

## PDC45A

Prime Power: 32KW/40KVA Standby Power: 35KW/44KVA Voltage: 400VAC

Powered by Cummins 4BT3.9-G2 Engine

### Genset Performance

- 230/400VAC, 50Hz, 0.8PF, 3 Phases 4 wires
- Frequency drop  $\leq 3\%$
- Voltage regulation  $\leq 0.3\%$
- The steady state frequency  $\leq 0.5\%$
- The steady state voltage deviation  $\leq \pm 1\%$
- The transient frequency deviation  $\leq +10\%$   $\leq -15\%$
- The transient voltage deviation  $\leq +20\%$   $\leq -15\%$
- Frequency recovery time  $\leq 3S$
- Voltage recovery time  $\leq 1S(\text{Voltage} \pm 3\%)$
- 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



## Diesel Engine

- Model: 4BT3.9-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 °C(104°F).
  - B. 1500r/min engine--altitude less than 1310m (4300ft), ambient temperature less than 40 °C(104°F)  
But engine working environment conditions exceed above, 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 °C(1% de-rating ,when temperature increase each 10°F ).  
in the ambient temperature is higher than 40°C(104°F)



## Alternator

- 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 satisfy tough environment.
- Rotor dynamic balancing complys for BS5625, class 2.
- Sealed with advanced lubricating grease to prolong life of bearing.



**Notes: Above data of alternator comes from Stamford. Specification may alternated without advance notice.**

## Standard Me-

- 3 phases voltage:  $U_a, U_b, U_c$
- Frequency F1
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature °C display
- Oil pressure OP
- Engine speed
- 3 phases current:  $I_a, I_b, I_c$
- Active power PA
- Power factor PF
- Temperature °C display
- KPa/Psi/Bar display
- Battery voltage V
- Running Hour
- Starting timer:(999999)



## Standard Protection Func-

### Genset Protection

- Programmable I/O signal
- Emergency stop

### Engine Protection

- Stop for over speed
- Low oil pressure
- High Coolant temperature
- Sensor fail
- Alarm for low/high battery voltage
- Low battery voltage
- Fail to start/Cranking fail

### Alternator Protection

- Over Voltage
- Over current
- Voltage signal lost
- Over Voltage
- Over frequency
- Under frequency

### Control System Components

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

## Genset

Model	PDC45A
Prime Rating (kw)	32
Standby Rating (kw)	35
Rate voltage(V)	400
Rate current(A)	58
Power factor	0.8
Frequency(Hz)	50

## Engine

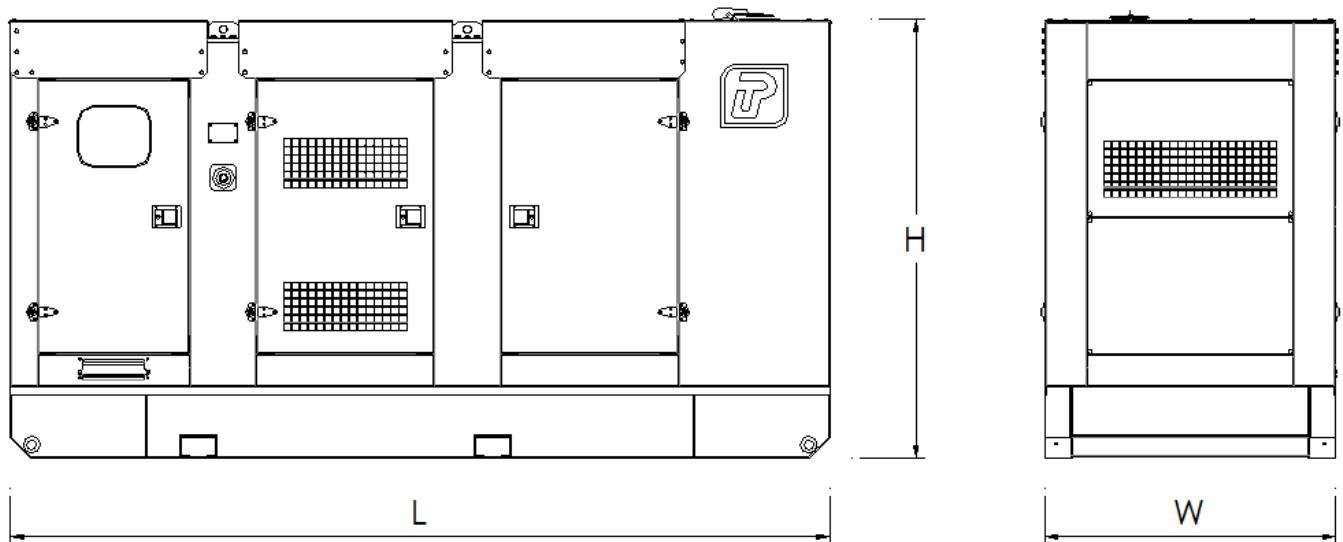
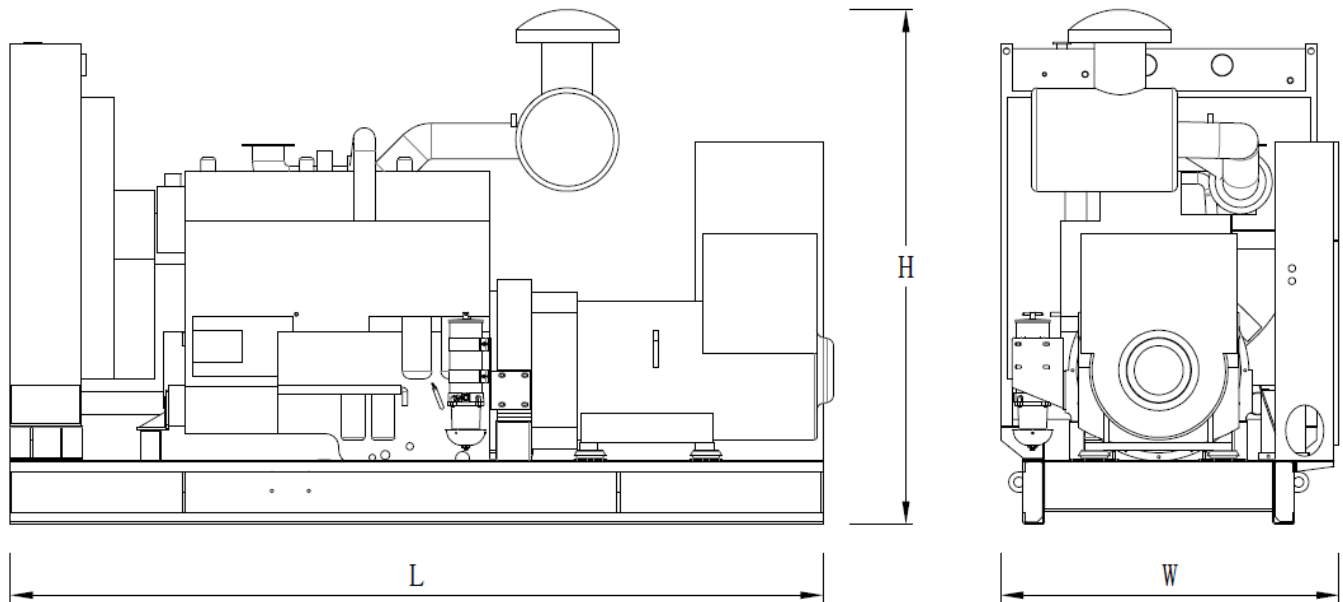
Engine Model	4BT3.9-G2
Gross Engine output-Prime (kw)	36
Gross Engine output-Standby (kw)	40
Bore * stroke (mm)	102*120
Cylinders and structure	4 In line
Displacement(Liter)	3.9
Compression Ratio	18:1
Intake way	Turbo Charge
Max intake resistance (KPa)	6.23
Air intake (m3/h)	157
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	364
Exhaust temp (°C)	487
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	146
Coolant capacity (L)	19
Highest water temperature(°C)	104
Minimum air opening to room (m2)	0.9/0.5
Thermostat range (°C)	82-95
Max oil temperature (°C)	121
Lubrication system oil capacity (L)	11
Rate load fuel consumption(L/H)	9.3
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
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Type	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	2100*835*1385	786	110
Silent Type	2300*900*1550	1336	250

## Contact Us

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