

WEICHAI GEN-SETS DATASHEET



Land Based Genset-WPG550*83

Gen-set specifications

Model	WPG550*8
Standby Rating kVA/kWe	550/440
Prime Rating kVA/kWe	500/400
Voltage V	400/230
Frequency Hz	50
Power Factor	0.8(lagging)
No. of Phases	3
Fuel consumption@25% / 50% / 75% (L/h)	27.8 / 51 / 75.3
Fuel consumption@100% / 110% (L/h)	109.5 / 123.1
Sound@1m (dB • (A))	Open≤105; Silence ≤85
Ambient temp (°C)	-10~45
Gen-set regulation class	ISO8528-5 G2
Steady-state voltage deviation	≤±2.5%
Transient voltage deviation (100% sudden power decrease/increase)	≤+25%; ≤-20%
Steady-state frequency band	≤1.5%
Transient frequency deviation from rated frequency (100% sudden power decrease/increase)	≤+12%; ≤-10%

Standard Features

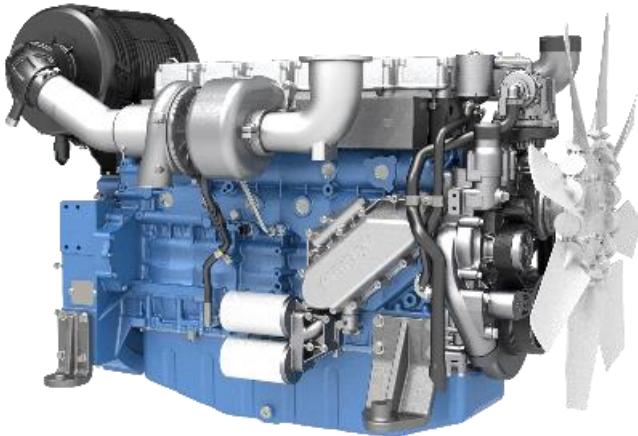
◆ ECU	◆ DC24 Electric starter	◆ WEICHAI WHC6120NC
◆ Closed water-cooled	◆ IP23	◆ H type insulation
◆ Air filter	◆ Muffler	◆ Circuit Breaker
◆ Starting batteries	◆ with connective wires	◆ Radiator
◆ Oil Drain Valve	◆ Forklift Groove	◆ Shock Absorber
◆ Color	Weichai blue (B, F)/beige canopy and black chassis (L)	
◆ Packaging	Wound film packing	

Options

◊ Voltage 380V/415V	◊ Voltage 440V/480V	◊ Single Voltage 220V/230V
◊ Automatic Transfer Switch	◊ Automatic Parallel system	◊ PMG
◊ Engine Heater (water)	◊ Engine Heater (air inlet)	◊ Alternator heater
◊ External fuel tank (1000L/1500L)		

Engine

- Weichai **WP13** series, 6 cylinder, in-line 4 stroke, radiator cooled engine
- Well-designed air handling system with
 - Dry type, Replaceable paper element air cleaner with restriction indicator
 - Air to air after cooling
 - Optimized turbocharger for increased altitude capabilities
 - High efficiency, large heat area intercooler, reduce the air temperature after the intercooler
- High pressure common rail fuel system
- Radiator
- First fill of lube oil and coolant
- Electrical starter motor with soft start engagement feature
- Intelligent fuel injection technology to start fast guarantee
- Battery charging alternator



Alternator

- Brushless type, Screen protected, Revolving field, Self excited alternator conforming to IEC 60034-1
- Best in class efficiency
- Steel casing
- Compact design with sealed bearings for longer life and lesser maintenance
- IP23 standard protection level
- Impregnation on all wound components for better mechanical strength



Control Module Specifications

The WEICHAI WHC6120CAN is an Auto Mains Failure 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



Engine specifications

Make	WEICHAI
Mode	WP13D490E310
Rated Speed r/min	1500
Prime Power kW	450
Cooling	Liquid cooled
Governor	ECU
Aspiration	TCI
No. of cylinders	6,in-line
Bore (mm) x Stroke (mm)	127x165
Displacement (L)	12.54
Starting system	24VDC Electrical
Total coolant capacity (L)	69.2
Total lubrication system capacity (L)	36
Cooling fan airflow (m³/min)	580
Exhaust Temperature (°C)	≤550
Recommended air flow @ PRP (m³/min)	29.8
Exhaust back pressure (mBar)	≤75
Radiator design temperature (°C)	45

Alternator specifications

Make	WEICHAI
Alternator Frame	WHA-500-4/0.4
Exciter Type	Self-excitation
Enclosure	IP23
Voltage regulation	≤±1%
Class of Insulation	H
Winding Pitch	2/3
Rotor	Single bearing

Remarks

Prime power(PRП)

Prime power is defined as being the maximum power which a generating set is capable of delivering continuously while supplying a available electrical load when operated for an unlimited number of hours per year under the agreed operating conditions 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 PRP unless otherwise agreed by the RIC engine manufacturer.

Emergency standby power(ESP)

Emergency standby power is defined as the maximum power available during a available electrical power sequence, under the stated operating 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 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 unless otherwise agreed by the RIC engine manufacturer.

Standard Conditions

STANDARD CONDITIONS		
Standard operating environment: ambient temperature is 5°C~40°C, the altitude is less than 1000m, the relative humidity is less than 90%(25°C), 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.		
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
Salt spray Ambient	Salt fog crystals are produced in seaside (< 30km from the coastline) or island Ambient	Anti-condensation heating; Spray three-proof paint on winding surface; Spraying epoxy protection for parts and structures.
Dust Ambient	The ambient where mining, building construction, desert Gobi or sandstorm occur	Improve the protection level of the alternator to IP44; Install filters.

If you need to use protective measures beyond the standard, please contact the factory and consult.

Special working condition

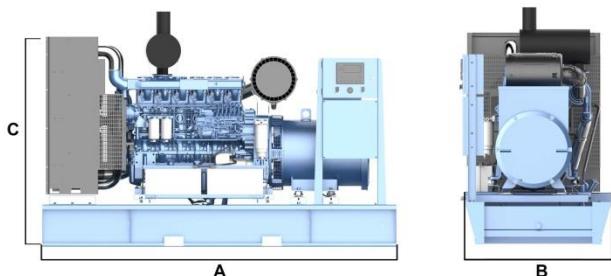
If the operating conditions of the generator meet the following conditions, please contact the factory and consult.

- 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

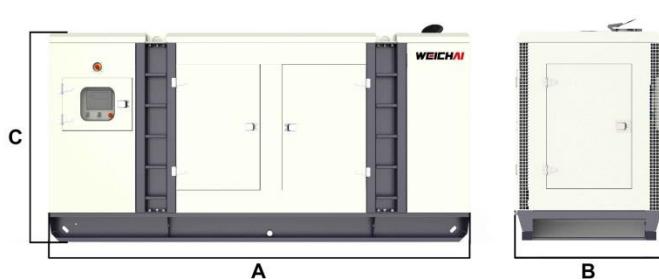
Genset Model	Prime Rating (kVA)	Length A(mm)	Width B(mm)	Height C(mm)	Wet Weight* (kg)	Standard Fuel tank Capacity (L)
WPG550/B83	500	3200	1345	1885	3220	/
WPG550/F83	500	3200	1345	2025	3360	450
WPG550/L83	500	5050	1550	2150	4050	450

*:Include coolant and oil.

Open genset



Silence genset



Availability Details

- Air intake system: Air filter;
- Cooling system: Closed-loop cooling radiator;
- Fume extraction system: Expansion pipe, muffler;
- Fuel system: Inlet return port connector, fuel filter;
- Lubrication system: Oil pan, oil filter;
- Vibration damping system: Rubber shock absorber;
- Electrical system: Control screen and switch cabinet;
- Silent System: Silencing box/container (silent unit configuration)

Note 1: Silent generator sets (L Series) can be used directly after installation on the ground, without the need for separate installation accessories, and open generator sets require appropriate installation accessories to install fume extraction systems, etc.

Note 2: The factory does not provide on-site installation accessories such as exhaust straight pipe, elbow, radiator shroud, etc. to the unit itself. The buyer needs to consider the installation of the accessories and the installation project in advance;