

YSD490D ENGINE TECHNICAL DATA SHEET

1. Engine Ratings for Generator application		YSD490D	
Engine Rated Speed	rpm	1500	1800
Generator set Frequency	Hz	50	60
Engine Prime Power (PRP)	kW	21	25
Engine Continuous Power (COP)	kW	21	25
Cooling Fan Power Consumption (kW)	kW	1,5	2
Engine Net Prime Output (PRP)	kW	19,2	22,7
Engine Net Continuous Output (COP)	kW	19,2	22,7
2. General Specification			
Length	mm	716	
Width	mm	530	
Height	mm	670	
Engine Dry Weight w/o Cooling System	kg	230	
Aspiration Type		Nature	
Injection Type		Direct	
Configuration		Vertical	
No. of Cylinders		4	
Displacement	liters	2,54	
Bore	mm	90	
Stroke	mm	100	
Compression Ratio		18	
Piston Speed	m/s	5.0/6.0	
Rotation Direction (from flywheel)		Anti-clockwise	
Number of Flywheel Teeth		119	
Flywheel House Size		SAE4	
3. Lubrication System			
Lube Oil Specification		CD 15W-40	
Oil Capacity	liters	8	
Max. Permissible Oil Temperature	°C	120	
Low Oil Pressure Warning	kPa	100	
Low Oil Pressure Shutdown	kPa	80	
Oil consumption (as % of fuel consumption)		0,75%	
4. Cooling System			
Coolant Capacity for Engine	Liters	5	
Max. Permissible Temperature	°C	90	
Max. Coolant Warning Temperature	°C	95	
Max. Coolant Shutdown Temperature	°C	98	

Thermostat Open Temperature	°C	72	
Radiator Cooling Flow	m ³ /min	≥62	≥73
Flow of Coolant pump	m ³ /h	≥9.98	≥11.98
Heat dissipation (engine radiator)	kW	15,75	18,75
Heat dissipation (convection)	kW	13,2	15,62

5. Fuel System

Governor Type		Mechanical	
Fuel Consumption at 25% of generator set prime output	l/h	1,87	2,14
Fuel Consumption at 50% of generator set prime output	l/h	3,34	3,89
Fuel Consumption at 75% of generator set prime output	l/h	4,66	5,43
Fuel Consumption at 100% of generator set prime output	l/h	5,96	6,35
Lowest Fuel Consumption Ratio	g/kW.hr	240	6,95

6. Intake & Exhaust System (On Standby Output)

Combustion Air Consumption	m ³ /min	1,42	1,71
Max. Intake Restriction	kPa	3,5	
Max. Exhaust Temperature (Before Turbo)	°C	/	/
Max. Exhaust Temperature (After Turbo)	°C	500	500
Max. Exhaust Back Pressure	kPa	6	
Exhaust Gas Flow	m ³ /min	3,68	4,42
Exhaust Flange Diameter	mm	74	

7. Electrical System

Charging Alternator Voltage	V	14
Charging Alternator Capacity	A	25
Starting Voltage	V	12
Starting Motor Capacity	KW	3,5
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