



SC8D280D2

◎ POWER RATING

| Engine Speed rpm | Type of Operation | Engine Power | |
|---------------------|----------------------|--------------|-----|
| | | kW | Ps |
| 1500 | Prime Power | 185 | 251 |
| | Standby Power | 204 | 280 |

- 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

◎ FUEL CONSUMPTION

| | | | |
|-----------------------|---------------------------------|---------|--------|
| ○ Engine Model | SC8D280D2 | ○ Power | lit/hr |
| ○ Engine Type | In-line,4 strokes, water-cooled | 25% | 12.4 |
| | Turbo charged | 50% | 22.5 |
| | air-to-air intercooled | 75% | 33.5 |
| ○ Combustion type | Direct injection | 100% | 44.9 |
| ○ Cylinder Type | Wet liner | 110% | 49.7 |
| ○ Number of cylinders | 6 | | |
| ○ Bore × stroke | 114(4.49) × 135(5.32) mm(in.) | | |
| ○ Displacement | 8.27(504.6) lit.(in3) | | |
| ○ Compression ratio | 18 : 1 | | |

| | |
|--------------------|---|
| ○ Firing order | 1-5-3-6-2-4 |
| ○ Injection timing | 6°BTDC |
| ○ Dry weight | Approx. 740kg (1631lb) |
| ○ Dimension | 1455×762×1273 mm |
| (L×W×H) | (57.3×30.0×50.2 in.) |
| ○ Rotation | Counter clockwise viewed from Flywheel |

◎ 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/cm ² (3556 psi) |
| ○ Fuel filter | Full flow, cartridge type |

| | | | |
|---------------------|-------------|-------------|-----------------|
| ○ Fly wheel housing | SAE NO.2 | ○ Used fuel | Diesel fuel oil |
| ○ Fly wheel | SAE NO.11.5 | | |

⊙ **MECHANISM**

| | |
|------------------------|---|
| ○ Type | Over head valve |
| ○ Number of valve | Intake 1, exhaust 1 per cylinder |
| ○ Valve lashes at cold | Intake 0.30mm (0.0118 in.) Exhaust 0.50mm (0.0197 in.) |

⊙ **VALVE TIMING**

| | Opening | Close |
|-----------------|----------------|----------------|
| ○ Intake valve | 22.5 deg. BTDC | 34.5 deg. ABDC |
| ○ Exhaust valve | 67.5 deg. BBDC | 25.5 deg. ATDC |

⊙ **COOLING SYSTEM**

| | |
|-----------------------------------|---|
| ○ Cooling method | Fresh water forced circulation |
| ○ Water capacity (engine only) | 12 liters (3.17 gal.) |
| ○ Pressure system | Max. 0.5 kg/cm ² (7.11 psi) |
| ○ Water pump | Centrifugal type driven by belt |
| ○ Water pump Capacity | 200 liters (52.8 gal.)/min at 1,500 rpm (engine) |
| ○ Thermostat | Wax–pellet type Opening temp. 82°C Full open temp. 93°C |
| ○ Cooling fan | Blower type, plastic 762 mm diameter, 10 blades |
| ○ Cooling air flow | 5.57 m ³ /s |

⊙ **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 19 liters (5.02 gal.) Low level 15 liters (3.96 gal.) |
| ○ Angularity limit | Front down 25 deg. Front up 35 deg. Side to side 35 deg. |
| ○ Lub. Oil | Refer to Operation Manual |

⊙ **ENGINEERING DATA**

| | |
|------------------------------------|-------------------------------------|
| ○ Water flow | 200 liters/min @1,500 rpm |
| ○ Heat rejection to coolant | 18.6 kcal/sec @1,500 rpm |
| ○ Heat rejection to CAC | 11.6 kcal/sec @1,500 rpm |
| ○ Air flow | 12.3 m ³ /min @1,500 rpm |
| ○ Exhaust gas flow | 27.2 m ³ /min @1,500 rpm |
| ○ Exhaust gas temp. | 600 °C @1,500 rpm |
| ○ Max. permissible restrictions | |
| Intake system | 3 kPa initial 6 kPa final |
| Exhaust system | 10 kPa max. |
| ○ Max. permissible altitude | 2,000 m |
| ○ Fan power | 8 kW |

◎ ELECTRICAL SYSTEM

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

◆ CONVERSION TABLE

- in. = mm × 0.0394
- lb/ft = N.m × 0.737
- PS = kW × 1.3596
- U.S. gal = lit. × 0.264
- psi = kg/cm² × 14.2233
- kW = 0.2388 kcal/s
- in³ = lit. × 61.02
- lb/PS.h = g/kW.h × 0.00162
- hp = PS × 0.98635
- cfm = m³/min × 35.336
- lb = kg × 2.20462

