

# SC4H115D2

## Used for 80kVA generator

### ◎ POWER RATING

Engine Speed	Type of Operation	Engine Power	
		kW	Ps
1500 rpm	Prime Power	78	106
	Standby Power	86	117

- 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	SC4H115D2	○ Power	lit/hr
○ Engine Type	In-line,4 strokes, water-cooled 4 valves, Turbo charged	25%	6.1
		50%	10.3
○ Combustion type	Direct injection	75%	15.2
○ Cylinder Type	Dry liner	100%	20.2
○ Number of cylinders	4	110%	22.1
○ 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. 450kg (992.1 lb)	◎ FUEL SYSTEM	
○ Dimension	1012×723×1102 mm	○ Injection pump	Beiyou in-line “AD” type
(L×W×H)	(39.9×28.5×43.4in.)	○ Governor	RSV
○ Rotation	Counter clockwise viewed from Flywheel	○ Feed pump	Mechanical type
○ Fly wheel housing	SAE NO.3	○ Injection nozzle	Multi hole type
		○ Opening pressure	250 kg/cm <sup>2</sup> (3556 psi)
		○ Fuel filter	Full flow, cartridge type

○ 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 6.8 liters ( 1.8 gal.)  
(engine only)

○ 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

○ Cooling air flow 2.35 m<sup>3</sup> /s

### ⊗ ELECTRICAL SYSTEM

○ 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 13.6 kcal/sec @1,500 rpm

○ Air flow 6.2 m<sup>3</sup>/min @1,500 rpm

○ Exhaust gas flow 14.1 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

○ Fan power 5 kW

### ◆ CONVERSION TABLE

○ Charging generator

24V×55A

in. = mm × 0.0394

lb/ft = N.m × 0.737

○ Voltage regulator

Built-in type IC regulator

PS = kW × 1.3596

U.S. gal = lit. × 0.264

○ Starting motor

24V×4.5kW

psi = kg/cm<sup>2</sup> × 14.2233

kW = 0.2388 kcal/s

○ Battery Voltage

24V

in<sup>3</sup> = lit. × 61.02

lb/PS.h = g/kW.h × 0.00162

○ Battery Capacity

120 AH

hp = PS × 0.98635

cfm = m<sup>3</sup>/min × 35.336

lb = kg × 2.20462

