



# MOBILE GENERATION MG80

Introducing CoolTech's in-chassis integrated Mobile Generation (MG) system.

## Mobile Generation

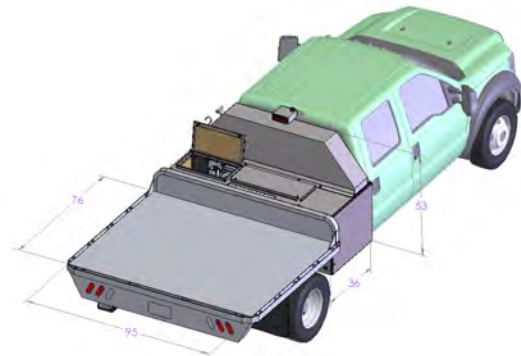
CoolTech's MG80 system utilizes the vehicle's engine as the prime mover for driving the generator. It offers a significant weight savings (3,500-lb weight savings compared to a tow behind generator) plus the ability to tow a trailer. Not needing to tow a trailer behind the generator results in up to a 50% mileage improvement.

## Retrofitable & Applicable Trucks

The MG80 is retrofitable. It can be installed on new or existing trucks. No permanent modifications are necessary and the MG80 kit can be un-installed returning trucks to its unmodified condition

The MG80 kit can retrofit all Ford F350 thru F550 Trucks meeting the following requirements:

- Chassis Cab
- Crew Cab
- Diesel Engine
- Two- or four-wheel drive



## Generator Features:

- Generator type: brushless alternator, synchronous, silent 4-pole
- Stator: 12-wire, 2/3 pitch (low third harmonic), Class H Insulation
- Generator excitation is provided through the digital voltage regulator by both voltage and current source windings in the generator. This dual-source excitation system helps the generator recover voltage during applications of large loads to the generator as additional excitation is provided from the current source winding during a heavy-load application.
- Voltage selection: via the 3-position rotary switch
  - 3-phase voltages: 208, 220, 240, 416, 440, 480
  - 1-phase voltage: 120, 139, 208, 220, 240, 277
- Single-phase receptacles are powered in all main voltage configurations
- Voltage regulation:  $\pm 0.5\%$
- Total harmonic distortion:  $< 5\%$
- Full-feature generator panel, just like a tow-behind generator. However, it has a superior user interface via a touchscreen Human Machine Interface (HMI).

**Technical features****(common to all MG models):**

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  - 1-phase voltage: 120, 139, 208, 220, 240, 277
  - Single-phase receptacles are powered in all main voltage configurations
- Voltage regulation:  $\pm 0.5\%$
- Current transformer protected
- Digitally adjustable voltage
- Circuit breakers for single-phase receptacles
- Single-phase receptacles are powered during all main voltage configurations.
- Total harmonic distortion:  $< 5\%$
- Power factor: 0.8
- Generator driven through the vehicle's transmission. At low loads, can be at low speeds and not at 1,800 rpm.
- Full-feature generator panel, just like a tow-behind generator. However, it has a superior user interface via a touchscreen Human Machine Interface (HMI).

**MG SYSTEM SPECIFICATIONS**

Model	MG80
<b>Output:</b>	
3-Phase: Standby (kVA/kW) — 60 Hz	79.5 / 63
3-Phase: Prime (kVA/kW) — 60 Hz	75 / 60
1-Phase: Standby (kVA/kW) — 60 Hz	47.7 / 38.2
1-Phase: Prime (kVA/kW) — 60 Hz	45/36
<b>Size and Weight:</b>	
Weight (lb)	1076
Bed Space (occupied)	—
<b>Fuel Consumption and Run Time:</b>	
Fuel Consumption (gph) — @ Standby	6.3
Total Fuel Capacity (gallons)	120
Approximate Run Time @ Standby	19.3
<b>AC Distribution</b>	
Main Breaker Rating (Amp)	225
120 V — 20-Amp Duplex	2
240 V — 50-Amp Twist Lock	3

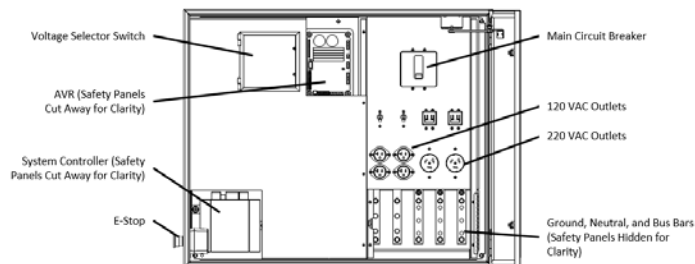
## Control System

- Fully integrated control system with a 32-bit microprocessor
- Integration with vehicle via the CAN bus
- The digital voltage regulator interfaces with the vehicle CAN bus to provide both in-cab and out-of-cab viewing of the generator operating parameters and vehicle operating parameters
- Vehicle operating parameters displayed include engine speed, engine temperature and transmission status
- Generator operating parameters displayed include line voltage, phase current, real power, reactive power and load power factor

## Generator Panel

The CoolTech's under-chassis integrated Mobile Power generation system has a full-feature generator panel, just like a tow-behind generator. However, it also has a superior user interface via a touchscreen **tablet**. Contrd features include the **tablet**, USB port, system reset button and main breaker, which are conveniently located for the user.

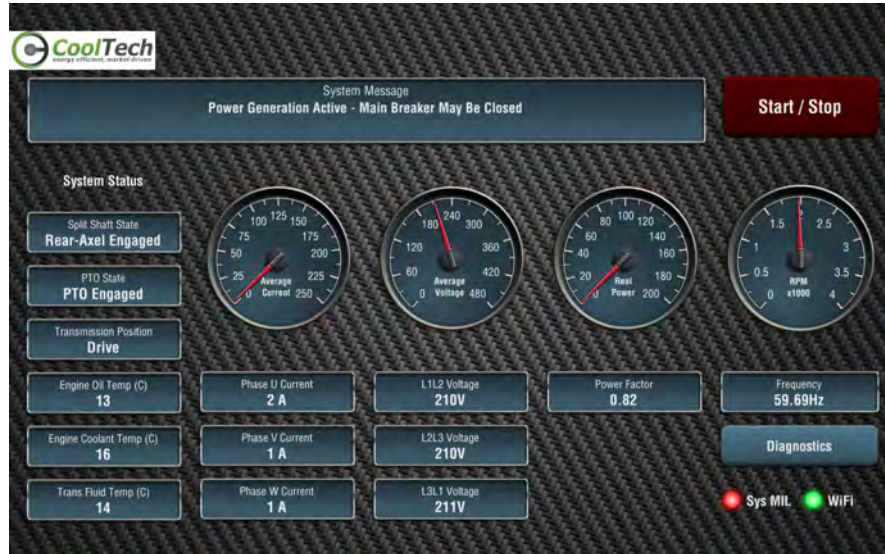
All users are protected from exposure to high voltage by a dead-front safety panel. Generator-output connection lugs are provided for connecting heavy-duty cables. The panel door is lockable and interlocked to prevent entry to the panel when the system is energized. A separate compartment is provided for standard 120 VAC, and 240 VAC NEMA receptacles are provided for quick connection of cables and tools.



## USER INTERFACE



- Mobile color display tablet with intuitive touchscreen interface
- Display portable for true ease of internal and external use
- Ruggedized IP-67 enclosures
- Convenient display of both generator and vehicle information
- CAN bus communication controls voltage regulator settings and control of the 3-position automated rotary switch
- Multilevel password protection for operators, fleet managers and expert users
- Software control allows the user to engage the system from the cab
- Integrated safety checks to prevent dangerous operation
- User-adjustable brightness and display timeout
- Firmware updatable



### Telematics — Remote Control and Monitoring

- Fleet management
- Vehicle tracking
- System diagnostics with push alerts to any computer and mobile device
- Remote monitoring via the same user interface implemented on the onboard display
- Fuel management (monitoring fuel consumption and refill schedule)
- Automated refill notifications
- Motor pool/daily rental
- Energy metering for accurate billing/cost monitoring
- Maintenance scheduling and tracking
- Automated maintenance notifications
- Data logging and analysis for fleet use optimization
- Geofencing
- Remote system disable to prevent unauthorized use
- Recover stolen vehicles

### Find out more.

Cooltech has a better answer in mobile power. A game-changing answer. Contact us today for more information.

**ENERGY EFFICIENT.  
MARKET DRIVEN.**