



IS 4246 : 2002 Domestic gas stoves for use with liquefied petroleum gases - Specification **(Fifth Revision)**

Domestic gas stoves are essential kitchen appliances used for cooking, providing a reliable and efficient source of heat. They typically operate on LPG (liquefied petroleum gas) or natural gas, offering precise control over flame intensity. With features like multiple burners, safety mechanisms, and energy efficiency, modern gas stoves are designed to meet the needs of everyday cooking, ensuring both convenience, safety and performance in the household kitchen.

A common consumer while purchasing the LPG cook stove expects it to be **energy efficient, leak proof, flame stability under wind, physically durable/rigid construction, producing less fumes** etc. The product shall be able to integrate with LPG ecosystem like LPG hose, LPG regulator etc.

In order to meet the above expectations of the consumer, BIS has published IS 4246 that outlines comprehensive requirements for construction, operation, safety and performance tests for domestic gas stoves with metallic bodies with or without toughened glass top intended for use with liquefied petroleum gas at 2.942 kN/m² (30 gf/cm²) gas inlet pressure.

The Indian Standard IS 4246:2002 for domestic gas stoves sets essential specifications for material quality, construction, performance, and safety, ensuring the safe use of LPG. The standard mandates that materials used in gas stoves resist corrosion, withstand high temperatures, and facilitate easy maintenance.

Performance requirements include a minimum thermal efficiency of 68% and controlled gas consumption within $\pm 8\%$ of specified rates. Safety is prioritized with gas soundness tests to detect leaks, reliable ignition, and stable flames that resist blow-off and backflow under various pressures.

Exhaust emissions must meet a CO/CO₂ ratio limit of 0.02 to control harmful gases. Stoves must pass type tests—such as strength, rigidity, and efficiency tests—before market release, while routine tests on production units maintain quality in ignition, flame stability, and noise control. Additionally, the standard addresses risks of soot formation, overheating, and flashback to ensure long-term safety and optimal performance.

Tempered glass, if provided, for gas stoves must be free of fissures and scratches, and should not be in direct contact with assembly screws to avoid stress. The glass must withstand thermal stress, passing tests where it's heated with burners and then cooled with water, without breaking. Glass must also withstand fragmentation test requirement.

In summary, IS 4246 is your assurance that the LPG cookstove you buy are safe, durable, and of high quality. Next time you purchase LPG cookstove, look for the BIS mark to ensure they meet these standards, giving you peace of mind for safety of our owns.