

Model: DE440E6

Powered by DEUTZ



Generator Specification

Service	PRP ⁽¹⁾	ESP ⁽²⁾
Power (kVA)	400	440
Power (kW)	320	352
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):

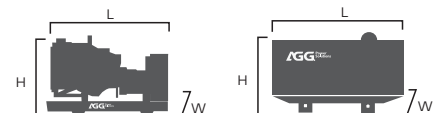
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures 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	440	352	400	320	529.3
440/254	440	352	400	320	577.4
380/220	440	352	400	320	668.5
220/127	440	352	400	320	1154.7
208/120	440	352	400	320	1221.4

Performance Data		
Model	DE440E6	
Engine brand	Deutz	
Engine model	BF6M1015CP	
Speed control type	ECU	
Phase	3	
Control system	Digital	
Starter motor voltage	12/24V	
Frequency	60HZ	
Engine speed (RPM)	1800	
Fuel Consumption (L/H)	100% standby power	-
	100% prime power	103.0
	75% prime power	73.5
	50% prime power	48.7

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)	2800mm	4350mm
Width (W)	1400mm	1500mm
Height (H)	2200mm	2250mm
Net Weight	3100KG	-
Fuel Tank (L)	400L	-

Note: This parameters allows for some acceptable deviations.

■ Engine Specification: BF6M1015CP

Basic technical data	
No. of cylinders	6
Cylinder arrangement	In-line
Cycle	4 stroke
Injection system	Bosch inline pump
Displacement	11.9 L
Bore	132 mm
Stroke	145 mm
Compression ratio	16.5:1
Mean effective pressure	TBD
Piston speed	8.7 m/s
Rotation	CCW
Engine dry, w/o cooling system	1060kg

Cooling system	
Delivery of coolant pump	19.2 m ³ /h
Min. pressure before coolant pump	0.8 bar
Coolant capacity(engine)	17 L
Coolant capacity (incl. cooling unit)	96 L
Air to boil	62°C
Fan power consumption	17.9 KW
Cooling air flow	30600 m ³ /h
Air pressure loss, external	1.5 mbar
Heat balance	
Heat dissipation (engine radiator)	173 KW
Heat dissipation (CAC)	105 KW
Heat dissipation (Convection)	31 KW

Inlet / Exhaust Data	
Max. intake depression (switch setting)	50 mbar
Combustion air volume	1817 m ³ /h
Max. exhaust back pressure	50 mbar
Max. exhaust gas temperature	515 °C
Exhaust gas flow (at above temp)	5020 m ³ /h
Exhaust flange/pipe diameter	120 mm

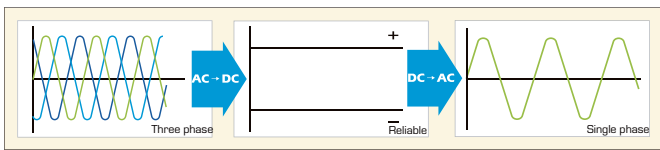
Output	
Gross output (LTP)	384 KW
Fan reduction	17.9 KW
Net flywheel	366.1 KW
Electrical output	348 KVA
Gross output (PRP)	351 KW
Gross output (Continuous power)	320 KW

Lubrication system	
Oil specification	TBD
Oil consumption (as % of fuel consumption)	0.3
Oil capacity (sump)	34 L
Min. oil pressure (warning)	3 bar
Min. oil pressure (shut down)	2.7 bar
Max. permissible oil temp(oil pan)	130°C

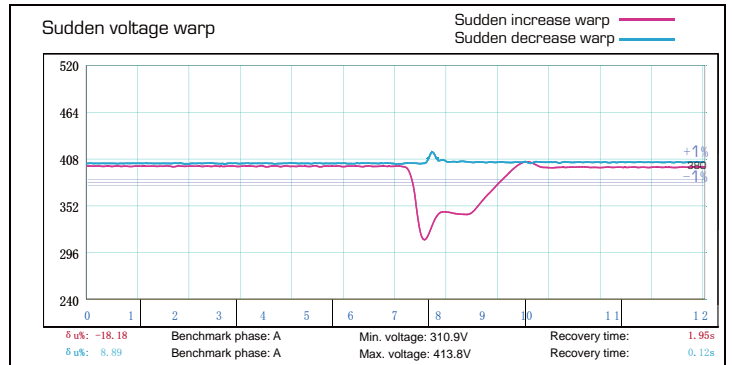
Electrical system	
Voltage	24 V
Starter	5.4 KW
Alternator output	55 A

■ Alternator Specification

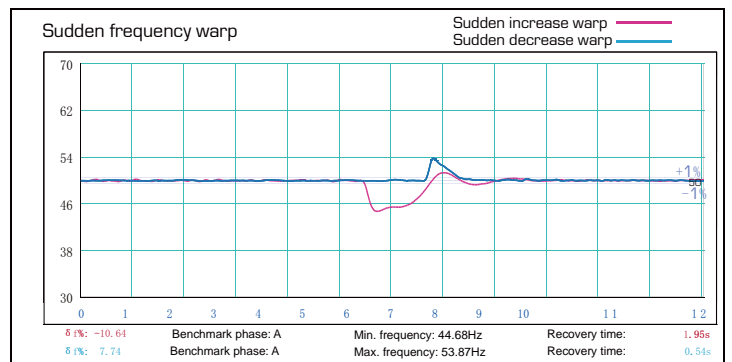
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



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: $a= 500m/s^2$

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