

Model: DE413D5

Powered by DEUTZ

Output Rating

| MODEL | | Power rating | | Voltage available |
|---------|-----------|--------------|------------|----------------------------|
| | | PRIME(1) | STANDBY(2) | |
| DE413D5 | 400V/50HZ | 300KW | 330KW | 380/220V 400/230V 415/240V |
| | PF:0.8 | 375KVA | 413KVA | |

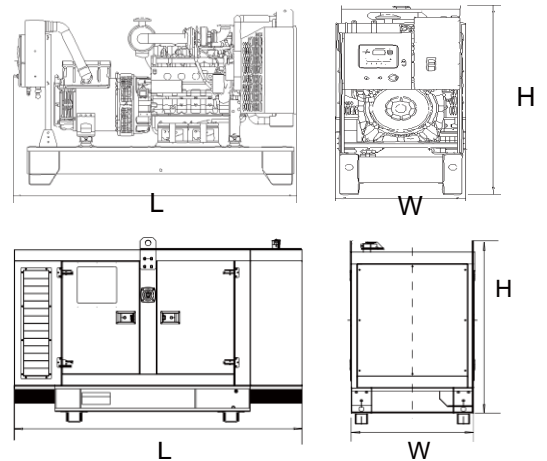
General Information

| | | |
|------------------------|------------------|------|
| Model | DE413D5 | |
| Engine | BF6M1015CP | |
| Speed Control Type | Electrical | |
| Phase | 3 | |
| Control System | Digital | |
| System Voltage | 12/24V | |
| Frequency | 50HZ | |
| Engine Speed (RPM) | 1500 | |
| Fuel Consumption (L/H) | 100% Prime Power | 94.3 |
| | 75% Prime Power | 68.1 |
| | 50% Prime Power | 45.2 |
| | 25% Prime Power | 23.6 |



Dimension and Weight

| Dimension | Open | Silent |
|------------|--------|--------|
| Length (L) | 3500mm | 4350mm |
| Width (W) | 1150mm | 1400mm |
| Height (H) | 2000mm | 2260mm |
| Net Weight | 2835KG | 4580KG |



AGG POWER gensets are compliant with EC mark 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) Prime Power (PRP):

According to ISO 8528-1:2005, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operation conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24h of operation shall not exceed 70% of the PRP.

(2) Standby Power (ESP):

According to ISO 8528-1:2005, standby power is the maximum power available during a variable electrical power sequence, under the stated operation conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24h of operation shall not exceed 70% of the ESP.



Engine Specification

General

| | | |
|--------------------------------------------|----------------------|-------|
| Aspiration | | turbo |
| No of cylinders | | 6 |
| Configuration | | V |
| Injection system | | |
| Displacement | [l] | |
| Bore | [mm] | 132 |
| Stroke | [mm] | 145 |
| Compression ratio | | 16.5 |
| Mean effective pressure | [bar] | |
| Rotation (looking at flywheel) | | |
| No of teeth on flywheel ring gear | | 167 |
| Engine without flywheel | [kg m ²] | 0.87 |
| Flywheel (standard genset spec.) | [kg m ²] | 2.26 |
| Weight | | |
| Engine dry, w/o cooling system | [kg] | 850 |
| Engine with cooling system | [kg] | 1055 |
| Lubrication system | | |
| Oil specification | | |
| Oil consumption (as % of fuel consumption) | | 0.3 |
| Oil capacity (sump) | [l] | 34 |
| Min. oil pressure (warning) | [bar] | 3 |
| Min. oil pressure (shut down) | [bar] | 2.7 |

Cooling System

| | | |
|-------------------------------------------------------|---------------------|-------|
| Max. perm. coolant outlet temperature | [°C] | 103 |
| Max. perm. flow resistance (cool. syst. and piping) | [bar] | 0,35 |
| Max. temperature of coolant (warning) | [°C] | 105 |
| Max. temperature of coolant (shutdown) | [°C] | 108 |
| Temperature at which thermostat starts to open | [°C] | 83 |
| Temperature at which thermostat is fully open | [°C] | 95 |
| Delivery of coolant pump | [m ³ /h] | 15.6 |
| Min. pressure before coolant pump | [bar] | 0,8 |
| Temperature at CAC outlet at standard conditions | [°C] | 50 |
| DEUTZ cooling system | | |
| Coolant capacity (engine) | [l] | 17 |
| Coolant capacity (incl. cooling unit) | [l] | 98 |
| Air to boil (max. permissible cool. air temp. at fan) | [°C] | 56 |
| Fan power consumption ⁴ | [kW] | 10.7 |
| Cooling air flow | [m ³ /h] | 24120 |
| Air pressure loss, external | [mbar] | 1,5 |
| Heat Balance | | |
| Heat dissipation (engine radiator) ⁶ | [kW] | 170 |
| Heat dissipation (CAC) ⁶ | [kW] | 85 |
| Heat dissipation (convection) | [kW] | 30 |

Inlet / Exhaust Data

| | | |
|-----------------------------------------|---------------------|------|
| Max. intake depression (Switch setting) | [mbar] | 50 |
| Combustion air volume | [m ³ /h] | 1478 |
| Max. exhaust back pressure | [mbar] | 50 |
| Max. exhaust gas temperature | [°C] | 555 |
| Exhaust gas flow (at above temp) | [m ³ /h] | 4272 |

Electrical System

| | | |
|-----------------------------------------------------|------|-----|
| Voltage | [V] | 24 |
| Starter | [kW] | 5.4 |
| Alternator output | [A] | 55 |
| Batteries (minimum capacity, cold start limit -5°C) | [Ah] | 143 |



▪ Alternator

| Alternator | | |
|--------------------------------|-------|--------------------------------|
| Poles | Num | 4 |
| Winding Connections (standard) | | Star-serie |
| Insulation | Class | H class |
| Enclosure (according IEC-34-5) | | IP23 |
| Exciter System | | Brushless |
| Voltage Regulator | | A.V.R. (Electronic) |
| Bearing | | Single bearing |
| Coupling | | Flexible disc |
| Coating type | | Standard (Vacuum impregnation) |

▪ Options

| Engine | Alternator | Generator Sets | Fuel System | Canopy |
|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> •Water Jacket Preheater •Oil Preheater | <ul style="list-style-type: none"> •Winding Temperature measuring Instrument •Alternator Preheater •PMG •Anti-damp and anti-corrosion treatment •Anti-condensation heater | <ul style="list-style-type: none"> •Tools with the machine | <ul style="list-style-type: none"> • Low fuel level alarm •Automatic fuel feeding system •Fuel T-valves | <ul style="list-style-type: none"> •Rental Type Canopy •Trailer |
| Lubricating System | Exhaust System | Cooling System | Control Panel | Voltages |
| <ul style="list-style-type: none"> •Oil with the machine | <ul style="list-style-type: none"> •Protection board from hotness | <ul style="list-style-type: none"> • Front heat protection • Coolant (-30°C) | <ul style="list-style-type: none"> •Remote control panel • ATS • Remote controller • Synchronizing controller | <ul style="list-style-type: none"> • 415/240V • 380/220V • 220/127V • 220/127V • 200-115V |



Control Panel



Product description

- Single gen-set controller for Stand-by and Prime-power applications
- Direct communication with EFI engines
- Total remote monitoring and control

Key features

- Easy to install, configure and use
- Wide range of communication capabilities including:
 - connection via RS232, RS485, CAN and on board USB
 - internet access using Ethernet or GPRS
 - support for Modbus and SNMP protocols
- Cloud-based monitoring and control
- Active SMS and emails in different languages
- 2x 5 A binary outputs for cranking and fuel solenoid
- Option for up to 16 additional binary inputs/outputs
- Flexible event based history with up to 350 events
- Load shedding, dummy load capability
- Automatic temperature based cooling/heating
- Comprehensive gen-set protections
- Multipurpose flexible timers
- True RMS measurement

Available extension modules

| Product | Description | Order code |
|--------------|------------------------------------|-------------|
| CM-Ethernet | Ethernet interface | CM2ETHERXBX |
| CM-GPRS | GSM modem / wireless internet | CM2GPRSXXBX |
| CM-RS232-485 | Dual port interface | CM223248XBX |
| EM-BIO8-EFCP | 8 additional binary inputs/outputs | EM2BIO8EXBX |

Functions and protections

| Description | ANSI code | Description | ANSI code |
|----------------------------------------|-----------|---------------------|-----------|
| Over voltage | 59 | Load shedding | 32P |
| Under voltage | 27 | Overload | 32 |
| Voltage asymmetry and Phase rotation** | 47 | Power factor | 55 |
| Over frequency | 81H | Temperature | 49T |
| Under frequency | 81L | Gas (fuel) level | 71 |
| Over current* | 50 + 51 | Earth fault current | 50N + 64 |
| Current unbalance | 46 | | |

* Short current only

** Fixed setting

