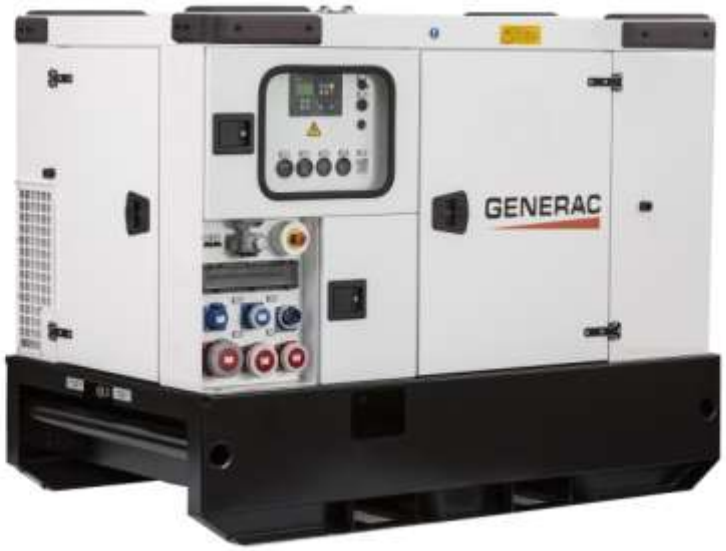
GENERAC | MOBILE PRODUCTS

GMR - 22Y



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 noiseemissions together with easy-touse and easy access for maintenance make these generator sets theideal solution for Rental companies.

Power Rating		
Frequency	Hz	50
Voltage	V	400/231
Power factor	cos φ	0.8
Phases		3
Standby power LTP	kVA	19.27
Standby power LTP	kW	15.42
MAX current	A	28
Prime power PRP	kVA	18.29
Prime power PRP	kW	14.63
MAX current	A	26

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 φ	0.8
Phases		3
Standby power LTP	kVA	19.27
Standby power LTP	kW	15.42
MAX current	A	48
Prime power PRP	kVA	18.29
Prime power PRP	kW	14.63
MAX current	A	46

Power supply 50Hz 230V Single Phase (with supplement VSS)		
Frequency	Hz	50
Voltage	V	230
Power factor	cos φ	1
Phases		1
Standby power LTP	kVA	15.50
Standby power LTP	kW	15.50
MAX current	A	67
Prime power PRP	kVA	14.00
Prime power PRP	kW	14.00
MAX current	A	61

Engine specifications		
Engine manufacturer		YANMAR
Model		4TNV88-BGPGE
Engine cooling system		Water
Nr. of cylinder and disposition		4 in line
Displacement	cm³	2190
Aspiration		Natural
Speed governor		Mechanical
Oil capacity	l	7.4
Coolant capacity	l	2.7
Electric circuit	V	12
ENGINE DATA	Hz	50
Operating Speed-Nominal	rpm	1500
Exhaust emission level		Stage IIIA
Specific fuel consumption @ 75% PRP	g/kWh	232
Specific fuel consumption @ 100% PRP	g/kWh	231

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 40-M5
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 40 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 40 is IP 23.
● Winding Protection Standard: for clean environments with relative humidity ≤ 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 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 1146 (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.

Genset Equipment Rental

CANOPY
Canopy painted in RAL9016 made up of modular panels with 1000h+ tested salt spray resistant zinced 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.
Exaust 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 refiling 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 LIGHTHING
Internal ligthing 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

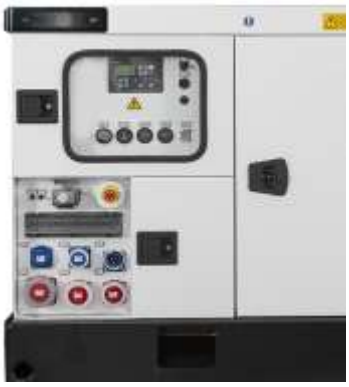
Autonomy		
[50Hz] Fuel consumption @ 75% PRP	l/h	3.59
[50Hz] Fuel consumption @ 100% PRP	l/h	4.76
[50hz] Running time @ 75% PRP	h	60.17
[50Hz] Running time @ 100% PRP	h	45.38

Noise level Rent 50Hz (2000-14)		
Guaranteed noise level (LWA)	dB(A)	90
Noise pressure level @ 7	dB(A)	73
Guaranteed noise level (LWA)	dB(A)	61

Installation data		
[50Hz] Exhaust gas flow @ PRP	m^3/min	3.5
[50Hz] Exhaust gas temperature @ LTP	°C	470

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	n	
3P+N+T CEE 400V 32A	n	1
3P+N+T CEE 400V 16A	n	1
2P+T CEE 230V 16A	n	1
230V 16A SCHUKO	n	1
Each socket with its own circuit breaker		√
Common differential protection for three phase sockets		√
Each single phase provided with earth fault protection		√