

Press Release

Rotkreuz, December 14, 2024

Garaventa builds the world's steepest aerial tramway

The major project Schilthornbahn 20XX encompasses the entirely new construction of the tramway connection from Stechelberg up to the Schilthorn. The completed first phase marks two premieres: the world's steepest reversible aerial tramway with a grade of almost 160 percent between Stechelberg and Mürren plus Switzerland's first Funifor tramway between Mürren and Birg. The second track of the Mürren–Birg Funifor will follow in the next few years, along with another two Funifor installations that will access the Schilthorn from Birg and go into service within six months of one another.

The tramway between Stechelberg and Mürren marks a world record with a maximum grade of almost 160 percent. No other aerial tramway worldwide incorporates such a steep section. Two 85-passenger cabins carry up to 800 passengers an hour and significantly shorten the trip time from Stechelberg to Mürren. The tramway climbs 775 vertical meters in less than four minutes.

As well as providing a passenger service, the tramway will also handle freight logistics between Stechelberg and Mürren, with a loading robot to optimize operations. Baggage and freight transport will be synchronous with passenger carriage; guests can hand in their baggage when buying their tickets and then collect it either at the station or directly in the hotel.

The tramway also features the AURO system (Autonomous Ropeway Operation), which enables unmanned operations. The use of cameras and sensors ensures that the tramway can run without operating crew in the stations.

First Funifor in Switzerland

The Funifor system celebrates its debut in Switzerland with the opening of the first track of the Mürren–Birg stretch. The special feature of this ropeway type is the wide track rope gauge, which guarantees high wind stability and reliable service even in difficult weather conditions. Each cabin has capacity for up to 100 passengers. In future, the Funifor tramways between Mürren, Birg and Schilthorn will have two parallel tracks operating independently of each other. This has the advantage that one track can run while the other undergoes maintenance work. Operation can then be provided 365 days a year.

Unique cabins and innovative technology

The cabins for the Schilthornbahn 20XX project were developed and manufactured in collaboration with Carvatech based in Oberwies, a company belonging to the Doppelmayr Group. Over the course of several years, a unique design has been created that addresses the specific requirements of this exceptional project. As a particular highlight, the windows in the cabins on the first two sections can be lowered to chest height to allow a direct panoramic view of the surrounding mountains.

The control technology for the tramways is supplied by Frey Stans, also part of the Doppelmayr Group. The innovative energy management system levels out peak power consumption through the recuperation and local storage of braking energy – this ensures the resource-efficient use of power across all five installations.

First installations are in service

The Schilthornbahn 20XX project is now taking shape with the completion of the first two tramway installations. The stations for the sections Stechelberg–Mürren and Mürren–Birg have largely been completed. The first two tramways go into operation on December 14, 2024. The remaining work on the haul ropes and track ropes will continue while the new installations are running. The first Funifor for the Birg–Schilthorn stretch is scheduled to go into operation on March 15, 2025, making the summit at an elevation of 2,970 meters accessible to the public once again. The second track between Mürren and Birg will follow in November 2025, before the project concludes with the opening of the second line between Birg and Schilthorn in 2026.

85-ATW Stechelberg–Mürren, Switzerland

Customer: Schilthornbahn AG
Bottom station elevation: 866 m
Top station elevation: 1,641 m
Max. grade: 159%
Max. speed: 7 m/s
Opened: 12/2024

100-FUF Mürren–Birg, Switzerland

Customer: Schilthornbahn AG
Bottom station elevation: 1,641 m
Top station elevation: 2,677 m
Max. grade: 73%
Max. speed: 12 m/s
Opened: 12/2024

Images: <https://coco.doppelmayr.com/pinaccess/showpin.do?pinCode=ZGDhEvBCuUin>
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Video Creation of the Aerial Tramway (Section 1):

<https://youtu.be/6pqqHcTs8a8?si=B8Suovo8prmp7o5V>

About Garaventa AG

Garaventa AG is a Swiss company headquartered in Rotkreuz, with additional sites in Goldau, Uetendorf and Sion. It is the Swiss branch of the Doppelmayr Group and has established itself as the competence center with international reach for reversible aerial tramway, funicular railway and material ropeway systems as well as for complex rope installation work. Garaventa is also responsible for all ropeway projects of the Doppelmayr Group in Switzerland. All functions and competencies for special ropeways are made available to the Group worldwide from Switzerland. Garaventa employs 380 people in Switzerland.

For inquiries, please contact:
Andreas Bonifazi +41 79 476 51 15 / media@garaventa.com