiler outlet piping when two or more boilers are connected to a common header. Valves must be installed with pressure under the disc, and when the stem is raised, only boiler pressure can raise the disc whenever boiler pressure exceeds header pressure. They prevent steam backflow from the header to boiler.

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