



**RICH MOTOR COMPANY**

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



P 15 - 16.5

Data Sheet

**Output Ratings**

Voltage, Frequency	Prime	Standby
400V, 50HZ	15KVA/12KWe	17.0KVA/13.0KWe
220/127, 60 HZ 403D-15G	18.0KVA/14.0KWe	20.0KVA/16.0KWe

**Ratings and Performance Data**

Engine Make & Model:	Perkins 403A-15G2		
Alternator Make and Model	OPTION A	OPTION B	OPTION C
	LSA 40S4	TAL040D	LINZE1X13M FS/4

Control Panel	DSE6020MK2		
Base Frame	Heavy duty fabricated steel		
Circuit breaker type	3Pole MCB LS-ABB-Schneider	32A	
Frequency	50 or 60 Hz		
Engine Speed	1500 or 800rpm		
Fuel Tank Capacity for OpenType	60L		
Exhaust System	50hz	60hz	
Maximum Allowable Back Pressure:			
kPa (in Hg)	10.2 (2.98)	10.2 (2.98)	
Exhaust Gas flow	m <sup>3</sup> /min		
	Prime	2.2	2.2
	Standby	TBA	TBA
Exhaust Gas temperature °C			
	Prime	470	470
	Standby	490	490

**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.

**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

**Specification**

Number of cylinders	3 vertical in-line	
Bore and stroke	84 x 90 mm	3.3 x 3.5 in
Displacement	1.496 litres	91.3 in <sup>3</sup>
Aspiration	Naturally aspirated	
Cycle	4 stroke	
Combustion system	Indirect injection	
Compression ratio	22.5:1	
Rotation	Anti-clockwise, viewed on flywheel	
Total lubricating capacity	6.0 litres	1.58 US gal
Cooling system	Water cooled	
Total coolant capacity	6.0 litres	1.58US gal
Power Factor	0.8	
Governor	Mechanical	

**Technical information**

**Air inlet**

- Mounted air filter
- Fuel system
- Mechanically governed cassette type fuel injection pump
- Split element fuel filter

**Lubrication system**

- Wet steel sump with filler and dipstick
- Spin-on full-flow lub oil filter

**Cooling system**

Thermostatically-controlled system with belt driven coolant pump and pusher fan/Mounted radiator, piping and guards

**Electrical equipment**

- 12 volt starter motor and 12 volt 15 amp alternator with DC output
- Oil pressure and coolant temperature switches
- 12 volt shut-off solenoid energised to run
- Glow plug cold start aid and heater/starter switch

**Flywheel and housing**

- 1500/1800 rev/min
- High inertia flywheel to SAE J620 Size 165.1 mm (6½ in) Heavy
- Flywheel housing SAE 5 Long

**Mountings**

- Front and rear engine mounting brackets

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## Alternator Physical Data

Specially adapted to applications

The LSA 40 alternator is designed to be suitable for typical generator applications, such as: backup, marine applications, rental, telecommunications, etc.

Compliant with international standards

The LSA 40 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 40 is designed, manufactured and marketed in an ISO 9001 environment and ISO 14001.

Manufactured By Leroy Somer / linz	LSA <sup>1</sup>	TAL <sup>2</sup>	LINZ <sup>3</sup>
Model	LSA40S4	TAL040D	E1X13M FS/4
No. of Bearings:	1	1	1
Insulation Class	H	H	H
Winding Pitch Code:	2/3 (wdg 6)	2/3 (wdg 6S)	1.43
Wires:	12	6	12
Ingress Protection Rating:	IP23	IP23	IP23
Excitation System:	SHUNT	SHUNT	SHUNT
AVR Model:	R220	R 120	HVR11

## Alternator Operating Data

Overspeed: rpm	22250 min-1	2250 min-1	2250 min-1
Voltage Regulation: (Steady state)	± 1%	± 1%	± 1%
Wave Form NEMA = TIF:	< 50	< 50	< 50
Wave Form IEC = THF:	< 3%	< 3%	< 3%
Total Harmonic content LL/LN:	< 5%	< 5%	< 5%
Radio Interference:	*	*	*
Radiant Heat: kW (Btu/min)	2670	2670	2670

Alternator Performance Data	50Hz			60 HZ
	415/240V	400/230V	380/220V	220/127V
Data Item				
Motor Starting Capability KVA	16	15	14	15
Short Circuit Capacity %	*	*	*	*
Reactances: Per Unit				
Xd	204	195		
X'd	17.2	16.4		
X''d	7	7		

## 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.

## 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	7.5L/H	7.5L/H
Prime power	6.8L/H	6.8L/H
75%	5.5L/H	5.5L/H
50%	4.4L/H	4.4L/H

Built-In Fuel Tank Capacity: 60L

## Recommended fuel Type and oil Type

Diesel fuel is according to BS2869 Cclass A2 or equivalent Lubricating Oil is according to API CH4 (15W/40)

## Controller Technical specs

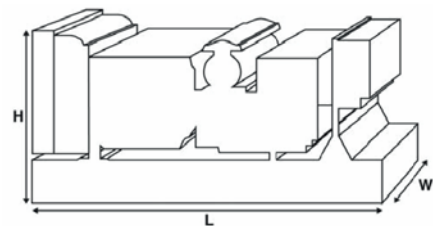
Make And Model Deep Sea PLC 6020 MK2

Model AUTO START AND AUTO MAINS FAILURE CONTROL MODULES

## Key

### Feature:

- 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) in	Width (W)	Height (H) in	Weight (Kg)
mm	in mm	mm	
1500	610	990	460

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 P9-P-13 P-15 Kva

Our compact design of the P9-P13-P15 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 maintenancance 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. throught the years RMC Specialist and Engineers have researched and developped 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

- \* 2 Large Side 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

### Robust Corrosion Free Enclosure

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

### Transportability

- \*Central Lifting points ontop of the roof
- \*Two Forklift pocket at the bottom of the Base frame facilitating handling
- \* Towing provision on 4 sides of the skid

### 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

### 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 referre to one of our sales team to know more about the extra options

### Sound Pressure Levels (dBA) Normal 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
P9	Prime	57.2	58.6	63.2	64.6	75.4	76.3	59.3	60.1	65.3	66.1	78.1	78.6
	Standby	57.7	59.3	63.7	65.3	75.7	76.7	59.5	60.4	65.5	66.4	78.2	78.8
P13	Prime	57.2	58.6	63.2	64.6	75.4	76.3	59.3	60.1	65.3	66.1	78.1	78.6
	StandBy	57.7	59.3	63.7	65.3	75.7	76.7	59.5	60.4	65.5	66.4	78.2	78.8
P15	Prime	59.8	60.5	65.8	66.5	77.0	77.7	61.9	63.1	67.9	69.1	78.9	79.9
	Standby	60.0	60.8	66.0	66.8	77.2	78.0	62.3	63.6	68.3	69.6	79.2	80.4

### 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
P9	Prime	54.1	55.3	56.2	57.0	59.3	60.2	54.1	55.3	56.2	57.0	59.3	60.2
	Standby	54.7	55.9	57.2	57.8	60.1	6.8	54.7	55.9	57.2	57.8	60.1	60.8
P13	Prime	54.1	55.3	56.2	57.0	59.3	6.2	54.1	55.3	56.2	57.0	59.3	60.2
	StandBy	54.7	55.9	57.2	57.8	60.1	6.8	54.7	55.9	57.2	57.8	60.1	60.8
P15	Prime	56.3	56.7	57.1	57.4	59.2	59.2	56.3	56.7	57.1	57.4	59.9	60.4
	Standby	56.3	56.7	57.1	57.4	59.2	59.2	56.3	56.7	57.1	57.4	59.9	60.4

### Dimensions and Weights

Genset Model	L in mm	W in mm	H in mm	Weight in Kg	Fuel Tank Capacity in L
Normal	1850	750	1240	550	70L
Super Silent	2000	1000	1280	630	78L



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