NEW FLYER

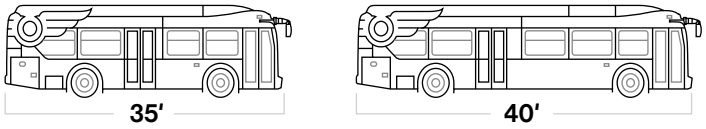
xcelsior® HYBRID-ELECTRIC

Sustainable and efficient mobility.

Transitioning toward a zero-emission future.

Hybrid-electric buses enable the critical transition step in the evolution to zero-emission mobility. They can immediately reduce greenhouse gas emissions and are a safe and reliable way to move people through the community while contributing to cleaner air.

Available in 2 Lengths



20 YEARS

New Flyer has been leading innovation in hybrid-electric mobility for over 20 years, supplying more hybrid buses to the North American industry—in more configurations—than any other manufacturer.

Facts.

New Flyer has successfully deployed over 8,000 hybrid-electric buses throughout North America. Today, its hybrid-electric technology is built on the Xcelsior® transit bus model.

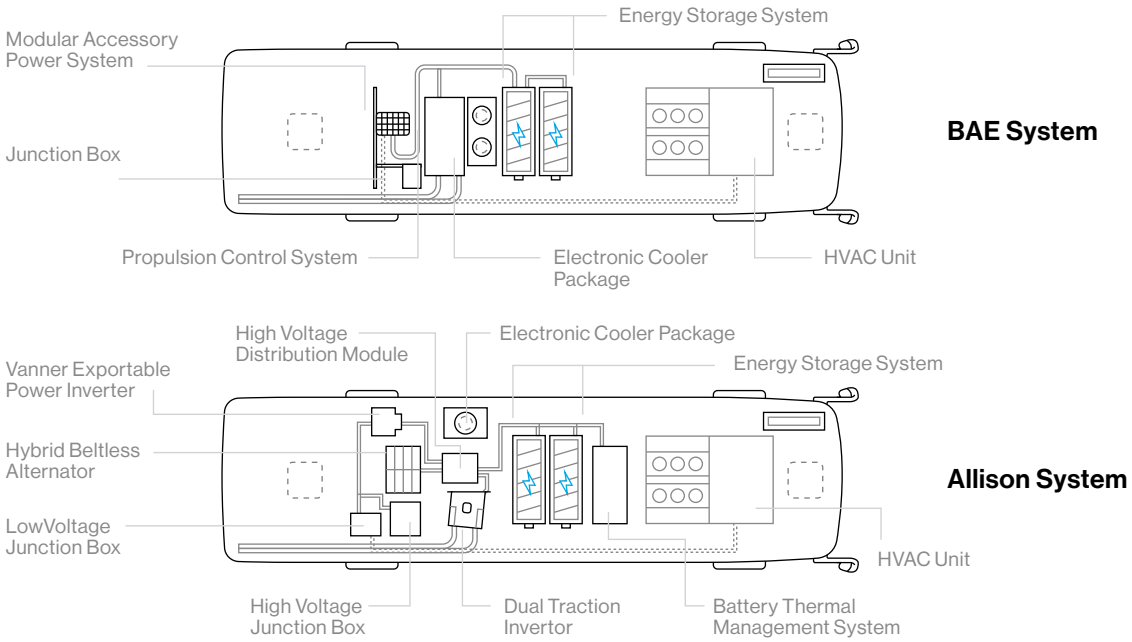
Xcelsior® hybrid-electric achieved the best fuel economy ever recorded at Altoona: 5.88 mpg, delivering up to 8% in fuel savings.

newflyer.com/hybrid

How it works.

Hybrid buses are powered by a combination of electricity and fuel. Electric power is generated by the combustible engine and stored in hybrid batteries.

Xcelsior® HYBRID-ELECTRIC 40'



Smart Power

From a standstill and at low speeds, vehicle acceleration is most efficiently achieved using purely electric power. As vehicle speed increases, the use of mechanical power increases while the electric motor augments acceleration power. High vehicle speeds draw on strictly mechanical power.

Regenerative Breaking

Up to 40% of the energy to accelerate the bus comes from energy saved through regenerative braking. Regenerative braking recovery is available across the entire speed range of the bus, which greatly extends brake life and reduces maintenance costs.

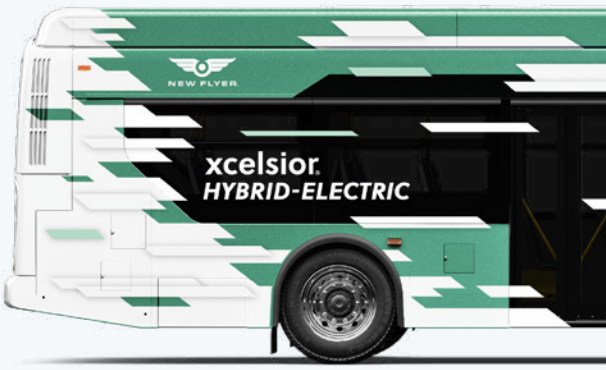
Benefits.

Battery Efficiency

Batteries have an expected life of six years and require no interim reconditioning.

Fuel Savings

Improved fuel economy by 10-29% compared to conventional buses, dependent on route deployment.



High Performance & Reliability

Significant reductions in transmission and brake maintenance, resulting in fewer service bays, parts and required fluids.

Smooth Ride

Better passenger experience through smoother acceleration, a quieter ride, and improved air quality.

Best-in-class features.

Enhanced Safety & Accessibility.

SmartRider™ enables kneeling to variable heights and minimizes the slope difference between a low-floor ramp and the bus floor. SmartRider™ ramp achieves a 1:6 slope ratio with a self-leveling feature.

Passenger Capacity

Industry-leading passenger carrying capacity.*

35' Xcelsior®	
Seated	32
Standees	35
Total	**67**

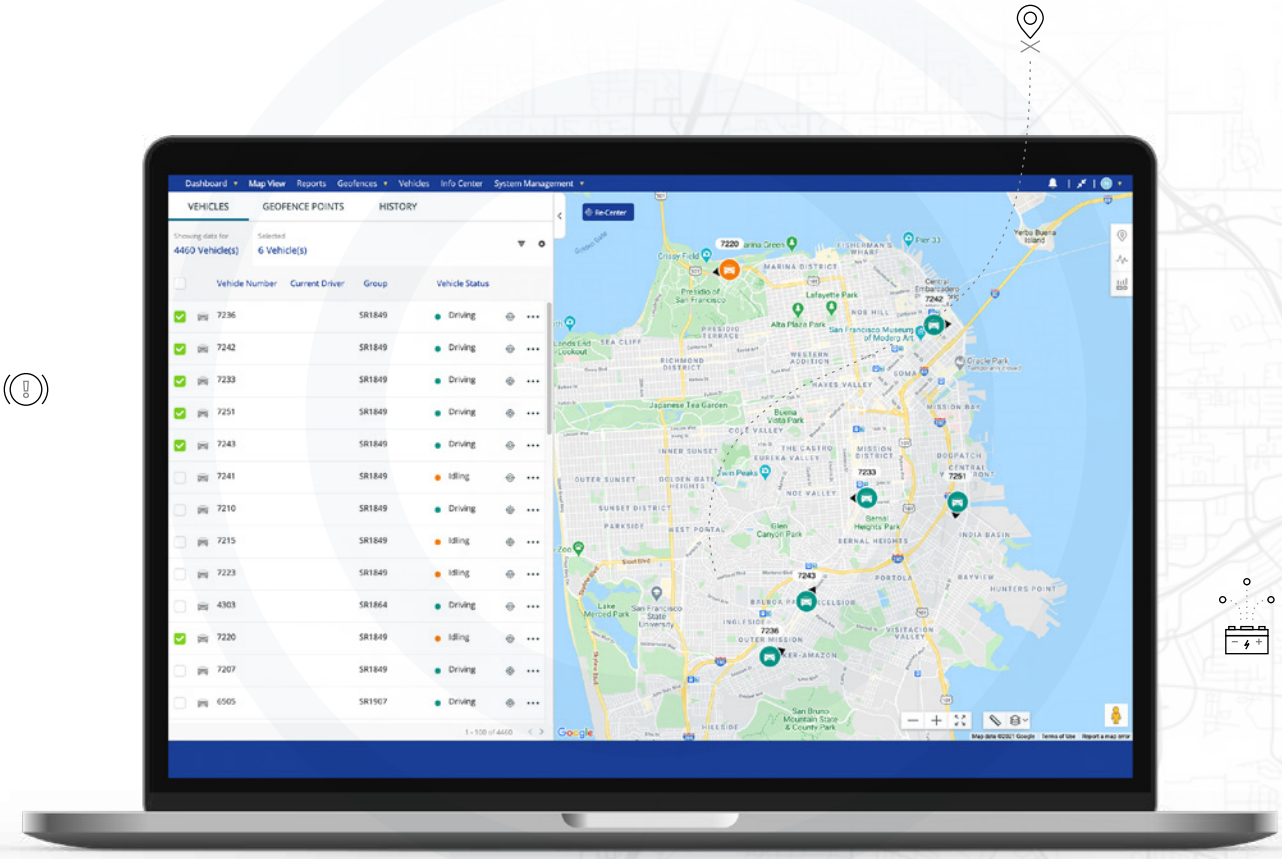
40' Xcelsior®	
Seated	40
Standees	44
Total	**84**

Performance

Weighs 8% less than previous models achieved through structure optimization and lighterweight supplier components, leading to improved efficiency and lower operating costs.

Delivers up to 8% fuel savings, reducing overall cost of ownership.

*Passenger capacity shown reflect standard configuration. Capacity may change dependent on custom design and components used.



NFI Connect™.

NFI Connect™ is an exclusive and state-of-the-art telematics solution designed to give you greater and smarter oversight of your whole operation, improving bus uptime and lowering costs, without requiring more work.

Measurements	35′ XDE35	40′ XDE40
Length	36′ 3" (11.05m) Over bumpers; 35′ 5" (10.80m) Over body	41′ 0" (12.50m) Over bumpers; 40′ 2" (12.24m) Over body
Width	102" (2.6m)	102" (2.6m)
Roof Height	10′ 10" (3.3m) over cooling fans	10′ 10" (3.3m) over cooling fans
Step Height	14" (356mm)	14" (356mm)
Front Step Height (Kneeled)	10" (254mm)	10" (254mm)
Interior Height – Floor to Ceiling	79" (2m) Over front and rear axle; 95" (2.4m) Mid-coach	79" (2m) Over front and rear axle; 95" (2.4m) Mid-coach
Tire Size	305/70R22.5	305/70R22.5
Aisle Width	21" to 24" (559mm to 610mm) (varies with seat model)	21" to 24" (559mm to 610mm)) (varies with seat model)
Wheelbase	226.75" (5.8m)	283.75" (7.2m)
Propulsion		
Transmission	Allison hybrid drive; BAE HybriDrive®	Allison hybrid drive; BAE HybriDrive®
Engine Options	Cummins B6.7	Cummins B6.7
Passenger Capacity (With wheelchair barrier protection)		
Seats	Up to 32	Up to 40
Standees	Up to 35	Up to 44
Accessibility		
Doors	2	2
Wheelchair Accessibility	32" (813mm) wide, 1:6 slope NFIL or SmartRider™ ramp, front door	32" (813mm) wide, 1:6 slope NFIL or SmartRider™ ramp, front door
Wheelchair Locations	2 - Front location, rear location also available (other options available)	2 - Front location, rear location also available (other options available)
Approach Angle		
Approach/Departure/Breakover Angles	9°/9°/12°	9°/9°/9°
Turning Radius		
(Body, with aluminum wheels; *Varies with wheel type)		
Turning Radius	39′ (11.9m)*	43.5′ (13.3)*
Main Components		
Floor	Composite at rear interior step, ACQ Plywood remainder (dB Ply used on upper deck). Tarabus, Altro, RCA	Composite at rear interior step, ACQ Plywood remainder (dB Ply used on upper deck). Tarabus, Altro, RCA
Electrical System	Parker Vansco	Parker Vansco
Cooling System	Electric cooling fans (EMP, Modine)	Electric cooling fans (EMP, Modine)
Fuel Tank	Polyethylene fuel tanks: 100 gallon (379 L); 125 gallon (473 L); Stainless steel tanks: 100 gallon (379 L) 125 gallon (473 L)	Polyethylene fuel tanks: 100 gallon (379 L); 125 gallon (473 L); Stainless steel tanks: 100 gallon (379 L) 125 gallon (473 L)
HVAC	Thermo King or MCC	Thermo King or MCC
Axles	MAN VOK 07 Front disc brakes; MAN HY-1350 Rear disc brakes; Single reduction axle	MAN VOK 07 Front disc brakes; MAN HY-1350 Rear disc brakes; Single reduction axle

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Learn more about this technology at the Vehicle Innovation Center
nfigroup.com/VIC