



# **PYC1000B**

Prime Power: 730KW/913KVA Standby Power: 800KW/1000KVA Voltage: 400VAC

≤3%

Powered by Yuchai YC6C1220-D31 Engine

# Genset Performance

- 230/400VAC, 50Hz, 0.8PF, 3 Phases 4 wires
- Frequency drop
- 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
- Voltage recovery time ≤1S(Voltage ±3%)
- THF (Telephone Harmonic Factor) <3
- TIF (Telephone Influence Factor) <50</li>
   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: PYC1000B-YC6C1220-D31
- Construction: High strength alloy cast iron has better rigidity, small vibration and low noise. The wet cylinder liner is easy to maintain.
- Intake: Charge inter-cooling
- Four valves + pressurized intercooling technology, sufficient air intake, full combustion and low fuel consumption.
- It adopts electronic control unit combined pump, ECU control smooth operation and good performance in speed regulation.
- Mechanical pump electronic speed regulation., operation smoothly, has good speed regulation and strong loading capacity.
- High quality alloy cast iron cylinder body with curved surface reinforced mesh structure, high strength vermicular cast iron cylinder cover, double insurance anti-punching cylinder cushion structure, unique cooling technology at the bottom of
  - cushion structure, unique cooling technology at the bottom of cylinder cover ensure engine has high reliability.
- Using Yuchai unique carbon scraping self-cleaning technology, lubricating oil consumption is low.
- Electric pre-oil supply technology is adopted to effectively protect the motion pair and prolong the service life.
- Supporting dual-energy startup.
- One cylinder and one lid structure, with maintenance window on the side of the machine body for easy maintenance. 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 with BS5625, class 2.5
- Sealed with advanced lubricating grease to prolong life of bearing.





# **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

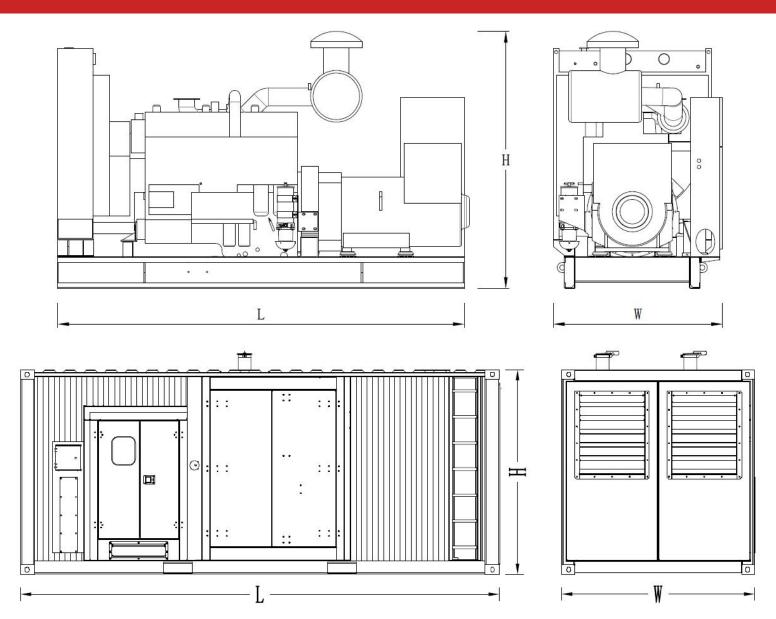
# **Data sheet of Genset**



Model					
Standby Rating (kw)   800     Rate voltage(V)   400     Rate current(A)   1317     Power factor   0.8     Frequency(Hz)   50     Engine   YC6C1220-D31     Gross Engine output-Prime (kw)   815     Gross Engine output-Standby (kw)   897     Bore * stroke (mm)   200*210     Cylinders and structure   6 In line     Dispiacement(Liter)   39.58     Compression Ratio   14.5:1     Intake way   Supercharge/Air-Air intercooler     Max intake resistance (KPa)   5     Air intake (m3/h)   4200     Max exhaust back pressure (KPa)   10     Exhaust gas flow (m3/h)   132*10     Exhaust temp (**□)   460     Cooling way   Water Radiator & Fan exhaust flow (m3/min)   1550     Coolant capacity (L)   197     Highest water temperature (**□)   107     Minimum air opening to room (m2)   5.8/5.0     Thermostat range (**□)   120     Lubrication system oil capacity (L)   175     Rate load fuel consumption(L/H)   206.1     Standard Governor/Class   Electronic     Alternator   Rated Voltage(V)   400/230     Output Way   3 Phases   3     Protection class   IP21-23     Insulation class   IP21-24     Insulation class   IP21-24     Insulation class   IP21-24     Insulation class   IP21-24     Insulation class   IP21-24	Model	PYC1000B			
Rate voltage(V)         400           Rate current(A)         1317           Power factor         0.8           Frequency(Hz)         50           Engine           Engine Model         YC6C1220-D31           Gross Engine output-Prime (kw)         815           Gross Engine output-Standby (kw)         897           Bore * stroke (mm)         200*210           Cylinders and structure         6 In line           Displacement(Liter)         39.58           Compression Ratio         14.5:1           Intake way         Supercharge/Air-Air intercooler           Max intake resistance (KPa)         5           Air intake (m3/h)         4200           Max exhaust back pressure (KPa)         10           Exhaust sas flow (m3/h)         13210           Exhaust temp (**C*)         460           Cooling way         Water Radiator & Fan           Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature(**C*)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (**C*)         75-85           Max oil temperature (**C*)         120 <t< td=""><td>Prime Rating (kw)</td><td colspan="2">730</td></t<>	Prime Rating (kw)	730			
Rate current(A)	Standby Rating (kw)	800			
Power factor	Rate voltage(V)	400			
Engine   Frequency(Hz)   Engine	Rate current(A)	1317			
Engine   Hodel   YC6C1220-D31	Power factor	0.8			
Engine Model   YC6C1220-D31	Frequency(Hz)	50			
Gross Engine output-Prime (kw)         815           Gross Engine output-Standby (kw)         897           Bore * stroke (mm)         200*210           Cylinders and structure         6 In line           Displacement(Liter)         39.58           Compression Ratio         14.5:1           Intake way         Supercharge/Air-Air intercooler           Max intake resistance (KPa)         5           Air intake (m3/h)         4200           Max exhaust back pressure (KPa)         10           Exhaust gas flow (m3/h)         13210           Exhaust temp (***C)         460           Cooling way         Water Radiator & Fan           Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature(**C)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (**C)         75-85           Max oil temperature (**C)         120           Lubrication system oil capacity (L)         175           Rate load fuel consumption(L/H)         206.1           Standard Governor/Class         Electronic           Alternator         Rated Voltage(V)         400/230           Output Way         3 Phases, 4 wire	Eng	ine			
Gross Engine output-Standby (kw)   897	Engine Model	YC6C1220-D31			
Bore * stroke (mm)   200*210	Gross Engine output-Prime (kw)	815			
Cylinders and structure         6 In line           Displacement(Liter)         39.58           Compression Ratio         14.5:1           Intake way         Supercharge/Air-Air intercooler           Max intake resistance (KPa)         5           Air intake (m3/h)         4200           Max exhaust back pressure (KPa)         10           Exhaust gas flow (m3/h)         13210           Exhaust temp (℃)         460           Cooling way         Water Radiator & Fan           Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature(℃)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (℃)         75-85           Max oil temperature (℃)         120           Lubrication system oil capacity (L)         175           Rate load fuel consumption(L/H)         206.1           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%	Gross Engine output-Standby (kw)	897			
Displacement(Liter)   39.58     Compression Ratio   14.5:1     Intake way   Supercharge/Air-Air intercooler     Max intake resistance (KPa)   5     Air intake (m3/h)   4200     Max exhaust back pressure (KPa)   10     Exhaust gas flow (m3/h)   13210     Exhaust temp (*C)   460     Cooling way   Water Radiator & Fan     Fan exhaust flow (m3/min)   1550     Coolant capacity (L)   197     Highest water temperature(*C)   107     Minimum air opening to room (m2)   5.8/5.0     Thermostat range (*C)   75-85     Max oil temperature (*C)   120     Lubrication system oil capacity (L)   175     Rate load fuel consumption(L/H)   206.1     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   IP21-24     Insulation class   IP21-24     Insulation class   IP21-25     Insulation class   IP21-26     Insulation class   IP21-27     Insulation class   IP21-2	Bore * stroke (mm)	200*210			
Compression Ratio	Cylinders and structure	6 In line			
Intake way	Displacement(Liter)	39.58			
Max intake resistance (KPa)         5           Air intake (m3/h)         4200           Max exhaust back pressure (KPa)         10           Exhaust gas flow (m3/h)         13210           Exhaust temp (°C)         460           Cooling way         Water Radiator & Fan           Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature (°C)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (°C)         75-85           Max oil temperature (°C)         120           Lubrication system oil capacity (L)         175           Rate load fuel consumption(L/H)         206.1           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         H	Compression Ratio	14.5:1			
Air intake (m3/h)         4200           Max exhaust back pressure (KPa)         10           Exhaust gas flow (m3/h)         13210           Exhaust temp (°C)         460           Cooling way         Water Radiator & Fan           Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature(°C)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (°C)         75-85           Max oil temperature (°C)         120           Lubrication system oil capacity (L)         175           Rate load fuel consumption(L/H)         206.1           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         H	Intake way	Supercharge/Air-Air intercooler			
Max exhaust back pressure (KPa)         10           Exhaust gas flow (m3/h)         13210           Exhaust temp (℃)         460           Cooling way         Water Radiator & Fan           Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature(℃)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (℃)         75-85           Max oil temperature (℃)         120           Lubrication system oil capacity (L)         175           Rate load fuel consumption(L/H)         206.1           Standard Governor/Class         Electronic           Alternator         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	Max intake resistance (KPa)	5			
Exhaust gas flow (m3/h)         13210           Exhaust temp (℃)         460           Cooling way         Water Radiator & Fan           Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature(℃)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (℃)         75-85           Max oil temperature (℃)         120           Lubrication system oil capacity (L)         175           Rate load fuel consumption(L/H)         206.1           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         H	Air intake (m3/h)	4200			
Exhaust temp (℃)         460           Cooling way         Water Radiator & Fan           Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature(℃)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (℃)         75-85           Max oil temperature (℃)         120           Lubrication system oil capacity (L)         175           Rate load fuel consumption(L/H)         206.1           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         H           Controller	Max exhaust back pressure (KPa)	10			
Cooling way  Fan exhaust flow (m3/min)  Coolant capacity (L)  Highest water temperature (°C)  Minimum air opening to room (m2)  Thermostat range (°C)  Aux oil temperature (°C)  Eate load fuel consumption (L/H)  Standard Governor/Class  Alternator  Rated Voltage(V)  Autority Way  Rated power factor  Max voltage regulation  Phase  Protection class  H  Controller	Exhaust gas flow (m3/h)	13210			
Fan exhaust flow (m3/min)         1550           Coolant capacity (L)         197           Highest water temperature(℃)         107           Minimum air opening to room (m2)         5.8/5.0           Thermostat range (℃)         75-85           Max oil temperature (℃)         120           Lubrication system oil capacity (L)         175           Rate load fuel consumption(L/H)         206.1           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         H	Exhaust temp (℃)	460			
Coolant capacity (L)  Highest water temperature(℃)  Minimum air opening to room (m2)  Thermostat range (℃)  Thermostat range (℃)  Thermostat range (℃)  Lubrication system oil capacity (L)  Rate load fuel consumption(L/H)  Standard Governor/Class  Electronic  Alternator  Rated Voltage(V)  Au0/230  Output Way  Rated power factor  Exciter  Brushless, Self-exciter  Max voltage regulation  Phase  3  Protection class  IP21-23  Insulation class  Controller	Cooling way	Water Radiator & Fan			
Highest water temperature(℃)  Minimum air opening to room (m2)  Thermostat range (℃)  Thermostat range (℃)  Thermostat range (℃)  Max oil temperature (℃)  Lubrication system oil capacity (L)  Rate load fuel consumption(L/H)  Standard Governor/Class  Electronic  Alternator  Rated Voltage(V)  Output Way  Rated power factor  Rated power factor  Exciter  Max voltage regulation  Phase  3  Protection class  Insulation class  H  Controller	Fan exhaust flow (m3/min)	1550			
Minimum air opening to room (m2)  Thermostat range (°C)  Thermostat range (°C)  Max oil temperature (°C)  Lubrication system oil capacity (L)  Rate load fuel consumption(L/H)  Standard Governor/Class  Electronic  Alternator  Rated Voltage(V)  Au0/230  Output Way  3 Phases, 4 wires  Rated power factor  Exciter  Max voltage regulation  Phase  3  Protection class  Insulation class  H  Controller	Coolant capacity (L)	197			
Thermostat range (°C)  Max oil temperature (°C)  Lubrication system oil capacity (L)  Rate load fuel consumption(L/H)  Standard Governor/Class  Electronic  Alternator  Rated Voltage(V)  Output Way  3 Phases, 4 wires  Rated power factor  Exciter  Max voltage regulation  Phase  3  Protection class  Insulation class  H  Controller	Highest water temperature(℃)	107			
Max oil temperature (°C)  Lubrication system oil capacity (L)  Rate load fuel consumption(L/H)  Standard Governor/Class  Electronic  Alternator  Rated Voltage(V)  Output Way  Output Way  Rated power factor  Exciter  Brushless, Self-exciter  Max voltage regulation  Phase  3  Protection class  Insulation class  Insulation class  Controller	Minimum air opening to room (m2)	5.8/5.0			
Lubrication system oil capacity (L)  Rate load fuel consumption(L/H)  Standard Governor/Class  Electronic  Alternator  Rated Voltage(V)  Output Way  Rated power factor  Exciter  Max voltage regulation  Phase  Protection class  Insulation class  H  Controller	Thermostat range (℃)	75-85			
Rate load fuel consumption(L/H)         206.1           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         H           Controller	Max oil temperature (℃)	120			
Standard Governor/Class  Alternator  Rated Voltage(V)  Output Way  3 Phases, 4 wires  Rated power factor  Exciter  Brushless, Self-exciter  Max voltage regulation  Phase  3  Protection class  Insulation class  H  Controller	Lubrication system oil capacity (L)	175			
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	Rate load fuel consumption(L/H)	206.1			
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	Standard Governor/Class	Electronic			
Output Way  Rated power factor  Exciter  Brushless, Self-exciter  Max voltage regulation  Phase  3  Protection class  Insulation class  H  Controller	Alternator				
Rated power factor 0.8  Exciter Brushless, Self-exciter  Max voltage regulation ±1%  Phase 3  Protection class IP21-23  Insulation class H  Controller	Rated Voltage(V)	400/230			
Exciter Brushless, Self-exciter  Max voltage regulation ±1%  Phase 3  Protection class IP21-23  Insulation class H  Controller	Output Way	3 Phases, 4 wires			
Max voltage regulation ±1% Phase 3 Protection class IP21-23 Insulation class H  Controller	Rated power factor	0.8			
Phase 3 Protection class IP21-23 Insulation class H  Controller	Exciter	Brushless, Self-exciter			
Protection class IP21-23 Insulation class H  Controller	Max voltage regulation	±1%			
Insulation class  Controller	Phase	3			
Controller	Protection class	IP21-23			
	Insulation class	Н			
Drond DOWEDTEC DEEDEEA	Controller				
POWER I EC OF DEEPSEA	Brand	POWERTEC or DEEPSEA			

# **Dimension and Weight**





Туре	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	4800*1770*2564	7620	-
Silent Type	12192*2438*2896	14420	2000

## **Contact Us**

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