



## Genset

Model	JHY5-100GF
Voltage	230/400V
Frequency&Speed	50HZ 1500RPM
Prime Power	108kW/135kVA
Standby Power	119kW/149kVA

## General Engine Data

### Main technical parameters

Number of cylinders	4
Configuration	Vertical, in-line
Aspiration	Turbocharged, air-air intercooled
Combustion system	Direct injection
Compression ratio	17.5:1
Bore	108 mm
Stroke	132 mm
Displacement	4.84 L
Rotation	Counterclockwise (viewed from the flywheel end)
Firing order (viewed from the belt pulley end)	1-3-4-2
Dry weight (without radiator)	465 kg
Wet weight (without radiator)	550 kg

### Overall dimensions

Length (from front end of radiator to rear end of air filter)	1419 mm
Width	805 mm
Height (with radiator and mounting support)	1057 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	420.6 mm
Height relative to the center of the crankshaft	146.9 mm

### Fuel consumption

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

Load condition	1500 r/min	
	g/(kW·h)	L/h
Standby	213.6	33.8
Prime	208.2	29.9
75% prime	200.6	21.6
50% prime	201.6	14.5

- **Engine:** Yuchai YC4A180L-D20
- **Alternator:** Stamford/Leroy Somer /Hengsheng
- **Controller:** DeepSea/SmartGen /DEIF/ComAp

Centerline deviation relative to the crankshaft center gravity

.....-8 mm

### Moments of rotation inertia

Engine	1.068kg·m <sup>2</sup>
Flywheel	0.89kg·m <sup>2</sup>

### Performance rating

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

### 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

#### Charger

Voltage	28V/14V
Output current	55A/65A

#### Starter

Type	Electric start, 1
Voltage	24V/12V
Power	5 kW/3.7kW
Number of teeth of flywheel	130
Number of teeth of starter	11

## Cooling system

Total coolant capacity.....	27 L
Engine coolant capacity.....	9 L
Radiator coolant capacity.....	15 L
Pipeline coolant capacity.....	3 L
Engine max. outlet coolant temperature.....	97°C
Pressure difference between inlet and outlet of water pump (max. hydrostatic head).....	150kPa
Thermostat operation temperature	
Initial open.....	(70±2)°C
full open.....	< 80°C
Max. coolant temperature rise:	
-Standby power.....	8°C
-Prime power.....	7°C

## Radiator

Cooling area.....	48m <sup>2</sup>
Dry weight.....	75kg
Core material.....	Aluminum
Number of lines.....	69
Density of core.....	13 cooling fins/inch
Width of core.....	702 mm
Height of core.....	740 mm
Min. pressure of pressure cap.....	(50±5)kPa

## Fan

Diameter.....	500 mm
Drive ratio.....	1.94:1
Material.....	Steel
Number of blades.....	6
Type.....	Blowing

## 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.

## Intake system

### Air filter

Max. intake resistance:	
-Clean air filter.....	3.5 kPa
-Dirty air filter.....	5 kPa
-Air filter type.....	Dry-type, filter cartridge of paper

### Inclination

Transverse inclination/longitudinal inclination (volume of engine oil sump: 15 L) .....	±10°
Transverse inclination/longitudinal inclination (volume of engine oil sump: 10.5 L) .....	±10°

## Fuel system

Injection system..... Mechanical pump+ electronic governor

### Injector

Type.....	Multiple jets
Injector opening pressure.....	(26~27) MPa

### Fuel pump

Drive mode .....	Gear driven
Fuel delivery pump flow @1500 rpm .....	0.7 L/min
Max. fuel inlet temperature limit.....	70 °C
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

### Fine- filter

Rated flow.....	1.2 L/min
Max. original resistance.....	7.5 kPa
Filtering efficiency:	
For particles of 10 μm.....	≥96 %
For particles of 3 μm.....	/

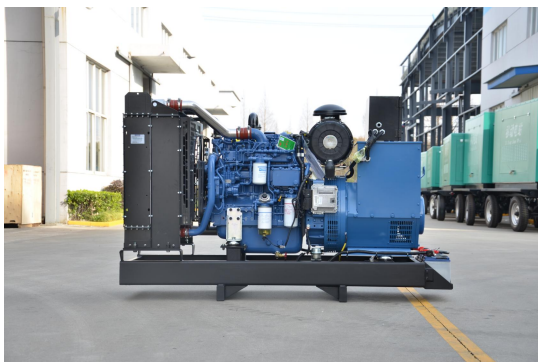


## Control Panel



The control module gives digital readouts of:

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



Dimension:2250\*950\*1400mm

Weight:1300kg



Dimension:3300\*1300\*1800mm

Weight:2350kg

Fuel Tank Capacity:360L

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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