

## **IS 10617:2018 Hermetic Compressors**

**Hermetic Compressor** is a machine consisting of an electrically driven refrigerant pump housed in a container which is welded or brazed together to form a gas tight shell also called as housing. The machine cannot be taken apart without cutting open the container housing and has no access to internal moving parts. The electrical windings are exposed to both the refrigerant and the compressor lubricating oil. There are various types of hermetically compressors using different pumping mechanisms i.e. Reciprocating compressor, Rotary compressor, Scroll compressor and Linear compressor.

Hermetic compressor should have reliable performance. The compressor should have high energy **efficiency** to **minimize power consumption** with in specified operating pressure and temperature, **Robust construction** with reliable seals to handle long-term use, Proper vibration dampening to prevent wear and tear, Hermetic sealing must prevent refrigerant leakage, The compressor should operate efficiently across a **wide temperature range**, ability to adapt to **varying load conditions** without degradation in performance. The compressor shall withstand High Voltage, leakage resistance and Pneumatic tests. The compressor shall be resistance to rusting, Bursting.

This standard deals with the **Safety** and **performance** requirements of hermetic sealed type standalone motor-compressors operating on vapour compressor cycle, suitable for low, medium and high temperature applications based on reciprocating (including linear), rotary and scroll pump mechanisms, their protection system which are intended for use in equipment for house hold, industrial and commercial purposes. This standard incorporates tests i.e. **Compressor Capacity Rating Test**, **Startability Test**, **Locked Rotor Test**, **High Voltage Test**, **Leakage Current Test**, **Pneumatic Test** of Shell, **Holding Charge test**, **Bursting Test**, **Running Overload Test**, **Resistance to Rusting test**,