### Diesel Product Line

**VD500-01**

**500 kWe**

#### Ratings

<table>
<thead>
<tr>
<th></th>
<th>208V</th>
<th>240V</th>
<th>480V</th>
<th>600V</th>
<th>4160V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PF</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Hz</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Generator Model</td>
<td>572RSL6429</td>
<td>572RSL6429</td>
<td>572RSL6429</td>
<td>572RSS4270</td>
<td>573FSM4354</td>
</tr>
<tr>
<td>Connection</td>
<td>12 LEAD WYE</td>
<td>12 LEAD DELTA</td>
<td>12 LEAD WYE</td>
<td>4 LEAD WYE</td>
<td>6 LEAD WYE</td>
</tr>
<tr>
<td>kWe</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>AMPS</td>
<td>1737</td>
<td>1505</td>
<td>753</td>
<td>602</td>
<td>87</td>
</tr>
<tr>
<td>Temp Rise</td>
<td>130˚C / 27˚C</td>
<td>130˚C / 27˚C</td>
<td>130˚C / 27˚C</td>
<td>130˚C / 27˚C</td>
<td>130˚C / 27˚C</td>
</tr>
</tbody>
</table>

#### Standard Equipment

**Engine**
- Radiator Cooled Unit Mounted (55˚C)
- Blower Fan & Fan Drive
- Starter & Alternator
- Oil Pump & Filter
- Oil Drain Extension w/Valve
- Governor - Electronic Isochronous
- 24V Battery System & Cables
- Air Cleaner (Dry Single Stage)
- Flexible Fuel Connector
- EPA Certified Tier 2

**Generator**
- Brushless Single Bearing
- Automatic Voltage Regulator
- ± .25% Voltage Regulation
- 4 Pole, Rotating Field
- 130˚C Standby Temperature Rise
- 100% of Rated Load - One Step
- 5% Maximum Harmonic Content
- NEMA MG 1, IEEE and ANSI Standards Compliance for Temperature Rise

**Additional**
- Single Source Supplier
- Microprocessor Based Digital Control
- Interface Connection Box
- Control Panel Mounted in NEMA 12 Enclosure
- Base - Structural Steel
- Main Line Circuit Breaker Mounted & Wired
- Critical Grade Silencer Mounted
- Battery Charger 24V 5 Amp
- Jacket Water Heater -20˚F 5000W 240V w/Isolation Valves
- Vibration Isolation Mounts
- Radiator Duct Flange (OPU Only)
- 2YR / 2000HR Standby Warranty
- Standard Colors - White / Gray

*Through 600 VAC
## Application Data

### Engine

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Volvo Penta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>TAD1641GE</td>
</tr>
<tr>
<td>Type</td>
<td>4-Cycle</td>
</tr>
<tr>
<td>Aspiration</td>
<td>Turbo Charged, CAC</td>
</tr>
<tr>
<td>Cylinder Arrangement</td>
<td>6 Cylinder Inline</td>
</tr>
<tr>
<td>Displacement - Cu. In. (lit):</td>
<td>984 (16.1)</td>
</tr>
<tr>
<td>Bore - in. (cm) x Stroke - in. (cm):</td>
<td>5.70 (14.4) x 6.50 (16.5)</td>
</tr>
<tr>
<td>Compression Ratio:</td>
<td>16.5:1</td>
</tr>
<tr>
<td>Rated RPM:</td>
<td>1800</td>
</tr>
<tr>
<td>Max HP Stby (kWm):</td>
<td>768 (573)</td>
</tr>
</tbody>
</table>

### Exhaust System

| Gas Temp. (Stack): °F (°C) | 893 (478) |
| Gas Volume at Stack Temp: CFM (m³/min) | 3,899 (110) |
| Maximum Allowable Exhaust Restriction: in. H₂O (kPa) | 40.2 (10.0) |

### Cooling System

| Ambient Capacity of Radiator: °F (°C) | 131 (55.0) |
| Maximum Allowable Static Pressure on Rad. Exhaust: in. H₂O (kPa) | 0.50 (0.12) |
| Water Pump Flow Rate: GPM (lit/min) | 122 (462) |
| Heat Rejection to Coolant: BTUM (kW) | 13,137 (230) |
| Heat Rejection to CAC: BTUM (kW) | 7,109 (125) |
| Heat Radiated to Ambient: BTUM (kW) | 3,700 (64.8) |

### Air Requirements

| Aspirating: CFM (m³/min) | 1,617 (45.8) |
| Air Flow Required for Rad. Cooled Unit: CFM (m³/min) | 21,120 (598) |
| Air Flow Required for Heat Exchanger/Rem. Rad. CFM (m³/min) | Consult Factory For Remote Cooled Applications |

### Fuel Consumption

| At 100% of Power Rating: gal/hr (lit/hr) | 36.8 (139.3) |
| At 75% of Power Rating: gal/hr (lit/hr) | 26.8 (101.4) |
| At 50% of Power Rating: gal/hr (lit/hr) | 18.0 (68.1) |

### Fluids Capacity

| Total Oil System: gal (lit) | 12.7 (48.1) |
| Engine Jacket Water Capacity: gal (lit) | 8.70 (33.0) |
| System Coolant Capacity: gal (lit) | 16.0 (60.6) |

**Derating Factors**
Rated Power is available up to 4,920 ft (1,500 m) at ambient temperatures to 122°F (50°C).
Consult factory for site conditions above these parameters.
Diesel Product Line

500 kWe

DGC-2020 Control Panel

Standard Features
- Digital Metering
- Engine Parameters
- Generator Protection Functions
- Engine Protection
- CAN Bus (J1939) ECU Communications
- Windows-Based Software
- Multilingual Capability
- Remote Communications to RDP-110 Remote Annunciator
- 16 Programmable Contact Inputs
- 15 Contact Outputs
- RS485 Communicator Interface
- UL Recognized, CSA Certified, CE Approved
- Event Recording
- IP 54 Front Panel Rating with Integrated Gasket
- NFPA 110 Level 1 Compatible

Weights / Dimensions / Sound Data

<table>
<thead>
<tr>
<th></th>
<th>L x W x H</th>
<th>Weight lbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPU</td>
<td>140 x 72 x 98 in</td>
<td>9,425</td>
</tr>
<tr>
<td>Level 1</td>
<td>180 x 72 x 103 in</td>
<td>11,075</td>
</tr>
<tr>
<td>Level 2</td>
<td>180 x 72 x 103 in</td>
<td>11,175</td>
</tr>
<tr>
<td>Level 3</td>
<td>225 x 72 x 103 in</td>
<td>11,575</td>
</tr>
</tbody>
</table>

Please allow 6-12 inches for height of exhaust stack.

No Load Full Load

<table>
<thead>
<tr>
<th></th>
<th>No Load</th>
<th>Full Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPU</td>
<td>91 dBA</td>
<td>94 dBA</td>
</tr>
<tr>
<td>Level 1</td>
<td>86 dBA</td>
<td>89 dBA</td>
</tr>
<tr>
<td>Level 2</td>
<td>81 dBA</td>
<td>83 dBA</td>
</tr>
<tr>
<td>Level 3</td>
<td>73 dBA</td>
<td>75 dBA</td>
</tr>
</tbody>
</table>

Drawings based on standard open power 480 volt standby generator. Lengths may vary with other voltages. Subject to change without notice.

Sound data as measured at 23 feet (7 meters) in accordance with ISO 8528-10 at standby rating.
Enclosures & Fuel Tanks

All enclosure models are 200 MPH wind rating certified in accordance with IBC2018 and ASCE/SEI 7-16 standards.

Level 2 & 3 enclosures include sound attenuation foam.
Level 3 enclosure includes frontal sound & exhaust hood.

*Enclosure height does not include exhaust stack.

All specification sheet dimensions are represented in inches.
All enclosures and fuel tanks are based on the standard standby unit configuration. Any deviation can change dimensions.
Materials and specifications subject to change without notice.

Distributed By:

Blue Star Power Systems, Inc.
2250 Carlson Drive
North Mankato, Minnesota 56003
Phone +1 507 345 1776
bluestarps.com
quote.bluestarps.com
sales@bluestarps.com