



IS 5312 (Part 1): 2004 - Swing Check Type Reflux (Non-Return) Valves



Product Definition:

The IS 5312 (Part 1): 2004 standard specifies "Swing Check Type Reflux (Non-Return) Valves" with a single-door design, used in waterworks to ensure one-way flow and prevent backflow. These valves are suitable for use in pipelines and are available in various sizes (50 mm to 600 mm) and pressure ratings (1.0 and 1.6 MPa). Their primary function is to automatically close when water flow stops, which helps maintain a consistent flow direction and prevents reverse flow in the system.

1. Quality Expectations:

Consumers expect reflux valves to offer strong, leak-proof performance, corrosion resistance, and easy, reliable operation. Specifically, they look for a durable construction that withstands high-pressure conditions and minimizes maintenance. For performance, consumers expect valves that seal effectively without allowing backflow and can reliably close by gravity. Durability is also key, with materials that resist corrosion and wear over time. Additionally, consumers expect clear flow direction markings for easy installation and use.

2. How the Standard Meets Expectations:

The IS 5312 (Part 1): 2004 standard addresses these quality expectations by:

- **Material Requirements:** It specifies robust materials for each component, such as cast iron for the body, stainless steel for hinges, and leaded bronze or rubber for sealing rings. This ensures the valve can withstand pressure and is corrosion-resistant.
- **Design and Construction:** The standard mandates design features that enhance function and durability. For example, it requires the door and hinge system to operate freely for reliable closure and mandates that the body ring must protrude to form a tight seal.
- **Testing Procedures:** To verify leak-proof performance, each valve undergoes hydrostatic testing at specified pressures for both the body and seat, ensuring there is no leakage or deformation under stress.
- **Protective Coatings:** The standard calls for protective coatings on unmachined surfaces to prevent rust, with options like black Japan or other approved paints for added durability.
- **Markings and Instructions:** For easy identification, valves must include clear markings for size, pressure rating, flow direction, and manufacturer information, making installation and use straightforward for consumers.

Through these requirements, the standard ensures that the valves meet consumer needs for reliability, durability, and safety in waterworks applications.