

MATTERHORN ALPINE CROSSING

IMAGINE THE HIGHEST ALPINE EXPERIENCE



MATTERHORN
ALPINE
CROSSING



A one-in-a-generation project

A long-cherished vision becomes reality: a connection between Zermatt and the Italian winter sports resort of Cervinia, unbroken and operational throughout the year, thanks to the Matterhorn Alpine Crossing. From the spring of 2023, the “Matterhorn Glacier Ride II” will be the final piece of the puzzle, as the highest continuous Alpine crossing by cable car is completed. The modern cableway will link the Klein Matterhorn mountain station with the station on Testa Grigia in Italy. Following the opening of the “Matterhorn Glacier Ride I” in the autumn of 2018, the completion of the “Matterhorn Glacier Ride II” will see the two resorts joined by a continuous link, the realization of a dream born over 80 years ago.

Facts about the Matterhorn Alpine Crossing

The major project to build an Alpine Crossing entered its second phase in April 2019. After the successful start-up of the “Matterhorn Glacier Ride I” in the autumn of 2018, the section between the Matterhorn Glacier Paradise and Testa Grigia is the only missing link in the cableway connection between Breuil-Cervinia and Zermatt. In future, a 3S cableway similar in construction to the “Matterhorn Glacier Ride I” will complete the link. The planned cost of construction is about 45 million Swiss francs. The new connection will make it possible to travel from Cervinia to Zermatt for the first time without getting your boots wet. If everything goes according to plan, the first passengers will cross the Alps by cableway in the spring of 2023, with the Matterhorn constantly in sight.

	<i>Matterhorn Glacier Ride I</i>	<i>Matterhorn Glacier Ride II</i>
<i>Valley station</i>	2'923 m above sea level	3'458 m above sea level
<i>Mountain station</i>	3'883 m above sea level	3'883 m above sea level
<i>Cable car manufacturer</i>	LEITNER	LEITNER
<i>Elevation gain</i>	900 m	363 m
<i>Carrying capacity</i>	2'000 passengers/hour	1'300 passengers/hour
<i>Speed</i>	7.5 m/s	7.5 m/s
<i>Journey time</i>	9 min	4 min
<i>Number of cabins</i>	25	10
<i>Cabins «Crystal Ride»</i>	4	2
<i>Passengers/cabins</i>	28	28
<i>Drive system</i>	LEITNER DirectDrive	LEITNER DirectDrive
<i>Cabin Design</i>	Pininfarina	Pininfarina
<i>Construction costs</i>	60 M.	45 M.

3S cableway

3S cableways combine the most advanced technology with the highest safety standards and greatest ride comfort. They offer numerous advantages over conventional circulating cableways, ensuring a more stable ride in high winds and providing increased carrying capacity and greater driving speed. With a maximum speed of 7.5 metres per second, the Matterhorn Glacier Ride I can carry up to 2000 passengers an hour to the Klein Matterhorn. It travels at a maximum height of 198 metres above the ground on a route that takes it over three support towers, two of which stand 2732 metres apart. "To date, there are only about fifteen 3S cableways worldwide. Nevertheless, the Matterhorn Glacier Ride I surpasses them all - both for altitude and the length of the span between towers 2 and 3" explains Jan Sorg, Project Engineer at LEITNER.

Different ropes for different jobs

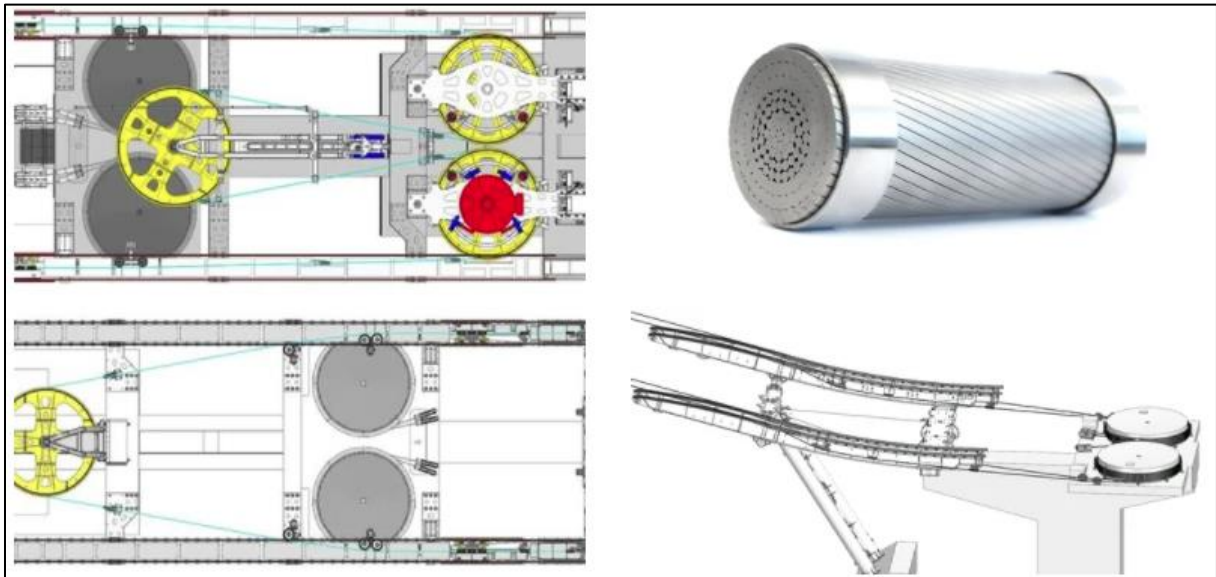
The Swiss company FATZER made all the hauling cable and support cables of the 3S cableway. The support cables have a smooth surface, allowing the cabins to glide quietly along them. This type of cable is known as a fully locked spiral strand rope. Wires with a shaped profile, which can interlock like a zip fastener, form the outer layer.

This manufacturing technique also means the outer wires cannot escape from the rope bundle in the event of breakage. Its smooth surface also helps protect the hauling cable, preventing the penetration of moisture and dirt. Two of the four hauling cables are fitted with fibre-optic cables, guaranteeing a redundant data link between the stations. These links also ensure continuous monitoring of key data, for example, the integrity of the multi-strand cable anchors at the mountain station and cable tension, as well as Internet and Intranet connections. Each of the four support cables of the Matterhorn Glacier Ride I is 3'940 metres long and 56 millimetres in diameter. They have a service life of 30 years and weigh 17.8 kg per metre. Their total weight is 280 tonnes.



By contrast, the hauling cable consists of twisted strands, spliced to form a continuous loop. It comprises six strands, each of which is made from 36 individual wires. Unlike the support cable, its surface is not flat, but wound around a core strand in a spiral-linear pattern. This process makes the hauling cable particularly dynamic and highly resilient under mechanical strain. The total length of the cable is 8120 metres; it weighs 8.28 kg per metre. Its total weight is 62 100 kg. The 6x36 Warrington Seale cable is extremely durable and needs replacing only about every 20 years.

Since the hauling cable runs on the supports over LEITNER's patented cable rollers with a spring system, cable vibrations are reduced, thus increasing ride comfort. At the same time, the system also protects the support cables and reduces maintenance costs.



One cablecar station – two cableways

Since November 2018, the new cableway of superlatives is operating all-year round, carrying up to 2000 passengers per hour to Klein Matterhorn. The Matterhorn Glacier Ride I, the world's highest 3S cableway, connects Trockener Steg with Klein Matterhorn at 3883 metres. With the existing Matterhorn-Express cable car and the new 3S (three-cable system) cableway passengers reach Europe's highest mountain station from Zermatt (1608 metres) quickly and in great comfort.

The cableway connection between the Klein Matterhorn and Testa Grigia sees the realization of a once-in-a-generation dream: to be able to travel the entire way from the Matterhorn village of Zermatt (Switzerland) to Breuil-Cervinia (Italy) without having to get your boots wet! A visionary cableway project will further enhance the status of Zermatt-Matterhorn as a premium high-alpine destination. The panoramic journey, lasting around one hour from Switzerland to Italy or vice versa, will cover an altitude difference of over 4'000 metres – the greatest by any cableway in Europe.

[Your contact for questions and further information about the project:](#)

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