In September 2010, LEO Express a.s. ordered five Intercity low-floor multiple unit FLIRTs from Stadler. They are in operation as LEO Express on the line from Prague to Ostrava and into Slovakia as far as Košice. The trains are designed for a running speed of up to 160 km/h. They set new standards in terms of passenger comfort. Passengers can choose between Premium, Business and Economy class. In all three classes, the passenger seats are fitted with tables, and all carriages have Internet access. Generous shelves make travelling with bulky luggage easier. There are special compartments for persons with restricted mobility, and a wheelchair-accessible toilet is also provided. A catering trolley for sales to passengers can be stored and supplied with power in a separate lockable compartment. The exterior and interior designs underline the special character of this Intercity train.
Technical features

Technology

– Lightweight car bodies in integral aluminium design for energy-efficient, safe travel and reduced operating costs
– Low-maintenance train design for high availability and reduced maintenance costs
– Bogies with pneumatic suspension for high stability, comfort and safety at travel speeds of up to 160 km/h
– Vehicle control system with CANopen bus system and computing technology for on-board troubleshooting

Comfort

– High-comfort Intercity connections in Premium, first and second class
– Barrier-free access throughout the second-class areas of the train
– Four entrance doors on each side for optimum exchange of passengers
– Separate HVAC systems for passenger compartment and control cabin
– Catering
– On-board information and entertainment system

Personnel

– Ergonomically and comfortably designed working environment to prevent driver fatigue

Reliability / Availability / Maintainability / Safety

– Design fulfils the requirements regarding collision safety
– Redundant drive equipment with water-cooled IGBT power converters and asynchronous motors
– Clear layout of passenger compartments for passenger orientation and safety

Vehicle data

Customer | LEO Express a.s.
Lines serviced | Czech Republic, Slovakia
| Prague–Ostrava–Žilina–Košice
Vehicle designation | FLIRT LEO Express
Gauge | 1435 mm
Supply voltage | 3 kVDC
Axle arrangement | Bo’2’2’2’2’Bo’
Number of vehicles | 5
Commissioning | 2012
Total seats | 237
Premium class | 6
Business class | 19
Economy class | 212 (including 4 tip-up seats)
Floor height

| Low-floor | 780 mm
| High-floor | 1120 mm
Entrance width | 950 mm
Axial thrust | 1500 kN
Length over coupling | 90178 mm
Vehicle width | 2880 mm
Vehicle height | 4150 mm
Wheelbase

| Motor bogie | 2700 mm
| Trailer bogie | 2700 mm
Driving wheel diameter | 870 mm
Carrying wheel diameter | 750 mm
Continuous output at wheel | 2000 kW
Max. output at wheel | 2800 kW
Starting tractive effort | 200 kN
Running speed | 160 km/h