



# SC4H80D2

## ◎ POWER RATING

Engine Speed rpm	Type of Operation	Engine Power	
		kW	Ps
1500	Prime Power	56	76
	Standby Power	62	85

-. 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	SC4H80D2
○ Engine Type	In-line,4 strokes, water-cooled 4 valves, Turbo charged
○ Combustion type	Direct injection
○ Cylinder Type	Dry liner
○ Number of cylinders	4
○ Bore × stroke	105(4.14) × 124(4.89) mm(in.)
○ Displacement	4.3(262.4) lit.(in3)
○ Compression ratio	17.3 : 1
○ Firing order	1-3-4-2
○ Injection timing	13.5°BTDC
○ Dry weight	Approx. 450kg (992.1 lb)
○ Dimension (L×W×H)	1012×723×1102 mm (39.9×28.5×43.4in.)
○ Rotation	Counter clockwise viewed from Flywheel
○ Fly wheel housing	SAE NO.3
○ Fly wheel	SAE NO.11.5

## ◎ MECHANISM

○ Type	Over head valve
○ Number of valve	Intake 2, exhaust 2 per cylinder
○ Valve lashes at cold	Intake 0.25mm (0.0099 in.) Exhaust 0.50mm (0.0197 in.)

## ◎ VALVE TIMING

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

## ◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity (engine only)	6.8 liters ( 1.8 gal.)

## ◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	3.6
50%	6.9
75%	10.6
100%	13.9
110%	15.1

## ◎ FUEL SYSTEM

○ Injection pump	Beiyou in-line “AD” type
○ Governor	RSV
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ Opening pressure	250 kg/cm2 (3556 psi)
○ 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 13 liters ( 3.4 gal.) Low level 11 liters ( 2.9 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	117 liters/min @1,500 rpm
○ Heat rejection to coolant	9.8 kcal/sec @1,500 rpm

- Pressure system      Max. 0.5 kg/cm<sup>2</sup> ( 7.11 psi)
- Water pump            Centrifugal type driven by belt
- Water pump Capacity   117 liters ( 30.9 gal.)/min  
   at 1,500 rpm (engine)
- Thermostat            Wax–pellet type  
   Opening temp. 82°C  
   Full open temp. 95°C
- Cooling fan            Blower type, plastic  
   550 mm diameter, 9 blades

- Air flow                    4.8 m<sup>3</sup>/min @ 1,500 rpm
- Exhaust gas flow        10.2 m<sup>3</sup>/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         6 kPa max.
- Max. permissible altitude   2,000 m

◎ **ELECTRICAL SYSTEM**

- Charging generator    24V×55A
- Voltage regulator      Built-in type IC regulator
- Starting motor         24V×4.5kW
- Battery Voltage        24V
- Battery Capacity      120 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/cm <sup>2</sup> × 14.2233 | kW = 0.2388 kcal/s                 |
| in <sup>3</sup> = lit. × 61.02     | lb/PS.h = g/kW.h × 0.00162         |
| hp = PS × 0.98635                  | cfm = m <sup>3</sup> /min × 35.336 |
| lb = kg × 2.20462                  |                                    |

