

## Features:

- Rotate speed governor: Mechanical governor
- Excitation system: self-excited SHUNT
- A.V.R model: R220/R438
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- 1x12V sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy  
(Only for Soundproofed sets)
- 50Ø radiator
- Oil pump on the engine
- Steel base frame with fork holes
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for daily running
- Drain points for fuel tank
- Operation Manual / Specifications



### Output Ratings

Generating Set Model	Prime Power*	Standby Power**
EP60	60kVA/48kW	66kVA/53kW

Ratings at 0.8 power factor

### Dimensions and Weights

Model	Length (L) mm	Width (W) mm	Height (H) mm	Dry Weight kg
EP60	2650	1050	1550	1407

### Notes:

#### \*Prime Power

Continuous duty operation, under variable load 24/24h-10% over load permissible 1 hour/12 hours;

#### \*\*Standby Power

Standby duty, operation under variable load, without over load;

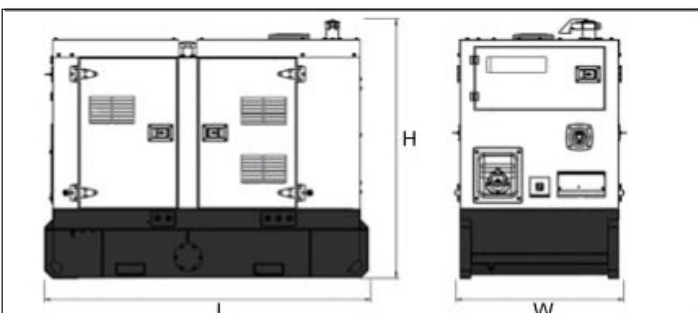
#### Standard Reference Conditions

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 A2.

### Ratings and Performance Data

<b>Engine Make &amp; Model:</b>	Perkins 1103A-33TG2
<b>Alternator Brand:</b>	Leroy somer
<b>Alternator Model:</b>	LSA42.3L9
<b>Control System:</b>	Auto Gen
<b>Circuit Breaker Type:</b>	3 Pole MCCB
<b>Frequency &amp; Phase:</b>	50Hz & 3PH
<b>Engine Speed: RPM</b>	1500
<b>Fuel Tank Capacity: litres</b>	240
EP60	
<b>Fuel Consumption: l/hr (100% Load)</b>	
- Prime Power	13.9
- Standby Power	15.4



## Engine model:1103A-33TG2

### Engine Technical Data

<b>No. of Cylinders / Alignment:</b>	3 / Vertical in-line
<b>Cycle:</b>	4 Stroke
<b>Bore / Stroke: mm (in)</b>	105/127
<b>Induction:</b>	Turbocharged
<b>Cooling Method:</b>	Water cooled
<b>Governing Type:</b>	Electronic
<b>Governing Class:</b>	ISO 8528 G2
<b>Compression Ratio:</b>	17.25:1
<b>Displacement:</b>	3.3L
<b>Moment of Inertia: kg m<sup>2</sup></b>	25
<b>Engine Electrical System:</b>	
- Voltage / Ground	12/Negative
- Battery Charger Amps	12/65
<b>Weight: kg</b>	
- Dry	420
- Wet	438

### Performance

<b>Engine Speed: rpm</b>	1500
<b>Gross Engine Power: kW</b>	
- Prime	55.0
- Standby	60.5
<b>BMEP: kPa</b>	
- Prime	1333
- Standby	1467

### Lubrication System

<b>Oil Filter Type:</b>	Spin-On, Full Flow
<b>Total Oil Capacity: l</b>	8.31
<b>Minimum: l</b>	6.2
<b>Oil Type:</b>	API-CG4/CH4
<b>Oil Cooling Method:</b>	Water

### Exhaust System

<b>Silencer Type:</b>	Industrial
<b>Exhaust outlet size:</b>	56mm
<b>Silencer Noise Reduction Level:</b>	N/A
<b>Maximum Allowable Back Pressure: kPa</b>	10
<b>Exhaust Gas Flow: m<sup>3</sup>/min</b>	
- Prime	10.1
- Standby	10.4
<b>Exhaust Gas Temperature: °C</b>	
- Prime	557
- Standby	571

### Cooling System

<b>Capacity with Radiator: l</b>	10.2
<b>Capacity without Radiator: l</b>	4.4
<b>Power to coolant and lubricating oil: kW</b>	
- Prime	35.0
- Standby	38.0
<b>Power to Radiation: kW</b>	
- Prime	10.0
- Standby	11.0
<b>Power to cooling fan: kW</b>	1.2/1.2
<b>Radiator Cooling Airflow: m<sup>3</sup>/min</b>	89.0/89.0
<b>External Restriction to Cooling Airflow: Pa</b>	N/A

Designed to operate in ambient conditions up to 50°C (122°F).

### Fuel System

<b>Fuel Filter Type:</b>	Replaceable Element			
<b>Recommended Fuel:</b>	Diesel Class A2			
<b>Fuel Consumption: l/hr</b>				
<b>Prime</b>	<b>110% Load</b>	<b>100% Load</b>	<b>75% Load</b>	<b>50% Load</b>
EP60	15.4	13.9	10.4	7.2

(Based on diesel fuel with a specific gravity of 0.85 and conforming to BS2869, Class A2)

### Air Systems

<b>Air Filter Type:</b>	Dry element type
<b>Combustion Air Flow: m<sup>3</sup>/min</b>	
- Prime	3.8
- Standby	3.9
<b>Max. Air Intake Restriction: kPa</b>	
-clean filter	5
-dirty filter	8

The weights are approximate and without fuel.

## Alternator model: LSA42.3L9

### Alternator Physical Data

<b>Manufactured by:</b>	Leroy somer
<b>Model:</b>	LSA42.3L9
<b>No. of Bearings:</b>	Single
<b>Insulation Class:</b>	H
<b>Winding Pitch Code:</b>	2/3
<b>Wires:</b>	12
<b>Ingress Protection Rating:</b>	IP23
<b>Excitation System:</b>	SHUNT, AREP OR
<b>AVR Model:</b>	R220, R438

### Alternator Operating Data

<b>Overspeed: rpm</b>	2250min <sup>-1</sup>
<b>Voltage Regulation: (Steady state)</b>	±0.5%
<b>Wave Form NEMA = TIF:</b>	<50
<b>Wave Form IEC = THF:</b>	<2%
<b>Total Harmonic content LL/LN:</b>	No load <3%-on load <2%
<b>Radio Interference:</b>	
<b>Radiant Heat: kW (Btu/min)</b>	
<b>EP60</b>	

### Alternator Performance Data:

### EP60

Data Item	
<b>Motor Starting Capability* kVA</b>	138/161.5
<b>Short Circuit Ratio** %</b>	0.47
<b>Reactances: Per Unit</b>	
Xd	230
X'd	11.6
X''d	5.8

### Voltage Technical Data

### EP60

Voltage	Prime:		Standby:	
	kVA	kW	kVA	kW
380/220V	60	48	66	52.8
400/230V	60	48	66	52.8
415/240V	60	48	66	52.8

# Control System

## PLC-920

### FEATURES

- Parameter configuration via RS-232 serial communication;
- Log last 50 events & alarm information with measured values;
- Statistics records;
- Remote start/stop;
- Speed sensing from alternator voltage or magnetic pickup;
- Configurable 3 inputs and 6 outputs;
- ECU powers, ECU stop, STOP or fuel solenoid selection;
- Automatic transfer switching control and engine control;
- Adjustable start, load and stop timers.

