

# Y-C500

**Prime Power: 400KW/500KVA Standby Power: 440KW/550KVA Voltage: 400VAC**

**Powered by Cummins QSZ13-G3 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

- Cummins Engine
- Brushless synchronous alternator
- 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
- S470 Soundproof type canopy
- Design and construction of environmental protection
- Engineering for the Genset room



# Equipment Instruction

## Diesel Engine

- Model: QSZ13-G3
- Construction: Cummins high pressure common rail fuel system (HPCR) realizes multi-point injection, and the throttle responds quickly at different speeds. More efficient power output, better fuel economy and less noise
- The integrated oil-water pipeline replaces the traditional hose to eliminate the hidden trouble of leakage.
- Enhanced cooling and lubrication functions effectively extend the service life of the engine
- The two-stage dual fuel filter ensures balanced particulate dispersion and maximizes the life of the fuel filter life, protect the main components of the fuel system
- Emission standards: Comply to China Tier III emission standards
- Environment: The engine can work normally under the following conditions without de-rating:
  - A. 1800r/min engine--altitude less than 1500m (5000ft), ambient temperature less than 40 °C(104° F).
  - B. 1500r/min engine--altitude less than 1310m (4300ft), ambient temperature less than 40 °C(104° F)



But engine working environment conditions exceed above, the engine output power will de-rate 4% as altitude increase each 300m(1000ft) at the altitude is higher than 1500m (5000ft), Also it will de-rate 2% as temperature increase every 11 °C(1% de-rating ,when temperature increase each 10° F ). in the ambient temperature is higher than 40°C(104° F).

## Alternator

- Optional brands **Stamford / Leroy Somer / Copy Stamford**
- 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.
- Optional Models: HCI 544D / TAL-A 47C / ZFLY 544D
- Sealed with advanced lubricating grease to prolong life of bearing.



# Intelligent Control System

## Standard Meters

- 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 Function

### 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 Y-C500. Customized solutions is available as required**

# Data sheet of Genset

## Genset

Model	Y-C500
Prime Rating (kw)	400
Standby Rating (kw)	440
Rate voltage(V)	400
Rate current(A)	686
Power factor	0.8
Frequency(Hz)	50

## Engine

Engine Model	QSZ13-G3
Gross Engine output-Prime (kw)	450
Gross Engine output-Standby (kw)	470
Bore * stroke (mm)	130*163
Cylinders and structure	6 In line
Displacement(Liter)	13
Compression Ratio	17:1
Intake way	Turbo Charge, Air-Air Intercool
Max intake resistance (KPa)	6.2
Air intake (m3/h)	1782
Max exhaust back pressure (KPa)	10
Exhaust gas flow (m3/h)	2190
Exhaust temp (°C)	547
Cooling way	Water Radiator & Fan
Fan exhaust flow (m3/min)	690
Coolant capacity (L)	73
Highest water temperature(°C)	102
Minimum air opening to room (m2)	2.8/2.5
Thermostat range (°C)	82-94
Max oil temperature (°C)	121
Lubrication system oil capacity (L)	45.42
Rate load fuel consumption(L/H)	101
Standard Governor/Class	Electronically Controlled High Voltage Common Rail

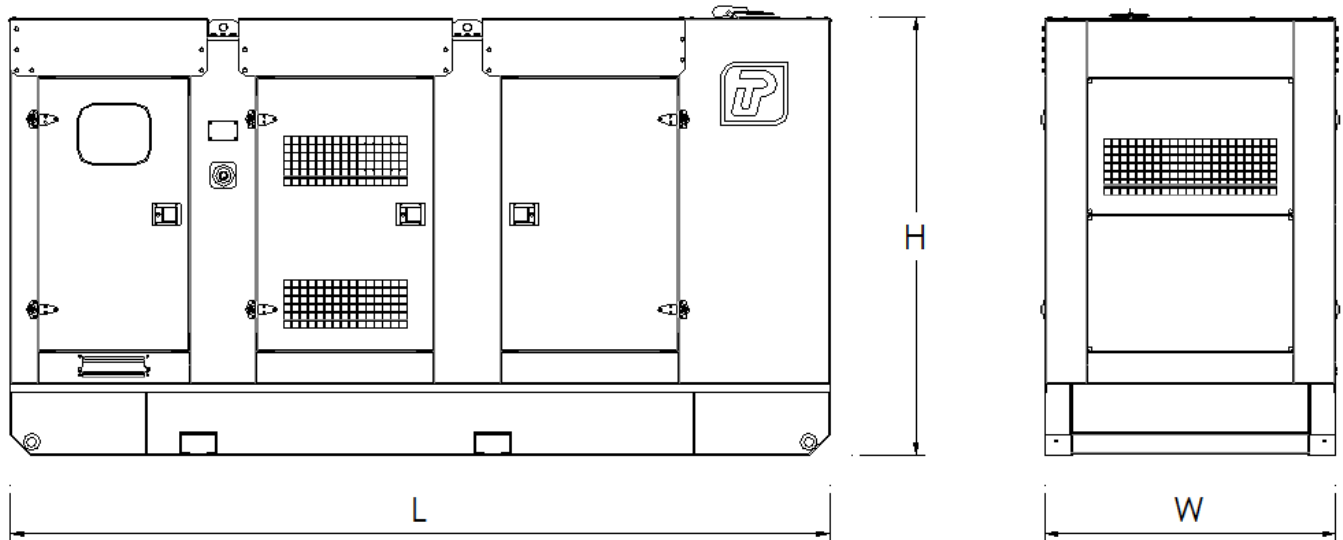
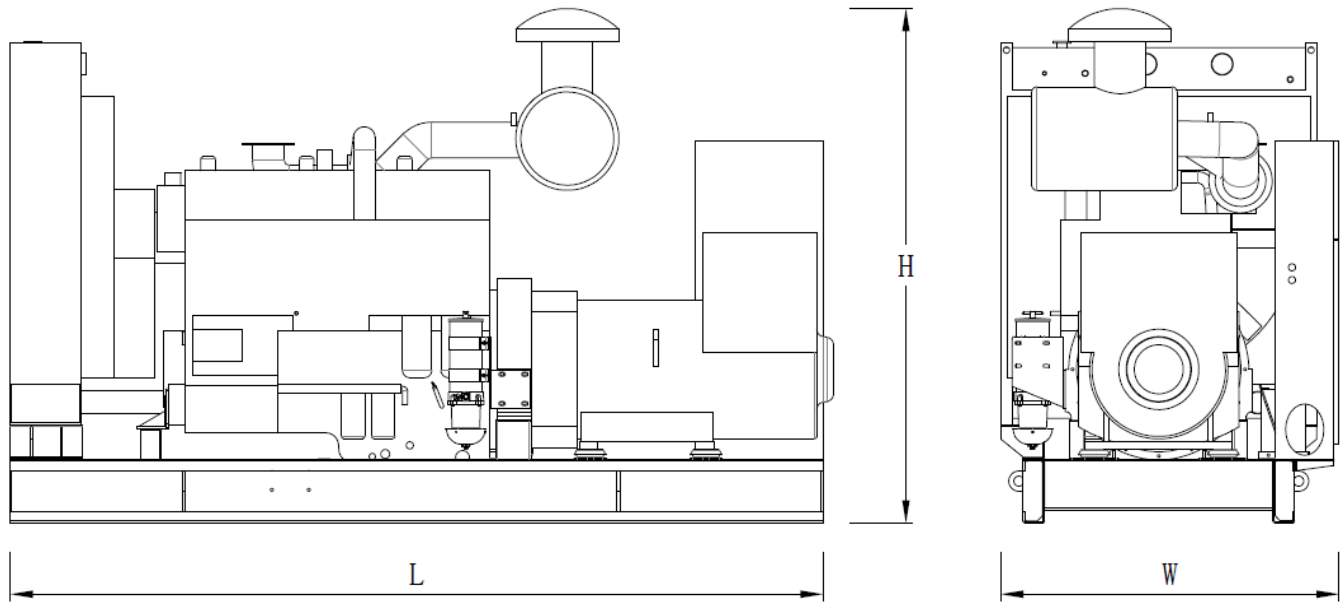
## Alternator

Rated Voltage(V)	400/230
Output Way	3 Phases, 4 wires
Rated power factor	0.8
Exciter	Brushless, Self-exciter
Max voltage regulation	±1%
Model	HCI 544D / TAL-A 47C / ZFLY 544D
Protection class	IP21-23
Insulation class	H

## Controller

Brand	DEEPSEA or MEBAY
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# Dimension and Weight



Type	Dimension (mm) (L*W*H)	Weight (kg)	Fuel Tank Capacity (L)
Open Type	3165*1373*2100	3385	-
Silent Type	4300*1594*2250	5185	900

**Contact Us**

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