

# NGE-73-CU, DIESEL GENSET

Powered by Cummins Engines  
Engine Model: Cummins 4BTA3.9G2  
60Hz, 440V, 1800RPM



## STANDARD SPECIFICATION

### Voltage Regulation

Voltage regulation maintained within  $\pm 0.5\%$

- Between 0.8 and 1.0 lagging and unity
- From no load to full load
- At speed droop variation up to 4.5%

### Frequency Adjustable Ratio

- Change load from 0-100%, within 1.0% (electric speed regulator), within 4.5% (mechanical speed regulator)

### Frequency Undulation

- Load from 0-100%, Frequency undulation within 0.25%
- No load wire volts max undulation ratio within 1.8%
- Three phase balanced load in the order of 5%

### Effect factor of telecom

- TIF better than 50
- THF to BS4999 Part 40 better than 2%

### Electromagnetism

In compliance with BS800 and VDE levels G and N

## General Features

- Heavy-duty industrial diesel engine
- Brushless synchronous alternators: four-pole construction, dynamically balanced
- Prototype tested and production tested
- Gen-set accepts rated load in one step
- 8-hour base mounted fuel tank
- Operation & Maintenance manual
- Special Integrated Steel Base tank and sprayed overall in gloss enamel paint
- Color: argent blue or green
- Optional weather-proof and sound attenuated enclosures available
- Full range of accessories and options available
- Battery Rack and batteries
- Backed by a world wide network of parts and service center

## CRITERION

ISO 9001:2000, ISO3046, ISO8528 BS4999  
BS5000PT99, BS5514, AS1359, IEC34 UTE5100  
VDE0530, CSAA22.2, CEMA, NEA



Genset model	NGE-73-CU
Power Output (PRP)	52 KW
	65 KVA
Power Output (ESP)	58 KW
	73 KVA
Engine Model	4BTA3.9G2
Canopy Type	NC20

1. Available in the following voltages:  
480/277V-440/254V-220/127V-208/120V.
2. ESP: Standby Power-Standby duty operation under variable, without overload.
3. PRP: Prime Power-Continuous duty operation, under variable load  
24/24-h-10% overload permissible 1 hour/12hours.

# NGE-73-CU, DIESEL GENSET



## Generator Engine

### Designed with Safety in Mind

The fully NGE-CU Range generator set are powered by Cummins engines.

Cummins water cooled Diesel engine, oil and fuel filter fitted, water separator, Lube-oil drain valve fitted.

## GENSET SPECIFICATION

**Cast Iron Skirted Block:** With main bearing supports between each cylinder, for maximum strength and rigidity, low weight, and optimum crankshaft support.

**Compact Size:** For ease of installation and easy access for routine maintenance.

**Direct Fuel Injection System:** With high swirl intake ports for thorough mixing of air and fuel to provide low fuel consumption.

### Forged Steel, I-Beam Cross Section Connecting Rods:

With angle split cap-to-rod interface and capscrew attachment for maximum structural strength and ease of service.

**Starting :** 24 volt negative earth. battery charging alternator 35 amp on engine. Cranking current 640 amps at 0 °c.

### Fuel System

24 volt fail safe actuator. Spin-on paper element fuel filters with Bosch fuel pump injection system with integral Electronic governor. Dual flexible fuel lines And connectors. Standard fuel water separator.

### Filters.

Air cleaner with dry element and restriction indicator.

Spin full flow lube oil filter.

### Cooling

50 °c radiator as standard

Oil cooler, Drain Tap

## GENSET SPECIFICATION

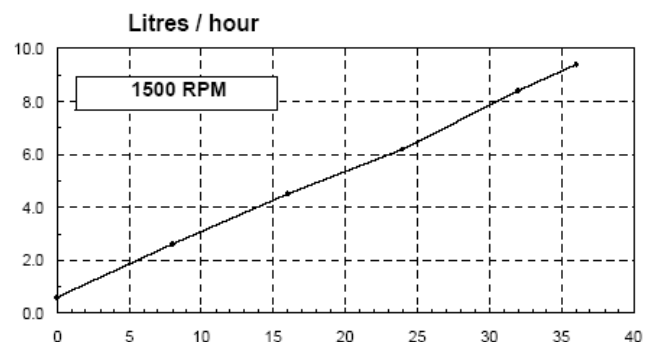
Engine Model		4BTA3.9G2
Type		4-cylinder ,4-cycle diesel engine
Apiration		Turbocharged
Bore x Stroke	mm	102 x 120
Compress the ratio		16.5:1
Engine Speed	rpm	1800
Continuous Rated Output /kw		65
Oil Capacity	L	16.4
Coolant Capacity	L	8
Starting System		Electric - 24 volt DC
Displacement	L	3.9
Lubricant	L	13
Battery Voltage /Capacity		24VDC/100A/120
Governing Type		Mechanical / Electrical

### Exhaust System

Exhaust Gas Flow	m <sup>3</sup> /min	14.8
Exhaust Temperature	°c	497

### Fuel System

Fuel Cons. 100%	g./Kw.h	216
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## AC ALTERNATOR

### STAMFORD NEWAGE GENERATOR

STAMFORD NEWAGE has a long history producing high-quality reliable products for the power generation market. Their portfolio of high quality generator ends is recognized as an industry standard.

#### Alternator Technical Data

##### Stamford AC alternator

- Brushless, self exciting
- Class 'H' insulation
- Standard degree of protection is IP22
- Self regulating
- With fan cooling
- Resist humid grease
- AC excitation, rotating rectification tube
- Stator grease insulation covered
- Rotator and excitation high polymer, Resist the corruption of oil and acid.
- Rotator balance is in accordance with BS5625 standard 12.5
- High-quality lubrication sealed long-time bearing
- Rotator silicon steel close tight

#### Alternator Technical Data

Generator Frame	18/22
Exciter	Brushless
Cooling Fan	Cast alloy aluminum
Bearing	Single, double shielded
Windings	100% copper
Connection Type	Reconnectable
Insulation Type	Class H
Pitch	2/3
Amortisseur Winding	Full
Voltage Regulator	SX440 / SX460
Voltage Regulation NL - FL	± 1.5%
Under speed Protection	Standard
Over excitation Protection	IP22
Standards	NEMA, IEC, IEEE, CSA, BS
Phase Sequence	A(U), B(V), C(W)
TIF (1960 Weightings)	<50
Excitation System	PMG - optional

## CONTROL PANELS

Different types of control panels are available for the Manual and / or Automatic Control.

Selected operational timers and alarms can be adjusted by the customer.

**Configuration** of the module can be carried out manually using the front panel editor, or alternatively by PC, through software.

Operation of the module is via pushbuttons mounted on the front panel with STOP, AUTO and MANUAL modes.

A further pushbutton provides an LCD DISPLAY SCROLL function to view the instrumentation.

#### Multiple alarm channels

- ▶ Under/Over speed
- ▶ Charge alternator failure
- ▶ Emergency stop
- ▶ Low oil pressure
- ▶ High engine temperature
- ▶ Fail to start
- ▶ Fail to come to rest
- ▶ Loss of speed sensing signal

#### Digital Inputs

- ▶ Emergency Stop - A N/C DC positive input
- ▶ 5 fully configurable warning or shutdown inputs.

#### Metering

Generator Volts L1-N, L2-N, L3-N  
 Generator Volts L1-L2, L2-L3, L3-L1  
 Generator Amps L1, L2, L3  
 Generator Frequency Hz

Engine Speed RPM  
 Engine Oil Pressure (PSI & Bar)  
 Engine Temperature (oC & oF)  
 Plant Battery Volts  
 Engine Hours Run

#### FEATURES

- ▶ Micro-processor based design
- ▶ Fully PC or front panel configuration
- ▶ Automatic engine starting & stopping
- ▶ Automatic shutdown on fault condition
- ▶ Provides engine and generator instrumentation
- ▶ Provides engine alarms and status information
- ▶ LED & LCD alarm indication

Control Panel By:



## OPTIONAL FEATURES

- ▶ Low fuel level alarm shutdown
- ▶ Automatic Fuel Filling System
- ▶ Engine Oil Heater
- ▶ Remote Radiator
- ▶ Charge Voltmeter
- ▶ Charge Ammeter
- ▶ Critical Silencer
- ▶ PMG
- ▶ Tool Kit
- ▶ Residential Silencer
- ▶ Auto Transfer Switch (ATS)
- ▶ Earth Fault Relay
- ▶ Remote Monitor Interface
- ▶ Protection for Alarm Module & Auxiliary Relay
- ▶ Parallel Control Panel
- ▶ Circuit Breaker MCCB & ACB
- ▶ Remote Control Panel



- ▶ Protection for Alarm Module & Auxiliary Relay
- ▶ Circuit Breaker MCCB & ACB
- ▶ Mains auto-charger
- ▶ Engine/Alternator Heaters
- ▶ Trailer
- ▶ Enclosures or Soundproof Canopy
- ▶ Manual Sump Oil Drain Pump
- ▶ Packing-Export Box
- ▶ And More

### Voltage Connections

277/480V,3 Phase  
 254/440V,3 Phase  
 240/416V,3 Phase  
 230/400V,3 Phase  
 220/380V,3 Phase  
 127/220V,3 Phase  
 115/200V,3 Phase  
 110/190V,3 Phase



Control your generator remotely

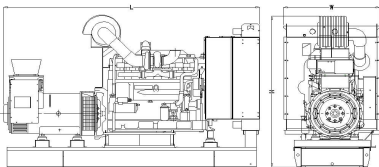


ATS Controller

Parallel Control Panel system

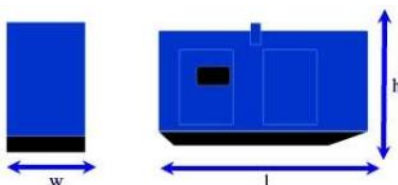
Remote Control Panel

## DIMENSIONS



### Open Model Excluding option

Overall size (L\*W\*h), mm:  
 1820\*760\*1280  
 Weight (kg):930



### Enclosure Unit

Overall size (L\*W\*h), mm:  
 2380\*1040\*1580  
 Weight (kg) :1450



In line with our policy of continuous product development, we reserve the right to change specification without notice.