

## PPE200A

Prime Power: 144KW/180KVA Standby Power:160KW/200KVA Voltage: 400VAC

Powered by Perkins1106A-70TAG 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

- Perkins 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
- 20GP or 40HQ container type canopy
- Design and construction of environmental protection
- Engineering for the Genset room



## Diesel Engine

- Model: Perkins 1106A-70TAG
- Construction: Forged steel crankshaft, cast iron steel body and Replaceable wet cylinder liner, two/four valves per cylinder ;
- Cooling system: Thermostatically-controlled system with belt driven coolant pump and pusher fan; mounted radiator, piping and guards;
- Fuel system: Mechanically regulated embedded fuel injection pump, non-direct injection ;



Environment: The engine can work under the following conditions without modulating power:

1800r/min engine--altitude less than 1000 m, ambient temperature less than 40 °C

1500r/min engine--altitude less than 1000 m, ambient temperature less than 40 °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 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

- 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

### 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               | PPE200A |
| Prime Rating (kw)   | 144     |
| Standby Rating (kw) | 160     |
| Rate voltage(V)     | 400     |
| Rate current(A)     | 260     |
| Power factor        | 0.8     |
| Frequency(Hz)       | 50      |

## Engine

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| Engine Model                        | 1106A-70TAG                          |
| Gross Engine output-Prime (kw)      | 157.7                                |
| Gross Engine output-Standby (kw)    | 175.2                                |
| Bore * stroke (mm)                  | 105*135                              |
| Cylinders and structure             | 6 In line                            |
| Displacement(Liter)                 | 7.01                                 |
| Compression Ratio                   | 16:1                                 |
| Intake way                          | Supercharge / Air to air intercooled |
| Max intake resistance (KPa)         | 5                                    |
| Air intake (m3/h)                   | 786                                  |
| Max exhaust back pressure (KPa)     | 6                                    |
| Exhaust gas flow (m3/h)             | 1893                                 |
| Exhaust temp (°C)                   | 491                                  |
| Cooling way                         | Water Radiator & Fan                 |
| Fan exhaust flow (m3/min)           | 282                                  |
| Coolant capacity (L)                | 21                                   |
| Highest water temperature(°C)       | 112                                  |
| Minimum air opening to room (m2)    | 1.8/1.6                              |
| Thermostat range (°C)               | 85-95                                |
| Max oil temperature (°C)            | 125                                  |
| Lubrication system oil capacity (L) | 16.5                                 |
| Rate load fuel consumption(L/H)     | 41.6                                 |
| Standard Governor/Class             | Mechanical                           |

## 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 GC6110 |
|-------|-----------------|



| Type        | Dimension (mm)<br>(L*W*H) | Weight<br>(kg) | Fuel Tank Capacity<br>(L) |
|-------------|---------------------------|----------------|---------------------------|
| Open Type   | 2550*1050*1590            | 1650           | 250                       |
| Silent Type | 2920*1100*1750            | 2400           | 400                       |

**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)