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 filters.
- Two Full flow lube oil filters. 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-rating factors).

4. EXHAUST SYSTEM
Heavy duty Industrial Exhaust Silencer

5. CIRCUIT BREAKER TYPE
ABB 3 pole MCCB. (4 pole is optional)

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.

- Generator frequency
- 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

(See DSE6110 brochure for more details)

ALTERNATOR DATA
Make: Leroy Somer
Model: LSA44.2VS45
No. of bearings: 1
Insulation class: H
Total Harmonic Content: <2%
Wires: 12
Ingress Protection: IP23
Excitation System: SHUNT
Winding Pitch: 2/3 (n° 6)
AVR Model: R250
Overspeed: 2250 mm⁻¹
Voltage Regulation (steady): ± 0.5%
Short Circuit Capacity: -
AREP & PMG Excitation System Available as Optional.

CONTROL PANEL
Make: Deep Sea
Model: DSE6110

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- 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

(CONTD.)

GENERATING SET (JP100)

<table>
<thead>
<tr>
<th>Output Ratings</th>
<th>Prime</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>380-415 V, 3 ph, 50 Hz, 1500 rpm</td>
<td>100 KVA</td>
<td>110 KVA</td>
</tr>
<tr>
<td>480 V, 3 ph, 60 Hz, 1800 rpm</td>
<td>90.4 KVA</td>
<td>100 KW</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE / TECHNICAL DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Make: Perkins</td>
</tr>
<tr>
<td>Engine Model: 1006TG2A</td>
</tr>
<tr>
<td>Governing Type: Mechanical</td>
</tr>
<tr>
<td>Number of Cylinders: 6</td>
</tr>
<tr>
<td>Cylinder Arrangement: Vertical in line</td>
</tr>
<tr>
<td>Bore and Stroke: 100 x 127</td>
</tr>
<tr>
<td>Displacement / Cubic Capacity: 5.99</td>
</tr>
<tr>
<td>Induction System: Turbocharged</td>
</tr>
<tr>
<td>Cycle: 4 stroke</td>
</tr>
<tr>
<td>Combustion System: Direct Injection</td>
</tr>
<tr>
<td>Compression Ratio: 16:1</td>
</tr>
<tr>
<td>Rotation: Anti-clockwise, viewed on flywheel</td>
</tr>
<tr>
<td>Cooling System: Water - cooled</td>
</tr>
<tr>
<td>Frequency and Engine Speed: 50Hz &amp; 1500rpm, 60Hz &amp; 1800rpm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENGINE / TECHNICAL DATA</th>
<th>Prime</th>
<th>Standby</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Power (kW): 95.5 (128)</td>
<td>105 (141)</td>
<td>113.5 (152.5)</td>
</tr>
<tr>
<td>Fuel Consumption @ 50% load (L/hr): 12.3</td>
<td>-</td>
<td>15.4</td>
</tr>
<tr>
<td>@ 75% load (L/hr): 17.9</td>
<td>-</td>
<td>21.7</td>
</tr>
<tr>
<td>@ 100% load (L/hr): 24.3</td>
<td>27.1</td>
<td>28.9</td>
</tr>
<tr>
<td>Total Lubrication System Capacity (litres): 16.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Coolant Capacity (inc. radiator) (litres): 27.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaust Temperature: °C: 550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiator Cooling Air Flow (Min): m³/sec: 1.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combustion Air Flow: m³/min: 5.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exhaust Gas Flow: m³/min: 16.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel Tank Capacity: litres: 164</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

DIMENSIONS AND WEIGHT
<table>
<thead>
<tr>
<th>Length cm</th>
<th>Width cm</th>
<th>Height cm</th>
<th>Weight* kg (wet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>230</td>
<td>73</td>
<td>140</td>
<td>1222</td>
</tr>
</tbody>
</table>

* For skid mounted genset without enclosure

湿重量 = 与润滑油和冷却剂
We offer a range of optional features and accessories to tailor our generating sets to meet your power needs.

### OPTIONS & ACCESSORIES

- A variety of generating set control and synchronizing panels
- Additional protection alarms and shutdowns
- Water fuel separator
- Water jacket heater
- Battery charger

### OPTIONS

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

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For further information on all of the standard and optional features accompanying this product please contact your local dealer or visit [www.powerandco.net](http://www.powerandco.net)

Location: 04 Spintex Road opposite Melcom Plus
Address: P.O. Box CT 10937 Cantonments-Accra.
Tel: 0302 812 718
Hotline: 0242383838 / 054100022
Email: info@powerandco.net
Web: [www.powerandco.net](http://www.powerandco.net)

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

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### 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.

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### AVAILABLE OPTIONS & ACCESSORIES

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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 or 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 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. **OPERATION & MAINTENANCE**
- 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:
BS5000, BS5514
SAE, BS5514
IEC 60034, VDE0500
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 manufacturers warranty terms & conditions.

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

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