

Media release

HOLD-BACK PERIOD none
DOCUMENT 2 pages
ENCLOSURES 2 renderings

Bussnang, 28 September 2022

Stadler delivers the world's first fully automated rack-and-pinion rail vehicle

Appenzeller Bahnen (AB) and Stadler have signed a contract for the manufacture and delivery of a rack-and-pinion rail vehicle for the Rheineck–Walzenhausen rail link. The contract includes equipping the vehicle with Stadler's CBTC (Communication-Based Train Control) solution. The new train on the Rheineck–Walzenhausen line will be the world's first fully automated overland adhesion/rack-and-pinion rail vehicle.

The train currently used by Appenzeller Bahnen (AB) on the Rheineck–Walzenhausen line has been in service for over 64 years and needs to be replaced due to its age. AB is ordering a new rack-and-pinion vehicle from Stadler which will be equipped for fully automated rail operation.

Signalling technology solution from Stadler for automated rail operation

This is the first time that Stadler has equipped a mountain rail vehicle with its in-house CBTC (Communication-Based Train Control) solution. This enables automated and driverless operation depending on the system expansion level. Stadler is implementing the highest automation level 4 (GoA4) for AB. This means that train operation can be fully automated and driverless. There are no longer any members of staff on board and all operations are automated. AB staff in the operations centre can intervene in train operations by remote control.

First fully automated rack-and-pinion railway in free-field conditions

Fully automated railways already exist in tunnels or on closed track systems where the risk of obstacles on the line can be safely excluded. This is the case for the Lausanne metro in Switzerland, for example. All over the world, dozens of railways are already operated as closed systems, where the track must be monitored to ensure that there are no obstacles. However, the new vehicle on the Rheineck–Walzenhausen line will be a fully automated train running as an open system in free-field conditions. The CBTC solution must therefore also take over the monitoring of the track and the detection of obstacles. The new train on the Rheineck–Walzenhausen line will be the world's first fully automated overland adhesion/rack-and-pinion rail vehicle. Commissioning is scheduled for 2026.

“The implementation of automated and driverless operation on the Rheineck–Walzenhausen line is a milestone in the digitalisation of rail operations. The project will represent valuable pioneering work for automated rail transport on intercity routes. Railway digitalisation projects around the world will benefit as a result. We are

proud to be leading the way in association with Appenzeller Bahnen and look forward to working together,” says Marc Trippel, Head of Stadler’s Signalling Division.

About Stadler

Stadler has been building trains for 80 years. The provider of rail vehicle construction solutions has its headquarters in Bussnang in eastern Switzerland. It has a workforce of over 13,000 based in various production and engineering locations as well as more than 70 service locations. The company is conscious of its social responsibility for sustainable mobility and therefore stands for innovative, sustainable and durable quality products. The product range in the field of mainline railways and city transport includes high-speed trains, intercity trains, regional and suburban trains, metros, tramways and trams. Stadler also manufactures main-line locomotives, shunting locomotives and passenger carriages. It is the world’s leading manufacturer in the rack-and-pinion rail vehicle industry.

Follow Stadler on [LinkedIn](#), [Xing](#) and [Facebook](#).

Media contact:

Stadler Rail Group

Gerda Königstorfer
Head of Communications & PR
Phone: +41 71 626 19 19
E-mail: media@stadlerrail.com

www.stadlerrail.com