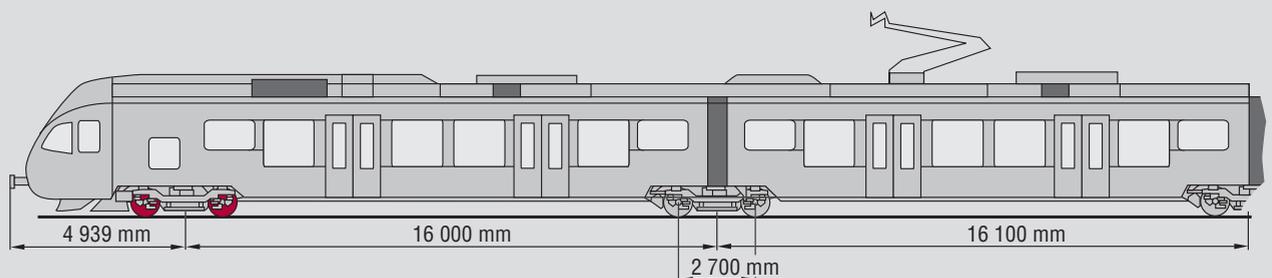


Low-floor electric multiple unit FLIRT with SZH-595 final drives



The FLIRT (Fast Light Innovative Regional Train) EMU built by Stadler Rail Group is setting new standards in regional rail traffic with its walk-through passenger area, optimized to a platform height of 550 mm, and its high acceleration capacity. Fitted with 4 x 500 kW TSA asynchronous motors and Voith final drives, the four-car EMU reaches maximum travelling speeds of 160 km/h.

Vehicle manufacturer	Stadler Rail Group
Operator	SBB (Regio S-Bahn Basel), SOB (South East Railways), NOH (North Hesse), TILO, MAV
Year of construction	since 2004
Service country	Switzerland, Germany, Italy, Hungary
Motor type	Traktionssysteme Austria (TSA) – TMF 59-39-4
Motor power	4 x 500 kW between 1 698 min ⁻¹ and 5 100 min ⁻¹
Top speed	160 km/h
Vehicle mass	120 t



Voith Turbo GmbH & Co. KG
Market Area Rail
Alexanderstrasse 2
89522 Heidenheim, Germany
Tel. +49 7321 37-4019
Fax +49 7321 37-7119
mechanical-drives@voith.com
www.voithturbo.com

SZH-595 final drive

The two-stage SZH-505 final drive is a drive component for the electric-multiple-unit „Flirt.“ The extremely quiet and highly efficient drive is an integrated, fully sprung transverse system which allows very comfortable traveling. The electric motor is flanged to the final drive in parallel to the wheel set shaft.

The transmission housing has a „Monoblock“ design (single housing) and excels by high stiffness at relatively low weight, coupled with low maintenance requirements and high availability.

SZH-595 final drive



Via a coupling on the primary side, each helical axle drive is connected with an asynchronous motor installed in driving direction. The overhung-mounted rotor shaft of the asynchronous machine transmits the drive torque via a membrane coupling to the helical axle drive. Via the two helical gear stages, drive torque is then transmitted via a single hollow shaft (optimum power curve) and the cardanically acting wedge packet coupling to the

wheel set shaft.

The two levels of the wedge packet coupling compensate for any dislocation between the drive unit and the wheel set shaft and/or the drive wheel. Owing to the high rubber volume of the wedge packet, the service life of the coupling is much longer than that of standard output couplings (lower LCC cost). The motor/transmission unit is supported in the bogie by three flexible connecting elements.

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