



## Genset

Model	JHY-220GF
Voltage	277/480V
Frequency&Speed	60HZ 1800RPM
Prime Power	216kW/270kVA
Standby Power	238kW/297kVA

- **Engine: Yuchai YC6MK360L-D20**
- **Alternator: Stamford/Leroy Somer /Hengsheng**
- **Controller: DeepSea/SmartGen /DEIF/ComAp**

## General Engine Data

### Main technical parameters

Number of cylinders .....	6
Configuration .....	Vertical, in-line
Aspiration .....	Turbocharged, air-air intercooled
Combustion system .....	Direct injection
Compression ratio .....	16.8:1
Bore .....	123 mm
Stroke .....	145 mm
Displacement .....	10.34 L
Rotation .....	Counterclockwise (viewed from the flywheel end)
Firing order (viewed from the belt pulley end) .....	1-5-3-6-2-4
Dry weight (without radiator) .....	1030 kg
Wet weight (without radiator) .....	1080 kg

### Overall dimensions

Length (from front end of radiator to rear end of air filter) .....	2088 mm
Width .....	1130 mm
Height (with radiator and mounting support) .....	1392 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 .....	567 mm
Height relative to the center of the crankshaft .....	181 mm

### Fuel consumption

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

Load condition	1800 r/min	
	g/(kW·h)	L/h
Standby	207.1	65.5
Prime	205.9	59.3
75% prime	205	44.2
50% prime	212.6	30.7

Centerline deviation relative to the crankshaft center gravity .....

.....-2 mm

### Moments of rotation inertia

Engine .....	3.02 kg·m <sup>2</sup>
Flywheel .....	2.35 kg·m <sup>2</sup>

### Performance rating

Speed droop .....	≤3 %
Steady state speed band .....	≤0.5 %

### Test conditions

Ambient temperature .....	25 ℃
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 ℃

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
<b>Charger</b>	
Voltage .....	28V
Output current .....	55A
<b>Starter</b>	
Type .....	Electric start, 1
Voltage .....	24V
Power .....	9kW
Number of teeth of flywheel .....	119
Number of teeth of starter .....	11

## Cooling system

Total coolant capacity.....	65 L
Engine coolant capacity.....	21 L
Radiator coolant capacity.....	40 L
Pipeline coolant capacity.....	4 L
Engine max. outlet coolant temperature.....	99 ℃
Thermostat operation temperature	
Initial open.....	(80±2) ℃
full open.....	<90 ℃
Max. coolant temperature rise:	
-Standby power.....	8.5 ℃
-Prime power.....	8 ℃

## Radiator

Cooling area.....	114.4m <sup>2</sup>
Dry weight.....	155kg
Core material.....	Aluminum
Width of core.....	1050 mm
Height of core.....	1060 mm
Thickness of core.....	96 mm
Min. pressure of pressure cap.....	(50±5)kPa
Coolant resistance limit.....	30 kPa

## Intercooler

Cooling area.....	53.2 m <sup>2</sup>
Core material.....	Aluminum
Width of core.....	1050 mm
Height of core.....	1060 mm
Thickness of core.....	63 mm
Air resistance limit.....	10 kPa

## Coolant pump

Rotation speed.....	2950 r/min
Drive mode.....	Pulley driven

## Fan

## 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

## Intake system

### Air filter

Max. intake resistance:	
-Clean air filter.....	3.5 kPa
-Dirty air filter.....	5 kPa
-Warning of intake resistance.....	6.2 kPa
-Air filter type.....	Dry-type, filter cartridge of paper

### Inclination

Transverse inclination/longitudinal inclination (volume of engine oil sump: 28 L).....	20°/ 15°
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### Fuel system

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

### Injector

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

### Fuel pump

Drive mode.....	Gear driven
Fuel delivery pump flow @1,800 rpm.....	4.9 L/min
Max. fuel inlet temperature limit.....	70 ℃
Allowed fuel inlet pressure of front end of fuel delivery pump (absolute pressure).....	(-100~150) kPa
Maximum fuel return pressure of fuel pump.....	20 kPa

### Fuel filter

#### Pre- filter

Rated flow.....	7 L/min
Max. original resistance.....	12 kPa
Water separation efficiency at the rated flow.....	≥95 %
Filter efficiency:	
For particles of ≥30 μm.....	≥96 %
For particles of (25~30) μm.....	≥85 %

#### Fine- filter

Rated flow.....	7 L/min
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- ✧ 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 drip-proof 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:2930\*1120\*1600mm

Weight:2000kg



Dimension:4000\*1700\*2000mm

Weight:3900kg

Fuel Tank Capacity:680L

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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