

ZERMATT: SWITZERLAND'S FIRST AUTONOMOUS GONDOLA LIFT

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Zermatt Bergbahnen AG has granted visitors, locals and even itself a Christmas present. The new detachable ten-person Kumme gondola lift went into operation and has since been a source of fascination. This latest highlight in the Matterhorn ski paradise features a smart design and state-of-the-art technology.

Despite the lockdown and all the uncertainties associated with it, work began as planned last spring on this innovative lift project, thanks in part to funding from reliable investors. After a busy and eventful summer of construction work, the latest flagship project by Zermatt Bergbahnen AG has been opened. A total investment of CHF 30 million went into the construction of the new facilities. In addition to the gondola lift, the project also includes provision of a 4.5 km snow-making system with 63 new snow lances and five avalanche control towers to ensure that visitors can always enjoy excellent snow conditions in safety. The patron of the state-of-the-art installation is Andreas Biner, president of the Zermatt local authority.

In harmony with the Alpine world

Even during the construction phase, efforts were made to minimize the impact of the lift on its natural surroundings. Thanks to active environmental controls, it was possible to minimize and renature any damage caused. It is anticipated that the new gondola lift will attract more winter sports enthusiasts to the Rothorn area and so a new wildlife conservation area has been set up below the Rothorn to provide a safe haven for animals.

The design of the cabins also reflects the Alpine surroundings. They display many of Zermatt's four-thousanders and various examples of the indigenous wildlife.

The eye-catching design of the cabins is more than matched by the stunning views they afford their passengers from within. The Kumme gondola lift sways gently and quietly on its journey from Tufternkehr to the mid-way station at Wyss Gufer and on to the Rothorn, accompanied throughout by the unique panorama, with the Matterhorn as its focal point. The Kumme gondola lift delivers a combination of transportation, relaxation and exhilaration!

The first autonomous gondola lift in Switzerland

The true highlight of the Kumme gondola lift is hidden behind the scenes, however. Using the latest technology, cableway manufacturers Doppelmayr/Garaventa have developed the innovative "AURO" system. The full name "AURO - Autonomous Ropeway Operation" reveals the secret of the Doppelmayr/Garaventa system: the AURO ropeway runs operator-free. Its state-of-the-art equipment includes smart networked technology and guarantees the highest levels of safety. It has cameras and sensors to monitor the lift, especially at the points where passengers enter and leave the cabins. The system automatically identifies situations that deviate from "normal operation". For example, should a passenger get their ski boot stuck in the door, the system would react immediately and automatically shut down the lift. It would then be restarted by a staff member, who keeps the cableway under continual surveillance from a control room (the Ropeway Operation Centre). The reliability and availability of an AURO system depends upon this perfect synergy between human operator and advanced technology. Autonomous ropeways are the way ahead as far as the future of cable-powered mobility is concerned. AURO systems transport passengers safely and reliably to their destinations in tourist areas and cities.

The Kumme gondola lift is the first autonomous cableway to go into operation in Switzerland. *“The opening of this unique lift shows that the Zermatt pioneering spirit is alive and well. The Kumme gondola lift represents a direct link to previous ground-breaking projects such as the highest mountain station in Europe and the highest 3S cableway in the world. The first weeks since the opening of this outstanding technical achievement and the positive development of the frequencies have confirmed that the ski area below the Rothorn has experienced a great enhancement. We hope that this cable car project will clear the path for further technical innovation even beyond the resort of Zermatt,”* declared ZBAG CEO Markus Hasler.

Technical details

Cable manufacturer	Doppelmayr/Garaventa
Lift type	Detachable D-Line gondola
Inclined length	3'192 m
Difference in altitude	965 m
Track width	6.4 m
No. of towers	17
Cable diameter	50 mm
Speed	6.0 m/sec
Carrying capacity	1500 passengers per hour
No. of cabins	56
Cabin type	OMEGA V-10
Cost of project	CHF 30 million

