

Y4102ZLD ENGINE TECHNICAL DATA SHEET

1. Engine Ratings for Generator application		Y4102ZLD	
Engine Rated Speed	rpm	1500	1800
Generator set Frequency	Hz	50	60
Engine Standby Power (LTP)	kW	50,4	55,6
Engine Prime Power (PRP)	kW	48	53
Engine Continuous Power (COP)	kW	48	53
Cooling Fan Power Consumption (kW)	kW	2	2,5
Engine Net Standby Output (LTP)	kW	47,9	52,7
Engine Net Prime Output (PRP)	kW	45,7	50,2
Engine Net Continuous Output (COP)	kW	45,7	50,2
2. General Specification			
Length	mm	892	
Width	mm	618	
Height	mm	740	
Engine Dry Weight w/o Cooling System	kg	340	
Aspiration Type		Turbocharged	
Injection Type		Direct	
Configuration		Vertical	
No. of Cylinders		4	
Displacement	liters	3,875	
Bore	mm	102	
Stroke	mm	118	
Compression Ratio		18	
Piston Speed	m/s	5.9/7.08	
Rotation Direction (from flywheel)		Anti-clockwise	
Number of Flywheel Teeth		119	
Flywheel House Size		SAE3	
3. Lubrication System			
Lube Oil Specification		CF 15W-40	
Oil Capacity	liters	13	
Max. Permissible Oil Temperature	°C	130	
Low Oil Pressure Warning	kPa	100	
Low Oil Pressure Shutdown	kPa	80	
Oil consumption (as % of fuel consumption)		0,77%	
4. Cooling System			
Coolant Capacity for Engine	Liters	7,2	
Max. Permissible Temperature	°C	90	

Max. Coolant Warning Temperature	°C	95	
Max. Coolant Shutdown Temperature	°C	98	
Thermostat Open Temperature	°C	76	
Radiator Cooling Flow	m³/min	≥115	≥135
Flow of Coolant pump	m³/h	≥11.7	≥14.1
Heat dissipation (engine radiator)	kW	36	39,75
Heat dissipation (convection)	kW	30	33,13

5. Fuel System

Governor Type		Mechanical	
Fuel Consumption at 25% of generator set prime output	l/h	4,49	5,08
Fuel Consumption at 50% of generator set prime output	l/h	7,57	8,11
Fuel Consumption at 75% of generator set prime output	l/h	10,22	11,31
Fuel Consumption at 100% of generator set prime output	l/h	13,16	14,55
Lowest Fuel Consumption Ratio	g/kW.hr	230	230

6. Intake & Exhaust System (On Standby Output)

Combustion Air Consumption	m³/min	4,13	4,95
Max. Intake Restriction	kPa	4,9	
Max. Exhaust Temperature (Before Turbo)	°C	620	620
Max. Exhaust Temperature (After Turbo)	°C	550	550
Max. Exhaust Back Pressure	kPa	10	
Exhaust Gas Flow	m³/min	10,53	12,63
Exhaust Flange Diameter	mm	84	

7. Electrical System

Charging Alternator Voltage	V	14or28
Charging Alternator Capacity	A	53.6or26.8
Starting Voltage	V	12or24
Starting Motor Capacity	KW	4.5or5
Minimum Battery Capacity	Ah	120
Minimum Ambient Temperature for Unaided Cold Start	°C	-10

Note :

1. All engine parameters are in accordance with ISO3046, ISO8528
2. All engine parameters are based on 25°C / 100kPa environment condition
3. No power decrease with below 40°C environment temperature and 1500 meter altitude
4. More than 40°C and 1500m above sea level , decrease 0.5% per 1°C , and 4% per 300m.
5. At calorific value 42700 kJ/kg + 5%, density 0,835 kg/dm³ , temperature 280 K
6. Above data is only the testing data in our laboratory, it can't used to be the data on all contract