PROUDLY 100% AUSTRALIAN OWNED
MACFARLANE GENERATORS
ESTABLISHED 1949

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Macfarlane Generators PTY. LTD. ACN 006 849 074 ABN 74 006 849 074

GRW67P

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-to-use and easy access for maintenance make these generator sets theideal solution for Rental companies.

Power Rating		
Frequency	Hz	50
Voltage	V	400
Phases	№	3
Power factor	cos ϕ	0.8
Standby power LTP	kVA	66.00
Standby power LTP	kW	52.80
MAX current	A	95
Prime power PRP	kVA	60.00
Prime power PRP	kW	48.00
NOMINAL current	A	87

Ratings definition (According to standard ISO8528 1:2005)

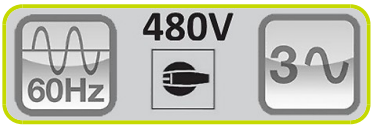
PRP - Prime Power:
It is defined as being the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures 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
Phases	№	3
Power factor	cos ϕ	0.8
Standby power LTP	kVA	66.00
Standby power LTP	kW	52.80
MAX current	A	166
Prime power PRP	kVA	60.00
Prime power PRP	kW	48.00
NOMINAL current	A	151

Power supply 50Hz 230V Single Phase (with supplement VSS)		
Frequency	Hz	50
Voltage	V	230
Phases	№	1
Power factor	cos ϕ	1
Standby power LTP	kVA	32.00
Standby power LTP	kW	32.00
MAX current	A	139
Prime power PRP	kVA	28.80
Prime power PRP	kW	28.80
NOMINAL current	A	125

Power supply 60Hz 480V Three Phase (with supplement DFS)		
Frequency	Hz	60
Voltage	V	480
Phase	№	3
Power factor	cos ϕ	0.8
Standby power LTP	kVA	75.30
Standby power LTP	kW	60.24
MAX current	A	91
Prime power PRP	kVA	67.45
Prime power PRP	kW	53.96
NOMINAL current	A	81



Power supply 60Hz 208V Three Phase (with supplement VSS)		
Frequency	Hz	60
Voltage	V	208
Phase	№	3
Power factor	cos ϕ	0.8
Standby power LTP	kVA	71.50
Standby power LTP	kW	57.20
MAX current	A	198
Prime power PRP	kVA	65.00
Prime power PRP	kW	52.00
NOMINAL current	A	180

Engine specifications		
Engine manufacturer		Perkins
Model		1104D-44TG2
Engine cooling system		Water
Nr. of cylinder and disposition		4 in line
Displacement	cm³	4400
Aspiration		Turbocharged
Speed governor		Electronic
Oil capacity	l	8
Lube oil consumption @ PRP (max)	%	0.15
Coolant capacity	l	16.5
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	232
[50Hz] Specific fuel consumption @ 100% PRP	g/kWh	235
[60Hz] Specific fuel consumption @ 75% PRP	g/kWh	246
[60Hz] Specific fuel consumption @ 100% PRP	g/kWh	243

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

Rotary type pump

Lube oil system

Wet steel sump with filler and dipstick

Filter

- Fuel filter
- Air filter
- Oil filter

Cooling system

- Mounted radiator
- Thermostatically-controlled system with belt driven coolant pump and pusher fan

Alternator Specifications		
Alternator		LEROY SOMER
Model		LSA 42.3 L9
Type		Brushless
Class		H
IP protection		23
Insulation Protection Systems		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 ≤ 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

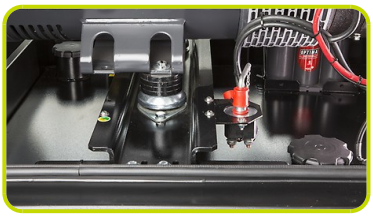
CANOPY
Canopy painted in RAL9016 made up of modular panels with 1000h+ tested salt spray resistant zinced metal sheet, with access doors on each side with high quality gaskets and lockable handles for easy maintenance and service.

SUPERSILENT
Soundproofing by means washable and fireproof soundproofing material, to get noise attenuation - max 75B(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.

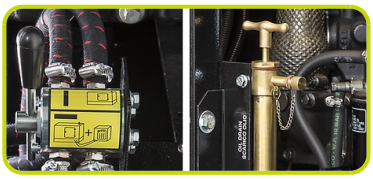
FUEL TANK
Integrated metal fuel tank complete with double fuel refiling point (one each side)

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



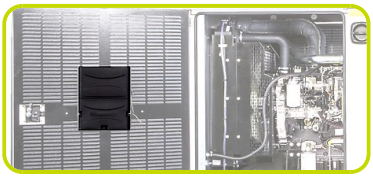
SINGLE LIFTING POINT

PLASTIC BUMPER
Protections for the transport and stocking

MANUAL BATTERY SWITCH

EARTH ROD
Earth stock with cable fixed inside the genset

DOCS HOLDER
Box intenal for documents, manuals and electrical drawings



Dimensional data		
Length	(L) mm	2400
Width	(W) mm	1200
Height	(H) mm	1650
Dry weight	Kg	1690
Fuel tank material		Metal
Fuel tank capacity	l	300

Autonomy		
[50Hz] Fuel consumption @ 100% PRP	l/h	15.58
[50Hz] Fuel consumption @ 75% PRP	l/h	11.60
[50hz] Running time @ 75% PRP	h	25.86
[50Hz] Running time @ 100% PRP	h	19.26
[60Hz] Fuel consumption @ 75% PRP	l/h	13.74
[60Hz] Fuel consumption @ 100% PRP	l/h	17.96
[60hz] Running time @ 75% PRP	h	21.83
[60Hz] Running time @ 100% PRP	h	16.70

Noise level 50Hz		
Guaranteed noise level (LWA)	dB(A)	90
Noise pressure level @ 1 m	dB(A)	73
Noise pressure level @ 7 m	dB(A)	61

Installation data		
[50Hz] Cooling air	m³/min	192.70
[50Hz] Exhaust gas flow @ PRP	m³/min	11.5
[50Hz] Exhaust gas temperature @ LTP	°C	560
[60Hz] Cooling air	m³/min	231.60
[60Hz] Exhaust gas flow @ PRP	m³/min	13.5
[60Hz] Exhaust gas temperature @ LTP	°C	598

Control panel availability	
MANUAL CONTROL PANEL	MCP
AUTOMATIC CONTROL PANEL	ACP
MODULAR PARALLEL PANEL	MPP

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.

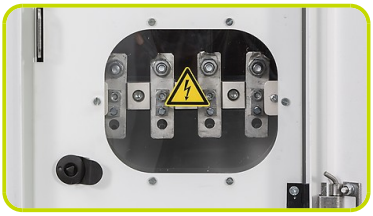
CONTROL SECTION
- ON/OFF selector switch
- Differential protection with internal switch
- 5A Battery charger.
- Potentiometer for voltage adjustment (internal)
- Alternator AVR (single plug wiring)

Control unit (AC-03)
- 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 - 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.

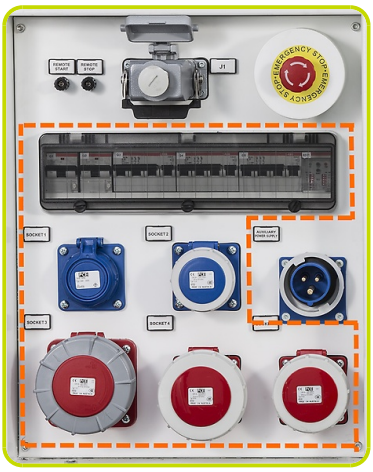
Extra Instrumentation (analogue)
- Fuel level meter
- Mechanical hour counter



POWER SECTION
- It integrates 4 poles modular circuit breaker suitably rated with thermal and magnetic overloads.
- Large and robust busbar with cables passage opening from the bottom for easy power cable connection.
- Provided with safety switch to trip circuit breaker if operator open the power section door to operate on the bus bar.

SOCKET SECTION

• Emergency push button		√
Two wires facility for remote start/stop		√
• Plug for auxiliary power supply		√
• Multipin connector for LTS		√
SUPPLEMENT - Only available when order		:
Socket Kit	Type	SPKA2
3P+N+T 400V 63A	n	1
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		•
Other Kit Socket combinations available		√



Sample image Only
Unit Supplied with AU Sockets