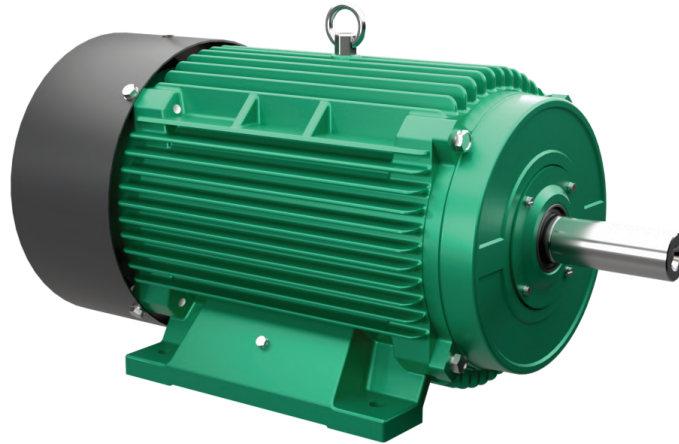


Make **INDIA**

The Capital of IE5 Machines driven by **LEDL's IE5 Motors**



IE5 Motors (Magnet-Free)

Load Performance Curve

THREE PHASE INDUCTION MOTOR

Output Power	15	kW
Rated Voltage	415	V
Rated Current	30.0	I
Speed	1440	RPM
Frequency	50	Hz
Pole	4	-

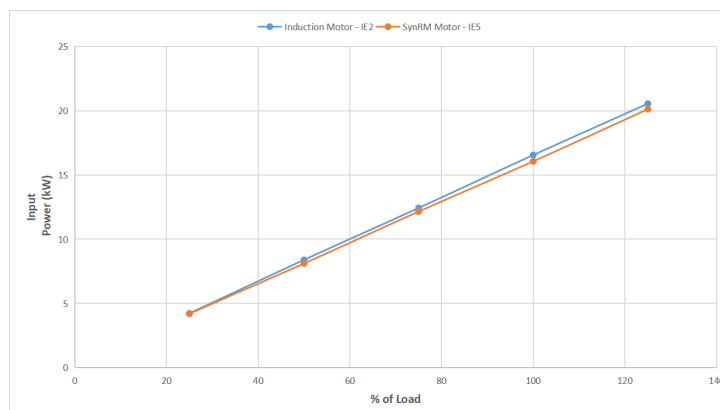
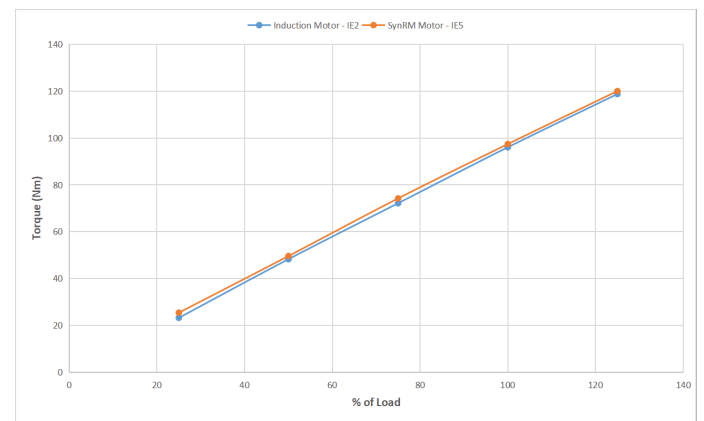
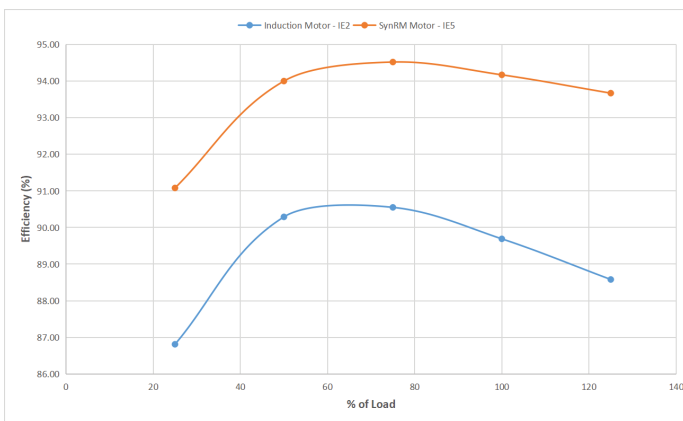
Duty Cycle	-	S1
Insulation Class	-	F
Moment of inertia (J)	kgm ²	0.103
Eff - IE2	%	90.6
Max Ambient Temp	°C	70
Frame	-	160L

Load Performance Curve

THREE PHASE SYNCHRONOUS RELUCTANCE MOTOR

Output Power	15	kW
Rated Voltage	415	V
Rated Current	29.0	I
Speed	300 - 3000	RPM
Frequency	10 - 100	Hz
Pole	4	-

Duty Cycle	-	S1
Insulation Class	-	F
Moment of inertia (J)	kgm ²	0.501
Eff - IE5	%	95.1
Max Ambient Temp	°C	70
Frame	-	160L



Truly indigenous IE5 from LEDL

⚡ Ultra-High Efficiency

SynRM can achieve high efficiency (up to IE5 levels) due to the absence of rotor copper losses and reduced iron losses.

IE5 SynRM motors meet the highest efficiency class defined by the International Electrotechnical Commission (IEC).

Better Partial Load Efficiency SynRMs maintain higher efficiency across a wider load range compared to induction motors, whose efficiency drops more significantly at partial loads.

⚡ Enhanced Reliability and Reduced Maintenance

Longer Lifespan: Cooler operation reduces stress on components like bearings and windings, leading to a longer motor lifespan and extended service intervals. Bearing failures, a common cause of motor outages, are less likely due to lower operating temperatures.

Simpler and Robust Rotor Construction: The lack of windings or magnets in the rotor leads to a simpler, more rugged design and potentially lower manufacturing costs.

Easier Maintenance: With no magnetic forces in the rotor, bearing replacement in SynRMs is as straightforward as in induction motors. There are no brushes to replace, unlike some other motor types.

Lower Bearing and Winding Temperatures: Reduced losses lead to less heat generation, which can extend bearing life and improve reliability.

⚡ Better Controllability

Being synchronous motors SynRMs offer more accurate speed and torque control, especially when used with a VFD.

They can provide full torque even at zero speed.

The precise control offered by SynRM and VFD packages can lead to improved process stability, higher product quality and reduced waste in industrial applications.

⚡ Improved Performance and Control

Accurate Speed Control: SynRMs operate at synchronous speed with practically no error, even without an encoder. Induction motors always have some slip, meaning their rotor speed is less than the synchronous speed.

Good Acceleration Performance: SynRM can provide good acceleration capabilities.

Better Dynamic Performance: The lower rotor inertia in some SynRM designs allows for faster acceleration and deceleration, making them suitable for high dynamic applications.

High Power Density and Power-to-Weight Ratio: SynRMs can offer high power output for their size and weight.

Suitability for Variable Speed Drives (VFDs): They are designed to work optimally with VFDs, which are crucial for achieving high efficiency and precise control.

⚡ SynRM motors are finding increasing use in various applications, including:

Industrial Drives: Pumps, Fans, Compressors, Extruders, Conveyors, Winches, Wire Drawing Machines etc.

Electric and Hybrid Vehicles: As traction motors or auxiliary drives.

Home Appliances: Washing machines, Air conditioners.

Low-Power Applications: Fiber spinning mills.

High-Speed Applications.



SynRM + VFD + IoT = Ultimate Power Saving Package



Lakshmi Electrical Drives Private Limited

504, Avinashi Road, Peelamedu, Coimbatore-641 004, Tamilnadu, India.
Unit-2 : 104-1A / 1B Thennampalayam, Annur Road, Arasur, Sulur(TK),
Coimbatore - 641 407,
URL: www.ledl.in • E-mail: support@ledl.in



scan for more details