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3 iPods to be won
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Wir



In Armenia, Garaventa has built the world's longest reversible aerial tramway: 5.7 km in length and 400 m at the highest point above ground. p.15



World première: 8/10 combined lift

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Evacuation concept replaces rescue ropeways

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8/10 is the magic formula in Mayrhofen

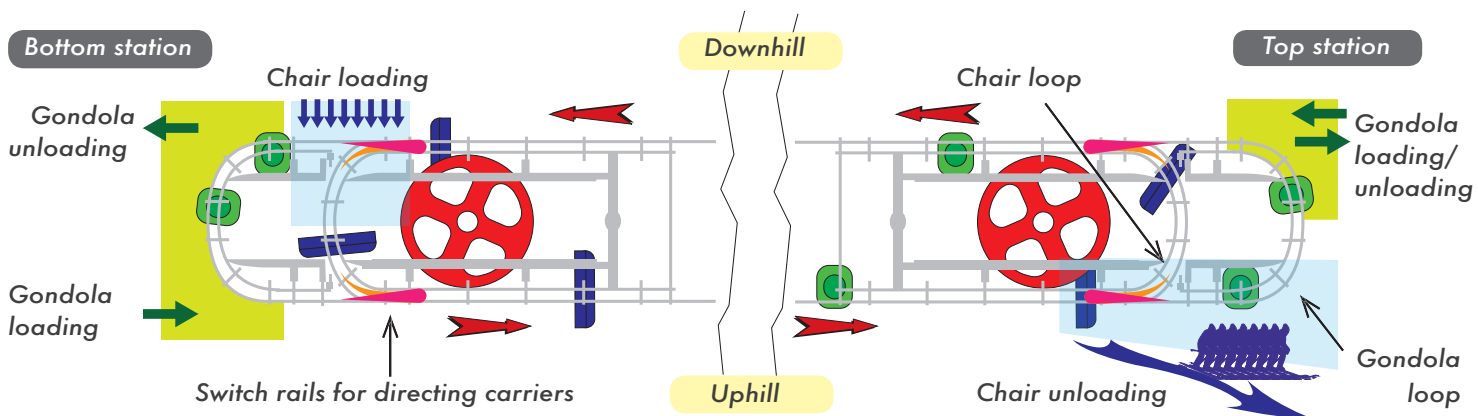


Mayrhofen in Tyrol's Ziller Valley celebrated a world première with the inauguration of the combined lift up to the Penken: For the first time, skiers can choose between 8-seater chairs and 10-passenger gondolas. The lift has an impressive capacity of 3,900 PPH.

The new combined lift replaces a triple chairlift built in 1984. It starts at the top station of the 2S bicable Penken lift. This acts as a feeder in the central area of the resort where altitudes range from 900m to 2,000m. The stations are entirely new, while the lift line has been retained. The carriers are housed separately in the underground parking facility at the bottom station. As they can be sent into circulation in random order, there is plenty of flexibility when it comes to addressing transport needs. Passengers wearing skis use the chairs, while other guests take the gondolas.

The benefits of combined lifts:

- Optimal adjustment to suit differing needs of summer and winter operation
- Easy handling for children's ski classes
- Straightforward transport of bulky sports equipment and freight.



World first: The use of two separate rope loops for chairs and gondolas means that 8-seater chairs can be deployed without conflicting with high-comfort boarding for the gondolas. To prevent any risk to gondola users from the wider chairs, the loading areas for chairs and gondolas have been separated. (Up to now this has not been necessary as the usual combination was 6-seater chairs and 8-passenger gondolas.) In these individual loading areas for either chairs or gondolas, the carriers are timed to ensure entirely smooth loading and unloading. The gondolas have a station transit speed of 0.15 m/s, while the chairs run at 0.75 m/s. In addition, passenger flows in the chair loading area are organized to compensate for loading time differences between slower and faster passengers.

Clear leadership of the world market confirmed once again

In fiscal 2009/2010* – a year of financial and economic crisis – the Doppelmayr Group installed 117 ropeways. Despite it not being an easy year, we nonetheless succeeded in weathering the proverbial economic storm and, thanks to our customers, maintained volume and profitability at a largely stable level. In the Alpine countries in particular, winter tourism has shown itself to be crisis-resistant. At the same time, we were able to demonstrate that Doppelmayr continues to be a reliable and future-proof partner even in a difficult economic climate.

Our key success factors include high product quality, a fast response capability and our great potential for innovation. – Find out for yourself in this latest issue of our "WIR" magazine which features a selection of fascinating installations and new technical developments.

Alongside our major market – winter tourism – we are growing our business in the field of urban transit applications. Doppelmayr/Garaventa know-how is also very much in demand for bulk material and unit load handling.

We are firmly resolved to maintain our proven strategy of customer-oriented quality, technology and innovation leadership. The fact that this is the right course is borne out in no small measure by the current progression in order intake. I would like to express my sincere thanks to our customers worldwide for this clear mark of confidence.



Michael Doppelmayr

* April 1, 2009 to March 31, 2010



The combined lift up to the Penken has a ratio of two chairs to one gondola. In the summer, gondolas are used exclusively; and 20 fully glazed standard gondolas alternate with six airy, open-top gondolas.



Director Josef Reiter, Mayrhofner Bergbahnen: Our new combined lift is fast, uncomplicated and comfortable.

It is our way of addressing the different requirements of our passengers. With the development of the combined lift, the Doppelmayr Group has created a transport system which optimally caters for the needs of all user groups. Every mix of chairs and gondolas is possible to suit the season, the weather conditions and the preferences of our guests.

8/10-CGD Kombibahn Penken

Transport capacity	3,900 PPH
Trip time	2.9 min
Speed	5.0 m/s
Cabins	20
Chairs	34
Interval	8.0 s
Inclined length	870 m
Bottom station altitude	1,793 m
Top station altitude	1,993 m
Vertical rise	200 m
Towers	11
Drive	Top
Tensioning	Bottom

Karspitzbahn is extended



The Wiesenalmbahn at Zell am Ziller has been extended by another section and renamed. The two separate lift systems are now known as Karspitz I and II.

In 2010, the operating company Zeller Bergbahnen replaced a double chairlift dating back to 1984 with the 8-MGD Karspitzbahn II.

The original plan had been to build the new section along with what was then the Wiesenalm lift back in 2008. However, when the negotiations covering a small plot of land near the top station of the old chair lift showed no signs of reaching a conclusion, the company decided not to wait any longer. It was not until 2010, after a lot of persuasion, that agreement was finally reached.

Construction was then able to proceed rapidly as a lot of the preparation had already been done.

Two independent sections

The lift is normally run in through operation although the two sections are actually independent of each other. If required, either the upper or lower section can operate on its own.

The lift line of Section 2 largely follows the same route as the old chairlift. Both the bottom and mid stations are



equipped with a fully automatic continuous loop parking facility.

Better distribution of skiers

As Zeller Bergbahnen CEO Dieter Grepl explains, this second feeder lift from Zell am Ziller has made it possible to alleviate the capacity bottlenecks previously experienced in peak periods on the other feeder, Rosenalmbahn I+II, thus optimizing skier distribution without building a new ski trail.



CEO Dieter Grepl, Zeller Bergbahnen: We are extremely happy with our longstanding partner

Doppelmayr and would like to thank them for doing a professional job and delivering on schedule! – Doppelmayr supplied the ropeway and electrical equipment, Zeller Bergbahnen AG took charge of local building coordination and hiring contractors.

8-MGD Karspitzbahn II

Transport capacity	2,400 PPH
Trip time	6.7 min
Speed	6.0 m/s
Cabins	76
Interval	12.0 s
Inclined length	2,410 m
Bottom station altitude	1,310 m
Top station altitude	2,116 m
Vertical rise	806 m
Towers	13
Drive	Top
Tensioning	Bottom



Five new Doppelmayr gondola lifts in the Ziller Valley

In 2010, Doppelmayr built five gondola lifts in the Ziller Valley: the Penkenbahn in Mayrhofen and four in the Zillertal Arena: Karspitzbahn II in Zell am Ziller, the Falschbachbahn in Gerlos and Dorfbahn I + II in Königsleiten.

The Zillertal Arena encompasses the villages of Zell, Gerlos, Wald-Königsleiten and Krimml. The region has over 166 kilometers of ski trails and 49 lifts with an hourly capacity of 83,000 passengers.

As Dietmar Grepl, CEO of Zeller Bergbahnen, sees it, the number of uphill trips are set to increase "thanks to the extremely attractive sport run". He is confident that these investments will pay off. "We are going to win back lost market share with these investments."

After protracted land negotiations the optimal solution: The Karspitzbahn has a feeder as well as a distribution function.

Gondola lift following guest survey



The construction of an 8-MGD to access the Gerlos side of the Königsleitenspitze (Ziller Valley, Tyrol) was largely the result of sounding out visitors' opinions.

Using a gondola lift in the middle of a ski area for the repeat trips up the mountain is quite unusual. However, the decision to build a gondola lift won the approval of guests in a survey. Their vote clearly highlighted the desire for comfort and child-friendly amenities.

As the Falschbachbahn is one of the most frequently used lifts in the region and the only link between Gerlos and Königsleiten, "it was important for us," explains David Kammerlander, Managing Director of Schilift-Zentrum-Gerlos GmbH, "that the new installation should have high transport capacity and operational reliability".

The Falschbachbahn is located in the upper reaches of the ski mountain and is

easy to get to from the 6-seater chairlift "Fußalm-X-Press".

8-MGD-S Falschbachbahn

Transport capacity	2,800 PPH
Trip time	4.3 min
Speed	6.0 m/s
Cabins	50
Interval	10.3 s
Inclined length	1,250 m
Bottom station altitude	1,868 m
Top station altitude	2,305 m
Vertical rise	437 m
Towers	9
Drive	Bottom
Tensioning	Bottom



The new 8-MGD Falschbachbahn replaces a quad chairlift built in 1994. The station locations and the lift line have been retained. The fully automatic dead end parking facility at the bottom station has been integrated into the mountain. As a new 8-passenger gondola lift was also built on the Königsleiten side at the same time, the ski resorts of Gerlos and Königsleiten have significantly boosted their attractiveness.

Dorfbahn in Königsleiten: A functional gem

The three-kilometer-long 8-MGD Dorfbahn 1+2 with heated seats marks the biggest investment in the 45-year history of the operating company, Gerlospass Königsleiten Bergbahnen.

Thanks to the two independent lift systems, the sections can be utilized individually. This means, for example, that the bottom section can still be run even if weather conditions prevent regular ski operations further up the mountain.

Another advantage of the intermediate station is the improved integration of the Sonnwendkopfbahn – a popular feeder lift also serving skiers using the adjacent slopes. This means greater convenience for beginners wishing to access the easier ski runs further up the mountain. Previously, it had been necessary to ski down to several other lifts – partly via difficult runs – in order to travel back uphill again.

The bottom station is situated in the village center. The side of the building facing the road features a transparent

lamella façade which optically connects the various parts of the building – parking deck, cash desk, ski lockers, administration – and simultaneously provides shading as well as safeguarding the assembly point on the upper floor.

Ski bus passes through the underground garage

Beneath the bottom station, a two-level underground parking lot has been built into the slope on one side. It is all part of a well-conceived transport system and the ski bus actually stops right in front of the escalator up to the platform of the gondola lift.

Safety system also covers crossing lifts

The intermediate station houses a fully automatic continuous loop parking facility for both sections.

The gondola lift crosses a surface lift, a fixed-grip double and a fixed-grip quad chairlift. The sheave assemblies are fitted with the Doppelmayr rope position monitoring system RPD as well as with break fork switches which also stop the lift below in the event of a deropement.

8-MGD-S Dorfbahn 1+2	
Transport capacity	2,381 PPH
Trip time	8.5 min
Speed	6.0 m/s
Cabins	90
Interval	12.1 s
Inclined length	2,635 m
Bottom station altitude	1,594 m
Mid station altitude	1,920 m
Top station altitude	2,247 m
Vertical rise	653 m
Towers	18+4
Both drives	Middle
Tensioning	1: Bottom 2: Middle



The 8-MGD-S Dorfbahn replaces the double chairlifts Königsleiten and Larmachkopf. With a length of two kilometers, the Larmachkopfbahn no longer met today's requirements and was not readily used in bad weather. Two-thirds of the cabins on the new lift are painted in black, the remaining third in red; the heated seats have black leather upholstery.

Record-breaking lifts to the Gaislachkogel



In mid-December 2010, two new Doppelmayr lifts went into operation in Sölden: an 8-passenger gondola lift and a 30-passenger 3S lift. These replace the DLM built in 1988.

The two new lifts are independent of each other but share a "mid station": the top station of the 8-MGD and bottom station of the 3S. This station lies at the intersection of various ski trails.

World record 8-passenger gondola lift

With an hourly capacity of 3,600 passengers, the 8-passenger gondola lift is the world's top-performing lift of its kind. The bottom station is situated in the village center. The loading platform is reached via escalators at the side of the building or by means of the elevator. The carrier parking facility is housed above the loading area – with no separating floor in between.

At the mid station (2,174 m) there is an unloading platform where passengers don their skis. Those traveling on to the summit change over to the 3S lift. The station building itself has a 190 m² window affording stunning panoramic views of the Stubai Alps. The basement houses workshops and garages for the snow-grooming vehicles. The mid station also has a restaurant.

High-tech foundations with 3D adjustment

A totally new evacuation concept was developed for the 3S (see page 22). Its top station was moved 30 m north of the dismantled DLM.



Transparent station façade. For the carrier parking – Doppelmayr's first ever overhead facility – very large structures had to be accommodated in the bottom station. This meant ensuring that the volume would have minimal impact on the visual impression of the village. The solution was to use a giant plastic skin for the façade. The plastic foil used is non-flammable and lighter than glass. Its low weight enabled the designers to use a slender steel construction. In addition, the space within this membrane is less prone to heat gain than in the case of glass. This ensures a pleasant climate on sunny days. The Innsbruck-based Johann Obermoser architectural practice has certainly come up with a highly successful design!



Concrete trough with foundations that can be hydraulically adjusted in all directions. Installed in the permafrost zone at Tower III (above) and the top station.

The new location offers better geological conditions than the old one. The top station – and also the third tower – is built in terrain which remains frozen all year round. The permafrost is the cement which holds the rocks together. Geologists estimate that the rock formations could thaw in the long term.

The new location is less susceptible to this phenomenon.

To compensate for any settling and displacement of the ground, a foundation was constructed consisting of 23 individual foundations. Permanent ventilation keeps the area beneath the foundation cold and stops the ground ice from melting. If settlement nonetheless occurs, horizontal and vertical adjustments can

be made using hydraulic presses and consolidation work performed.

There was another important reason for repositioning the top station. As construction would take two years, the operating company did not want to miss out on a winter season. The foundation work on the 3S was able to go ahead in the late summer of 2009 and the DLM did not have to be dismantled until April 2010.

Fascinating details

- 200 t steel for Tower III on the 3S
- The black gondolas of the 8-MGD change color depending on viewing angle and sunlight. They display various slogans.



The design of the Gaislachkoglbahn is crucial for its economic success. After all, guests pay primarily for the overall experience, not for the technology. When the customer says "that's a fantastic lift!" then the installation works as a marketing tool. Everyone will want at least one ride on the Gaislachkoglbahn. (Mag. J. Falkner, Marketing Manager)



Even greater speed and wind stability with the 3S

On a 3S tricable lift the gondolas travel on two track ropes and are pulled by a haul rope. The two track ropes dampen carrier side swing, giving particularly high wind stability. In addition, 3S lifts can have very long rope spans.

Gaislachkoglbahn	8-MGD	3S
Transport capacity in PPH	3,600	2,600
Trip time in min	7.2	6.8
Speed in m/s	6.0	6.0
Carriers	107	19
Interval in s	8.0	41.5
Inclined length in m	2,041	1,978
Vertical rise	811	864
Towers	16	3
Drive	Top	Top
Tensioning	Bottom	Bottom

Bettmeralp: New concept for family chairlift



Garaventa has built a detachable quad chairlift with orange bubbles at the Bettmeralp ski resort in the Swiss canton of Valais.

The new 4-CLD-B-O was built in summer 2010. Its lower section replaces the two parallel Bettmeralp surface lifts dating back to 1972; the equally long upper section is new.

Child-friendly and comfortable

The ski region lies at an altitude of almost 2000m near the 23-kilometer Aletsch Glacier, the longest in the Alps. The four villages in this area are car-free.

Two feeder lifts provide access to the Bettmeralp region. From their top stations, a recently built conveyor now takes passengers to the bottom station of the new lift. (Skiers previously had to climb up the



Director Anton König, Bettmeralpbahnen AG: "We have had positive experience with Doppelmayr and Garaventa over many years. In

the last decade we have built three lifts with Garaventa. These people know the ropes, and we have absolute trust in their expertise and professionalism."

slope to reach the old surface lifts). From here, an escalator is provided for access to the loading area which is equipped with a lifting platform.

The bottom station is an architectural showpiece. The extensive glazing enables guests to form an emotional bond with the surrounding mountain landscape.

The drive is housed in the intermediate station known as "Schene Bodu". The twin-grooved drive bull wheel serves both sections of the lift. Fully automatic carrier parking is also incorporated in the intermediate station. In order to protect the natural environment, this facility has been built underground.



Child-friendliness: In the chair loading area a video shows lift users the right way to behave on the lift. The chairs have markings to indicate the correct seating positions, seat dividers, and safety handles that fit between the legs to prevent children slipping off the seat as well as a wide, padded restraining bar.

4-CLD-B-O Bettmeralp – Schene Bodu/Blausee

Transport capacity	2,000 PPH
Trip time	4.2 min
Speed	5.0 m/s
Chairs	69
Interval	7.2 s
Inclined length	1,080 m
Vertical rise	275 m
Towers	13
Drive	Middle
Tensioning	Bottom + Top
Top station altitude	2,212 m
Bottom station altitude	1,937 m

Optimized funicular operation in Davos



In 2010, the Parsenn funicular railway in Davos was extended by a second section up to the Weissfluhjoch. This funicular is the main transport link to the Parsenn region.

The two sections of the Parsenn funicular from Davos village to the Weissfluhjoch were inaugurated in the early 1930s. Extensive modernization of the first section to Höhenweg was carried out in 2002. The second section was upgraded in 2010.

Many curves and bridges

The new funicular has two tracks and incorporates a large number of curves. One third of the line passes through a snow shed and over bridges. The snow shed was built to facilitate snow clearing.

Extensive track upgrade

The track infrastructure has been upgraded, the superstructure replaced and the gauge widened from 80 cm to 100 cm. The track alignment was retained. Each of the two cabins can carry 110 passengers. Travel speed has been increased from 6.2 m/s to 9 m/s.



With the new funicular we have enhanced passenger comfort as well as bringing the installation in line with the latest standards.



110 FUL Höhenweg – Weissfluhjoch

Transport capacity	970 PPH
Trip time	5.0 min
Speed	9.0 m/s
Carriers	2
Inclined length	2,214 m
Vertical rise	449 m
Drive	Top
Top station altitude	2,663 m
Bottom station altitude	2,214 m

Markus Good, Technical Operations Manager, Davos Klosters Mountains

The funicular also serves five mountain restaurants as well as the Institute for Snow and Avalanche Research. Freight handling between the first and second sections has been speeded up significantly thanks to the new intermediate station. In the past, cargo had to be transferred through two rooms from one freight carrier on the first section to another on the second section¹ using three cranes. The transfer can now be handled with a single crane.

¹ On the Parsenn funicular an additional freight carrier (at the front or now alternatively at the back) or a luggage basket is used.



Record-breaking construction pace



In the Swiss canton of Bern, Bergbahnen Destination Gstaad AG (BDG) has replaced a 4-passenger gondola lift built in 1959 with the new 8-MGD Rougemont – La Videmanette.

The new lift is the main western link to the Eggli/La Videmanette region. As Director Armon Cantieni explains, the aim had been to create a comfortable, fast and reliable means of access to the BDG's longest ski slope with continuous snowmaking facilities (10 km). And, in view of the age of its predecessor, a new installation had been planned for some time.

The entrance to the existing top station would have been too narrow for the new gondolas. For this reason it was replaced by a new building. At the same time, access to the ski trails and hiking tracks was improved through the addition of a pedestrian tunnel.

Flexible gondola deployment

The number of gondolas on the line can be varied by 25%, 50% or 75% during operation.

The flexibility is such that in particularly quiet periods during the summer, the lift is actually run as a pulsed-movement ropeway with two groups of three cabins. Special start/stop couplings are provided in the stations for this mode of operation.

For the first time in Switzerland: The new Doppelmayr/Garaventa evacuation concept

As the lift crosses areas which are prone to avalanche, special design features have been incorporated to facilitate evacuation in an emergency scenario. In addition to the RPD, Doppelmayr's patented rope monitoring system, this concept includes emergency running characteristics for the drives to ensure that stranded passengers can be brought back to the bottom station with the gondolas in any event. This is the first time that an evacuation concept of this kind has been incorporated on a gondola lift in Switzerland.



Director Armon Cantieni highlights the special features of the new gondola lift: the integrated rescue configuration and

the record-breaking construction time. Work on dismantling the old lift only began in mid-June. Installation of the line structures got under way on September 10 and the official opening took place on December 10. Delivering the equipment was a major operation. The 80-ton rope was delivered on two special transport vehicles. The bridge in front of the bottom station would not have withstood one of the usual heavy haulage trucks. The solution consisted of one empty vehicle passing over the bridge and the rope then being unwound from one reel, across the bridge and onto the other reel.

8-MGD Rougemont - La Videmanette

Transport capacity	1,400 PPH
Trip time	9.6 min
Speed	6.0 m/s
Cabins	56
Interval	20.6 s
Inclined length	3,100 m
Vertical rise	1,184 m
Towers	17
Drive	Top
Tensioning	Bottom
Top station altitude	2,152 m
Bottom station altitude	968 m

In addition to the Rougemont-La Videmanette lift, which is an important feeder as well as being used by skiers for repeat uphill trips, Garaventa built the 4-CLD-B-O Chalberhöni-Vorderes Eggli in the same area in 2010. The coordinated transport facilities of the two lifts represent a huge increase in convenience for skiers.

APM for Oakland

Doppelmayr Cable Car (DCC) is building an automated people mover, known as a pinched-loop CABLE Liner, in Oakland (San Francisco Bay Area, USA).

The elevated dual track is 5,100 m in length and 12 m above street level at its highest point. The maximum distance between towers is 58 m. The system has four trains of three cars each and connects Oakland Airport with the BART Coliseum station.

Construction began at the end of 2010 and start-up is scheduled for 2014. DCC will be running the installation for 20 years.

Modern technology, operational efficiency, environmental friendliness

DCC was able to win the contract against tough international competition thanks to the proven technology, operational efficiency and environmental friendliness of the system – improving air quality was a major factor in the award.

The client is the biggest public transport operator in the San Francisco area, Bay Area Rapid Transit (BART).



The Oakland Airport Connector

System length	5,100 m
Transport capacity	1,490 PPH
4 trains, each carrying	158 P
Speed	14.0 m/s
Trip time (complete line)	10.5 min



Grindelwald: Firstbahn ups its speed



Thanks to a technically imaginative rebuild of the third section on the 6-passenger Grindelwald-First gondola lift, it has been possible to increase overall capacity by 12 percent.

There were two factors that motivated the lift expansion, as the head of Winter Sports + Firstbahn, Christoph Egger, points out: "On the one hand, at the age of 18, the lift was half way through its service life. That's the right time for revamping the installation. And on the other hand, we needed to significantly increase capacity on the third section in order to avoid waiting times for repeat trips."

Four basic measures were implemented to increase capacity:

- The control system was replaced,
- some of the sheave assemblies were reinforced,
- faster switch rails were installed at the Schreckfeld mid station and

- 10 additional gondolas were purchased.

Flexible operating modes to fit requirements

The ten new gondolas are run on all three sections until 10.30 am (Operating Mode 1). From 11 am, it is possible for them to be run exclusively on Section 3 (Operating Mode 2), in other words on the upper section only. After 2 pm, the lift control system can then be switched back to Operating Mode 1 (gondolas circulate in all 3 sections).

To house the new gondolas in the First station, the existing concrete canopy was provided with a wooden enclosure.



Christoph Egger, Board Member of Jungfraubahnen and head of the Firstbahn as well as the "Winter Sports" business division,

likes to underline the achievement: "We've managed to generate 50% more capacity on Section 3 by simply buying another ten gondolas!"

6-MGD Schreckfeld-First, Section 3

Transport capacity	1,800 PPH
Trip time	3.0 min
Speed	5.0 m/s
Cabins	42
Interval	12 s
Inclined length	919 m
Vertical rise	213 m
Top station altitude	2,167 m
Bottom station altitude	1,954 m
Towers	9
Drive	Bottom
Tensioning	Top

Armenia: The world's longest aerial tram



Garaventa has built the world's longest reversible aerial tramway in Armenia. It is almost six kilometers in length and features include two tracks, no track rope brakes and an integrated evacuation concept to ensure that the cabins can always be returned to the nearest station.

The tram connects the little village of Halidzor across the wide River Votran Gorge with the ancient Tatev monastery complex. In the Middle Ages, this was an important university. To this day, it remains one of Armenia's major religious centers and is seen as a place of pilgrimage by many Armenians.

Emigrant's gift to the nation

The Tatev-Halidzor tram was financed by a wealthy Armenian expatriate as a gift to the nation. In the next few years, a restaurant and a hotel are to be built near the lower terminal.

The tram is 5.7 km long, the longest of its four rope spans covering 2.7 km.

The towers are 20 m and 60 m high; the maximum height above valley floor reaches 400 m.

Building operations proved arduous in view of the poor roads and the extreme continental climate on the plateau – sweltering heat in the summer and bitter cold in the winter. The nearest city, Goris, is 10 km away. The trip from the capital, Yerevan, which lies 320 km to the west, takes five hours and involves crossing two 2,000-meter-high passes. The road from Halidzor to Tatev was widened and asphalted for the construction of the aerial tram. This work was absolutely essential – transporting the equipment required for rope installation alone took 14 semitrailer trucks!



25-ATW Tatev-Halidzor

Transport capacity	120 PPH
Trip time	12.0 min
Max. speed	10.0 m/s
Inclined length	5,760 m
Vertical rise	12 m
Towers	3
2 track ropes ø	40 mm
Haul rope ø	27 mm
Drive / 355 kW	Halidzor
Haul rope counterweight 17.4 t	Tatev
Fixed track rope anchoring	Top + Bottom
Platform altitude Halidzor	1,546 m
Platform altitude Tatev	1,534 m

The ropeline of the aerial tram is very flat. The Halidzor terminal (photo) is an open construction with a glass roof over the entrance and a machine room in the basement. Next to the terminal is the cash desk along with a small waiting room, cafeteria, toilet and a large parking lot for coaches.



New attraction for Merano

In 2010, the operating company, Meran 2000 Bergbahnen AG, awarded the contract for the complete rebuild of the 40-year-old aerial tramway from Merano to the Merano 2000 ski resort. With its 120-passenger cabins, this is the biggest aerial tramway in South Tyrol.

The lower terminal, Naif, is next to the municipal bus stop on the outskirts of Merano. The tram has three stations.



Access in the upper and lower terminals is via a ramp and a sliding platform, which is moved depending on which side the cabin enters. For Director Franz Pixner (photo), this feature meant that the station buildings could be kept compact and their footprint reduced. This was particularly advantageous at the base terminal because otherwise it would have been necessary to build closer to the Naifbach (river) and the associated torrent control work would have involved significant costs.

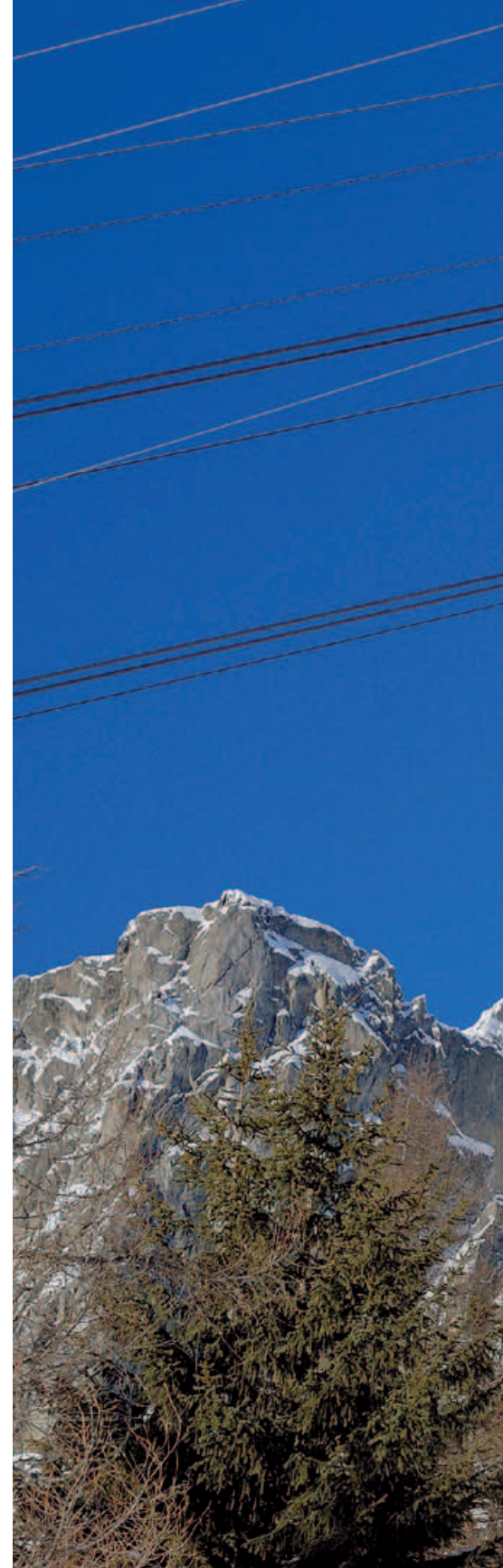
The 50m Tower II is designed as a mid station. During the summer season, passengers can load and unload here. The tram crosses impassable terrain. This posed a challenge for the construction operations, and not just for the rope transport and installation – with each of the four-kilometer-long track ropes weighing 122 tons. There were also five old concrete towers to be dismantled and the three new lattice towers to be erected. Access roads had to be built for this purpose.

The profile of the aerial tram meant that a rescue ropeway was mandatory. The carriers for this system are propelled by a separate rope loop with drive in the top terminal; they can each carry 20 passengers. One rescue carrier is parked in the lower terminal, another two in the upper terminal.

The aerial tram providing access to the Merano 2000 skiing and hiking region was closed down in summer 2010 for the rebuild and reopened in December. In the meantime, a shuttle bus service was laid on from Merano to the gondola lift in the neighboring village of Falzeben.

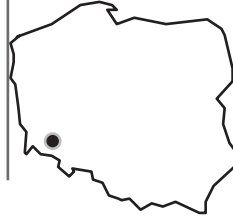
120-ATW Naif-Piffing (Meran 2000)

Transport capacity	850 PPH
Trip time	7.0 min
Max. speed	11.0 m/s
Inclined length	3,647 m
Vertical rise	1,251 m
Towers	3
Drive 1000 kW (2x500)	Top
Haul rope counterweight 20t	Bottom
Fixed track rope anchoring	Top + Bottom
Lower terminal platform	648 m
Upper terminal platform	1,899 m





Giant Mountains: 6-CLD in national park



A new 6-CLD chairlift has been opened in Poland's Karkonosze or Giant Mountains, close to the borders with Germany and the Czech Republic. The lift extends far into the Karkonoski National Park, a Natura 2000 region.

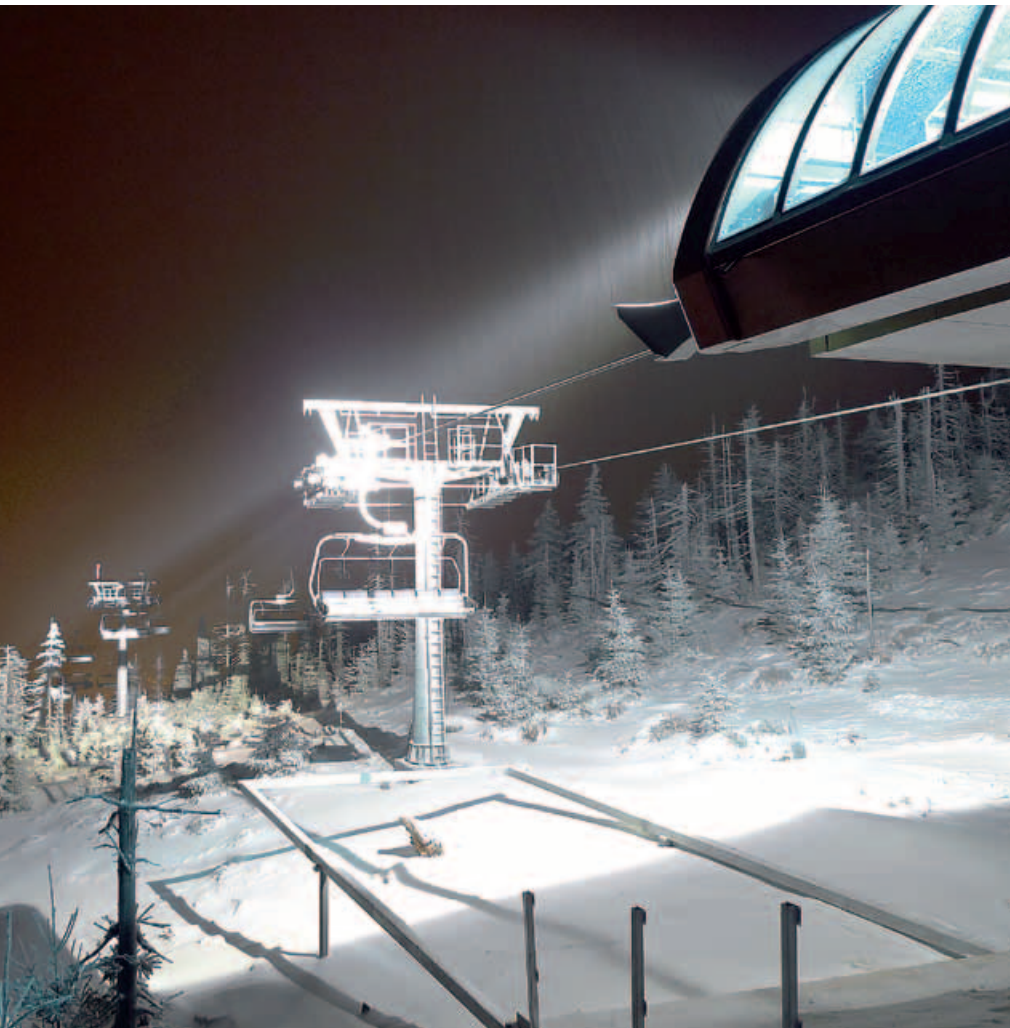
Szklarska Poreba is a small town in the Lower Silesian "Voivodeship" (province), idyllically situated in the Giant Mountains and at the center of the ski area named after it. This resort is a two-hour drive from the cities of Dresden (Germany) and Wrocław (Poland), and ranks as a popular vacation destination. Among the three dozen ski lifts that operate in the winter months, the showpiece is certainly the new 6-CLD, known as the Sudety Lift SB 3.

The lift line runs from bottom station on the edge of the town to the top station in the national park. For this reason, particular care had to be taken during construction. No machinery was used for the earthworks to avoid even the slightest damage to meadowland, and the manu-

al operations were backed up with a material ropeway. Doppelmayr was able to draw on its many years of experience of working in conservation areas of this kind. As well as acting as general contractor for the project, Doppelmayr was also responsible for providing the power supply lines. The construction work was completed in six months.

Severe icing – the rope is run 24/7

At 2.5 kilometers, the lift is long for a 6-CLD. This feature, combined with the climatic conditions of wind and high humidity, could lead to extreme icing. To prevent that from happening, the empty rope is also run overnight, at a speed of up to 1 m/s. The carriers are parked in the stations.



6 CLD Sudetylift SB 3

Transport capacity	1,995 PPH
Trip time	8.3 min
Speed	5.0 m/s
Chairs	92
Interval	10.8 s
Inclined length	2,381 m
Vertical rise	508 m
Towers	18
Drive	Top
Tensioning	Bottom
Bottom station altitude	717 m
Top station altitude	1,225 m

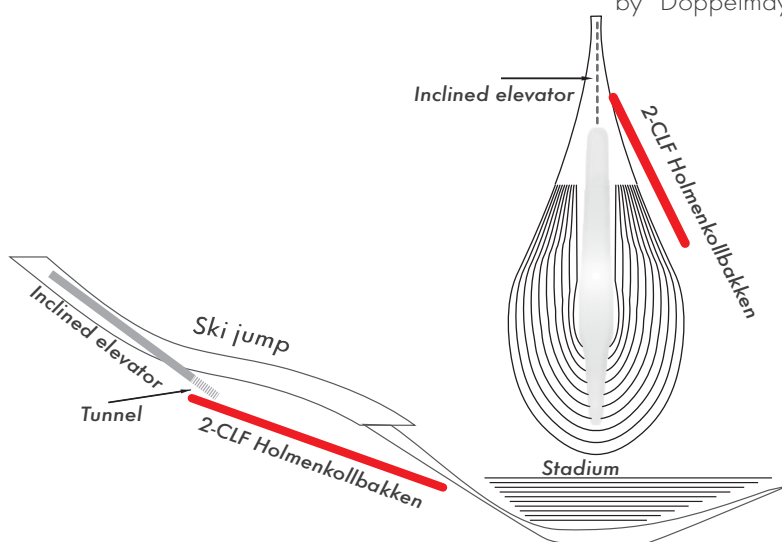
The new installation replaces a nearby fixed-grip two-seater chairlift which no longer provided adequate capacity. Passengers had regularly been confronted with waiting times of three-quarters of an hour or more. With this problem consigned to history, smooth passenger flows are now the order of the day. New trails have also been constructed in the lower section of the ski area, outside the national park.

Ropeways for the Nordic World Ski Championships 2011

The Doppelmayr Group was awarded the contract to build two fixed-grip chairlifts for the completely refurbished Holmenkollen ski jump and arena where the 2011 World Ski Championships are to be held.

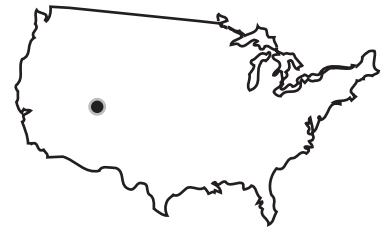
Located on the outskirts of Oslo, the 60-meter-high "Holmenkollbakken" is one of the world's oldest and most well-known ski jumps. The refurbishment was completed in 2010. This included construction of the large hill, Holmenkollbakken, and the smaller Midstadbakken normal hill ski jump.

Doppelmayr supplied two fixed-grip double chairlifts for the winter sports facility on the Holmenkollen. One of these lifts provides access to the Midstuen ski jump, while the other will carry athletes to a lobby integrated into the mighty takeoff section of the Holmenkollen ski jump. From here, a 108-meter-long inclined elevator leads first through a tunnel and then inside the steel structure of the ski jump up to the cantilevered top section where the start positions for the jumpers are located. The inclined elevator was also supplied by Doppelmayr.



	2-CLF Holmenkollbakken	2-CLF Midstadbakken
Transport capacity	461 PPH	236 PPH
Trip time	1.8 min	3.7 min
Speed	1.2 m/s	1.2 m/s
Chairs	15	15
Interval	15.6 s	30.5 s
Inclined length	129 m	263 m
Vertical rise	39 m	89 m
Towers	3	3
Drive	Bottom	Bottom
Tensioning	Bottom	Bottom





First orange bubbles in USA

Doppelmayr has installed the first chairlift with orange bubbles at one of the largest ski resorts in the USA. The Orange Bubble Express at Canyons in Utah is a detachable quad lift with heated seats. It was also the biggest chairlift installation in the country in 2010.

The new installation replaces the Golden Eagle lift, a fixed-grip double built in 1965. As well as being much longer than the old Golden Eagle route, which only went as far as the new mid station, the Orange Bubble Express has also increased uphill capacity by 47 percent. The location of the bottom station – now directly in front of the Grand Summit Hotel – was moved slightly and the lower section of lift line underwent significant terrain modifications.

The successful completion of the new high-speed quad lift is all part of the biggest ever infrastructure development project planned for Canyons. "Our goal is to further increase uphill capacity and expand skiable area as well as investing in snowmaking equipment and hospitality. We are aiming for a 50 percent in-

crease in paying guests," explains Canyons Managing Director Mike Goar in an interview with "Deseret News".

4-CLD-B-O-S Orange Bubble Express

Transport capacity	2,400 PPH
Trip time	9.4 min
Speed	5.1 m/s
Carriers	186
Interval	6.0 s
Inclined length	2,700 m
Vertical rise	464 m
Towers	30
Drive	Top
Tensioning	Bottom
Bottom station altitude	2,110 m
Top station altitude	2,574 m



The Canyons ski resort is proud of the Orange Bubble Express. As well as being visually striking on the outside, guests enjoy the comforts of heated seats and a stunning view on the inside: "Sitting snug and warm inside the weather-protecting orange bubble feels like being inside a giant pair of ski goggles!"

Kopaonik: Good things come in threes!



In summer 2010, Doppelmayr installed three ropeways in Kopaonik: a detachable 6-seater and two fixed-grip quad chairlifts.

Kopaonik, less than 300 km south-east of Belgrade, is Serbia's major ski resort. The organization responsible for the ski lifts in the region is the state-run "Ski Resorts of Serbia". Doppelmayr has been a general supplier to the ski resort of Kopaonik since 2003, when the government launched a major expansion initiative for winter tourism in Serbia.

New lift to the heart of the ski resort

The 6-CLD Karaman Greben departs from the center of the ski resort where most of the hotels and parking lots are located. It replaces a 4-CLF built in 2003. – At the time, nobody had anticipated the huge popularity of skiing as a pastime or that so many families with children would flock to the resort. A detachable lift is much better suited to this type of user than a fixed-grip installation which calls

for better skiing ability. When building the new lift, attention was focused on optimizing skier flows.

The bottom station – a UNI-G-M with full roof enclosure – was moved 70 m downhill to the level of the 4-CLD Pančičev Vrh built by Doppelmayr in 2005. The bottom station also houses a service platform with a short parking rail.

The top station, a UNI-G-S with compact enclosure, was moved a short distance uphill. Most of the tower shafts and foundations were retained.

Brand new 4-CLF Krst

The bottom station of the brand new 4-CLF Krst is close by the existing bottom stations of the chairlifts Pančičev Vrh and Karaman Greben. This lift takes guests up to the other side of the mountain where ropeways include the Sunčana lift. The new lift is also intended for skiers wishing



		6-CLD Karaman Greben	4-CLF Krst	4-CLF Sunčana Dolina
Transport capacity	PPH	3,000	2,024	2,068
Trip time	min	4.4	4.3	6.3
Speed	m/s	5.0	2.6	2.6
Carriers		73	74	110
Interval	s	7.2	7.1	7.0
Inclined length	m	1,225	671	983
Vertical rise	m	179	116	191
Towers		12	7	12
Drive		Bottom	Bottom	Bottom
Tensioning		Bottom	Bottom	Bottom
Bottom station altitude	m	1,725	1,721	1,609
Top station altitude	m	1,904	1,837	1,800

to use the adjacent slopes.

Relocated lift in new splendor

The 4-CLF Sunčana Dolina is actually the former Karaman-Greben lift which had to make way for the detachable installation. Only the tower shafts (with the exception of three that were taken from the old lift line) are new. This lift facilitates access to the heart of the ski resort from the other side of the mountain.

Novel evacuation concept replaces rescue devices

The 3S lifts in Koblenz and Sölden were the first to incorporate a ropeway evacuation concept which allows passengers to stay in the gondolas in the event of a lift failure.

With the new evacuation concept, Doppelmayr engineers have succeeded in fulfilling a long-held customer wish. The aim of this development was to provide the technical and organizational means to ensure that all gondolas can always be safely returned to the nearest station.

Top safety – optimal comfort

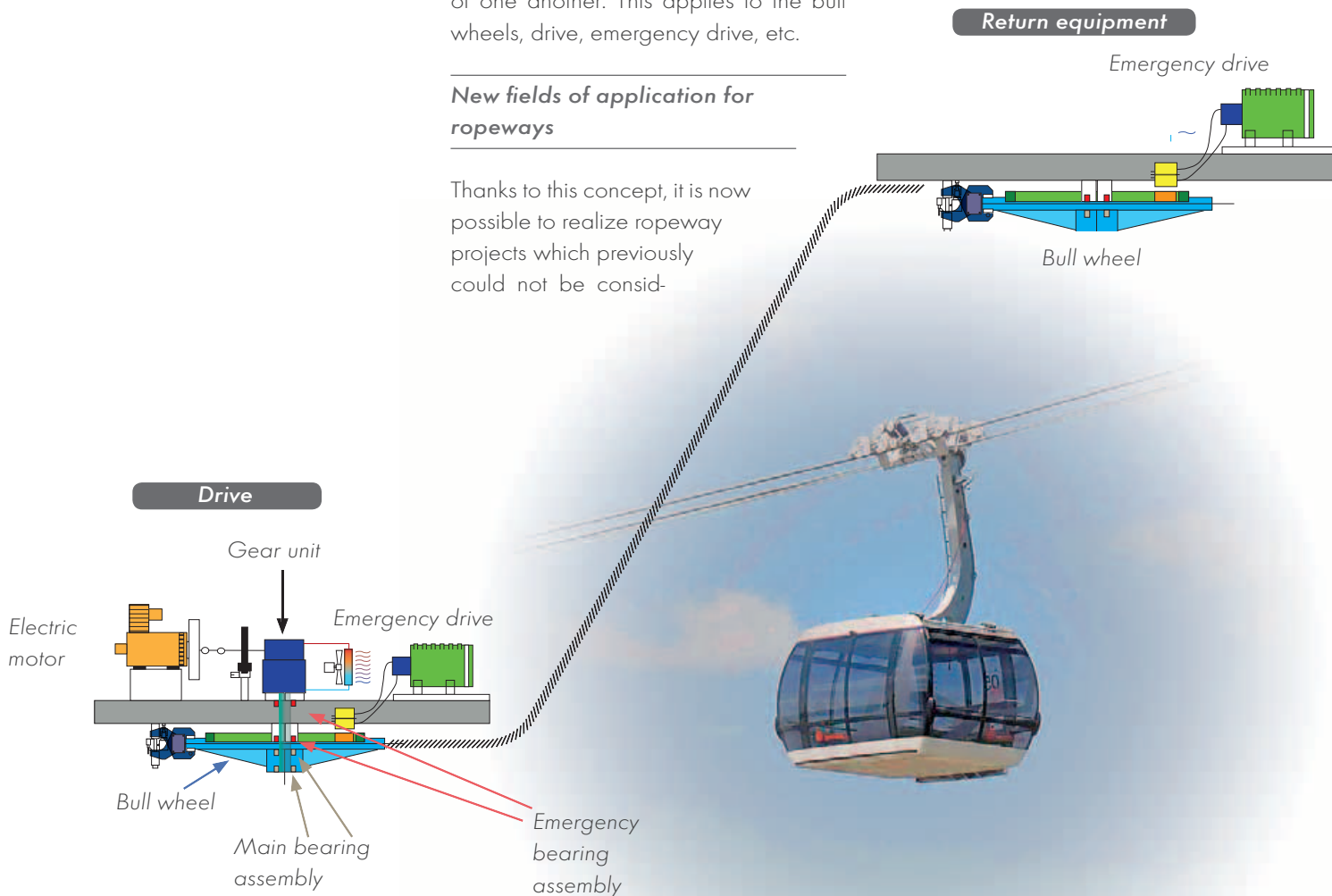
This approach provides maximum safety plus the utmost in comfort.

The key to this solution is "redundancy". All functionally relevant parts and equipment are duplicated and independent of one another. This applies to the bull wheels, drive, emergency drive, etc.

New fields of application for ropeways

Thanks to this concept, it is now possible to realize ropeway projects which previously could not be consid-

ered as no acceptable evacuation option was available. On the one hand, this involved cases where stranded passengers could not be rescued because the height above ground was too great, the terrain impassable or the body of water too vast. In other situations, compliance with the statutory time limit for a rescue operation was not always possible, or the presence of high traffic volumes and tall buildings in urban environments prevented the construction of passenger ropeways.



Ski fun with Skippy



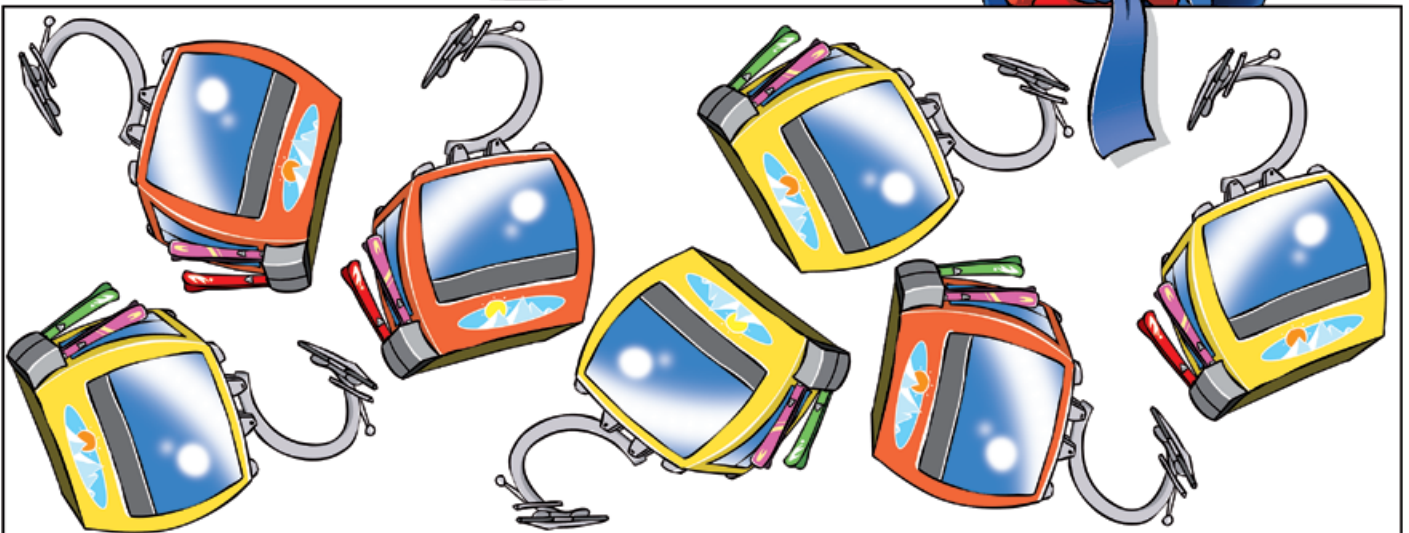
Hi kids!

It's me again, Skippy!

As you know, I always have your safety at heart. Some of you have written to me and said that you really like using drag lifts. Like everything, it's great if you know how - and there are a few things to remember.



Seven gondolas have been mixed up here. But two of them are exactly the same. Can you find them?



If you like, write and tell me all about the things you notice when you go skiing!
This is my email address: skippy@doppelmayr.com

O.I.T.A.F. Ropeway Congress 2011



"Cableways: safe, environmentally friendly, with success into the future" is the theme of the O.I.T.A.F. Congress 2011 in Rio de Janeiro (October 24 - 27, 2011).

The following topics are to be discussed with reference to the present and to the future:

- "Rope-driven transportation in urban settlements" (technical solutions; construction and operation; economic prospects and social aspects).

- "Transportation by rope and tourism" (alpine winter tourism; planning and operation of ski areas in the light of current trends and general conditions; electronic online ticket selling systems; Latin American ropeway installations for tourists).

- "Sustainability of transportation by rope, environmental and social aspects, economic efficiency"

- "Technology and safety" (latest technical developments of ropeway installations designed to carry persons; the importance of material handling ropeways and likely development; ropes for material handling ropeways and for ropeways designed to carry persons; different fields of application and systems of inspection).

The program includes an opportunity to visit the "Morro do Alemão" ropeway currently under construction as well as a city tour. A gala dinner will round off the event. Conference languages are English, German, French, Italian, Spanish and Portuguese.

For further information visit:

<http://www.oitaf2011.com.br> and www.oitaf.org

QM certificates for Doppelmayr Transport Technology

Doppelmayr Transport Technology GmbH has achieved certification of its management system in accordance with the standards ISO 9001:2008 (Quality Management), ISO 14001:2004 (Environmental Management) and OSHAS 18001:2007 (Occupational Health and Safety Management).



Hermann Fröhstück, Managing Director of Doppelmayr Transport Technology, with Kurt Welti, lead auditor of the Swiss Association for Quality and Management Systems (SQS).



Interalpin '11

The Doppelmayr Group cordially invites you to visit its stand at Interalpin 2011 (May 4 - 6 in Innsbruck). For further information: ekkehard.assmann@doppelmayr.com.

New names for Doppelmayr USA and Canada

With effect from January 1, 2011:

- "Doppelmayr CTEC, Inc. (USA)" has become "Doppelmayr USA, Inc." (head office in Salt Lake City, Utah) and
- "Doppelmayr CTEC Ltd. (Canada)" has become "Doppelmayr Canada Ltd." (head office in St. Jérôme, Quebec).

New CEO at CWA

On March 8, 2010, Raimund Baumgartner took over as head of CWA. He follows in the footsteps of CWA's long-serving and successful CEO Félix Rhyner.

Prize draw

The quiz question for the February 2011 prize draw is: **What is the transport capacity of the world's top-performing 8-passenger gondola lift?** Three iPods are to be won. The judges' decision is final.

Please mail your answer to: wir@doppelmayr.com by March 10, 2011, stating "Prize Draw" as the subject.

The correct answer to our prize draw question in issue No. 182/September 2010 was: "Koblentz".

The following lucky winners have been drawn from the correct answers: Reto Gehrig, Goldau (Switzerland); M. Hibler, Bad Kohlgrub (Germany); Andrea Chietini, Mezzocorona (Italy). Each wins an iPod. Congratulations to the winners!

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