

## PDC220A

**Prime Power: 160KW/200KVA   Standby Power: 176KW/220KVA   Voltage: 400V**

**Powered by Cummins QSL8.9-G2 Engine**

### Genset Performance

- 230/400V, 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  $\leq 1S$  (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)
- 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
- Design and construction of environmental protection engineering for the Genset room

## Diesel Engine

- Model: **QSB8.9-G2**
- Leading in-cylinder combustion technology gives the engine basic platform excellent reliability and durability, good inheritance, long-lasting advantages, and easy upgrades;
- Integrated oil and water pipelines replace traditional hoses, eliminating the risk of leakage;
- Enhanced cooling and lubrication functions effectively extend the service life of the engine;
- Cummins high-pressure common rail fuel system (HPCR) realizes multi-point injection, rapid throttle response at different speeds, more efficient power output, better fuel economy and lower noise.
- Two-stage dual fuel filters ensure a balanced level of particle dispersion, maximize the life of the fuel filter, and protect the main components of the fuel system.
- Emission standards: Meet the National Phase III emission standards;
- The engine may be operated at :

1500 RPM up to 2000 m and 104 ° F (40 ° C) without power deration.

For sustained operation above these conditions, derate by 4% per 300 m, and 3% per 10 ° C.



## 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 complies for BS5625, class 2.5
- Sealed with advanced lubricating grease to prolong life of bearing.



## Standard

- 3 phases voltage: U<sub>a</sub>, U<sub>b</sub>, U<sub>c</sub>
- Frequency F1
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature °C display
- Oil pressure OP
- Engine speed
- 3 phases current: I<sub>a</sub>, I<sub>b</sub>, I<sub>c</sub>
- 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
- 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 display



## Communication Interface

### (Option)

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

## Genset

Model	PDC220A
Prime Rating (kw)	160
Standby Rating (kw)	176
Rate voltage(V)	400
Rate current(A)	291
Power factor	0.8
Frequency(Hz)	50

## Engine

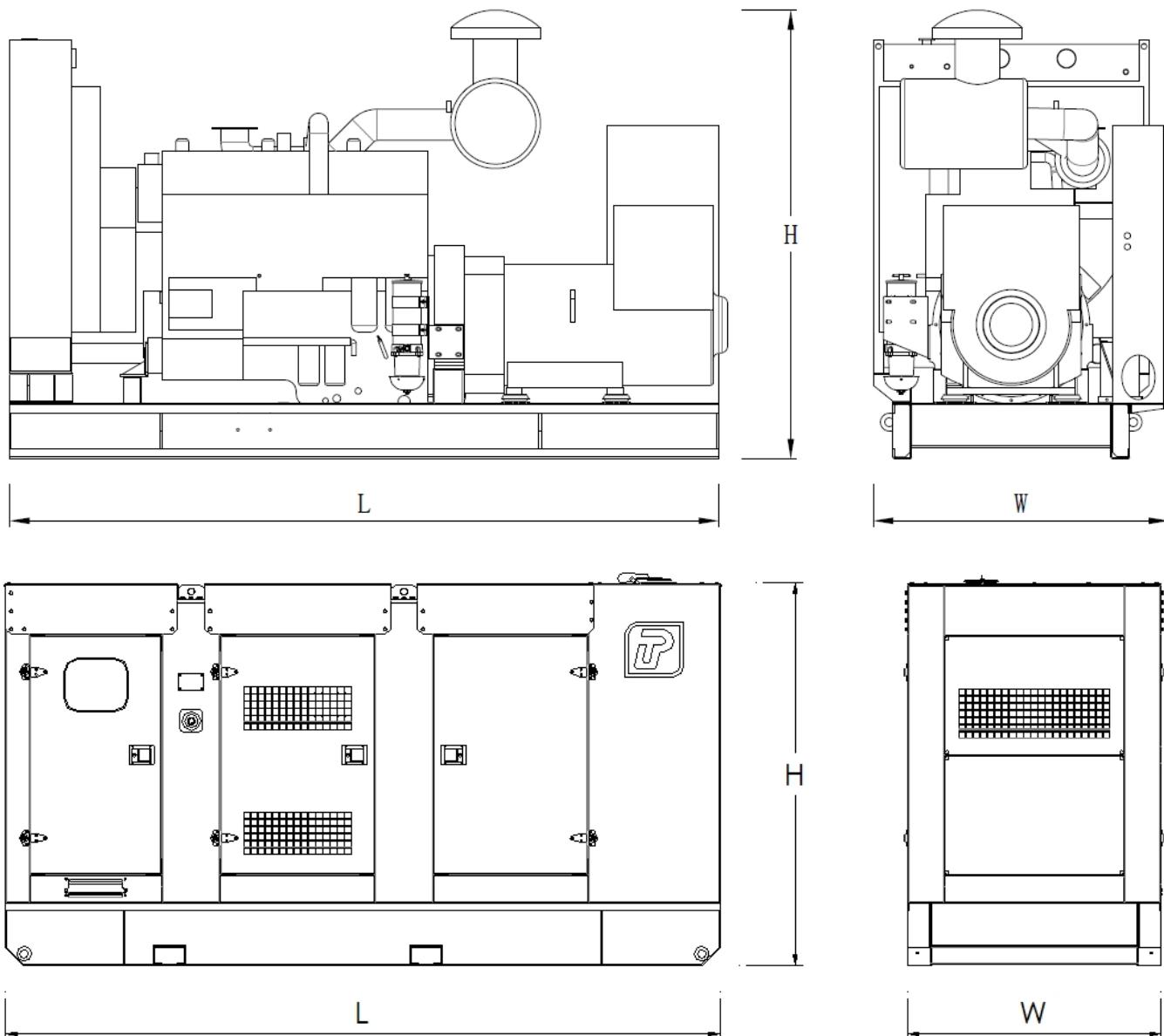
Engine Model	QSL8.9-G2
Gross Engine output-Prime (kw)	206
Gross Engine output-Standby (kw)	226
Bore * stroke (mm)	114*145
Cylinders and structure	6 In line
Displacement(Liter)	8.9
Compression Ratio	17.73:1
Intake way	Turbocharged and Charge Air Cooled
Max intake resistance (KPa)	6.2
Air intake (m3/h)	659
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	1728
Exhaust temp (°C)	510
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	380
Coolant capacity (L)	33.5
Highest water temperature(°C)	104
Minimum air opening to room (m2)	2.4/2.0
Thermostat range (°C)	83-95
Max oil temperature (°C)	124
Lubrication system oil capacity (L)	28.1
Rate load fuel consumption(L/H)	55
Standard Governor/Class	Electronically Controlled High Voltage Common Rail

## Alternator

Rated Voltage(V)	230/400
Output Way	3 Phases, 4 wires
Rated power factor	0.8
Exciter	Brushless, Self-excitator
Max voltage regulation	±1%
Phase	3
Protection class	IP21-23
Insulation class	H

## Controller

Brand	POWERTEC
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Type	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
<b>Open Type</b>	2731*1067*1528	1952	430
<b>Silent Type</b>	3950*1400*2115	3352	750

Contact Us

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