



**RICH MOTOR COMPANY**

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RMC Sells, Builds, & Operates  
**Power Generators**  
in Emerging markets



**P 230-250 Data Sheet**

**Output Ratings**

Voltage, Frequency	Prime	Standby
400V, 50HZ	230KVA/184KWe	250KVA/200KWe
220/127, 60 HZ	245KVA/196KWe	269KVA/215KWe

**Ratings and Performance Data**

Engine Make & Model:	Perkins 1506A-E88TAG2		
Alternator Make and Model	OPTION A	OPTION B	OPTION C
	LSA46.3 S4	TAL046C	LINZ PRO 28SD/4

Control Panel	DSE6020MK2		
Base Frame	Heavy duty fabricated steel		
Circuit breaker type	3Pole MCCB LS-ABB-Schneider 350A		
Frequency	50 OR 60		
Engine Speed	1500 OR 1800		
Fuel Tank Capacity for open type	220L		
<b>Exhaust System</b>	<b>50hz</b>	<b>60hz</b>	

Maximum Allowable Back Pressure:	kPa		
	10.0 kPa	-	
Exhaust Gas flow	m <sup>3</sup> /min		
	Prime	37.5	45.3
	Standby	40.4	48.9
Exhaust Gas temperature °C			
	Prime	537	477
	Standby	558	496

**Prime Rating**

Prime power: Variable load. Unlimited hours usage with an average load factor of 80% of the published prime power over each 24 hour period.

A 10% overload is available for 1 hour in every 12 hours of operation. Standby power:

Variable load. Limited to 500 hours annual usage, up to 300 hours of which may be continuous running. No overload is permitted.

**Standby Rating**

These ratings are applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The alternator on this model is peak continuous rated (as defined in ISO 8528-3).

**Standard Reference Conditions Note:**

Standard reference conditions 25°C (77°F) Air Inlet Temp, 100m (328 ft) A.S.L. 30% relative humidity. Fuel consumption data at full load with diesel fuel with specific gravity of 0.85 and conforming to BS2869: 1998, Class A 2

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS5514/1.

**Specification**

Number of cylinders	6 vertical in-line	
Bore and stroke	112 x 149 mm	4.5 x 5.8 in
Displacement	8.8 litres	537 in <sup>3</sup>
Aspiration	TURBOCHARGED AFTERCOOLED	
Cycle	4 stroke	
Combustion system	Indirect injection	
Compression ratio	16.1:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	41 litres	9.01 US gal
Cooling system	Water cooled	
Total coolant capacity	29.6 litres	7.81 US gal
Power Factor	0.8	

**Technical information**

**Air inlet**

Mounted air filter and turbocharger

**Fuel system**

HEUI fuel system with full authority electronic control  
Electronic governing to ISO 8528-5 with stand-alone isochronous and load-sharing capabilities

Fuel filter, fuel transfer pump, fuel priming pump

Spin on primary, secondary and water filter separator

**Lubrication system**

Wet full aluminium sump with filler and dipstick

Full-flow spin-on filters /Oil pump, gear driven

**Cooling system**

Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan

Mounted radiator, piping and guards

**Electrical equipment**

24V starter motor and 24V, 45 amp alternator with DC output

Oil pressure and coolant temperature switches

12 volt shut-off solenoid energised to run

I Electronic Control Module (ECM) mounted on engine with wiring looms and sensors

**Flywheel and housing**

1500/1800 rev/min

High inertia flywheel to SAE 1 J620 Size 355.6 mm (14 in)

Aluminium SAE 1 flywheel housing

**Mountings**

Front and rear engine mounting brackets

**Data Sheet**  
**P 230 - 250**



### Alternator Physical Data

Specially adapted to applications

The LSA 46.3 alternator is designed to be suitable for typical generator applications, such as: backup, marine applications, rental, telecommunications, etc.

Compliant with international standards

The LSA 46.3 alternator conforms to the main international standards and regulations:

- IEC 60034, NEMA MG 1.32-33, ISO 8528-3, CSA C22.2 n°100-14, UL 1446 (UL 1004 on request), marine regulations, etc.

It can be integrated into a CE marked generator.

The LSA 46.3 is designed, manufactured and marketed in an ISO 9001 and ISO 14001 environment.

Manufactured By Leroy Somer EU/ linz EU	LSA <sup>1</sup>	TAL <sup>2</sup>	LINZ <sup>3</sup>
Model	LSA46.3 S4	TAL046C	LINZ PRO 28SD/4
No. of Bearings:	1	1	1
Insulation Class	H	H	H
Winding Pitch Code:	2/3 (wdg 6)	2/3 (wdg 6S)	2/3 (wdg 6S)
Wires:	12	6	12
Ingress Protection Rating:	IP23	IP23	IP23
Excitation System:	SHUNT	SHUNT	SHUNT
AVR Model:	R250	R120	HVR11
Short-circuit current	-	-	-
Overspeed: rpm	2250 min-1	2250 min-1	2250 min-1
Voltage Regulation: (Steady state)	± 0.5%	± 1%	± 1%
Wave Form NEMA = TIF:	< 50	< 50	< 50
Wave Form IEC = THF:	< 2%	< 2%	< 2%
Total Harmonic content LL/LN:	< 2.5%	< 2.5%	< 4%
Radio Interference:	R 791 interference suppression conforming to standard EN 61000-6-3, EN 61000-6-2, EN 55011 group 1 class B standard for EU		
Radiant Heat: kW (Btu/min)	16852	16852	16852

Alternator	50Hz		60 Hz
	Performance Data		
Data Item	400V	480V	220/127V
Motor Starting Capability* KVA	374	403	*
Short Circuit Capacity %	*	*	*
Reactances: Per Unit			
Xd	339	354	
X'd	13.8	14.4	
X''d	11	11.5	

\*Reactances shown are applicable to prime ratings. \*Based on 30% voltage dip at 0 power factor. Reactances shown are applicable to prime ratings. \*Based on 30% voltage dip at 0.0 power factor and SHUNT excitation. \*\*With optional permanent magnet generator or AREP excitation

### Emissions

Certified against the requirements of EU 2007 (EU 97/68/EC Stage II) legislation for non-road mobile machinery, powered by constant speed engines.

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

### Warranty

All prime equipment, limited to 2,000 running hours per year, has a one year manufacturer's warranty. Standby equipment, limited to 500 running hours per year, has a two year manufacturer's warranty. For details on warranty cover please contact Rich Motor, or visit our website: [www.richmotor.com](http://www.richmotor.com)

Fuel consumption	1500rpm	1800rpm
Standby power	60.7L/H	69.8L/H
Prime power	55.5L/H	63.1L/H
75%	41.6L/H	47.5L/H
50%	28.9L/H	33.1L/H
Fuel Tank Capacity for open type	220L	

### Recommended fuel Type and oil Type

Fuel specification: Recommended fuel to conform to BS 2869 1998 CLASS A2 or BSEN590.

. Lubricating oil: 15W40 to API CG4.

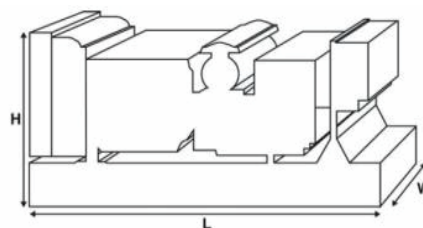
### Controller Technical specs

Make And Model **Deep Sea PLC 6020 MK2**

**AUTO START AND AUTO MAINS FAILURE CONTROL MODULES**

### Key

- Efficient power save mode
- 3 phase generator sensing
- 3 phase mains (utility) sensing
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Generator overload protection (kW)
- Generator/load current monitoring and protection
- Breaker control via fascia buttons
- Fuel and start outputs,
- 4 configurable DC outputs
- 4 configurable analogue/digital input
- 6 configurable digital inputs
- Support for 0-10 V & 4-20 mA oil pressure sensors
- Configurable staged loading outputs
- Configurable event log (50)
- LCD and LED alarm indicatio
- Comprehensive warning, electrical trip or shutdown protection upon fault conditio
- Engine speed protection
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel pump control
- Real time cloc
- Battery voltage monitoring
- 3 engine maintenance alarms
- CAN, MPU and alternator speed sensing in one variant



### Dimensions And Weights

Length (L)	Width (W)	Height (H)	Weight (Kg)
in mm 2850	in mm 990	in mm 1750	2250

RMC is the most trusted supplier of power and O&M services in UAE and The Middle East. We build, install, and service power solutions tailored to fit any need up to 2MW.





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# Sound Proof P-230

Our compact design of the P-230 Kva Normal and Super enclosures ensure optimum performance in the harshest environments. Designed and Fabricated using the latest technology and high-tech equipments, RMC Enclosures are built to Last. Doors & access panels can be Opened 180 degrees to allow easy maintenance and service access. Extremely durable and robust, the enclosures are designed to resist corrosion and handling damage with the ability to withstand rough handling common on many construction sites. through the years RMC Specialist and Engineers have researched and developed the performance , looks and practicality of the enclosure. All our enclosure are weather Proof , corrosion resistant using only galvanized steel sheet, sound absorbant material with rockwool insulation covered with a layer of perforated galvanized steel sheet and a residential exhaust muffler . It offers durability and high sound suppression.

**Excellent Access for Maintenance**

- \* 4 Access Doors for better service space
- \* 2 acces doors on the front and back
- \* Lube Oil and Coolant drainage valve
- \* external fuel filling Gauge with Level indicator

**Transportability**

- \*Central Lifting points ontop of the roof
- \*Two Forklift pocket at the bottom of the Base frame facilitating handling

**Fuel Tank**

- \*BuiltIn fuel tank - Extendable\*
- \*External bulk tank connection provision via ball valve mounted on the side of the enclosure

**Optional Equipment :**

- Electronic fuel level sensor
- Fuel Leak detector
- Double skin tank
- Manual/Automatic fuel filling pump

\* kindly refer to one of our sales team to know more about the extra options

**Robust Corrosion Free Enclosure**

- \*Galvanised steel protected by powder coat paint
- \*Black finish stainless steel locks and hinges
- \* Zinc plated / stainless steel fasteners

**Security and Safety**

- \*Control panel viewing via large viewing window in lockable enclosure door
- \* Emergency stop push button mounted on enclosure exterior & one on the control panel
- \*Cooling fan and battery charging alternator fully guarded
- \*Fuel fill and battery can only be reached via lockable access doors and gauges
- \*Fully enclosed exhaust silencing system for operator safety

Generator Set Model		50Hz						60Hz					
		15m		7m		1m		15m		7m		1m	
		75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load
P-230	Prime	71.8	71.9	79.6	79.8	80.0	80.2	72.4	72.6	79.1	79.5	80.2	80.9
	Standby	71.8	71.9	79.6	79.8	80.0	80.2	72.4	72.6	79.1	79.5	80.2	80.9

**Sound Pressure Levels (dBA) Super Silent Enclosure**

Generator Set Model		50Hz						60Hz					
		15m		7m		1m		15m		7m		1m	
		75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load	75% Load	100% Load
P-230	Prime	69.2	69.5	73.9	74.2	77.2	77.6	69.5	69.8	74.2	74.6	77.2	77.8
	Standby	69.2	69.5	73.9	74.2	77.2	77.6	69.5	69.8	74.2	74.6	77.2	77.8

**Dimensions and Weights**

Genset Model	L	W	H	Weight	Fuel
	in mm	in mm	in mm	in Kg	
Normal	3650	1400	1975	3500	380L
Super Silent	4150	1600	2050	3800	550L

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The mentioned data in this sheet are subject to change without prior notice , Due to continuous research and development.



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