4Z3.2-G21

◎ **Power**

Engine Speed	Type of Operation	Engine Power	Generator Power	
rpm		kW	kW	kVA
1500	Prime Power	32	25	31.3
	Standby Power	35	27.5	34.4
1800	Prime Power	38	32	40
	Standby Power	42	35	44

-. The engine performance is as per GB/T2820

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

→**Prime Power**：Power output available with varying load for unlimited time. The permissible average power output over 24 hours of operation shall not exceed 80% of the prime power rating.

→**Standby Power**：Power output available in the duration of an emergency outage or under test conditions，Maximum operation time is 200 hours per year. The permissible average power output over 24 hours of operation shall not exceed 80% of the standby power rating.

Overload operation is not allowed

◎ SPECIFICATIONS

○ Engine Model	4Z3.2-G21
○ Engine Type	In-line,4strokes, water-cooled
○ Combustion type	Direct injection
○ Cylinder Type	Wet liner
○ Number of cylinders	4
○ Bore × stroke	98× 105 mm
○ Displacement	3.2L
○ Compression ratio	18 : 1
○ Firing order	1-3-4-2
○ Injection timing	14-17°
○ Dry weight	270 kg
○ Dry weight (L×W×H)	916×551×733mm

◎ FUEL CONSUMPTION

○ Power	L/h （1500r/min）	L/h（1800r/min）
25%	2.2	2.9
50%	3.65	4.25
75%	5.14	5.84
100%	7.11	7.71
110%	7.6	8.3

◎ FUEL SYSTEM

○ Injection pump	KangDa
○ Governor	Electric type
○ Feed pump	Mechanical type
○ Injection nozzle	Multi hole type

○ Rotation	Counter clockwise viewed from Flywheel
○ Fly wheel housing	SAE 4#
○ Fly wheel	SAE 7.5#（tooth number 120）

◎ MECHANISM

○ Type	Overhead valve
○ Number of valve	Intake 1, exhaust 1 per cylinder
○ Valve lashes at cold	Intake 0.40mm
	Exhaust 0.65mm

◎ VALVE TIMING

	Opening	Close
○ Intake valve	15° BTDC	30° ABDC
○ Exhaust valve	45° BBDC	13° ATDC

◎ COOLING SYSTEM

○ Water capacity (engine only)	3.2L
○ Lid Min. pressure	70kPa
○ Water pump	Centrifugal type driven by belt
○ Water pump Capacity	25L/min （1500r/min）
	28L/min （1800r/min）
○ Thermostat	Wax–pellet type
	Opening temp. 72°C
	Full open temp. 82°C
○ Cooling fan	Blower type, plastic
	450 mm diameter, 7 blades
	Power concumption 3.5 kW
○ Opening pressure	24MPa
○ Fuel filter	Full flow, cartridge type
○ Used fuel	Diesel fuel oil

◎ LUBRICATION SYSTEM

○ Lub. Method	Fully forced pressure feed type
○ Oil pump	Gear type driven by camshaft
○ Oil filter	Full flow, cartridge type
○ Oil pan capacity	High level 10 L
	Low level 8 L
○ Angularity limit	Front down 25°
	Front up 35°
	Side to side 35°
○ Lub. Oil	Refer to Operation Manual

◎ ENGINEERING DATA

○ Heat rejection to coolant	15.5 kcal/sec（1500r/min）
	18.6 kcal/sec（1800r/min）
○ Heat rejection to intercooler	
○ Air flow	3.34m3/min （1500r/min）
	4.01m3/min（1800r/min）
○ Exhaust gas flow	10.6m3/min（1500r/min）
	10.6m3/min（1800r/min）
○ Exhaust gas temp.	550 °C
○ Max. permissible restrictions	3 kPa initial
Intake system	4 kPa final
Exhaust system	10 kPa max

○ The maximum temp. of coolant in prime/ Standby power 104/100℃

○ intercooler permissible restrictions

◎ ELECTRICAL SYSTEM

○ Charging generator 12V×70A

○ Voltage regulator Built-in type IC regulator

○ Starting motor 12V×3.8kW

○ Battery Voltage 12V

○ Battery Capacity 110~120 AH