



# SC27G830D2

## ◎ POWER RATING

Engine Speed	Type of	Engine Power	
rpm	Operation	kW	Ps
1500	Prime Power	565	755
	Standby Power	610	830

-. 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	SC27G830D2
○ Engine Type	V-type, 4 strokes, water-cooled
	Turbo charged
	air-to-air intercooled
○ Combustion type	Direct injection
○ Cylinder Type	Wet liner
○ Number of cylinders	12
○ Bore × stroke	135(5.32) × 155(6.1) mm(in.)
○ Displacement	26.6(1623) lit.(in3)
○ Compression ratio	16 : 1
○ Firing order	1-12-5-8-3-10-6-7-2-11-4-9
○ Injection timing	13.5 °BTDC
○ Dry weight	Approx. 2080kg (4585 lb)
○ Dimension	1930×1686×1872mm
(L×W×H)	(76×66.4×75.8 in.)
○ Rotation	Counter clockwise viewed from
	Flywheel
○ Fly wheel housing	SAE NO.0
○ Fly wheel	SAE NO.18

## ◎ FUEL CONSUMPTION

○ Power	lit/hr
25%	42.2
50%	74.1
75%	106.7
100%	141.0
110%	152.7

## ◎ 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 lash 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	48 liters ( 12.7 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 65 liters ( 17.16 gal.)
	Low level 55 liters ( 14.52 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	740 liters/min @1,500 rpm
○ Heat rejection to coolant	55.8 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 740 liters ( 195.36 gal.)/min at 1,500 rpm (engine)
- Thermostat Wax–pellet type  
Opening temp. 77 °C  
Full open temp. 90 °C
- Cooling fan Blower type,iron  
1220 mm diameter, 6 blades
- Cooling air flow 17.50 m<sup>3</sup> /s

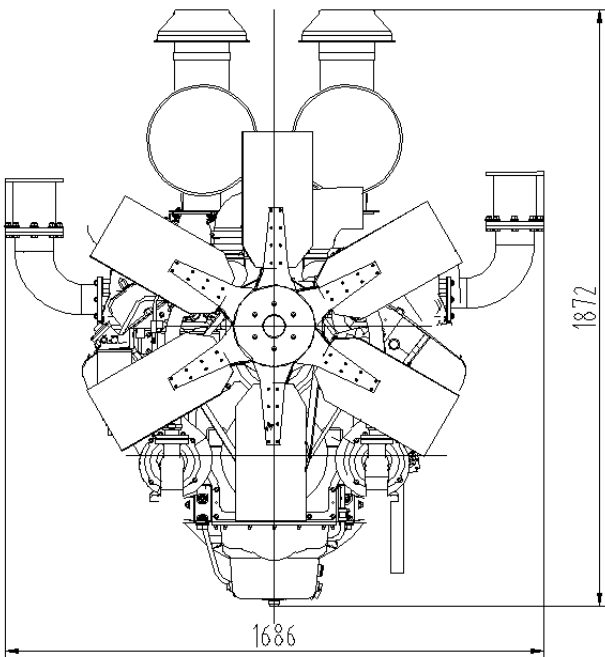
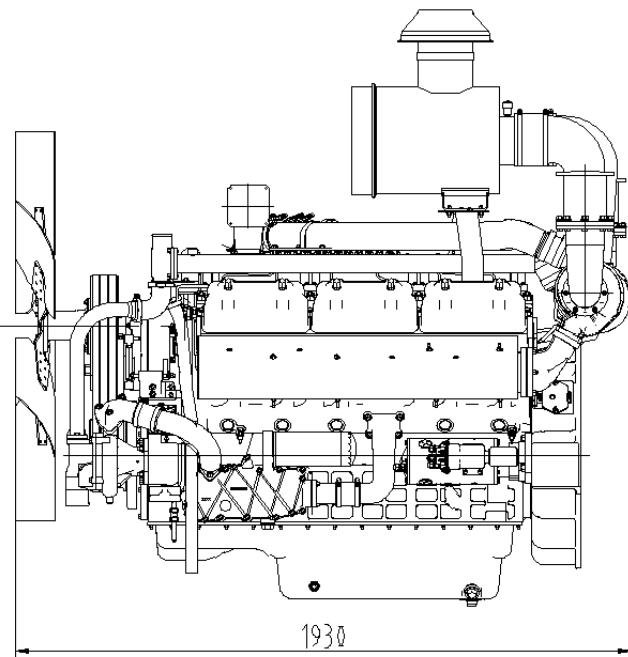
◎ **ELECTRICAL SYSTEM**

- Charging generator 28V×55A
- Voltage regulator Built-in type IC regulator
- Starting motor 24V×11kW
- Battery Voltage 24V
- Battery Capacity 200 AH

- Heat rejection to CAC 34.9 kcal/sec @1,500 rpm
- Engine waste heat 17.4 kcal/sec @1,500 rpm
- Air flow 39 m3/min @1,500 rpm
- Exhaust gas flow 99.5 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 25 kW

◆ **CONVERSION TABLE**

- in. = mm × 0.0394
- PS = kW × 1.3596
- psi = kg/cm2 × 14.2233
- in<sup>3</sup> = lit. × 61.02
- hp = PS × 0.98635
- lb = kg × 2.20462
- lb/ft = N.m × 0.737
- U.S. gal = lit. × 0.264
- kW = 0.2388 kcal/s
- lb/PS.h = g/kW.h × 0.00162
- cfm = m3/min × 35.336



	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	50	282	≤7	3	35	198	≤7	3