



## Genset

|                 |              |
|-----------------|--------------|
| Model           | JHY-170GF    |
| Voltage         | 277/480V     |
| Frequency&Speed | 60HZ 1800RPM |
| Prime Power     | 171kW/214kVA |
| Standby Power   | 188kW/235kVA |

- **Engine:** Yuchai YC6A285-D32
- **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                              | 17.5:1  |
| Bore   | 108 mm  |
| Stroke   | 132 mm  |
| Displacement                                   | 7.255L  |
| 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)                  | 725 kg  |
| Wet weight (without radiator)                  | 750 kg  |

### Overall dimensions

|   |         |
|---|---------|
| Length (from front end of radiator to rear end of air filter) | 1740 mm |
| Width   | 960 mm  |
| Height (with radiator and mounting support)                   | 1160 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          | 589 mm |
| Height relative to the center of the crankshaft | 215 mm |

### Fuel consumption

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

| Load condition | 1800 r/min |      |
|----------------|------------|------|
|                | g/(kW·h)   | L/h  |
| Standby        | 218.9      | 54.8 |
| Prime          | 223.8      | 50.9 |
| 75% prime      | 232.7      | 39.7 |
| 50% prime      | 242.2      | 27.6 |

|  |          |
|--|----------|
| Centerline deviation relative to the crankshaft center gravity | -29.4 mm |
|--|----------|

### Moments of rotation inertia

|          |                       |
|----------|-----------------------|
| Engine   | 1.9 kg·m <sup>2</sup> |
| Flywheel | 1.5 kg·m <sup>2</sup> |

### Performance rating

|                         |        |
|-------------------------|--------|
| Speed droop             | ≤0.5 % |
| 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/14V           |
| Output current              | 35A/65A           |
| Starter                     |                   |
| Type                        | Electric start, 1 |
| Voltage                     | 24V/12V           |
| Power                       | 6 kW/5.5kW        |
| Number of teeth of flywheel | 110               |
| Number of teeth of starter  | 11                |

## Cooling system

|  |         |
|--|---------|
| Total coolant capacity.....  | 54.66 L |
| Engine coolant capacity.....   | 20.66 L |
| Radiator coolant capacity.....   | 30 L    |
| Pipeline coolant capacity.....   | 4 L     |
| Engine max. outlet coolant temperature.....  | 97℃     |
| Pressure difference between inlet and outlet of water pump<br>(max. hydrostatic head)..... | 48 kPa  |
| Thermostat operation temperature   |         |
| Initial open.....  | (70±2)℃ |
| full open.....   | <80℃    |
| Max. coolant temperature rise:   |         |
| -Standby power.....  | 8℃      |
| -Prime power.....  | 7℃      |

## Radiator

|                                    |                      |
|------------------------------------|----------------------|
| Cooling area.....                  | 71.3m <sup>2</sup>   |
| Dry weight.....                    | 100kg                |
| Core material.....                 | Aluminum             |
| Number of lines.....               | 88                   |
| Density of core.....               | 13 cooling fins/inch |
| Width of core.....                 | 892 mm               |
| Height of core.....                | 820 mm               |
| Min. pressure of pressure cap..... | (50±5)kPa            |
| Coolant resistance limit.....      | 25 kPa               |

## Intercooler

|                           |                      |
|---------------------------|----------------------|
| Cooling area.....         | 40.4 m <sup>2</sup>  |
| Core material.....        | Aluminum             |
| Number of lines.....      | 38                   |
| Density of core.....      | 11 cooling fins/inch |
| Width of core.....        | 880 mm               |
| Height of core.....       | 800 mm               |
| Air resistance limit..... | 15 kPa               |

## Alternator

|                      |  |
|----------------------|--|
| Pole No.             | 4-Pole                                     |
| Exciter Type         | Single bearing, Brushless,<br>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..... | 3.0 kPa                             |
| -Dirty air filter..... | 3.5 kPa                             |
| -Air filter type.....  | Dry-type, filter cartridge of paper |

### Inclination

Transverse inclination/longitudinal inclination (volume of engine oil sump: 20 L) ..... 10°/ 10°

## Fuel system

Injection system.....High pressure common rail

### Injector

Type.....Electronically controlled, with multiple jets  
Injector opening pressure.....Electronically controlled

### Fuel pump

Drive mode .....Gear driven  
Fuel delivery pump flow @1800 rpm ..... 5 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.....7 L/min  
Max. original resistance.....10 kPa  
Water separation efficiency at the rated flow .....≥95 %  
Filter efficiency:  
For particles of 25 μm.....99 %  
For particles of 10 μm.....85 %

#### Fine- filter

Rated flow.....7 L/min  
Max. original resistance.....7 kPa

- ✧ 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:2500\*1200\*1600mm

Weight:2300kg



Dimension:3600\*1600\*1900mm

Weight:3500kg

Fuel Tank Capacity:550L

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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