

ELECTRIC LOW-FLOOR MULTIPLE UNIT FLIRT

Trinity Metro, Texas USA

In June 2015, Trinity Metro ordered eight diesel-electric low-floor multiple unit FLIRT from Stadler for the TEXRail project.

The trains 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 requirements of the Federal Railroad Administration (FRA) and Buy America. The diesel generator units are installed in a separate midsection, which allows the FLIRT 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. To expand their fleet, TEXRail ordered four additional vehicles from Stadler in 2024.

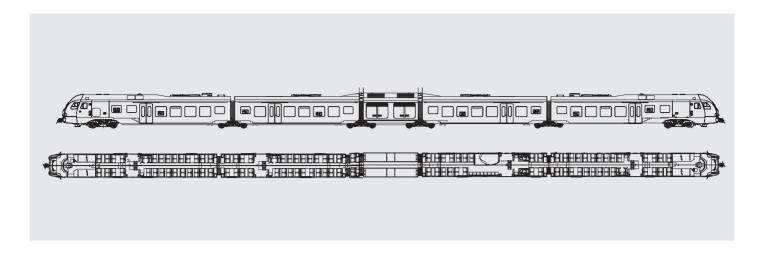
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Technical features

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 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
- Onboard restrooms

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	12
Original Service Start	December 2019
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)

