



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 Standby Power (LTP)	kW	23,1	27,5
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 Standby Output (LTP)	kW	21,1	24,9
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		CD40
Oil Capacity	liters	7,6
Max. Permissible Oil Temperature	°C	110
Low Oil Pressure Warning	kPa	100
Low Oil Pressure Shutdown	kPa	100
Oil consumption (as % of fuel consumption)		0,75%

4. Cooling System

Coolant Capacity for Engine	Liters	10,7	
Max. Permissible Temperature	°C	85	
Max. Coolant Warning Temperature	°C	85	
Max. Coolant Shutdown Temperature	°C	95	
Thermostat Open Temperature	°C	75	
Radiator Cooling Flow	m ³ /min		
Flow of Coolant pump	m ³ /h	≥270	≥270
Heat dissipation (engine radiator)	kW		
Heat dissipation (convection)	kW		

5. Fuel System

Governor Type		Mechanical	
Fuel Consumption at 25% of generator set prime output	l/h	3,1	3,10
Fuel Consumption at 50% of generator set prime output	l/h	4,71	4,71
Fuel Consumption at 75% of generator set prime output	l/h	5,64	5,62
Fuel Consumption at 100% of generator set prime output	l/h	6,36	6,76
Lowest Fuel Consumption Ratio	g/kW.hr	253	228

6. Intake & Exhaust System (On Standby Output)

Combustion Air Consumption	m ³ /min	1,38	1,48
Max. Intake Restriction	kPa	101	
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		
Exhaust Flange Diameter	mm	74	

7. Electrical System

Charging Alternator Voltage	V	12	
Charging Alternator Capacity	A		
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

This datasheet has been prepared by Gucbir Generator / Istanbul for Yang Dong engines.