## PERKINS MARINE GENERATOR SET

# Perkins Marine Genset 13.5kVA 50Hz 1500rpm 230Volts 1Phase

professional diesel generator set manufacturer with Power solutions to deliver flexibility, reliability and cost-effectiveness.



Perkins 4.4 Marine Genset For reference only. Image shown may not reflect actual package.

50Hz 1500 rpm 230 Volts 1 phase

#### **General Features** Standards & Conditions •Perkins Marine engine **Design Standards** Stamford Marine Alternator The design and production of genset are in •LCD control panel conformity with: Speed governor: Electronic •ISO8528:2005 Excitation: Self excited •GB/T13032-2010 •A.V.R. •GB/T2820-2009 Voltage adjust knob •CCS regulation of Steel vessel classification Vibration isolators assessment between base and engine-generator Dry air filter

## Shop test

Certificates

- •Refer to CCS test program for shop test
- Starting ability test

•DC12V electric starter

Operation Manual & Instruments

Marine Type engine & alternator

- Warning & Shutdown protection test
- •Voltage deviation and speed variation at 0%, 25%, 50%, 100% and 110% load

#### **Documents**

•Supplier provides 1 set approval drawings (Chinese & English) within 10 working days after contract signature.

Each set consists of

- a. Genset outline drawing
- b. Electrical schematic diagram
- Packing list of Genset
- Operation manual of Genset
- •Maintenance & operation manual of engine
- •Instruction of the AC alternator

#### **Environmental Operating Conditions**

- •Installation place: inboard (well ventilated)
- Ambient temperature: 5℃ to 45℃
- Sea water temperature: -1°C to 32°C
- Relative humidity: ≤ 60%
- •Altitude: ≤1000 m
- ≤ 15° List
- Trim ≤ 5°
- •Roll angle ≤ 22° 30′
- •Pitch angle  $\leq$  7° 30′
- •Genset could start successfully and work continuously with slight salt mist, mycete, oil mist or curdle mist around.

#### Warranty

- •Engine and alternator apply for global warranty and post-sale service their own
- •Warranty of genset: 12 months or 1000 working hours (effecting which comes first) under normal
- •Genset should be operated & overhauled correctly according to manual & operation instructions.

50Hz 1500 rpm 230 Volts 1 phase

#### **TECHNICAL DATA** Open type Generator Set - -1500 rpm/50 Hz/ 230 Volts

Genset Model	SDMP13.5SE
Generator Set Performance	
Genset Power rating @ 1.0 pf (PRP)	13.5kW
	13.5kVA
Overload capability (ESP)	14.8kW
	14.8kVA
Starter	Electric motor

#### **Voltage Regulation Performance**

Voltage range adjustable at no load 90%-110% Un

Voltage regulation ≤ +/- 1% (steady state)

Transient Voltage Warp (100% load off)  $\leq$  + 20% Transient Voltage Warp (100% load on)  $\leq$  - 15% Recovery Time  $\leq$  1.5s

#### **Frequency Regulation Performance**

Frequency Deviation ≤ +/- 0.5% (steady state)

Transient Frequency Warp (100% load off)  $\leq$  + 12% Transient Frequency Warp (100% load on)  $\leq$  - 10% Recovery Time  $\leq$  5s

**Emissions** European standard

Society of Classification N/A

- Prime Power (PRP): Prime power is available for an unlimited number of annual hours in variable load application, in accordance with GB/T2820-2009 (equivalent to ISO8528); A 10% overload capability is available for a period of 1 hour within a 12-hour period of operation.
- Standby Power Rating (ESP): The standby power rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload, utility parallel or negotiated outage operation capability is available at this rating.

50Hz 1500 rpm 230 Volts 1 phase

# **SPECIFICATION**

Genset	SDMP13.5SE		
Perkins Marine Engine			
Model	422GM		
Manufacturer	Perkins Engine Company Limited (Made in UK)		
Rated power	18.4kW		
Туре	Inline 4, 4 cycle, direct injection		
Bore*Stroke	84*100mm		
Compression Ratio	23.3:1		
Displacement	2.2L		
Aspiration	Naturally aspirated		
Cooling	Heat exchanger		
Governor	Electronic		
Starter	DC12V electric starter		
Total lubricating capacity	10.6 litres		
Total coolant capacity	10 litres		
Fuel specification	Light diesel		
Lubricating oil specification	CF40 or better		
Stamford Marine Alter	nator		
Model	PM144E		
Manufacturer	Cummins Generators Technology(China) Co., Ltd.		
Rated capacity	13.5kVA		
Туре	Brushless, AVR-excited, AVR, 2/3 pitch		
Construction	Single bearing, close coupled		
Connecting	1 Phase 2 Wires		
IP rating	IP23		
Insulation / Temp. Rise	Class H / H		
THD, TIF, THF	THD≤5%, TIF≤50, THF≤2%		
Voltage Regulation	Less than +/- 1% (steady state) Less than +/- 2.5% (no load to full load)		
LCD Control Panel (Marine type)			
Instruction	Start button, Stop button, Reset button, Test button, Emergency stop etc.		
Indication	n Tachometer		
	Lube Oil pressure, Coolant temperature		
	Indication according to Engine Full electorinic control system		
Alarm & Shutdown	Overspeed, Low Lube oil pressure		
Protection	High Coolant temperature		

50Hz 1500 rpm 230 Volts 1 phase

Notice: Of optional, please indicate me before place PO. The cost will be on your charge.

# FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

System	Standard	Optional
Air Inlet	Air cleaner Closed engine breather system	
Cooling	Heat exchanger Sea water pump Fresh water pump	
Exhaust	Exhaust manifold Water cooled exhaust outlet	
Fuel	Spin-on fuel oil filter and separator Rotary fuel injection pump Electronic governor	
Lube	Lubricating oil filter Oil dipstick Oil cooler Oil pump	
Governor	Electronic	
Generator	Self excited, Brushless Class H insulation Class H temperature rise Class IP23 protection Auto Voltage Regulator (AVR)	
Control Panels	LCD control panel Remote controller with 20m cables	
Mounting	Wide base Rubber vibration isolators	
Starting/Chargin	Charging alternator 12 Volt starting motor	
General	Paint –blue in comply with engine Base in Black	

50Hz 1500 rpm 230 Volts 1 phase

# **DIMENSIONS**

Package dimension: Perkins & Stamford Package			
Model	SDMP13.5SE		
Length (mm)	1300		
Width (mm)	720		
Height (mm)	860		
Weight (kgs)	480		

Note: Do not use for installation design.

See general dimension drawings of approval for detail.