



Overview

Allison Transmission is introducing the new ABE Series, a line of fully-integrated electric axles designed to fit double-decker buses, low-floor city buses, non-low floor buses and articulated buses, replacing the vehicle's traditional powertrain system. Available in single speed and 2-speed options, the ABE Series is a bolt-in solution that features electric motors, power electronics, a multi-speed gearbox, oil cooler and pump. The ABE Series axles are capable of operating without restrictions at regular highway speeds and on all allowable grades, making our ABE Series electric powertrain system the most efficient and powerful solution for bus fleets today.

Features + Benefits

Fully integrated system

The fully integrated design allows more space for battery packs and other critical electric vehicle components

Superior performance

Capable of operating without restrictions at regular highway speeds and on all allowable grades

Easier installation

No modifications to the existing bus frame or suspension are required to install or retrofit the ABE Series electric powertrain, allowing the use of standard brakes

Proprietary cooling

Proprietary cooling allows for industry-best continuous motor power and allows users to run closer to peak power for longer durations

100% regenerative braking

System designed to handle 100% torque in regenerative braking for maximum energy recovery

Helical wheel end

Helical gearing is used for increased efficiency and quieter operation

Wider walk through sizes available

Wider walk through sizes are available for airport buses, 2-door and 3-door bus applications

Increased efficiency

Elimination of bevel gearing, minimal gear meshes, and forced lubrication for increased efficiency and extended ranges

Technical Specifications

ABE Series Model	ABE130D1	ABE130D2
GAWR	23,150 lb to 28,660 lb (10,500 kg to 13,000 kg)	23,150 lb to 28,660 lb (10,500 kg to 13,000 kg)
Gearbox speed	Single speed	2-speed
Max. torque to wheels	16,816 lb-ft (22,800 Nm)	27,437 lb-ft (37,200 Nm)
Motor continuous power	536 hp (400 kW)	536 hp (400 kW)
Motor peak power	738 hp (550 kW)	738 hp (550 kW)
Voltage*	550 V - 750 V	550 V - 750 V
Walk-through sizes**	28 in (700 mm) - standard 39 in (1,000 mm) - optional	28 in (700 mm) - standard 39 in (1,000 mm) - optional
Tire size compatibility	275/70R22.5 dual 285/70R19.5 dual	275/70R22.5 dual 305/70R22.5 dual 445/65R22.5 single super tire
Wheel size	19.5 in x 8.25 in 22.5 in x 8.25 in	22.5 in x 8.25 in
Vehicle width*** (mm)	100 in (2,550 mm) - 102 in (2,600 mm)	100 in (2,550 mm) - 102 in (2,600 mm)
Brakes	Air disc brakes optional	Air disc brakes optional
Applications	<ul style="list-style-type: none"> • 12-meter low-floor city buses and double-decker buses • 2-door or 3-door buses • Ultra low-floor or high-floor • Airport buses 	<ul style="list-style-type: none"> • 12-meter double-decker buses • 18-meter articulated buses • 2-door or 3-door buses • Ultra low-floor or high-floor • Trams • Airport buses

NOTE: All applications are subject to Allison Engineering approval. Features subject to change.

*Performance numbers at 650 V. Higher power levels available at 750 V upon request.

**Larger walk-through options available for airport buses.

***Wider or narrower vehicle widths possible upon request.