

## PDC215A

Prime Power: 160KW/200KVA

Standby Power: 172KW/215KVA

Voltage: 400V

Powered by Cummins 6CTAA8.3-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  $\leq +10\%$   $\leq -7\%$
- 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 / ISO8528:2018  
(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
- Design and construction of environmental protection engineering for the Genset room



## Diesel Engine

- Model: **6CTAA8.3-G2**
- Structure: The cylinder liner adopts a platform mesh honing design and a corrosion-resistant high-nickel cast iron piston, which greatly reduces engine oil consumption, enhanced durability, longer service life
- Integrated design: the cylinder block, cylinder head and other parts are "multi-purpose in one piece", reducing the number of connecting parts; 40% fewer parts than other similar engines, greatly reducing the failure rate;
- Fuel system: Bosch in-line fuel pump, more complete combustion under high injection pressure, less energy loss, More powerful power and strong fuel adaptability;
- Filtration system: Dry core air filter with air intake resistance indicator  
Spin-on Paper Based Full Flow and Bypass Oil Filters Spin-on anti-corrosion water filter;
- Leading design and manufacturing: advanced design, exquisite manufacturing technology, reliable and durable.
- Holset supercharger: with integrated wastegate valve, strong low-speed response and power.



## 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.
- Sealed with advanced lubricating grease to prolong life of bearing.



## Standard

- 3 phases voltage:  $U_a, U_b, U_c$
- Frequency  $F1$
- Apparent power  $PR$
- Power factor  $PF$
- Coolant temperature  $WT$
- Temperature  $^{\circ}C$  display
- Oil pressure  $OP$
- Engine speed
- 3 phases current:  $I_a, I_b, I_c$
- Active power  $PA$
- Power factor  $PF$
- Temperature  $^{\circ}C$  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               | PDC215A |
| Prime Rating (kw)   | 160     |
| Standby Rating (kw) | 172     |
| Rate voltage(V)     | 400     |
| Rate current(A)     | 289     |
| Power factor        | 0.8     |
| Frequency(Hz)       | 50      |

## Engine

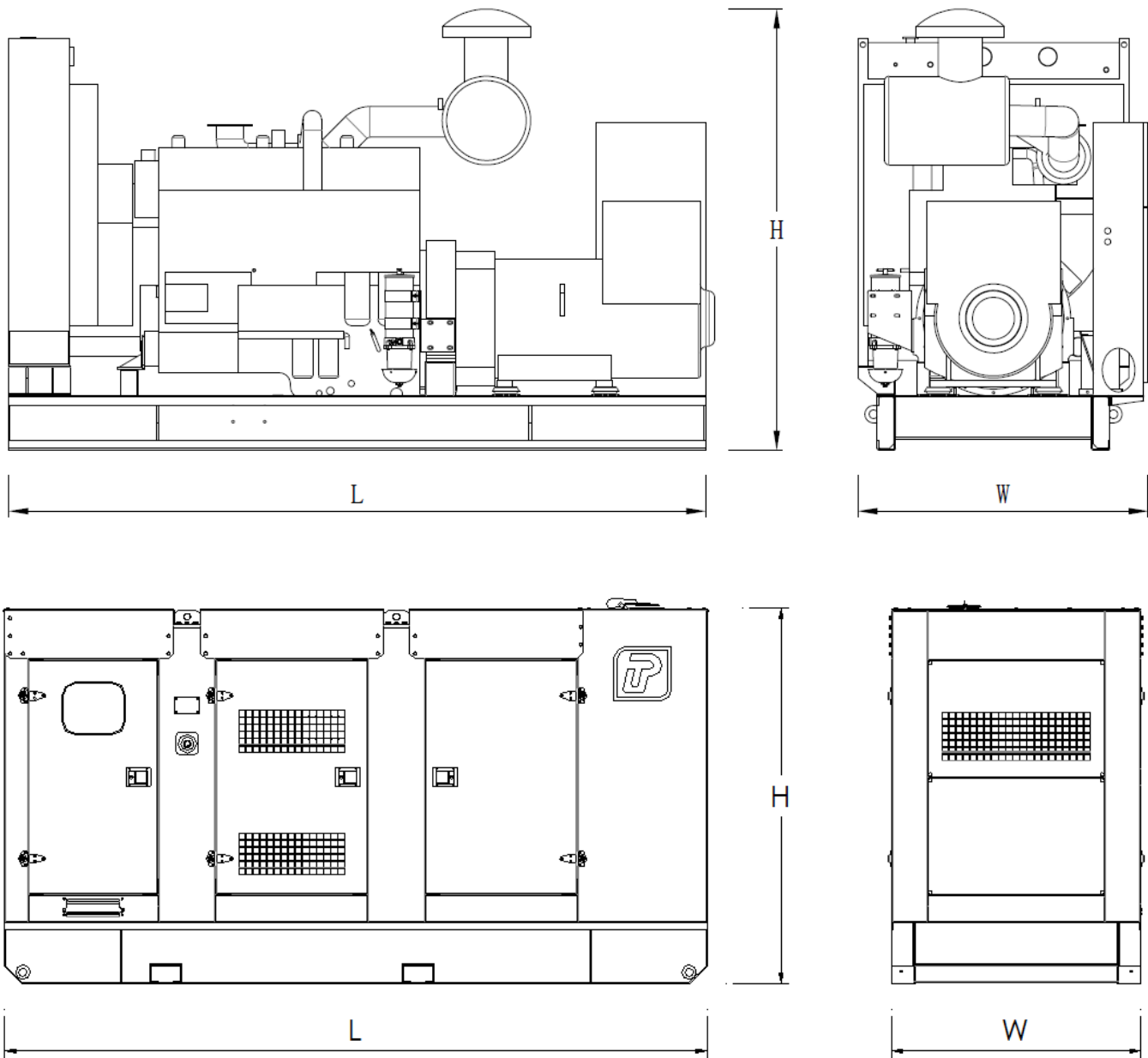
|                                     |                                    |
|-------------------------------------|------------------------------------|
| Engine Model                        | 6CTAA8.3-G2                        |
| Gross Engine output-Prime (kw)      | 183                                |
| Gross Engine output-Standby (kw)    | 203                                |
| Bore * stroke (mm)                  | 114*135                            |
| Cylinders and structure             | 6 In line                          |
| Displacement(Liter)                 | 8.3                                |
| Compression Ratio                   | 18.0:1                             |
| Intake way                          | Turbocharged and Charge Air Cooled |
| Max intake resistance (KPa)         | 6.35                               |
| Air intake (m3/h)                   | 659                                |
| Max exhaust back pressure (KPa)     | 10                                 |
| Exhaust gas flow (m3/h)             | 1728                               |
| Exhaust temp (°C)                   | 580                                |
| Cooling way                         | Water Radiator & Fan               |
| Fan exhaust flow (m3/min)           | 380                                |
| Coolant capacity (L)                | 34                                 |
| Highest water temperature(°C)       | 110                                |
| Minimum air opening to room (m2)    | 1.5/1.3                            |
| Thermostat range (°C)               | 83-95                              |
| Max oil temperature (°C)            | 121                                |
| Lubrication system oil capacity (L) | 23.8                               |
| Rate load fuel consumption(L/H)     | 45                                 |
| 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   | 2550*1112*1443            | 1800           | 315                       |
| Silent Type | 3500*1245*2052            | 3060           | 550                       |

Contact Us

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