4ZTAA4.1-G22

◎ **Power**

Engine Speed	Type of Operation	Engine Power	Generator Power	
rpm		kW	kW	kVA
1500	Prime Power	74	60	75
	Standby Power	81	66	82.5
1800	Prime Power	80	65	81
	Standby Power	88	71.5	89

-. 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**		◎ **FUEL CONSUMPTION**	
○ Engine Model	4ZTAA4.1-G22	○ Power L/h（1500r/min）	L/h（1800r/min）
○ Engine Type	In-line,4strokes, water-cooled	25% 5.5	6.1
	Turbo charged inter-cooled	50% 10	10.9
○ Combustion type	Direct injection	75% 14.6	16
○ Cylinder Type	Wet liner	100% 18.7	20.5
○ Number of cylinders	4	110% 20.4	22.4
○ Bore × stroke	105× 118 mm		
○ Displacement	4.1L		
○ Compression ratio	18 : 1		
○ Firing order	1-3-4-2	◎ **FUEL SYSTEM**	
○ Injection timing	14-17°	○ Injection pump	KangDa
○ Dry weight	365 kg	○ Governor	Electric type
○ Dimensions	927×627×959mm	○ Feed pump	Mechanical type
(L×W×H)		○ Injection nozzle	Multi hole type

○ Rotation	Counter clockwise viewed from Flywheel	○ Opening pressure	24MPa
○ Fly wheel housing	SAE 3#	○ Fuel filter	Full flow, cartridge type
○ Fly wheel	SAE 11.5#	○ Used fuel	Diesel fuel oil
◎ **MECHANISM**		◎ **LUBRICATION SYSTEM**	
○ Type	Overhead valve	○ Lub. Method	Fully forced pressure feed type
○ Number of valve	Intake 1, exhaust 1 per cylinder	○ Oil pump	Gear type driven by camshaft
○ Valve lashes at cold	Intake 0.35mm	○ Oil filter	Full flow, cartridge type
	Exhaust 0.45mm	○ Oil pan capacity	High level 7.5 L
			Low level 6.5 L
◎ **VALVE TIMING**		○ Angularity limit	Front down 25°
	Opening Close		Front up 35°
○ Intake valve	18° BTDC 54° ABDC		Side to side 35°
○ Exhaust valve	62° BBDC 18° ATDC	○ Lub. Oil	Refer to Operation Manual
◎ **COOLING SYSTEM**		◎ **ENGINEERING DATA**	
○ Water capacity	8.54L	○ Heat rejection to coolant	8.0 kcal/sec（1500r/min）
(engine only)			8.6 kcal/sec（1800r/min）
○ Lid Min. pressure	70kPa	○ Heat rejection to intercooler	5 kcal/sec （1500r/min）
○ Water pump	Centrifugal type driven by belt		5.4 kcal/sec （1800r/min）
○ Water pump Capacity		○ Air flow	7.7m3/min （1500r/min）
			9.1m3/min（1800r/min）
○ Thermostat	Wax–pellet type	○ Exhaust gas flow	20.8m3/min（1500r/min）
	Opening temp. 72°C		24.6m3/min（1800r/min）
	Full open temp. 82°C	○ Exhaust gas temp.	550 °C
○ Cooling fan	Blower type, plastic	○ Max. permissible restrictions	3 kPa initial

	490 mm diameter, 7 blades	Intake system	4 kPa final
	Power concumption 3kw/1500r/min 3.5kw/1800r/min	Exhaust system	10 kPa max
○ The maximum temp. of coolant in prime/ Standby power	104/100℃	○ intercooler permissible restrictions	10 kPa
◎ **ELECTRICAL SYSTEM**			
○ Charging generator	14V×35A		
○ Voltage regulator	Built-in type IC regulator		
○ Starting motor	12V×3.8kW		
○ Battery Voltage	12V		
○ Battery Capacity	110~120 AH		