

**Durability & low noise**

Designed for easiest, fastest and most economical installation. Well-balanced to produce smooth and vibration-free operation with low noise level.

To maintain a controlled working temperature in cylinders and combustion chambers, the engine is equipped with piston cooling. The engine is also fitted with replaceable cylinder liners and valve seats/guides to ensure maximum durability and service life of the engine.

**Low exhaust emission**

The state of the art, high-tech injection and charging system with low internal losses contributes to excellent combustion and low fuel consumption.

Generator performance class in accordance with ISO 8528

**Easy service & maintenance**

Easily accessible service and maintenance points contribute to the ease of service of the engine.

- **Electronic governing EMS**
- **CAN bus communication**
- **Compact design for the power class**
- **High power to weight ratio**
- **Emission compliant acc. to EU Stage II**
- **Noise optimized engine design**
- **RoHS2 Compliant**
- **Dual speed**

## DG Technical Specification

| <b>Technical Data Sheet of 250 KVA</b>                                |              |     |
|---|--------------|-----|
| <b>Voltage, Frequency &amp; Power</b>                                 |              |     |
| <b>Switchable to dual frequency with a selector switch (50/60 Hz)</b> |              |     |
| <b>Specification (50Hz)</b>   |              |     |
| Frequency   | Hz           | 50  |
| Voltage (3PH)   | V            | 415 |
| Power factor  | cos $\theta$ | 0.8 |
| Phase   |              | 3   |
| <b>Power rating</b>   |              |     |
| Emergency Standby Power ESP   | kVA          | 278 |
| Emergency Standby Power ESP   | KWM          | 242 |
| Prime power PRP   | kVA          | 253 |
| Prime power PRP   | KWM          | 220 |
| <b>Specification (60Hz)</b>   |              |     |
| Frequency   | Hz           | 60  |
| Voltage (3PH)   | V            | 415 |
| Power factor  | cos $\theta$ | 0.8 |
| Phase   |              | 3   |
| <b>Power rating</b>   |              |     |
| Emergency Standby Power ESP   | kVA          | 285 |
| Emergency Standby Power ESP   | KWM          | 248 |
| Prime power PRP   | kVA          | 259 |
| Prime power PRP   | KWM          | 259 |

Ratings definition (According to standard ISO8528 1:2005)

All performance and de ration parameters to be considered for load calculations accordingly.

**PRP - Prime Power:** It is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output over 24 h of operation shall not exceed 70 % of the prime power.

**ESP - Emergency Standby Power:** For supplying emergency power for the duration of a utility power failure, not to exceed 200 hrs/yr. Average load factor of 70% of the standby rating over 24 hour period.

| Engine specifications                            |        |   |
|--|--------|---|
| <b>Engine Brand</b>                              |        | Volvo   |
| Model  |        | TAD841GE  |
| Low exhaust emissions                            |        | Equal to EU stage II  |
| Engine cooling system                            |        | Ready mix or Volvo Penta coolant mixed with clean fresh water 40 / 60 |
| Configuration and no.of cylinders                |        | in line 6   |
| Displacement                                     | ltr    | 7.7   |
| Aspiration                                       |        | Turbocharged intercooled  |
| Speed governor                                   |        | Electronic  |
| Prime gross power PRP @1500                      | kWM    | 220   |
| Maximum gross power LTP ESP @1800                | kWM    | 248   |
| Oil capacity                                     | ltr    | 27  |
| Lube oil consumption PRP (max)                   | ltr/hr | 0.01  |
| Total Coolant capacity                           | ltr    | 41  |
| Fuel   |        | Diesel  |
| Specific fuel consumption 75%/100% PRP @1500 rpm | g/kWh  | 198   |
| Specific fuel consumption 75%/100% PRP @1800 rpm | g/kWh  | 203   |
| Starting system                                  |        | Electric  |
| Starting engine capability                       | KW     | 5.6   |
| Electric circuit                                 | V      | 24  |
| Alternator Specifications                        |        |   |
| Make   |        | Stamford  |
| Model  |        | UCDI274K  |
| Voltage  | V      | 415   |
| Frequency  | Hz     | 50-60   |
| Power factor                                     | cos θ  | 0.8   |
| Poles  |        | 4   |
| Type   |        | Brushless   |
| Voltage regulation (with 4% Engine Governing)    | %      | ±1  |
| Efficiency @ 75% load                            |        | 93.3  |
| Insulation System                                |        | Class H   |
| Protection                                       |        | IP 23   |



## DSE4520 MKII AUTO MAINS FAILURE CONTROL MODULE

Load unbalanced alarm, • Configurable for use as an auto start and AMF control module • J1939-75 support and CAN alarm ignore function • Alternator frequency & CAN speed sensing in one variant • Largest back-lit icon display in its class • Heated display option • Real time clock provides accurate event logging

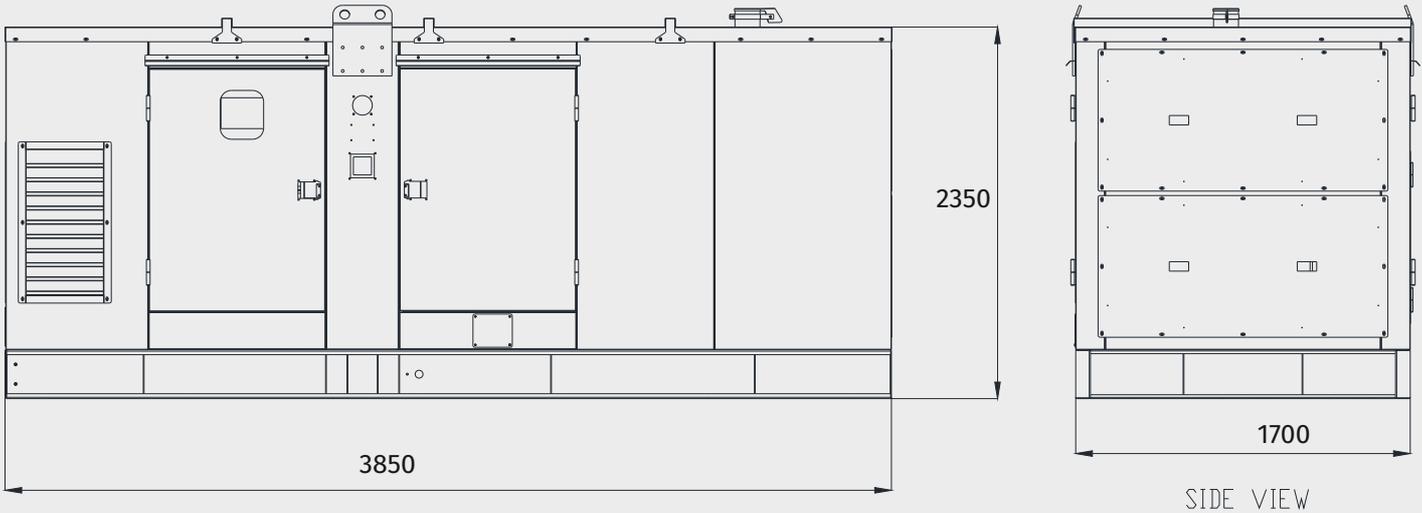
- Fully configurable via the fascia or PC using USB communication • Extremely efficient power save mode • 3 phase generator sensing • 3 phase mains (utility) sensing • Compatible with 600 V ph to ph nominal systems • Generator/load power monitoring (kW, kV A, kV Ar, pf) • Accumulated power monitoring (kW h, kVA h, kVAr h)
- Generator overload protection (kW) • Generator/load current monitoring and protection • Fuel and start outputs (configurable when using CAN) • 4 configurable DC outputs • 3 configurable analogue/digital inputs • 4 configurable digital inputs • Configurable staged loading outputs • 3 engine maintenance alarms • Engine speed protection • Engine hours counter • Engine pre-heat • Engine run-time scheduler • Engine idle control for starting & stopping • Tier 4 engine instrumentation screens
- Battery voltage monitoring • Start on low battery voltage • Configurable remote start input • 1 alternative configuration • Comprehensive warning, electrical trip or shutdown protection upon fault condition • LCD alarm indication • Event log (50) • Fuel solenoid pulling circuit • On-screen line diagram on/off functionality
- Configurable CAN instrumentation (10) • Water in fuel digital input • Tank bund alarm digital input • Generator at rest output • ECU periodic wake-up for information retrieval • Back-light power-save mode • Adjustable delay crank timer • Pre/post heat functionality • Overload protection • Mains/generator A/C system selection • Output timer for external audible alarm

## KEY BENEFITS

- Automatically transfers between mains (utility) and generator
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored simultaneously which are clearly displayed on the large back-lit icon display.
- The module can be configured to suit a wide range of applications
- Uses DSE Configuration Suite PC Software for simplified configuration
- Compatible with a wide range of CAN engines including Tier 4
- Licence-free PC software
- IP65 rating (with optional gasket) offers increased resistance to water ingress

|  |         |       |
|--|---------|-------|
| <b>Dimensional Data</b>                            |         |       |
| Length   | (L) mm  | 3850  |
| Width  | (W) mm  | 1700  |
| Height   | (H) mm  | 2350  |
| Dry weight   | kg      | 4000  |
| Fuel Tank capacity                                 | ltr     | 500   |
| Fuel Tank material                                 |         | metal |
| <b>Autonomy</b>                                    |         |       |
| Fuel consumption @ 75% PRP                         | G/KWH   | 204   |
| Fuel consumption @ 100% PRP                        | G/KWH   | 207   |
| Running time @ 75% PRP                             | Hr      | 12    |
| Running time @ 100% PRP                            | Hr      | 9     |
| <b>Installation Data</b>                           |         |       |
| Total air flow                                     | m3/min  | 500   |
| Exhaust gas flow                                   | m3/min  | 48    |
| Exhaust gas temperature                            | celcius | 478   |
| <b>Electrical Data</b>                             |         |       |
| Battery Capacity ( minimum )                       | Ah      | 2X150 |
| Max current (DG Set)                               | A       | 400   |
| <b>Scope of Supply and Supplements</b>             |         |       |
| Draw Out type Fuel Tank                            |         |       |
| Leak proof Tray                                    |         |       |
| Customized canopy colour (RAL - 9003 / Ral- 9005 ) |         |       |
| Fork Lift Pockets , Top Lifting Provision          |         |       |
| Special Baseframe design                           |         |       |
| Manual Oil Pump                                    |         |       |
| Battery Isolator Switch for Protection             |         |       |

## Dimensions & Weight



**Overall Size (L x W x H) : 3850x1700x2350 mm**

**Weight (Dry, Max) : 4000 Kg**

**NOTE:** Drawing provided is for reference only and should not be used for planning installation. Please contact the Company or latest updated details. All the data is as per respective manufacturers' specification. PERFECT reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

**Disclaimer:** Due to continues product improvements, specifications are subject to change without prior.



**ISO Certified**



**OHSAS Certified**

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