

WPG2250*7

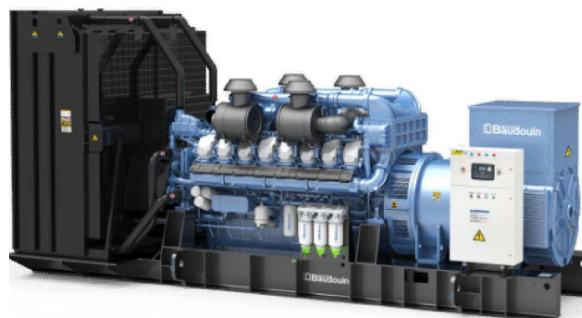
DIESEL GENERATING SET

GENERATING SET RATINGS

50Hz – 1500rpm @ 0.8p.f

NET	DCP		PRP		ESP	
Voltage	kVA	kWe	kVA	kWe	kVA	kWe
415/240	2000	1600	2000	1600	2250	1800
400/230	2000	1600	2000	1600	2250	1800
380/220	2000	1600	2000	1600	2250	1800

50 Hz – Non Emission



PRODUCT STANDARD FEATURES

Engine and block

- Vermicular graphite cast iron cylinder block and cylinder head
- Alloyed cast iron, wet cylinder liners with fire ring on the top
- Separate cylinder head with 4 valves, top-down cooling
- Hydraulic bolt for both the cylinder head and bearing cap
- Hardened steel forged crankshaft with induction hardened journals, crankpins and radius
- Monoblock piston with PCJ

Cooling System

- Radiator and hoses supplied standard
- Two separate circuits
- High temperature circuit equipped with thermostatically-controlled system with one gear-driven coolant pump
- Low temperature circuit equipped with thermostatically-controlled system with one gear-driven coolant pump

Fuel System

- High pressure Common Rail injection system, for engines with ECU Fine filter

Lubrication System

- Fin oil cooler, 5 oil filters
- Bypass oil and oil thermostat to keep the oil temperature steady
- Electrical oil pre-lube pump to pre-lubricate the engine and ensure good starting ability

Air Intake

- 4 single-stage turbochargers
- Air filters with restriction indicator

Electrical System

- Standard starting system comes with 2 x 24 Vdc electric starter motors and 1 x battery charging alternator
- Redundant dual starting system available as an option.

Exhaust System

- Exhaust manifold and turbocharger shield for heat isolating

Alternator

- High Efficiency Brushless, 4 Pole, IP23 drip-proof revolving field design built with Class H insulation/Class H Temperature rise
- Low reactance with 2/3 pitch windings on the stator
- Direct-coupled by high-elasticated coupling
- Sustained overcurrent >300% in 10 sec
- Direct drive centrifugal blower fan cooling
- Excitation by PMG

Genset Controller

- **Baudouin's** Genset controller is ideal for a wide range of applications
- Display status message Provide protection Auto shutdown at fault detection
- See individual spec sheet for detailed specifications

- 1) All ratings are based on operating conditions under ISO 8528-1, ISO 3046, DIN6271. Performance tolerance of $\pm 5\%$.
- 2) Test conditions: 100 kPa, 25°C air inlet temperature, relative humidity of 30%, with fuel density 0.84 kg/L. Derating may be required for conditions outside these; please contact the factory for details.
- 3) Power output curves are based on the engine operating with fuel system, water pump and lubricating oil pump; not included are battery charging alternator, fan and optional equipment.

GENERATOR SET SPECIFICATIONS

Governor and regulation class	In accordance with ISO 8528-5 Class G3 performance and compliance to 100% step load less than 10 sec
Phase number and connection	3 phase, 4 wires, Y-type
Cooling method	Closed looped water-cooled
Starting method	DC 24V Electric starter
Steady-state voltage deviation	$\leq \pm 1\%$
Steady-state frequency band	$\leq 0.25\%$

ENGINE

Brand / Model	Baudouin / 16M33G2250/5
Engine type	Diesel 4 strokes-cycle
Gross Power	ESP - 1980 / PRP - 1800
Cylinder / Type / Aspiration	16 / Vee - Type / Turbocharged and intercooled
Bore x Stroke	mm 150 x 185
Displacement	L 52.3
Compression ratio	14:1
Brake Mean Effective Pressure	kPa ESP – 3029
Governor	Electronic
** See engine data sheet for detailed specification	

COOLING SYSTEM

Type of Coolant	Liquid (water + 50% antifreeze)
Max coolant temperature – shutdown	°C 103
Cooling Fan Airflow	m3/min 3480
** See engine data sheet for detailed specification	

LUBRICATION SYSTEM

Operating Temperature range before Engine	°C 78 -105
Oil consumption	g/kW.hr ≤ 0.4
Total lub oil capacity (including filters)	L 175
Type of lub oil filter	Spin-on full flow filter

FUEL CONSUMPTION (Tolerance +3%)

100% ESP	L/hr 484.6
100% PRP	L/hr 428.6
75% PRP	L/hr 311.3
50% PRP	L/hr 208.8
25% PRP	L/hr 112.7

EXHAUST SYSTEM

Exhaust Gas temperature after the turbocharger	°C 550
Exhaust Gas flow	m3/min ESP – 440.6 PRP – 400.5
Max Exhaust back pressure	mBar 75

ALTERNATOR

Brand / Model	Baudouin / WHA 52.3 L9
Design	Brushless, Self-exciting and self-regulating
Phase / Poles	3-Phase / 4-Pole
Winding Pitch	2/3
Type of Excitation	PMG
Cooling type	Air
Coupling / No. of Bearing	Direct / Single
Voltage regulation method	AVR
Winding temperature sensor	PT100
Bearing temperature sensor	PT100
Anti-condensation heater voltage	AC230V
Insurance	Class H
Protection Grade	IP23
** See engine data sheet for detailed specification	

GENSET CONTROLLER

Baudouin's Genset controller is designed for manual/auto parallel systems. The controller is an easy to use Synchronising Auto Mains (Utility) Failure Control Module suitable for paralleling single gensets (diesel or gas) with the mains (utility).

Key Benefits

- Real-time clock provides accurate event logging
- Ethernet communication, provides built in advanced remote monitoring.
- Can be integrated into building management systems (BMS) and programmable logic control (PLC)



STANDARD OPEN SET VERSION

- Steel chassis
- Emergency stop button
- 12/ 24 Vdc maintenance free starter battery and Battery charger connecting cables.
- Anti-vibration shock absorbers
- Standard filter (air filter, fuel filter, Oil filter)

- Radiator with pusher fan
- Hot parts protection
- Moving parts protection
- Operation & Maintenance manual & Wiring diagrams.

OPTIONS

Engine

- Coolant heater
- Fuel / Water separator
- Remote radiator/ heat exchanger
- Redundant dual starting system
- Exhaust ~25dBA reduction muffler
- Exhaust Y- connection pipe
- Lube oil automatic replenishment system

Alternator

- Class H or B temperature rise
- Oversized terminal box
- Mounting differentiates CT
- Infrared view port
- Winding protections for harsh environments and relative humidity greater than 95%

Ratings definitions: according to ISO8528-1 (2018-02 edition) and ISO-3046-1

Emergency standby power (ESP):

ESP 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.

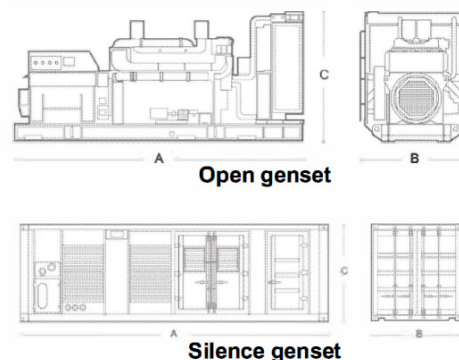
Typical operational hours of the engine is 200 hours per year, with a maximum usage of 500 hours per year. This includes an annual maximum of 25 hours per year at the ESP power rating. No overload capability is allowed. The engine is not to be used for sustained utility paralleling applications.

Prime power (PRP):

PRP 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 for 1 hour within every 12-hour period.

Data Center power (DCP):

DCP is the maximum power that an engine is capable of delivering while supplying a variable or continuous load and during unlimited run hours. An overload capability of 10% is available for 1 hour within every 12-hour period



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 (Without Radiator)	WPG2250B7	5900	2155	2560	13500
Silence	WPG2250C7	12192	2438	2896	29820

* Note: Sizes and weights represent a set with standard 400V features. See the outline drawings for the detailed configurations of sizes and weights.

Codes and standards

ISO 9001	This generator set is designed and manufactured in facilities certified to ISO 9001.	ISO 8528	This generator 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.	NFPA 110	The genset can comply to a single step in accordance with NFPA 110

The generator set is designed and manufactured in facilities certified to standards ISO9001:2015 and ISO14001:2015. The generator set is prototype-tested, factory-built and production tested and is in compliance with the relevant standards:

- ISO 8528-13, ISO 3046, DIN627
- EN 60034-1, EN 60204-1
- Machinery Directive 2006/42/EC/LVD 2014/35/EU

Data and specifications are subject to change without notice.