



FLIRT H₂

SBCTA, San Bernadino County Transportation Authority

The FLIRT H₂ is a two car FLIRT with Hydrogen Power Pack for San Bernadino County Transportation Authority. It is based on the existing FLIRT Diesel Multiple Unit (DMU) for SBCTA. Many components and subsystems are identical. The Hydrogen Train for the SBCTA is the first vehicle in the new FLIRT H₂ product family.

At the same time the FLIRT H₂ will be the first Hydrogen Train in the US. The project is supported by the State of California. The new train will be operated on the 9-mile route from San Bernardino to Redlands University and will perform up to 16 trips per day. This means that the vehicle will have a total daily mileage range of 300 up to 380 miles (480 km up to 600 km) per day.

Being a member of the FLIRT family, the FLIRT H₂ has the same modular drive technology: The Multiple Unit is equipped with a scalable Power Pack, that is able to drive train consists from two up to four cars. The Power Pack is using modular fuel cells and batteries that can be tailored to the requirements of different operation schemes. Of course, the FLIRT H₂ is also available with a pantograph, to be operated in the most energy efficient electric mode, under the wire and to save hydrogen.

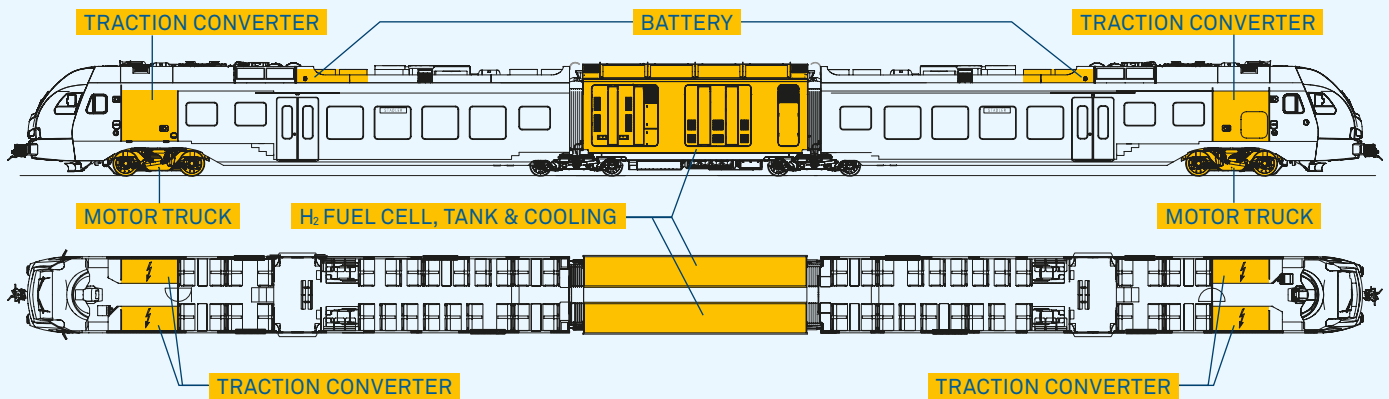
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Technical features

Technology

- Emission-free driving with hydrogen
- Emission-free driving in electric mode (optional)
- Suited for Californian Climate
- LTO Batteries for high recuperation
- Sealed modular H₂- storage in the Power Pack
- Lightweight Aluminium Carbody

Comfort

- Powerful, redundant air-conditioning layout
- Comfortable seats with tables
- Conform to die ADA guidelines
- Wide doorways
- Level entry, low floor

Safety

- Crash design according to FRA und EN standards
- Fire-protection and -detection systems
- Passenger Information and Communication systems
- Hydrogen storage completely separated from passenger area

Technical Data

Customer San Bernardino County Transportation Authority, California USA

Operation California, USA

Gauge 4' – 8.5" (1,435 mm)

Designation FLIRT H₂

Wheel arrangement Bo'2'2'Bo'

Number of vehicles 1

Commissioning 2024

Seats 104/12/116

Standing capacity 4/m2 120

Floor height

Low Floor 24.02" (610 mm)

High Floor 47.64" (1210 mm)

Door width 4' – 3.18" (1,300 mm)

Longitudinal strength 1,500 kN

Length over coupler 168' – 11.54" (51,500 mm)

Width 9' – 9.32" (2,980 mm)

Height 14' – 1.77" (4,312 mm)

Wheel base

Motor truck 98.43" (2,500 mm)

Trailer truck 106.3" (2,700 mm)

Max. dynamic brake 1450 kW

Max. power 700 kW

Tractive effort 160 kN

Max. Speed 79 mph (127 km/h)

Range > 286 miles (460 km)

Max axle load 20 t