TECHNICAL SPECIFICATION OF 250KVA SILENT DG SET.

LP-250

Powered by:

ASHOK LEYLAND AL8NTIDG6

250Kva at 50 Hz

GENERAL CHARACTERISTICS		
Service		***Power***
Rated Output	KVA	**250**
Active power Output at 0,8 PF	KW	**200**
Rated Speed	r.p.m.	1500
Standard Voltage	V	415

Performance data refer to Standard Reference Conditions of ISO 8528/ISO 3046/BS 5514, NTP Conditions

PRIME MOVER PERFORMANCE		1500 r.p.m.
Service		***Power*** [2]
Rated Power		303 HP
Gross Power		314 HP
Manufacturer		**Ashok Leyland**
Engine Model		**AL8NTIDG6**
Cyl. No.		6 – in line
Bore/Stroke:	Mm	112 x 135
Displacement		7.98 Ltrs
Compression ration		16.5 : 1
Working Principal		4 Stroke.
Injection		Direct
4 stroke Diesel Engine – Aspiration system		TURBOCHARGED AFTER COOLED
Fuel Consumption @ 75% Load		41.15 Ltrs / Hr.
Governor		Electronic

1 *(1) **Net power at flywheel. Fan deducted**. The engine power output are data supplied by the manufacturer.*

2 *(2) **POWER** – Power available for variable load with an average load factor not exceeding 80% of the prime power rating in any 24 hour period. Overload of 10% permitted for 1 hour in every 12 hours operation. Continuous operation with variable load (100% overload capability) according to DIN ISO 3046*

BASIC EQUIPMENT

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Lube Oil System
Forced-feed lubrication system with gear pump
Cartridge filters
Regulator valves
Oil sump pump
Low oil pressure switch for automatic shutdown

Fuel System
Injection Pump
Cartridge filters

Cooling System
Fresh water-cooling system in closed circuit
Coolant circulation pump
Thermostatic Valve
Front-type standard radiator
Engine-mounted fan drive (V-belt drive)
Water temperature switch for automatic shut-down.

Suction System
Suction system with dry air filters
Turbocharger
Collector on the cylinders

Exhaust System
Residential Exhaust silencer …….. 30/35 dB(A) (soundproof version)
Flexible pipe

Electric System
2 x 12 Volt battery operated electric starting system

SYNCHRONOUS GENERATOR*		
Nominal Power	KVA	250
Brand		**Leroy Somer or Equivalent**
Poles	N°	4
Winding connections (standard)		Star with neutral
Insulation	class	H
Enclosure (according to IEC-34-5)		IP23
Exciter system		Brushless exciter design with solid state
Voltage regulator		Automatic
Steady voltage precision		within ± 1,5%

MOUNTING ARRANGEMENT

The engine-alternator coupling is a monoblock type with direct flanging of the bell cover flywheel of the engine to the alternator frame. The alternator rotor is a single-bearing type and is coaxial and directly connected to the engine flywheel with flexible coupling of metallic plates.

The baseframe is made with steel sections welded and strengthened in order to make a strong support to the en-gine-alternator set. The engine-alternator assembly is frame mounted with the interposition of properly sized AVM pads in order to damp the vibrations transmitted to the frame. The frame structure allows quickly movements with elevating machines.

FUEL SYSTEM

Fuel tank integrated in the baseframe.
Autonomy: Minimun 8 hours operations.

CONTROL PANEL

MANUAL CONTROL PANEL

The steel sheet/CRCA cubicle type control panel is manufactured with 14/16 gauge CRCA sheet & powder coated for a weather proof and long lasting finish .The Panel is floor standing, dust & vermin proof under normal conditions. It will be completed with all internal wiring & will house the following:

1. MCB /MCCB of suitable rating with over load & short circuit protection.
2. Instruments displaying water temperature, lube oil pressure, engine RPM, battery charging.
3. Combined meter for indication of voltage, amps, & frequency.
4. Current transformers.
5. Indicating light for load on & set running wired with back up fuses.
6. Aliminium bus bars with supports of suitable rating with incoming & outgoing termination (above 40 KVA)

GENERATING SET PROTECTIONS

- Low oil pressure (shutdown)
- High engine temperature (shutdown)
- Emergency Stop

POWER SECTION

The power section is divided from the auxiliary circuit, according to the current norms so as to grant a major security in the functioning.
The power section includes:

- **3-poles MCCB** for the protection of the electric machine. (1 x genset) alongwith manual control panel.

SOUNDPROOF CANOPY according to CPCB NORMS 75 dB(A) at 1 Meters

Constructive Form is of modular type, made of steel sheet painted and lined inside by sound-insulating material in class “1” of reaction to fire, which assures a sound level of less than **75** dB(A) at 1 m. in open space complying with CPCB norms with set at full load.

Canopy is provided with suitable doors for the usual engine maintenance.
Silencer for air outlet is applied on canopy.
Canopy is fixed to the basement of genset in a single structure.

In the soundproof canopy a **SOUNDPROOF SILENCER** for exhaust gases is of RESIDENTIAL type. Sound deadening value from free exhaust to applied silencer is approx. 30 dB (A). The Canopy is designed in such a way that the difference between inside Canopy temperature at air cleaner and ambient temperature is maintained within **7 deg centigrade** as per IS 8528.

NORMS

The supply corresponds to the existing norms, in particular. The final user must grant the integration of the Generating Set in his own electric plant by respecting the national norms and the specifications according to the conditions and modes of installation.

DIMENSIONS & WEIGHT

Soundproof version in canopy:

Length	Mm	4700
Width	Mm	1600
Height	Mm	2000
Dry weight (with standard accessories)	*Kg*	3500

DOCUMENTATION

Full set of engine, alternator and Genset maintenance manuals as well as electric wiring diagrams. Testing certificate is available upon request.

FACTORY TEST

Before despatching, all gensets are tested with our load banks. The proper performance of the genset and its control and A measurement instruments is also checked.