

# DATA SHEET SPECIFICATION

## UPG-P1500

50 Hz



Genset Model

UPG-P1500

Engine Model

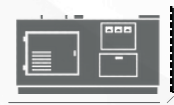
Perkins 4012-46TAG2A

Alternator Model

LSA50.2L8

Controller Model

DSE 7320



### Dimension

| Closed type(mm) |       | Open type(mm) |       |
|-----------------|-------|---------------|-------|
| Length          | 9000  | Length        | 4900  |
| Width           | 2440  | Width         | 1870  |
| Height          | 2790  | Height        | 2310  |
| Weight(kg)      | 14800 | Weight(kg)    | 10300 |

### POWERED BY



Three phase



water cooled



DIESEL



Battery Charging Alternator

### Ratings @ 0.8 PF

| VOLTAGE   | FREQUENCY | PRIME RATING |         | STAND-BY RATING |         |
|-----------|-----------|--------------|---------|-----------------|---------|
| 230-400 V | 50 Hz     | 1500 kva     | 1204 kw | 1656 kva        | 1325 kw |

### Prime

These ratings are applicable for supplying continuous electrical power (at variable load). There is no annual hours limitation and this genset can supply 10% overload for 1 hour in 12 hours

### Stand by

These ratings are applicable for supplying continuous electrical power(at variable load) in the case of emergency power supply. No overload is permitted on the ratings. The alternator on this model is peak continuous rates(as defined in ISO 8528-5)

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

### Genset Standard Specification

|                    |   |
|--------------------|---|
| Model              | UPG-P1500   |
| Base frame         | Heavy duty fabricated steel                       |
| Circuit breaker    | ABB 3 pole MCCB(4 pole is optional)               |
| Engine speed       | 1500 RPM(50HZ)                                    |
| Fuel tank capacity | Not available*                                    |
| Air inlet          | Mounted air filter                                |
| Induction system   | Turbo charged and air to charge cooled            |
| Combustion system  | Direct injection                                  |
| Fuel system        | Fuel injection pump                               |
| Fuel filter        | Split element                                     |
| cooling system     | Water-cooled                                      |
| Electric Equipment | 24 v starter motor and 24 v DC alternator and ECM |

\* Base tank not recommended for above 800 kva genset for sufficient cooling of diesel

All information in this document is substantially correct at time of printing and may be altered subsequently.

### Engine Data

|  |   |                 |
|--|---|-----------------|
| Model  | Perkins 4012-46TAG2A                    |                 |
| No of cylinder & arrangement                   | 12 - 60° Vee form                       |                 |
| Compression ratio                              | 13:1                                    |                 |
| Aspiration                                     | Turbo charged                           |                 |
| Bore and stroke(mm)                            | 160*190                                 |                 |
| Rotation                                       | Anti-clockwise viewed from flywheel end |                 |
| Governing class                                | ISO 8528-5 G3                           |                 |
| Radiator cooling air flow(m <sup>3</sup> /sec) | 32.4                                    |                 |
|  | <b>50 Hz</b>                            |                 |
|  | <b>Prime</b>                            | <b>Stand by</b> |
| Gross engine power kw(hp)                      | 1331 (1785)                             | 1459 (1957)     |
| at 50 % Load (l/hr)                            | 162                                     | -               |
| at 75% Load (l/hr)                             | 237                                     | -               |
| at 100% Load (l/hr)                            | 301                                     | 335             |
| Boost pressure ratio                           | 3.1                                     | 3.4             |
| Total lubrication system capacity(L)           | 177                                     | 177             |
| Total Coolant capacity(L)                      | 210                                     | 210             |

### Alternator Data

|  |                  |
|--|------------------|
| Make   | Leroy Somer      |
| Model  | LSA50.2L8        |
| Insulation class                             | H                |
| No of bearing                                | 1                |
| Total harmonic content                       | <3.5%            |
| Winding pitch                                | 2/3              |
| Ingress Protection                           | IP23             |
| Altitude                                     | ≤1000m           |
| Overspeed                                    | 2250 R.P.M       |
| AVR Model                                    | R450             |
| Excitation system                            | AREP             |
| Voltage regulation(steady)                   | ± 0.5%           |
| Short Circuit Capacity                       | 300% (3 In): 10s |
| PMG Excitation System Available as Optional. |                  |

Exhaust pipes with exhaust heat



Oil and coolant drain



Anti-vibration pads



Fuel Inlet/Outlet



Emergency stop button



## Enclosure

### SILENT FEATURES:

- Lockable external fuel filling point
- Internal /External fuel connection
- External oil drainage
- External coolant drainage
- Air inlet /outlet louvers
- Sound splitters at radiator side (only for 1000 KVA and above) (For 725-880 KVA vertical air discharge)
- Common earth connection
- 2 layers white color paint
- Cooling fan and battery charging alternator fully guarded
- Engine, radiator, fuel fill and battery can only be reached via lockable access doors

### HIGLY CORROSION RESISTANCE CONSTRUCTION

- Carbon steel locks and hinges
- Body made from galvanized steel components (2.0mm) treated with polyester powder coating

### TRANSPORTABILITY

- Tested and certified single point lifting facility
- Forklift legs available

### SOUND PRESSURE LEVEL

- 80 - 85 dBA at 3 meters (standard)

### SECURITY AND SAFETY:

- Control panel viewing window in a lockable access door
- Emergency stop push button (red) fixed externally for quick access
- Cooling fan and battery charging alternator fully guarded
- Fuel fill and battery can only be reached via lockable access doors
- Exhaust silencing system totally enclosed for operator safety

### Control Panel Data

|       |               |
|-------|---------------|
| Make  | Deep Sea      |
| Model | DSE 7320 MKII |



## Controller key features

The DSE 7320 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)
- Generator current
- 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

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## 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.

|                                      |       |
|--------------------------------------|-------|
| Max allowable pressure               | 50 Hz |
| Kpa                                  | 5     |
| Exhaust gas flow m <sup>3</sup> /min | 50 Hz |
| Prime                                | 235   |
| Standby                              | 235   |
| Exhaust gas temperature °C           | 50 Hz |
| Prime                                | 455   |
| Stand by                             | 455   |

## 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.

## 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.

## COUPLING

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

## 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.

## SAFETY GUARDS

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

## 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.

## DOCUMENTATIONS

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

## QUALITY STANDARDS

Following standards: ISO 8528/1, ISO 3046/1, BS 5514/1.

## 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.