



# PYC200A

Prime Power: 150KW/188KVA Standby Power: 160KW/200KVA Voltage: 400VAC

Powered by Yuchai YC6A245-D30 Engine

### **Genset Performance**

- 230/400VAC, 50Hz, 0.8PF, 3 Phases 4 wires
- Frequency drop ≤3%
- Voltage regulation ≤0.3%
- The steady state frequency ≤0.5%
- The steady state voltage deviation  $\leq \pm 1\%$
- The transient frequency deviation **≤+10% ≤-15%**
- The transient voltage deviation ≤+20% ≤-15%
- Frequency recovery time ≤3S
- $\leq$ 1S(Voltage  $\pm$ 3%) Voltage recovery time
- THF (Telephone Harmonic Factor) <3
- TIF (Telephone Influence Factor) <50
  - Comply to Standard NEMA MG1-22.43
- Standard equipped with ambient temperature 40°C
  - Connecting radiator
- Built-in vibration isolator with high performance on shock absorption.

### **Standard Configuration**

- Guangxi Yuchai 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
- Silent type/Trailer
- Standardized container
- Design and construction of environmental protection; engineering for the Genset room.



# **Equipment Instruction**



## **Diesel Engine**

- Model: PYC200A-YC6A245-D30
- Construction: High strength cylinder block, alloy forged steel crankshaft, alloy steel connecting rod and inner cooling oil channel piston make the engine more durable, lighter and more compact in similar products.
- Intake: Charge inter-cooling
- Advanced and mature electronic common rail + high efficiency booster technology is adopted to accurately control the fuel injection volume. Adequate intake to ensure that the diesel engine under different loads, full combustion, less emissions.
- Using full-flow oil cooler and heat dissipation efficiency is increased by 30%. Oil temperature is effectively reduced. Lubricating oil at a reasonable temperature is to reduce friction loss.
- The piston adopts internal cooling channel to cool oil, effectively reducing the piston temperature so as to have a long service life.
- Meet the requirement of G3 grade of genset performance.
- Conform to non-road country T3 and European S3A standards.

Engine Operating Environment Description:

1800r/min engine--altitude less than 1000 m, ambient temperature less than 40  $\,^{\circ}$ C 1500r/min engine--altitude less than 1000 m, ambient temperature less than 40  $\,^{\circ}$ 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
- The stator winding is impregnated and the surface is covered with moisture-proof epoxy insulating paint.
- Rotor and exciter made with high temperature insulating resin, to satify 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.

## **Intelligent Control System**



#### **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

#### **Engine Protection**

- Stop for over speed
- Low oil pressure
- High Coolant temperature
- Sensor fail

#### **Alternator Protection**

- Over Voltage
- Over current
- Voltage signal lost

#### **Control System Components**

- Manual/auto/stop/start
- Setting button
- Fault status indicators

- Emergency stop
- Alarm for low/high battery voltage
- Low battery voltage
- Fail to start/Cranking fail
- Over Voltage
- Over frequency
- Under frequency
- 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

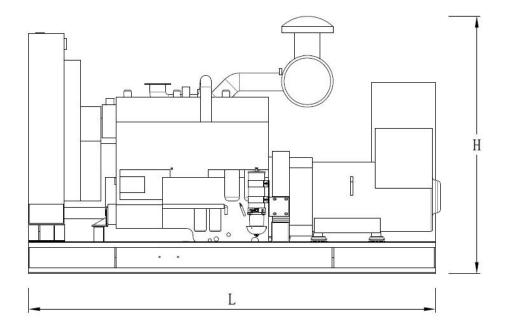
# **Data sheet of Genset**

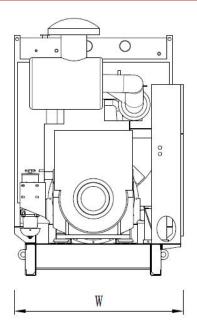


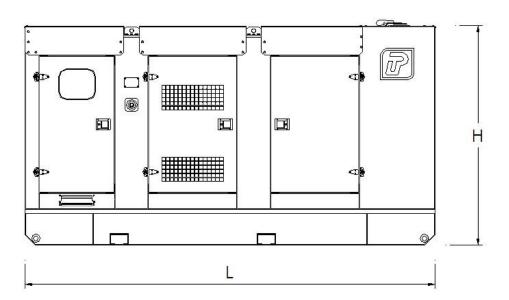
 Genset				
Model	PYC200A			
Prime Rating (kw)	150			
Standby Rating (kw)	160			
Rate voltage(V)	400			
Rate current(A)	271			
Power factor	0.8			
Frequency(Hz)	50			
Engine				
Engine Model	YC6A245-D30			
Gross Engine output-Prime (kw)	165			
Gross Engine output-Standby (kw)	181			
Bore * stroke (mm)	108*132			
Cylinders and structure	6 In line			
Displacement(Liter)	7.252			
Compression Ratio	17.5:1			
Intake way	Supercharge/Air-air intercooling			
Max intake resistance (KPa)	≪5			
Air intake (m3/h)	621			
Max exhaust back pressure (KPa)	10			
Exhaust gas flow (m3/h)	1602			
Exhaust temp (℃)	522			
Cooling way	Water Radiator & Fan			
Fan exhaust flow (m3/min)	227			
Coolant capacity (L)	36			
Highest water temperature(℃)	102			
Minimum air opening to room (m2)	2.0/1.8			
Thermostat range (℃)	70-80			
Max oil temperature (℃)				
Lubrication system oil capacity (L)	Lubrication system oil capacity (L) 20-22			
Rate load fuel consumption(L/H)	41.5			
Standard Governor/Class	Electronic			
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	Н			
Controller				
Brand	POWERTEC or DEEPSEA			

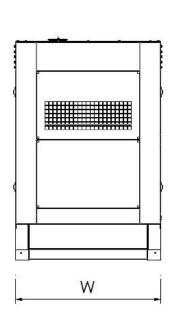
# **Dimension and Weight**











Туре	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	2612*1053*1478	1831	250
Silent Type	3950*1400*2115	3231	600

## **Contact Us**

## **Powertec Generator System Co., Ltd**

Add: Danshui Yanna Industry Zone, Huiyang, Huizhou, Guangdong, China

**Tel:** +86 752-3911119 / 3911118

Fax: +86 752-3911110

Web: www.powertec.com.cn

Email: powertec@powertec.com.cn