

PRO Rental Product Range

PRO310-4

(EUV Compliant)

50/60Hz Switchable Rating

Prime Product

310 kVA / 248 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 1706J-E93TAG2 four-stroke diesel engine combines consistent performance and excellent fuel economy with minimal weight

After Treatment

- Diesel Emissions Fluid (DEF) Tank

Fuel / Emissions Strategy

- EUV compliance

Single-Source Supplier

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

DeepSea Control Panel

- Simple user friendly interface and navigation
- Single point interface for voltage / frequency adjustment

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
- Five lockable (padlock / keylock) access doors for ease of maintenance
- Safety glass control panel viewing window with key lock
- Fuel fill and battery can only be reached through lockable access doors

Reduced Environmental Impact

- Dual wall base tank with 110% spill containment
- Bund Level alarm



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STANDARD EQUIPMENT

After Treatment

- Engine Mounted Clean Emissions Module (CEM)
- Diesel Emissions Fluid (DEF) Tank located in discharge box, accessible through lockable access door

Air Inlet

- Two stage air cleaner with dust cup and service indicator
- Twin turbocharger and air-to-air aftercooler

Alternator

- LL5114N frame, three-phase, random wound, 12-lead design, self-excited, 2/3 pitch
- Coastal insulation protection

Charging System

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

Control Panel

- DeepSea 8620 genset mounted digital controller
- Synchronising auto mains & failure load share control module
- Ethernet communication
- Can be integrated into building management system
- IP65 rated
- Fully featured power metering, protective relaying and engine/generator control and monitoring

Cooling System

- Cooling package mounted radiator with vertical air discharge - 50°C high ambient capability
- Variable speed 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, 630 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 1706J twin turbo heavy duty diesel engine
- Four-stroke diesel engine combines consistent performance and excellent fuel economy with minimum weight



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Exhaust System

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

Fuel System

- 667 L dual wall fuel tank, 14 hr runtime @ 75% prime rating, internal fuel fill
- Engine mounted primary fuel filter (10micron) with integral water separator and water in Fuel sensor
- 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 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.
- 500 hour oil change intervals

Mounting System

- Generator set soft mounted using captive vibration mounts
- Heavy duty steel base frame contains integral dual wall fuel tank
- Provides 110% spill containment of all engine fluids
- Forklift pockets and heavy duty drag bar with skid plates

Starting System

- Single electric starting motor, 24V

General

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

AVAILABLE OPTIONS

- Socket box with integrated MCB & RCBO protection
- 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
- 2x 12V 950CCA maintenance free batteries with single pole battery isolator switch.
- 24V battery charger
- Permanent Magnet Generator (PMG)
- Earth Leakage
- CE labelling
- Lube oil sump pump
- 230 VAC anti-condensation heater option

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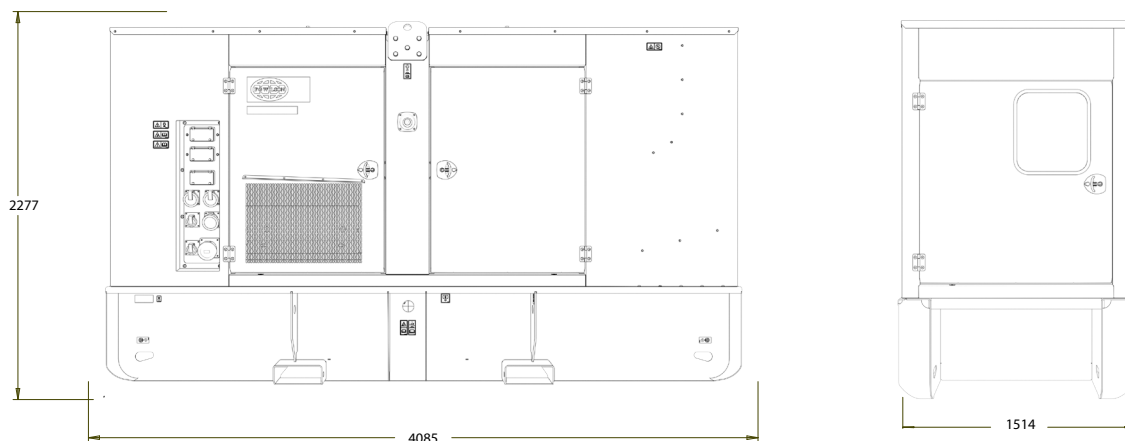
Power Ratings

Frequency	Voltage	kVA	kW	Output Amps (A)	Breaker Rating (A)
50 Hz	415/240V	310	248	431	630
	400/230V	310	248	447	
	380/220V	310	248	471	
60 Hz	480/277V	337	270	406	630
	440/254V	337	270	443	
	380/220V	337	270	512	

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)	4085
Width (mm)	1514
Height (mm)	2277
Weight - Lube Oil & Coolant (kg)	4103
Weight - Lube Oil, Coolant & Fuel (kg)	4784

Sockets	15A	16A	32A	50A	63A	125A
CEE Form	–	2x1ph+N+E	2x3ph+N+E	–	1x3ph+N+E	1x3ph+N+E



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PRO310-4 Technical Data

Generator Set Technical Data

	Units	50 Hz	60 Hz
Power Rating	kW (kVA)	248 (310)	248 (310)
Oil pan capacity	L	30	30
Fuel consumption			
100% Load	L/hr	62.6	64.7
75% Load		46.9	48.9
50% Load		32.9	34.8
Fuel Tank Capacity	L	667	667
Running Time (75% Load)	Hrs	14.2	13.6
DEF Tank Capacity¥	L	65.6	13.6
Ambeint Capability	°C	36	47
Engine & Radiator Coolant Capacity	L	37.9	37.9
Engine Coolant Capacity	L	20.3	20.3
Combustion Airflow	m3/min	19	24
Exhaust flow at rated – dry exhaust	m3/min	39	45
Exhaust temperature at rated kW	°C	434	413
Noise Rating			
Sound Power*		94	97
1m at 100% Load	dB(A)	75.8	78.4
7m at 100% Load		67.2	70.4
1m at 75% Load		74.5	76.5
7m at 75% Load		65.4	68

*Guaranteed sound power as per 2000/14/EC

¥ DEF consumption is on average approximately 8% of the fuel consumption. DEF tank capacity is sufficient to last more than 16hrs when fully filled with Genset at 75% load.

Emissions Data

	Units	50 Hz	60 Hz
Nox	g/hp-hr	0.05	0.07
CO	g/hp-hr	0.05	0.07
HC	g/hp-hr	0.01	0.02
PM	g/hp-hr	0.00	0.00



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Engine Data

Engine	1706J-E93TAG2
Bore – mm	115
Stroke – mm	149
Displacement – L	9.3
Compression ratio	17.0:1
Engine RPM	1500 / 1800
Aspiration	Turbocharged - Aftercooled (TA)
Aftercooler type	ATAAC
Turbocharger	Single
Fuel system	Direct Injection
Governor Type	Electronic ECM controlled (A6E2)
Fuel specification	Ultra Low Sulphur Diesel Only (ULSD)
Oil specification	15W-40 CK-4
Diesel Exhaust Fluid	ISO22241-1

Alternator Data

Frame Size	LL5114N
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 ± 0.5%
Telephone Harmonic Factor (THF)	Less than 2%
Total Harmonic Distortion (THD)	Less than 2%

* Materials and specifications are subject to change without notice.

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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.

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