



PDC65A

Prime Power: 45KW/57KVA Standby Power: 50KW/63KVA Voltage: 400VAC

Powered by Cummins 4BTA3. 9-G2 Engine

Genset Performance

- 230/400VAC, 50Hz, 0.8PF, 3 Phases 4 wires
- Frequency drop ≤3%
- Voltage regulation ≤0.3%
- The steady state frequency ≤0.5%
- The steady state voltage deviation $\leq \pm 1\%$
- The transient frequency deviation ≤+10% ≤-15%
- The transient voltage deviation ≤+20% ≤-15%
- Frequency recovery time ≤3S
- Voltage recovery time ≤1S(Voltage ±3%)
- THF (Telephone Harmonic Factor) <3
- TIF (Telephone Influence Factor) <50
 Comply to Standard NEMA MG1-22.43
 - Built-in vibration isolator with high performance on shock absorption.

Standard Configuration

- Cummins Engine
- Brushless synchronous alternator
- POWERTEC intelligent controller
- 40°C standard ambient temperature (50°C Optional)
- Molded case circuit breaker (3P)
- Float battery charger
- Battery connect wire
- Steel base frame
- Silencer, bellows, exhaust bend
- Manual book and files

Optional Items

- Starting batteries
- Fuel tank
- Oil-water separator
- Sensor for low coolant level, low fuel/oil level
- Automatically monitoring & controlling system of city power
- Coolant heater
- Oil heater
- Heat exchanger--Water cooled tower system
- Soundproof canopy
- Trailer
- S230 Soundproof canopy
- Design and construction of environmental protection
- Engineering for the Genset room



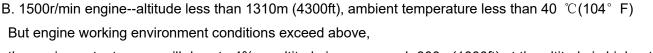
Equipment Instruction



Diesel Engine

Model: 4BTA3.9-G2

- Construction: Adopt forged steel camshaft and crankshaft, High strength cylinder block design, plenty parts cast on the Cylinders, stiffness strong, high pressure resistant capacity, longer service life.
- Advanced design and superior manufacture: Adapt to harsh severe work condition, high strength and has heavy loading work capacity.
- Fuel system: Rotator high pressure fuel pump, lower fuel consumption, and reduce noise effectively.
- Environment: The engine can work normally under the following conditions without de-rating:
- A. 1800r/min engine--altitude less than 1500m (5000ft), ambient temperature less than 40 $\,^{\circ}\mathrm{C}(104^{\circ}\,\mathrm{F})$.



the engine output power will de-rate 4% as altitude increase each 300m(1000ft) at the altitude is higher than 1500m (5000ft),

Also it will de-rate 2% as temperature increase every 11 $^{\circ}$ C(1% de-rating ,when temperature increase each 10 $^{\circ}$ F). in the ambient temperature is higher than 40 $^{\circ}$ C(104 $^{\circ}$ F)



- Optional brands: Stamford / Marathon / Faraday / Engga / Mecc Alt
- Brushless, 4 pole rotating magnetic field, single bearing with protective cover.
- Insulation: H Class.
- IP Class: IP23
- Cooling system
- AC exciter, rotate rectifying
- Rotor and exciter made with high temperature insulating resin, to satify tough environment.
- Rotor dynamic balancing complys for BS5625, class 2.
- Sealed with advanced lubricating grease to prolong life of bearing.





Intelligent Control System



Standard

- 3 phases voltage: Ua, Ub, Uc
- Frequency F1
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature °C display
- Oil pressure OP
- Engine speed

- 3 phases current: La, Lb, Lc
- Active power PA
- Power factor PF
- Temperature °C display
- KPa/Psi/Bar display
- Battery voltage V
- Running Hour
- Starting timer:(999999)



Standard Protection

Genset Protection

Programmable I/O signal

Engine Protection

- Stop for over speed
- Low oil pressure
- High Coolant temperature
- Sensor fail

Alternator Protection

- Over Voltage
- Over current
- Voltage signal lost

Control System Components

- Manual/auto/stop/start
- Setting button
- Fault status indicators

- Emergency stop
- Alarm for low/high battery voltage
- Low battery voltage
- Fail to start/Cranking fail
- Over Voltage
- Over frequency
- Under frequency
- Screen menu selection button
- Emergency stop button
- Digital displayer



Communication Interface

(Option)

International standard MODBUS communication protocol RS232/ RS485 is suitable for remote control and monitor; It is easy integrated with SCADA;.

Notes: Above data of controller comes from POWERTEC GC6110. Customized solutions is available as required

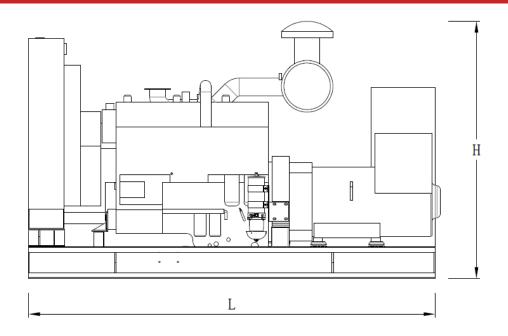
Data sheet of Genset

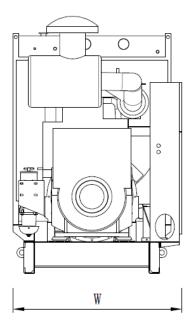


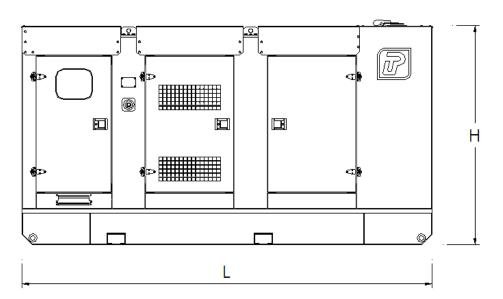
Genset				
Model	PDC65A			
Prime Rating (kw)	45			
Standby Rating (kw)	50			
Rate voltage(V)	400			
Rate current(A)	81			
Power factor	0.8			
Frequency(Hz)	50			
Engine				
Engine Model	4BTA3.9-G2			
Gross Engine output-Prime (kw)	50			
Gross Engine output-Standby (kw)	55			
Bore * stroke (mm)	102*120			
Cylinders and structure	4 In line			
Displacement(Liter)	3.9			
Compression Ratio	16.5:1			
Intake way	Turbo Charge			
Max intake resistance (KPa)	6.23			
Air intake (m3/h)	198			
Max exhaust back pressure (KPa)	e (KPa) 10			
Exhaust gas flow (m3/h)	536			
Exhaust temp (°C)	560			
Cooling way	Water Radiator & Fan			
Fan exhaust flow (m3/min)	160			
Coolant capacity (L)	22			
Highest water temperature(°C)	104			
Minimum air opening to room (m2)	0.9/0.5			
Thormostat range (°C)	82-95			
May ail temperature (°C)	121			
Lubrication system oil capacity (L)	11			
Rate load fuel consumption(L/H)	13			
Standard Governor/Class Electronic				
Alternator				
Rated Voltage(V)	400/230			
Output Way	3 Phases, 4 wires			
Rated power factor	0.8			
Exciter	Brushless, Self-exciter			
Max voltage regulation	±1%			
Phase	3			
Protection class	IP21-23			
Insulation class H				
Controller				
Brand	POWERTEC or DEEPSEA			

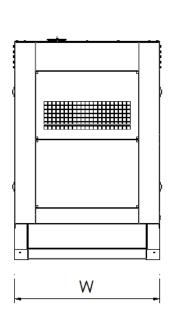
Dimension and Weight











Туре	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	2100*835*1385	880	110
Silent Type	2300*900*1550	1430	250

Contact Us

Powertec Generator System Inc.

Add: Danshui Yanna Industry Zone, Huiyang, Huizhou, Guangdong, China

Tel: +86 752-3911119 / 3911118

Fax: +86 752-3911110

Web: www.powertec.com.cn

Email: powertec@powertec.com.cn