

## IS 8776 : 2024 Valve Fittings for Use with Liquefied Petroleum Gas (LPG) Cylinders up to and Including 13 Litre Water Capacity — Specification

IS 8776:2024 is the Indian Standard that specifies the design, manufacturing, and testing requirements for valve fittings used with Liquefied Petroleum Gas (LPG) cylinders up to 13 liters in water capacity. This standard has undergone updates to align with international practices and the latest technological advancements. Here's an overview of the key components:

1. **Scope:** This standard specifies the basic requirements of material, dimensions and testing of valve fittings for liquefied petroleum gas (LPG) gas cylinders up to and including 13 litre water capacity.

The standard covers the following types of valves: a) Valves with parallel inlet threads, Type A; and b) Valves with their bodies directly welded to the cylinder, Type B;

2. **Materials:** Valves must be made from materials compatible with LPG. Requirements specify tensile strength, chemical composition, and impact strength for brass and steel alloys used in valve construction.
3. **Design Requirements:** Valves must be self-sealing, compatible with LPG, and able to withstand a working pressure of up to 1.67 MPa at 65°C. Additional design considerations include wall thickness and compatibility of non-metallic parts.
4. **Testing:**
  - a) **Stress Corrosion:** Copper alloys are tested for corrosion resistance.
  - b) **Hydrostatic and Pneumatic Tests:** Valve bodies are subject to high-pressure tests to ensure integrity and leak tightness.
  - c) **Cycle Test:** Valves must operate reliably through 5,000 open-close cycles.
  - d) **Operational and Type Approval Tests:** Tests are conducted to confirm durability, functionality, and compliance with design specifications.
5. **Marking:** Each valve must display the manufacturer's identification, date of manufacture, maximum working pressure, and the BIS certification mark.

This standard ensures that LPG valves are safe, durable, and reliable for domestic and industrial use, with strict requirements to safeguard against leaks and structural failure.