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Upswing at Karer Pass, South Tyrol. Pictured here is the 8-passenger gondola lift, one of three new installations. p.10



8-CLD-B-O Giggijoch with orange bubbles Longer lift line and enhanced comfort. p.2
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Gondola lift, 6-seater bubbles with seat heating, ski lift, avalanche blasters. p.4
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Poland: Orange bubble lift is a major attraction
70 percent of Zielniec's guests prefer the "Dutch" lift. p.20
8-passenger gondola lift in Keystone
First "Vision" station installed in the USA. p.23 Whistler Blackcomb in Canada, the venue for the 2010 Winter Olympics, has consolidated its reputation as North America's top ski resort with the "PEAK 2 PEAK" 3S lift. p.24



Magazine for Customers and Employees

# 8-CLD-B-O Giggijoch with orange bubbles



The winter season 2008/09 saw the startup of the new 8-seater chairlift with orange bubbles and loading carpet on the Giggijoch (Sölden). This replaces a fixed-grip triple chairlift built in 1982. he new 8-CLD-B-O is not just an eyecatcher, but also significantly helps to disperse skier traffic and therefore increases the attractiveness of the ski trails in this sector. - The 2,284 m Giggijoch is the end point of the 8-MGD Giggijoch from the center of Sölden and the starting point for four chairlifts.

The old triple chairlift had one major drawback: Between the exit of the feeder gondola next to the restaurant and the entrance to the chairlift there was a vertical rise of eight meters. This was an obstacle that deterred many of the guests from using the chairlift once they had unloaded from the gondola.

New bottom station, longer lift line – better access from the feeder lift

In order to eliminate this shortcoming, the bottom station of the new chairlift was located further downhill, the loading area turned by 90°, two-thirds of the service building placed below ground and the actual lift itself extended by 250m. The chairs are accommodated in a cavern in



The new 8-CLD-B-O on the Giggijoch has been very well received.



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the completely new bottom station. The extension of the lift line made it necessary to enlarge the ski slope by 2.5 ha and install another 18 snow canons.

While the new lift was under construction the restaurant was also refurbished. All levels are now accessible with skis. Escalators provide convenient transportation within the restaurant itself. At the heart of the new "Wirtshaus am Giggijoch" is an area with waitress service dedicated to traditional Austrian cuisine.

8-CLD-B-O Giggijoch	
Transport capacity	3,700 PPH
Trip time	4.6 min
Speed	5.0 m/s
Chairs	70
Interval	7.8 s
Inclined length	1,232 m
Vertical rise	316 m
Towers	12
Drive	Bottom
Tension	Bottom



### Interalpin – trade fair highlight of 2009

his year, the world's biggest exhibition for the ropeway sector - Interalpin in Innsbruck - will be opening its doors to the global ropeway village from April 22 - 24. It goes without saying that the Doppelmayr/ Garaventa Group will have a strong presence at the show. Interalpin provides an outstanding opportunity for us to demonstrate our capabilities and to discuss future challenges with our customers.

We have surprises in store this year in the form of some very special topics and exhibits on our 1,000 m<sup>2</sup> stand:

- The train of the Cable Liner Shuttle for Venice.
- A cabin from the record-breaking 3S "PEAK 2 PEAK" in Whistler Blackcomb.
- A chair from the first chairlift in the world to be officially approved to carry seven children accompanied by only one adult.
- A demonstration stand for our failsafe rope position monitoring system, RPD
- One of the biggest aerial tramway carriages from Switzerland plus
- an overview of our latest surface lift technology.

We look forward to your visit and to fascinating discussions in a relaxed atmosphere. "Food for thought" will of course also be catered for!

All our customers and friends are cordially invited to visit our stand.

Michael Doppelmayr

# Kals-Matrei ski region: New boost

Since the winter season 2008/09, the ski areas of Matrei and Kals have become one ski resort. The link was provided by two Doppelmayr lifts: the 8-MGD Kals with two sections and the 6-CLD-B Cimaroß.



The "Großglockner resort Kals-Matrei" lies on the Felbertauern road, the main route connecting northern and eastern Tyrol, and superbly placed for panoramic views of the high mountain range formed by the Glockner, Schober and Granatspitz group. There are 110 km of ski trails and 16 lifts; the latest are

- the 8-passenger gondola lift Kals,
- the detachable 6-seater chairlift Cimaroß (with seat heating) and
- the "village lift", a surface lift from the Kals descent back to the municipality of Kals.

Efforts to link up the ski areas of Kals and Matrei go back a long way. But they did not succeed until the Schultz Group<sup>1</sup>, which had owned the Matrei resort since 1994, also acquired the Kals area in 2006. Then everything took place in quick succession. In 2007, the Cimaroß lift was built on the Matrei side in order to create ample capacity for the expected onrush of users once the planned gondola lift on the Kals side opened. This ropeway was erected in 2008. Both lifts have their top stations - roughly 100 m apart - at an altitude of around 2,400 m. The top station of the gondola lift is integrated into the "Adlerlounge" hotel and restaurant; the viewing platform has been named "Adlerhorst" (the eagle's nest). Sports shops are housed in the top station and in the two bottom stations.

## Energy saving thanks to drive in the mid station

The drive for the independent rope loops of the gondola lift sections is located in the mid sta-

<sup>1</sup> The Schultz Group owns the ski resorts Ski-Optimal Hochfügen and Hochzillertal, Mölltaler Gletscher, Ankogel Mallnitz and Sillian Hochpustertal with the Dolomiten-Residenz-Sporthotel Sillian.



tion. (This is the bottom station of the second section and the top station of the first section.) The common drive bull wheel has two grooves and the ropeline of the second section has a 1.96° deflection. By opting for two rope loops it was possible to use a smaller rope diameter than would have been the case with a single loop encompassing both sections. This results in a considerable weight saving in terms of the rope; therefore, less drive power is required – and consequently less energy.

8-MGD Kals	Section 1	Section 2
Transport capacity	1,600 PPH	1,600 PPH
Trip time	8.1 min	4.6 min
Speed	6.0m/s	6.0 m/s
Cabins	54	30
Interval	18.0 s	18.0 s
Inclined length	2,539 m	1,257 m
Vertical rise	617 m	432 m
Towers	15	6
Drive	Тор	Bottom
Tension	Bottom	Тор



Mid station of the 8-MGD Kals.

2009 will see the construction of the 6-CLD-B Goldried II, also with seat heating. This lift replaces a double chairlift and will help to ensure a better distribution of skier traffic on the Matrei side.

# Avalanche blasting lifts safeguard the ski trails and the Kals community

Along with the two summit lifts, three avalanche blasting ropeways were ordered

6-CLD-B Cimaroß	
Transport capacity	2,400 PPH
Trip time	4.5 min
Speed	5.0 m/s
Chairs	60
Interval	9.0 s
Inclined length	1,237 m
Vertical rise	447 m
Towers	12
Drive	Тор
Tension	Bottom

to safeguard the ski trails. However, the installation near the Kals-Matreier Törl (2,207 m) cannot be built until summer 2009 as the window available for construction work at high altitude was too short to complete all three in 2008. These ropeways cross very steep terrain; they have rope spans of up to 600m in length and a ground clearance of up to 120 m. The avalanche blasting lifts on the slopes of the Blauspitze also significantly im-

1-SL Dorflift	
Transport capacity	637 PPH
Trip time	2.4 min
Speed	2.5 m/s
Towing outfits	51
Interval	5.6 s
Inclined length	353 m
Vertical rise	77 m
Towers	5
Drive	Тор
Tension	Тор

proves avalanche protection for the municipality of Kals, as Heinz Schultz, CEO of the Schultz Group, is keen to emphasize.

### Tourism boom in the region

The impact that the new Glockner ski resort of Kals-Matrei has had on tourism is sensational. In Matrei the number of overnight guests was up by 47 percent in December 2008, in Kals by 38 percent.

ABR Blauspitz	
Inclined length	2,926 m
Vertical rise	172 m
Towers	8
Drive altitude	2,256 m
ABR Gorner	
Inclined length	3,083 m
Vertical rise	336 m
Towers	9
Drive altitude	2.426 m

# "Mobile" surface lift in Steibis

Imbergbahn & Skiarena Steibis in Bavaria's Allgäu region can now boast yet another attraction. The platter lift known as the Imbi-Sonnenlift went into operation in the "Kinderland" section on December 12, 2008. The special feature of this surface lift is that, rather than being fixed to deep concrete foundations in the ground, it was fixed to steel frames and concrete slabs.

Sti resort for families with small children. It has a whole series of interconnected lifts and descents with different levels of difficulty.

Doppelmayr/Garay

The latest hit is the "Kinderland" section, a separate, generously proportioned children's ski area which is readily visible from the Imberg restaurant and features three loading carpets plus a very special platter lift, the Imbi-Sonnenlift. This section is located on the sunny slope next to the top station of the 8-MGD Imbergbahn, the high-capacity feeder into the ski area.

### No permanently anchored foundations

Specially developed by Doppelmayr for small ski areas and special applications, the Imbi-Sonnenlift is a surface lift which can be installed (and removed) rapidly without the need for permanently anchored concrete foundations. - From order placement to official approval, the Imbi-Lift took just seven weeks!

Both the bottom and top terminals were erected on steel frames. Steel plates stacked in the rear sections of the steel frames provide a counterweight to the pulling force of the rope. The two line towers stand on concrete slabs. The control unit is housed in a container at the bottom terminal, from where the three loading carpets are also controlled.

# Even small children find the platters a piece of cake

The round platter of the towing unit has proved to be particularly well suited to children as it requires less strength and dexterity than a T-bar.

The Kinderland section has become very popular, especially as the ski schools offer courses for children of all ages and everything that a child's (and parent's) heart can desire is available here: a variety of terrain and exciting, imaginative



Even the youngest visitors quickly and intuitively No. 178 • April 2009



get to grips with handling the lift platters. No. 178 • April 2009

amenities, a warming up room, etc. The close proximity to the regular ski trails also makes it easier to put what has just been learned into practice.

### Market niche in the family sector

Thomas Lingg, Managing Director of Imbergbahnen, has targeted a highly specific market segment with the Imbi-Sonnenlift: "We see ourselves as an 'all-round ski resort', in other words, one that offers something for everyone, from the small child to the senior citizen. We have an above-average number of sunny days, a location with abundant snow, plus wide slopes with good snow cover and a descent to base which can be skied throughout the season. With the Imbi-Sonnenlift, we have successfully optimized this offering." Whereas the children's ski classes previously had to be



Thomas Lingg, Managing Director of Imbergbahn & Skiarena Steibis, praises the fact that "Doppelmayr not

only worked rapidly but also prepared all the documentation so well that I had very little extra work with the approval process".

1-SL Imbi-Sonnenlift	
Transport capacity	567 PPH
Trip time	1.3 min
Speed	2.0 m/s
Towing outfits	31
Interval	6.3 s
Inclined length	190 m
Vertical rise	33 m
Towers	2
Drive	Bottom
Tension	Bottom

dispersed over the entire ski area, today these activities can be centered on the Kinderland. This is also very much to the delight of grandparents who often like to accompany their grandchildren and "be there to see how they make their first turns, just like their first steps".

Nonetheless, the decision to develop the Kinderland was certainly not an easy one. "We simply had no experience to go on." The operating company therefore initially envisaged a trial season, especially as the land owner required the lift to be dismantled in the warmer months of the year. A hire contract was entered into with Doppelmayr.

The lift has been a resounding success and more than paid off in a "marked increase in visitor frequency throughout the ski area". This happened without the need for any major promotional activities. Word about the quality improvements in Steibis soon got around in the region of Stuttgart, Augsburg and Lake Constance - which are all within a two-hour drive from the resort. 85 percent of the visitors to Steibis are day trippers.

### Small urban ski centers as the new springboard to the large resorts?

Thomas Lingg hopes that lifts in the style of the Imbi-Sonnenlift will encourage the establishment of small ski centers in urban agglomerations. This would enable children and young people to develop a taste for skiing, and inspire parents and grandparents to spend skiing vacations in the Alps. That would go a long way toward safeguarding the future of the traditional ski areas.

The significance of this contribution, as Lingg mentions almost in passing, is that in the relatively small ski resort of Steibis alone, almost 400 jobs are directly dependent on skiing operations. The remainder of the regional economy - including the hospitality sector - is not included in that figure.

# Gondola lift for Kandersteg

Since December 2008, a gondola lift has replaced the old double chairlift from Kandersteg to Oeschinensee.





Oeschinensee, Bernese Oberland: Hiking or enjoying the fun of the 750 m long toboggan run in the summer; skiing, sledding, hiking and ice fishing in the winter.

andersteg in Bernese Oberland is well-known for two reasons: on the one hand due to the motorail service through the Lötschberg Tunnel to Wallis, and on the other because of the particularly enchanting all-year tourist region. The Oeschinensee is a UNESCO world heritage site.

Apart from the feeder lift from the village of Kandersteg, the ski region at Oeschinensee has another two surface lifts and a ski kindergarten with a short lift. The ski trails have constantly been improved over the course of time and the descent to the valley is also skiable in times when there is less snowfall, thanks to the snowmaking installations. As a result, there was a significant increase in skier numbers and the old double chairlift, built in 1948, with seats arranged at right-angles to the direction of travel, gradually reached its capacity limits. While this lift was cute to look at and provided a nostalgic highlight for romantics, it had long been unable to meet modern demands and barely carried 500 passengers an hour.

Since the operating permit was due to expire in 2008, the decision was taken – as David Wandfluh, CEO of Gondelbahn Kandersteg-Oeschinensee AG, explains – to provide a "proper replacement" for this lift. They ultimately chose a modern gondola lift.

#### Senior citizens and families

This was killing two birds with one stone: First, it is now possible to double the transport capacity; second, the far more comfortable gondolas meet the needs of families with children, wheelchair users and, last but not least, older visitors ("for us, an increasingly important target group").

#### Record installation time

The lift was erected in record time: Demolition of the old chairlift began on September 7, 2008, the final inspection by the Federal Office of Transport was completed on December 7 and the local population took advantage of the open day on December 17 to make their first trip with the new gondola. During the periods in between the pressure was on: The station buildings had to be rebuilt and new towers installed. The drive is located in the bottom station; the



power supply available at the top would not have been sufficient. In the interests of noise protection, the lift has an underground vault drive.

David Wandfluh is convinced that it was only thanks to the outstanding planning work and the smooth coordination between all the companies involved that the project could be completed in such a short time frame.

For Garaventa, who were responsible for the electro-mechanical equipment, Wandfluh has nothing but praise. The entire team did an excellent job and the lift worked perfectly from day one. "Up to now, we haven't had a single malfunction."

8-MGD Kandersteg-Oeschinensee		
Transport capacity	1,000 PPH	
Trip time	6.0 min	
Speed	5.0 m/s	
Cabins	23	
Interval	29 s	
Inclined length	1,287 m	
Vertical rise	486 m	
Towers	9	
Drive	Bottom	
Tension	Тор	

An old friend in new splendor

Doppelmayr/Garaventa Grour

The funicular railway Interlaken – Harder Kulm, part of the Jungfraubahn Group, was fitted out with new cabins in spring 2008.

he Harderbahn was first opened on May 15, 1908. At that time, Interlaken was already enjoying an international reputation as a flourishing holiday resort. Even then, nobody wanted to see Interlaken's local mountain, the Harder Kulm, marred by a straight path through the forest. For this reason, the track forms what is almost a 90° circular arc, something quite unusual for a funicular. The Harderbahn provides passengers with a breathtaking view of Interlaken and the surrounding villages, Lake Thun and Lake Brienz, the Lütschine valleys and as far as the majestic peaks of the four-thousand-meter Eiger, Mönch and Jungfrau.

The funicular has been built and looked after by companies belonging to the Doppelmayr/Garaventa Group from the outset. The last major modernization was undertaken in 1966. 2008 marked the third time in the funicular's history that it had been equipped with new cabins. These are in the Harderbahn's traditional red paint finish and offer passengers enhanced comfort as well as a fantastic view, thanks to the panorama windows in the roof.

65-FUL Interlaken – Harder		
Transport capacity	400 PPH	
Trip time	8.0 min	
Speed	3.0 m/s	
Inclined length	1,450 m	
Vertical rise	731 m	
Drive	Тор	



Magnificent view from the two panorama cabins: The funicular railway from Interlaken's "Bödeli" (region between Lake Thun and Lake Brienz) to the 1,322 m Harder Kulm has been equipped with new carriers. It operates from the end of April through to the end of October.

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### Upswing at Karer Pass

The Karer Pass in South Tyrol was given a facelift of the special kind for the 2008/09 season: the construction of an 8-passenger gondola lift, a detachable quad chairlift and a surface lift.

he 1,745 m Karer Pass (Passo di Costalunga), 30 kilometers from Bolzano, is a wide ridge between the Dolomite massifs of Rosengarten and Latemar. It connects South Tyrol with the Trentino region. Largely because of its good accessibility, its many sunny days and its idyllic location, the Karer Pass saw its tourism sector blossom in the mid 19th century, and up until the early 1970s was mentioned in the same breath as St. Moritz and Cortina. Famous personalities – including Karl May, Agatha Christie, Winston Churchill, Luis Trenker and Carl Zuckmayer - stayed at the Grand Hotel Karersee, which was one of the first to bathe in the splendor of electric light powered by its very own plant.

However, when attempts to persuade the many lift operating companies to pursue a common goal failed and investments in modernization stopped, the flow of guests began to dwindle.

#### Revitalization through the new lifts

It was only when the owner of ten of the lifts, Latemar Karersee GmbH, decided to rebuild the ski resort that the seeds of fresh hope were sewn. This resulted in the upswing so long and eagerly awaited not only by the local population but also the entire region as far as Bolzano and beyond.

8-MGD Hubertus	
Transport capacity	1,200 PPH
Trip time	3.2 min
Speed	6.0 m/s
Cabins	21
Interval	24.0 s
Inclined length	1,206 m
Vertical rise	126 m
Towers	11
Drive	Тор
Tension	Bottom



Majority shareholder Georg Eisath explains how this change in fortunes was achieved: "The three ski lifts directly on the Karer Pass in the direction of Latemar had previously been isolated. Today, the new 8-passenger gondola known as the Hubertus Lift and the ski trail of the same name link up the Latemar and Rosengarten areas. We now have the new detachable quad chairlift, Pra di Tori, which goes to Latemar. In addition we've installed the Le Pope T-bar in this area. The old ski trail has been reconstructed and a second option added."

All three lifts serve the adjacent slopes, while the Hubertus Lift also acts as a feeder from the center at the Paolina Lift. The ski resort has 16 lifts in total: the

### 4-CLD Pra di Tori

Transport capacity	1,200 PPH
Trip time	3.42 min
Speed	5.0 m/s
Chairs	40
Interval	12.0 s
Inclined length	1,110 m
Vertical rise	294 m
Towers	12
Drive	Bottom
Tension	Тор



New attractiveness thanks to new lifts: 8-passenger gondola, quad bubble and platter lift. They appeal to new guests and well as bringing back traditional customer groups.

8-passenger gondola, two detachable quad chairlifts, two fixed-grip triple chairlifts, three fixed-grip double chairlifts and eight T-bar lifts, providing a total transport capacity of 15,000 passengers an hour.



Georg Eisath is the majority shareholder in Latemar Karersee GmbH which operates ten ski lifts.





### Input develops tourist center in Mexico

Input Projektentwicklungs GmbH, a member of the Doppelmayr/Garaventa Group, has developed the master plan for the Copper Canyon tourist center in Mexico. The first expansion stage will involve the construction of an aerial tramway.

opper Canyon in the Mexican province of Chihuahua is a huge gorge, comparable to the Grand Canyon in the American Rockies. It is here that the government wants to set up a tourist center. Input is drawing up the plans and Doppelmayr/Garaventa is supplying the lifts.

- The project encompasses:
- Two aerial tramways
- A gondola lift
- Three hotels
- A leisure/theme park
- A camping park for recreational vehicles
- Apartment blocks and
- A golf course.

Construction of the first aerial tramway is already fixed, with completion scheduled for summer 2010.



1-SL Le I	ope
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Transport capacity	720 PPH
Trip time	3.0 min
Speed	2.8 m/s
Towing outfits	79
Interval	5.0 s
Inclined length	553 m
Vertical rise	80 m
Towers	5
Drive	Bottom
Tension	Bottom

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# 9-MGD at top Spanish

ski resort

Doppelmayr/Garay

The Baqueira-Beret ski area in the Pyrenees is not only the biggest in Spain but also one of the most attractive and a regular haunt for many celebrities. Here, Doppelmayr built the second section of the 9-MGD Telecabina Baqueira.



The Baqueira-Beret ski area lies between altitudes of 1,500 m and 2,500 m, and is open toward the Atlantic in the west. It therefore has ample precipitation and consequently good snow conditions. Development of the region as a ski resort began in the 1960s. Today, Baqueira-Beret offers over 33 lifts with an hourly capacity of 56,500 passengers plus over 100 kilometers of ski trails.

With the installation of the second section, Doppelmayr Spain completed the 9-MGD Telecabina Baqueira, which operates as a feeder from the parking lot on the edge of the holiday village of Rue into the actual ski area. The first section went into service in 2006, but lengthy approval proceedings meant that construction of the mid station could not start until May 2008. The lift was finally handed over to the operating company at the end of July. Each of the sections can be operated independently. The carrier parking facility is housed in the mid station.

9-MGD Telecabina Baqueira	
Transport capacity	3,000 PPH
Trip time	5.7 min
Speed	4.0 m/s
Cabins	79
Interval	10.8 s
Inclined length	1,180 m
Vertical rise	1,241 m
Towers	17
Drive	Тор
Tension	Bottom



Mid station of the 9-MGD Baqueira lift with continuous rope loop. Skis are transported inside the cabin.

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# Korea: Kangwon Land expands further

In 2006, Doppelmayr equipped the High 1 Kangwon Land ski resort in South Korea with eight chairlifts and one surface lift. Huge crowds of visitors led to excessive waiting times at the base station. A detachable 6-seater chairlift followed in 2008 to increase feeder capacity.



angwon Land is a 2.5-hour drive to the east of South Korea's capital, Seoul. It not only boasts the biggest casino in the country, with 100 roulette and other gaming tables as well as 1,000 gaming machines, but is also the only one which is open to Korean nationals. The casino encompasses two hotels with around 700 beds, an apartment complex with 400 units, a golf course, an adventure park, and – since 2006 – a ski resort.

### Two parallel chairlifts

The new 6-CLD "Lift A1" runs immediately next to and in parallel with "Lift A", built in 2006. For reasons of tradition, travel speed is not fully utilized but limited to between 3.5 and 4.0 m/s. In a break with tradition, however, this lift is the second with station parking in Korea. Up to now, it has not been usual practice to garage the chairs. Lift A1 also has a service platform for grip maintenance, the fail-safe rope position monitoring system RPD, seats with comfort upholstery and an AC drive. The ropeway meets "the best Austrian standards", as the Koreans are proud to emphasize.

Construction was completed in the very short time of two months – including the concreting works. Doppelmayr acted as subcontractor to South Korean multinational Daewoo.

### 6-CLD Lift A1

Transport capacity	3,085 PPH
Trip time	3.5 min
Speed	5.0 m/s
Chairs	60
Interval	7.0 s
Inclined length	970 m
Vertical rise	1 <i>57</i> m
Towers	8
Drive	Bottom
Tension	Bottom



Kangwon Land: two parallel chairlifts to handle the large volumes of skiers.

# Ski resort with view of the Vltava

Doppelmayr built three fixed-grip quad chairlifts, all with loading carpet, at the Lipno reservoir on the Vltava River in the Czech Republic, not far from the Austrian border.

ipno is a well-known all-year vacation area. Around half of the guests are Czech nationals, while most of the remainder come from Germany and Holland.

Doppelmayr/Garavente

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The ski area lies between altitudes of 700 m and 900 m on the wooded mountain Kramolín above the village of Lipno nad Vltavou. There are six ski trails with an overall length of roughly 7.5 kilometers. These have snow-making facilities over their entire length and are in part equipped for night skiing. The resort also has an extensive network of crosscountry tracks. The reservoir is used for ice-skating: In 2008/09, the groomed surface for ice-skaters covered no less than 11 kilometers. The Aauapark, a water world with a host of attractions, is open all year round and is widely known beyond national borders.

Access to the ski area is provided by the 4-CLF Lipno-Expres, which has its base station near the Foxpark, a children's ski sector frequently used by the ski schools.

The Lipno-Expres takes passengers from the large parking lot not far from the village up to the gently sloping peak of the Kramolín, where a small restaurant and various infrastructure buildings – mountain rescue, garages for snowgrooming equipment, etc. – are to be found.

The opposite side is accessed by the two fixed-grip chairlifts, Strecha and Promenádní, which run virtually in parallel with each other and some 200 m apart. The Promenádní goes to the Slupceny vrch. These lifts serve their own interconnected ski trails and the Snowpark for snowboarders. Both, this peak and the Kramolín, have a short surface lift. The total transport capacity of the lift infrastructure is 11,400 passengers an hour.



4-CLF Promenádní (above) and 4-CLF Střecha

4-CLF Lipno Expres



# T-bar lift in the "Bohemian Merano"

### 4-CLF Lipno Expres

Transport capacity	2,386 PPH
Trip time	7.7 min
Speed	2.6 m/s
Chairs	155
Interval	6.0 s
Inclined length	1,203 m
Vertical rise	161 m
Vertical rise Towers	161 m 14
Vertical rise Towers Drive	161 m 14 Bottom
Vertical rise Towers Drive Tension	161 m 14 Bottom Top

4-CLF Promenádní	
Transport capacity	2,006 PPH
Trip time	5.5 min
Speed	2.6 m/s
Chairs	94
Interval	7.2 s
Inclined length	864 m
Vertical rise	173 m
Towers	11
Drive	Bottom
Tension	Bottom

### 4-CLF Střecha

Transport capacity	2,391 PPH
Trip time	5.5 min
Speed	2.6 m/s
Chairs	112
Interval	6.0 s
Inclined length	1,203 m
Vertical rise	161 m
Towers	11
Drive	Тор
Tension	Тор

The ski resort of Moninec, a popular destination for the citizens of Prague, has a new T-bar lift from Doppelmayr.

n the heart of the Czech Republic lies a landscape which is often described as the "Bohemian Merano" due to its gently undulating, wooded hills. It is here, on the periphery of the town of Sedlec-Prčice, just an hour's drive from Prague, that Doppelmayr installed the 2-SL Moninec.

Fewer skiers waiting in line means enhanced attractiveness for the resort as a whole

The ski area lies between altitudes of 500 m and 700 m and has two ski trails

plus four lifts with a total hourly capacity of 4,400 passengers.

The new surface lift has certainly led to a marked improvement in transport capacity and has helped to reduce the long lines at the entrance to the lifts. Moninec gets particularly busy on the weekends.

### 2-SL Moninec

Transport capacity	1,200 PPH
Trip time	2.7 min
Speed	3.1 m/s
Towing outfits	60
Interval	6.0 s
Inclined length	548 m
Vertical rise	126 m
Towers	6
Drive	Bottom
Tension	Bottom





# Confident mood in Slovakia

Doppelmayr/Garay

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The 2,000-strong municipality of Tatranská Lomnica at an altitude of 850m is the final destination of the Tatra railroad, part of the town of Vysoké Tatry and the tourist center of the Slovakian High Tatras. The village was established as a health resort in 1892; some of its picturesque hotels originate from this period. From 1940 onwards, several ropeways were built to access the surrounding mountains.

### Premium ski resort Tatranská Lomnica

The main crest of the High Tatras is 27 km long. The highest mountain, the 2,655 m Gerlachovský štít, is part of the Tatranská Lomnica ski area. The mountain is protected as a national park and has been designated as a biosphere reserve by UNESCO.

As a consequence, preparations for modernization of the ski area were protracted. Negotiations with the environmental organization TANAP took four years before satisfactory compromises could be found. But patience and perseverance paid off. A new, 5.5-kilometer ski trail and snow-making installations for 20 ha of skiable terrain as well as two restaurants and sports shops were finally built.

The location in this sensitive landscape called for meticulous care in the construction of the 4-CLF Čučoriedky. The few access routes that exist are narrow. The towers were installed using helicopters. The hydraulic tension station was split in two and transported to the construction site at the top station using an excavator. A crane truck could not have coped with the difficult access.

To avoid having to make any terrain corrections, the station footprints were kept small and higher structures built, making time-consuming ramp construction necessary.





The new 4-CLF Čučoriedky was very well received, particularly as it provides access to an extensive new carving trail.



Managing Director Bohuš Hlavatý underlines his great satisfaction with the planning, construction and operational

reliability of the quad chairlift Čučoriedky

The lift is operated by Tatranské lanové dráhy, a.s. This company has set

4-CLF Čučoriedky	
Transport capacity	2,381 PPH
Trip time	5.8 min
Speed	2.6 m/s
Chairs	117
Interval	6.1 s
Inclined length	906 m
Vertical rise	199 m
Towers	12
Drive	Bottom
Tension	Тор

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Winter 2008 saw the opening of four Doppelmayr lifts in Slovakia – in the ski resorts of Tatranská Lomnica, Martinské Hole, Králiky and Skalka.



6-CLD Floch. The Martinské Hole ski area in the Lesser Fatra has been radically modernized by the surface lift Pri Lese, near the city of Banská Bystrica in the Kremnica Mountains.

itself the goal of creating a premium resort for winter and summer tourism and has already developed the appropriate master plan<sup>1</sup>.

The new quad chairlift is an important step in this direction, particularly as the ski slope it serves has been extended. A detachable 6-seater chairlift with or-

<sup>1</sup> Around 40% of annual sales volume is generated in the summer

6-CLD-B Floch	
Transport capacity	2,600 PPH
Trip time	4.0 min
Speed	5.0 m/s
Chairs	58
Interval	8.31s
Inclined length	1,087m
Vertical rise	229 m
Towers	10
Drive	Bottom
Tension	Bottom

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ange bubbles and seat heating as well as the construction of a top-class hotel is planned for 2009.

### 6-CLD-B for Martinské Hole

Martinské Hole in the Lesser Fatra Mountains, at altitudes ranging from 1,100 m to 1,500 m, has some 12 kilometers of ski trails for beginners to intermediates plus six lifts, and ranks among Slovakia's most

2-SL Pri lese	
Transport capacity	1,083 PPH
Trip time	2.2 min
Speed	3.0 m/s
Towing outfits	46
Interval	6.6 s
Inclined length	449 m
Vertical rise	87 m
Towers	5
Drive	Bottom
Tension	Bottom

well-known ski resorts. The area includes a snowboard park, 16 kilometers of cross-country tracks and 300 car parking spaces near the lifts. The snow carnival which marks the end of the season is a famous event at this resort.

The new 6-CLD-B Floch with loading carpet and mechanical dead-end parking in the bottom station replaces a surface lift dating from 1974. This is the first of several planned lift replacements.

4-CLF Pekná Vyhliadka	
Transport capacity	2,384 PPH
Trip time	5.8 min
Speed	2.6 m/s
Chairs	117
Interval	6.0 s
Inclined length	906 m
Vertical rise	247 m
Towers	11
Drive	Тор
Tension	Тор

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4-CLF Skalka, also in the Kremnica Mountains, not far from Banská Bystrica.

#### Surface lift for the Králiky ski resort

On the northern slopes of the Kremnica Mountains in the heart of Slovakia and eight kilometers from the university city of Banská Bystrica (population 80,000), lies the popular family ski resort of Králiky. Here, Doppelmayr replaced a twin platter lift with a modern T-bar lift, the 2-SL Pri Lese. This lift has been very well received.

The area is located at altitudes of between 830 m and 930 m and offers three ski trails. Its three surface lifts have a combined transport capacity of around 1,800 passengers an hour. Managing Director Andrej Klačan sees the main



MD Andrej Klačan, Králiky: Doppelmayr scores on reliability and rapid installation.

argument for choosing a Doppelmayr lift as being the high technical reliability of Doppelmayr products; the same goes for other forthcoming projects. "We are also particularly impressed with the rapid installation and the exceptional professionalism of Doppelmayr's chief fitter." - Installation on the line and the rope splice were completed in just three days.

#### 4-CLF for Skalka

Also near Banská Bystrica, and not far from the medieval mining town of Kremnica in the Kremnické vrchy mountain range, is the Skalka ski center offering facilities for alpine and cross-country skiing.

CLD s.r.o. erected a new quad chair lift with Chairdrive in Skalka as part of a resort expansion project. (Until then, there had only been two surface lifts.) When snowfall made the bottom station difficult to reach with heavy equipment during the construction phase, the rope pulling operation was performed from the top station.

# Adrenaline rush in Rotorua

Doppelmayr/Garavente C

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Doppelmayr has installed a second ropeway in the Rotorua fun park Skyline Skyrides. This fixed-grip chair lift simultaneously transports riders and the 3-wheel carts used for the Luge – a funfilled gravity ride on a concrete track rather like a summer toboggan run, where riders can enjoy an exhilarating descent and take in the magnificent scenery.

otorua lies in the heart of New Zealand's North Island, 100 kilometers to the southeast of Hamilton, on the shores of the 80 km<sup>2</sup> Lake Rotorua. The region is famous for its thermal springs which are also used for spas. On the outskirts of town, an 8-seater gondola, built by Doppelmayr in 2005, takes visitors up to the Skyline entertainment park on Mt. Ngongotaha either to experience the world famous Luge, or simply to indulge in fine dining at the Buffet Restaurant or the newly revamped Terrace Cafe. It is here that Doppelmayr has built a second, fixed-grip two-seater ropeway, which opened in mid-August to serve the Luge. The official inauguration was performed by Prime Minister John Philip Key on March 12, 2009.

The operator, Skyline Skyrides, is a



wholly owned subsidiary of Skyline Enterprises Ltd. of Queenstown, N.Z. The luge system was developed in Rotorua in the late 1980s and initially served by a second-hand single-seater chairlift.

The installation provided a tremendous boost for the park and led to the construction of the Doppelmayr gondola lift and two further chairlifts for the Luge (1996 and 2008).

The Rotorua Luge now has three tracks with six different starting options, offering different levels of difficulty, from the leisurely scenic route to the downhill advanced track. Also situated half way down the scenic route is a very unique indoor/outdoor function venue, the Redwood Forest Sails. The Luge facility has proven to be extremely popular and therefore attracts large numbers of visitors. For this reason, the operators needed to boost transport capacity for returning riders from the end point which is located in a wood.



Luge rides are great fun: After arriving at the top by chairlift, riders board their luges for the downhill run on the concrete track.

2-CLF Luge Lift No. 3 1.051 PPH Transport capacity Trip time 5.3 min Speed 1.4 m/s Chairs 95 Interval 69s Inclined length 444 m Vertical rise 96 m Towers 7 Drive Bottom Tension Тор

The ropeway system is designed so that two luge carts are automatically suspended from the chairs before the two passengers take their seats. Doppelmayr was responsible for the mechanical and electrical supply and installation of the equipment, while Skyline Skyrides took charge of the construction of new tracks and infrastructure work. Skyline Enterprises also operates other luge installations in Quebec, Canada, on Sentosa Island, Singapore, and in Queenstown, N.Z. In addition, Skyline has sold luge carts to Japan and continues to develop sales to other customers.

# Poland: Two new lifts for Zieleniec

In Zieleniec, one of Poland's most popular ski regions, Doppelmayr erected a detachable 6-seater chairlift with orange bubbles, seat heating and RPD as well as a quad chairlift.



Zieleniec, dates back to the beginning of the 18th century and lies at an altitude of 950 m in the Orlickie Mountains on the Czech border. Its north-facing location ensures stable snow conditions on average for 150 days in the year. Practically all the ski trails are illuminated. In total, 1,500 beds are provided in hotels, guesthouses and private accommodation.

The region is also a popular recreation area in the summer.

### Orange bubble lift is a major attraction

The orange bubbles of the detachable 6-seater chairlift, "Lift 3", with orange seat upholstery (and seat heating) are a big hit and can be seen from a long way off, particularly during the daily night-time operations. Despite free capacity on the adjacent lifts, long lines of skiers form until late into the night at the base station, which is also clad in orange. Reports in the press and on TV are full of superlatives<sup>1</sup>. This lift has 90° loading.

The lift owner and operator is Winterpol Sp. z o.o. This company was formed in 1991 and has played a pivotal role in the development of Zieleniec. Until recently, the resort only had outmoded surface lifts. Doppelmayr installed the first modern chairlift in 2005: the 4-CLF Winterpol. The 2-SL Winterpol followed a year later.

# High-performance 4-CLF crosses the new 6-CLD-B-S-O

In close proximity to the 6-CLD-B-S-O Lift 3 there is another new chairlift, the 4-CLF Lift 6, which Doppelmayr also built in 2008. Up to now, the investor, Baza Turystyczno Wypoczynkowa "Gryglówka" Kazimierz Grygiel, had just one surface lift but also wanted to offer his guests a modern chairlift. These two lifts cross, forming Poland's first ever ropeway intersection.





Lift owner Richard Sobiesak rates the Doppelmayr technology highly.

The bottom stations of the two lifts are located roughly 200m apart and cross at a point further up the mountain, where Lift 3 passes above Lift 6. An additional monitoring system using break forks in the intersection zone<sup>2</sup> on Lift 3 ensures that Lift 6 below is also shut down in the event of deropement.

### Short construction period

Both installations replace old surface lifts. The lift lines have been extended through the forest up to the national border. The



The new lifts - the 6-CLD-B-S-O Lift 3, and the 4-CLF Lift 6 - cross; they have a special monitoring system in the intersection zone. The color of the new 6-seater chairlift has earned it the nickname of "Dutch" lift among skiers. Guests are particularly impressed with "the convenient loading and unloading, the ride comfort and the protection against the elements provided by the bubbles," says owner Richard Sobiesak. Since the lift opened on December 25, 2008, it has been in operation for 13 hours a day. Any maintenance work is carried out at night.

contract was signed on June 5, 2008. Lift 3 went into test operation in mid-December and was officially approved on December 23. Lift 6 was also completed before Christmas but the approval inspection did not take place until January 5 and 6, 2009.

- <sup>1</sup> Richard Sobiesak, the lift owner, cites a statistic which states that 70 percent
- of skiers use the new installation.
- <sup>2</sup> The switches are installed on the two towers of Lift 3. They also act on the control system of Lift 6 to stop it if necessary.

6-CLD-B-S-O Lift 3	
Transport capacity	3,000 PPH
Trip time	2.4 min
Speed	5.0 m/s
Chairs	41
Interval	7.2 s
Inclined length	609 m
Vertical rise	142 m
Towers	7
Drive	Bottom
Tension	Bottom

### 4-CLF Lift 6

4-CLI LIII 0	
Transport capacity	2,400 PPH
Trip time	3.8 min
Speed	2.6 m/s
Chairs	77
Interval	6.0 s
Inclined length	588 m
Vertical rise	126 m
Towers	8
Drive	Bottom
Tension	Bottom

# Triple-link ropeway chain near Dombai



Linking on from the two Doppelmayr lifts built in 2006, the new 4-CLF Dombai III now extends the chain from the village of Dombai up to the northern slopes of the 4047 m Dombai-Ulgen. ombai, in the Russian republic of Karachay-Cherkessia, is located just a few kilometers away from the border with Georgia. It is one of the most popular ski centers in the Caucasus Mountains and offers a dozen hotels plus roughly the same number of wellgroomed ski trails. The village lies at an altitude of 1,600 m amid a breathtaking panorama of high mountains. The 5,642 m Elbrus, a dormant twin-peaked volcano with 70 glaciers, can be seen in the distance.

Doppelmayr/Gara

The Doppelmayr lift chain starts with the 8-MGD Dombai I, continues with the 6-CLD Dombai II and is rounded off by the new 4-CLF Dombai III.

#### Two slopes - one lift

This chairlift crosses a hollow which is optimally utilized by an intermediate station at its base: Skiers can ride up the slopes on both sides and ski down again. The drive is housed in the intermediate station, the ideal technical solution for this constellation.

The construction took six months. Skado (Doppelmayr Russia) was responsible for the ropeway equipment. The building work was contracted out to a local company by the owner, Arkada.



Reward for good partnership: Elsar Appakov from Arkada played a decisive role in ensuring that after 2006 the contract

for the third modern chairlift was also awarded to Doppelmayr.

### 4-CLF Dombai III

Transport capacity	1,546 PPH
Trip time	4.8 min
Speed	2.3 m/s
Chairs	63
Interval	9.3 s
Inclined length	661 m
Vertical rise	143 m
Towers	9
Drive	Bottom
Tension	Тор



Intermediate station at the base of a hollow. Thanks to its proximity to the Black Sea, Dombai has abundant snowfall, with average winter temperatures of minus 5 degrees Celsius. It is possible to ski there from November until well into April.

### New 8-MGD in Keystone



wir

Doppelmayr/Garav

Three mountains, five bowls and acres of fun: The all-year mountain resort of Keystone promises plenty of opportunities for an enjoyable guest experience. In the winter season 2008/09, a new 8-passenger gondola lift went into operation on the 3,547 m Dercum Mountain, Keystone's main mountain.

The River Run Gondola is the third to be built on this lift line. Some of the old tower foundations were retained. This lift is also the first in the USA to be equipped with a "Vision" station enclosure.

he new River Run Gondola replaces a 6-seater gondola (built by the Doppelmayr Group in 1986) which had approximately 60,000 hours of operation. The new gondola can carry over twice as many passengers as its predecessor and offers far greater comfort: The loading and unloading surfaces at all stations are heated, the LWI (Level Walk-in) cabins are more spacious, and the bottom station was moved across the river to the edge of River Run Village - which offers 7,000 beds. The new location has been integrated into the Mountain Service Center with ticket sales, info terminal, ski storage, restrooms, etc.

Apart from being extended further downhill, the lift line is the same as before. A number of tower locations were reused and the top station was retained, although it underwent an extreme makeover. The space restrictions at the top terminal and parking garage made reusing this space a real challenge for engineers and fitters. Besides the fact that the new 8-passenger gondolas take up more room than the previous 6-passenger cabins, a larger drive was also required and two 464 kW AC motors were selected.

# Intelligent closing mechanism for gondola doors

A new feature is the mid station which can be used for both uphill and downhill trips. Skiers like to ride down from the mountain on very busy days when the primary trail to the base is relatively demanding and toward the end of the winter season when there is less snow cover. A new restaurant is proposed at the top station that will stay open until late at night, serving night skiers and summer visitors. To prevent passengers from disembarking in the mid station at these times, the door opening/closing mechanism can be blocked via the central control system to prevent the gondola doors from opening. The parking facility for the cabins is housed underground in the top station.

Jon Mauch was the Keystone Resort project manager. He was particularly impressed with the way the entire project was handled. "I have built over thirty lifts, including another gondola and 12 detachable chairlifts. This was the cleanest, most trouble-free start-up that I have ever had. Doppelmayr-CTEC engineered an extremely smooth lift profile that is great for passenger comfort. It was a pleasure to do business with them. I am very happy with the installation and its performance. I believe it has fulfilled everyone's expectations."

#### 8-MGD River Run Gondola

Transport capacity	2,400 PPH
Trip time	11.8 min
Speed	5.1 m/s
Cabins	125
Interval	12.0 s
Inclined length	2,922 m
Vertical rise	703 m
Towers	33
Drive	Тор
Tension	Bottom





### PEAK 2 PEAK: A vision became reality

"We are thrilled to announce the opening of the PEAK 2 PEAK Gondola, a lift quite unlike any other in the world," said Dave Brownlie, President and COO (Chief Operating Officer) at the grand opening, in Whistler, Canada, on December 12, 2008. - The lift has actually set two world records: for the longest unsupported

> span and the greatest height above ground.

t had all started in 1997 with a trip to Europe by Hugh Smythe, President, Mountain Operations at Intrawest<sup>1</sup>, and Paul Matthews, President of Ecosign (resort master planning). Looking at the lift connections from Zermatt to the ski resorts all around the Matterhorn, they hit on the idea of connecting Whistler and Blackcomb Mountains with a convenient aerial ropeway to form a single, connected ski resort. It then took several years to convince the investors and filter out the best technical solutions until the decision was finally made in favor of the Doppelmayr 3S technology in 2005.

Intrawest, one of the biggest players among the North American ski resort operators, acquired Blackcomb in 1986 and purchased Whistler 10 years later, paving the way for the creation of Whistler Blackcomb as an economic entity. Today, Whistler Blackcomb is the biggest single ski area in North America with 33 km<sup>2</sup> of skiable terrain, 38 lifts – hourly capacity: 60,000 passengers – and ample bed capacity. Whistler Village lies between the two mountains, Whistler and Blackcomb. From here, there is a gondola to the Roundhouse Lodge on Whistler Mountain and another gondola that accesses high-speed quad chairs to the Rendezvous Restaurant on Blackcomb Mountain. The terminals of the new 3S lift are right next to these restaurants.

# Singing the praises of Doppelmayr quality

The person responsible for construction of the lift at Whistler Blackcomb was Dave Brownlie. He has held various management roles at this resort over the past 21 years. After beginning his tenure with Blackcomb as Director of Finance, he went on to become VP Finance & Corporate Development before being appointed Executive VP and COO of Whistler Blackcomb & Panorama Resorts and is now President & COO of Whistler Blackcomb.

Dave Brownlie expects a ropeway manufacturer to deliver top quality in terms of transport solutions and products, installation and maintenance as well as

<sup>&</sup>lt;sup>1</sup> Intrawest ULC is the owner of Whistler Blackcomb; Hugh R. Smythe is Senior Vice President, Intrawest Mountain Resorts





Whistler Blackcomb is extremely proud of its landmark PEAK 2 PEAK Gondola, not least because it has set two world records: the longest unsupported span (3,026 m) and the highest lift of its kind (436 m). The terminals are located at altitudes of 1,834 m (loading platform on Whistler Mountain; drive) and 1,870 m (loading platform on Blackcomb Mountain; tension). The gondolas are parked in both terminals. For further information and technical details: WIR No. 173/Sept. 2007 and No. 177/Jan. 2009.



Dave Brownlie, COO (Chief Operations Officer) and President of Whistler Blackcomb: "The response from skiers to the 3S

gondola has been overwhelming. Doppelmayr CTEC did an excellent job and has created a new icon that symbolizes modern North America." He was exceptionally impressed by the teamwork of the Doppelmayr-Garaventa crew from Canada, Switzerland and Austria.

number one ski resort. And as host to the 2010 Winter Olympics, the resort has every intention of living up to that reputation. To date, around USD 875 million has been invested in the infrastructure for the Olympics alone. This amount does not include the 3S project.

the right price-performance ratio. His experience of working with Doppelmayr has always been extremely positive; 14 ropeways have now been built in this area with Doppelmayr since 1987. For Dave Brownlie, it is the quality of the product that sets Doppelmayr apart from its competitors. The company chose the Doppelmayr 3S system for the PEAK 2 PEAK project "because of the innovative technology that provided comfort, capacity and speed" which combined to form a "very unique installation".

### Unique and challenging: the PEAK 2 PEAK project

The PEAK 2 PEAK Gondola is a truly unique project. And exceptional technical

3S PEAK 2 PEAK	
Transport capacity	2,050 pphpd
Trip time	ll min
Speed	7.5 m/s
28-pax cabins	28
Interval	49.2 s
Inclined length	4,516 m
Vertical rise	36 m
Towers	4
Drive	Mt. Whistler
Tension	Mt. Blackcomb

and organizational challenges had to be overcome in order to realize it. The construction crews (including the Europeans!) soon got used to the presence of bears, but the rope pulling operation - rope height above ground 436 m, 3,026 m rope span - was only one of the tremendous technical feats accomplished. And the outstanding achievements were not limited to the construction site itself. The top terminal of the 4-CLD Solar Coaster, for example, had to be moved 50m in order to be able to erect the return station of the PEAK 2 PEAK in the correct position. Transporting the rope (which was brought to Whistler on five low-loader railroad carriages) up the mountain was a major logistical accomplishment. In addition, special mountain and aircraft warning systems had to be installed.

When Austrian fitter Mathias Zudrell took to the roof of the gondola and crossed the Fitzsimmons Creek valley for the first time on September 19, 2008, following a five-and-one-half-month installation period, there was a huge feeling of jubilation at having mastered such an outstanding technical feat and because Hugh Smythe's vision had finally become reality.

The gondola will provide an enormous boost to the prestige of the region. It will further enhance Whistler Blackcomb's reputation as North America's

# Vietnam: Gondola lifts for up-and-coming tourist sector

26 Contraction

In Bana, not far from Danang and roughly in the geographical center of Vietnam, Doppelmayr has built two 8-passenger gondola lifts: The Bana Cable Car was completed at the end of February, the Bana Peak Gondola in April 2009. **B** ana lies at an altitude of 1,450 m. The climate is drier and on average 10 °C cooler than in the coastal city of Danang. For this reason, it had already become an elegant resort for rest and relaxation back in the 19th century. But over time, the beautiful villas fell into disrepair until Vietnam's economic upswing in the 1990s led to the resort's renaissance. At the end of the 1990s, Doppelmayr built a pulsed movement gondola lift which carried passengers from the villas to the mountain top.

In the meantime, development has continued. Danang experienced a huge upturn in the manufacturing sector. Now the local government has set its sights on boosting tourism.

> In 2007, a private investor was found who was willing to develop the entire mountain into a modern tourist area with hotels and vacation villas. The main target group consists of guests from Southeast Asia and the USA.

The investor took no time in awarding the contract for the two 8-passenger gondola lifts. The Bana Cable Car

Difficult installation in jungle terrain; Doppelmayr was responsible for supervision; the customer took charge of transport, tower procurement and provision of the construction crew.

Drive

Tension

- which runs from Danang to Bana greatly improves access to the resort as the 18 km mountain road is narrow and steep, and the journey is time-consuming. During the rainy season this road often becomes impassable. The Bana Peak Gondola replaces the old pulsed movement lift which could no longer offer the required capacity.

To save space, the stopping distances are integrated into the stations. The Bana Cable Car has UNI-G-L stations, while the Bana Peak Gondola has the UNI-G-M version. In view of the heavy thunderstorms that occur during the monsoon, two lightning protection cables are fitted above the track rope. At the request of the customer, different cabin models (from CWA) were chosen: Omega IV tropical LWI for the Bana Cable Car, Konus 8 LWI for the Bana Peak Gondola.

8-MGD Bana Cable Car		
Transport capacity	1,500 PPH	
Trip time	15.1 min	
Speed	6.0 m/s	
Cabins	94	
Interval	19.2s	
Inclined length	5,042 m	
Vertical rise	1,292 m	
Towers	22	
Drive	Тор	
Tension	Bottom	
Tension <b>8-MGD Bana Peak Gonc</b>	Bottom Iola	
Tension <b>8-MGD Bana Peak Gonc</b> Transport capacity	Bottom Iola 1,500 PPH	
Tension <b>8-MGD Bana Peak Gonc</b> Transport capacity Trip time	Bottom Iola 1,500 PPH 3.5 min	
Tension <b>8-MGD Bana Peak Gonc</b> Transport capacity Trip time Speed	Bottom lola 1,500 PPH 3.5 min 5.0 m/s	
Tension <b>8-MGD Bana Peak Gonc</b> Transport capacity Trip time Speed Cabins	Bottom lola 1,500 PPH 3.5 min 5.0 m/s 21	
Tension <b>8-MGD Bana Peak Gonc</b> Transport capacity Trip time Speed Cabins Interval	Bottom lola 1,500 PPH 3.5 min 5.0 m/s 21 19.2 s	
Tension <b>8-MGD Bana Peak Gonc</b> Transport capacity Trip time Speed Cabins Interval Inclined length	Bottom Iola 1,500 PPH 3.5 min 5.0 m/s 21 19.2 s 698 m	
Tension 8-MGD Bana Peak Gond Transport capacity Trip time Speed Cabins Interval Inclined length Vertical rise	Bottom lola 1,500 PPH 3.5 min 5.0 m/s 21 19.2 s 698 m 131 m	
Tension 8-MGD Bana Peak Gonc Transport capacity Trip time Speed Cabins Interval Inclined length Vertical rise Towers	Bottom Iola 1,500 PPH 3.5 min 5.0 m/s 21 19.2 s 698 m 131 m 4	



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Bottom

Тор

# By gondola lift to Buddha's mountain

Doppelmayr/Garavente C



Doppelmayr installed a high-performance 8-passenger gondola lift on Mount Fanjingshan in the southern Chinese province of Guizhou. The lift saves pilgrims and tourists the arduous climb up the 8,000 stone steps over a vertical rise of 1,200 meters to the famous Buddha shrines. he remote region in the Wuling Mountains has been a national park since 1978 and a UNESCO biosphere reserve since 1986. It is home to hundreds of rare plants and animals, some of which are only found here. Since the Ming dynasty (1368 to 1644), it has also ranked among the most important holy sites for Buddhists. Every year, over 100,000 pilgrims visit the mountain.

The Fanjingshan lift has two long rope spans of 495 m and 330 m with heights above ground of 178 m and 95 m respectively. A continuous loop parking facility is housed in the top station. In line with the latest Chinese ropeway code, rescue systems had to be provided along

Doppelmayr has already built four ropeways in China for the customer, private entrepreneur Wuhan-Sante. Reasons for the purchase decision: Doppelmayr's excellent reputation as technology and quality leader, extremely comfortable ropeways. the haul rope. Two rescue ropeways were installed. In view of the low rope inclination, one of these is self-propelled. It docks onto the gondola, hydraulically opens the grip and conveys the cabin plus occupants in piggy-back fashion up to the next tower where the passengers can be lowered by rope. The other rescue device is a winch; evacuation is performed by allowing the carriers to slide along the rope.

#### 8-MGD Fanjingshan

Transport capacity	1,000 PPH
Trip time	10.4 min
Speed	6.0 m/s
Cabins	44
Interval	28.8 s
Inclined length	3,413 m
Vertical rise	1,193 m
Towers	18
Drive	Bottom
Tension	Тор



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Doppelmayr/Gara



New office building for Doppelmayr Italia

In Lana (near Merano), Doppelmayr Italia has brought together the previously separated offices for Management, Sales, Procurement, Engineering and Administration under one roof in a brand new office block with underground parking for 32 automobiles.

The new building also houses a store for spares and production parts, plus the assembly shop.

The net surface area is 3,000 m<sup>2</sup>, the building volume 12,000 m<sup>3</sup>. A new parking lot has also been built. 110 people work in Lana in two buildings – administration and workshop.



New Garaventa building in Goldau

Garaventa has replaced part of the old production facility (mechanical, fitting, hydraulic, electrical sections) in Goldau (canton Schwyz) with a new building. In addition, 130 office workplaces were created; most of these were previously housed in the two rented properties in Bergstraße and elsewhere on the plant premises. The basement of the new building provides parking for employees. The building has 8,400 m<sup>2</sup> of floor space and a volume of 31,450 m<sup>3</sup>. The main entrance is now at Tennmattstraße 15, where customer parking is also provided. Garaventa AG employs 227 people in Goldau.



Doppelmayr Poland

Up to now, Doppelmayr's interests in Poland were looked after by an agent. In February, the company's own subsidiary, Doppelmayr Polsko Sp. z o. o., opened its doors. The new office is headed by Bogdan Tarko (photo). The goal is to improve service and marketing quality through the central location in close proximity to the major ski regions. 43-316 Bielsko-Biala

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Ski World Championship

Since the World Championship in St. Anton (2001), the Tirol-Berg pavilion has been the information and meeting point for journalists and celebrities at every alpine Ski World Championship. At Val d'Isère (February 2009) Doppelmayr/ Garaventa was present at Tirol-Berg for the first time. Photo: Austrian TV reporter and presenter Ernst Hausleitner kicked off his report on the World Championship in a Doppelmayr orange bubble.



Doppelmayr at Alpitec China

As a global player, Doppelmayr took part in Alpitec China (February 19 – 21, 2009, in Beijing) with a fascinating product show. The Doppelmayr stand attracted large numbers of visitors.

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