



Model:SC8D280D2

◎ POWER RATING

| Engine Speed | Type of | Gross Engine Output | Net Engine Output |
|--------------|---------------|---------------------|-------------------|
| rpm | Operation | kW | kW |
| 1500 | Prime Power | 185 | 176 |
| | Standby Power | 204 | 195 |

-. 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 | SC8D280D2 |
| ○ Engine Type | In-line,4 strokes, water-cooled Turbo charged air-to-air intercooled |
| ○ Combustion type | Direct injection |
| ○ Cylinder Type | Wet liner |
| ○ Number of cylinders | 6 |
| ○ Bore × stroke | 114(4.49) × 135(5.32) mm(in.) |
| ○ Displacement | 8.27(504.6) lit.(in ³) |
| ○ Compression ratio | 18 : 1 |
| ○ Firing order | 1-5-3-6-2-4 |
| ○ Injection timing | 6°BTDC |
| ○ Dry weight | Approx. 740kg (1631lb) |
| ○ Dimension (L×W×H) | 1455×762×1273 mm (57.3×30.0×50.2 in.) |
| ○ Rotation | Counter clockwise viewed from |

◎ FUEL CONSUMPTION

| | |
|----------------------|-----------------------------------|
| ○ Power | lit/hr |
| 25% | 12.4 |
| 50% | 22.5 |
| 75% | 33.5 |
| 100% | 44.9 |
| 110% | 49.7 |
| ◎ 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/cm ² (3556 psi) |



| | | | | |
|-----------------------------------|--|-----------------------------|------------------------------------|---|
| | Flywheel | | ○ Fuel filter | Full flow, cartridge type |
| ○ Fly wheel housing | SAE NO.2 | | ○ Used fuel | Diesel fuel oil |
| ○ Fly wheel | SAE NO.11.5 | | | |
| ◎ MECHANISM | | ◎ LUBRICATION SYSTEM | | |
| ○ Type | Over head valve | | ○ Lub. Method | Fully forced pressure feed type |
| ○ Number of valve | Intake 1, exhaust 1 per cylinder | | ○ Oil pump | Gear type driven by crankshaft |
| ○ Valve lashes at cold | Intake 0.30mm (0.0118 in.) | | ○ Oil filter | Full flow, cartridge type |
| | Exhaust 0.50mm (0.0197 in.) | | ○ Oil pan capacity | High level 19 liters (5.02 gal.) Low level 15 liters (3.96 gal.) |
| ◎ VALVE TIMING | | | ○ Angularity limit | Front down 25 deg. Front up 35 deg. |
| | Opening | Close | | Side to side 35 deg. |
| ○ Intake valve | 22.5 deg. BTDC | 34.5 deg. ABDC | | |
| ○ Exhaust valve | 67.5 deg. BBDC | 25.5 deg. ATDC | ○ Lub. Oil | Refer to Operation Manual |
| ◎ COOLING SYSTEM | | ◎ ENGINEERING DATA | | |
| ○ Cooling method | Fresh water forced circulation | | ○ Water flow | 200 liters/min @1,500 rpm |
| ○ Water capacity (engine only) | 12 liters (3.17 gal.) | | ○ Heat rejection to coolant | 18.6 kcal/sec @1,500 rpm |
| | | | ○ Heat rejection to CAC | 11.6 kcal/sec @1,500 rpm |
| ○ Pressure system | Max. 0.5 kg/cm2 (7.11 psi) | | ○ Engine waste heat | 5.8 kcal/sec @1,500 rpm |
| ○ Water pump | Centrifugal type driven by belt | | ○ Air flow | 12.3 m3/min @1,500 rpm |
| ○ Water pump Capacity | 200 liters (52.8 gal.)/min | | ○ Exhaust gas flow | 27.2 m3/min @1,500 rpm |
| | at 1,500 rpm (engine) | | ○ Exhaust gas temp. | 600 °C @1,500 rpm |
| ○ Thermostat | Wax–pellet type | | ○ Max. permissible restrictions | |
| | Opening temp. 82°C Full open temp. 93°C | | Intake system | 3 kPa initial |



- Cooling fan
 - Blower type, plastic
 - 762 mm diameter, 10 blades
- Cooling air flow
 - 5.57 m³/s

- Exhaust system
 - 6 kPa final
 - 10 kPa max.
- Max. permissible altitude
 - 2,000 m

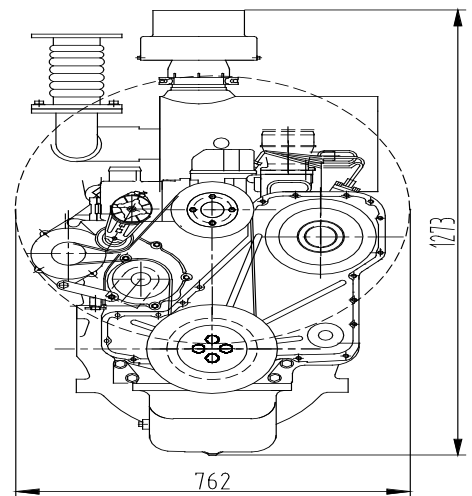
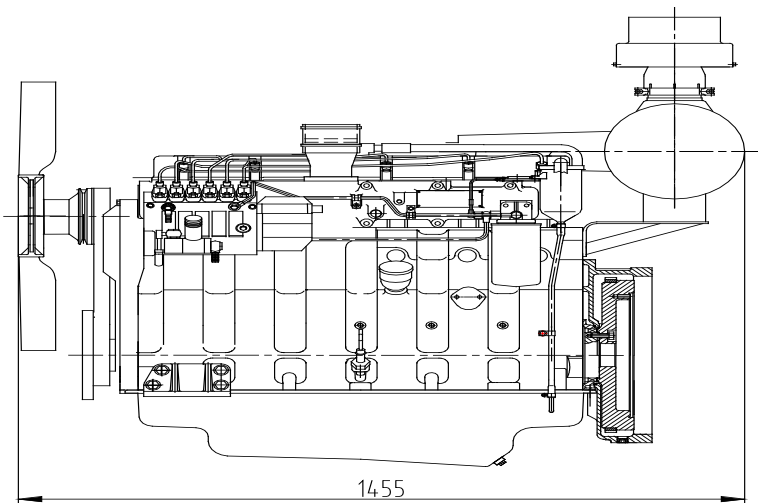
- Fan power
 - 8 kW

◎ **ELECTRICAL SYSTEM**

◆ **CONVERSION TABLE**

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

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



| | Initial load acceptance when engine reaches rated speed (15 seconds maximum after engine starts to crank) | | | | 2nd load application Immediately after engine has recovered to rated speed (5 seconds after initial load application) | | | |
|--------------|---|---------------|---------------------|---------------------------------|---|---------------|---------------------|---------------------------------|
| | Engine speed | Prime power % | Load kWm (kWe) Nett | Transient Frequency deviation % | Frequency recovery time seconds | Prime power % | Load kWm (kWe) Nett | Transient Frequency deviation % |
| 1500 rev/min | 45 | 83 | ≤7 | 3 | 25 | 46 | ≤7 | 3 |