



IS 5312 (Part 1):2013 - SWING CHECK TYPE REFLUX (NON-RETURN) VALVES **FOR WATER WORKS PURPOSE : MULTI-DOOR PATTERN**

Swing Check Type Reflux Valves are a type of valve designed to prevent the backflow of fluids in piping systems. They are commonly used in water supply systems, sewage systems, and industrial applications to ensure the unidirectional flow of fluids.

These valves have many desirable properties in application such as:

- a. **Reliable Operation:** Consistent and reliable performance under various operating conditions.
- b. **Tight Sealing:** Effective sealing to prevent backflow and leakage.
- c. **Low Pressure Drop:** Minimal pressure loss across the valve to reduce energy consumption.
- d. **Quick Response Time:** Rapid opening and closing to minimize water hammer and system instability.
- e. **Durability:** Long service life and resistance to wear and tear.

Additionally these valves are required to be made from durable materials and sound construction. The valve material should be resistant to corrosion to ensure long-term performance. The valve body and internal components should be robust to withstand pressure and temperature fluctuations. Simplicity in design and easy access facilitates easy maintenance and repair. Also, the low pressure drop and minimal energy loss helps to render plumbing/drainage systems energy efficient.

This Indian Standard specifies the quality requirements covering:

Material to be used for various components such as valve body, disc, hinge pin, and other components.

Design and Construction - the design requirements, including the number and arrangement of discs, the hinge mechanism, and the seat design.

Performance Requirements - requirements for various performance parameters, such as pressure rating, flow capacity, tightness, and durability.

The Standard has prescribed various tests to assess these parameters to ensure compliance to the above requirements.