

# JIANGHAO GENERATOR

Genset	
Model	JHP-700GF
Voltage	277/480V
Frequency&Speed	60HZ;1800RPM
Prime Power	680kW/850kVA
Standby Power	755kW/944kVA

The Perkins<sup>®</sup> 4000 Series family of 6, 8, 12 and 16 cylinder diesel engines was designed in advance of today's uncompromising demands within the power generation industry and includes superior performance and reliability.

The 4006-23TAG3A is a turbocharged and air-to-air charge cooled, 6 cylinder diesel engine offered with either temperate or tropical cooling. Its premium features and design provide economic and durable operation as well as an exceptional power to weight ratio, excellent load acceptance and improved gaseous emissions, plus the overall performance and reliability characteristics essential to the power generation market.

# Engine: Perkins 4006-23TAG3AAlternator:Stamford/Leroy Somer

# /Hengsheng

➢Controller:DeepSea/SmartGen

# /DEIF/ComAp



Specification			
Number of cylinders	6 vertical in-line		
Bore and stroke	160 x 190 mm	6.3 x 7.5 in	
Displacement	22.921 litres	1397 in <sup>3</sup>	
Aspiration	Turbocharged and air-to-air charge cooled		
Cycle	4 stroke		
Combustion system	Direct injection		
Compression ratio	13.6:1		
Rotation	Anti-clockwise, viewed on flywheel		
Total lubricating capacity	113.4 litres	29.5 US gal	
Cooling system	Water-cooled		
Total coolant capacity	105 litres	27.7 US gal	



Engine package weights and dimensions		
Length	3027 mm	119 in
Width	1706 mm	67 in
Height	1964 mm	77 in
Weight (dry)	2524 kg	5564 lb



Speed rpm Type of		Typical generator		Engine power			
	Type of operation	output (Net)		Gr	oss	N	et
			kWe	kWm	hp	kWm	hp
1800	Continuous baseload	675	540	614	823	570	764
	Prime power	844	675	759	1018	715	959
	Standby (maximum)	938	750	839	1125	795	1066

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1. Derating may be required for conditions outside these; consult Perkins Engines Company Limited.

Generator powers are typical and are based on an average alternator efficiency and a power factor (cos. θ) of 0.8. Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2. Lubricating oil: 15W40 to API OG4.

#### Rating definitions

Baseload power: Power available for continuous full load operation. No overload is permitted on baseload power. Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. There is no overload permitted on baseload power. Standby power: Power available in the event of a main power network failure up to a maximum of 500 hours per year of which up to 300 hours may be run continuously. Load factor may be up to 100% of standby power. No overload is permitted.

Percent of prime power	Fuel consumption at 1800 rpm g/kWh	Fuel consumption at 1800 rpm I/hr
Standby power	230	224
Prime power	226	200
Baseload power	213	152
75%	214	144
50%	205	96

#### Lubrication system

- Wet full aluminium sump with filler and dipstick
- Full flow spin-on oil filters

#### Cooling system

- Twin thermostats, water pump
- System designed for ambient temperatures up to 50°C
- Radiator supplied loose incorporating air-to-air charge cooler

#### Electrical equipment

- 24V starter motor, 24V alternator with integral regulator and DC output
- Turbine inlet temperature protection
- · High coolant temperature protection switch
- · Low oil pressure protection switch

#### Flywheel and housing

- Flywheel to SAE J620 size 18
- SAE '0' flywheel housing

#### **Optional equipment**

- 4 meter wiring harness
- Secondary electric start
- Immersion heater
- Exhaust counter flanges
- Single exhaust outlet pipe
- Temperate radiator kit

#### Alternator

Pole No.	4-Pole
Exciter Type	Single bearing, Brushless,
	Self-excited
Power factor	0.8
Voltage adjust range	$\leq 5\%$
Insulation Grade	Н
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:4600\*1800\*2300mm Weight:6200kg



Dimension:5800\*2300\*2500mm Weight:10100kg Fuel Tank Capacity:1200L 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

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