GENERAC | MOBILE PRODUCTS

GMN - 200V

Main Features		
Frequency	Hz	50
Voltage	V	400
Power factor	cos φ	0.8
Phase and connection		3

Power Rating		
Standby power LTP	kVA	196.00
Standby power LTP	kW	156.80
Prime power PRP	kVA	179.02
Prime power PRP	kW	143.22

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.

Engine specifications		
Engine manufacturer		Volvo
Model		TAD752GE
[50Hz] Exhaust emission level		Stage IIIA
Engine cooling system		Water
Nr. of cylinder and disposition		6 in line
Displacement	cm^3	7150
Aspiration		Turbocharged intercooled
Speed governor		Electronic
Prime gross power PRP	kW	166
Maximum gross power LTP	kW	184
Oil capacity	l	34
Coolant capacity		23.1
Fuel	l	Diesel
Specific fuel consumption @ 75%	g/kWh	216
Specific fuel consumption @ PRP	g/kWh	205
Starting system		Electric
Starting engine capability	kW	5
Electric circuit	V	24

ENGINE EQUIPMENT

Standards

The engine performance corresponds to ISO 3046, BS 5514 and DIN 6271. Ratings are based on ISO 8528. Engine speed governing in accordance with ISO 3046/IV, class A1 and ISO 8528-5 class G3

Engine and block

- Optimized cast iron cylinder block with optimum distribution of forces
- Keystone top compression rings for long service life
- Replaceable valve guides and valve seats

Fuel system

- Common rail
- Engine mounted fuel pre-filter with water separator
- Fine fuel filter of cartridge insert type
- Gear driven fuel feed pump

Lubrication system

- Rotary displacement oil pump driven by the crankshaft
- Deep front oil sump ,Oil filler on top, Oil dipstick, short in front
- Integrated full flow oil cooler, side-mounted

Cooling system

- Belt driven, maintenance-free coolant pump with high degree of efficiency
- Efficient cooling with accurate coolant control through a water distribution duct in the cylinder block
- Reliable thermostat with minimum pressure drop

Intake and exhaust system

- Two-stage air filter, with cyclone

Alternator Specifications		
Brand		Mecc Alte
Model		ECO38-1SN/4
Voltage	V	400
Frequency	Hz	50
Power factor	cos φ	0.8
Poles		4
Type		Brushless
Voltage regulation system		Electronic
Standard AVR		DSR
Voltage tolerance	%	1
Efficiency @ 75% load		92.6
Class		H
IP protection		23

Mechanical structure

Robust mechanical structure which permits easy access to the connections and components during routine maintenance check-ups.

Voltage regulator

Voltage regulation with DSR. The digital DSR controls the range of voltage, avoiding any possible trouble that can be made by unskilled personnel. The voltage accuracy is ±1% in static condition with any power factor and with speed variation between 5% and +30% with reference to the rated speed

Windings / Excitation system

Generator stator is wound to 2/3 pitch. This eliminates triplen (3rd, 9th, 15th …) harmonics on the voltage waveform and is found to be the optimum design for troublefree supply of non-linear loads. The 2/3 pitch design avoids excessive neutral currents sometimes seen with higher winding pitches. MAUX (Standard): The MAUX MeccAlte Auxiliary Winding is a separate winding within the main stators that feeds the regulator. This winding enables to take an overload of 300% forced current (short circuit maintenance) for 20 seconds. This is ideal for motor starting requirements.

Insulation / Impregnation

Insulation is of class H standard. Impregnation is made with premium tropicalised epoxy resins by dipping and dripping. High voltage parts are impregnated by vacuum, so the insulation level is always very good. In the high-power models, the stator windings undergo a second insulation process. Grey protection is applied on the main and exciter stator to give enhanced protection.

Reference standards

Alternator manufactured according to , and complies with , the most common specification such as CEI 2-3, IEC 34-1, EN 60034-1, VDE 0530, BS 4999-5000, CAN/ CSA-C22.2 No14-95-No100-95.

Genset equipment

BASE FRAME MADE OF WELDER STEEL PROFILE, COMPLETE WITH:
- Anti-vibration mountings properly sized
- Screwed support legs.

PLASTIC FUEL TANK WITH THE FOLLOWING COMPONENT:
- Filler neck
- Air breather (ventilation pipe)
- Minimum fuel level sensor
- Leak proof tray
- Leak detector sensor

ENGINE COMPLETE WITH:
- Battery
- Liquids (no fuel)
- Manual lube oil drain pump

CANOPY:
- Soundproof canopy made up of modular panels, realized with zinced steel as treatment against corrosion and aggressive conditions, properly fixed and sealed allowing a full weatherproof enclosure.
- Easy access to the genset for maintenance purposes thanks to: Wide lateral access doors fixed by stainless steel hinges and provided with plastic lockable handles and internal perforated galvanized steel-sheet; Detachable panels, with screws holes protected by rubber tap.
- Control panel protection door provided with suitable window and lockable handle.
- Lateral air inlet opening properly protected and soundproofed. Exhaust air outlet from the roof, trough wet section protected by proper grid.
- Single detachable lifting eye placed on the roof.

SOUNDPROOF:
- Noise attenuation thanks to soundproofing material
- Efficient residential silencer placed inside the canopy

Dimensional data		
Length (L)	mm	3400
Width (W)	mm	1250
Height (H)	mm	1250
Dry weight	kg	2549
Fuel tank capacity	l	350

Autonomy		
Fuel consumption @ 75% PRP	l/h	32.66
Fuel consumption @ 100% PRP	l/h	40.51
Running time @ 75% PRP	h	10.72
Running time @ 100% PRP	h	8.64

Noise level		
Guaranteed noise level (LWA)	dB(A)	94
Noise pressure level @ 7	dB(A)	65

Installation data		
Total air flow	m^3/min	252.48
Exhaust gas flow @ PRP	m^3/min	29.2
Exhaust gas temperature @ LTP	°C	450

Data Current		
Battery capacity	Ah	140
MAX current	A	282.91
Circuit breaker	A	320

ACP - Automatic control panel

Mounted on the genset, complete with digital control unit for monitoring, control and protection of the generating set, protected through door with lockable handle.

DIGITAL INSTRUMENTATION

- Generating set voltage (3 phases).
- Mains voltage.
- Generating set frequency.
- Generating set current (3 phases).
- Battery voltage.
- Power (kVA - kW - kVAr).
- Power factor Cos ϕ.
- Hours-counter.
- Engine speed r.p.m.
- Fuel level (%).
- Engine temperature (depending on model)

COMMANDS 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.
- DC system disconnection switch.
- Acoustic alarm.
- Automatic battery charger.
- RS232 Communication port.
- Settable PASSWORD for protection level.

PROTECTIONS WITH ALARM

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

PROTECTIONS WITH SHUTDOWN

- Engine protections: low fuel level, low oil pressure, high engine temperature,
- Genset protection: under/over voltage, overload, under/over battery voltage, battery charger failure.
- Circuit breaker protection: III poles.
- Earth Fault included in the control unit.

OTHERS PROTECTIONS

- Emergency stop button.
- Panel protected through door with lockable handle.

OUT PUT PANEL ACP

- Plinth row for connection from ACP to LTS panel. ✓
- Power cables connection to Circuit Breaker. ✓