

N20G4 - Technical Data Sheet



NEWAGE® range is the three-phase, four-pole synchronous AC generators of brushless design, providing optimized and reliable power for standby and other applications.

Standards

NEWAGE® industrial alternators meet the requirements of IEC 60034-1 and ISO 8528-3.

Quality Assurance

NEWAGE® alternators are designed, built, and tested to the quality assurance level of ISO9001.

Excitation System

The excitation system is self-excited as standard with power being provided by the main stator via the digital Automatic Voltage Regulator (AVR) to the exciter stator.

The exciter rotor output is fed to the main rotor through a three-phase full wave bridge rectifier. The digital Automatic Voltage Regulator is three-phase voltage sensed and will control the alternator output voltage to within $\pm 1\%$.

Terminal Box

NEWAGE® alternators feature a main stator with six ends brought out to the terminal box, which is located at the non-drive end of the alternator. The terminal box contains the AVR and provides easily accessible wiring connection points.

Shaft and Rotor

All NEWAGE® alternators are single bearing with applicable SAE engine interface housing and drive disc. The rotor poles are provided with damper cage as standard.

Insulation/ Impregnation

All NEWAGE® generators utilize a Class H insulation system.

Every wound component is impregnated with materials and processes designed specifically to provide protection against the challenging environments often encountered in generator operation.



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Technical Specifications	
Number of Phases	3
Number of Poles	4
Insulation System	Class H
Stator Winding	Single Layer; Fully-Pitched
Number of Leads	6
Nominal Ambient Temperature	-15 to 40 °C
IP Rating	IP23
Voltage Regulation	± 1%
Total Harmonic Distortion (THD)	< 5%
Excitation System	Brushless, Self-Excited
Regulator Type	DM710
Nominal Speed	1500RPM at 50Hz, 1800RPM at 60Hz
Overspeed	2250RPM
Cooling Air Flow	5.5m³/min at 1500RPM – 6.6m³/min at 1800RPM
Bearing	Single Bearing, Type 6207 2RSC3
Weight	97kg
Overload	110% of rated power for 1 hour in a 6-hour cycle
Electromagnetic Compatibility	EN61000-6-2, EN61000-6-4

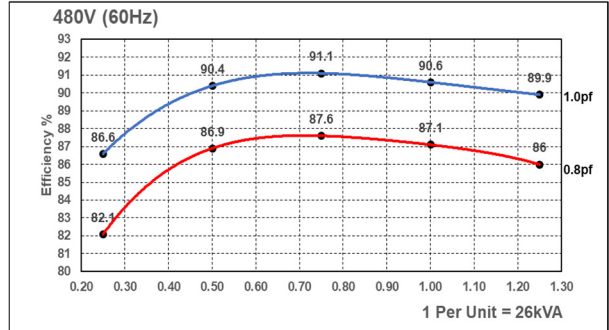
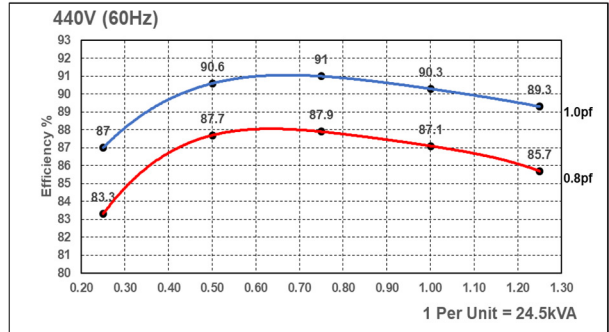
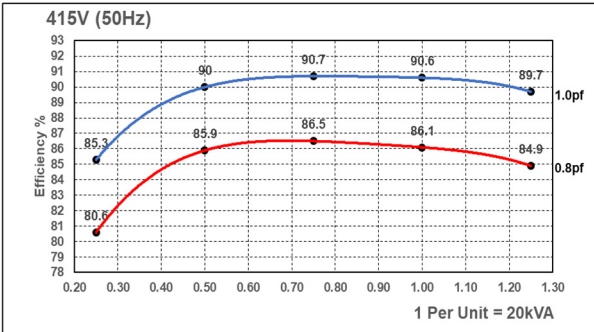
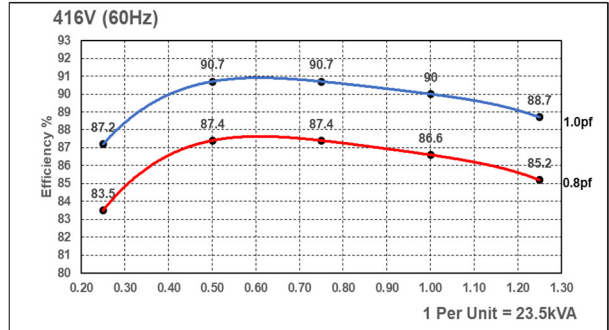
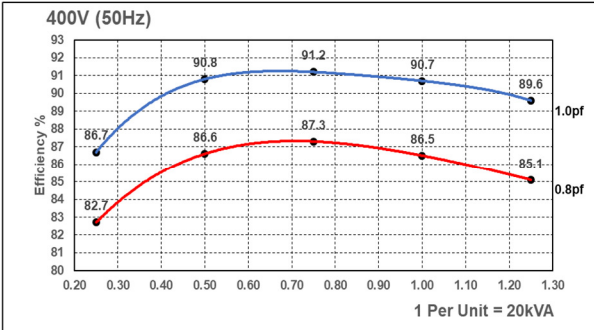
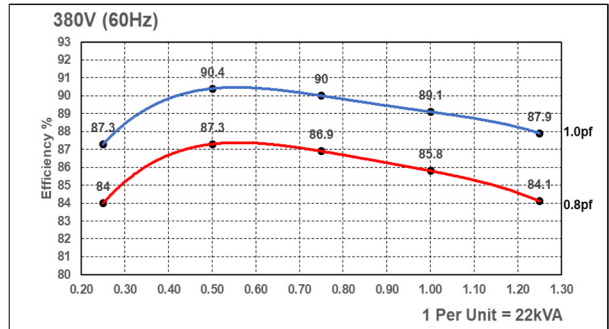
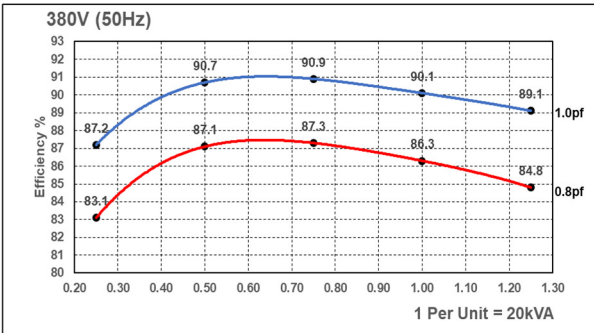
Electrical Ratings (0.8 – 1.0 PF)

Class – Temp Rise		Cont. H - 125/40 °C			Standby - 150/40 °C			Standby - 163/27 °C		
50 Hz	Voltage	380	400	415	380	400	415	380	400	415
	kVA	20	20	20	21	21	21	22	22	22
	kW	16	16	16	16.8	16.8	16.8	17.6	17.6	17.6

Class – Temp Rise		Cont. H - 125/40 °C				Standby - 150/40 °C				Standby - 163/27 °C			
60 Hz	Voltage	380	416	440	480	380	416	440	480	380	416	440	480
	kVA	22	23.5	24.5	26	23.1	24.7	25.7	27.3	24.2	25.9	27	28.6
	kW	17.6	18.8	19.6	20.8	18.5	19.7	20.6	21.8	19.4	20.7	21.6	22.9

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Three Phase Efficiency Curves

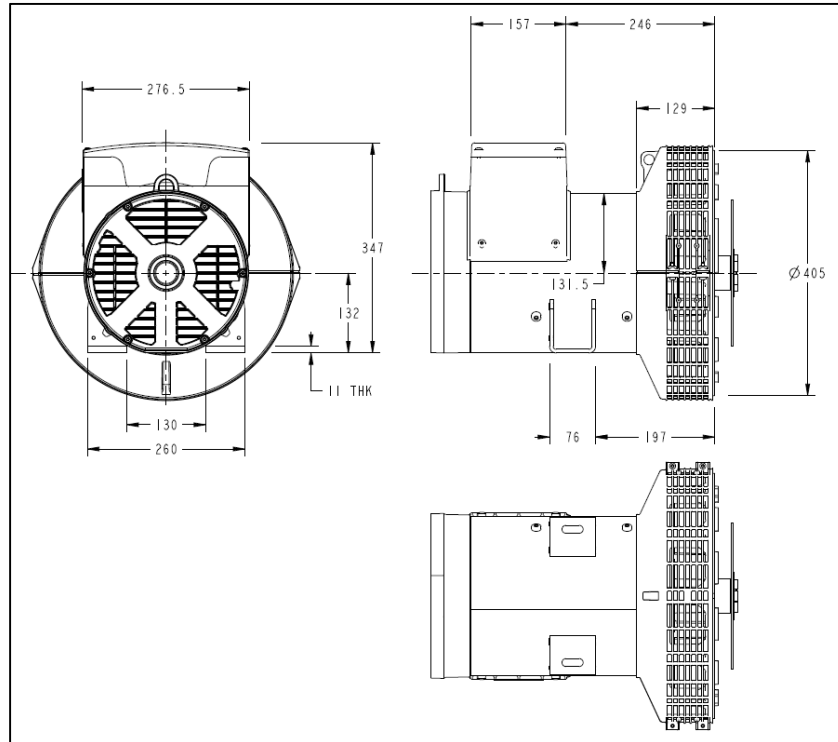


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Overall Dimensions – SAE 4/ 7.5




Output Power De-rates


The output power ratings are subjected to the following ambient temperature de-rates:

- 4% for every 5°C by which the operational ambient temperature exceeds 40 °C, up to max. 55 °C


The output power ratings are subjected to the following altitude de-rates:

- 1000 to 1500m above sea level: apply the constant de-rate factor of 0.96
- 1501 to 2000m above sea level: apply the constant de-rate factor of 0.91
- 2001 to 3000m above sea level: apply the constant de-rate factor of 0.85

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