

MX-###-###-### — CHP=COMBINED HEAT AND POWER
FUEL TYPE
N=NATURAL GAS
L=PROPANE
OUTPUT VOLTAGE
208=120/208
240=120/240
220=110/220
COLD AMBIENT OPTION
CA=COLD AMBIENT OPTION INCLUDED
BLANK=NO COLD AMBIENT OPTION INCLUDED



CONFIGURATIONS

Fuel Type	Natural Gas
	Propane
Output Voltage	120/208V 3PH 60 Hz
	120/240V 1PH 60 Hz
	110/220V 1PH 50 Hz
Oil System	Extended Run – 9000 hr service interval
Ambient Startup	Standard
	Cold Ambient
CHP	Up To 9.4kW Heat Recovery

POWER SPECIFICATIONS

Model	Maximum Output Rating @ 40°C						Max Unbalance	Engine Speed
	V	φ	HZ	Net Load kVA	Overload** kVA	COS φ	W	RPM
MX-#-208-##-###	*120/208	3	60	6.0	8.0	0.8	500	1800
MX-#-240-##-###	*120/240	1	60	6.0	8.0	1.0	500	1800
MX-#-220-##-###	*110/220	1	50	6.0	7.1	1.0	500	1500

* Phase balancing is required when 120VAC or 110VAC loads are connected.

**Overload condition occurs for 100 seconds or less at 40°C ambient. Lower load and cooler ambient conditions will increase the time of allowable overload conditions. Continuous overload will decrease engine life, reduce maintenance intervals, and may cause the electrical load to disconnect.

COMMUNICATION

Ethernet	RJ45
Protocols	Modbus RS-485, Modbus TCP/IP
Inputs (Dry Contact)	Remote ON/OFF, Remote Start, External ESD, Alarm to PLC x4 (18-22 AWG)
Outputs (Dry Contact)	Alarm To SCADA, Out of Service, Load Status x3 (18-22 AWG)
Local Monitoring	4x20 OLED, 5 Button Keypad Control
Remote Monitoring	IoT platform to monitor MX generators
Email Alerts	Alert users for important system information (requires IoT subscription)

OPERATING MODES

Local	System on/off switch, generator start/stop buttons, ESD push button
Remote	Dry contacts – System on/off, generator start/stop, ESD, alarms
Manual	Generator starts and stops only through local or remote command
Auto-Standby	Generator starts and stops automatically when not in use to maintain battery voltage and engine temperature. Otherwise, unit runs normally while in use

ENVIRONMENTAL SPECIFICATIONS

Sound	78 dB(A) or less @ 1 m 71 dB(A) or less @ 3 m
Ambient Rating (Continuous)*	Non-shaded: -40°C (-40°F) to 44°C (111°F) Shaded: -40°C (-40°F) to 50°C (122°F) fully shaded Power derate required above 44°C (111°F) or above 50°C (122°F) fully shaded
Minimum Ambient (Startup)**	-5°C (23°F) without Cold Ambient configuration -40°C (-40°F) with Cold Ambient Configuration or running in Auto/Standby mode
Altitude	Ratings are tested at 1,047 m (3,435 ft) asl. Contact GPT for more information.

*Contact GPT for operation conditions below -40°C (-40°F) and above 44°C (111°F) or 50°C (122°F) fully shaded

**For all configurations, Auto/Standby mode will keep the engine above 5°C (23°F) so it can start at any time. Cold startup may require an external 120V AC power source to heat the engine block.

FUEL SPECIFICATIONS

		Natural Gas (MX-N-###-##-###)			Propane (MX-L-###-##-###)		
		-	Min	Max	-	Min	Max
Inlet pressure (Standard)	psig	-	2	5	-	2	5
	kPag	-	13.8	34.5	-	13.8	34.5
Inlet pressure w/ Regulator	psig	-	10	28	-	10	28
	kPag	-	68.9	193.1	-	68.9	193.1
Fuel BTU (LHV)*	BTU/scf	-	872	1066	-	2059	2523
	MJ/sm3	-	32.5	39.7	-	76.7	94.0
Fuel BTU (HHV)*	BTU/scf	-	966	1181	-	2226	2728
	MJ/sm3	-	36.0	44.0	-	82.94	101.64
Composition	%	[CH4]	80%	99%	[C3H8]	90%	100%
	%	[N2+CO2]	0%	10%	[C3H6]	0%	5%
	PPMv	[H2S]**	0	2 avg.	-	-	-
	PPMv	Total Sulphur	0	50	Total Sulphur	0	50
	Notes	Methane Number must be > 50. Gas shall not contain any liquids. Gas shall not contain any particulates. H2S must average 2 PPMv or less, and not exceed 4 PPMv at any time.			HD-5 Consumer Grade Propane or equivalent. Propane may need additional heating in cold temperatures to maintain vapor pressure.		
Fuel Consumption (HHV) and Flow Rates***	120/208V 3PH 60 Hz	kW	8.9	26.3	kW	8.6	24.4
		BTU/h	30,500	89,700	BTU/h	29,400	83,100
		SCFD	700	2,057	Gal/day	7.8	22.2
		Sm3/d	19.8	58.3	L/day	29.6	83.9
	120/240V 1PH 60 Hz	kW	9.3	27.2	kW	9.0	25.2
		BTU/h	31,800	92,900	BTU/h	30,600	86,100
		SCFD	730	2,130	Gal/day	8.2	23.0
		Sm3/d	20.7	60.3	L/day	30.9	86.9
	110/220V 1PH 50 Hz	kW	8.0	26.7	kW	7.6	24.7
		BTU/h	26,300	92,000	BTU/h	26,000	84,200
		SCFD	623	2,088	Gal/day	6.9	22.4
		Sm3/d	17.6	59.1	L/day	26.3	84.9

*Contact GPT for fuel BTU that are outside of the fuel specifications range

**If H2S is present in the gas stream, consult GPT before installation. An H2S removal system may be required. H2S must average 2 PPMv or less, and not exceed 4 PPMv at any time.

*** Flow rates calculated using Natural Gas HHV = 39.0 MJ/sm3, and Propane Gas 95.8 MJ/sm3. Propane gas consumption is converted to liquid consumption. Min fuel consumption is at 0 kVA net load, max consumption is at 6.0 kVA net load.

Consumption will be higher than maximum if MX is overloaded.

ENGINE SPECIFICATIONS	
Prime Mover	Engine, Inline 3 cylinder, 4-Cycle Liquid Cooled, OHV Gear Drive
Fuels	Natural Gas or Propane (LPG)
RPM	1800 RPM or 1500 RPM
Max Shaft Output	NG: 11.7 kW LPG: 13.6 kW
Displacement	953 cc
Bore x Stroke	72 x 78 mm
Engine Oil	Mobil Pegasus 1 SAE 15W40
Engine Air Filters	Primary Radial and Safety Radial

ALTERNATOR SPECIFICATIONS	
Alternator	Brushless Synchronous with AVR 4 Poles
Insulation Class / Efficiency	H / 84.4%
THD	<3%
Protection	IP21
Rated Power, 3-PH at 60 Hz	12.0 kVA
Rated Power, 1-PH at 60 Hz	9.0 kVA
Rated Power, 1-PH at 50 Hz	7.5 kVA
Overload	110% for one hour in a 6 hour cycle

FUEL INTERFACE	
Customer Interface	1/2" Tube Union
Inlet Pressure*	2-5 PSI (Standard)
<i>Contact GPT for pressures outside of normal range</i>	10-28 PSI (Regulator Option)
Regulator Option	Includes ball valve, regulator, pressure gauge

ELECTRICAL INTERFACE	
Customer Interface	4x 10 AWG 3-PH, 3X 10 AWG 1-PH
Customer Ground lug hole size	7/16" DIA [11mm]
Cable Gland size	3X-1 3/8" [35mm] hole for 1" Trade size conduit connection
Battery type	2X Sealed AGM deep cycle 12V DC 100-105 AH
Emergency Stop	Normally closed E-Stop

COOLING SYSTEM	
Cooling System	Fan Cooled Aluminum Radiator
Coolant Pump	Brushless 24V DC Centrifugal Pump
Coolant Fan	2X- 280x86mm, 24V, DC Axial fans
Coolant Type	Volvo Penta VCS or VCS2 Ethylene Glycol
Coolant Ratio	60/40 Ethylene Glycol/Water
Max Coolant Volume (mixed)	10 Liters (2.64 US gallons)

CONSTRUCTION	
Lifting Eyes	Optional
Engine Enclosure	Steel, Powder Coated Grey, Polyurethane Foam Insulation UL-94 HF-1
Engine Access	Door Access and Removable panels, tools required
Electrical Panel	Type 4, Steel, Powder Coated Grey
Electrical Panel Interface	ESD, On/Off, Start/Stop, Local/Remote, Manual/Auto, Status/Alarm LED
Electrical Panel Access	Door Access, tools required, LED display and breakers on inside
Enclosure Fans	2X- 280x86mm, 24V, DC Axial fans
Enclosure Filter	12x12x2" MERV 9 Pleated Filter

EMISSIONS

Fuel	CO ₂ e (g/kW-hr)	CO ₂ e @ 6 kVA (tonnes/year)
Natural Gas	820.7	52.9
Propane	992.5	64.0

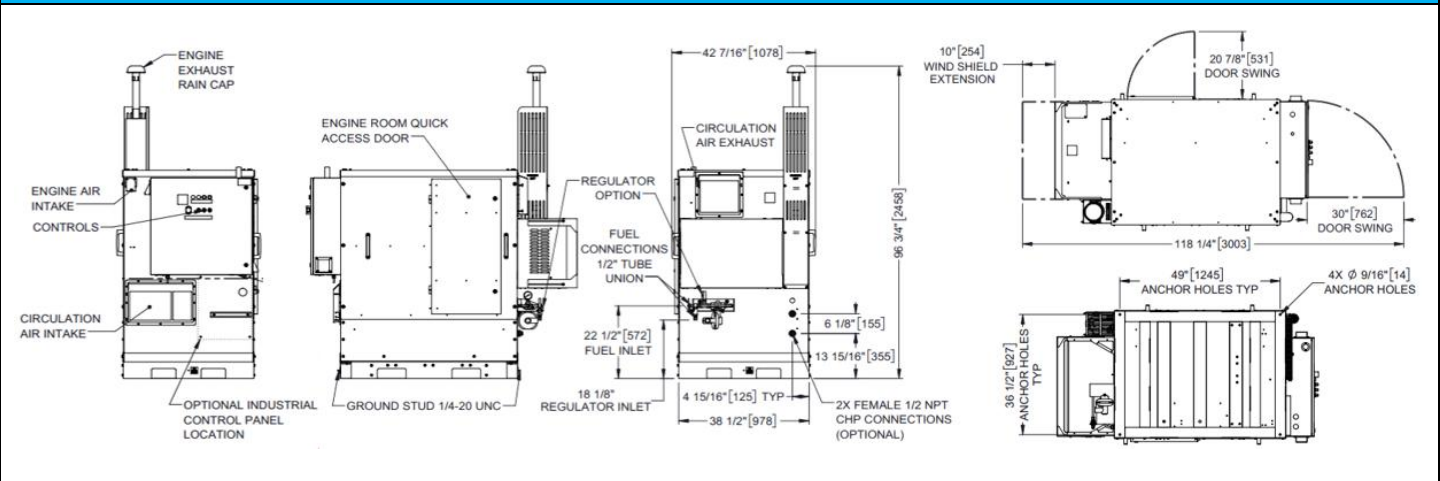
For emissions measured in g/kW-hr, note that kW refers to the shaft power output of the engine.

Emissions were measured and calculated on an 1800 RPM unit using a G2 test cycle using ISO 8178-G2 test modes and 40 CFR 1048.505 weighting. Results include deterioration factors calculated per 40 CFR 1054.245(c).

CERTIFICATIONS

Safety	 Conforms to ANSI/CAN/UL/ULC STD 2200 Stationary Engine Generator Assemblies Control Number: 5024343
Emissions	Certificate of Conformity to EPA 40 CFR Part 1054 Small Nonroad Spark-Ignition Engines & Equipment Engine Family: TGPPS.9532MX (2026) Rated Fuels: Natural Gas and Propane

DIMENSIONS AND WEIGHT



Overall dimensions	90" x 42 1/2" x 96 3/4"
Weight (including fluids)	1610 lbs. [730kg]
Foundation Bolt pattern	49" x 36 1/2" x 9/16" DIA HOLE