



## Y490D ENGINE TECHNICAL DATA SHEET

1. Engine Ratings for Generator application		Y490D	
Engine Rated Speed	rpm	1500	1800
Generator set Frequency	Hz	50	60
<b>Engine Standby Power (LTP)</b>	kW	26,4	30,8
<b>Engine Prime Power (PRP)</b>	kW	24	28
<b>Engine Continuous Power (COP)</b>	kW	24	28
Cooling Fan Power Consumption (kW)	kW	1,5	2
Engine Net Standby Output (LTP)	kW	24,4	28,2
Engine Net Prime Output (PRP)	kW	22,2	25,7
Engine Net Continuous Output (COP)	kW	22,2	25,7
<b>2. General Specification</b>			
Length	mm	716	
Width	mm	530	
Height	mm	670	
Engine Dry Weight w/o Cooling System	kg	240	
Aspiration Type		Natural	
Injection Type		Direct	
Configuration		Vertical	
No. of Cylinders		4	
Displacement	liters	2,67	
Bore	mm	90	
Stroke	mm	105	
Compression Ratio		18	
Piston Speed	m/s	5.25/6.3	
Rotation Direction (from flywheel)		Anti-clockwise	
Number of Flywheel Teeth		119	
Flywheel House Size		SAE4	
<b>3. Lubrication System</b>			
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)		0,72%	

<b>4. Cooling System</b>			
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 <sup>3</sup> /min		
Flow of Coolant pump	m <sup>3</sup> /h	≥270	≥270
Heat dissipation (engine radiator)	kW		
Heat dissipation (convection)	kW		
<b>5. Fuel System</b>			
Governor Type		Mechanical	
Fuel Consumption at 25% of generator set prime output	l/h	3,27	3,29
Fuel Consumption at 50% of generator set prime output	l/h	4,81	4,87
Fuel Consumption at 75% of generator set prime output	l/h	5,77	5,8
Fuel Consumption at 100% of generator set prime output	l/h	6,43	6,89
Lowest Fuel Consumption Ratio	g/kW.hr	255	250
<b>6. Intake &amp; Exhaust System ( On Standby Output )</b>			
Combustion Air Consumption	m <sup>3</sup> /min	1,59	1,82
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 <sup>3</sup> /min		
Exhaust Flange Diameter	mm	74	
<b>7. Electrical System</b>			
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	
<b>Note :</b>			
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/dm <sup>3</sup> , 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.