



➤ **Engine: Perkins 2806C-E18TAG1A**

➤ **Alternator: Stamford/Leroy Somer  
/Hengsheng**

➤ **Controller: DeepSea/SmartGen  
/DEIF/ComAp**

## Genset

Model	JHP-500GF
Voltage	277/480V
Frequency&Speed	60HZ;1800RPM
Prime Power	500kW/625kVA
Standby Power	550kW/688kVA

The Perkins 2800 Series is a family of well-proven 6 cylinder 16 and 18 litre inline diesel engines, designed to address today's uncompromising demands within the power generation industry with particular aim at the standby market sector. Developed from a proven heavy-duty industrial base, the engine offers superior performance and reliability.

The 2806C-E18TAG1A is a turbocharged and air-to-air chargecooled, 6 cylinder diesel engine of 18 litres capacity. Its premium features provide economic and durable operation, low gaseous emissions and advanced overall performance and reliability.



## Specification

Number of cylinders	6 vertical in-line	
Bore and stroke	145 x 183 mm	5.7 x 7.2 in
Displacement	18.1 litres	1104 in <sup>3</sup>
Aspiration	Turbocharged and air-to-air chargecooled	
Cycle	4 stroke	
Combustion system	Direct injection	
Compression ratio	14.5:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	62 litres	16.4 US gal
Cooling system	Water-cooled	
Total coolant capacity	61 litres	16.1 US gal



## Engine package weights and dimensions

Length	2545 mm	100 in
Width	1536 mm	60.5 in
Height	1808 mm	71 in
Weight (dry)	2050 kg	4519 lb

Speed rpm	Type of operation	Typical generator output (Net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	hp	kWm	hp
1800	Prime power	625	500	568	762	543	729
	Standby power	687	550	623	835	598	802

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514. 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.  $\theta$ ) of 0.8. Fuel specification: BS 2869: Part 2 1998 Class A2 or ASTM D975 D2. Lubricating oil: 15W40 to API CG4.

#### Rating definitions

Prime power: Power available at variable load with a load factor not exceeding 80% of the prime power rating. Overload of 10% is permitted for 1 hour in every 12 hours operation. 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 l/hr
Standby power	207	144
Prime power	206	130
Baseload power	-	-
75%	212	100
50%	226	71

#### Fuel system

- Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control
- Governing to ISO 8528-5 class G2 with isochronous capability
- Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator
- Fuel cooler

#### Lubrication system

- Wet sump with filler and dipstick
- Full-flow replaceable 'Ecoplus' filter
- Oil cooler integral with filter header

#### Alternator

Pole No.	4-Pole
Exciter Type	Single bearing, Brushless, Self-excited
Power factor	0.8
Voltage adjust range	$\leq 5\%$
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 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:**

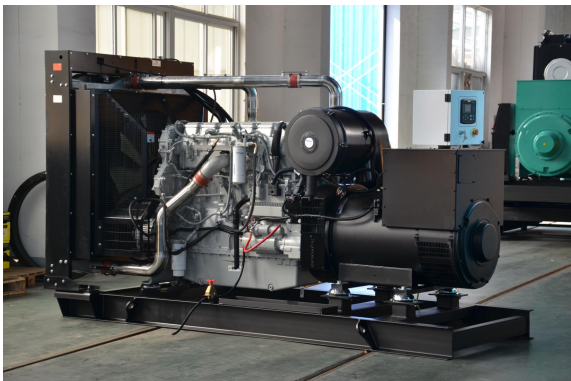
Generator voltage;  
Output frequency;  
Engine speed;  
Battery voltage;  
Engine hours run.

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



Dimension:4100\*1600\*2200mm  
Weight:4800kg

**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



Dimension:5800\*2300\*2500mm  
Weight:8700kg  
Fuel Tank Capacity:1200L

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