

## Mahindra&Mahindra Ltd.

**Model : MP500**

**Frequency : 50 Hz**

**Diesel Generator**

Model	Engine	Alternator	Voltage	PH	Frequency	Prime Rating		Power factor
						KVA/kW	Amps	
LP500	2506C-E15TAG2	HCI544D1	415V	3	50 Hz	500 / 400	695	0.8

Rating	Prime Power – KW(KVA)		
	580 (725)		
Load	50%	75%	100%
Liters/ hr	53	76	100
g/Kwh	211	201	199

Engine	Prime Power Rating
Engine Manufacturer	Perkins UK
Engine Model	2506C-E15TAG2
Configuration	6, Vertical In-line
Aspiration	Turbo Charged and After Cooled
Gross Engine Power output, kWm / BHP	451 / 605
Net Engine power output, kWm / BHP	435 / 583
BMEP @ rated load, kPa	2405
Displacement, L	15.2
Bore , mm	137
Stoke, mm	171
Rated Speed, rpm	1500
Piston Speed, m/s	8
Compression Ratio	16 : 1
Lub oil capacity Max, L	53
Lub oil capacity Min, L	45
Governor Type	Electronics
Starting Voltage, V- DC	24

## Fuel System

Recommended fuel to conform to	BS2869 1998 Class A1, A2
Type of injection system	Direct injection
Fuel injection pump	Combined unit injector
Fuel injector	Combined unit injector
Delivery at 1500 rev/min, L/hr	413
Injector pressure, MPa	200
Fuel Lift pump pressure, kPa	550
Fuel lift pump maximum suction head, m	3
Fuel filter spacing, microns	10

## Air

Maximum air intake restriction of engine clean filter	3.7kPa
Maximum air intake restriction of engine , dirty filter	6.2kPa
Air filter type	Dry - paper
Combustion air flow, m <sup>3</sup> /min	35.8

## Exhaust

Maximum back pressure for total system	6.8kPa
Exhaust gas temperature, after turbo, °C	550
Exhaust gas flow maximum after turbo , m <sup>3</sup> /min	94

## Standard set –mounted radiator cooling

Ambient design, °C	50
Fan Load , KW	8.8
Coolant Capacity with radiator , L	58
Engine Coolant Flow, L/s	6.1
Cooling system air flow, m <sup>3</sup> /min	722

## Weights\*

	open
Unit wet weight kgs	5300

- Weight represent a set with standard feature

Dimension	Length	Width		Height
Standard canopy dimension	5500		2000	2235

## Test conditions

Air temperature	25 °C
Barometric pressure	100 kPa
Relative humidity	30%
Air inlet restriction at maximum power (nominal)	2.5 kPa
Exhaust back pressure (nominal)	3.0 kPa

## Alternator

Specification	500kVA - 3ph
Model	HCI544D1
Rated Voltage	415V
Type	4 pole
Exciter type	Brushless
Insulation	Class - H
Temperature rise	125 °C
Enclosure Protection	IP23
Bearing	Single
Voltage regulation	± 0.5%
Efficiency	94.7

Prime power is available for an unlimited number of annual operating hours in variable load applications, in accordance with IS 8528-

1. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO3046-1.

Standby Power Rating is applicable for supplying emergency power for the duration of utility power interruption. No Overload, utility parallel or negotiated outage operation capability is available at this rating.

In installations served by unreliable utility sources (where outage last longer or occur more frequently), where operation is likely to exceed 2000 hours per year, the prime power should be applied. All ratings are based on the following reference conditions: Ambient temperature -27°C (Altitude above sea Level-150metres) Relative humidity- 60%

Power rating as per Standard reference condition as per BS 5514/ ISO 3046 / ISO 8528

Reference condition 27 °C ambient Temp, 100KPA (750mm of Hg) Atmospheric Condition and 60% humidity – as per IS10002, ISO 3046

Fuel consumption of DG set is considering specific gravity of fuel as 0.8355 at NTP condition, Tolerance will be +5%