



DIESEL-ELECTRIC LOW-FLOOR MULTIPLE UNIT FLIRT

for Dallas Area Rapid Transit (DART), Dallas, Texas, USA

In June 2019, Dallas Area Rapid Transit ordered eight diesel-electric low-floor multiple unit FLIRTs from Stadler for the Silverline project. The trains will operate on the commuter route in the corridor between Plano 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 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 DART offer 222 seats and additional standing room for 263 passengers, and meet the Americans with Disabilities Act (ADA) requirements for persons with reduced mobility.

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Technical Features

Technology

- Redundant traction power system consisting of four 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

- Powerful HVAC system with built-in redundancy
- 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

- 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
- Redundant traction power system and redundant HVAC system
- Low life-cycle costs due to light-weight design

Vehicle Data

Customer	Dallas Area Rapid Transit
Operated Network	DART, Cotton Belt corridor
Gauge	1435mm (4'-8.5")
Axle Arrangement	4 powered 8 unpowered
Number of Vehicles	8
Delivery	End of 2022
Seats	222 (including flip-up seats)
Flip-up Seats	28
Standing Spaces	263
Vehicle Overall Length	81100 mm (266'-0.92")
Vehicle Width	3108 mm (10'-2.36")
Vehicle Height	4285 mm (14'-0.68")
Truck Wheelbase	
End Cars	1580 mm (51'-10.3")
Intermediate Cars	1570 mm (51'-6.11")
Maximum speed	79 mph (130 km/h)