



RICH MOTOR COMPANY

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



P 650 - 700

Data Sheet

Output Ratings

Voltage, Frequency	Prime	Standby
400V, 50HZ	650KVA/520KWe	700KVA/560KWe
220/127, 60 HZ *	625KVA/500KWe	687KVA/550KWe

*Not Applicable for TAL

Ratings and Performance Data

Engine Make & Model:	Perkins 2806A-E18TAG2A		
Alternator Make and Model	OPTION A	OPTION B	OPTION C
	LSA 49.1 S4	TAL047 F	-

Control Panel DSE6020MK2

Base Frame Heavy duty fabricated steel

Circuit breaker type 3Pole MCCB LS-ABB-Schneider 1000A

Frequency 50 OR 60

Engine Speed 1500 -1800

Fuel Tank Capacity for open type 600L

Exhaust System 50hz 60hz

Maximum Allowable Back Pressure:		
kPa	6.0 kPa	-

Exhaust Gas flow	m ³ /min	
Prime	96	109
Standby	104	118

Exhaust Gas temperature °C

Prime	568	481
Standby	571	489

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 and DIN 6271

Specification

Number of cylinders	6 vertical in-line	
Bore and stroke	145 x 183 mm	5.7 x 7.2 in
Displacement	18.1 litres	1104 in3
Aspiration	Turbocharged and air-to-air charge cooled	
Cycle	4 stroke	
Combustion system	Indirect injection	
Compression ratio	14.5:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	62 litres	16.4 US gal
Cooling system	Water cooled	
Total coolant capacity	61 litres	16.1 US gal
Power Factor	0.8	

Technical information

Air inlet

Mounted air filter and turbocharger

Fuel system

Mechanically actuated electronically controlled unit fuel injectors with full authority electronic control

Governing to ISO 8528-5 class G2 with isochronous capability

Replaceable 'Ecoplus' fuel filter elements with primary filter/water separator

Fuel cooler

Lubrication system

Wet full aluminium sump with filler and dipstick

Full-flow replaceable 'Ecoplus' filters /Oil cooler integral with filter header

Cooling system

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

Radiator supplied loose incorporating air-to-air charge cooler

-System designed for ambients up to 50°C

Electrical equipment

24 volt starter motor and 24 volt 70 amp alternator with DC output

Oil pressure and coolant temperature switches

12 volt shut-off solenoid energised to run

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

Flywheel and housing

1500/1800 rev/min

I High inertia flywheel to SAE J620 size 18

Aluminium SAE 0 flywheel housing

Mountings

Front and rear engine mounting brackets

Data Sheet
P 650 - 700



Alternator Physical Data

The LSA 49.1 alternator is designed to be suitable for typical generator applications, such as: backup, marine applications, rental, telecommunications, etc.

COMPLIANT WITH INTERNATIONAL STANDARDS

The LSA 49.1 alternator conforms to the main international standards and regulations: - IEC 60034, NEMA MG 1.32-33, ISO 8528-3, CSA / UL 1446 (UL 1004 on request), marine regulations, etc.

It can be integrated into a CE marked generator.

The LSA 49.1 is designed, manufactured and marketed in an ISO 9001 environment and ISO 14001.

Manufactured By Leroy Somer / linz	Europe	LSA ¹	TAL ²	LINZ ³
Model		LSA 49.1 S4	TAL047 F	-
No. of Bearings:		1	1	-
Insulation Class		H	H	-
Winding Pitch Code:		2/3 (wdg 6)	2/3 (wdg 6S)	-
Wires:		6	6	-
Ingress Protection Rating:		IP23	IP23	-
Excitation System:		SHUNT	SHUNT	-
AVR Model:		R450	R150	-
Overspeed: rpm		2250 min-1	2250 min-1	-
Voltage Regulation: (Steady state)		± 0.5%	± 1%	-
Wave Form NEMA = TIF:		< 50	< 50	-
Wave Form IEC = THF:		< 2%	< 2%	-

Total Harmonic content LL/LN:		< 2.5%	< 2.5%	-
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)		29340	29340	-
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Alternator	50Hz		60 HZ
	Performance Data		
Data Item	400V	480V	220/127V
Motor Starting Capability* KVA	1763	1650	*
Short Circuit Capacity** %	*	*	*
Reactances: Per Unit			
Xd	343	343	
X'd	17.5	17.5	
X''d	14	14	

*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

Fuel consumption	1500rpm	1800rpm
Standby power	143L/H	141L/H
Prime power	132L/H	127L/H
75%	99L/H	95L/H
50%	97L/H	66L/H
Fuel Tank Capacity for open type	600L	

Recommended fuel Type and oil Type

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

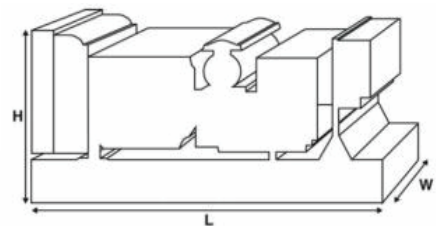
Lubricating oil: 15W40 to API CG4.

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	in mm	in mm	5300
3750	1540	2170	

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-650

Our compact design of the P-650 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 maintenace 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 developped the performace , looks and pratcticality 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 galavanized 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 refere 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-650	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-650	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	4840	1950	2550	7200	930L
Super Silent	5250	2000	2625	7900	1071L

Images are the property of Rich Motor company FZE

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



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