



NEW FLYER



*Introducing the New Flyer Xcelsior®*

**ELECTRIC**

*Built to*  
**RELY ON.**  
newflyer.com





NEW FLYER

# ELECTRIC BUS

OUR ELECTRIC BUS, PAVING THE WAY TO A  
FUTURE OF GREEN PUBLIC TRANSPORTATION.

New Flyer electrification development has been focused on the Xcelsior® platform, our highly successful next-generation transit bus. This technology lowers operational costs and reduces emissions while providing customers with a quiet and comfortable ride.

New Flyer has extensive experience with electric propulsion including hybrid, trolley and fuel-cell buses, supplying more electric buses to the North American industry in more configurations than any other transit bus manufacturer.

## Quiet RIDE

- With the absence of a traditional engine, your customers will notice a significantly quieter ride.

## Zero EMISSIONS

- Save 100 - 160 tonnes of greenhouse gas per year compared to a 40' diesel bus and 75 - 110 tonnes compared to a 40' diesel hybrid bus.
- Save up to \$400,000 in fuel costs over the 12-year life of the bus.
- With no engine, transmission, intake or exhaust, you spend less on maintenance costs.

### CHARGING OPTIONS

The bus is connected to charging systems to recharge the batteries, either en-route or at a transit yard.



New Flyer Xcelsior® XE40 seen here at the Winnipeg James Armstrong Richardson International Airport



The electric bus is powered by energy stored in rechargeable batteries. Instead of an internal combustion engine, it's propelled by an electric motor.

- The lithium ion batteries store up to 300 kWh of electricity and is monitored by a sophisticated battery management system.
- The Siemens Electric Drive System converts three-phase alternating current (AC) power to drive the traction motor by using direct current (DC) power from the batteries. When braking, the motor acts as a generator to recover energy, just like in conventional hybrid vehicles.

#### ALL-ELECTRIC ACCESSORIES

The air compressor and air conditioning compressors are electrically powered. DC power is converted to AC power and is supplied to each of these major systems separately. This allows each system to operate more reliably and efficiently, with minimum power consumption. The bus also has a converter to supply 24-volt DC power for power steering, interior fans, lights, and other accessories.

#### HEATING, VENTILATION AND AIR CONDITIONING

An electrically-driven air conditioning system is used to cool the bus when needed. For moderately cold temperatures, the bus uses electric heating. For very cold conditions, an optional liquid fuel heater warms the passenger cabin using a small amount of renewable bio-diesel. This helps maintain bus range during very cold climate conditions.

*New Flyer*  
**XCELSIOR®**

*Powered any way YOU WANT.*



**DIESEL | CNG | HYBRID | TROLLEY | ELECTRIC**

New Flyer is committed to providing world-class support for the electric bus and stands proudly behind its lifetime customer care program, the most comprehensive warranty, service, training, and spare parts support in the industry.

**Built to Rely On.**



# NEW FLYER ELECTRIC BUS



## Manufacturing Facilities

Winnipeg, MB  
Crookston, MN  
St. Cloud, MN  
Anniston, AL

## Parts Distribution Centers

Winnipeg, MB  
Brampton, ON  
Hebron, KY  
Fresno, CA

## Bus Fabrication

Winnipeg, MB  
Elkhart, IN

## Service Center

Arnprior, ON  
Ontario, CA

[www.newflyer.com](http://www.newflyer.com)



## MEASUREMENTS

Length	41' - 0" (12.50m) over bumpers; 40' - 2" (12.24m) over body
Roof Height	130" (3.3m)
Step Height	14" (356mm)
Front step height/kneeled	10" (254mm)
Interior height - floor to ceiling	79" (2m) over front and rear axle; 95" (2.4m) mid-coach
Tire Size	305/70R22.5
Aisle Width	22" to 24" (559mm to 610mm) (varies with seat model)
Wheel Base	283.75" (7.2m)

## PROPULSION

Transmission	None (Direct Drive)
Propulsion System	Siemens ELFA2 Electric Drive System, permanent magnet traction motor
Range	Up to 80 miles/charge, unlimited with en route rapid charging

## CAPACITY

Seats	Up to 40
Standees	Up to 43

## WEIGHT

Curb Weight	31,000 lbs
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## ACCESSIBILITY

Number of Doors	2
Wheelchair Accessibility	660lb (299kg), 32" (813mm) wide, 1:7 slope. Flip out NFIL ramp, front door
Wheelchair Locations	2 - front location (other options available)

## CLEARANCES

Approach/departure/breakover angles	9°/9°/9°
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## TURNING RADIUS

Turning radius (body, with aluminum wheels)	44' (13.4m) (varies with wheel type)
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## MAIN COMPONENTS

Floor	Composite at rear interior step, ACQ Plywood remainder (dB Ply used on upper deck). Tarabus, Altro, RCA
Electrical System	Parker Vansco multiplex with integrated dash instrument panel
Cooling System	Electric cooling fans
Energy Storage	200 kWh li-ion
HVAC	Thermo King TE15 (cabin), Thermo King battery thermal management
Axles	MAN VOK 07 front disc brakes MAN HY-1350 rear disc brakes, single reduction axle



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