SC9D310D2

◎ POWER RATING

Engine Speed	Type of	Gross Engine Output	Net Engine Output
rpm	Operation	kW	kW
1500	Prime Power	208	199
	Standby Power	228	219

-. 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	SC9D310D2
○ Engine Type	In-line,4 strokes, water-cooled Turbo charged air-to-air intercooled
○ Combustion type	Direct injection
○ Cylinder Type	Wet liner
○ Number of cylinders	6
○ Bore × stroke	114(4.49) × 144(5.67) mm(in.)
○ Displacement	8.82(538.2) lit.(in3)
○ Compression ratio	18 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	6°BTDC
○ Dry weight	Approx. 740kg (1631b)
○ Dimension (L×W×H)	1455×762×1273 mm (57.3×30.0×50.2 in.)
○ Rotation	Counter clockwise viewed from Flywheel
○ Fly wheel housing	SAE NO.2
○ Fly wheel	SAE NO.11.5

◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	13.9
50%	26.3
75%	38.2
100%	50.6
110%	55.6

◎ 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/cm2 (3556 psi)
○ Fuel filter	Full flow, cartridge type
○ Used fuel	Diesel fuel oil

◎ MECHANISM

○ Type	Over head valve
○ Number of valve	Intake 1, exhaust 1 per cylinder
○ Valve lashes at cold	Intake 0.30mm (0.0118 in.) Exhaust 0.50mm (0.0197 in.)

◎ 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 19 liters (5.02 gal.) Low level 15 liters (3.96 gal.)
○ Angularity limit	Front down 25 deg. Front up 35 deg. Side to side 35 deg.
○ Lub. Oil	Refer to Operation Manual

◎ VALVE TIMING

	Opening	Close
○ Intake valve	22.5 deg. BTDC	34.5 deg. ABDC
○ Exhaust valve	67.5 deg. BBDC	25.5 deg. ATDC

◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity	12 liters (3.17 gal.)

◎ ENGINEERING DATA

○ Water flow	200 liters/min @1,500 rpm
○ Heat rejection to coolant	20.9 kcal/sec @1,500 rpm

(engine only)

○ Pressure system	Max. 0.5 kg/cm2 (7.11 psi)
○ Water pump	Centrifugal type driven by belt
○ Water pump Capacity	200 liters (52.8 gal.)/min at 1,500 rpm (engine)
○ Thermostat	Wax–pellet type Opening temp. 82°C Full open temp. 93°C
○ Cooling fan	Blower type, plastic 762 mm diameter, 10 blades
○ Cooling air flow	6.23 m^3 /s

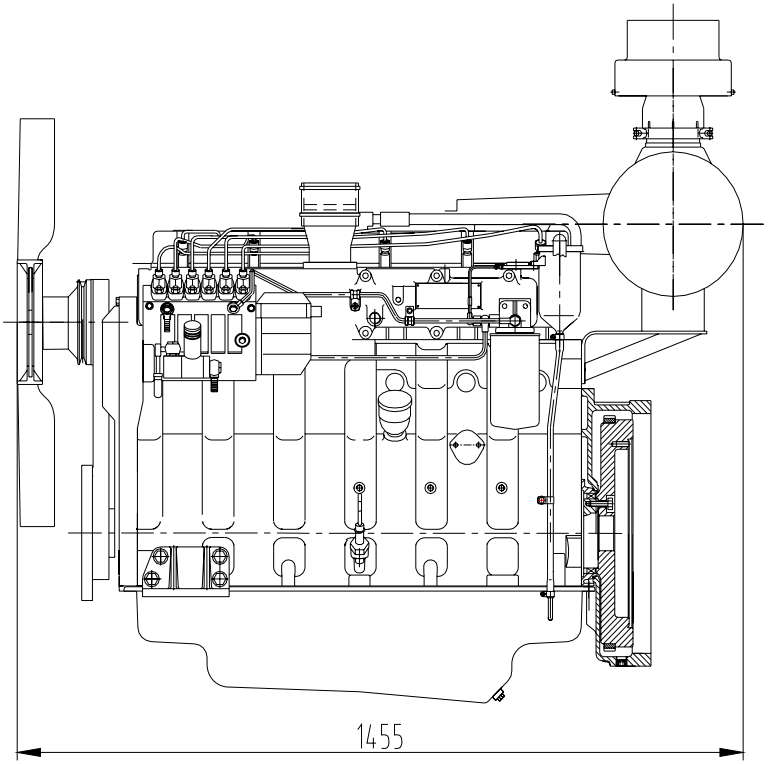
○ Heat rejection to CAC	13.1 kcal/sec @1,500 rpm
○ Engine waste heat	6.5 kcal/sec @1,500 rpm
○ Air flow	16.4 m3/min @1,500 rpm
○ Exhaust gas flow	35.9 m3/min @1,500 rpm
○ Exhaust gas temp.	600 °C @1,500 rpm
○ Max. permissible restrictions	
Intake system	3 kPa initial 6 kPa final
Exhaust system	6 kPa max.
○ Max. permissible altitude	2,000 m
○ Fan power	8 kW

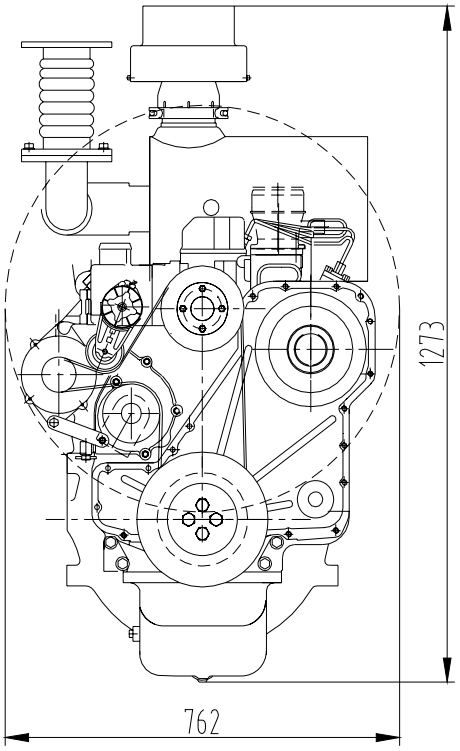
◎ ELECTRICAL SYSTEM

○ Charging generator	28V×55A
○ Voltage regulator	Built-in type IC regulator
○ Starting motor	24V×7.5kW
○ Battery Voltage	24V
○ Battery Capacity	180 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/cm2 × 14.2233	kW = 0.2388 kcal/s
in^3 = lit. × 61.02	lb/PS.h = g/kW.h × 0.00162
hp = PS × 0.98635	cfm = m3/min × 35.336
lb = kg × 2.20462	





	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)			
Engine speed	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	45	94	≤7	3	25	52	≤7	3