6DTAA8.9-G31

◎ **Power**

Engine Speed	Type of	Engine Power	Generator Power	
r/min	Operation	kW	kW	kVA
1500	Prime Power	185	160	200
	Standby Power	204	180	225
1800	Prime Power	205	180	225
	Standby Power	226	200	250

-. The engine performance is as per GB/T2820

-. Ratings are based on GB/T1147.1.

→**Prime Power**：--- There is no time limit in the case of variable load operation. In any 250hours of continuous operation period, the variable load of average work load less than 70%of the prime power. The operation time in the situation of 100%prime power no more than 500 hours. Permit 10%overload running1hours in any 12 hours of continuous operation period. The overload 10% power running time of every year no more than 25 hours..

→**Standby Power**：The annual total standby power load should be less than 80%and the average running time shall be less than200 hours. Among them the standby power point should be no more than 25 hours a year.。

◎ SPECIFICATIONS

○ Engine Model	6DTAA8.9-G31
○ Engine Type	In-line,4strokes,water-cooled, Turbo charged with aftercooler
○ Combustion type	Direct injection
○ Cylinder Type	Wet liner
○ Number of cylinders	6
○ Bore ×stroke	114×144mm
○ Displacement	8.82 L
○ Compression ratio	16.5 : 1
○ Firing order	1-5-3-6-2-4
○ Injection timing	Electronic control
○ Dry weight	Approx. 900kg
○ Dimension (L×W×H)	1493×805×1323 mm
○ Rotation	SAE NO.2
○ Fly wheel housing	SAE NO.11.5(tooth number of gear:125)

◎ FUEL CONSUMPTION

○ Power	L/h（1500r/min）	L/h（1800r/min）
25%	10.8	12.0
50%	21.6	24.1
75%	32.2	35.8
100%	43.1	47.9
110%	48.3	53.6

◎ FUEL SYSTEM

○ Injection pump	DENSO
○ Governor	DENSO
○ Feed pump	DENSO
○ Injection nozzle	Multi hole type
○ Opening pressure	180MPa
○ Fuel filter	Full flow, cartridge type
○ Used fuel	Diesel fuel oil

◎ MECHANISM

○ Type	Overhead valve
○ Number of valve	Two valve
○ Valve lashes at cold	Intake 0.30mm Exhaust 0.50mm

◎ 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 25liters Low level 22liters
○ 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	29.5° BTDC	42.5° ABDC
○ Exhaust valve	69.5° BBDC	34.5° ATDC

◎ COOLING SYSTEM

○ Cooling method	Fresh water forced circulation
○ Water capacity (engine only)	12 liters
○ Lid Min. pressure	70kPa
○ Water pump	Centrifugal type driven by belt
○ Water pump Capacity	200L/min （1500r/min）
	240L/min （1800r/min）
○ Thermostat	Wax–pellet type
	Opening temp. 82℃
	Full open temp. 93℃
○ Cooling fan	Blower type, plastic
	762 mm diameter, 10blades
	Power consumption 6kw
○ Cooling air flow	6.2m³ /s

◎ 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

◎ ENGINEERING DATA

○ Heat rejection to coolant	18.6 kcal/sec（1500r/min）
	20.6 kcal/sec（1800r/min）
○ Heat rejection to intercooler	11.6 m3/min （1500r/min）
	12.9 m3/min （1800r/min）
○ Air flow	16.4m3/min （1500r/min）
	19.8m3/min（1800r/min）
○ Exhaust gas flow	28.3m3/min（1500r/min）
	39.5m3/min（1800r/min）
○ Exhaust gas temp.	600 ℃
○ Max. permissible restrictions	
Intake system	3 kPa initial
	6 kPa final (need charge filter element)
Exhaust system	6 kPa
○ Max. permissible altitude	2000 m