

GM-ALLISON HYBRID E^P50 SYSTEM articulated bus



It's the right thing to do.

Proven on the streets of over 94 cities worldwide, the GM-Allison Hybrid E^P50 System is the most advanced two-mode parallel hybrid for buses. It is operating in Seattle, Philadelphia, Washington DC, Houston, Honolulu, Albuquerque, Aspen, Vancouver, Minneapolis/St. Paul, Chicago, Cleveland and Istanbul, Turkey. The GM-Allison Hybrid system is an infinitely variable speed hybrid that automatically chooses to operate in a parallel or series hybrid path to maximize efficiency and minimize emissions, fuel consumption and noise. In fact, those are the benefits that led officials at one of the world's most treasured scenic destinations, Yosemite National Park, to choose GM-Allison Hybrid technology for their entire fleet. With over 85,000,000 miles in transit revenue service, the GM-Allison Hybrid's advanced Nickel Metal Hydride energy storage system has yet to experience an end-of-life battery failure. GM-Allison Hybrid E^P50 System is the right thing to do for your fleet, your community and the environment.

E^P50 SYSTEM

articulated bus



RANGE SELECTOR

DUAL POWER INVERTER MODULE (DPIM)

E^V DRIVE

ENERGY STORAGE UNIT

ENGINE

SYSTEM CONTROLLERS

- Two-mode compound split parallel hybrid architecture
- In-service fuel economy improvements range from 20-54% compared to conventional buses
- NO_x reductions up to 50%
- Noise levels approaching that of passenger cars (79 db @ 10 meters)
- Advanced Nickel Metal Hydride energy storage system with 6-year target life and no requirement for periodic battery conditioning
- Concentric AC induction motors
- Infinitely variable gear ratio and torque multiplication
- Common oil for cooling and lubrication of motors, drive unit and DPIM (no Water Ethylene Glycol support pumps required) oil-to-air cooler used
- Conventional packaging results in simplified installation, operation and maintenance
- Allison Transmission worldwide sales and service support

E^V50 DRIVE SPECIFICATION/ARTICULATED BUS PRODUCT

E^V50 Drive Input

Continuous: 330 hp (246 kW)
 Rated input torque: 1050 lb-ft (1420 Nm)
 Rated input speed: 2300 rpm

Physical Characteristics

Weight: 919 lbs (417 kg) dry, 944 lbs (428 kg) wet
 Size: 32" (817 mm) L* x 23" (573 mm) W** x 12" (312 mm) H***

Transmission Fluid

TranSynd™ synthetic

E^P50 SYSTEM PERFORMANCE

Typical acceleration power with energy storage: 400 hp (298 kW)

* Length measured from engine/drive unit splintline to end of output shaft (installed length)

** Width measured from lug box to lug box

*** Height measured from centerline to bottom of sump

For more information, contact your local Allison Transmission representative.

E^P50 SYSTEM COMPONENTS

System Controllers

Allison Transmission
 1000/2000/2400 Series™ controllers
 Weight: 6.7 lbs (3.0 kg) [for 2]

Dual Power Inverter Module (DPIM)

General Motors Corporation's advanced inverter technology
 430-900 VDC 150 kW
 continuous 3-phase AC
 Weight: 165 lbs (75 kg)
 Size: 45" (1151 mm) L x 25" (632 mm) W
 x 6.5" (165 mm) H

Energy Storage

Full regenerative braking
 recovery from 50 mph
 Weight: 963 lbs (437 kg)
 Size: 86" (2183 mm) L x 44" (1116 mm) W
 x 11" (283 mm) H



Leaders in advanced hybrid technology

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