

WPG17*1

DIESEL GENERATING SET

GENERATING SET RATINGS 50Hz – 1500rpm @ 0.8p.f.

| Voltage | PRP | | ESP | |
|---------|-----|-----|-----|-----|
| | kVA | kWe | kVA | kWe |
| 415/240 | 15 | 12 | 17 | 14 |
| 400/230 | 15 | 12 | 17 | 14 |
| 380/220 | 15 | 12 | 17 | 14 |



PRODUCT FEATURES

Engine

- Cast iron gantry type structure block
- One-piece forged crankshaft
- Separate cast iron cylinder heads and wet liners
- Aluminum alloy pistons with oil cooling gallery

Cooling system

- Radiator and hoses supplied directly mounted on the engine
- Thermostatically-controlled system with belt driven coolant pump and pusher fan

Fuel system

- P type fuel injection pump and injector for higher inject pressure, for engines with electronic governor

Lubrication system

- Flat bottom large capacity oil pan
- Spin-on full-flow lube oil filter

Electrical system

- 12 Vdc electric starter motor and battery charging alternator

Air intake and exhaust system

- Special rear mounted air filter with restriction indicator
- Equipped with exhaust silencer
- Exhaust manifold and turbocharger shield for heat isolating

Alternator

- Brushless, 4 Pole, IP23 drip-proof revolving field design
- Class H insulation and Class H temperature rise
- Low reactance with 2/3 pitch windings on the stator
- Direct-coupled by flexible disc
- Sustained overcurrent >300% in 10 sec
- Direct drive centrifugal blower fan cooling

Control module

- DSE control module is ideal for a wide control range to manage, monitor, and diagnose quickly and easily.
- Display status message Provide protection Auto shutdown at fault detection



| GENERATING SET SPECIFICATIONS | | |
|--------------------------------------|--|---------------------|
| Governor and regulation class | In accordance to ISO 8528-5 Class G2 performance | |
| Phase number and connection | 3 phase, 4 wires, Y-type | |
| Cooling method | Closed looped water-cooled | |
| Starting method | DC 12V Electric starter | |
| Steady-state voltage deviation | ≤± 2.5% | |
| Steady-state frequency band | ≤1.5% | |
| ENGINE | | |
| Brand / Model | Weichai / WP2.3D20E200 | |
| Gross Power | kWm | ESP - 20 / PRP - 18 |
| Cylinder / Type / Aspiration | 4 / In-line / Natural | |
| Bore x Stroke | mm | 89 x 92 |
| Displacement | L | 2.3 |
| Compression ratio | 17.5:1 | |
| Brake Mean Effective Pressure | kPa | ESP – 869 |

| COOLING SYSTEM | | |
|--|---------------------------------|---------|
| Type of Coolant | Liquid (water + 50% antifreeze) | |
| Total Cooling System Capacity (with Radiator) | L | 8.2 |
| Max coolant temperature – shutdown | °C | 105 |
| Cooling Fan Airflow | m ³ /min | 48 |
| LUBRICATION SYSTEM | | |
| Operating Temperature range before Engine | °C | 78 -105 |
| Oil fuel consumption ratio based on engine fuel consumption data | g/kW.hr | ≤ 0.4% |
| Total system capacity (including filters) | L | 11.5 |
| Type of oil filter | Spin-on full flow filter | |



| FUEL SYSTEM | | | |
|--|---------------------|--------|-----------------------|
| Type of fuel filter | | | Spin-on fuel filter |
| Min. internal diameter of the supply pipe | mm | | 10 |
| Min. internal diameter of the return pipe | mm | | 10 |
| Max. fuel return restriction | Bar | | 0.5 |
| Max. fuel inlet temperature | °C | | 50 |
| Fuel supply flow | L/hr | | 40.2 |
| Fuel Consumption (Tolerance +3%) | | | |
| | Rating | gr/kWh | L/hr |
| | 100%ESP | 219 | 5.2 |
| | 100%PRP | 218.3 | 4.7 |
| | 75% PRP | 224.1 | 3.6 |
| | 50% PRP | 244.4 | 2.6 |
| | 25% PRP | 350 | 1.9 |
| EXHAUST SYSTEM | | | |
| Exhaust Gas temperature after the turbocharger | °C | | N/A |
| Exhaust Gas flow | m ³ /min | | ESP – 4.5 / PRP – 4.3 |
| Max. Exhaust back pressure | mBar | | 80 |

| ALTERNATOR | | | |
|---------------------------------|-----------------------|-------------------------|--|
| Brand / Model | WEICHA / WHA-15-4/0.4 | LEROY-SOMER / TAL-A40-D | |
| Rated Current | 21.7A | 21.7A | |
| Coupling / No. of Bearing | Direct / Single | Direct / Single | |
| Winding Pitch | 2/3 | 2/3 | |
| Type of Excitation | Self-excitation | Self-excitation | |
| Cooling type | Air | Air | |
| Voltage regulation method | AVR | AVR | |
| Insurance | Class H | Class H | |
| Temperature rise | Class H | Class H | |
| Protection Grade | IP23 | IP23 | |
| Efficiency at 0.8p.f.@100% load | 81.6% | 82.2% | |

| CONTROL MODULE | |
|---|--|
| Back-lit LCD display | |
| 3 Phase generator and 3 Phase Mains monitoring | |
| Monitoring speed, frequency, voltage, current, oil pressure, coolant temperature and fuel level | |
| Display warning, shutdown and engine status information | |
| Hours counter provides accurate information for monitoring and maintenance. | |
| | |

Ratings definitions

Emergency Standby Power (ESP):

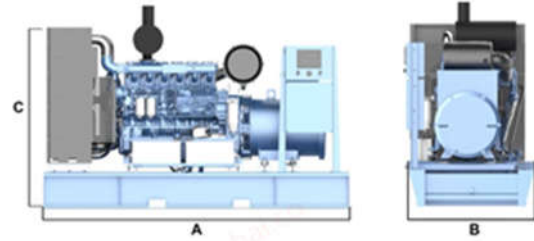
Emergency Standby Power is the maximum power available for a varying load for the duration of a main power network failure. The average load factor over 24 hours of operation should not exceed 70% of the engine's ESP power rating.

Typical operational hours of the engine are 200 hours per year, with a maximum usage of 500 hours per year. This includes an annual maximum of 25 hours per year at the ESP power rating. No overload capability is allowed. The engine is not to be used for sustained utility paralleling applications.

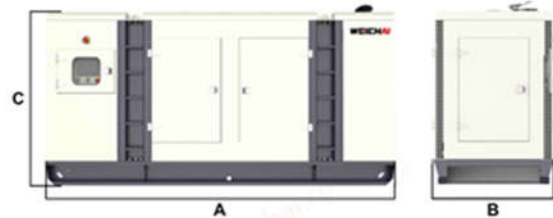
Prime power (PRP):

Prime Power is the maximum power available for unlimited hours of usage in a variable load application. The average load factor should not exceed 70% of the engine's PRP power rating during any 24 hour period. An overload capability of 10% is available; however, this is limited to 1 hour within every 12 hour period.

Open genset



Silence genset



This outline drawing is to provide representative configuration details for Model series only. See respective model data sheet for specific model outline drawing number.


Do not use for installation design

Dimension and Weight

| Structure | Model | Dim "A" mm | Dim "B" mm | Dim "C" mm | Dry wt.* kg |
|-----------|---------|---------------|---------------|---------------|----------------|
| Open | WPG17F1 | 1407 | 792 | 1118 | 581 |
| Silence | WPG17L1 | 1900 | 720 | 1100 | 726 |

* Note: Weights represent a set with standard features. See outline drawings for weights of other configurations.

Codes and standards

| | | | |
|---|---|----------|---|
| ISO 9001 | This generating set is designed and manufactured in facilities certified to ISO 9001. | ISO 8528 | This generating set has been designed to comply with ISO 8528 regulation. |
|  | The CE marking is only valid when equipment is used in a fixed installation application. Material compliance declaration is available upon request. | | |

For more information contact your local Weichai distributor or visit www.weichai.com