

Model: C3438E6

Powered by CUMMINS



Generator Specification

Service	PRP ⁽¹⁾	ESP ⁽²⁾
Power (kVA)	3125	3438
Power (kW)	2500	2750
Rated speed (r.p.m)	1800	
Standard voltage (V)	440/254V	
Rated at power factor(cos phi)	0.8	



AGG Power gensets are compliant with ISO 9001 and CE standard, which include the following directives:

- 2006/42/EC Machinery safety.
- 2006/95/EC Low voltage
- EN 60204-1: 2006+A1: 2009, EN ISO 12100: 2010, EN ISO 13849-1: 2008, EN 12601 : 2010

(1) PRP (Prime Power):

According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

(2) ESP (Standby Power):

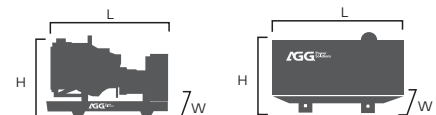
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

Powers Voltage (V)	ESP		PRP		Standby Amps
	KVA	KW	KVA	KW	
480/277	3438	2750	3125	2500	4135.4
440/254	3438	2750	3125	2500	4511.3
380/220	3438	2750	3125	2500	5223.7
220/127	3438	2750	3125	2500	9022.7
208/120	3438	2750	3125	2500	9543.2

Performance Data		
Model	C3438E6	
Engine brand	Cummins	
Engine model	QSK78G8	
Speed control type	ECM	
Phase	3	
Control system	Digital	
Starter motor voltage	24V	
Frequency	60HZ	
Engine speed (RPM)	1800	
Fuel Consumption (L/H)	100% standby power	701
	100% prime power	634
	75% prime power	500
	50% prime power	352

Standard reference Conditions

Note: Standard reference condition 25°C (77°F) air inlet temp, 100m(328ft) A.S.L 30% relative humidity. Fuel consumption dat with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998 , Class A2



Dimension and Weight		
Dimension	Open	Silent
Length (L)	-	12192mm
Width (W)	-	2438mm
Height (H)	-	2896mm
Net Weight	-	-
Fuel Tank (L)	-	-

■ Engine Specification: QSK78G8

Basic technical data	
No. of cylinders	18
Cylinder arrangement	60° Vee
Cycle	4 stroke
Induction system	Turbocharged
Compression ratio	15.5:1
Bore	170mm
Stroke	190mm
Displacement	77.6L
Engine idle speed	700-900rpm
Approximate engine weight	9220kg

Cooling system	
Minimum pressure cap rating at sea level	76 kPa
Coolant Capacity	
Engine	166.6 L
Aftercoolers	56.8 L
Maximum static head of coolant above engine crank centerline	/
Standard Thermostat (Modulating) Range	/
Minimum Pressure Cap	/
Maximum Top Tank Temperature for Standby / Prime Power	/

Fuel system	
Injection system	Cummins HPI
Governor type	ECM
Maximum restriction at lift pump	/
Maximum fuel inlet temperature	/
Maximum fuel supply restriction at fuel pump inlet with clean fuel filter element(s) at maximum fuel flow	16.9 kPa
with dirty fuel filter element(s) at maximum fuel flow	30 kPa

Air intake system	
Maximum Intake Air Restriction with Dirty Filter Element	6.2 kPa
with Normal Duty Air Cleaner and Clean Filter Element	3.7 kPa

Lubrication system	
Oil Pressure	
— Minimum low idle	207 kPa
— Governed speed	413.7 - 482.6 kPa
Maximum oil temperature	121 deg C
Minimum required lube system capacity-sump plus filters	/

Electrical system	
Cranking motor (Heavy duty, positive engagement)	24V
Battery charging system, negative ground	55 Amp
Maximum allowable resistance of cranking circuit	/
Minimum recommended battery capacity- cold soak	/

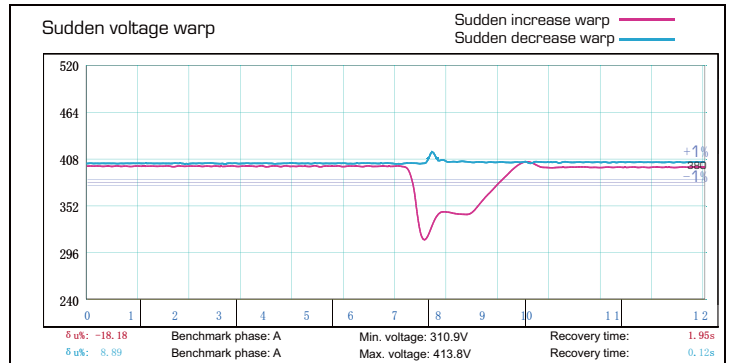
General installation	Prime power
Gross engine power output	2,737kW
Piston speed	11.4m/s
Friction horsepower	266kW
Engine water flow to engine	/
Intake air flow	3,756L/s
Exhaust gas flow	8,619L/s
Heat Rejection to Ambient	255kW
Heat Rejection to Exhaust	1723kW
Heat Rejection to Jacket Coolant	957kW
Heat rejection to fuel	44kW

■ Alternator Specification

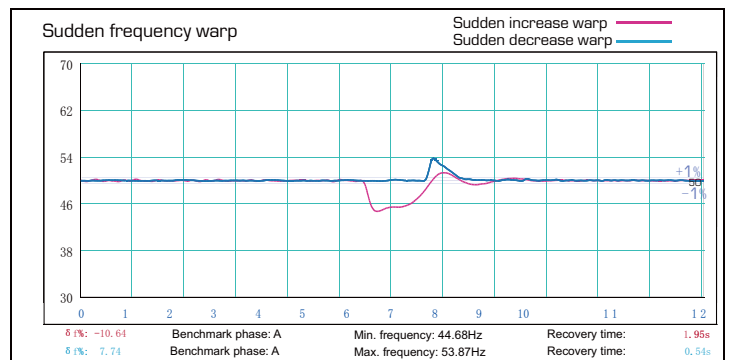
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



■ Options

Engine	Alternator	Generator Sets	Fuel System
<ul style="list-style-type: none"> Water Jacket Pre-heater Fuel heater 	<ul style="list-style-type: none"> Winding Temp measuring Instrument Alternator Pre-heater PMG Anti-damp and anti-corrosion treatment Anti-condensation heater Winding and bearing RTD 	<ul style="list-style-type: none"> Tools with the machine Extended range fuel tank Bunded fuel tank 	<ul style="list-style-type: none"> Low fuel level alarm Automatic fuel feeding system Fuel T-valves
Canopy	Lub oil system	Cooling System	Control Panel
<ul style="list-style-type: none"> Rental type Canopy Trailer 	<ul style="list-style-type: none"> Oil Pre-heater Oil temp sensor 	<ul style="list-style-type: none"> Front heat protection 	<ul style="list-style-type: none"> Remote control panel ATS Synchronizing controller Adjustable earth leakage relay

■ Control Panel

Configuration

- Emergency stop button
- Protection MCB
- Battery charger
- Integrated aviation plug
- ATS connection
- Digital control module

Features

- 3 phase generator set monitoring
- Support of engines equipped with electronic control unit
- Comprehensive diagnostic message
- Automatic or manual start/stop of the gensets
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display
- Parameters adjustable via keyboard or PC
- Mains measurements (50HZ/60HZ)
- Generator measurements (50HZ/60HZ)
- Comprehensive shutdown or warning on fault condition
- 3 phase Generator protections
 - Over-/under voltage
 - Over-/under frequency
 - Current/voltage asymmetry
 - Over current/overload
- 3 phase AMF function
 - Over-/under frequency
 - Over-/under voltage
 - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface
- Modem communication support
- Hours counter
- Sealed to Ip65
- Event log

Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- User friendly set-up and button layout
- Module can be configured to suit individual applications
- PC software for simplified configuration
- Wide range of communication capabilities

Operation conditions

- Operation temp: -20 °C to + 70 °C
- Storage temp: -30 °C to + 80 °C
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz, ±1.6 mm
5-100Hz, a=4g
- Shocks: a= 500m/s²

Options

- Ethernet interface (Remote monitoring and control)
- GSM modem/wireless internet (Remote monitoring and control)
- RS232-RS485 Dual port interface
- Synchronizing control panel
- Distribution board with sockets kit and power busbar
- Battery trickle charge ammeter
- Earth leakage protection
- Earth fault protection
- Low fuel level alarm
- Low fuel level shutdown
- High fuel level alarm
- Fuel transfer system control
- Low coolant level shutdown
- High lube oil temp shutdown
- Overload via alarm switch on breaker
- Engine coolant heater controls
- Control panel heater
- Speed adjust switch
- Oil temp displayed on LCD screen
- Additional 8 inputs and outputs