



Genset

Model	JHY5-400GF
Voltage	230/400V
Frequency&Speed	50HZ 1500RPM
Prime Power	397kW/496kVA
Standby Power	437kW/546kVA

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	15:1
Bore	145 mm
Stroke	165 mm
Displacement	16.35 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)	1980 kg
Wet weight (without radiator)	2078 kg

Overall dimensions

Length (from front end of radiator to rear end of air filter)	2488 mm
Width	1240 mm
Height (with radiator and mounting support)	1688 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	824 mm
Height relative to the center of the crankshaft	178 mm

Fuel consumption

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

Load condition	1500 r/min	
	g/(kW·h)	L/h
Standby	213.7	124.1
Prime	208.4	110.1
75% prime	203.4	80.6
50% prime	207.0	54.7

- Engine: Yuchai YC6T660L-D20
- Alternator: Stamford/Leroy Somer /Hengsheng
- Controller: DeepSea/SmartGen /DEIF/ComAp

Centerline deviation relative to the crankshaft center gravity

.....-3.6 mm

Moments of rotation inertia

Engine	6.18 kg·m ²
Flywheel	4.04 kg·m ²

Performance rating

Speed droop	≤ 3 %
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
Charger	
Voltage	28V
Output current	55A
Starter	
Type	Electric start, 1
Voltage	24V
Power	9kW
Number of teeth of flywheel	123
Number of teeth of starter	11

Cooling system

Total coolant capacity.....	89 L
Engine coolant capacity.....	36 L
Radiator coolant capacity.....	48 L
Pipeline coolant capacity.....	5 L
Engine max. outlet coolant temperature.....	99℃
Thermostat operation temperature	
Initial open.....	(75±2)℃
full open.....	(85±2)℃
Max. coolant temperature rise:	
-Standby power.....	8.0℃
-Prime power.....	7.8℃

Radiator & Intercooler

Dry weight.....	269kg
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Radiator

Cooling area.....	142.1m ²
Core material.....	Aluminum
Width of core.....	1368 mm
Height of core.....	1140 mm
Thickness of core.....	82 mm
Min. pressure of pressure cap.....	(50±5)kPa
Coolant resistance limit.....	15 kPa

Intercooler

Cooling area.....	66.8 m ²
Core material.....	Aluminum
Width of core.....	1354 mm
Height of core.....	1125 mm
Thickness of core.....	62 mm

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
-Warning of intake resistance	6.2 kPa
-Air filter type.....Dry-type, filter cartridge of paper	
Rated flow.....	2100m ³ /h

Inclination

Transverse inclination/longitudinal inclination (volume of engine oil sump: 52 L)	10°/ 10°
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Fuel system

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

Type.....	P-type
Injector opening pressure	(24~25) MPa

Fuel pump

Drive mode.....	Gear driven
Fuel delivery pump flow @1,500 rpm	10 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 %

Control Panel



The control module gives digital readouts of:

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



Dimension:3500*1440*1800mm

Weight:3800kg



Dimension:4700*2100*2400mm

Weight:6650kg

Fuel Tank Capacity:1000L

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

Jiangsu Jianghao Generator Co.,Ltd

Address: No.1 Xixu Road, Medical High-tech Zone,
Taizhou city, Jiangsu, China

Contact Person: Anthony Feng

Email: jhfsale@jhgenerator.com

WhatsApp: +86 18652649673

