THERMAL SYSTEM
OEM & RETROFIT TRANSIT BUS/MOTOR COACH APPLICATIONS

MINI-HYBRID

MINI-HYBRID GEN IV
MINI-HYBRID GEN III

MINI-HYBRID® BENEFITS:
- Curbside Quiet
- Less Maintenance
- Qualifies for FTA Funding
- Delivers More Power to the Wheels
- Diesel, CNG, LNG, & Hybrid Applications
- Improved Fuel Economy & Reduced Emissions
- Increased Safety Through Hydraulic Fluid Elimination

BRUSHLESS ALTERNATORS
- Air Cooled
- Power 450, 290 Amps @ Engine Low Idle / 450 Amps Max
- Power 535, 325 Amps @ Engine Low Idle / 535 Amps Max

EMP
(906) 789-7497
emp-corp.com
2701 N. 30th Street - Escanaba, MI 49829
## PRODUCT SPECIFICATIONS

### MINI-HYBRID

#### COOLING SYSTEM FEATURES
- Thermal Management Controller
- EMP FIL-15 28 Volt Pusher Fans with Integrated Controllers
- Radiator
- Charge Air Cooler
- Powdercoated Steel Frame & Fan Shroud
- Hybrid Cooler
- Wiring Harness
- Adjustable Door Seals

#### INSTALLATION KITS
- Power Cables, Can Interface Cable, Ignition Signal Wire
- Power Distribution Center with Main Fuse & Cable Tie-downs
- Power Steering Reservoir, Fittings & Brackets
- Kit Mounting Brackets & isolation Grommets
- Fan Reversal & Diagnostics LED Panel

#### CHARGING SYSTEM KITS
- brushless Alternator - 535 Amps 28 VDC/450 Amp 28 VDC
- Cooling Air Duct & Mounting Bracket
- Voltage Regulator
- Voltage Regulator Harness
- Oil Port Block-off Kit

#### AVAILABLE MINI-HYBRID THERMAL SYSTEM KITS
- Engines: Cummins, DDC, John Deere, Doosan, Caterpillar
- Fuels: Diesel, CNG, LNG, Hybrids
- OEM & Aftermarket Applications:
  - New Flyer
  - Gillig
  - NABI
  - Nova
  - Orion
  - MCI
  - Neoplan
  - El Dorado

#### WEIGHT OF BASE KIT
330 lbs. as shown

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### MINI-HYBRID COMPONENTS*

*Please Email productinfo@emp-corp.com for specific component specifications*

- FIL-15 Electric Fan
- Optimized Radiator, CAC & Oil Coolers
- Brushless Alternator
- Thermal Mgt. Control

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### MEETS SAE J1308 STANDARDS
SCREEN GUARD INSTALLED ON ALL EMP ELECTRIC FANS

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**MINI-HYBRID GEN IV (4 FAN)**

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**COOLING SYSTEM ADVANTAGES**
- Electronic Control of Engine and CAC Temperatures
- Electronic Control of Transmission and Hybrid System Temperatures
- Patented Baffle Design
- J1939 CAN Capable
- Onboard Diagnostics
- Long Life, 28V, Brushless, Sensorless 11" and 15" Fans
- Reversible Fans Clean Debris from the Heat Exchangers and Screens
- Reduced Power Consumption
- Increase Power to the Wheels
- Custom Hardware and Software Configurations Available
- OEM and Aftermarket Packages Available

**CURRENT DRAW**
Draws 43 Amps OR LESS 90% of the Time

**SERVICE / SUPPORT**
FREE Service Tool Available with the Products
Factory Sales and Service
Global Service & Field Support Including Onsite Training

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**EMP**
POWERING THE FUTURE

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