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Model: DE22D5

Powered by DEUTZ





Generator Specification

Service	PRP(1)	ESP(2)
Power (kVA)	20	22
Power (kW)	16	18
Rated speed (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):

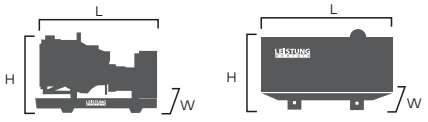
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures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

Powers	ESP		PRP		Standby
Voltage (V)	KVA	KW	KVA	KW	Amps
415/240	22	18	20	16	30.6
400/230	22	18	20	16	31.8
380/220	22	18	20	16	33.4

Performance Data		
Model		DE22D5
Engine brand		Deutz
Engine model		BFM3 G1
Speed control type		ECU
Phase		3
Control system		Digital
Starter motor voltage		12/24V
Frequency		50HZ
Engine speed (RPM)		1500
Fuel Consumption (L/H)	100% standby power	-
	100% prime power	5.4
	75% prime power	4
	50% prime power	2.8

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)	1750mm	2300mm
Width (W)	750mm	900mm
Height (H)	1050mm	1276mm
Net Weight	410KG	800KG
Fuel Tank (L)	-	86L

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Engine Specification: BFM3 G1

Basic technical data	
No. of cylinders	4
Cylinder arrangement	In-line
Cycle	4 stroke
Injection system	in-line pump
Displacement	3.168 L
Bore	98 mm
Stroke	105 mm
Compression ratio	18.5:1
Mean effective pressure	5.6 bar
Piston speed	5.25 m/s
Rotation	CCW
Engine dry, w/o cooling system	245kg

Cooling system	
Delivery of coolant pump	4.2m³/h
Min. pressure before coolant pump	0.15bar
Coolant capacity(engine)	4.8L
Coolant capacity (incl. cooling unit)	TBD
Air to boil	50 ℃
Fan power consumption	2 KW
Cooling air flow	3960m³/h
Air pressure loss, external	1.5 mbar
Heat balance	
Heat dissipation (engine radiator)	25KW

Inlet / Exhaust Data	
Max. intake depression(switch setting)	30 mbar
Combustion air volume	132m³/h
Max. exhaust back pressure	100 mbar
Max. exhaust gas temperature	530 ℃
Exhaust gas flow (at above temp)	250m³/h

Output	
Gross output (LTP)	22 KW
Fan reduction	2 KW
Net flywheel	TBD
Electrical output	22kVA
Gross output (PRP)	20KW
Gross output (Continous power)	19KW

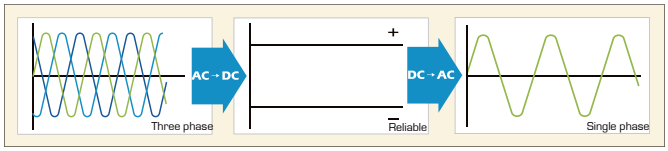
Lubrication system	
Oil specification	CF-4
Oil consumption (as % of fuel consumption)	0.5
Oil capacity (sump)	7.5L
Min. oil pressure (warning)	1.5 bar
Min. oil pressure (shut down)	1.0bar
Max. permissible oil temp(oil pan)	120 ℃

Electrical system	
Voltage	12 V
Starter	3 KW
Alternator output	55 A

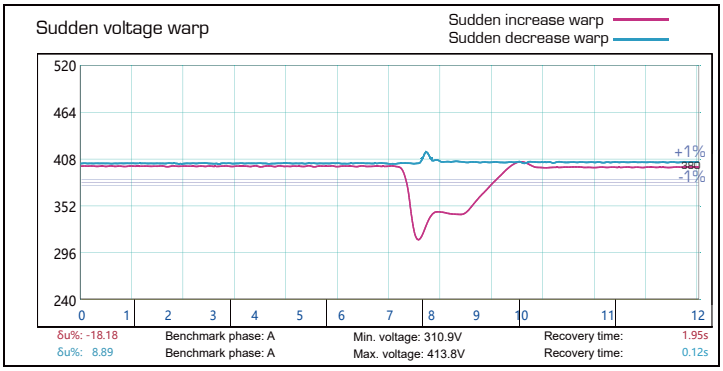
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Alternator Specification

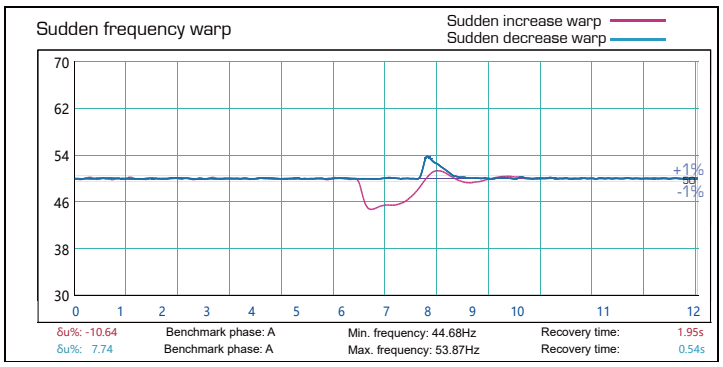
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



Options

Engine	Alternator	Generator Sets	Fuel System
▪ 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 ▪ Bunded fuel 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	▪ Remote control panel ▪ ATS ▪ Synchronizing controller ▪ Adjustable earth leakage relay

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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 ℃ to + 70 ℃
- Storage temp: -30 ℃ to + 80 ℃
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz, ±1.6mm
  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

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