

PYC625B

Prime Power: 450KW/563KVA Standby Power:500KW/625KVA Voltage: 400VAC

Powered by Yuchai YC6TD780-D31 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
- 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.



Diesel Engine

- Model: PYC625B-YC6TD780-D31
- Construction: Construction: High strength cylinder block, alloy forged steel crankshaft, alloy steel connecting rod and internal cooling oil pipe piston make the engine more durable, lighter and compact than other products.
- 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.
- Using high precision paper filter element.
- Adopting 24V standard electrical system.
- The parts have good universality and high serialization, one cylinder with one lid structure, to reduce comprehensive maintenance cost.
- The YC6TD series engine is a product developed independently according to the advanced technology of large engines at home and abroad. With four valves, supercharged intercooler and electronic controlled monomer pump, optimized and verified by advanced combustion development technology of Yuchai, it has the characteristics of energy saving, environmental protection, high reliability, strong loading capacity and good maintainability.



Engine Operating Environment Description:

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
- 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 satisfy tough environment.
- Rotor dynamic balancing complies with BS5625, class 2.5
- 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	PYC625B
Prime Rating (kw)	450
Standby Rating (kw)	500
Rate voltage(V)	400
Rate current(A)	812
Power factor	0.8
Frequency(Hz)	50

Engine

Engine Model	YC6TD780-D31
Gross Engine output-Prime (kw)	520
Gross Engine output-Standby (kw)	572
Bore * stroke (mm)	152*180
Cylinders and structure	6 In line
Displacement(Liter)	19.598
Compression Ratio	14:1
Intake way	Supercharge/Air-Air intercooler
Max intake resistance (KPa)	5
Air intake (m3/h)	2448
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	7524
Exhaust temp (°C)	550
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	1160
Coolant capacity (L)	131
Highest water temperature(°C)	97
Minimum air opening to room (m2)	4.5/4.0
Thermostat range (°C)	75-85
Max oil temperature (°C)	120
Lubrication system oil capacity (L)	52
Rate load fuel consumption(L/H)	137
Standard Governor/Class	EUP

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 GC7110.2
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Type	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	3881*1884*1876	4500	-
Silent Type	4700*1700*2450	6450	1000

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