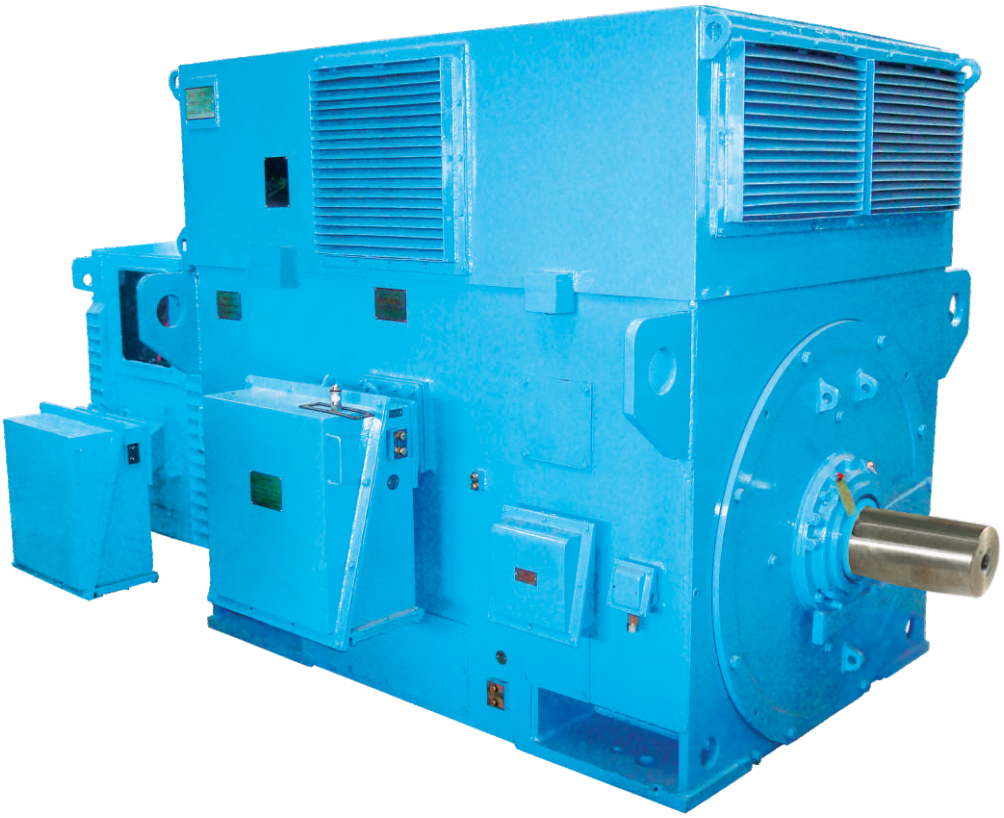
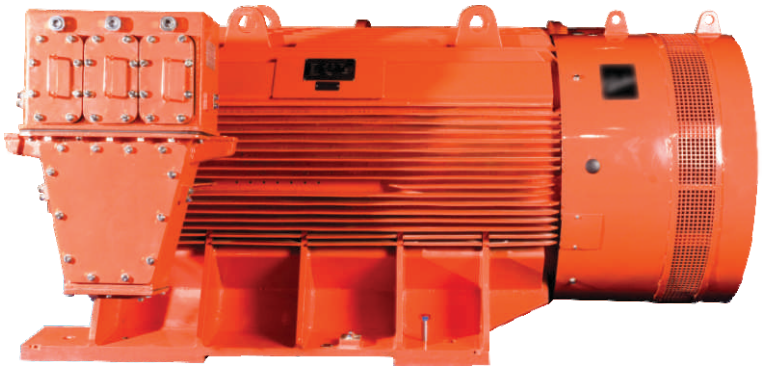
new india electricals

MEDIUM AND HIGH VOLTAGE THREE PHASE INDUCTION MOTORS



SQUIRREL CAGE MOTORS

Range	-	Upto 8000KW
Voltage	-	415/660/3300/6600/11000V
Mounting	-	Horizontal / Vertical
Speed	-	3000 / 1500 / 1000 / 720 / 600
Features	-	Versatile, Rugged, VFD Compatible
Application	-	Pumps, Fans, Grinders, Conveyors, Compressors, Mixers etc.
Industries	-	Cement, Steel, Power, Sugar, Paper, Chemical and Fertilizer, Mining etc.,

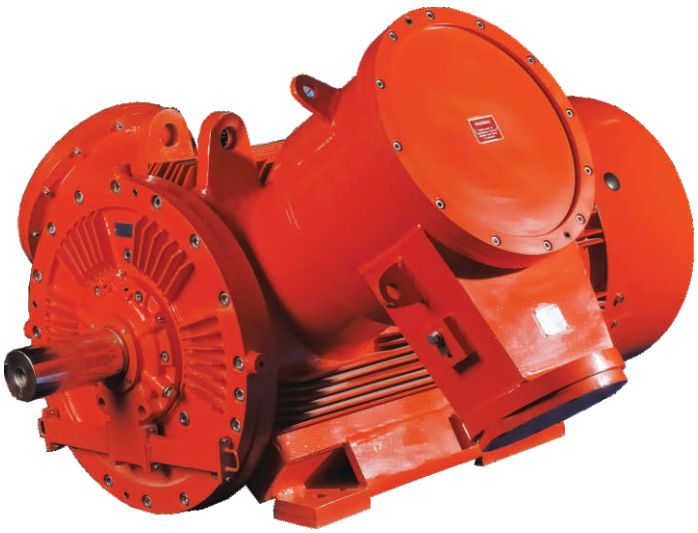


SLIPRING MOTORS

Range	-	Upto 8000KW
Voltage	-	415/660/3300/6600/11000V
Mounting	-	Horizontal
Speed	-	1500 / 1000 / 720 / 600/ 480
Features	-	High starting torque, variety of enclosures and Cooling Systems
Application	-	Ball Mills, Crushers, Fans, Grinders, Rolling Mills, Heavy Conveyers
Industries	-	Cement, Steel, Sugar, Mining

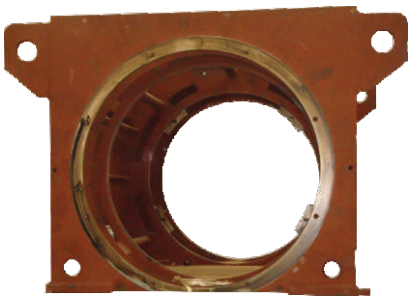
HARAZDOUS AREA MOTORS

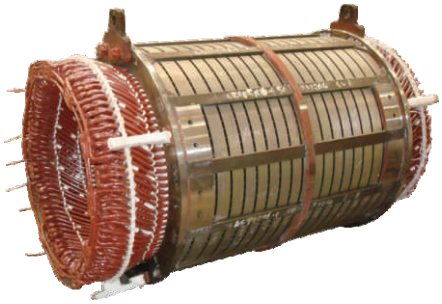
Range	-	Upto 8000KW
Voltage	-	415/660/3300/6600V
Mounting	-	Horizontal / Vertical
Speed	-	1500 / 1000 / 720 / 600
Features	-	EExe (Increased Safety) EExn (Non Sparking) EExd (Flameproof)
Certification	-	By Various Agencies
Application	-	Pumps, Fans, Conveyors, Compressors etc.,
Industries	-	Chemical, Petrochemical, Fertilizer Units, Oil and Gas, Mines, Refineries etc.,



FRAME

Fabricated or Cast Iron frames are the structural components that accommodate, support and protect the active magnetic parts of the Motors. Frames are designed to withstand rugged site conditions and offer excellent Mechanical strength and stability and to ensure low vibration levels across the speed range.



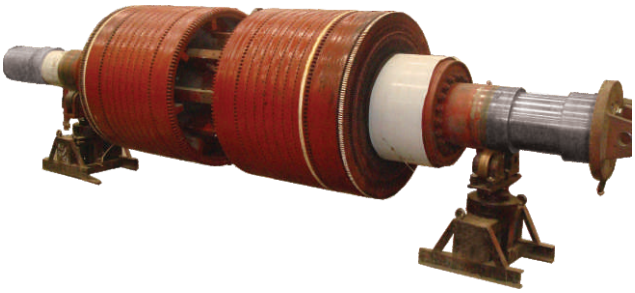


STATOR

This static part of the motor consists of a steel laminated core. Air ducts are provided for efficient and uniform cooling. The stator is vacuum pressure impregnated (VPI). The VPI process of curing of the completely wound stator winding with specially formulated epoxy resin to ensure a sealed and homogeneous insulation systems resulting in low losses, high electric strength and excellent heat transfer.

ROTOR

The rotor consists of a shaft and steel lamination core. Careful designed and properly balanced rotors ensure low vibration levels. Shaft material is selected depending upon the applications.



BEARINGS

Bearings are selected after detail study of the application and are based on the power and speed of the motor. Generally high quality Anti-Friction bearings are used. However if the application and customer demands other bearings such as Sleeve Bearings, Cylindrical Roller Bearings or Deep Grooved Ball Bearings are used. Insulated bearings are used wherever required and in all inverter driven motors to prevent circulation of shaft current due to harmonics.

COOLING SYSTEMS

IC411 - TEFC	-	Totally Enclosed Fan Cooled
IC416 - TEBV	-	Totally Enclosed Force Cooled
IC611 - TEAAC	-	Totally Enclosed Air-to-Air Heat Exchanger
IC81W/IC86W	-	TEWAC - Totally Enclosed Air-to-Air Water Heat Exchanger
IC666 - TEAAC	-	Totally Enclosed - Independent Cooling Air-to-Air Heat Exchanger
IC31 - TEPV	-	Totally Enclosed Self Cooled by Ducts
IC37 - TEPV	-	Totally Enclosed Independent Cooling by Ducts
IC01 - ODP	-	Open Type Self Cooled
IC06 - OIV	-	Open Type Independent Force Cooled

ACCESSORIES OFFERED

Temperature Detectors in Stator Winding

Temperature Detectors in Bearings

Space Heaters

Shaft Grounding brushes for VFD Applications

Bearing Thermometer

Oil Flow Meter

Lubrication Hydraulic Unit

Capacitors

Independent Cooling System

Encoders / Tacho Generators

Special Painting

Sleeved Bearings

Special Shaft Material

Special Shaft Extensions

DC MOTORS - LAMINATED YOKE

RUGGED, RELIABLE, CONTINUOUS DUTY
OPERATIVE WORKHORSES.

APPLICATION

Steel Industry, Plastic Extruders, Pumps, Paper Industry, Printing Machines, Conveyars, Cement Industry, Textile Machines, Apron Feeders, Sugar Industry, Wire Drawing, Machine Tools-Spindle Drives, Rubber Industry, Cable Making Machine & Test Rigs

STANDARDS

The range meets BS 5000 part 99-1973. Customized versions that meet standards such as NEMA, International Electrotechnical Commission etc are also available.

DESIGN

Computer controlled optimizing techniques have been employed to derive a compact, highly efficient design. Features such as ease of serviceability, low maintenance, long working life and continuous duty operation have been fully achieved.

ARMATURE

Armature core is built up from low loss, high grade cold rolled silicon steel stampings. The slots are skewed suitably to minimize noise and vibration.

Armature conductors are soldered to the commutator risers using a special tin-silver alloy to withstand high temperatures. The overhangs are banded with a high tensile resin fibre glass tape on automatic banding machine with "progressive tensioning" facility.

The completely wound armatures undergo vacuum pressure impregnation to ensure complete filling of all voids thus enhancing the life of the motor. The finished armature is treated with epoxy thixotropic gel coating as a surface seal.

COMMUTATOR

The commutator, which is the heart of any DC machine, is built in-house to ensure quality, accuracy and reliability. The arch-bound construction uses high conductivity, hard drawn silver bearing copper segments.

MAGNET FRAME

The stator stack is built up with steel laminations employing sturdy end plates to give required strength, stability and rigidity of the frame.

The main pole and commutating pole breaks are also built from steel laminations, and located accurately in recesses provided in the stator stack to ensure perfect symmetry essential for grade I commutation.

THE BRUSH GEAR

The brush holders are of robust construction and are rigidly mounted to insulated arms arranged with large creepage paths to ground. Constant pressure brush holders used in the brush gear eliminate the need to adjust the spring pressure as the brushes wear. The complete brush gear assembly can be rocked and clamped for setting the magnetic neutral axis.

INSULATION SCHEME

As a standard class 'F' insulation using class 'H' material is provided which results in an automatic and generous reserve over the ratings declared. This also ensures that the motor can take higher momentary loads.

SPECIAL FEATURES

- Completely laminated magnetic circuit for high di/dt
- Fully compensated machine to enhance the overload and field weakening capability
- Vacuum pressure impregnation for completely wound armatures for enhanced reliability
- Three plane dynamic balancing to ensure accurate balancing.
- Automatic coil winding and stretching machine.
- In-house fully equipped commutator manufacturing facility.
- Sturdy mechanical construction.
- Computer aided designs for optimal efficiency & design parameters.

OPTIONAL EXTRAS

The following optional extras can be provided at extra cost :

1. Mercury dial type bearing temperature detectors
2. RTD type bearing temperature detectors
3. Embedded temp. detectors - thermistors with relay unit
4. Embedded temp. detectors - TRD type
5. Filters for force cooling unit.
6. Air flow switch ; Water leakage detectors
7. Thermostat ; Air pressure switch
8. Space heater

NIE/HTMTR/0409

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