



## Model:SC12E420D2

### ◎ POWER RATING

Engine Speed rpm	Type of Operation	Engine Power	
		kW	Ps
1500	Prime Power	280	380
	Standby Power	308	420

-. 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	SC12E420D2
○ Engine Type	In-line,4 strokes, water-cooled 4 valves, Turbo charged air-to-air intercooled
○ Combustion type	Direct injection
○ Cylinder Type	Wet liner
○ Number of cylinders	6
○ Bore × stroke	128(5.04) × 153(6.03) mm(in.)
○ Displacement	11.8(720) lit.(in3)
○ Compression ratio	17 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	14°BTDC
○ Dry weight	Approx.1070 kg (2,359 lb)
○ Dimension (L×W×H)	1787×918×1294 mm (70.4×36.2×51 in.)
○ Rotation	Counter clockwise viewed from

### ◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	17.8
50%	35.1
75%	51.4
100%	68.6
110%	78.1

### ◎ 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)



	Flywheel		○ Fuel filter	Full flow, cartridge type
○ Fly wheel housing	SAE NO.1		○ Used fuel	Diesel fuel oil
○ Fly wheel	SAE NO.14			
<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 0.40mm (0.0158 in.)		○ Oil filter	Full flow, cartridge type
	Exhaust 0.65mm (0.0256 in.)		○ Oil pan capacity	High level 41 liters ( 10.82 gal.) Low level 33 liters ( 8.71 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	15 deg. BTDC	30 deg. ABDC		
○ Exhaust valve	45 deg. BBDC	13 deg. ATDC	○ Lub. Oil	Refer to Operation Manual
<b>◎ COOLING SYSTEM</b>		<b>◎ ENGINEERING DATA</b>		
○ Cooling method	Fresh water forced circulation		○ Water flow	515 liters/min @1,500 rpm
○ Water capacity (engine only)	23.2 liters ( 6.12 gal.)		○ Heat rejection to coolant	32.1 kcal/sec @1,500 rpm
			○ Heat rejection to CAC	11.2 kcal/sec @1,500 rpm
○ Pressure system	Max. 0.5 kg/cm2 ( 7.11 psi)		○ Air flow	17.5 m3/min @1,500 rpm
○ Water pump	Centrifugal type driven by belt		○ Exhaust gas flow	46.3 m3/min @1,500 rpm
○ Water pump Capacity	515 liters ( 136 gal.)/min		○ Exhaust gas temp.	600 °C @1,500 rpm
	at 1,500 rpm (engine)		○ Max. permissible	
○ Thermostat	Wax–pellet type		restrictions	
	Opening temp. 85°C		Intake system	3 kPa initial
	Full open temp. 95°C			6 kPa final

