

Model: AF 16.5 D 5

Powered by AGG



Generator Specification

Service	PRP ⁽¹⁾	ESP ⁽²⁾
Power(kVA)	15	16.5
Power (kW)	12	13
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.

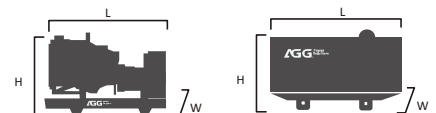
Powers Voltage (V)	ESP		PRP		Standby Amps
	KVA	KW	KVA	KW	
415/240	16.5	13	15	12	23.0
400/230	16.5	13	15	12	23.8
380/220	16.5	13	15	12	25.1

Performance Data

Model	AF16.5D5	
Enginebrand	AGG	
Enginemodel	AF2270	
Speedcontroltype	Electronic	
Phase	3	
Control system	Digital	
Starter motorvoltage	12V	
Frequency	50HZ	
Engine speed (RPM)	1500	
Fuel Consumption (L/H)	100% standby power	3.96
	100% prime power	3.57
	75% prime power	2.7
	50% prime power	1.88

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)	1615 mm	2080 mm
Width (W)	550 mm	800 mm
Height (H)	1180 mm	1136 mm
Net Weight	800 KG	700 KG
Fuel Tank (L)	180 L	50 L

Note: This parameters allows for some acceptable deviations.

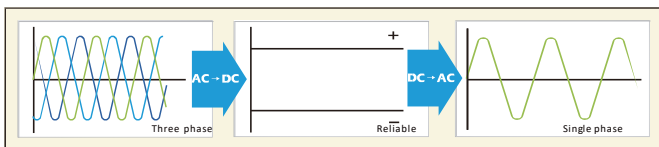
■ Engine Specification: AF2270

Engine model	AF2270		AF2540	
Type	4-cylinder-stroke			
Air Intake type	Natural			
Cooling mode	Water cooling			
Governor mode	Mechanical&electronic			
Bore x Stroke(mm)	85 x 100		90 x 100	
Compression ratio	17:1			
Rated speed(rpm)	1500	1800	1500	1800
Dis placement(L)	2.27		2.54	
Rated power(without fan)(KW)	17	20	21	28
Standby power(wlthout fan)(KW)	19	22	23	31
Fuel consumption(g/KWh)	240			
Oil consumption(L/h)	0.05			
Steady state speed regulation(%)	≤ 5	≤ 5 or ≤ 3	≤ 5	≤ 5 or ≤ 3
Oil capacity Including filter(L)	7.8		8	
Emission compliant	Stage II			
The flywheel shell Interface	SAE4			
	Flywheel for 7.5" & 10" flexible coupling	Flywheel for 7.5 flexible coupling	Flywheel for 7.5" & 10" flexible coupling	Flywheel for 7.5 flexible coupling
Dryweight base(kg)	220			
Dryweight of Gen Pac(kg)	240			
Overall dimension(base)(mm)	750X555X680			
Overall dimension(G.P)(mm)	920X610X760			
Fan consumption(KW)	1.2	2	1.6	2
27°C air consumption(m ³ /min)	1.4	1.7	1.7	2.3
Heat rejection of exhaust(KW)	17.2	20.8	17.4	28.6
Exhaust gas temperature after turbine(°C)	550	560	450	560
Exhaust gas flow(m ³ /min)	4.2	5.3	4.6	6.6
Heat rejection from engine(KW)	1.1	3.4	1.3	4.3
Heat rejection of coolant(KW)	11	15	13.7	21
Base configuration	Standard configuration(add on the base)			
Engine wth fan	Intake and exhaust system:Air filter and connecting pipes; Connecting flang of exhaust pipe			
Alternator 500W 14V Starter motor 3.5KW 12V	Cooling system:Radlator wth connecting pipes;Fan guard; Belt guard			

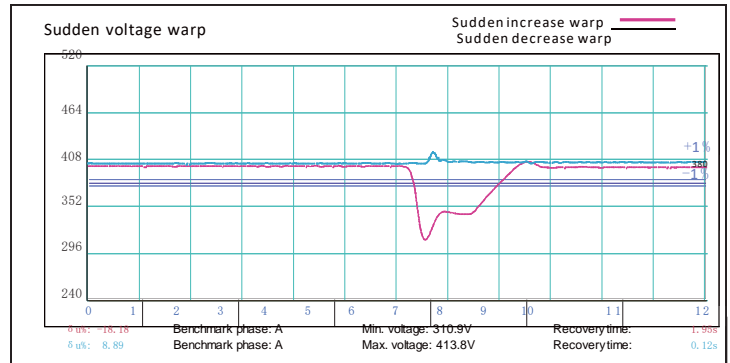
Note: Declared power denotes the power, under atmospheric pressure of 100kPa (750 mmHg), ambient temperature of 25°C and relative humidity of 30%, and without air filter and muffler,. When atmosphere condition is different from standard atmosphere, check-calculation should be made as per GB/T6072.1-2001 《Performance of Reciprocating Internal Combustion Engine, Part 1: Declaration and Testing Methods of Standard Basic Information, Power, Fuel and Engine Oil Consumption》 .

■ Alternator Specification

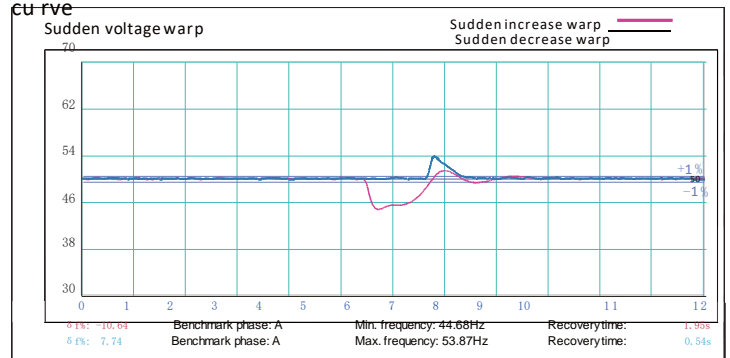
Alternator	
Number of phase	3
Powerfactor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2 / 3
IP rating	IP23
Excitationsystem	Self-excited
Bearing	Single bearing
Coating	Vacuumimpregnation
Voltageregulator	A.V.R
Couping	Flexible disc



Emer g ency vol tage cur ve



Emergen cy freq u en cy 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
5-100 Hz, $a = 4g$
- 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

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