



## Genset

Model	JHY5-2800GF
Voltage	230/400V
Frequency&Speed	50HZ 1500RPM
Prime Power	2709kW/3386kVA
Standby Power	2980kW/3725kVA

- Engine: Yuchai YC16VC4500-D30
- Alternator: Stamford/Leroy Somer  
/Hengsheng
- Controller: DeepSea/SmartGen  
/DEIF/ComAp

## General Engine Data

### Main technical parameters

Number of cylinders	16
Configuration	Vertical, V-type
Aspiration	Turbocharged, water-air intercooled
Combustion system	Direct injection
Compression ratio	13.5:1
Bore	200 mm
Stroke	210 mm
Displacement	105.56 L
Rotation	Counterclockwise (viewed from the flywheel end)
Firing order (viewed from the belt pulley end)	left 1—right 1-left 6—right 6-left 2—right 2-left 5—right 5-left 8—right 8-left 3-right 3-left 7-right 7-left 4-right 4
Dry weight (without radiator)	12200 kg
Wet weight (without radiator)	13000 kg

### Overall dimensions

Length (from front end of radiator to rear end of air filter)	3910 mm
Width	1690 mm
Height (with radiator and mounting support)	2450 mm

### Centre of gravity (dry engine, with the center of the rear end face of the flywheel shell as the origin)

From the rear end face of the flywheel	1652 mm
Height relative to the center of the crankshaft	225 mm

### Fuel consumption

Note: The density of diesel is 0.835 kg/L.

Load condition	1,500 r/min	
	g/(kW-h)	L/h
Standby	214.1	849.0
Prime	208.6	752.0
75% prime	197.5	533.8
50% prime	202.4	363.8

Centerline deviation relative to the crankshaft center gravity

44 mm

### Moments of rotation inertia

Engine	44.42 kg·m <sup>2</sup>
Flywheel	29.36 kg·m <sup>2</sup>

### Performance rating

Speed droop	≤1 %
Steady state speed band	≤0.5 %

### Test conditions

Ambient temperature	25 °C
Atmospheric pressure	100 kPa
Relative humidity	35 %
Max. operating intake resistance	≤3.7 kPa
Exhaust backpressure limit	≤10 kPa
Fuel temperature (fuel inlet pump)	38±2 °C

Attention: Unless otherwise explicitly specified, all parameter data are measured under standard test condition as above. If the engine is operated under other test conditions rather than the test condition above, it shall be adjusted properly according to the actual environment. Contact the Yuchai Technical Service Department for details.

### Electric system

Type	Negative ground
Starter	
Type	Electric start, 2
Voltage	24V
Power	2×11 kW
Number of teeth of flywheel	199
Number of teeth of starter	11
Charger	
Voltage	27V
Electric current	55 A

## Cooling system

Total coolant capacity.....	1030 L
Engine coolant capacity.....	450 L
Radiator coolant capacity.....	540 L
Pipeline coolant capacity.....	40 L
Engine max. outlet coolant temperature(high temperature). $\leq 98^{\circ}\text{C}$	
Engine max. inlet coolant temperature(low temperature).... $\leq 65^{\circ}\text{C}$	
Pressure difference between inlet and outlet of water pump (max. hydrostatic head).....	135.5/332 kPa
Thermostat operation temperature	
Initial open.....	$(75\pm 2)^{\circ}\text{C}$
full open.....	$< 85^{\circ}\text{C}$
Max. coolant temperature rise(high temperature):	
-Standby power.....	$10^{\circ}\text{C}$
-Prime power.....	$9.2^{\circ}\text{C}$
Max. coolant temperature rise(low temperature):	
-Standby power.....	$9.9^{\circ}\text{C}$
-Prime power.....	$8.7^{\circ}\text{C}$

## Radiator

Cooling area(high temperature).....	$858\text{m}^2$
Cooling area(low temperature).....	$929\text{m}^2$
Dry weight.....	2200kg
Core material.....	Aluminum
Width of core.....	2800 mm
Height of core.....	2646 mm
Min. pressure of pressure cap.....	$(70\pm 5)\text{kPa}$
Coolant resistance limit.....	50 kPa

## Alternator

Pole No.	4-Pole
Exciter Type	Single bearing, Brushless, Self-excited
Power factor	0.8
Voltage adjust range	$\leq 5\%$
Insulation Grade	H
Protection Grade	IP23/22
Phase / wire	3 phase 4 wires

- ✧ NEMAMG1.JIANGHAO,and ANSI standards compliance for temperature rise and motor starting.
- ✧ Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- ✧ Sustained short-circuit current enabling down stream circuit breakers to trip without collapsing the generator field.
- ✧ Self-ventilated and dripproof construction.
- ✧ Superior voltage waveform from two-thirds Pitch windings and skewed stator.
- ✧ Digital solid-state.volts-per-hertz voltage Regulator with +1% no-load to full-load regulation.

## Intake system

### Air filter

Max. intake resistance:

-Clean air filter .....	2.45 kPa
-Dirty air filter .....	6 kPa
-Air filter type.....	dry-type, filter cartridge of hardware cloth

### Inclination

Transverse inclination/longitudinal inclination (volume of engine oil sump: 400 L) .....  $20^{\circ}/15^{\circ}$

### Fuel system

Injection system.....High pressure common rail

### Injector

Type.....	Electronically controlled, with multi
Injector opening pressure.....	Electronically cont

### Fuel pump

Drive mode .....	Gear driven
Fuel delivery pump flow @1,500 rpm .....	10 L/min
Max. fuel inlet temperature limit.....	$75^{\circ}\text{C}$
Allowed fuel inlet pressure of front end of fuel delivery pump (absolute pressure).....	$(35\sim 100)\text{kPa}$
Maximum fuel return pressure of fuel pump .....	20 kPa

### Fuel filter

#### Pre- filter

Rated flow.....	40 L/min
Max. original resistance.....	15kPa
Water separation efficiency at the rated flow .....	$\geq 95\%$

## Control Panel



The control module gives digital readouts of:

Generator voltage;  
Output frequency;  
Engine speed;  
Battery voltage;  
Engine hours run.



Dimension:9000\*2950\*3500mm

Weight:27000kg

Fuel Tank Capacity:1000-3000L

The **control panel** is an Digital Control Module suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the module will display warnings, shutdown and engine status information on the back-lit LCD screen and illuminated LEDs.

**The control module has indicators for failure information:**

Over speed/Low speed,  
Emergency stop  
Low oil pressure;  
High water temperature  
Failure to start  
Battery charger failure

**Automatic shutdown occurs under:**

Low engine oil pressure;  
High engine water temperature;  
Over speed/Low speed;  
Failure to start after three attempts.

## Electrical system

- Maintenance-free and anti-explosion battery
- Standard breaker
- ABB breaker (optional)
- ATS (optional)
- Battery charger (optional)
- GMS monitoring (optional)

## Packing

- Wrapping film packaging
- Tray packaging
- plywood box packaging

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