



Generator engineered and designed to work in a wide variety of applications where temporary power supply is needed. Versatility, high efficiency, high structural resistance, high degree of protection and low noise emissions together with easy-touse and easy access for maintenance make these generator sets the ideal solution for Rental companies.

**Power Rating**

Frequency	Hz	50
Voltage	V	400/231
Power factor	cos $\phi$	0.8
Phases		3
Standby power LTP	kVA	46.00
Standby power LTP	kW	37.28
MAX current	A	67
Prime power PRP	kVA	44.25
Prime power PRP	kW	35.40
MAX current	A	64


**400V**

**Ratings definition (According to standard ISO8528 1:2005)**

**PRP - Prime Power:** It is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output over 24 h of operation shall not exceed 70 % of the prime power.

**LTP - Limited-Time running Power:** It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 h of operation per year (whose no more than 300 for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

**Power supply 50Hz 230V Three Phase (with supplement VSS)**

Frequency	Hz	50
Voltage	V	230
Power factor	cos $\varphi$	0.8
Phases		3
Standby power LTP	kVA	46.60
Standby power LTP	kW	37.28
MAX current	A	117
Prime power PRP	kVA	44.25
Prime power PRP	kW	35.40
MAX current	A	111

**Power supply 50Hz 230V Single Phase (with supplement VSS)**

Frequency	Hz	50
Voltage	V	230
Power factor	cos $\varphi$	1
Phases		1
Standby power LTP	kVA	30.00
Standby power LTP	kW	30.00
MAX current	A	130
Prime power PRP	kVA	27.00
Prime power PRP	kW	27.00
MAX current	A	117

**Power supply 60Hz 480V Three Phase (with supplement DFS)**

Frequency	Hz	60
Voltage	V	480
Power factor	cos $\varphi$	0.8
Phases		3
Standby power LTP	kVA	56.68
Standby power LTP	kW	45.34
MAX current	A	68
Prime power PRP	kVA	45.34
Prime power PRP	kW	42.98
MAX current	A	65

**Power supply 60Hz 208V Three Phase (with supplement VSS)**

Frequency	Hz	60
Voltage	V	208
Power factor	cos $\varphi$	0.8
Phases		3
Standby power LTP	kVA	55.00
Standby power LTP	kW	44.00
MAX current	A	153
Prime power PRP	kVA	50.00
Prime power PRP	kW	40.00
MAX current	A	139



Engine specifications		
Engine manufacturer		YANMAR
Model		4TNV98T-ZGPGE
Engine cooling system		Water
Nr. of cylinder and disposition		4 in line
Displacement	cm <sup>3</sup>	3319
Aspiration		Turbocharged
Speed governor		Electronic
Oil capacity	l	11.2
Coolant capacity	l	4.2
Electric circuit	V	12
VERSION SWITCHABLE [50/60Hz]		YES
ENGINE DATA	Hz	50
[50Hz] Operating Speed-Nominal	rpm	1500
[50Hz] Exhaust emission level		Stage IIIA
[50Hz] Specific fuel consumption @ 75% PRP	g/kWh	217
[50Hz] Specific fuel consumption @ 100% PRP	g/kWh	219
ENGINE DATA	Hz	60
[60Hz] Operating Speed-Nominal	rpm	1800
[60Hz] Exhaust emission optimized for EPA tier (EPA)		Tier 4 Interim
[60Hz] Specific fuel consumption @ 75% PRP	g/kWh	221
[60Hz] Specific fuel consumption @ 100% PRP	g/kWh	223



## Engine Equipment

### Standards

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1

### Fuel system

- Direct injection system
- Fuel filter paper element
- Fuel pump Bosch in-Line

### Lube oil system

- Forced feed system
- Trochoid pump
- Paper element lube oil filter

### Induction system

- Mounted air filter

### Cooling system

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

### Alternator Specifications Switchable

Brand	LEROY SOMER	
Model	LSA 42.3 M7	
Type	Brushless	
Class	H	
IP protection	23	
Winding insulation	Protection System 2	
Poles	4	
Winding leads	12	
Voltage regulation system	Electronic	
Standard AVR	R 438	
Voltage tolerance	%	0.5



### SPECIALLY ADAPTED TO APPLICATIONS

The LSA 42.3 alternator is designed to be suitable for typical generator applications, such as: backup, marine applications, rental, telecommunications, etc.

### TOP OF THE RANGE ELECTRICAL PERFORMANCE

- Class H insulation.
- Standard 12 wire re-connectable winding, 2/3 pitch, type no. 6.
- Voltage range:
  - 50 Hz: 220 V - 240 V and 380 V - 415 V
  - 60 Hz: 208 V - 240 V and 380 V - 480 V
- High efficiency and motor starting capacity.
- R 791 interference suppression conforming to standard EN 55011 group 1 class B standard for European zone (CE marking).

### EXCITATION AND REGULATION SYSTEM

- Excitation system: AREP
- Voltage A.V.R.: R 438

### REINFORCED MECHANICAL STRUCTURE

- Compact rigid assembly to better withstand generator vibrations.
- Steel frame.
- Aluminium flanges and shields.
- single-bearing designed to be suitable for heat engines.
- Half-key balancing bearing.
- Permanently greased bearing (20 000h).

### PROTECTION SYSTEM SUITED TO THE ENVIRONMENT

- The LSA 42.3 is IP 23.
- Winding Protection Standard: for clean environments with relative humidity  $\leq 95\%$ , including indoor marine environments.
- Winding Protection System 2: reinforced insulation for tropical environment (abrasive atmosphere), rental (except for coastal area), relative humidity  $> 95\%$

### COMPLIANT WITH INTERNATIONAL STANDARDS

The LSA 42.3 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 1146 (UL 1004 on request), marine regulations, etc.

It can be integrated into a CE marked generator.

The LSA 42.3 is designed, manufactured and marketed in an ISO 9001 environment and ISO 14001.



## Genset Equipment Rental

### CANOPY

Canopy painted in RAL9016 made up of modular panels with 1000h+ tested salt spray resistant zinc metal sheet, with access doors on each side with high quality gaskets and lockable handles for easy maintenance and service.



### SUPERSILENT

Soundproofing by means washable and fireproof soundproofing material, to get noise attenuation - max 75dB(A)@1m.

Exhaust silencer integrated in the genset shape with flat rain flap.



### BASE FRAME

Heavy duty base guarantees the highest standards of durability and resistance, painted using a high quality powder coating process (1000+h tested salt spray resistance).

Fully bunded, able to retain 110% of all the sets fluids, the base frame is provided with integrated fork pockets and pull bar for easy maneuverability and site positioning.



### FUEL TANK

Integrated metal fuel tank complete with double fuel refilling point (one each side)



### LEAK PROOF TRAY WITH DETECTOR SENSOR

Fluid leak check in the leak proof tray .

### FUEL VALVE (6 WAY)

System designed for use the fuel from external tank and increase the autonomy of the generator



### LUBE OIL DRAIN PUMP

Makes it easier to the engine oil change

### SINGLE LIFTING POINT



### PLASTIC BUMPER

Protections for the transport and stocking



### MANUAL BATTERY SWITCH



### EARTH ROD

Earth stock with cable fixed inside the genset

### INTERNAL LIGHTING

Internal lighting with switch: for control operations or maintenance engine/alternator.



### DOCS HOLDER

Box intenal for documents, manuals and electrical drawings



Dimensional data		
Length (L)	mm	2000
Width (W)	mm	1200
Height (H)	mm	1582
Fuel tank material	kg	Metal
Fuel tank capacity	l	216



Autonomy		
[50Hz] Fuel consumption @ 75% PRP	l/h	7.76
[50Hz] Fuel consumption @ 100% PRP	l/h	10.45
[50Hz] Running time @ 75% PRP	h	27.84
[50Hz] Running time @ 100% PRP	h	20.67
[60Hz] Fuel consumption @ 75% PRP	l/h	9.50
[50Hz] Fuel consumption @ 100% PRP	l/h	12.82
[60Hz] Running time @ 75% PRP	h	22.74
[60Hz] Running time @ 100% PRP	h	16.85



Noise level Rent 50Hz (2000-14)		
Guaranteed noise level (LWA)	dB(A)	91
Noise pressure level @ 7	dB(A)	74
Guaranteed noise level (LWA)	dB(A)	62



Installation data		
[50Hz] Exhaust gas flow @ PRP	m <sup>3</sup> /min	9.6
[50Hz] Exhaust gas temperature @ LTP	°C	530
[60Hz] Exhaust gas flow @ PRP	m <sup>3</sup> /min	12
[60Hz] Exhaust gas temperature @ LTP	°C	550



**ACP - Automatic Control Panel**

Mounted on the genset, complete with digital control unit (AC-03) for monitoring, control and protection of the generating set, protected through doors with lockable handle.

**CONTROL SECTION**

- ON/OFF selector switch
- Differential protection with internal switch
- 5A Battery charger.
- Potentiometer for voltage adjustment (internal)
- Alternator AVR (single plug wiring)
- Internal lighting with automatic switch on control section door
- Control unit ( AMF 26P)
  - Generating set voltage (3 phases).
  - Mains voltage.
  - Generating set frequency.
  - Generating set current (3 phases).
  - Battery voltage.
  - Power (kVA - kW - kVAR - Cos φ).
  - Hours-counter.
  - Engine speed r.p.m.
  - Fuel level (%).
  - Engine temperature

Comand and others:

- Four operation modes: OFF - Manual starting - Automatic starting - Automatic test.
- Pushbutton for forcing Mains contactor or Genset contactor.
- Push-buttons: start/stop, fault reset, up/down/page/enter selection.
- Remote starting availability.
- Acoustic alarm.
- Automatic battery charger.
- RS232 Communication port.
- Settable PASSWORD for protection level

Protections:

- Engine protections: low fuel level, low oil pressure, high engine temperature,
- Genset protection: under/over voltage, overload, under/over battery voltage, battery charger failure.

• Extra Instrumentation (analogue)

- Engine water temperature
- Engine oil pressure
- Fuel level meter
- Mechanical hour counter

**SOCKET SECTION**

- Multipin connector for LTS
- Two wires facility for remote start/stop
- Plug for auxiliary power supply
- Sochet Kit
  - 3P+N+T 400V 63A
  - 3P+N+T CEE 400V 32A
  - 3P+N+T CEE 400V 16A
  - 2P+T CEE 230V 16A
  - 230V 16A SCHUKO
- Each socket with its own circuit breaker
- Common differential protection for three phase sockets
- Each single phase provided with earth fault protection



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