

# Generator JP500

## Description

### GENERATING SET MODEL (JP500)

Output Ratings	Prime	Standby
400-415 V, 3 ph, 50 Hz, 1500 rpm	500 KVA 400 KW	550 KVA 440 KW
480 V, 3 ph, 60 HZ, 1800 rpm	569 KVA 455 KW	624 KVA 500 KW
Rating at 0.8 Power Factor		

### GENERATING SET MODEL (JP500)

Engine Make	Perkins			
Engine Model	2506A-E15TAG4			
Governing Class	ISO 8528-5 G3			
Number of Cylinders	6			
Cylinder Arrangement	Vertical in line			
Bore and Stroke mm	137 x 171			
Displacement / Cubic Capacity litres	15.2			
Induction System	Turbocharged and air to air charge cooled			
Cycle	4 stroke			
System Combustion	Direct Injection			
Compression Ratio	16:1			
Rotation	Anti-clockwise, viewed on flywheel			
Cooling System	Water – cooled			
Frequency and Engine Speed	50Hz & 1500rpm 60HZ & 1800rpm			
	<b>Prime</b>	<b>Standby</b>	<b>Prime</b>	<b>Standby</b>
Gross Engine Power KW (hp)	451 (605)	495 (664)	458 (615)	514 (689)

Fuel Consumption @ 50% load L/hr	53		53	
@ 75% load L/hr	76		78	
@ 100% load L/hr	100	1111	102	116
Total Lubrication System Capacity litres	62	62	62	62
Total Coolant Capacity litres	58	58	58	58
Boost Pressure Ratio	3.40	3.60	3.00	3.25
Exhaust Temperature: °C	n/a	550	n/a	550
Radiator Cooling Air Flow (Min): m³/sec	11	11	13.7	13.7
Combustion Air Flow: m³/min	35.8	36.6	34.3	38
Exhaust Gas Flow: m³/min	94	98	96	105.3
Fuel Tank Capacity: litres	735	735	735	735

## DIMENSIONS AND WEIGHT

### Length cm Width cm Height cm Weight\* Kg (wet)

370      115      210      3797

## STANDARD SPECIFICATIONS

### 1 – ENGINE

Perkins four stroke heavy duty high-performance industrial type Diesel engine.

### 2 – ENGINE FILTRATION SYSTEM

- Cartridge type dry air filter
- Two Cartridge type fuel filter
- Full flow lube oil filter

All filters have replaceable elements

### 3 – COOLING RADIATOR

Radiator and cooling fan, complete with safety guards, designed to cool the engine at high ambient temperatures.

### 4 – EXHAUST SYSTEM

Heavy Duty Industrial Exhaust Silencer:  
Silencer noise reduction level: 15(dB)

Maximum Allowable Back Pressure: 6.8 (kPa)

## 5 – CIRCUIT BREAKER TYPE

ABB 3 pole ACB / MCCB (supplied disconnected and without cables)\*

### ALTERNATOR DATA

Make	Leroy Somer
Model	TAL 047D
No. of bearings	1
Insulation class	H
Total Harmonic Content	< 3.5% on load
Wires	6
Ingress Protection	IP23
Excitation System	SHUNT
Winding Pitch	2/3 (n° 6)
AYR Model	R150
Overspeed	2250 min <sup>-1</sup>
Voltage Regulation	± 1%
Short Circuit Capacity	–
PMG Excitation System Available as Optional	

### CONTROL PANEL

Make Deep Sea

Model DSE6110

The

DSE6110 is an Auto Start Control Module for single genset applications. It includes a backlit LCD display which clearly shows the status of the engine all the times. This module can either be programmed using the front panel or by using the DSE configuration suite PC software.

Metering and Alarm Indications:

- Generator frequency
- Underspeed, Overspeed
- Generator volts (L-L, L-N)

- Engine oil pressure
- Engine coolant temperature
- Fuel level (warning or shutdown) – optional
- Hours run counter
- Battery volts
- Fail to start/stop
- Emergency stop
- Failed to reach loading voltage/frequency
- Charge fail
- Loss of magnetic pick-up signal – optional
- Low DC voltage
- CAN diagnostics and CAN fail/error

## ALL INSPIRED DESIGN TO MEET YOUR NEEDS

### **RATINGS DEFINITION**

#### Prime Power

These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. 10% overload power is available for 1 hour in 12 hours continuous operation.

#### Standby Power

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power. No overload is permitted on these ratings.

### STANDARD REFERENCE CONDITIONS

Output ratings are presented at 25°C air inlet temperature, barometric pressure 100 kPa, relative humidity 30%. This generating set is designed to operate at high ambient temperatures (up to 55°C), humidity (up to 99%) and higher attitudes. De-rating may apply, please consult your dealer for specific site ratings.

### AVAILABLE OPTIONS AND ACCESSORIES

We offer a range of optional features and accessories to tailor our generating sets to meet your power needs.

#### OPTIONS

- \* A variety of generating set control and synchronizing panels
- \* Additional protection alarms and shutdowns
- \* Water fuel separator

- \* Water jacket heater
- \* Battery charger

#### ACCESSORIES

- \* Genuine spare parts
- \* Load banks
- \* Auxiliary fuel tanks
- \* Manual & automatic transfer switches

### STANDARD SPECIFICATIONS

#### 6. FUEL SYSTEM

On Generating Sets up to 700 KVA, the baseframe design is incorporated with an integral fuel tank with a capacity of approx. 8 hours running at Full Load. The tank is supplied complete with full cap breather, fuel feed and return lines to the Engine and drain plug.

#### 7. ALTERNATOR

##### 7.1 INSULATION SYSTEM

- The insulation system is Class H.
- All windings are impregnated in either a triple dip thermosetting liquid, oil and acid resisting polyester varnish or vacuum pressure impregnated with a special polyester resin.
- Heavy coat of antitracking varnish additional protection against moisture or condensation.

##### 7.2 AUTOMATIC VOLTAGE REGULATOR (AVR)

The fully sealed Automatic Voltage Regulator maintains the Voltage Regulation at 1% Nominal adjustment by means of a trim pot incorporated on the AVR.

##### 7.3 MOTOR STARTING

An overload capacity equivalent to 300% of the Full Load impedance at zero Power Factor can be sustained for 10 seconds, when PMG option is fitted.

#### 8. MOUNTING ARRANGEMENT

##### 8.1 BASE FRAME

The complete Generating Set is mounted as a whole on a heavy duty fabricated steel Baseframe.

##### 8.2 COUPLING

The Engine and Alternator are directly coupled by means of an SAE flange. The Engine flywheel is flexibly coupled to the Alternator rotor.

##### 8.3 ANTI-VIBRATION MOUNTING PADS

Anti-Vibration pads are affixed between the Engine/ Alternator feet and the Baseframe thus ensuring complete vibration isolation of the rotating assembly.

##### 8.4 SAFETY GUARDS

The Fan & Fan Drive along with the Battery Charging Alternator are Safety Guard protected for personnel protection.

#### 9. FACTORY TESTS

- \* The Generating set is load tested before dispatch

- \* All protective devices control functions and site load conditions are simulated, The generator and its systems are checked before dispatch.

#### 10. EQUIPMENT FINISHING

All mild steel components are fully degreased and painted with powder coated paint to ensure maximum scuff resistance and durability.

#### 11. DOCUMENTATIONS

Operation & Maintenance manual, Circuit wiring diagrams, and Commissioning / Fault Finding Instruction leaflets are accompanied with the Generator.

#### 12. QUALITY STANDARDS

The equipment meets the following standards: BS4999, BS5000, BS5514, IEC 60034, VDE0530, NEMA MG 1 22 and ISO 8528

#### 13. WARRANTY

All of the Generating Sets are covered under a warranty policy for a period of 12 months. Warranty of the equipment is in line with manufacturer's warranty terms & conditions.

In line with continuous product development, we reserve the right to change specifications without notice.