



Indian Standard IS 1391 (Part 2) : 2023 – Split Air Conditioners

Split air conditioners (ACs) are comprised of an **indoor and outdoor unit**, designed to condition the air within an enclosed space. With increasing temperatures, the need for efficient and reliable ACs has increased to ensure comfortable living and working space.

Consumers expect split ACs to provide effective **temperature control**, have reasonable sound levels, consume minimal power and safe to operate.

This standard, **IS 1391 (Part 2) : 2023** specifies safety and performance requirements of single or three phase non-ducted split with single stage, two stage, multistage, fixed and variable speed air conditioner and heat pumps (residential, commercial, and industrial) of rated capacity up to and including 18 000 W their rated voltage up to and including 250 V a.c., 50 Hz for single-phase and up to and including 415 V a.c., 50 Hz for three-phase power supply employing air cooled condensers and test methods for determination of various ratings. This standard is limited to systems utilizing a single refrigeration circuit, having one evaporator and one condenser.

This standard is not applicable to the a) Water-source heat pumps or water-cooled air conditioners; b) Mobile (windowless) units having a condenser exhaust duct; c) Individual assemblies not constituting a refrigeration system; d) Equipment using the absorption refrigeration cycle; and e) Portable air-conditioners.

This standard specifies requirements for the compressors, heat exchangers, motors, electrically charged parts, temperature sensing controls, refrigerant circuits, earthing provisions, and air filters. Rating requirements are defined for cooling and heating capacity, power consumption, and sound levels.

Various performance tests like general running test, leakage test, HV test, leakage current test, earth resistance test, safety tests, power factor test, maximum operating condition test, freeze up test, enclosure sweat test, power consumption tests, cooling and heating capacity tests, Indian seasonal energy efficiency ratio, max heating performance test and sound pressure test are covered under this standard. These tests are further categorized as routine test, type test and acceptance test. This product is also covered under mandatory certification of BIS.