

PRO Rental Product Range

PRO500-1

(Fuel Optimised)

50/60Hz Switchable Rating

Prime Product

500 kVA / 400 kW



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

DeepSea DSE7320 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



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STANDARD EQUIPMENT

Air Inlet

- Air cleaner 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

- DeepSea DSE7320 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 through 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



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Exhaust System

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

Fuel System

- 692 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
- Manual Push Button priming pump.
- Auxiliary connections for customer supplied fuel transfer with 3 way fuel transfer system, internally mounted within the banded 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
- Air cleaner, two stage cyclonic/paper with dust cup and service indicator
- 24V battery charger
- Permanent Magnet Generator (PMG)
- Earth Leakage
- CE labelling
- Lube oil sump pump
- 1000 hour service interval

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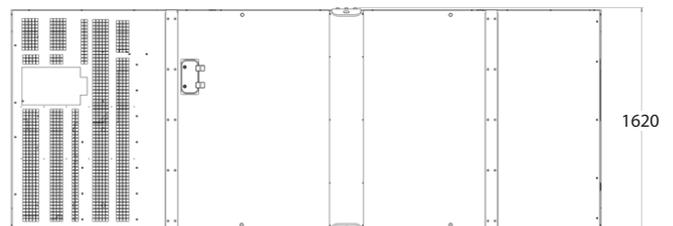
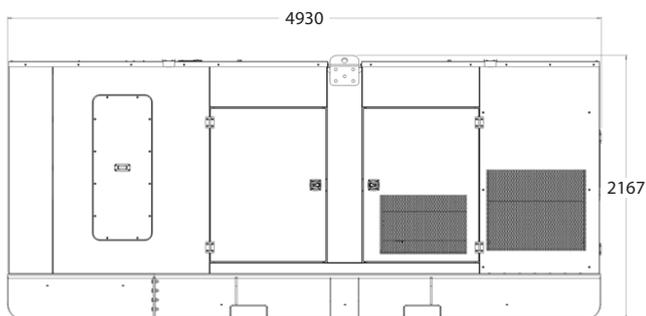
Power Ratings

Frequency	Voltage	Prime kW (kVA)
50 Hz	380/220 V	400 (500)
	400/230 V	400 (500)
	415/240 V	400 (500)
60 Hz	380/220 V	420 (525)
	440/254 V	420 (525)
	480/277 V	420 (525)
	220/127 V	420 (525)
	240/138 V	420 (525)

Ratings at 0.8 power factor.

Prime Rating: These ratings are applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and this model can supply 10% overload power for 1 hour in 12 hours.

Power available at variable load with a load factor not exceeding 80% of the prime power rating in a 24 hour period.



Weights & Dimensions

Length (mm)	4930
Width (mm)	1620
Height (mm)	2167
Weight - Lube Oil & Coolant (kg)	5288
Weight - Lube Oil, Coolant & Fuel (kg)	5986



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PRO500-1 Technical Data

Generator Set Technical Data

	UNITS	50 Hz	60 Hz
Power Rating	kW (kVA)	400 (500)	420 (525)
Oil pan capacity	L	53	53
Fuel consumption			
100% Load	L/hr	102	107
75% Load		76	83
50% Load		54	59
Fuel Tank Capacity	L	692	692
Running Time (75% Load)	Hrs	9.3	9.4
Ambeint Capability	°C	50	45
Engine & Radiator Coolant Capacity	L	48	48
Engine Coolant Capacity	L	9.5	9.5
Combustion Airflow	m3/min	29.9	40
Exhaust flow at rated – dry exhaust	m3/min	26.4	27.8
Exhaust temperature at rated kW	°C	642	654
Noise Rating			
Sound Power*		98	98
1m at 100% Load	dB(A)	81.2	81.7
7m at 100% Load		71.7	72.5
1m at 75% Load		80.1	80.0
7m at 75% Load		70.9	70.9

*Guaranteed sound power as per 2000/14/EC



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Perkins 2506A Engine Data

Engine	2506A-E15TAG2
Bore – mm (in)	137 mm (5.39 in)
Stroke – mm (in)	171 mm (6.73 in)
Displacement – L (cu in)	15.2 L (928 in ³)
Compression ratio	16:1
Engine RPM	1500 / 1800
Aspiration	Air-to-Air
Aftercooler type	ATAAC
Turbocharger	Single
Fuel system	MEUI
Governor Type	Electronic
Fuel	Class A2 Diesel or BS-EN590

Alternator Data

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

* Materials and specifications are subject to change without notice.

Caterpillar (NI) Limited is the manufacturer of FG Wilson brand diesel generating sets, and our facilities manufacture products in the following locations:

Brazil • China • India

With headquarters in Northern Ireland, FG Wilson products are distributed through a Global Dealer Network.

To contact your local Sales Office, please visit the FG Wilson website at www.fgwilson.com.

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