



# SC4H160D2

## ◎ POWER RATING

Engine Speed	Type of	Engine Power	
rpm	Operation	kW	Ps
1500	Prime Power	105	143
	Standby Power	116	160

-. 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	SC4H160D2
○ Engine Type	In-line, 4 strokes, water-cooled
	4 valves, Turbo charged
	air-to-air intercooled
○ 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	16 : 1
○ Firing order	1-3-4-2
○ Injection timing	11° BTDC
○ Dry weight	Approx. 450kg (992.1 lb)
○ Dimension	1053×717×1158 mm
(L×W×H)	(41.5×28.3×45.6 in.)
○ Rotation	Counter clockwise viewed from
	Flywheel
○ Fly wheel housing	SAE NO. 3
○ Fly wheel	SAE NO. 11.5

## ◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	6.6
50%	12.8
75%	16.7
100%	25.0
110%	27.7

## ◎ 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 <sup>2</sup> (3556 psi)
○ Fuel filter	Full flow, cartridge type
○ Used fuel	Diesel fuel oil

## ◎ 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.)

## ◎ 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	155 liters/min @ 1,500 rpm
○ Heat rejection to coolant	15.5 kcal/sec @ 1,500 rpm

- (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 155 liters ( 136 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  
620 mm diameter, 10 blades

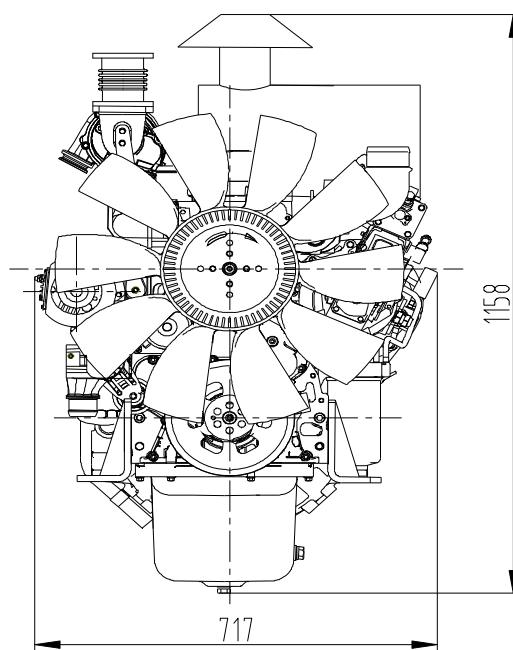
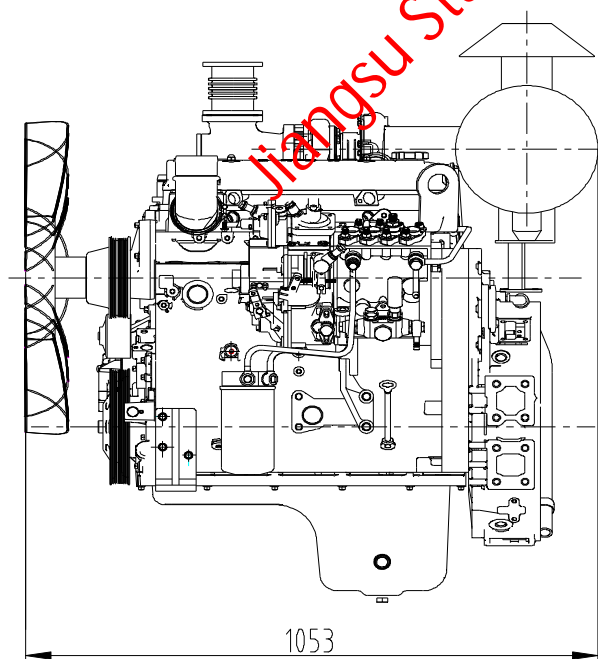
- Heat rejection to CAC 7.8 kcal/sec @1,500 rpm
- Air flow 7.39 m<sup>3</sup>/min @1,500 rpm
- Exhaust gas flow 16.8 m<sup>3</sup>/min @1,500 rpm
- Exhaust gas temp. 600°C @1,500 rpm
- Max. permissible restrictions
- Intake system 3 kPa initial  
6 kPa final
- Exhaust system 6 kPa max.
- Max. permissible 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                  |                                    |



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