

◎ Power

Engine Speed	Type of Operation	Engine Power	Generator Power
r/min		kW	kVA
1500	Prime Power	340	375
	Standby Power	380	413

- The engine performance is as per GB/T2820

- Ratings are based on GB/T1147.1.

→**Prime Power** :--- There is no time limit in the case of variable load operation. In any 250hours of continuous operation period, the variable load of average work load less than 70%of the prime power. The operation time in the situation of 100%prime power no more than 500 hours. Permit 10%overload running1hours in any 12 hours of continuous operation period. The overload 10% power running time of every year no more than 25 hours..

→**Standby Power**: The annual total standby power load should be less than 80%and the average running time shall be less than200 hours. Among them the standby power point should be no more than 25 hours a year.。

◎ SPECIFICATIONS

○ Engine Model	SC12E500D3
○ Engine Type	In-line,4strokes,4valves,water-cooled, Turbo charged with aftercooler
○ Combustion type	Direct injection
○ Cylinder Type	Wet liner
○ Number of cylinders	6
○ Bore × stroke	128 × 153mm
○ Displacement	11.8 L
○ Compression ratio	17 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	Electronic control
○ Dry weight	Approx. 1164kg
○ Dimension (L×W×H)	1793×918×1364 mm
○ Rotation	SAE NO.1
○ Fly wheel housing	SAE NO.14(tooth number of gear:133)

◎ MECHANISM

○ Type	Overhead valve
○ Number of valve	Intake 2, exhaust 2 per cylinder
○ Valve lashes at cold	Intake 0.25mm Exhaust 0.50mm

◎ VALVE TIMING

	Opening	Close
○ Intake valve	20.9° BTDC	44.9° ABDC
○ Exhaust valve	51.7° BBDC	11.7° ATDC

◎ FUEL CONSUMPTION

○ Power	L/h (1500r/min)	L/h (1800r/min)
25%	20.7	20.8
50%	41.0	41.2
75%	59.3	59.6
100%	79.9	80.3
110%	90.7	91.1

◎ FUEL SYSTEM

○ Injection pump	BOSCH COM-RAIL
○ Governor	Electric type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ Opening pressure	250 kg/cm ²
○ Fuel filter	Full flow, cartridge type
○ Used fuel	Diesel fuel oil

◎ LUBRICATION SYSTEM

○ Lub. Method	Fully forced pressure feed type
○ Oil pump	Gear type driven by crankshaft
○ Oil filter	Full flow, cartridge type
○ Oil pan capacity	High level 41liters Low level 33liters
○ Angularity limit	Front down 25 deg. Front up 35 deg. Side to side 35 deg.
○ Lub. Oil	Refer to Operation Manual

◎ COOLING SYSTEM

- Cooling method Fresh water forced circulation
- Water capacity 23.2 liters
(engine only)
- Lid Min. pressure 70kPa
- Water pump Centrifugal type driven by belt
- Water pump Capacity 515L/min (1500r/min)
618L/min (1800r/min)

- The maximum temp. of coolant in prime/ Standby power 104/100
- Thermostat Wax-pellet type
Opening temp. 85°C
Full open temp. 95°C
- Cooling fan Blower type, plastic
843 mm diameter, 8blades
Power consumption 6kw

◎ ELECTRICAL SYSTEM

- Charging generator 28V×70A
- Voltage regulator Built-in type IC regulator
- Starting motor 24V×5.5kW
- Battery Voltage 24V
- Battery Capacity 180 AH

◆ 换算表

$$\text{in.} = \text{mm} \times 0.0394$$

$$\text{PS} = \text{kW} \times 1.3596$$

$$\text{psi} = \text{kg/cm}^2 \times 14.2233$$

$$\text{in}^3 = \text{L} \times 61.02$$

$$\text{hp} = \text{PS} \times 0.98635$$

$$\text{lb} = \text{kg} \times 2.20462$$

$$\text{lb/ft} = \text{N.m} \times 0.737$$

$$\text{U.S. gal} = \text{L} \times 0.264$$

$$\text{kW} = 0.2388 \text{ kcal/s}$$

$$\text{lb/PS.h} = \text{g/kW.h} \times 0.00162$$

$$\text{cfm} = \text{m}^3/\text{min} \times 35.336$$

◎ ENGINEERING DATA

- Heat rejection to coolant 34.2 kcal/sec (1500r/min)
34.2 kcal/sec (1800r/min)
- Heat rejection to intercooler 21.4 m³/min (1500r/min)
21.4 m³/min (1800r/min)
- Exhaust gas temp. 600 °C
- Max. permissible restrictions 3 kPa initial
6 kPa final (need charge filter element)

- Intake system

- Exhaust system 10 kPa max.
- Max. permissible altitude 2000 m
- intercooler permissible restrictions 9 kPa
- Cooling air flow 8.8m³/s

