



Model: TG80



Shown with optional features.

Ratings Range — 60 Hertz Operation

Standby: kW 80
 kVA 100

FEATURES

- Single source responsibility for the generator set and accessories.
- Prototype and production tested to insure one step load acceptance per NFPA 110.
- Two year limited warranty on generator sets and accessories. Extended warranties also available.
- Unit conforms to CSA, NEMA, EGSA, ANSI and other standards.
- Heavy duty 4 cycle industrial engine for reliability and fuel efficiency.
- Brushless rotating field generator with class H insulation.
- Heavy duty steel base with integral vibration isolators.
- EPA Certified Engine.

GEN SET RATINGS

Genset Model Number	Alternator	Voltage L-N / L-L	Phase	Hertz	Natural Gas 130° Rise Standby Rating		LP Gas 130° Rise Standby Rating	
					kW / kVA	Amps	kW / kVA	Amps
TG80	362CSL1604	277/480	3	60	80/100	120	N/A	N/A
		139/240	3	60	80/100	241	N/A	N/A
		127/220	3	60	80/100	262	N/A	N/A
		240/416	3	60	80/100	139	N/A	N/A
		120/208	3	60	80/100	278	N/A	N/A
		120/240	3	60	80/100	241	N/A	N/A
		220/380	3	60	80/100	142	N/A	N/A
	120/240	1	60	66/66	275	N/A	N/A	
	363CSL1617	120/240	1	60	80/80	333	N/A	N/A

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor.
 STANDBY RATINGS: Standby ratings apply to installations served by a reliable utility source. The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-3046/1, BS 5514, AS 2789, and DIN 6271.
 PRIME POWER RATINGS: Prime power ratings apply to installations where utility power is unavailable or unreliable. At varying load the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528/1, overload power in accordance with ISO-3046/1, BS5514, AS2789, and DIN 6271. For limited running time and base load ratings consult the factory. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.
 GENERAL GUIDELINES FOR DERATION: Altitude: Derate 0.5% per 100m (328 ft.) elevation above 1000m (3279 ft.) Temperature: Derate 1.0% per 10°C (18°F) temperature above 40°C (104°F).



Application and Engineering Data

Basic Technical Data

Manufacturer	General Motors
Model	Vortec 5.7 L
Number of cylinders	8
Cylinder arrangement	Vertical in-line
Cycle	4
Induction system	Turbocharged
Compression ratio	9.1:1
Bore	4.00 in (101.6 mm)
Stroke	3.48 in (88.4 mm)
Cubic capacity	350 cu in (5.7 L)
Piston speed	1044 ft/min (318 m/min)
Main bearings: qty and type	5, M400 Copper Lead
Governor type	Electronic
Rated rpm	1800
Max power at rated rpm	133 hp (99 kW)

Engine power at Standby rating	N/A
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	± 0.5%
Frequency	Fixed
Air cleaner type	Dry

Exhaust System

Exhaust manifold type	Dry
Exhaust flow at rated kW	670 cfm (18.9 m ³ /min)
Exhaust temperature at rated kW	1200 °F (649 °C)
Maximum allowable back pressure	3.0 in (10.2 kPa)
Exhaust outlet size at engine hookup	N/A

Cooling System

Ambient temperature	122 °F (50 °C)
Engine jacket water capacity	1.8 gal (6.8 L)
Radiator system capacity, including engine	6.0 gal (22.5 L)
Engine jacket water flow	38 gpm (144 Lpm)
Heat rejected to cooling water at rated kW	3540 Btu/min (62 kW)
Max restriction of cooling air, intake and discharge side of radiator	0.5 H ₂ O (0.125 kPa)

Lubrication System

Type	Full Pressure
Oil pan capacity	5.0 qt (4.7 L)
Oil pan capacity with filter	6.5 qt (6.2 L)
Oil filter: qty and type	1, Cartridge

Electrical System

Ignition system	Individual Coil, Near Plug Ignition
Battery charging alternator:	
Ground	negative
Volts	12
Ampere rating	70
Starter motor rated voltage	12
Battery, recommended cold cranking amps (CCA):	
Qty rating for -18 °C (0 °F)	1,630
Battery voltage	12

Operation Requirements

Radiator-cooled cooling air, m³/min (scfm) ‡	5500 scfm (156 m ³ /min)
Combustion air	237 cfm (6.8 m ³ /min)
Heat rejected to ambient air:	
Engine	2700 Btu/min (47 kW)
Alternator	825 Btu/min (14.5 kW)

Fuel System

Fuel Type	Natural Gas
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Fuel Consumption

<u>Natural Gas</u>	
100% Load	1185 cfh (33.6 m ³ /hr)
75% Load	981 cfh (27.8 m ³ /hr)
50% Load	777 cfh (22.0 m ³ /hr)
25% Load	573 cfh (16.2 m ³ /hr)

Generator Controller Options



- Dashboard Style LCD Panel
- NFPA 110
- SAE J1939 ECU Communications
- Load Share Synch Features
- Metering, Data Trending, Alarms
- Engine Status Indicators
- Fuel Consumption
- CanBus, ModBus
- Ethernet Communications
- Remote Contacts Form C, RS 232/485



- Internet Bridge Module
- Internet Connection & Web Browser
- Remote Access & Control
- IntelliMonitor Network Management
- SNMP, PC SCADA
- Site Overview & Statistic Settling
- Automatic Downloads, Report Writer
- Receive Emails or IM Text
- CAT 5e, RS232/485, RJ 45
- Ethernet or Dial Up Connection
- Fleet Scalability

Alternator Specifications

Manufacturer	Marathon	<ul style="list-style-type: none"> • NEMA MG1, IEEE, AND ANSI standards compliance for temperature and motor starting. • Sustained short-circuit current of the rated current for up to 10 seconds. • Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field. • Self-ventilated and dripproof construction. • Superior voltage waveform from a two-thirds pitch stator and skewed rotor. • Linkboards • Optimized Electrical Design • Enhanced Ventilation • Fully Guarded • Heavy Duty Bearings
Type	Ext. Voltage Regulated, Brushless	
Gen Frame	MAGNAPLUS	
Insulation	NEMA	
Material	Class H	
Temperature Rise	130 °C, Standby	
Hertz	60	
Phase	3	
RPM	1800	
Exciter	Rotating	
# Leads	12 Reconnectable or 4 Single Phase	
PF	0.8	
Ambient	40°C	
Coupling Single Bearing	Flexible	
Amortisseur Windings	Full	
Cooling Air Volume	250 CFM	
Peak Motor Starting	30% Voltage Dip, 175 skVA	
Voltage Regulation no-load and full-load	1 Phase Sensing 1% Optional 3 Phase Sensing 1/2%	

STANDARD FEATURES

- Heavy Duty Steel Base
- Vibration Isolators
- Oil Drain Valve with Extension
- Battery Rack
- Battery Cables
- High Ambient Unit Mounted Radiator
- Battery Charging Alternator
- Factory Paint
- Factory Test Prior to Shipment
- 2 Year Warranty
- Owners Manual

AVAILABLE ACCESSORIES

OPEN UNIT

- Narrow Skid Base
- Radiator Duct Flange
- Ship Loose Flex Exhaust
- Ship Loose Critical Silencer

ENCLOSED UNIT

- Wide Skid Base
- Standard Enclosure With Internal Silencer
- Sound Attenuated Enclosure With Silencer
- Load Center With Lights and GFI Receptacle

CONTROLLER

- IntelliLite Model IL-NT-MRS19
- Ethernet Bridge
- Remote Annunciator

MISCELLANEOUS

- Flexible Fuel Lines
- Coolant Drain Kit
- Water Jacket Heater
- Oil Pan Heater
- Generator Strip Heater
- Battery
- Battery Charger
- Pad Type Battery Heater
- Battery Heater Blanket with Thermostat
- Line Circuit Breaker

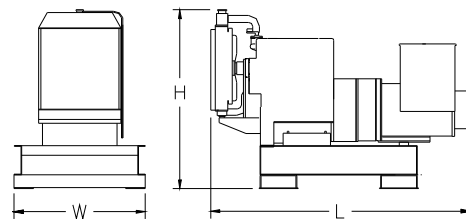
WARRANTY

- 3 Year Warranty
- 5 Year Warranty

WEIGHTS AND DIMENSIONS

OVERALL SIZE, L x W x H, in.: 96 in x 46 in x 62 in
WEIGHT: 2406 lbs.

Note: Dim and weights reflect standard open unit with no options



Note: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

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