



Global Series Energy Efficient Motors

Crompton Greaves G-Series (Global Series) Motors belong to family of energy efficient, Totally enclosed fan cooled (TEFC) state-of-art, squirrel cage motors. These motors are extremely efficient, even at partial load, and they have very low noise level. Efficiency is maximized by effectively utilizing materials, minimizing losses and optimized fin design. Further more, due to reduced fan and core losses, there is no sharp drop in the efficiency curve at partial load.

The components are designed using finite element analysis of electromagnetic, structural, thermal and air flow, which ensures better stress distribution and high structural rigidity. Adequate steps have been taken in the electrical design process to make sure the natural frequencies of stator teeth and core remain well away from the field forcing frequency. Appropriate selection of tolerances and fits in addition to good manufacturing processes facilitates maintaining high level of quality. The rotor and fans are separately balanced on precision balancing machine to very stringent grades. All these put together, results in extremely low vibration levels.

The motors are totally enclosed (IP55) surface cooled through a fan mounted on the shaft (IC4A1A1) or separately mounted (IC4A1A6) along with the following features

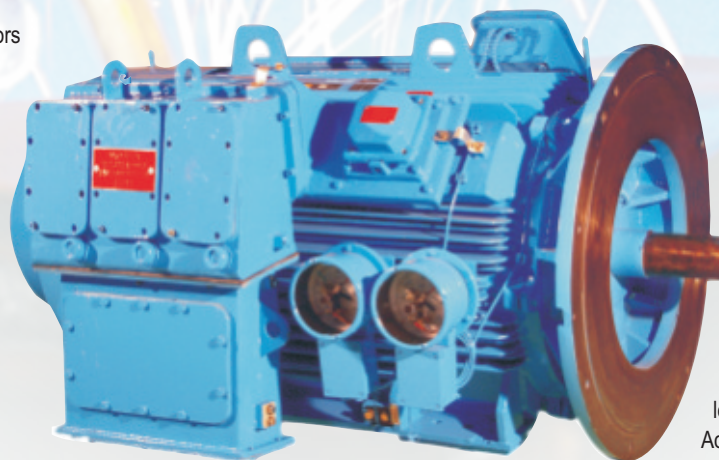
- Axial ventilation rotor design
- Machined stator
- Single circuit ventilation
- Vacuum pressure impregnation (VPI) insulation system



NG-Series Foot Mounted, 400M Frame Motor

Salient Features

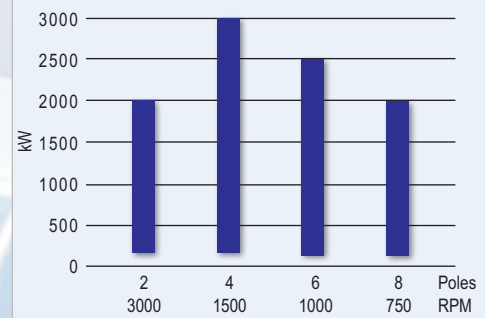
- Energy efficient surface cooled motors
- Robust steel frame
- Solid deep rotor bars in single cage
- Special double cage as per driven equipment requirement
- Antifriction bearings
- Dynamically balanced rotors
- Stringent quality checks
- Class 'F' insulation with class 'B' temperature rise
- High efficiency
- Low noise levels
- Low vibration levels
- Ease of maintenance



NG-Series Foot and Flange Mounted, 315M Frame Motor

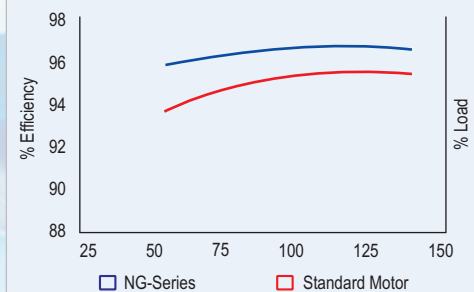
For optimum performance and maximum life NG-Series motors are built with axial ventilation rotor design with machined stator core that improves heat transfer thereby giving excellent thermal performance. This is further aided by streamlined internal air circuit design & vacuum pressure impregnation (VPI) insulation scheme which meets the requirement of Thermal class F (temperature limit 155°C) though the motors are rated for class B temperature rise operation.

NG-Series Output Chart, 3300-6600 V, 50Hz



Value For Money

350 kW, 4 Pole, 355 Frame Motor Efficiency Pattern



The efficiency curve of standard motor is dropping in nature i.e. there is a sharp fall in efficiency at part loads. But NG-series motors have an almost flat efficiency curve. Hence fall in efficiency is marginal. Thus energy saving is significant even at part loads.

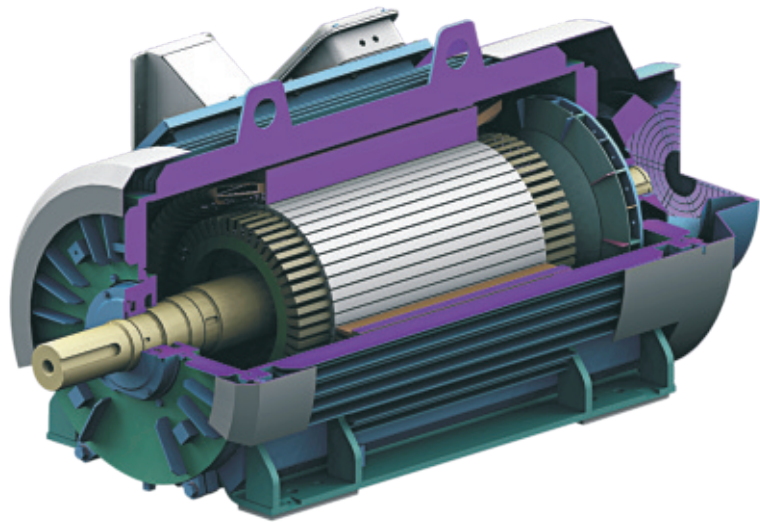
CGL's Motor Solutions

CG deliver variants of the NG-Series motor (with 13.2kV 60Hz. higher poles/low speed). Special mounting arrangement can also be built as per customer requirement. CG also supply configurations of G-Series motors with sleeve bearings, double shaft extension, low vibration, low noise levels, motors for hazardous areas. Additional sensors (vibration sensors, speed sensor, contact thermometer) can be provided to compliment motor monitoring and fault protection units.

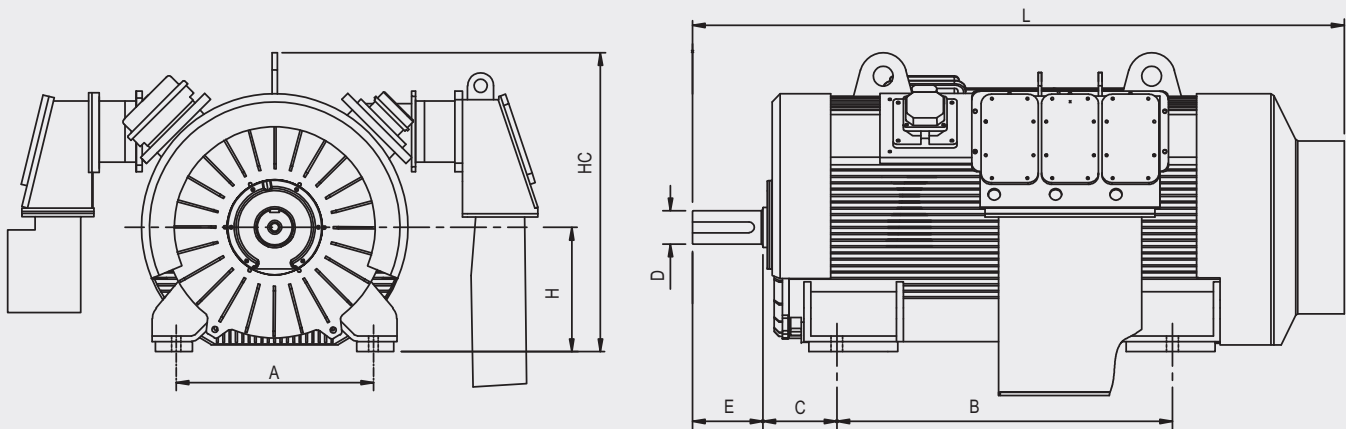
NG-Series

Standard Range

- Totally enclosed fan cooled (TEFC)
- 100 to 3000kW at 50 Hz
- 150 to 4000HP at 60 Hz
- Voltages from 380 V to 13200 V
- Shaft heights 315 - 630mm
12.4 - 22.0 inches
- Horizontal or vertical
- IP55/IP56, IC4A1A1 / IC4A1A6
- 2 Pole to 12 Pole
- Standards IEC60034 / IS325
- Motors for hazardous areas
- Motors for VFD application



General Arrangement Drawing



Overall Dimensions of Motor

Type	Poles	A	B	C	ØD	E	H	HC	L
NG 315 S	2 - 6	508	800	216	70 - 95	140 - 170	315	790	1700
NG 315 M	2 - 6	508	900	216	70 - 95	140 - 170	315	790	1800
NG 315 L	2 - 6	508	1000	216	70 - 95	140 - 170	315	790	1900
NG 355 S	2 - 6	610	900	250	85 - 110	170 - 210	355	900	1845
NG 355 M	2 - 6	610	1000	250	85 - 110	170 - 210	355	900	1945
NG 355 L	2 - 6	610	1120	250	85 - 110	170 - 210	355	900	2065
NG 400 S	2 - 8	686	900	280	85 - 120	170 - 210	400	1000	1980
NG 400 M	2 - 8	686	1000	280	85 - 120	170 - 210	400	1000	2080
NG 400 L	2 - 8	686	1120	280	85 - 120	170 - 210	400	1000	2220
NG 450 S	2 - 8	750	1000	315	85 - 125	170 - 210	450	1100	2150
NG 450 M	2 - 8	750	1120	315	85 - 125	170 - 210	450	1100	2325
NG 450 L	2 - 8	750	1250	315	85 - 125	170 - 210	450	1100	2525

All dimensions are in mm

† GD500, GD560 are also available on request

Note : Due to continuous improvements and developments, the above data is likely to be changed without prior notice.

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