PRO Rental Product Range

PRO500-1
(Fuel Optimised)

50/60Hz Switchable Rating
Prime Product
500 kVA / 400 kWe

KEY FEATURES

Rental Ready Features

- Forklift pockets
- Fully certified dual point lifting
- Integrated heavy duty drag bar with robust skid plate
- Coolant & oil drains piped to baseframe
- EMC Certified
- Fully certified spark arresting silencer
- 50/60 Hz switchable frequency via terminal link
- Optimized cable entry for easy hook-up
- Sound isolated control panel with integrated power distribution access.
- Robust hook-up point for lugged cable connection
- AC protected by limit switch on distribution door
- Emergency stop on control panel and enclosure
- Inboard mounted 3 way fuel valve connection for external fuel connection

Engine

- Perkins Engine
- Fuel optimised offering

Single-Source Supplier

- Factory designed and fully prototype tested with certified torsion vibration analysis available
- ISO 9001:2000 compliant facility

PowerWizard Control Panel

- Simple user friendly interface and navigation

Alternator

- Leroy Somer Alternator
- Coastal insulation protection
- Self (shunt) excitation

Integrated Voltage Regulator (IVR)

- Three-phase sensing
- Adjustable volts-per-hertz regulation
- Provides precise control, excellent block loading, and constant voltage in the normal operating range.

Enclosure

- Galvanized sheet steel construction with two coat polyester powder-coated finish
- Six lockable (padlock / keylock) access doors for ease of maintenance
- Safety glass control panel viewing window with key lock

Reduced Environmental Impact

- Fuel optimised
- Single wall base tank with 110% spill containment
- Dual wall base tank with 110% spill containment
- Bund Level alarm
STANDARD EQUIPMENT

Air Inlet
  • Air cleaner, two stage cyclonic/paper with dust cup and service indicator
  • Turbocharger and air-to-air aftercooler

Alternator
  • LL6114F frame, three-phase, random wound, 12-lead design, self-excited, 2/3 pitch
  • Coastal insulation protection
  • 230 VAC anti-condensation heater option

Charging System
  • Charging alternator; 24V, heavy duty with integral regulator and belt guards

Control Panel
  • PowerWizard 2.1+ genset mounted digital controller
  • 50/60Hz frequency switch via terminal link
  • Panel mounted Emergency stop switch
  • Automatic set-point adjustment integrated with voltage and frequency changes
  • Integrated Voltage Regulator with EM10 Excitation Module
  • Fully featured power metering, protective relaying and engine/generator control and monitoring

Cooling System
  • Cooling package mounted radiator with high ambient capability
  • Pusher fan with guards
  • Coolant drain line with internal brass ball control valve piped to base-frame
  • Low coolant level shutdown.
  • 50% coolant antifreeze with corrosion inhibitor

Distribution System
  • Robust steel enclosure, separate hinged, lockable door with rust resistant pinned hinges
  • Main circuit breaker 4-pole, 800A with 24V DC shunt trip wired to distribution door safety switch
  • Two wire remote start/stop terminals and 230 VAC auxiliary power connection for rapid starting
  • Cable support

Enclosure
  • Sound attenuating, galvanized sheet metal enclosure with exceptional noise performance
  • External emergency stop switch on enclosure
  • Modular panel construction with a welded roof design
  • Interior walls, ceilings and ducts insulated with precision cut noise insulating materials
  • Sealed quarter turn compression door latches with key and padlock capabilities
  • Front and rear access provided though hinged doors
  • External side mounted dual point lifting frame
  • Enclosure is protected by powder coated white paint

Engine
  • Perkins 2506A heavy duty diesel engine
  • Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight
  • ECM electronic engine control
Exhaust System

- Integrated spark arresting silencer with flexible connectors, in separate compartment

Fuel System

- 207 gal (784 L) single wall fuel tank, 9.3 hr runtime @ 75% prime rating, internal fuel fill
- Off engine mounted Racor fuel water separator (4 micron) with secondary engine mounted fuel water separator
- Auxiliary connections for customer supplied fuel transfer with 3 way fuel transfer system, internally mounted within the bunded area.
- Mechanical fuel gauge
- Electronic Fuel gauge with control panel display. Low level fuel warning & shutdown.
- Configurable bund level sensor. Low level warning & high level warning / shutdown.

Lube System

- On engine primary & secondary oil filters, filler and dipstick.
- Open crankcase breather with a fumes disposal container. Drain located on side of baseframe.
- Oil drain piped to edge of baseframe with internally mounted ball valve.
- 500 hour oil change intervals

Mounting System

- Generator set soft mounted using captive vibration mounts
- Heavy duty steel base frame contains integral fuel tank
- Forklift pockets and heavy duty drag bar with skid plates

Starting System

- Single electric starting motor, 24V
- 2x 12V 950CCA maintenance free batteries (wired in parallel), with single pole battery isolator switch.
- 230 Volt single phase jacket water heater with thermostat and shut off valves

General

- Factory testing of standard generator set
- Full manufacturer’s warranty, O&M manuals

AVAILABLE OPTIONS

- Dual wall fuel tank
- Synchronising control panel and motorised breakers
- Low voltage 60 Hz configuration including breaker and power cables
- Anti-condensation heater 230 VAC
- Coolant heater 230 VAC
- 24V battery charger
- Permanent Magnet Generator (PMG)
- Earth Leakage
- CE labelling
- Lube oil sump pump
- 1000 hour service interval
**PRO Rental Product Range**

### Power Ratings

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Voltage</th>
<th>Prime kW (kVA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 Hz</td>
<td>380/220 V</td>
<td>400 (500)</td>
</tr>
<tr>
<td></td>
<td>400/230 V</td>
<td>400 (500)</td>
</tr>
<tr>
<td></td>
<td>415/240 V</td>
<td>400 (500)</td>
</tr>
<tr>
<td>60 Hz</td>
<td>380/220 V</td>
<td>420 (525)</td>
</tr>
<tr>
<td></td>
<td>440/254 V</td>
<td>420 (525)</td>
</tr>
<tr>
<td></td>
<td>480/277 V</td>
<td>420 (525)</td>
</tr>
<tr>
<td></td>
<td>220/127 V</td>
<td>420 (525)</td>
</tr>
<tr>
<td></td>
<td>240/138 V</td>
<td>420 (525)</td>
</tr>
</tbody>
</table>

### Weights & Dimensions

- **Length (mm)**: 4930
- **Width (mm)**: 1620
- **Height (mm)**: 2167
- **Weight - Lube Oil & Coolant (kg)**: 5288
- **Weight - Lube Oil, Coolant & Fuel (kg)**: 5986
# PRO500-1 Technical Data

## Generator Set Technical Data

<table>
<thead>
<tr>
<th></th>
<th>UNITS</th>
<th>50 Hz</th>
<th>60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Rating</strong></td>
<td>kW (kVA)</td>
<td>400 (500)</td>
<td>420 (525)</td>
</tr>
<tr>
<td><strong>Oil pan capacity</strong></td>
<td>L</td>
<td>53</td>
<td>53</td>
</tr>
<tr>
<td><strong>Fuel consumption</strong></td>
<td>L/hr</td>
<td>102</td>
<td>107</td>
</tr>
<tr>
<td><strong>Fuel Tank Capacity</strong></td>
<td>L</td>
<td>784</td>
<td>784</td>
</tr>
<tr>
<td><strong>Running Time (75% Load)</strong></td>
<td>Hrs</td>
<td>9.3</td>
<td>9.4</td>
</tr>
<tr>
<td><strong>Ambient Capability</strong></td>
<td>°C</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td><strong>Engine &amp; Radiator Coolant Capacity</strong></td>
<td>L</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td><strong>Engine Coolant Capacity</strong></td>
<td>L</td>
<td>9.5</td>
<td>9.5</td>
</tr>
<tr>
<td><strong>Combustion Airflow</strong></td>
<td>m³/min</td>
<td>29.9</td>
<td>40</td>
</tr>
<tr>
<td><strong>Exhaust flow at rated – dry exhaust</strong></td>
<td>m³/min</td>
<td>26.4</td>
<td>27.8</td>
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<tr>
<td><strong>Exhaust temperature at rated kW</strong></td>
<td>°C</td>
<td>642</td>
<td>654</td>
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<tr>
<td><strong>Noise Rating</strong></td>
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<td>TBC</td>
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*Guaranteed sound power as per 2000/14/EC*
PERKINS 2506A ENGINE DATA

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine</td>
<td>2506A-E15TAG2</td>
</tr>
<tr>
<td>Bore – mm (in)</td>
<td>137 mm (5.39 in)</td>
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<tr>
<td>Stroke – mm (in)</td>
<td>171 mm (6.73 in)</td>
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<tr>
<td>Displacement – L (cu in)</td>
<td>15.2 L (928 in³)</td>
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<tr>
<td>Compression ratio</td>
<td>16:1</td>
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<tr>
<td>Engine RPM</td>
<td>1500 / 1800</td>
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<tr>
<td>Aspiration</td>
<td>Air-to-Air</td>
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<tr>
<td>Aftercooler type</td>
<td>ATAAC</td>
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<tr>
<td>Turbocharger</td>
<td>Single</td>
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<tr>
<td>Fuel system</td>
<td>MEUI</td>
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<tr>
<td>Governor Type</td>
<td>Electronic</td>
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<tr>
<td>Fuel</td>
<td>Class A2 Diesel or BS-EN590</td>
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</tbody>
</table>

ALTERNATOR DATA

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Frame Size</td>
<td>LL6114F</td>
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<tr>
<td>Pitch</td>
<td>2/3</td>
</tr>
<tr>
<td>No of Poles</td>
<td>4</td>
</tr>
<tr>
<td>Excitation</td>
<td>Static regulated, brushless, self-excited</td>
</tr>
<tr>
<td>No of Bearings</td>
<td>Single bearing, close coupled</td>
</tr>
<tr>
<td>Insulation Class</td>
<td>H</td>
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<tr>
<td>Temperature rise</td>
<td>125/40°C</td>
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<tr>
<td>Enclosure IP Rating</td>
<td>IP23</td>
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<tr>
<td>Overspeed Capability (% of rated)</td>
<td>25%</td>
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<tr>
<td>Voltage Regulator</td>
<td>3 phase sensing with adjustable Volts-per-Hz</td>
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<tr>
<td>Voltage regulation</td>
<td>Less than ± 0.5%</td>
</tr>
<tr>
<td>Telephone Harmonic Factor (THF)</td>
<td>Less than 2%</td>
</tr>
<tr>
<td>Harmonic Distortion (THD)</td>
<td>Less than 2%</td>
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</tbody>
</table>

* Materials and specifications are subject to change without notice.