



# SC13G420D2

## ◎ POWER RATING

Engine Speed	Type of	Engine Power	
rpm	Operation	kW	Ps
1500	Prime Power	280	381
	Standby Power	308	419

-. 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	SC13G420D2
○ 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	135(5.32) × 150(5.9) mm(in.)
○ Displacement	12,88(786) lit.(in <sup>3</sup> )
○ Compression ratio	16 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	15° BTDC
○ Dry weight	Approx. 1296kg (2857.2 lb)
○ Dimension (L×W×H)	1704×1063×1540 mm (67.1×41.9×60.7 in.)
○ Rotation	Counter clockwise viewed from Flywheel
○ Fly wheel housing	SAE NO.1
○ Fly wheel	SAE NO.14

## ◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	15.8
50%	31.6
75%	47.1
100%	65.2
110%	72.8

## ◎ FUEL SYSTEM

○ Injection pump	Yijie in-line "P" type
○ Governor	Electric type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type
○ Opening pressure	240kg/cm <sup>2</sup> (3414 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 0.325mm (0.0128 in.) Exhaust 0.375mm (0.0148 in.)

## ◎ VALVE TIMING

	Opening	Close
○ Intake valve	20 deg. BTDC	48 deg. ABDC
○ Exhaust valve	48 deg. BBDC	20 deg. ATDC

## ◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity	25.5 liters ( 6.73 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 41 liters ( 10.82 gal.) Low level 33 liters ( 8.71 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	450 liters/min @ 1,500 rpm
○ Heat rejection to coolant	32.5 kcal/sec @ 1,500 rpm

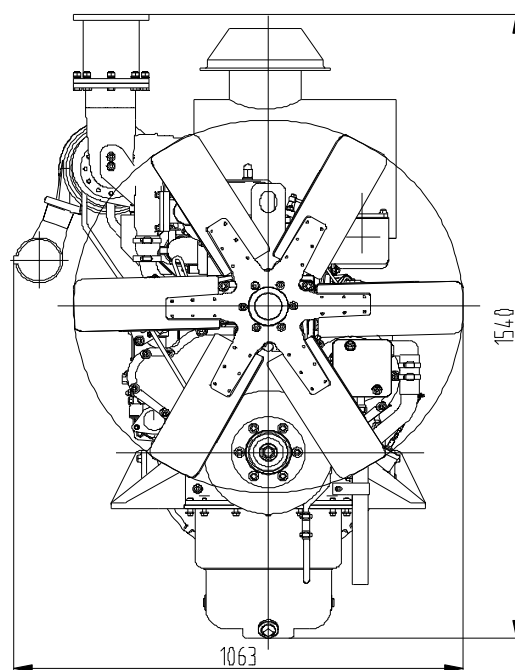
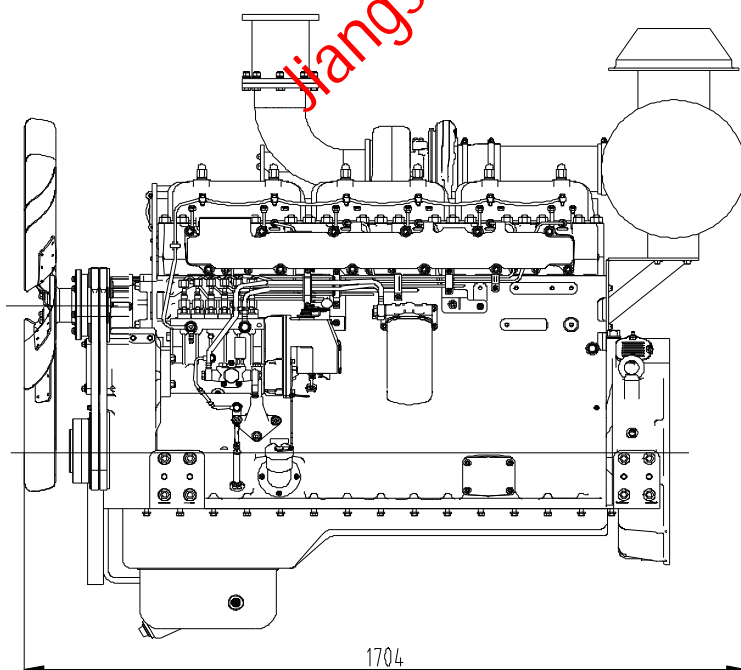
(engine only)		○ Heat rejection to CAC	18.7 kcal/sec @1,500 rpm
○ Pressure system	Max. 0.5 kg/cm <sup>2</sup> ( 7.11 psi)	○ Air flow	17.8 m <sup>3</sup> /min @1,500 rpm
○ Water pump	Centrifugal type driven by belt	○ Exhaust gas flow	44.2 m <sup>3</sup> /min @1,500 rpm
○ Water pump Capacity	450 liters ( 118.8 gal.)/min at 1,500 rpm (engine)	○ Exhaust gas temp.	600 °C @1,500 rpm
○ Thermostat	Wax–pellet type Opening temp. 77°C Full open temp. 90°C	○ Max. permissible restrictions	
○ Cooling fan	Blower type,iron 920 mm diameter, 6 blades	Intake system	3 kPa initial 6 kPa final
		Exhaust system	6 kPa max.
		○ Max. permissible altitude	2,000 m

## ◎ 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/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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