# SC12E480D2

## ◎ POWER RATING

| Engine Speed | Type of Operation | Engine | Genset | |
|---|---|---|---|---|
| r/min | | kW | kW | kVA |
| 1500 | Prime Power | 323 | 290 | 362.5 |
| | Standby Power | 355 | 310 | 387.5 |

-. The engine performance is as per GB/T2820.

-. Ratings are based on GB/T1147.1.

---Prime power is available for an unlimited number of hours per year in a variable load application. The permissible average power output over 24 hours of operation shall not exceed 80% of the prime power rating.

---Standby power is available in the event of a utility power outage or under test conditions for up to 200 hours of operation per year. The permissible average power output over 24 hours of operation shall not exceed 80% of the standby power rating.

## ◎ SPECIFICATIONS

| | |
|---|---|
| ○ Engine Model | SC12E480D2 |
| ○ Engine Type | In-line,4 strokes, water-cooled<br>4 valves, Turbo charged<br>air-to-air intercooled |
| ○ Combustion type | Direct injection |
| ○ Cylinder Type | Dry 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 | 14.5°BTDC |
| ○ Dry weight | 1164 kg |
| ○ Dimension(L×W×H) | 1787×918×1287 mm |
| ○ Rotation | CCW viewed from flywheel |
| ○ Fly wheel housing | SAE NO.1 |
| ○ Fly wheel | SAE NO.14 |

## ◎ FUEL CONSUMPTION

| ○ Power | L/h（1500r/min） |
|---|---|
| 25% | 22.0 |
| 50% | 38.9 |
| 75% | 56.5 |
| 100% | 77.2 |
| 110% | 85.7 |

## ◎ FUEL SYSTEM

| | |
|---|---|
| ○ Injection pump | Longkou in-line “P” type |
| ○ Governor | Electric type |
| ○ Feed pump | Mechanical type |
| ○ Injection nozzle | Multi hole type |
| ○ Opening pressure | 250 kg/cm2 |
| ○ Fuel filter | Full flow, cartridge type |
| ○ Used fuel | Diesel fuel oil |

## ◎ MECHANISM

| | |
|---|---|
| ○ Type | Over head valve |
| ○ Number of valve | Intake 2, exhaust 2 per cylinder |
| ○ Valve lashes at cold | Intake 0.40mm |
| | Exhaust 0.65mm |

## ◎ VALVE TIMING

| | Opening | Close |
|---|---|---|
| ○ Intake valve | 15° BTDC | 30° ABDC |
| ○ Exhaust valve | 45° BBDC | 13° ATDC |

## ◎ COOLING SYSTEM

| | |
|---|---|
| ○ Cooling method | Fresh water forced circulation |
| ○ Water capacity | 23.2 L(engine only) |
| ○ Pressure system | Max. 0.5 kg/cm2 |
| ○ Water pump | Centrifugal type driven by belt |
| ○ Water pump Capacity | 515 L/min at 1500r/min |
| ○ Thermostat | Wax–pellet type |
| | Opening temp. 85°C |
| | Full open temp. 95°C |
| ○ Cooling fan | Blower type, plastic |
| | 843 mm diameter, 8 blades |

○ Max. coolant temperature at standby / prime power

104/100℃

## ◎ 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/ Low level 36L/31L |
| ○ Angularity limit | Front down 25° |
| | Front up 35° |
| | Side to side 35° |
| ○ Lub. Oil | Refer to Operation Manual |

## ◎ ENGINEERING DATA

| | |
|---|---|
| ○ Heat rejection to coolant | 31.3 kcal/sec（1500r/min） |
| ○ Heat rejection to CAC | 20.2 kcal/sec（1500r/min） |
| ○ Engine waste heat | 29.8 $m^3$/min（1500r/min） |
| ○ Exhaust gas flow | 76.9 m3/min（1500r/min） |
| ○ Exhaust gas temp. | 600 °C |
| ○ Max. permissible restrictions | |
| Intake system | 3 kPa initial / 6 kPa final |
| Exhaust system | 10 kPa max. |
| ○ Intercooler resistance limit | 10 kPa |

## ◎ ELECTRICAL SYSTEM

| | |
|---|---|
| ○ Charging generator | 28V×55A |
| ○ Voltage regulator | Built-in type IC regulator |
| ○ Starting motor | 24V×7.5 kW |
| ○ Battery Voltage | 24V |
| ○ Battery Capacity | 180 AH |