INTERNATIONAL MACHINERY & GENERATORS

Perkins 746KVA

GENERATING SET MODEL (JP12.5)

Output Ratings	Prime	Standby
380-415 V, 3 ph, 50 Hz, 1500 rpm	746 KVA	821 KVA
	596.8 KW	656.8 KW

Ratings at 0.8 Power Factor

ENGINE / TECHNICAL DATA

Engine Make	Perkins	
Engine Model	4006 - 23TAG2A	
Governing Type	Electronic	
Number of Cylinders	6	
Cylinder Arrangement	Vertical in line	
Bore and Stroke mm	112 x 149	
Displacement / Cubic Capacity litres	8.8	
Induction System	Turbocharged, air to air charge cooled	
Cycle	4 stroke	
Combustion System	Direct Injection	
Compression Ratio	16:1	
Rotation	Anti-clockwise, viewed on flywheel	
Cooling System	Water - cooled	
Frequency and Engine Speed	**50Hz & 1500rpm**	
	Prime	**Standby**
Gross Engine Power kW (hp)	658 (882)	721 (967)
Fuel Consumption @ 50% load L/hr	80	-
@ 75% load L/hr	115	-
@ 100% load L/hr	150	165
Total Lubrication System Capacity litres	113.4	113.4
Total Coolant Capacity (inc. radiator) litres	120	120
Boost Pressure Ratio	3.4	3.6
Exhaust Temperature: °C	430	430
Radiator Cooling Air Flow (Min): m^3/sec	14.5	14.5
Combustion Air Flow: m^3/min	64	71
Exhaust Gas Flow: m^3/min	180	180
Fuel Tank Capacity: litres	N/A	N/A

DIMENSIONS AND WEIGHT

Length cm	**Width** cm	**Height** cm	**Weight*** kg (wet)
449	171	216.5	6360

* For skid mounted genset with enclosure

wet weight = with lube oil and coolant

ALTERNATOR DATA (Leroy Somer OR Stamford)

Make	Leroy Somer
Model	TAL 049C
No. of bearings	1
Insulation class	H
Total Harmonic Content	<3.5%
Wires	6
Ingress Protection	IP23
Excitation System	SHUNT
Winding Pitch	2/3 (n° 6)
AVR Model	R150
Overspeed	2250 mn^{-1}
Voltage Regulation (steady)	± 1%
Short Circuit Capacity	-

AREP Excitation System Available as Optional.

CONTROL PANEL

Make	Deep Sea
Model	DSE7320

DSE7320 is an Auto Mains (Utility) Failure Control Module. It is operated via the START, STOP, AUTO and MANUAL soft touch membrane buttons on the front panel. DSE7320 can be controlled remotely using either a GSM Modem, Ethernet via DSE860/865 or via RS485.

Protection:

- Fail to start
- Low oil pressure
- High engine temperature
- U/O Voltage shutdown
- U/O Frequency shutdown
- Underspeed, Overspeed
- Loss of engine speed detection
- High/Low battery voltage
- kW overload
- Unbalanced load
- Low fuel alarm (if fitted)
- Battery charger failure (if fitted)

(Please refer to DSE7320 brochure for more details)

STANDARD SPECIFICATIONS

1. ENGINE

Perkins four stroke heavy duty high performance diesel engine industrial type.

2. ENGINE FILTRATION SYSTEM

- Two Catridge type dry air filter.
- Catridge type fuel filter.
- Three 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 (consult your dealer for de-ration factors)

4. EXHAUST SYSTEM

Heavy duty Industrial Exhaust Silencer

Silencer noise reduction level	14 (dB)
Maximum allowable back pressure	6.0 (kPa)

5. CIRCUIT BREAKER TYPE

ABB 3 pole MCCB or Schneider (4 pole is optional)

(contd.)

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 failure. 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 altitudes. De-ration may apply, please consult your dealer for specific site ratings.

Some of the specifications are not standard on all Genset models.

AVAILABLE OPTIONS & 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 seperator
- Water jacket heater
- Battery charger

ACCESSORIES

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

GET IN TOUCH

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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 fill 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 ±0.5%. 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 AREP 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 it's 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

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 manufacturers warranty terms & conditions.
(check warranty statement for more details, as it may vary for different countries)