

Business Guard 14



GENERATOR RATING

Voltage	Hz	Phase	P.F.	Standby Amps	Standby ratings kW/kVA	Prime ratings kW/kVA
120/240	60	1	1	112/56	13.5/13.5	12/12

Performance data refer to standard reference conditions of ISO 8528: +77°F. 100m. ALT. relative humidity 30%. During running-in period the output increase by approx. 5% which is taken into consideration at delivery. Power reduction to DIN ISO 3046, standard values: Above 100m ALT approx. 1% per 100m, Above 77°F (50°C) approx 4% per 50°F (10°C).

SYNCHRONOUS ALTERNATOR

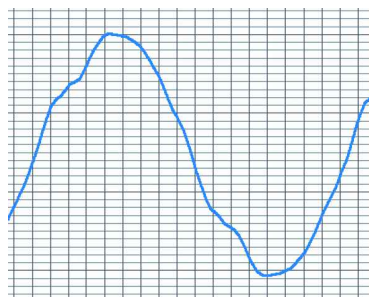
Manufacturer:	NSM
Type:	M 132 SB/4
Pole number:	4
Exciter type:	Condenser
Voltage regulator:	Auto regulator
Bearing number:	1
Coupling:	Direct
Voltage regulation 0 to 100% load:	+/-3.5%
Recovery time (20% volt dip) ms:	<400ms
Insulation class:	H/H
IP:	23
Waveform distortion:	Max 5.3%
Frame mounting:	SAE 5-6.5

- Compliance with CEI EN 60034-1, IEC 34-1, VDE 0530, UTE NF 51-111, BS 5000
- Impregnated windings with epoxy varnish TSM standards
- Generator allows as standard short circuit current of 300-400% of rated for up to 5 seconds.
- Good motor starting
- Brushless excites design
- For humid-saline climates

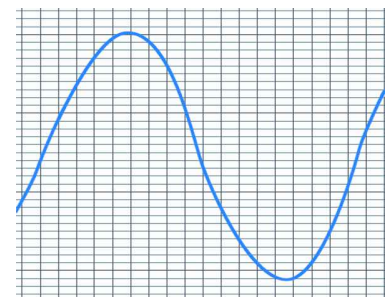
"QUALITY" SINE-WAVE

Max harmonic distortion 5.3%

Suitable for all electronics appliances.



ELECTROGENIUS power sine-wave with max. 5.3% harmonic distortion.



Normal utility power sine-wave with average 3% harmonic distortion.

ENGINE DATA

Rated output:	NA*	13.5 kW / 18.5 hp
	NB*	15 kW / 20.5 hp
Manufacturer:		LOMBARDINI
Model:		LWD 1404 Plus
Cylinder Arrangement:		4 x L
Displacement:		83.72 cu. in. (1.372 L)
Bore and Stroke:		2.95 x 3.06 in.(75 x 77.8 mm)
Compression ratio:		22.8
Rated RPM:		1800 Rpm
Piston Speed:		905 ft/min (4.6 m/s)
Frequency regulation, no load to full load:		0.2-0.4 %
Frequency regulation, steady state:		0.3 %
BMEP:		101.52 psi (7 bar)
Governor type:		Centrifugal
Cooling system:		Liquid coolant
Recommended battery:		74 Ah
Oil specification:		Diesel Multigrade 5W-40 100% synthetic, or similar specifications.
Easily accessible for engine service		Yes
Exhaust System		
Exhaust temperature		932° F (500° C)
Exhaust gas flow		12.15 gal/s (46 L/s)
Max back pressure		146.6 hPa
Emission		EPA Tier 2 - CARB certified
Fuel system		
Fuel consumption 100% load		1.09 gal/hr (4.1 L/h)
Fuel consumption 75% load		0.79 gal/hr (3 L/h)
Fuel consumption 50% load		0.55 gal/hr (2.1 L/h)
Fuel filter		Standard
Water fuel filter		Double standard
Total fuel flow		14.5 gal/h (55 L/h)
Oil System		
Total oil capacity w/filters		0.87 gal (3.3 L)
Oil pressure low idle		29.00 psi (2 Bar)
Oil pressure rated RPM		50.76 psi (3.5 bar)
Oil consumption 100% load		0.0031 gal/hr (0.012 L/h)
Air system		
Motor Dry air filter		Natural aspiration type with automatic control
Air intake		
Max intake restriction		25 hPa
Combustion air flow		5.28 gal/s (20.5 L/s)
Coolant System		
Max radiator & engine capacity		1.54 gal (5.85 L)
Water temperature		185° F (85° C)
Outlet water temperature		179.6° F (82° C)
Fan air flow		4.84 gal/min (18 l/min)
Engine heat rejection		12 kW

NA* : continuous rating overload capacity 6271 (ISO 3046/1- ICXN) : for continuous heavy duty with constant speed and load.(10%overload available for governing purposes only)
 NB* : rating no overload capacity 6271 (ISO 3046/1- IFN) : for continuous light duty with constant speed and variable load overload not admitted
 NA (ISO 3046/1- ICXN) NB (ISO 3046/1- IFN) rating refers to engine after run in with standard air cleaner and environment conditions of 68°F and 1 bar Max rating certified within 5%. Derating 1% approx. every 100 m . altitude and 2% approx. every 41°F beyond 68°F.

CONTROL PANEL

Microprocessor control panel with digital display.

Standard features:

- AC voltmeter
- AC ammeter
- Frequency meter
- kVA meter, kW meter
- kW/h meter
- Cosfi meter
- Elapsed Hours Run Meter
- Automatic function
- Manual function
- Acoustic alarms:
- Block function
- Short circuit protection
- Protection fuses
- Automatic factory-settings reprogram
- Over load protection
- 63 Amps circuit breaker
- Pre-heating motor
- Additional command for pump restocking
- Fuel level indicator
- Fuel reserve indicator
- Programmable weekly Auto Test
- Programmable day block
- Event log
- 80 Amps on board transfer-switch



- Fuel reserve
- Overload
- High temperature
- Air filter clogging
- Starting failure
- Oil service
- Mechanical failure
- Low oil pressure
- Low battery voltage
- High battery voltage
- Overspeed
- Under frequency
- Circuit breaker

Engine shutdown

- Oil pressure
- High water temperature
- Overspeed
- Over crank
- Air filter clogging protection
- Mechanical failure
- Overload

Engine parameters

- Fuel reserve
- Hours Run Meter
- Battery volts and ammeter with automatic battery charger

GENERATOR STANDARD FEATURES

- Emergency stop button
- Internal clock
- Communication via a RS485 for remote control and management
- Remote connection for emergency stop button
- Remote connection for dual alarm
- Remote connection for start function
- Remote connection for block function
- Anti-vibration mountings: standard rubber panel insulation from the floor
- Special sump pump connection for flood prevention
- Plated 20/10 rustproof treatment and varnish epoxy
- 74 Ah battery included
- Fuel tank 18.5 gal (70 lt)
- Enclosure IP 23
- Exhaust pipe: predisposed for connections for conveying outside exhaust fumes emitted by generator.

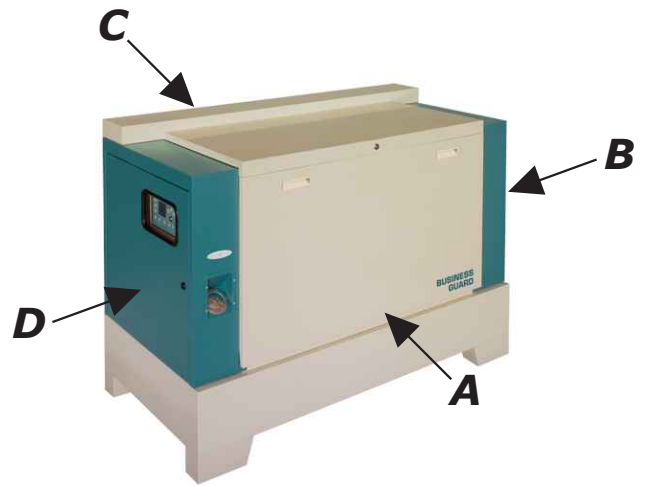
OPTIONS

Engine

- Oil drain extension
- Exhaust pipe for external connection
- Water heater for cold climates
- Oil heater for cold climates

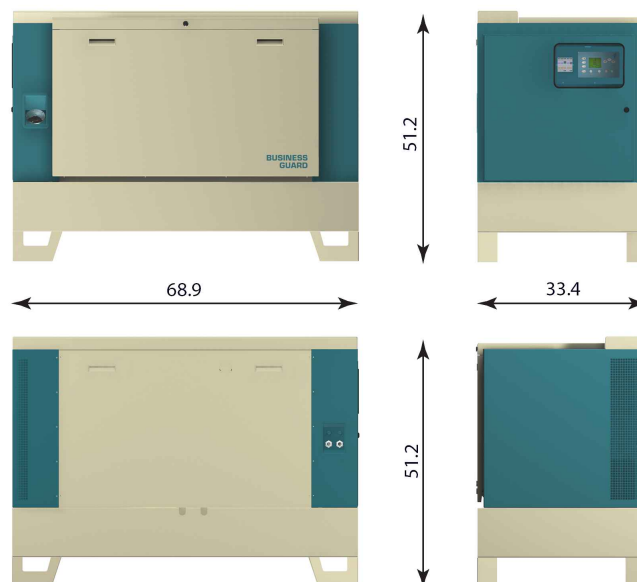
SOUND DATA

Position (23 feet)	75% load dB(a)	100% load dB(a)
A	53	56
B	53.5	56.5
C	52.5	54.5
D	53	56
Average	53	56



WEIGHT AND DIMENSIONS

Overall size l x w x h 68.9x33.4x51.2 in (175x85x130 cm)
Weight 1278 lbs (580 Kg)



PROFESSIONAL INSTALLATION REQUIRED

The generator set must be installed to meet current electrical, building and safety codes.

3 years/2000 hours WARRANTY