



Smart solutions.
Strong relationships.

Large & Traction Machines Railway Signalling



Motors
upto **25MW**

Generators
upto **70MVA**

LARGE ROTATING MACHINES

Squirrel Cage & Slip Ring Induction Motors in **CACA** enclosure

CG covers the most popular enclosure i.e. Closed Air Circuit Air method of cooling (IC6A1A1 & IC6A1A6) as per IEC 60034. Squirrel cage motors are suitable for VFD operations. These motors are widely used in all Industries for various applications like pump, fan, blower, crusher, conveyor, pulper, feeder etc.



IC6A1A6 Cooling Type, Oil Lubricated 630 Frame

Range	Squirrel Cage	Slip Ring
Voltage	upto 15kV	upto 15kV
Power	upto 25000kW	upto 25000kW
Pole	2 Pole to 24 Pole	4 Pole to 12 Pole
Frame	355 - 1120	355 - 1000
Series	TP, FT	
Mounting	B3, V1.	

Squirrel Cage & Slip Ring Induction Motors in **SPDP** enclosure

CG Large Re-Rolling Mill Duty slip ring induction motors (KMR series) are used to drive re-rolling mill for rolling hot steel billets into rods, flat bars, rails, channels, angles, sheets etc under arduous conditions of widely fluctuating loads & sudden overloads which last for few seconds. Screen protected drip proof (IC0A1) UDC / UDR series are suitable for operation in clean atmosphere specially pump & fan applications. SPDP motor offers higher KW in lower frame.



VUDC 1700 IP23 Drip Proof

Range	Squirrel Cage	Slip Ring
Voltage	upto 15kV	upto 15kV
Power	upto 11000kW	upto 9000kW
Pole	2 Pole to 20 Pole	4 Pole to 14 Pole
Frame	355 - 1120	355 - 1000
Series	KMR, UD, FH, FW	
Mounting	B3, V1.	

INDUCTION MOTORS

Squirrel Cage & Slip Ring Induction Motors in **CACW** enclosure

CG offers Closed Air Circuit Water Cooled (IC8A1W7) as per IEC 60034. Squirrel cage motors are suitable for VFD operations. These motors are widely used in all Industries for various applications like pump, fan, blower, crusher, conveyor, pulper, feeder etc.



IC6A1W7 Cooling Type, Oil Lubricated 630 Frame

Range	Squirrel Cage	Slip Ring
Voltage	upto 15kV	upto 15kV
Power	upto 25000kW	upto 25000kW
Pole	2 Pole to 24 Pole	4 Pole to 12 Pole
Frame	355 - 1120	355 - 1000
Series	UW, FR	
Mounting	B3, V1.	

Squirrel Cage & Slip Ring Induction Motors in **TETV** enclosure

Totally Enclosed Tube Ventilated (IC5A1A1) motors are most suitable in highly dusty, humid & polluted atmosphere for use in industries such as cement, steel, tyre, rubber, paper, refineries, petrochemicals, fertilizers, power generation plant, mines etc. The dimensions are generally as per IEC 60072. A or IS: 8223. Motors are with double ended radial ventilation with low noise, low loss internal fan for uniform temperature gradient.



Flange Mounted (IMV1) VTVC - Series, 1080 Frame

Range	Squirrel Cage	Slip Ring
Voltage	upto 13.2kV	upto 13.2kV
Power	upto 5000kW	upto 4000kW
Pole	2 Pole to 20 Pole	4 Pole to 12 Pole
Frame	450 - 800	450 - 800
Series	TV	
Mounting	B3, V1.	



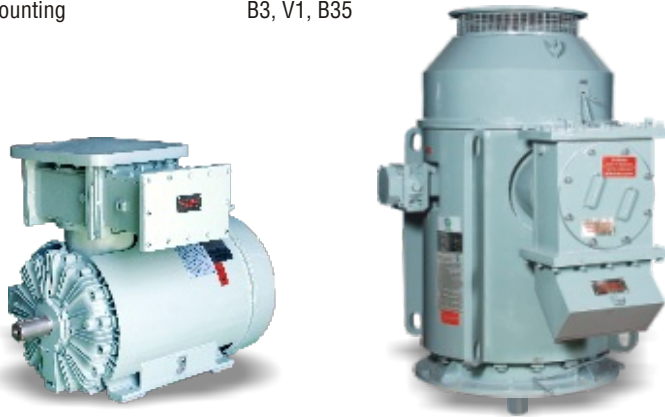
Global Series Energy Efficient AC Motors



NG 400 Foot Mounted Induction Motor

NG series motors belongs to a family of energy efficient, TEFC (IC4A1A1), state of art, squirrel cage induction motors. The new series of motors have high efficiency with almost flat efficiency curve from 60% to 100% loading. Additionally, the motors have desirable features of low noise & low vibrations.

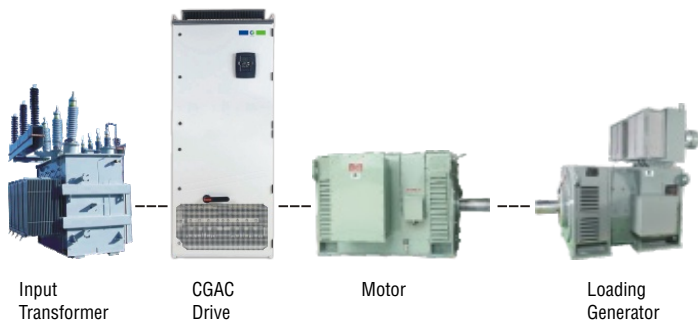
Range	
Voltage	upto 11kV
Power	upto 2000kW
Pole	2 Pole to 12 Pole
Frame	315 to 630
Mounting	B3, V1, B35



Motor with Type "d" Protection with Horizontal & Vertical Mounting

String test

Understanding the criticality of system reliability to our customers, CG offers its customers the option of on-load test of motors with drive.



MOTORS FOR HAZARDOUS AREA



E560 Motor with Type "d" Protection & Horizontal Mounting

CG offers a wide range of motors for use in Hazardous area in CACA, TEFC & TETV enclosures. These motors are widely used in petrochemical complexes, refineries, chemical, fertilizer, oil & gas & various other industries wherein inflammable gases are likely to be present. The motors are specially designed to meet requirement of IEC: 60079-7 (for Ex-e motors), IS/IEC: 60079-15 (for Ex-n motors), IEC:60079-2 (for Ex-p motors) & IEC:60079-1 (for Ex-d motors).

Range	Ex(e) Increased Safety	Ex(n) Non Sparking
Voltage	upto 15kV	upto 15kV
Power	upto 5000kW	upto 5000kW
Pole	2 Pole to 20 Pole	2 Pole to 20 Pole
Frame	315 to 900	315 to 900
Mounting	B3, V1	

Range	Ex(d) Flame Proof	Ex(p) Pressurised
Voltage	6.6kV	upto 15kV
Power	2000kW	190 kW to 5000kW
Pole	2 Pole to 8 Pole	2 pole to 20 pole
Frame	E355 to E710	400 to 900
Mounting	B3, V1	



ROLLING STOCK ELECTRICAL EQUIPMENT



**Traction Motor Type 6 FRA 6068
TM for 6000HP Loco**



**Traction Alternator Type
C1012TA for 1400 HP Demu**



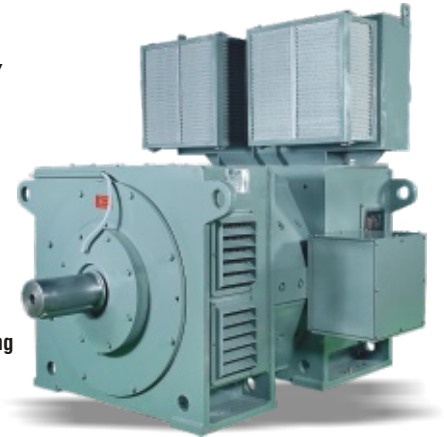
**Traction Alternator Type
C1014TA for 4000 HP Locomotive**

CG offer wide range Rolling Stock Electrics to AC Locomotives, Diesel Electric Locomotives & EMU'S / DEMU'S to Indian Railway. Application product range include Traction Motors / Alternators, Control Panel, Power Converter, Auxiliary Converter & Control Electrics. CG also offer complete solutions for Diesel Electric Multiple Unit (DEMU/EMU).

Range

For Diesel Locomotives	upto 4500HP
For Electrical Locomotives	upto 6000HP
For DEMU & DETC	upto 1400HP
For AC EMU	25KV

INDUSTRIAL DUTY DC MOTORS



**DC Motor for Steel Rolling
560 Frame**

CG offers a wide range of DC machines which are compact & robust, thus offer higher KW to weight ratio. The range includes blower cooled, CACA, and CACW in IP22, IP23, IP-54 & IP55 protection. Critical items are manufactured in-house under stringent quality control & are proven as six sigma products. Machines are with compensated windings to withstand high short time overloads under field weakening conditions. Motors are with skewed rotor construction which ensures low noise, low weight & GD2 for swift mechanical response. Large size bearings & moulded design commutator ensures longer & trouble free operation. Motor conforms to IEC60034-1, BS5000 Part 99 & IS4722.

Range

Frame	315 to 710
KW	50 to 2000KW
RPM range & Armature voltage as per specific requirement	

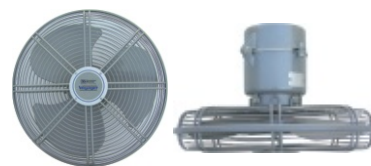
RAILWAY SIGNALLING RELAYS



Technical Data

Neutral Line Relay	: QN1, QNA1, QS3, QNN1, QNNA1
Biased Relay	: QBA1, QBBA1, QBCA1
Track Relay	: QT2, QTA1, QTA2
Lamp Proving Relay	: QECX 61, QECR2, QECX 51, QECX 52, QECX 53, QUCX 1
Latch Relay	: QI 1
Special Cation	: BRB & IRS

BRUSHLESS DC RAILWAY CARRIAGE FAN



Technical Data

Voltage Range	: 65-135
DC Sweep	: 400 mm
Power Input	: 32W Max.
Air Delivery	: 60 Cu Air
Starting Voltage	: 40V DC

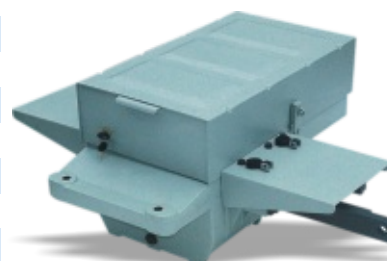
DATA LOGGER FOR RAILWAY SIGNALLING



Technical Data

Digital Input	: From 512 up to 4096 in steps of 64
Analog Input	: From 32 up to 64
Tele Command Outputs	: 8
Display	: 4 Line Alfa-numeric LCD display
Networking	: Up to 32 nos data loggers in Multi drop / point to point configuration
Input Voltages	: 24V DC + 20%, - 10%

POINT MACHINES



Trailability

Trailable, Non Trailable

Voltage

110V DC, 120V DC, 380V, 3 Phase AC

Stoke lengths

143 mm, 220 mm & 175 mm

SYNCHRONOUS GENERATOR

CG is a pioneer in the modern technology in electrical field which offers complete solutions for generation, transmission and distribution of energy by supplying globally recognized high-tech products delivering elevated efficiency and robustness.

Since its inception, Crompton Greaves has been synonymous with electricity. In 1875, a Crompton 'dynamo' powered the world's very first electricity-lit house in Colchester, Essex, U.K. CG's India operations were established in 1937, and since then the company has retained its leadership position in the management and application of electrical energy.

CG generators meet the vital needs of diverse applications - be it in continuous power supply, parallel operation in power plants, industrial plants, hospitals and high-rise buildings; mobile applications such as railway vehicles, cranes, marine or wind power demanding the utmost level of electrical performance.

The Synchronous Generator designs are created using latest technology and optimized using FEM/Flux plotting techniques to deliver the highest level of performance.



2000KW, 8Pole, 3.3kV, Synchronous Generator - Hydro Application

Rating:
upto 70MVA
upto 15kV

Applications:
• DG Set • Steam • Hydro • MG Set etc.

Mounting:
B3, V1.



Series Motor

- High Efficiency
- Low Noise & Vibration
- Better Power Factor
- Improved Power to weight ratio

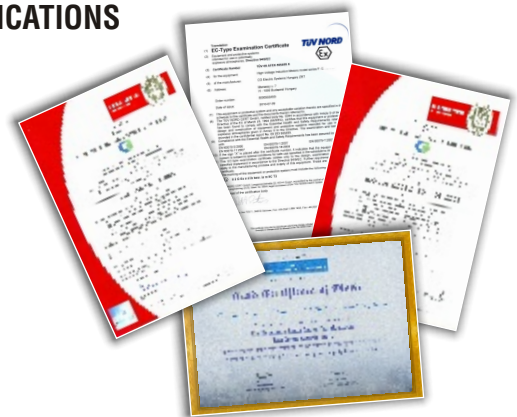


2550KW, 6Pole, 11KV, TPC560 Fan Drive, N Series Motor

The N Series Motors are the latest addition in CGs HT Motor Portfolio. These high efficiency, low noise & low vibration motors & lower weight as compared to its contemporaries cater to the different rugged application for the industry. The N Series Motors are available from 355 Frame to 1120 Frame up to 12 MW in CACA & CACW enclosures both in Vertical & Horizontal mountings. These motors are virtually developed on analytical platforms & guarantees performance at par with best in the world.

Power	: upto 12MW
Frame	: 355 - 1120
Pole	: 2 to 20 Pole
Voltage	: Upto 13.2KV
Mounting	: B3, V1.

CERTIFICATIONS



Quality work is based on a quality policy that focuses on customer satisfaction, employees commitment and constant improvement. The quality system has been designed to meet the customer's expectations and demands. The quality system shall also support and facilitate our activities in pursuing a serious and long term customer cooperation. We have chosen to adapt the system to follow the internationally recognised standard ISO 9001:2008, ISO 14001:2004 & ISO 18001:2007. The enterprise has a quality management system that complies with the international standard.

For more information:

Visit us at: www.cgglobal.com