

Indian Standard IS 1391 (Part 1) : 2023 – Your Guide to Safe and Effective Unitary Room Air Conditioners

Air conditioners have become essential for artificial control of environment and maintaining a comfortable indoor atmosphere particularly during summer seasons.

Room Air Conditioner, which is commonly called **Window Air Conditioner** is expected to maintain a healthy and pleasant air quality by maintaining **proper temperature and humidity** and cleaning the air by circulating it through its air filters. This kind of mechanical control is possible by a set of **components, namely, compressor, evaporator, expansion valve, condenser, fans and thermostats**. A suitable **refrigerant** circulates through the coils thereby producing the cooling effect through a cyclic process.

Room Air conditioner and its various parts should have adequate **strength and rigidity** to withstand normal conditions of handling, transport and usage. In addition to this, the design of Air Conditioners should facilitate **easy maintenance and operation**.

Room Air Conditioner should not produce any unwanted noise, thereby ensuring **silent operation**. IS 1391 (Part 1) : 2023 specifies **Sound Pressure Test** so that the sound levels of both indoor and out door remain within permissible limits. **Energy efficiency and durability** are some of the other characteristics which should invariably be present in any good Air Conditioner.

For safety of Unitary Room Air Conditioners, **IS 1391 (Part 1) : 2023** specifies the requirements for **refrigerant pipes and fittings, provision for earthing, air filters (HEPA), temperature sensing controls, compressors, heat exchangers, motors and drain plugs** etc. All these components should conform to related Indian Standards.

To **ensure efficient operation** of the Room Air Conditioner, **IS 1391 (Part 1) : 2023** specifies various test, such as, **Cooling/Heating Capacity Test, Safety Test, Freeze Up Test, Power Consumption Test** etc. To cater to **Indian environmental conditions**, method of measurement of **Indian Seasonal Energy Efficiency Ratio (ISEER)** has also been prescribed in **IS 1391 (Part 1) : 2023**.

The Air Conditioners are tested in BIS approved laboratories meticulously for all the requirements of IS 1391 (Part 1) : 2023, for grant of license of BIS Mark and its continued operation.

It is always advisable to buy BIS Marked Room Air Conditioners **conforming to IS 1391 (Part 1) : 2023** for safe, efficient and environment friendly Room Air Conditioners.