

Model: S460E6

Powered by SCANIA



Generator Specification

Service	PRP ⁽¹⁾	ESP ⁽²⁾
Power (kVA)	420	460
Power (kW)	328	360
Rated speed (r.p.m)	1800	
Standard voltage (V)	220/127V, 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.

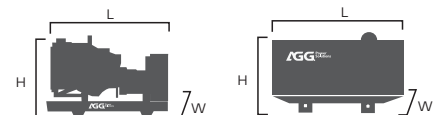
Powers Voltage (V)	ESP		PRP		Standby Amps
	KVA	KW	KVA	KW	
480/277	450	360	413	330.4	553.3
440/254	450	360	413	330.4	603.6
380/220	450	360	413	330.4	698.9
220/127	450	360	413	330.4	1207.2
208/120	450	360	413	330.4	1276.9

Performance Data

Model	S450E6	
Engine brand	Scania	
Engine model	DC13 O72A O2-11	
Speed control type	ECM	
Phase	3	
Control system	Digital	
Starter motor voltage	24V	
Frequency	60HZ	
Engine speed (RPM)	1800	
Fuel Consumption (g/kwh)	100% standby power	191
	100% prime power	188
	75% prime power	187
	50% prime power	194

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)	3600mm	4600mm
Width (W)	2090mm	1450mm
Height (H)	1460mm	2200mm
Net Weight	2678KG	REQ
Fuel Tank (L)	REQ	REQ

Note: This parameters allows for some acceptable deviations.

■ Engine Specification: DC13 072A 02-11

Basic technical data	
No. of cylinders	6
Cylinder arrangement	In-line
Cycle	4 stroke
Displacement	12.7 dm ³
Bore	130 mm
Stroke	160 mm
Compression ratio	16.3:1
Piston speed	
at 1500rpm	8 m/s
at 1800rpm	9.6 m/s
Pistons	Steel pistons
Camshaft	High position alloy steel

Cooling system	
Coolant volume excl. radiator	16 dm ³
Coolant volume incl. 1.1 m ² radiator	38 dm ³
Coolant temperature	90-95 ° C
Number of thermostats	1
Opening temperature	80/87 ° C

Injection system	
Type	Unit injectors, PDE
Governor	ECM
Fuel filter	Paper filter element, 6 micro
Fuel pre-filter with water separator	Paper filter element, 10 micro

Inlet System	
Permissible pressure drop in intake system	
with cleaned or new filter	30 mbar
with blocked(dirty) filter	65 mbar

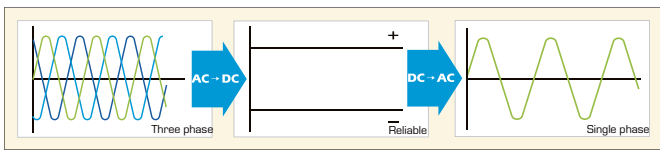
Lubrication system	
Oil capacity	
min	30 dm ³
max	36 dm ³
Oil consumption	<0.3 g/kWh
Oil change intervals	500 h
Oil pressure	
normal	3-6 bar
minimum permitted at idle speed	0.7 bar
Oil temp (normal)	90-110 ° C
Oil cleaner	Centrifugal
Oil filter	Paper/full flow
Oil cooler	Water cooled/full flow

Electrical system	
Type	1 pole, 24V DC
Starter, standard equipment	1 pole, 24V, 6KW
Alternator, standard equipment	1 pole, 28V, 100A

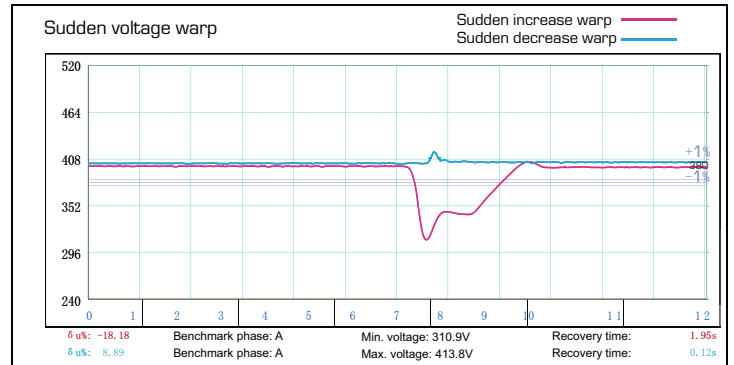
General installation	Prime power
Gross power	372 KW 421 KVA
Heat rejection	
to coolant	111 KW
to exhaust gas	251 KW
to charge air	72 KW
to surrounding air	29 KW
Air consumption	32 kg/min
Air temperature	
before charge air cooler	180° C
after charge air cooler	48° C
Pressure in intake manifold	1.8 Bar
Fall of pressure, charge air cooler	0.15 Bar
Exhaust flow	33 kg/min
Exhaust temperature	457
Step load performance (according to class G2)	87% 328 KW

■ Alternator Specification

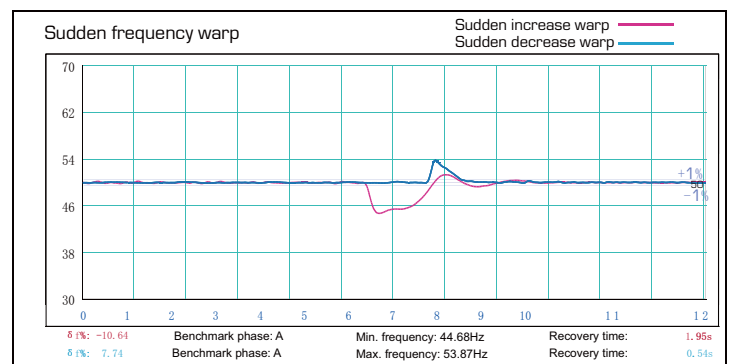
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



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