

# ■ Model: DE165D5

Powered by DEUTZ



## ■ Generator Specification

Service	PRP <sup>(1)</sup>	ESP <sup>(2)</sup>
Power (kVA)	150	165
Power (kW)	120	132
Rated speed (r.p.m)	1500	
Standard voltage (V)	400/230V	
Rated at power factor(cos phi)	0.8	



Dynamis 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 a 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

### (2) ESP (Standby Power):

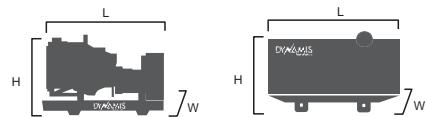
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures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

### Performance Data

Model	DE165D5
Engine brand	Deutz
Engine model	BF6M1013EC
Speed control type	Mechanical
Phase	3
Control system	Digital
Starter motor voltage	12/24V
Frequency	50HZ
Engine speed (RPM)	1500
Fuel	100% standby power
Consumption (L/H)	100% prime power
	7.5% prime power
	5.0% prime power

### 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)	2510mm	3520mm
Width (W)	1080mm	1100mm
Height (H)	1632mm	1942mm
Net Weight	1603KG	2281KG
Fuel Tank (L)	240L	240L

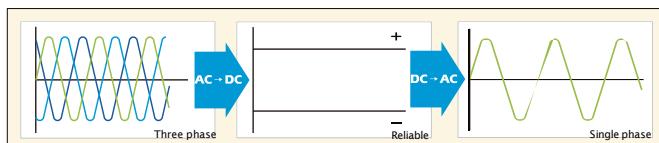
Powers Voltage (V)	ESP KVA	KW	PRP KVA	KW	Standby Amps
415/240	165	132	150	120	229.6
400/230	165	132	150	120	238.2
380/220	165	132	150	120	250.7

## ■ Engine Specification: BF6M1013EC

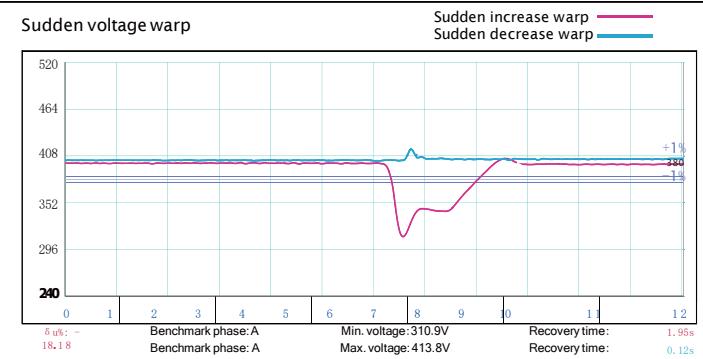
Basic technical data		Output	
No. of cylinders	6	Gross output (LTP)	152 KW
Cylinder arrangement	In-line	Fan reduction	7.2 KW
Cycle	4 stroke	Net flywheel	145.8 KW
Injection system	Single injection pumps	Electrical output	164kVA
Displace 3elnt	6.25 L	Gross output (PRP)	146KW
Bore	108 mm	Gross output (Continous power)	139KW
Stroke	130 mm		
Compression ratio	16.0:1		
Mean effective pressure	17.1 bar		
Piston speed	9.97 m/s		
Rotation	CCW		
Engine dry, w/o cooling system	708kg		
Cooling system		Lubrication system	
Delivery of coolant pump	12.2 m <sup>3</sup> / h	Oil specification	TR0199-99-3002/6
Min. pressure before coolant pump	0.3 bar	Oil consumption	
Coolant capacity(engine)	9.8 L	(as % of fuel consumption)	0.3
Coolant capacity (incl. cooling unit)	23.1 L	Oil capacity (sump)	20 L
Air to boil	57°C	Min. oil pressure (warning)	2.7 bar
Fan power consumption	7.2 KW	Min. oil pressure (shut down)	2 bar
Cooling air flow	10800 m <sup>3</sup> / h	Max. permissible oil temp(oil pan)	130°C
Air pressure loss, external	1.5 mbar		
Heat balance		Electrical system	
Heat dissipation (engine radiator)	68.4 KW	Voltage	12V or 24V
Heat dissipation (CAC)	24.0 KW	Starter	12V or 24V
Heat dissipation (Convection)	15.5 KW	Alternator output	55A
Inlet / Exhaust Data			
Max. intake depression(switch setting)	25 mbar		
Combustion air volume	639.3 m <sup>3</sup> / h		
Max. exhaust back pressure	30 mbar		
Max. exhaust gas temperature	535°C		
Exhaust gas flow (at above temp)	1799 m <sup>3</sup> / h		
Exhaust flange/pipe diameter	TBD		

## ■ Alternator Specification

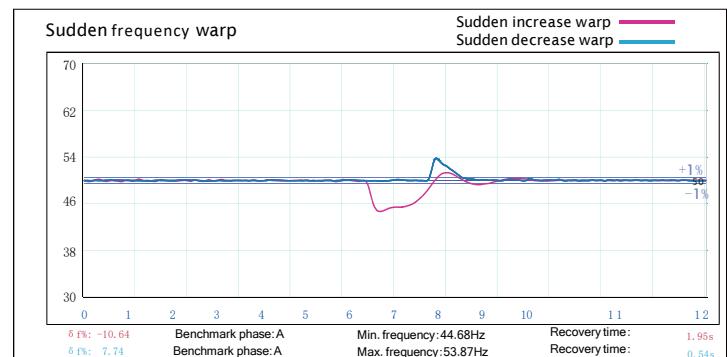
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2 / 3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Coupling	Flexible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



Emergency voltage curve



Emergency frequency curve



## ■ Options

Engine	Alternator	Generator Sets	Fuel System
<ul style="list-style-type: none"> <li>WaterJacket Pre-heater</li> <li>Fuel heater</li> </ul>	<ul style="list-style-type: none"> <li>Winding Temp measuring Instrument</li> <li>Alternator Pre-heater</li> <li>PMG</li> <li>Anti-damp and anti-corrosion treatment</li> <li>Anti-condensation heater</li> <li>Winding and bearing RTD</li> </ul>	<ul style="list-style-type: none"> <li>Tools with the machine</li> <li>Extended range fuel tank</li> <li>Bunded fuel tank</li> </ul>	<ul style="list-style-type: none"> <li>Low fuel level alarm</li> <li>Automatic fuel feeding system</li> <li>Fuel T-valves</li> </ul>
Canopy	Lub oil system	Cooling System	Control Panel
<ul style="list-style-type: none"> <li>Rental type Canopy</li> <li>Trailer</li> </ul>	<ul style="list-style-type: none"> <li>Oil Pre-heater</li> <li>Oil temp sensor</li> </ul>	<ul style="list-style-type: none"> <li>Front heat protection</li> </ul>	<ul style="list-style-type: none"> <li>Remote control panel</li> <li>ATS</li> <li>Synchronizing controller</li> <li>Adjustable earth leakage relay</li> </ul>

## ■ 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,  $\pm 1.6$  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