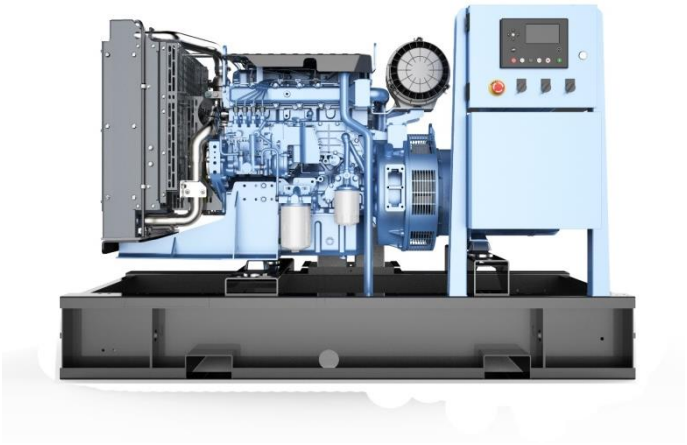
WPG88*1

DIESEL GENERATING SET

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

Voltage	PRP		ESP	
V	**kVA**	kWe	**kVA**	kWe
415/240	**80**	64	**88**	70.4
400/230	**80**	64	**88**	70.4
380/220	**80**	64	**88**	70.4



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

Air intake and exhaust system

- Top-mounted turbocharger optimized for gen-set application
- Special rear-mounted air filter with restriction indicator
- Exhaust manifold shield for heat isolation

Fuel system

- P-type fuel injection pump and injector for higher injection pressure
- Duplex fine filter for better efficiency

Electrical system

- 12 Vdc electric starter motor and battery charging alternator
- Low oil pressure & high water temperature sensors

Lubrication system

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

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
- 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

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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		BAUDOUIN/ 4M10G88/5
Gross Power	kWm	ESP - 80 / PRP - 72
Cylinder / Type / Aspiration		4 / In-line / Turbocharged and intercooled
Bore x Stroke	mm	105 x 118
Displacement	L	4.087
Compression ratio		17.5:1
Brake Mean Effective Pressure	kPa	ESP – 1570

COOLING SYSTEM		
Type of Coolant		Liquid (water + 50% antifreeze)
Total Cooling System Capacity (with Radiator)	L	17.9
Max coolant temperature – shutdown	°C	105
Cooling Fan Airflow	m^3/min	146
LUBRICATION SYSTEM		
Operating Temperature range before Engine	°C	78 -105
Oil fuel consumption ratio based on engine fuel consumption data	g/kW.hr	≤ 0.1%
Total system capacity (including filters)	L	13
Type of oil filter		Spin-on full flow filter

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FUEL SYSTEM

Type of fuel filter		Spin-on fuel filter
Min. internal diameter of the supply pipe	mm	12
Min. internal diameter of the return pipe	mm	12
Max. fuel return restriction	Bar	0.12
Max. fuel inlet temperature	°C	50
Fuel supply flow	L/hr	84
Fuel Consumption (Tolerance +3%)		

Rating	gr/kWh	L/hr
100%ESP	218.9	21.3
100%PRP	212.8	18.8
75% PRP	208.7	13.5
50% PRP	210.6	9.1
25% PRP	243.1	5.24

EXHAUST SYSTEM

Exhaust Gas temperature after the turbocharger	°C	700
Exhaust Gas flow	m^3/min	ESP – 17.25 / PRP – 15.74
Max. Exhaust back pressure	mBar	50
Noise level(Open)	dB(A)@1m(75%)	105
Noise level(Open)	dB(A)@7m(75%)	98
Noise level(Silenced)	dB(A)@1m(75%)	85
Noise level(Silenced)	dB(A)@7m(75%)	78

ALTERNATOR

Brand / Model	LEROY-SOMER / TAL A44 C
Rated Current	118.9A
Coupling / No. of Bearing	Direct / Single
Winding Pitch	2/3
Type of Excitation	Self-excitation
Cooling type	Air
Voltage regulation method	AVR
Insurance	Class H
Temperature rise	Class H
Protection Grade	IP23
Efficiency at 0.8p.f.@100% load	86.7%

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CONTROL MODULE DSE 6120

- 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.

STANDARD CONDITIONS

Standard operating environment: ambient temperature is 5℃~40℃,the altitude is less than 1000m,the relative humidity is less than 90%(25℃),and there is no dust, sand dust, salt fog, mold, condensation environment, etc.

If the operating environment exceeds the above requirements, please contact the factory and consult.

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Ambient adaptability protection measures for alternators

Ambient type	Ambient description	Measures of protection
General Ambient	The air is clean and dry, the humidity is ≤90%, and the distance from the coastline is ≥ 30km; Non-industrial ambient (chemical splash, acid-base steam, corrosive environment, etc.)	standard configuration
Humid Ambient	The humidity above 90% or condensation occurs	Anti-condensation heating (Optional)
Salt spray Ambient	Salt fog crystals are produced in seaside (< 30km from the coastline) or island Ambient	Anti-condensation heating; (Optional) Spray three-proof paint on winding surface; (Optional) Spraying epoxy protection for parts and structures. (Optional)
Dust Ambient	The ambient where mining, building construction, desert Gobi or sandstorm occur	Standard IP23 protection Improve the protection level of the alternator to IP44; (Optional)
If you need to use protective measures beyond the standard, please contact the factory and consult.		

Special working condition

If the operating conditions of the generator meet the following conditions, please contact the factory and consult.

- Multistage parallel operation
- Grid-connected operation
- As the main power supply, it runs continuously for a long time
- The load includes a high power motor type load
- Capacitive load
- Special ambient such as high temperature, cold and plateau

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Ratings definitions

Emergency Standby Power (ESP):

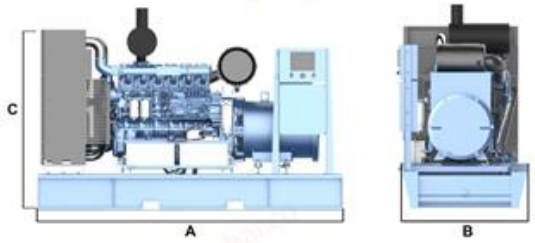
Emergency Standby Power is the maximum power available for a varying load for the duration of a main power network failure. The average load factor over 24 hours of operation should not exceed 70% of the engine's ESP power rating.

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.

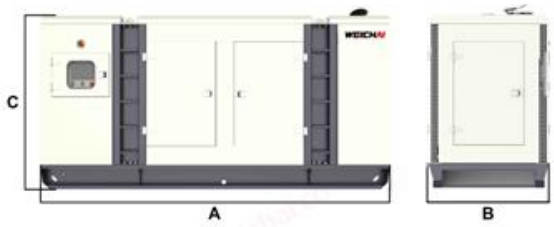
Prime power (PRP):

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

Ddimension and Weight

Structure	Model	Dim "A" mm	Dim "B" mm	Dim "C" mm	Dry wt.* kg	Tank capacity L
Open	WPG88F1	1930	860	1218	1070	110
Silenced	WPG88L1	2880	1050	1600	1530	250

* 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.

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