



## IS 12615 : 2018 - Line Operated Three Phase a.c. Motors ( IE CODE )

### “Efficiency Classes and Performance Specification”

Three-phase **AC induction motors** are widely used in various industrial, commercial, and residential applications due to their simplicity, reliability, and efficiency. They are commonly used to drive equipment like pumps, fans, compressors, conveyors, and other machinery. These **line operated induction motors** are one of the major energy consuming industrial equipment.

Indian Standard 12615:2018 covers three-phase AC induction motors. This Indian Standard specifies the **efficiency classes** and performance requirements. It encourages energy-efficient motor design while addressing both the electrical and mechanical characteristics required for long-term reliable performance in general-purpose industrial applications. The focus is on **reliable operation, low maintenance, and energy savings**, aligning with global practices in industrial motor technology.

The standard covers induction motors with different configurations such as **power ratings** from 0.12kW to 1000 kW, 2 to 8 poles, and voltages up to and including 1000V at 50Hz, but excludes certain motor types like those with over 10 poles, integrated frequency converters, and submersible motors. **Energy efficiency classes (IE2, IE3, IE4)** are central to the standard, defining **minimum efficiency levels** for various motor configurations.

The standard details test procedures and requirements for performance parameters like earthing, dimensions, insulation Resistance, winding resistance, locked rotor torque, locked rotor current, full load current, momentary overload, and temperature rise.