



MGG210N2 - Natural Gas Generator

Natural Gas, Engine Generator 277/480VAC, 3 phase, 4 wire, 60 Hz, 1800RPM, to produce 177kW/221kVA (266 output amps) 125 degree C Prime Power rated.

Standard Features:

NG D111TIC 11.1L, 4-cycle, 6-cylinder, turbocharged, charge air cooled Engine
UCI274G-311, 277/480V 12 lead PMG Alternator

Tandem Axle Oil Field Trailer

InteliGen Controller - Unit to Unit paralleling feature set

300AT, 80% rated Thermal Magnetic Line Circuit Breaker

Skid-mounted in heavy-gauge aluminum sound attenuated enclosure

Dual Stage Air Cleaner

Critical Grade Silencer with Flex Connection

Coolant & Oil Drains Plumbed to skid base, w/ shutoff valves

16 gallon Ren Oil makeup unit

Auto change over Nat. gas to L.P. Liquid

Battery Disconnect Switch

Panel Light

Buck Transformer w/120VAC outlet receptacles

Starting Batteries, Rack and Cables

1 Year/1,000 Hour Prime Power Warranty

Mobile Gaseous Unit – Gaseous Fuel

Ratings Range – 60 Hertz Operation

Liquid Propane: kW 96 - 132
 kVA 96 - 165

Natural Gas: kW 96 - 200
 kVA 96 - 250

Magnum generators are available in a variety of power ratings and installation styles to meet the energy needs of the smallest businesses and the largest manufacturing facilities. All generator sets are designed to meet the specifications to ensure the fastest startup and dependable long-term operation. Rely on Magnum generators to provide the clean, quiet and environmentally friendly electrical power when you need it most. Emergency backup, standby, peak shaving or for any of your day or night electrical power needs, you can count on a dependable Magnum generator to provide the peace of mind and security you desire.

Standby Power Features

- ✓ Heavy-duty industrial gaseous fuel engine that meets the latest EPA emissions levels
- ✓ Brushless synchronous alternators with dynamic balancing and four pole construction
- ✓ Fully featured microprocessor based controller that's easy to use and field programmable for customized installations
- ✓ Generator sets are prototype tested and production tested to ensure easy startup
- ✓ Gen-set accepts rated load in one step
- ✓ Heavy duty construction that's designed for use in standby applications
- ✓ Manufactured in a dedicated and secure ISO-9001 certified facility
- ✓ Generator sets are backed by a world wide network of parts and service centers
- ✓ Optional agency approvals available including UL2200 and NFPA110
- ✓ Optional environmental enclosures available including weather resistant, sound attenuated, containerized, and walk-in models
- ✓ Full range of genset accessories and factory installed options available

Genset Ratings

Genset Model Number	Alternator	Voltage L-L / L-N	Phase	Hertz	150°C Rise Alternator Standby Rating – LP Fuel		150°C Rise Alternator Standby Rating – Natural Gas		125°C Rise Alternator Prime Rating – Natural Gas	
					kW / kVA	Amps	kW / kVA	Amps	kW / kVA	Amps
MGG210N2	UCI274E-311	208 / 120	3	60	129 / 161	448	136 / 170	472	128 / 160	445
		220 / 127	3	60	130 / 163	427	140 / 175	460	134 / 168	440
		240 / 120 (1)	3	60	129 / 161	388	136 / 170	409	128 / 160	385
		240 / 120 (1)	1	60	96 / 96	400	96 / 96	400	96 / 96	400
		240 / 139	3	60	130 / 163	391	150 / 188	452	143 / 179	431
		380 / 220	3	60	124 / 155	236	124 / 155	236	112 / 140	213
		416 / 240	3	60	129 / 161	224	136 / 170	236	128 / 160	222
		440 / 254	3	60	130 / 163	213	140 / 175	230	134 / 168	220
		480 / 277	3	60	130 / 163	196	150 / 188	226	143 / 179	215
	UCI274E-17	600 / 347	3	60	130 / 163	157	150 / 188	181	143 / 179	172
	UCI274H-311	208 / 120	3	60	132 / 165	459	199 / 249	691	176 / 220	611
		220 / 127	3	60	132 / 165	434	199 / 249	654	176 / 220	578
		240 / 120 (1)	3	60	132 / 165	397	199 / 249	599	176 / 220	530
		240 / 120 (1)	1	60	132 / 132	550	142 / 142	592	142 / 142	592
		240 / 139	3	60	132 / 165	397	200 / 250	602	177 / 221	533
		380 / 220	3	60	132 / 165	251	182 / 228	346	170 / 213	323
		416 / 240	3	60	132 / 165	229	199 / 249	346	176 / 220	306
		440 / 254	3	60	132 / 165	217	199 / 249	327	176 / 220	289
		480 / 277	3	60	132 / 165	199	200 / 250	301	177 / 221	266
	UCI274H-17	600 / 347	3	60	132 / 165	159	200 / 250	241	177 / 221	213
	UCI274H-06	240 / 120 (1)	1	60	130 / 130	542	180 / 180	750	156 / 156	650

NOTES: (1) Alternator connections have two circuits available for low voltage. Available current in each low voltage circuit is equal to high voltage current listed in table. For ratings and voltages not listed above refer to the Genset Selector. Standby ratings do not have an overload capability but can be used for the duration of the utility failure per ISO-3046, DIN6271 and BS5514. Magnum reserves the right to implement specifications or design changes without notice.

Engine Application Data

Engine Specifications

Manufacturer	NG Engine
Engine Model #	D111TIC
Engine Type	4 Cycle, 6 Cylinder
Induction System	Turbocharged/ Charge Air Cooled
Displacement, L (in ³)	11.05 (675)
EPA Emissions Certification	40 CFR Part 60 & 1048
HP at Rated Speed BHP (kW _m) NG	302 (225)
HP at Rated Speed BHP (kW _m) Propane	202 (151)
Rated RPM	1800
Bore and Stroke in (mm)	4.84x6.1 (123x155)
Compression Ratio	10.5:1
Air Filter Type	Dry
Governor Type / Model	Electronic
Governor Manufacturer	EControls
Freq Reg NL to FL	Isochronous
Freq Reg Steady State	+/-0.5%

Engine Lubrication System

Oil Pan Capacity gal (L)	6.6 (25.0)
Oil Capacity w/Filter gal (L)	7.6 (28.6)
Oil Filter Quantity	1
Oil Filter Type	Cartridge
Oil Cooler	Water Cooled
Recommended Oil	15W-40 Low Ash
Oil Press psi (kPa)	43.5 (299)

Engine Cooling System

Genset Max Ambient Temp °F (°C)	122 (50)
Engine Coolant Cap qt (L)	22 (25.0)
Engine + Radiator System Cap qt (L)	131.2 (149.0)
Water Pump Type	Centrifugal
Coolant Flow gpm (Lpm)	82 (310)
Charge Air Cooler Flow cfm (cmm)	555 (15.7)
Heat Rejected to Charge Air Cooler @ Rated kW; Btu/min (kW)	1460 (25.7)
Heat Rejected to Radiator @ Rated kW; Btu/min(kW)	11071 (194.7)
Max Restriction of Cooling Air in H ₂ O (kPa)	0.5 (0.124)

Engine Exhaust System

Exhaust Manifold Type	Wet
Exhaust Flow @ Rated kW cfm (cmm)	1425 (40.4)
Exhaust Temp (dry manifold) °F (°C)	1382 (750)
Min Back Pressure in H ₂ O (kPa)	0 (0)
Max Back Pressure in H ₂ O (kPa)	20.4 (5.1)
Exhaust Outlet Diameter in (mm)	3.5 (88.9)
Exhaust Outlet Type	Flange
Exhaust Catalyst	Included

Engine Electrical System

Charging Alternator Volts dc	24
Charging Alternator Amps	45
Grounding Polarity	Negative
Starter Motor Volts dc	24
Battery Recommendations	
Battery Volts dc	24
Min Cold Cranking Amps	900
Quantity Required	2

Ventilation Requirements

Cooling Airflow, scfm (cmm)	22300 (632)
Combustion Airflow, cfm (cmm)	400 (11.3)
Heat Rejected to Ambient	
From Engine, Btu/min (kW)	1877 (33)
From Alternator, Btu/min (kW)	836 (14.7)
Recommended Free Area Intake	
Louver Size, ft ² (m ²)	46.0 (4.28)

Engine Fuel System

Recommended Fuel	
Natural Gas min HHV (Btu/ft ³)	1015
Propane Vapor min HHV (Btu/ft ³)	2650
Fuel Supply Pressure in-H ₂ O (kPa)	7-11 (1.7-2.7)
Fuel Line At Engine	
Supply Line, npt	2

Propane Fuel Consumption – Standby Rating

100% Load cfph (m ³ ph)	704 (19.9)
75% Load cfph (m ³ ph)	600 (17.0)
50% Load cfph (m ³ ph)	404 (11.4)
25% Load cfph (m ³ ph)	255 (7.2)

NG Fuel Consumption – Standby Rating

100% Load cfph (m ³ ph)	2115 (59.9)
75% Load cfph (m ³ ph)	1648 (46.7)
50% Load cfph (m ³ ph)	1157 (32.8)
25% Load cfph (m ³ ph)	705 (20.0)

NG Fuel Consumption – Standby Rating

100% Load cfph (m ³ ph)	1925 (54.5)
75% Load cfph (m ³ ph)	1500 (42.5)
50% Load cfph (m ³ ph)	1053 (29.8)
25% Load cfph (m ³ ph)	642 (18.2)

Engine Output Deratings - Standby

Rated Temp	77°F
Rated Altitude	325 ft
Max Altitude	10,000 ft
Temperature Derate	-1% / 8° F
Altitude Derate	-3% / 1000 ft

Alternator Specifications

Alternator Type	4-Pole, Rotating Field	Automatic Voltage Regulator	
Exciter Type	Brushless	Wound Field	SX460
Excitation System		PMG	MX341, MX321
Shunt Connection	Standard	Voltage Regulation	No Load to Full Load
PMG	Optional	Std Regulator	+/- 1.5%
Insulation	per NEMA MG1	PMG Regulator	+/- 1%, +/- 0.5%
Material	Class H	Load Acceptance	100% of Rating, One Step
Standby Temp Rise	150°C		
Lead Connection	12 Lead, Reconnectable	Subtransient Reactance	
Stator Pitch	2/3	480V, Per Unit	14%, 11%
Amortisseur Winding	Full	TIF (1960 Weighting)	<50
Bearing	Single, Double Shielded	Line Harmonics	5% Maximum
Drive Coupling	Flexible Disk	Motor Starting kVA	30% Max Voltage Dip
Unbalanced Load	20% of Standby Rating	Alt @ 480V SkVA	UCI274E-311 450 kVA
		Alt @ 480V SkVA	UCI274H-311 730 kVA

Genset Controller Specifications

Magnum IntelliLite NT Features

Large back-lit graphical LCD Display
64x128 pixel resolution

6 LED Genset Status Indicators

Alarm	Red LED
Not In Auto	Red LED
Warning	Yellow LED
Running	Green LED
Ready / Auto	Green LED
Supplying Load	Green LED

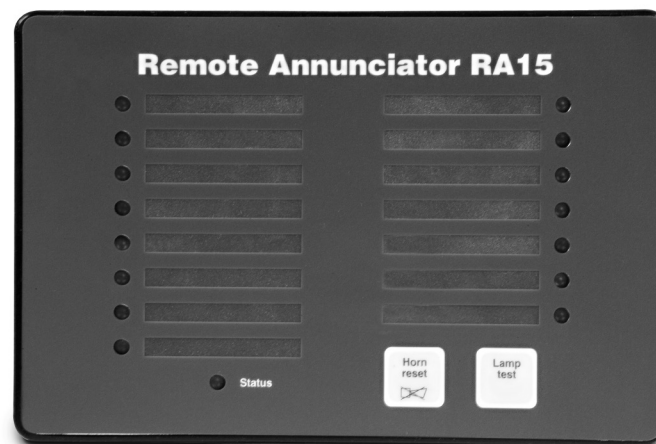
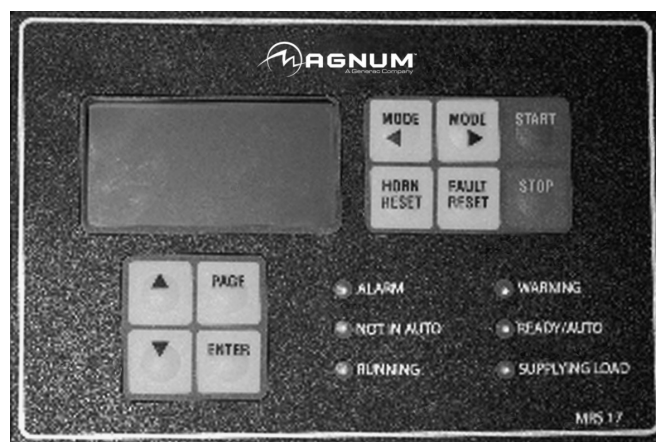
Sealed Membrane Panel to IP65

Push Buttons for Simple Control

Start, Stop, Fault Reset, Horn Reset, Mode, Page, and Enter Keys

Display Metering and Protection

Oil Pressure Warning / Shutdown
High / Low Coolant Temperature Warning
High Coolant Temperature Shutdown
Low Coolant Level Shutdown
Over Speed Protection
Battery Voltage Over / Under Warning
Running Hour Meter
Generator Under / Over Volts Warn / Shutdown
Generator Under / Over Freq Warn / Shutdown
Generator Over Current Shutdown
Generator Output Metering for V1-V3, I1-I3,
Hz, kW, kWh, kVAh



Additional Standard Genset Features

- ✓ Formed Steel Sub-Base
- ✓ Integral Vibration Isolation
- ✓ Sub-Base Lifting Eyes
- ✓ Unit Mounted Radiator
- ✓ Engine Mounted Fan
- ✓ Radiator Fan Guard
- ✓ Battery Charging Alternator
- ✓ Battery Rack and Cables
- ✓ Unit Mounted Control Panel
- ✓ Spin-On Oil Filter
- ✓ Enamel Finish
- ✓ One Set - Operation / Maintenance Manual
- ✓ Factory Tested Prior to Shipment
- ✓ Limited Warranty

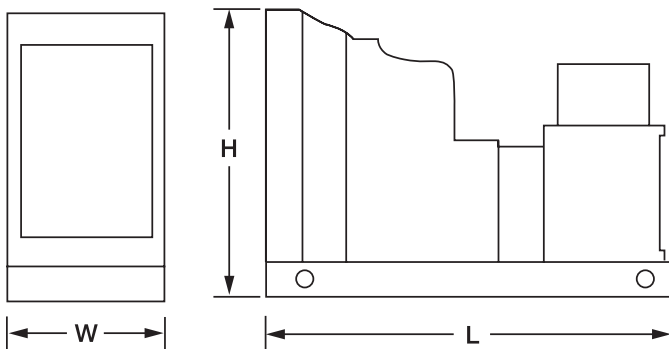
Optional Agency Approvals

- UL2200 (Review Option Availability)
- NFPA110 (Request Remote Annunciator)

Weight and Dimensions (Open Unit)

Weight – Wet lb (kg)	5420 (2458)
Overall Dimensions	Length x Width x Height
inches	131 x 60 x 75
mm	3327 x 1524 x 1905

Note: Drawing is provided for reference only.
Use engineering outline for installation planning.



Available Accessories and Options

Open Unit

- Industrial Silencer
- Residential Silencer
- Critical Silencer
- Hospital Grade Silencer
- Exhaust Flex Pipe
- Rain Cap
- Radiator Duct Flange

Enclosed Units

- Weather Resistant Enclosure
- Sound Attenuated w/Internal Critical Silencer
- ISO Container
- Walk-In Enclosure

Alternator Accessories

- PMG Exciter and AVR Upgrade
- Alternator Space Heater
- Exciter Field Circuit Breaker
- Alternator Drip Shield

Genset Accessories

- Voltage Adjust Potentiometer
- Starting Battery
- Battery Charger Auto/Float
- Auto/ Float Equalize Timer Manual Automatic
- Battery Heater
- Engine Coolant Heater
- Oil & Coolant Drain Valves (Engine/Radiator)
- Oil & Coolant Drain Extended to Base

Main Output Breaker

- Wall Mount
- Unit Mount

Transfer Switch

- Manual
- Automatic

Control Panel

- Remote Annunciator
- Remote Communications
- Remote E-Stop

Fuel System

- Fuel Strainer
- Dual Fuel Automatic Changeover

Vibration Isolators

- Elastomer Isolator
- Standard Spring
- Seismic Spring