



## Model:SC4H80D2

### ◎ POWER RATING

Engine Speed	Type of	Gross Engine Output	Net Engine Output
rpm	Operation	kW	kW
1500	Prime Power	56	52
	Standby Power	62	58

-. 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.(in <sup>3</sup> )
○ Compression ratio	17.3 : 1
○ Firing order	1-3-4-2
○ Injection timing	13.5°BTDC
○ Dry weight	Approx. 430kg (948 lb)
○ Dimension	1012×723×1102 mm
(L×W×H)	(39.9×28.5×43.4in.)
○ Rotation	Counter clockwise viewed from

### ◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	4.0
50%	7.3
75%	10.2
100%	13.6
110%	15.1

### ◎ FUEL SYSTEM

○ Injection pump	Beiyou in-line “AD” type
○ Governor	Electric type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type



	Flywheel		○ Opening pressure	250 kg/cm <sup>2</sup> (3556 psi)
○ Fly wheel housing	SAE NO.3#		○ Fuel filter	Full flow, cartridge type
○ Fly wheel	SAE NO.11.5#		○ Used fuel	Diesel fuel oil
<b>◎ MECHANISM</b>		<b>◎ LUBRICATION SYSTEM</b>		
○ Type	Over head valve		○ Lub. Method	Fully forced pressure feed type
○ Number of valve	Intake 2, exhaust 2 per cylinder		○ Oil pump	Gear type driven by crankshaft
○ Valve lashes at cold	Intake 0.25mm (0.0099 in.)		○ Oil filter	Full flow, cartridge type
	Exhaust 0.50mm (0.0197 in.)		○ Oil pan capacity	High level 13 liters ( 3.4 gal.) Low level 11 liters ( 2.9 gal.)
<b>◎ VALVE TIMING</b>			○ Angularity limit	Front down 25 deg. Front up 35 deg. Side to side 35 deg.
	<b>Opening</b>	<b>Close</b>		
○ Intake valve	20.9° BTDC	44.9° ABDC	○ Lub. Oil	Refer to Operation Manual
○ Exhaust valve	51.7° BBDC	11.7° ATDC		
<b>◎ COOLING SYSTEM</b>		<b>◎ ENGINEERING DATA</b>		
○ Cooling method	Fresh water forced circulation		○ Water flow	117 liters/min @1,500 rpm
○ Water capacity (engine only)	6.8 liters ( 1.8 gal.)		○ Heat rejection to coolant	5.6 kcal/sec @1,500 rpm
			○ Engine waste heat	2.0 kcal/sec @1,500 rpm
○ Pressure system	Max. 0.5 kg/cm <sup>2</sup> ( 7.11 psi)		○ Air flow	4.3m <sup>3</sup> /min @1,500 rpm
○ Water pump	Centrifugal type driven by belt		○ Exhaust gas flow	10.2 m <sup>3</sup> /min @1,500 rpm
○ Water pump Capacity	117 liters ( 30.9 gal.)/min		○ Exhaust gas temp.	600 °C @1,500 rpm
	at 1,500 rpm (engine)		○ Max. permissible	
○ Thermostat	Wax-pellet type		restrictions	
	Opening temp. 82°C		Intake system	3 kPa initial
	Full open temp. 95°C			6 kPa final



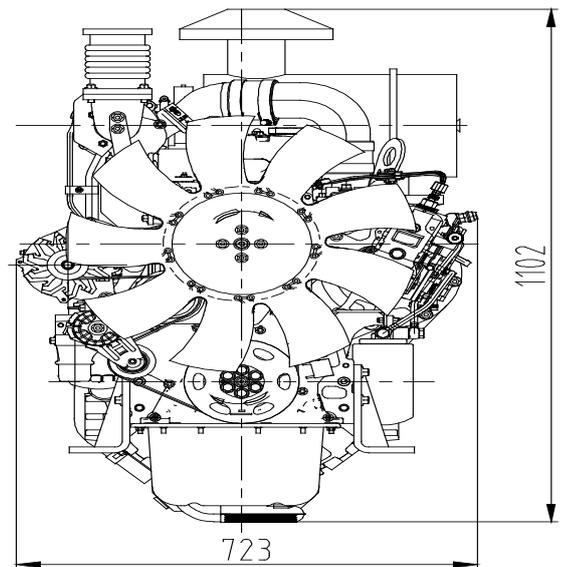
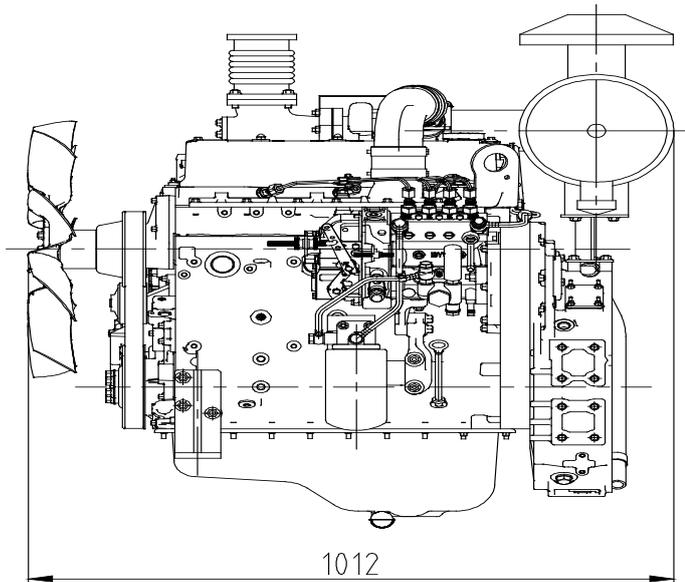
- Cooling fan
  - Blower type, plastic
  - 550 mm diameter, 9 blades
- Cooling air flow
  - 1.86 m<sup>3</sup>/s
- Exhaust system
  - 6 kPa max.
- Max. permissible altitude
  - 2,000 m
- Fan power
  - 3 kW

◎ **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



Engine speed	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)			
	Prime power %	Load kWm (kWe) Nett	Transient Frequency deviation %	Frequency recovery time seconds	Prime power %	Load kWm (kWe) Nett	Transient Frequency deviation %	Frequency recovery time seconds
1500 rev/min	70	40	≤7	3	30	16	≤7	3