In June 2015, Trinity Metro ordered eight diesel-electric low-floor multiple unit FLIRTs from Stadler for the TEXRail project. The trains will operate on the commuter route in the corridor between downtown Fort Worth and the northern railway terminus of the Dallas/Fort Worth International Airport in Texas. The design of the vehicles allows operation of a mixed fleet including freight trains with the vehicles meeting the new AVT requirements of the Federal Railroad Administration (FRA) and Buy America. The diesel generator units are installed in a separate midsection, which allows the FLIRTs to offer exceptionally quiet passenger compartments and a large proportion of low-floor area. The vehicles are scalable, allowing the option to easily add an additional passenger car or an additional diesel generator unit as required. Vehicles may also be outfitted with bi-modal drive equipment, as the electrical traction unit is the same as in vehicles that are solely electrically powered, and have the same design. The FLIRTs for TEXRail offer 224 seats and additional standing room for 254 passengers, and are equipped with a bathroom system that, as with the entire vehicle, meets the Americans with Disabilities Act (ADA) requirements for persons with reduced mobility.
Technical Features

Technology

- Redundant traction power system consisting of two units, each with a diesel engine, asynchronous generator, IGBT power converter and asynchronous drive motor
- Lightweight aluminum car body design according to the newest Crashworthiness (EN 15227) and Structural Strength (EN 12663) standards
- Meets FRA Alternate Compliance requirements for operating in mixed traffic
- EPA Tier 4 Final compliant
- Traction equipment housed in a separate power car, efficiently insulating the passenger compartments from noise and vibrations

Comfort

- Extremely powerful, redundant HVAC system
- Comfortable seating with tray tables and USB outlets
- Fully ADA compliant with wide entrance doors
- Low floor vehicle level boarding at all passenger doors

Personnel

- Ergonomic and comfortable working environment
- Intuitive design and arrangement of control elements

Reliability / Availability / Maintainability / Safety

- Crash absorption system for the protection of driver and passengers, fulfills FRA and EU crashworthiness standards
- Latest generation of vehicle control systems including detailed diagnostic features
- Fire detection and suppression systems
- Emergency intercoms in passenger compartment
- Redundant traction power system and redundant HVAC system
- Low life-cycle costs due to light-weight design

Vehicle Data

Customer
Trinity Metro, Texas USA

Line Operated
TEXRail, downtown Fort Worth to DFW International Airport

Track Gauge
1435 mm (4’–8.5")

Axle Arrangement
4 powered 8 unpowered

Number of Vehicles
8

Service Start-up
Fall 2018

Seating Capacity
224 (including flip-up seats)

Flip-up Seats
28

Overall Length
266’ (81.1 m)

Vehicle Width
9’ 5.4” (2880 mm)

Truck Wheelbase
622” end car/
618” intermediate cars

Maximum Power at Wheel
700 kW

Starting Tractive Power
160 kN

Maximum Speed
79 mph (130 kph)