

## PDC425B

Prime Power: 310KW/388KVA

Standby Power: 340KW/425KVA

Voltage: 400AC

Powered by Cummins 6ZTAA13-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  $\leq +10\%$   $\leq -7\%$
- 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.
- Product standards: (1) GB/T 2820-2022 / IS08528:2018  
(2) GB/T 4712-2008 (3) YD/T 502-2020 (4) YD/T 1051-2018

### 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
- Soundproof Canopy
- Design and construction of environmental protection engineering for the Genset room

## Diesel Engine

- Model: **6ZTAA13-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;
- Intake and exhaust: The efficient Holset exhaust gas supercharger further improves combustion; the pressure-type pulse exhaust pipe can make full use of exhaust gas energy and improve engine efficiency; air-to-air intercooling technology ensures better fuel economy and emissions;
- Fuel system: Using Beiyou PD pump/GAC electronic governor, combined with Cummins' advanced power cylinder design and electronic control system, it greatly reduces fuel consumption and ensures excellent fuel economy of the engine in different working conditions and applications.
- Lower emissions: The in-machine purification solution is adopted to meet the stricter emission requirements of hospitals, schools, etc. The usage requirements of the required places.



## 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.



## 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
- 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               | PDC425B |
| Prime Rating (kw)   | 310     |
| Standby Rating (kw) | 340     |
| Rate voltage(V)     | 400     |
| Rate current(A)     | 559     |
| Power factor        | 0.8     |
| Frequency(Hz)       | 50      |

## Engine

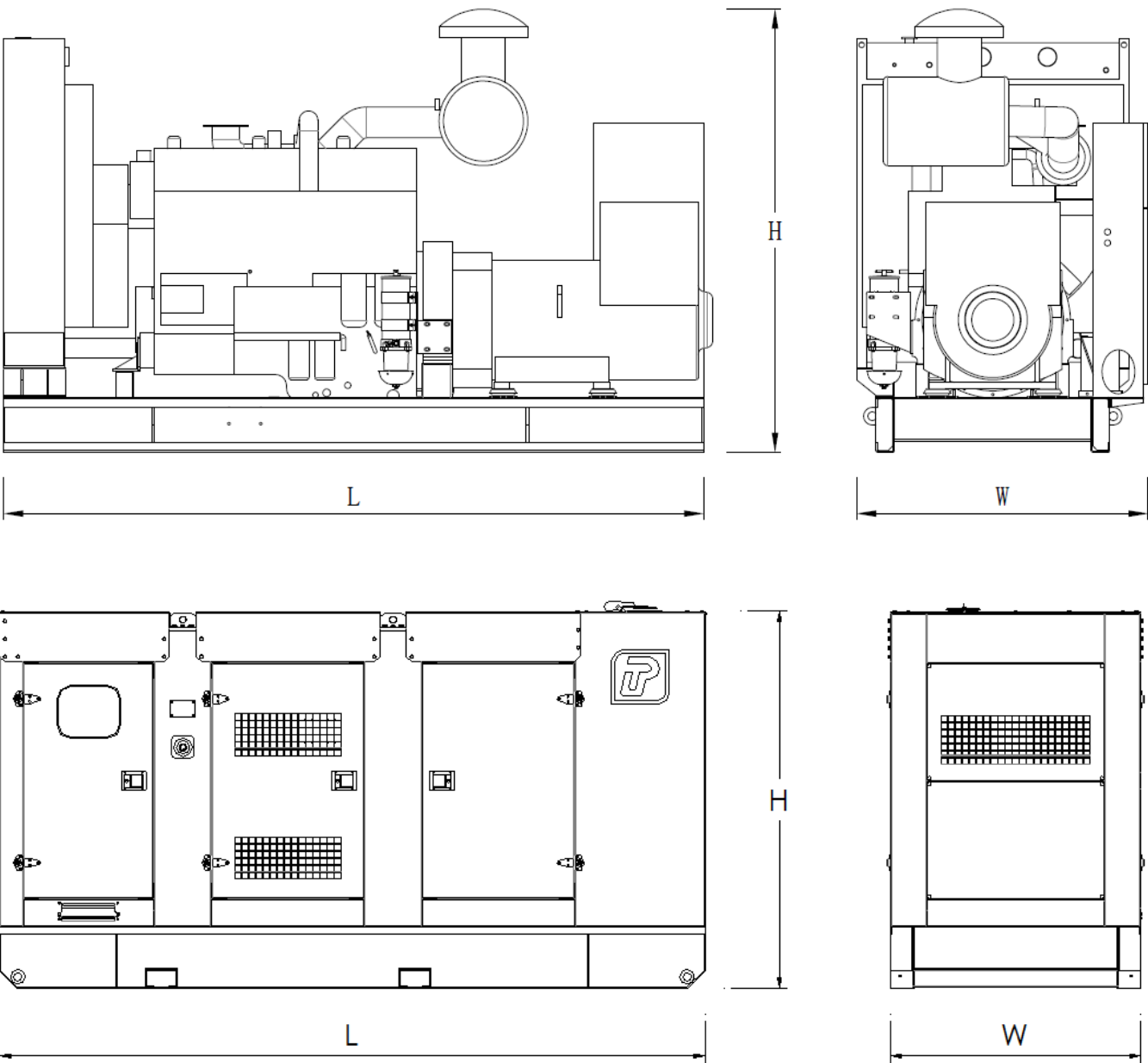
|                                     |                                    |
|-------------------------------------|------------------------------------|
| Engine Model                        | 6ZTAA13-G3                         |
| Gross Engine output-Prime (kw)      | 340                                |
| Gross Engine output-Standby (kw)    | 380                                |
| 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)                   | 1530                               |
| Max exhaust back pressure (KPa)     | 13                                 |
| Exhaust gas flow (m3/h)             | 3480                               |
| Exhaust temp (°C)                   | 636                                |
| Cooling way                         | Water Radiator & Fan               |
| Fan exhaust flow (m3/min)           | 690                                |
| Coolant capacity (L)                | 73.1                               |
| Highest water temperature(°C)       | 102                                |
| 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)     | 76.5                               |
| Standard Governor/Class             | Electronic                         |

## 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)<br>(L*W*H) | Weight<br>(kg) | Fuel Tank Capacity<br>(L) |
|-------------|---------------------------|----------------|---------------------------|
| Open Type   | 3215*1415*1911            | 3256           | -                         |
| Silent Type | 4300*1594*2250            | 5056           | 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)