

## PDC500B

Prime Power: 380KW/475KVA

Standby Power: 400KW/500KVA

Voltage: 400VAC

Powered by Cummins QSZ13-G3 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  $\leq 1S(\text{Voltage} \pm 3\%)$
- 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)
- 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: **QSZ13-G3**
- Structure: Using forged steel camshaft and crankshaft, high-strength cylinder design, many parts are cast on the cylinder, high rigidity, strong high pressure resistance, and longer service life;
- Excellent reliability: It is designed using the world's leading engineering technology and analysis tools and combined with the usage conditions of Chinese users. With the support of powerful sensors and electronic control systems, the engine has stronger high-altitude operating performance, low-temperature operation and large-load sustainability. Operating capability, the engine can operate freely at temperatures ranging from minus 40 to 60 degrees Celsius and at an altitude of 5,200 meters.
- Fuel system: Using Cummins XPI ultra-high pressure common rail fuel injection system and CTT high-flow turbocharger, combined with Cummins' advanced power cylinder design and electronic control system, it greatly reduces fuel consumption and ensures the engine's performance in different working conditions and applications. Excellent fuel economy;
- Lower emissions: Using an in-machine purification solution, it can meet the needs of hospitals, schools and other places that have stricter emission requirements;



## 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:  $U_a, U_b, U_c$
- Frequency  $F_1$
- Apparent power PR
- Power factor PF
- Coolant temperature WT
- Temperature  $^{\circ}\text{C}$  display
- Oil pressure OP
- Engine speed
- 3 phases current:  $I_a, I_b, I_c$
- Active power PA
- Power factor PF
- Temperature  $^{\circ}\text{C}$  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 displayer



## 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	PDC500B
Prime Rating (kw)	380
Standby Rating (kw)	400
Rate voltage(V)	400
Rate current(A)	686
Power factor	0.8
Frequency(Hz)	50

## Engine

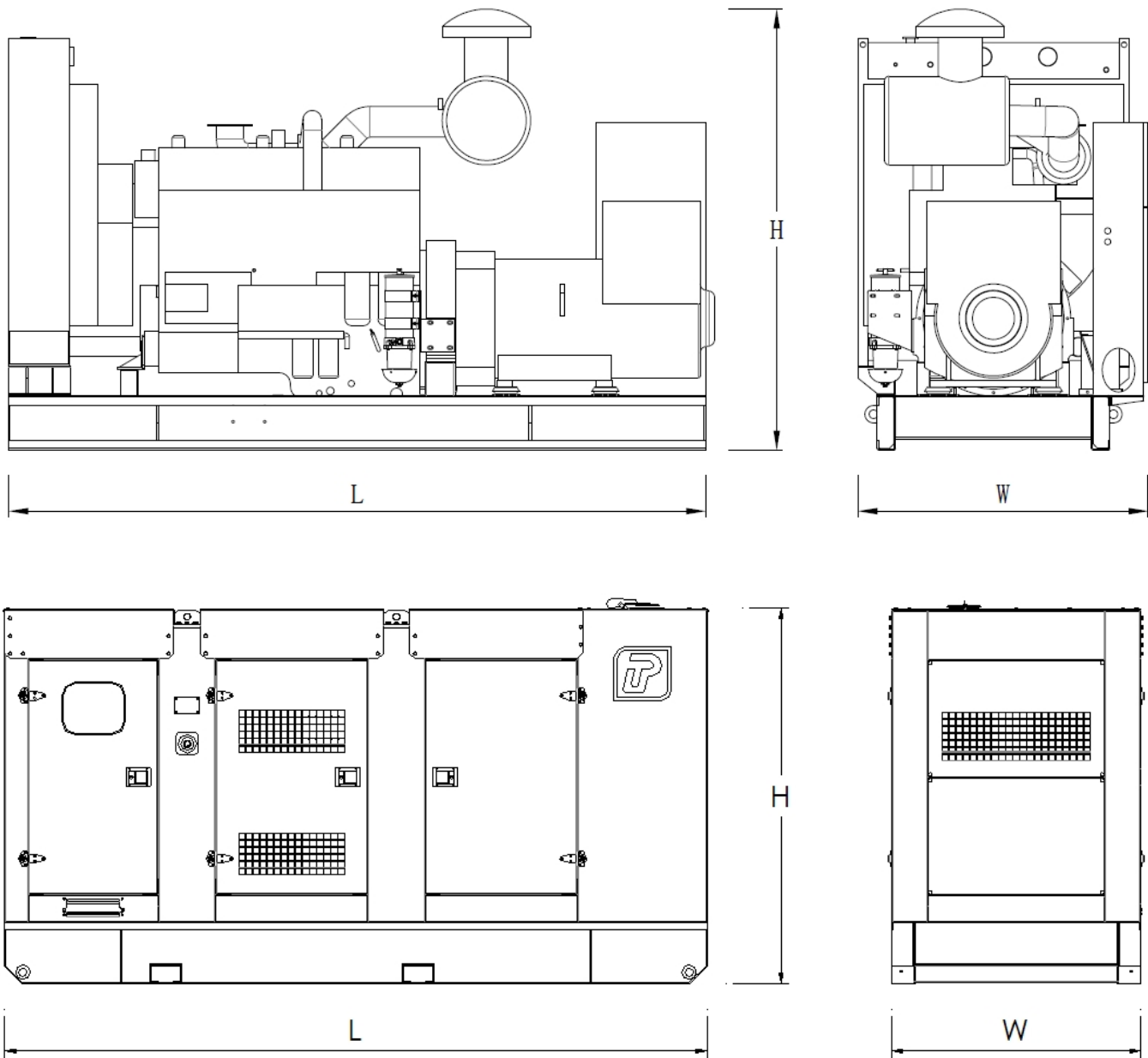
Engine Model	QSZ13-G3
Gross Engine output-Prime (kw)	450
Gross Engine output-Standby (kw)	470
Bore * stroke (mm)	130*163
Cylinders and structure	6 In line
Displacement(Liter)	13
Compression Ratio	17:1
Intake way	Turbocharged and Charge Air Cooled
Max intake resistance (KPa)	6.2
Air intake (m3/h)	1782
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	2190
Exhaust temp (°C)	547
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	690
Coolant capacity (L)	73
Highest water temperature(°C)	107
Minimum air opening to room (m2)	2.6/2.2
Thermostat range (°C)	82-94
Max oil temperature (°C)	121
Lubrication system oil capacity (L)	45.42
Rate load fuel consumption(L/H)	101
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-exciter
Max voltage regulation	±1%
Phase	3
Protection class	IP21-23
Insulation class	H

## Controller

Brand	POWERTEC
-------	----------



Type	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	3165*1373*2100	3385	-
Silent Type	4300*1594*2250	5185	900

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](http://www.powertec.com.cn)

**Email:** [powertec@powertec.com.cn](mailto:powertec@powertec.com.cn)