



## Genset

Model	JHY5-1800GF
Voltage	230/400V
Frequency&Speed	50HZ 1500RPM
Prime Power	1805kW/2256kVA
Standby Power	1985kW/2482kVA

## General Engine Data

### Main technical parameters

Number of cylinders .....	16
Configuration .....	Vertical, V-type
Aspiration .....	Turbocharged, air-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) .....	12500 kg
Wet weight (without radiator) .....	13500 kg

### Overall dimensions

Length (from front end of pulley to flywheel shell face) .....	3635 mm
Width .....	1915 mm
Height .....	2370 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	214.5	566.2
Prime	205.7	493.9
75% prime	209.0	376.4
50% prime	224.3	269.3

- Engine: Yuchai YC16VC3000-D31
- Alternator: Stamford/Leroy Somer /Hengsheng
- Controller: DeepSea/SmartGen /DEIF/ComAp

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 .....	30 %
Max. operating intake resistance .....	≤5 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 unit
Voltage .....	24V
Power .....	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.....	800 L
Engine coolant capacity	
-(high temperature).....	270 L
-(low temperature).....	180 L
Radiator coolant capacity.....	300 L
Pipeline coolant capacity.....	50 L
Engine max. outlet coolant temperature(high temperature)....	95℃
Engine max. inlet coolant temperature(low temperature).....	67℃
Pressure difference between inlet and outlet of water pump	
(max. hydrostatic head).....	135.5/332 kPa
Thermostat operation temperature	
Initial open.....	(75±2)℃
full open.....	<85℃
Max. coolant temperature rise(high temperature):	
-Standby power.....	6.3℃
-Prime power.....	5.7℃
Max. coolant temperature rise(low temperature):	
-Standby power.....	12.5℃
-Prime power.....	11.6℃
<b>Radiator</b>	
Cooling area(high temperature).....	490m <sup>2</sup>
Cooling area(low temperature).....	914m <sup>2</sup>
Dry weight.....	1645kg
Core material.....	Cuprum
Width of core.....	2450 mm
Height of core.....	2250 mm

## 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: 460 L) .....20°/15°

## Fuel system

Injection system.....electronic unit pump

### Injector

Type.....	S type, with multiple jets
Injector opening pressure .....	(26~27) MPa

### Fuel pump

Drive mode .....	Gear driven
Fuel delivery pump flow @1,500 rpm .....	60 L/min
Max. fuel inlet temperature limit.....	70 ℃
Allowed fuel inlet pressure of front end of fuel delivery pump	
(absolute pressure).....	(35~100) kPa
Maximum fuel return pressure of fuel pump .....	20 kPa

### Fuel filter

#### Pre- filter

Rated flow.....	30 L/min
Max. original resistance.....	10 kPa
Water separation efficiency at the rated flow .....	≥95 %

## Alternator

Pole No.	4-Pole
Exciter Type	Single bearing, Brushless, Self-excited
Power factor	0.8
Voltage adjust range	≤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.



## Control Panel



The control module gives digital readouts of:

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



Dimension: 6830\*2745\*3100mm

Weight: 17500kg

Fuel Tank Capacity: 1000-3000L

The **control panel** is a 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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