Output Ratings

<table>
<thead>
<tr>
<th>Generating Set Model</th>
<th>PG375B3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseload</td>
<td></td>
</tr>
<tr>
<td>380-415V, 50 Hz</td>
<td>375 kVA / 300 kW</td>
</tr>
</tbody>
</table>

Definitions

Baseload (Continuous) Rating
These ratings are applicable for supplying continuous electrical power for full load operations. There is no overload available. The ratings represent the engine performance in accordance with ISO 3046 at reference conditions equivalent to those specified in ISO 3046/1 based on the use of natural gas having a lower calorific value of 34.71MJ/m³.

Standard Reference Conditions
Note: Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m (328ft) A.S.L. 30% relative humidity. All engine performance data based on the above mentioned maximum continuous ratings. Fuel consumption data at full load using gas fuel with a lower calorific value of 34.71MJ/m³.

Ratings and Performance Data

<table>
<thead>
<tr>
<th>Engine Make and Model</th>
<th>Perkins 4006-23TRS1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternator manufacturer for</td>
<td>Leroy Somer</td>
</tr>
<tr>
<td>FG Wilson by:</td>
<td></td>
</tr>
<tr>
<td>Alternator Model:</td>
<td>LL6114D</td>
</tr>
<tr>
<td>Control Panel:</td>
<td>PowerWizard 2.0</td>
</tr>
<tr>
<td>Base Frame:</td>
<td>Heavy Duty Fabricated Steel</td>
</tr>
<tr>
<td>Circuit Breaker Type/Rating:</td>
<td>Optional</td>
</tr>
<tr>
<td>Frequency:</td>
<td>50 Hz</td>
</tr>
<tr>
<td>Engine Speed: RPM:</td>
<td>1500</td>
</tr>
<tr>
<td>Fuel Consumption: m³/hr (ft³/hr)</td>
<td>86 (3024)</td>
</tr>
</tbody>
</table>

Available Options

FG Wilson offer a range of optional features to tailor our generating sets to meet your power needs. Options include:

- Upgrade to CE Certification
- A wide range of Sound Attenuated Containers
- A variety of generating set control and synchronising panels
- Additional alarms and shutdowns
- A selection of exhaust silencer noise levels

For further information on all of the standard and optional features accompanying this product please contact your local Dealer or visit: www.FGWilson.com

Dimensions and Weights

<table>
<thead>
<tr>
<th>Length (L) mm (in)</th>
<th>Width (W) mm (in)</th>
<th>Height (H) mm (in)</th>
<th>Wet kg (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4746 (187)</td>
<td>1992 (78)</td>
<td>2189 (86)</td>
<td>6056 (13351)</td>
</tr>
</tbody>
</table>

Wet = With Lube Oil and Coolant

Ratings in accordance with ISO 8528, ISO 3046, IEC 60034, BS5000 and NEMA MG-1/22. Generating set pictured may include optional accessories.
# Engine Technical Data

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Cylinders/Alignment:</td>
<td>6 in-line</td>
</tr>
<tr>
<td>Cycle:</td>
<td>4 Stroke</td>
</tr>
<tr>
<td>Bore/Stroke: mm (in)</td>
<td>160 (6.3) / 190 (7.5)</td>
</tr>
<tr>
<td>Induction:</td>
<td>Turbocharged</td>
</tr>
<tr>
<td>Cooling Method:</td>
<td>Water</td>
</tr>
<tr>
<td>Governing Type:</td>
<td>Electronic</td>
</tr>
<tr>
<td>Governing Class:</td>
<td>ISO 8528 G2</td>
</tr>
<tr>
<td>Compression Ratio:</td>
<td>12.1 Nominal</td>
</tr>
<tr>
<td>Displacement: l (cu.in):</td>
<td>22.92 (1399)</td>
</tr>
<tr>
<td>Moment of Inertia: kg m² (lb/in²)</td>
<td>4.12 (0.006)</td>
</tr>
<tr>
<td>Engine Electrical System:</td>
<td>- Voltage/Ground: 24/Negative - Battery Charger Amps: 32</td>
</tr>
<tr>
<td>Weight: kg (lb)</td>
<td>– Dry 2420 (5335.2) – Wet 2652 (5846.7)</td>
</tr>
<tr>
<td>Air Filter Type:</td>
<td>Replaceable Element</td>
</tr>
<tr>
<td>Combustion Air Flow: m³/min (cfm)</td>
<td>25.3 (894)</td>
</tr>
<tr>
<td>Max. Combustion Air Intake Restriction: kPa (in H₂O)</td>
<td>3.73 (15.0)</td>
</tr>
<tr>
<td>Radiator Cooling Airflow: m³/min (cfm)</td>
<td>918 (32418)</td>
</tr>
<tr>
<td>External Restriction to Cooling Airflow: Pa (in Wg)</td>
<td>196 (0.82)</td>
</tr>
</tbody>
</table>

## Air Systems

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling System Capacity: l (US gal)</td>
<td>237 (62.9)</td>
</tr>
<tr>
<td>Water Pump Type:</td>
<td>Gear Driven</td>
</tr>
<tr>
<td>Heat Rejected to Water &amp; Lube Oil: kW (Btu/min)</td>
<td>240 (13651)</td>
</tr>
<tr>
<td>Heat Radiation to Room: kW (Btu/min)</td>
<td>69.5 (3953)</td>
</tr>
<tr>
<td>Radiator Fan Load:</td>
<td>11.6 (15.54)</td>
</tr>
</tbody>
</table>

Designed to operate in ambient conditions up to 50°C (122°F). Contact your local FG Wilson Dealer for power ratings at specific site conditions.

## Performance

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine Speed: rpm</td>
<td>1500</td>
</tr>
<tr>
<td>Gross Engine Power: kW (hp)</td>
<td>322 (432)</td>
</tr>
<tr>
<td>BMEP: kPa (psi)</td>
<td>1120 (162)</td>
</tr>
</tbody>
</table>

## Fuel Systems

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted Fuel:</td>
<td>Natural gas with lower calorific value of 34.7 MJ/m³ and minimum methane number of 75</td>
</tr>
</tbody>
</table>

Fuel consumption varies widely within each gas type stated. This is because these gases are available (naturally or produced) with variances in their physical properties.

## Lubrication System

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil Filter Type:</td>
<td>Spin-On, Full Flow</td>
</tr>
<tr>
<td>Total Oil Capacity: l (US gal)</td>
<td>123 (32.5)</td>
</tr>
<tr>
<td>Oil Pan: l (US gal)</td>
<td>113 (29.9)</td>
</tr>
<tr>
<td>Oil Type:</td>
<td>See Service Bulletin 48</td>
</tr>
<tr>
<td>Oil Cooling Method:</td>
<td>Water</td>
</tr>
</tbody>
</table>

## Exhaust System

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Allowable Back Pressure: kPa (in Hg)</td>
<td>3.9 (1.15)</td>
</tr>
<tr>
<td>Exhaust Gas Flow: m³/min (cfm)</td>
<td>66 (2330.8)</td>
</tr>
<tr>
<td>Exhaust Gas Temperature: °C (°F):</td>
<td>495 (923)</td>
</tr>
<tr>
<td>Heat Rejected to Exhaust System: kW (Btu/min)</td>
<td>266 (15140)</td>
</tr>
</tbody>
</table>
**Alternator Physical Data**

<table>
<thead>
<tr>
<th>Manufactured for FG Wilson by:</th>
<th>Leroy Somer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model:</td>
<td>LL6114D</td>
</tr>
<tr>
<td>No. of Bearings:</td>
<td>Single</td>
</tr>
<tr>
<td>Insulation Class:</td>
<td>H</td>
</tr>
<tr>
<td>Winding Pitch Code:</td>
<td>2/3 (No. 6)</td>
</tr>
<tr>
<td>Wires:</td>
<td>12</td>
</tr>
<tr>
<td>Ingress Protection Rating:</td>
<td>IP23</td>
</tr>
<tr>
<td>Excitation System:</td>
<td>Shunt</td>
</tr>
<tr>
<td>AVR Model:</td>
<td>R450</td>
</tr>
</tbody>
</table>

**Alternator Operating Data**

| Overspeed: RPM               | 2250        |
| Voltage Regulation (steady state): | +/- 0.5   |
| Wave Form NEMA = TIF:       | <50         |
| Wave Form IEC = THF:        | <2%         |
| Total Harmonic Content LL/LN: | <2%     |
| Radio Interference:         | Suppression is in line with European Standard EN61000 |
| Radiant Heat: kW (Btu/min)  | 50 Hz: 27.8 (1581) |

**Alternator Performance Data:**

<table>
<thead>
<tr>
<th>Data Item</th>
<th>415/240V</th>
<th>400/230</th>
<th>380/220</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Starting Capability* kVA</td>
<td>987</td>
<td>923</td>
<td>840</td>
</tr>
<tr>
<td>Short Circuit Capacity** %</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Reactances:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per Unit</td>
<td>Xd</td>
<td>X’d</td>
<td>X*d</td>
</tr>
<tr>
<td></td>
<td>3.280</td>
<td>0.80</td>
<td>0.124</td>
</tr>
<tr>
<td></td>
<td>3.530</td>
<td>0.190</td>
<td>0.133</td>
</tr>
<tr>
<td></td>
<td>3.910</td>
<td>0.210</td>
<td>0.147</td>
</tr>
</tbody>
</table>

Reactances shown are applicable to baseload ratings
* Based on 30% voltage dip at 0.6 power factor.
** With optional Permanent Magnet generator or AREP excitation.

**Voltage Technical Data**

<table>
<thead>
<tr>
<th>PG375B3 Baseload</th>
<th>415/240</th>
<th>400/230</th>
<th>380/220</th>
</tr>
</thead>
<tbody>
<tr>
<td>kVA</td>
<td>375</td>
<td>375</td>
<td>375</td>
</tr>
<tr>
<td>kW</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
</tbody>
</table>
General Information

Documentation
A full set of operation and maintenance manuals and circuit wiring diagrams.

Generating Set Standards
The equipment meets the following standards: BS5000, ISO 8528, ISO 3046, IEC 60034, NEMA MG-1.22.
FG Wilson is a fully accredited ISO 9001 company.

Warranty
All equipment carries full manufacturer’s warranty. Extended warranty terms available. For details on warranty cover please contact your local dealer, or visit our website: www.FGWilson.com

Dealer Contact Details:

FG Wilson manufactures product in the following locations:
Northern Ireland • Brazil • China • India • USA
With headquarters in Northern Ireland, FG Wilson operates through a Global Dealer Network.
To contact your local Sales Office please visit the FG Wilson website at www.FGWilson.com.
FG Wilson is a trading name of Caterpillar (NI) Limited.

In line with our policy of continuous product development, we reserve the right to change specification without notice.