AGG Power Solutions

Your professional power

Model: D440D5

Powered by DOOSAN

Generator Specification

Service	PRP	ESP
Power(kVA)	400	440
Power(kW)	320	352
Ratedspeed(r.p.m)	1500	
Standard voltage (V)	400/230V	
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):

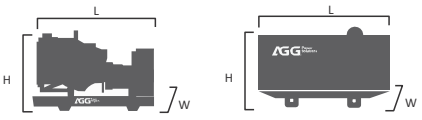
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures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

Powers Voltage (V)	ESP KVA	ESP KW	PRP KVA	PRP KW	Standby Amps
415/240	440	352	400	320	612.1
400/230	440	352	400	320	635.1
380/220	440	352	400	320	668.5

Perfom Data		
Model		D440D5
Enginebrand		Doosan
Engine model		P158LE
Speed control type		Electronic
Phase		3
Control system		Digital
Starter motor voltage		24V
Frequency		50HZ
Enginespeed(RPM)		1500
Fuel Consumption (L/H)	100% standbypower	102.9
	100% prime power	89.3
	75% prime power	65.1
	50% prime power	43.9

Standard reference Conditions

Note: Standard reference condition25℃ (77℉) 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)	2980mm	4270mm
Width (W)	1400mm	1650mm
Height (H)	1915mm	2520mm
Net Weight	3300KGS	-
Fuel Tank (L)	630L	-

Note: This parameters allows for some acceptable deviations.

Engine Specification: P158LE

Basic technical data	
No.of cylinders	8
Cylinder arrangement	V-type
Cycle	4 stroke
Injection timing	16°±1° BTDC
Compression ratio	15:1
Bore	128mm
Stroke	142mm
Displacement	14.618L
Fly wheel housing	SAE NO. 1M
Number of teeth on flywheel	160

Cooling system	
Cooling method	Freshwaterforcedcirculation
Coolantcapacity	20L
Coolant flow rate	600 liters/min
Pressurecap	Max. 49kPa
Water temp	
-Maximum for standby and prime	103 ℃
-Before start of full load	40℃
Water pump	Centrifugal type
Thermostat type and range	Wax-Pellet type
Cooling fan	915mm diameter,7 blade
Max.externalcoolant systemrestriction	Not available

Fuelsystem	
Injection pump	Boschin-line"P"type
Governor	Electric type
Speed drop	G3 Class
Feed pump	Mechanical type in pump
Injection nozzle	Multi hole type
Opening pressure	27.9 MPa
Fuel filter	Full flow
Maximum fuel inlet restriction	10kPa
Maximum fuel return restriction	60kPa
Fuel feed pump capacity	315 L/hr
Used fuel	Diesel fuel oil

Induction system	
Maximum intake air restriction	
-with clean filter element	2.16 kPa
-with dirty filte relement	6.23 kPa
Max. static pressure after radiator	0.125 kPa

Lubrication system	
Lub.method	Fully forced pressure feed type
Oil pump	Gear type driven by crank-shaft gear
Oil filter	Full flow, cartridge type
Oil capacity	
-Max.	21L
-Min	17L
Luboil pressure	Idle speed: Min 100 kPa
	Governed speed: Min 250kPa
Maximum oil temp	120℃
Lubrication oil	Refer to operation manual

Electrical system	
Battery charging alternator	28.5V X 45A Alternator
Voltageregulator	Built-in type IC regulator
Starting motor	24V x 4.5 kW
Batteryvoltage	24V
Batterycapacity	2*100Ah
Starting aid (option)	Block heater, Air heater

General installation	Prime power
Governedenginespeed	1500 rpm
Engine idle speed	800 rpm
Overspeedlimit	1650rpm
Gross engine power output	363kW
Break mean effective pressure	1.99Mpa
Mean pistonspeed	7.1 m/s
Friction power	32kW
Maximum lube oil consumption	346g/h
Fan power	14kW

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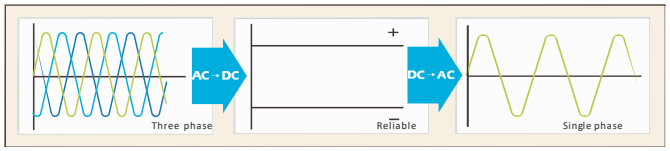
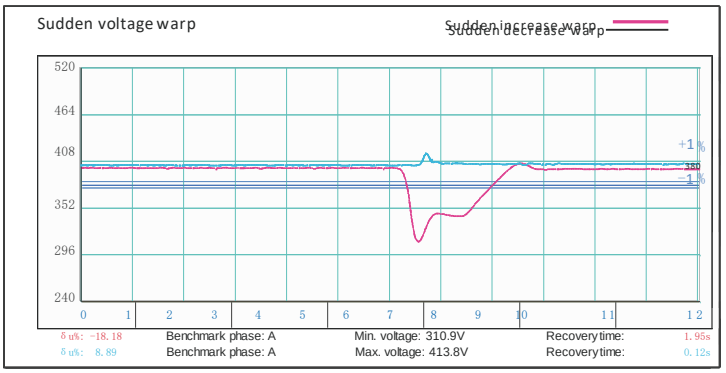
Alternator Specification

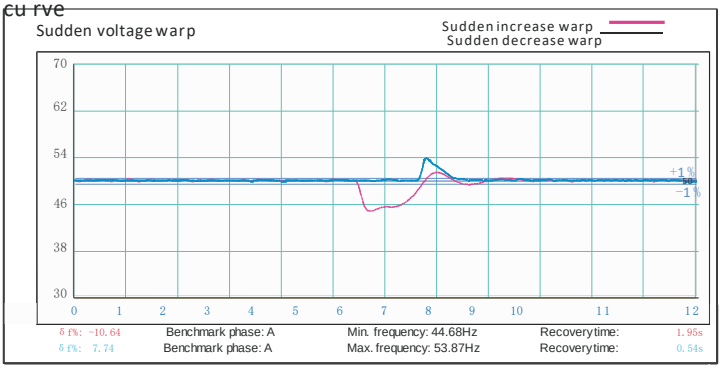
Alternator	
Number of phase	3
Powerfactor(CosPhi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
WindingPitch	2/3
IP rating	IP23
Excitationsystem	Self-excited
Bearing	Single bearing
Coating	Vacuumimpregnation
Voltageregulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



Options

Engine	Alternator	Generator Sets	Fuel System
• Water Jacket Pre-heater • Fuel heater	• Winding Temp measuring Instrument • Alternator Pre-heater • PMG • Anti-damp and anti-corrosion treatment • Anti-condensation heater • Winding and bearing RTD	• Tools with the machine • Extended range fuel tank • Bundedfuel tank	• Low fuel level alarm • Automatic fuel feeding system • Fuel T-valves
Canopy	**Lub oil system**	**Cooling System**	**Control Panel**
• Rental type Canopy • Trailer	• Oil Pre-heater • Oil temp sensor	• Front heat protection	• Remotecontrolpanel • ATS • Synchronizingcontroller • Adjustable earth leakage relay

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Control Panel

Configuration

- Emergencystopbutton
- Protection MCB
- Battery charger
- Integrated aviation plug
- ATSconnection
- 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 conditio n
- 3 phase Generator protections
  - Over-/undervoltage
  - Over-/underfrequency
  - Current/voltage asymmetry
  - Over current/overload
- 3 phase AMF function
  - Over-/under frequency
  - Over-/under voltage
  - Voltageasymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and output s
- Warm-up and cooling functions
- Generator C.B. and Mains C.B. control with feedbac kand 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℃ to + 70 ℃
- Storage temp: -30 ℃ to + 80 ℃
- Operating humidity: 95% w/o condensation
- Vibration: 5-25Hz, ±1.6 mm
  5-100 Hz, a= 4g
- Shocks: a= 500m/s²

Options

- Ethernet interface (Remote monitoring and control)
- GSM modem/wireless internet (Remote monitoring an control) d
- 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
- Lowfuellevelalarm
- Lowfuellevelshutdown
- High fuel level alarm
- Fuel transfer system control
- Low coolant levelshutdown
- 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

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