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# Wir



Several new Doppelmayr lifts have gone into operation in the "SkiWelt" of the Kitzbühel Alps. p.10



## **8-seater chairlift in Europe's biggest ski region**

Enhanced comfort and less congestion in Portes du Soleil/Champéry. p.2

## **Even greater comfort on Seiser Alm**

A new 6-CLD-B significantly improves the lift infrastructure. p.4

## **World first for children**

A new chairlift concept for children is put into practice in Serfaus, Tyrol. p.18

## **Jackson Hole replaces its famous "red box"**

The emblem is retained – and modernized. p.20

## **Sheregesh ski region in Siberia goes up in the world**

This up and coming region gets a boost from its new 4-CLD. p.22

## **8-seater gondola lift in central China**

Private investor builds ropeway in Shirenschan. p.23

*Hintertux now has three Funitels. The key factor in deciding on the Funitel chain was the system's high wind stability. p.6*

 **Doppelmayr®**



## The 8-seater chairlift to the sun

**In 2008, Garaventa built a high-capacity 8-seater chairlift in the Swiss part of the French-speaking ski resort of Portes du Soleil, Europe's biggest ski area.**



*Director  
Raymond  
Monay: The  
relationship  
of trust  
between Télé  
Champéry-  
Crosets Portes  
du Soleil*

*AG and the Doppelmayr/Garaventa Group has a long tradition. "We know and value the company, the quality of its lifts and its ability to meet deadlines." He is particularly impressed with the technology and performance features of the 8-seater chairlift.*

**T**ourism in general, and skiing in particular, is a tradition in the region between Lake Geneva and Mont Blanc. The municipality of Champéry near the Franco-Swiss border, just an hour's drive from Geneva Airport, recently celebrated "150 years of tourism". In comparison, the holiday village of Les Crosets in the mountains is still young. It was created in 1962, after a severe

storm destroyed the forests and the local authorities wanted to put the wood from the fallen trees to good use by constructing holiday chalets. It was not long before the first surface lift was erected, and subsequently the entire region between Champéry and Les Crosets was opened up with ski lifts and trails. 1968 saw the opening of the first direct link with the neighboring French ski resort of Avoriaz. This marked the beginning of the "Portes du Soleil" which today boasts 650 km of trails and 204 lifts<sup>1</sup>. (The area also has 380 km of hiking trails and is a popular destination for mountain bikers. The World Cup races and, in 2011, the World Championship are to be held here.)

The new 8-seater chairlift was commissioned by Télé Champéry-Crosets Portes du Soleil AG, whose ski region lies at altitudes of between 1,050 m and 2,250 m, has 50 kilometers of trails and 17 lifts<sup>2</sup> which sell 6 million trips in the winter. The company employs a workforce of 130 people in the winter and 30 in the summer.





## Quality, innovation and technology leader

### Higher capacity, greater comfort

The 8-CLD Crosets-Marcheuson, as the new lift is called, replaces a 20-year-old fixed-grip quad chairlift and a T-bar lift. The capacity of these lifts had long proved insufficient as a means of access to the mountain and to serve the adjacent slopes. The new lift offers a 30 percent increase in capacity and is expected to carry 2 million skiers a year.

The installation has two UNI-G stations. The bottom station with 90° boarding and a loading carpet is located on the edge of a central, spacious loading plateau which is shared by several lifts and where skiers can conveniently don their skis. This plateau is in fact the roof of a carrier parking facility built into the slope and covered with grass in the summer. During the construction of the new lift, this building structure was extended along the same level, creating room for cash desks, service areas, etc. beneath the boarding area.

As Director Raymond Monay reports, "the restructuring of our lift installations

will continue over the next few years in order to further improve safety, reliability and comfort".

<sup>1</sup> One ski pass for 12 interlinked ski areas

<sup>2</sup> 1 aerial tramway, 7 chairlifts (3 of them detachable), 7 surface lifts and 2 baby lifts with a total capacity of 23,200 passengers per hour.

#### 8-CLD Crosets-Marcheuson

Transport capacity	4,000 PPH
Trip time	3.3 min
Speed	5.0 m/s
Chairs	55
Interval	7.2 s
Inclined length	836 m
Vertical rise	253 m
Towers	8
Drive	Top
Tension	Bottom

8-CLD Crosets-Marcheuson. A high-capacity feeder for Europe's biggest ski area network: Portes du Soleil.

In fiscal year 2007/08, Doppelmayr posted sales revenues of EUR 679.7 million (plus three percent) with 2,605 employees and consolidated its clear quality, technology and innovation leadership in the ropeway sector. This pole position was confirmed by satisfied customers and users as well as a large number of world firsts. The "unmanned" gondola lift in Val Thorens, France, the first gondola lifts with seat heating in Ischgl and Zell am See, Austria, and the first gondola lift with sauna cabin in Finland are just a few impressive examples.

The established strategy of positioning the ropeway as a means of passenger transport in cities has also been crowned with success. The development and implementation of modern ropeway applications for bulk material handling in industry and mining have made it possible to serve an attractive niche market.

Ultimately, it was thanks to the trust placed in our expertise by our customers and partners that our ropeway competence could be put to the test. And we shall continue to pull out all the stops to ensure that we meet their expectations in the future.

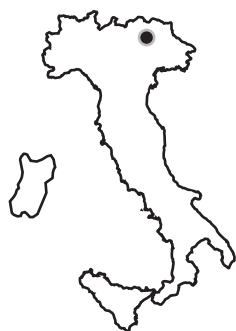


Michael Doppelmayr



## Even greater comfort on Seiser Alm

Doppelmayr Italia has replaced the 20-year-old "Panorama" quad chairlift on Seiser Alm in the Dolomites of South Tyrol with a comfortable detachable 6-seater bubble chairlift. This installation acts as a direct feeder to almost all the lifts on Seiser Alm.



Marketing Director Susanne Griesser and her brother Martin Griesser, Managing Director, Operations and Technical Director, are united in their view: "The decision in favor of the 6-seater chairlift optimally meets the need of alpine skiers, cross-country skiers and hikers for comfort and speed." Construction was carried out rapidly. Doppelmayr took charge of transport, installation, start-up and approval; the customer, Griesser Martin & Co. KG, performed the building work.

Seiser Alm, Europe's biggest high mountain pastureland, is an ideal skiing and hiking area. In the summer, well-maintained hiking paths provide access to the pastures and peaks. In the winter, skiers and snowboarders have 60 km of trails and 23 lifts available to them.

### Child safety lock

The new 6-CLD-B is 300 m longer than the old chairlift. As well as being equipped with bubbles, it features a child safety lock. This makes good sense as the bottom station is in close proximity to the practice slopes for the two ski schools on Seiser Alm and they are regular users of the chairlift.

The prime reason for building the new lift, as Marketing Director Susanne Griesser explains, was that "since the construction of the Seis-Seiser Alm lift,



the location of the old bottom station and the consequent change in access possibilities no longer met the new logistical requirements". – In the winter, the link-up with the ski network was poor as skiers wishing to get to the Panorama lift and

### 6-CLD-B Panorama Seiser Alm

Transport capacity	2,600 PPH
Trip time	4.3 min
Speed	5.0 m/s
Chairs	70
Interval	8.3 s
Inclined length	1,311 m
Vertical rise	200 m
Towers	13
Drive	Top
Tension	Bottom





*The new, efficient and comfortable 6-CLD-B Panorama significantly facilitates access to Seiser Alm. This area forms part of the Superski Dolomiti network and is the starting point for the famous Sella Ronda ski route which crosses four mountain saddles and four valleys.*

further on to the trails on Seiser Alm either had to walk a short distance or use the Laurin lift, a quad chairlift. This resulted in long waiting times. "With our new chairlift, guests can get directly and by the shortest route from the top station of the Seis-Seiser-Alm lift to the where they want to ski".

The 6-CLD-B Panorama Seiser Alm also provides access to a toboggan run, cross-country ski trails on the ridge and virtually all winter and summer hiking paths via Seiser Alm.

Toboggans as well as kids' buggies or wheelchairs are transported on the chairs. It's all quite simple: One of the lift crew fastens the item to be transported

onto the next available chair – and it is lifted off at the other end.

The new lift, like the old one, will also operate in the summer. Susanne Griesser expects ten percent summer and 90% winter guests. – The Panorama Restaurant at the top station with its all-round view is a popular destination at any time of the year.

### ***Harmonious integration into the landscape***

The Panorama lift crosses a highly sensitive protected area. Great care was therefore taken with the ropeway design and construction. Susanne Griesser: "It

was because we didn't want any unnecessary impact on the landscape that we did without a second feeder lift to the existing Panorama lift and instead replaced it with a modern, efficient and comfortable installation." – The way the turf was treated illustrates the great effort taken to minimize any effect on the landscape. This was carefully removed before the excavation work began, set aside and finally put back in place manually.

The 6-CLD-B Panorama increases the attractiveness of Seiser Alm, not least for leisurely skiers and families, a target group on which greater attention is to be focused in the future.

# Hintertux Glacier: Triumph of the sleek mover

**Doppelmayr Funitels are particularly impressive because of their characteristic sleek movement. Hintertux is the only ski region worldwide with a triple-link Funitel chain. The latest Funitel, Gletscherbus 1, went into service in November 2008.**



**H**intertux at the end of the Tyrolean Zill Valley is unique in many respects. The skiing season, for instance, lasts all year round on the glacier. There are no interruptions for ropeway maintenance as all major destinations can be reached by at least two lifts.

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### *Funitel technology stands the test of lively winds*

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The desire for comfort, operational reliability and the best in ropeway engineering is the key factor which inspired the use of Funitel systems by Doppelmayr. As Hintertux lies right in the path of the "foehn" wind, ropeways need to be able to operate at higher wind speeds.

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### *"Foehn" as a piece of luck*

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Klaus Dengg, one of the three directors<sup>1</sup> of the lift operating company, Zillertaler Gletscherbahn, looks upon the "foehn" wind as a piece of luck: "Our sometimes extreme weather conditions are down to our glacier." – And this is where the Funitel is ideal.

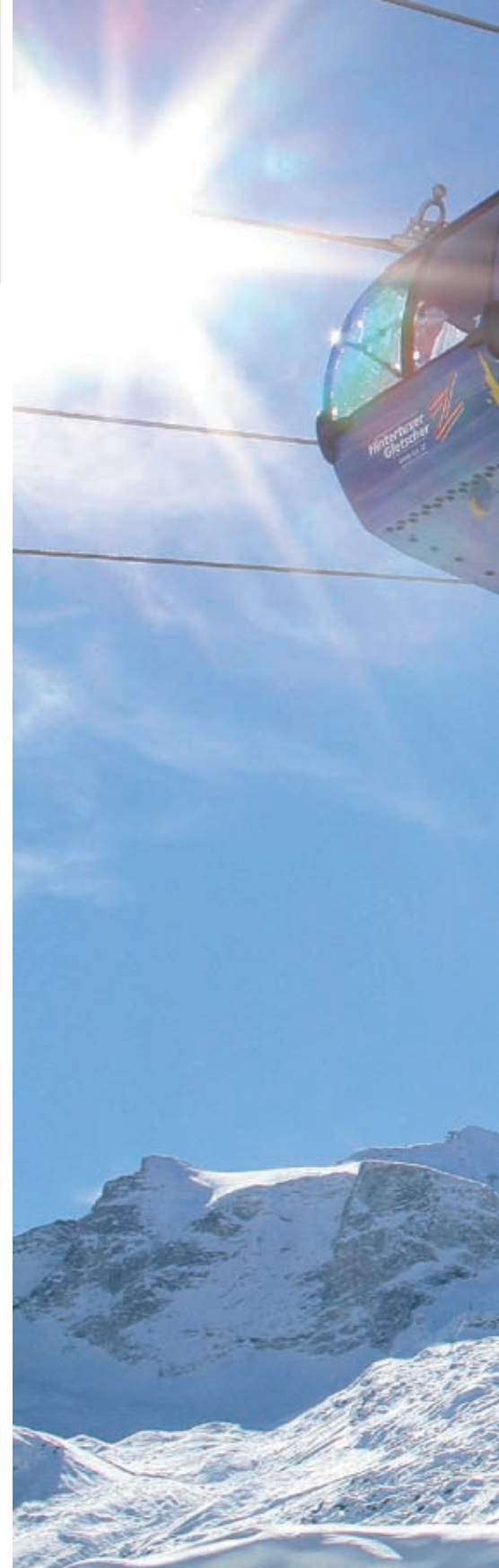
1996 saw the construction of the first Funitel in Hintertux, the Gletscherbus 2. This traces a route from Sommerbergalm (2,100m) to Tuxer Fernerhaus on the edge of the Hintertux Glacier (2,660m) and is particularly exposed to this wind. (Sommerbergalm is the very heart of the area and forms the starting point and destination for virtually all the ski trails.)

Gletscherbus 3 from Fernerhaus to Gefrorene Wand<sup>2</sup> (altitude 3,250m), the highest part of the ski region, followed in 2000. This lift marked another piece in the jigsaw as far as the company's detailed long-term strategy was concerned. Just how visionary this planning had been was finally revealed with the completion of the third Funitel in 2007/08.

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<sup>1</sup> Klaus and Franz Dengg, Felix Gaugg

<sup>2</sup> Construction began in 1999



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### *Visionary planning far into the future*

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Initially, when an 8-seater gondola was built in the year 2000 as a second feeder up to Sommerbergalm, the construction requirements for the next Funitel, Gletscherbus 1, were already taken into account. The station locations for the 8-MGD were chosen to allow their sub-





*Klaus Dengg, CEO of Zillertaler Gletscherbahn, uses "sleek" to describe the travel movement of the Doppelmayr Funitel. The new Gletscherbus 1 completes the Funitel chain from valley to peak – and ensures reliable downhill service even in strong winds. When the "foehn" blows, even good skiers prefer to make the downhill trip with the lift as, quite apart from the wind, visibility becomes a problem and really good knowledge of the local terrain is required.*

sequent integration in one building complex, along with the stations of the future Funitel, without too much additional work. The bottom station of this lift had been moved 100 m downhill where neither

the construction of this 8-seater gondola lift nor of the Funitel would interfere with operation of the 4-seater gondola lift dating from 1972. This 4-MGD was not shut down until summer 2008; Glacierbus 1

exceeds by far the capacity it replaces.

In the meantime, the bottom station has been turned into an impressive ter-

terminal complex as a large part of it is below ground while the visible part of the structure forms a wide semi-circle which nestles against the end of the valley and aesthetically harmonizes with its natural surroundings. It houses the bottom stations and parking facilities for both lifts as well as the cash desks, toilets, sports shop, ski hire, staff apartments, etc. The underground parking lot dating from 2000 has been enlarged by another 60 spaces, providing room for 300 cars. The drive machinery for the Funitel<sup>3</sup> is also located in the basement.

The top station, which houses the tension system for the Funitel, also has a multifunctional configuration. A new self-service restaurant was built there in 2005. With its log fire and wooden de-

sign features, the interior creates a homely atmosphere in spite of its size. In summer 2009, the stations of the gondola lift and Gletscherbus 1 will come under the same roof.

While the overall system cannot fail to impress, individual details are equally fascinating, such as the 24-passenger cabins (suggested by Klaus Dengg). These feature bench seats located along the walls and standing chairs in the center.

#### ***The importance of advice and after-sales service***

For Klaus Dengg, it's not just the technology that matters. He also expects comprehensive and continuous training for his technical personnel. His aim is to make sure that the ropeway crew are entirely familiarized with the installation before they are faced with a troubleshooting situation where valuable time would otherwise be lost. Dengg also attaches great importance to meticulous and extensive advice from Doppelmayr: "I certainly wouldn't have been very happy if, for example, I'd subsequently been told I could have had a particular feature if only I'd ordered it in time!"

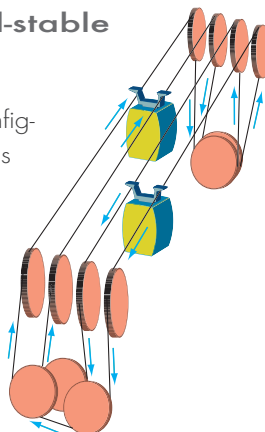
<sup>3</sup> The drive of the 8-MGD is in the top station

#### **Funitel Gletscherbus 1**

Transport capacity	3,200 PPH
Trip time	5.3 min
Speed	6.0 m/s
24-passenger cabins	24
Interval	27.0 s
Inclined length	1,413 m
Vertical rise	527 m
Towers	8
Drive	Bottom
Tension	Top

#### **The Funitel system is particularly wind-stable**

The special feature of the Funitel system is the double configuration of the rope loop: One continuous rope produces four rope lines. There are two parallel ropes on both the uphill and downhill sides, with a rope gauge of 3.2 m. The parallel ropes prevent side swing when the cabins pass over the towers and on entry into the stations as well as stabilizing the cabins on the line. As a result, the Funitel is able to operate at higher wind speeds than are possible with conventional monocable systems.



**The tramway from Engelberg to hamlet Brunni at the foot of the majestic Mythen massif has been completely rebuilt by Garaventa.**

The Brunni tram, built in 1952, was completely modernized in 2008. As part of the rebuild, the bottom terminal was moved from the center of the village to the outskirts and a new top terminal was also constructed.

#### ***Platform access via elevator in the mid station***

The three towers have been replaced by a single 38 m-high structure which also incorporates the mid station. A glazed





The new Engelberg-Brunni tramway is of major importance for both the local farming community and for tourism.

## Aerial tram serves alpine farmers and tourists

elevator provides access to the loading and unloading platform which automatically lowers like a drawbridge as soon as the cabins have reached the correct position. Passengers include not only tourists but above all school children from the surrounding mountain farms. Milk is also transported down to the valley on a daily basis. The elevator is configured so that it can only be used in conjunction with tram operations. The new cabins have windows down to the floor.

### Far greater ride comfort

The old tramway – which had 40-passenger cabins, while the new ones carry 65 people – remained in service until the new tram started up in December 2008 and is to be demolished in 2009. As well as increasing the transport capacity, the new tram now offers far greater ride comfort.

Many of the passengers also find the location of the new top terminal right next

to the terrace of the Brunni Restaurant a lot more convenient. With the old tram, guests had to climb a flight of stairs to reach it.

### 65-ATW Engelberg-Brunni

Transport capacity	634 PPH
Trip time	4.5 min
Speed max.	10 m/s
Speed over towers	7 m/s
Inclined length	1,716 m
Vertical rise	834 m
Towers	1
Drive 392 kW	Top
Haul rope tension weight	Bottom
Fixed track rope anchoring	Top + Bottom
Altitude of top terminal platform	1,849 m



*"The planning permission and the start of the building construction were delayed by seven weeks. In spite of this and not least thanks to the tremendous dedication of Garaventa, we were able to make the opening date of December 19 as planned." – Hans Bünter retired as Managing Director of the Engelberg-Brunni tramway on July 1, 2008, but remained on the board and saw the tram modernization project through to completion as its technical director. Engelberg-Brunni Bahn AG was responsible for coordinating the building construction.*

## SkiWelt – region of superlatives



**The Tyrolean SkiWelt Wilder Kaiser-Brixental is a top-class region for winter sports. Quite apart from its impressive size – 280 kilometers of ski trails, 91 lifts – this winter the region started up four lifts which represent something special in terms of their purpose as well as their technology.**

**S**kiWelt was established in the mid 1970s. Today, it encompasses nine ski resorts. There is a great sense of community between them which goes far beyond the ticketing network. This includes a joint marketing company and even operating supplies are purchased jointly.

In 2008, the following lifts went into service:

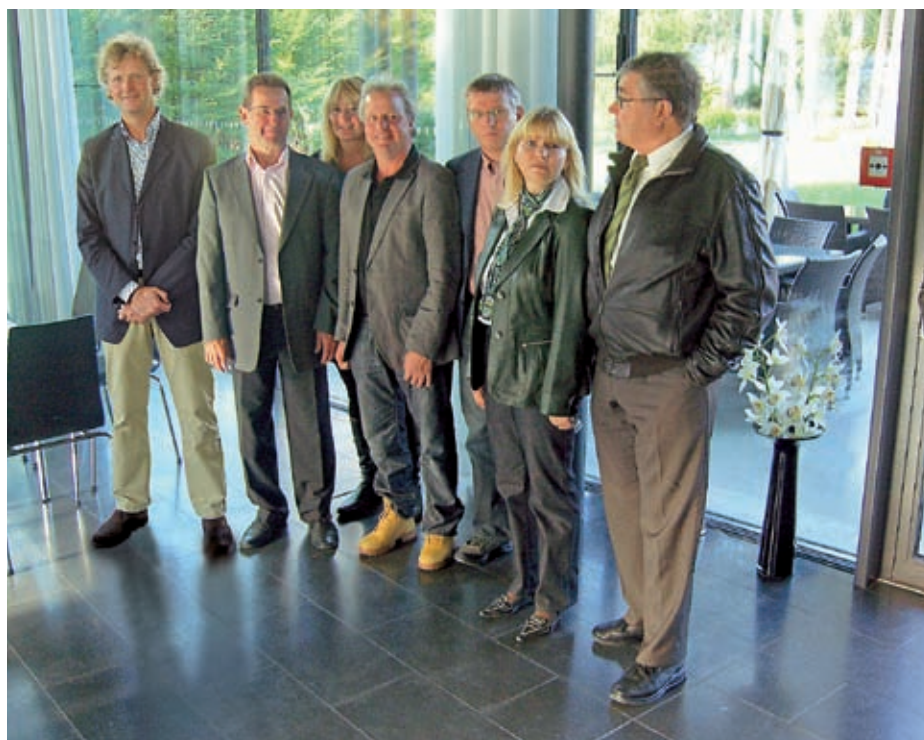
- the 8-seater gondola lift Salvenbahn II (Bergbahnen Hohe Salve-Hopfgarten-Itter-Kelchsau),
- SkiWeltbahn (Bergbahnen Brixen im Thale) and
- Choralmbahn (Bergbahnen Westendorf) plus
- the detachable 6-seater chairlift Silleralm with orange bubbles and seat heating (Berg- und Skilifte Hochsöll)

### **Salvenbahn: Gondolas with heated seats**

Salvenbahn II is one of five gondola lifts which Doppelmayr equipped with seat heating. It marks the fulfillment of a visionary decision taken by the municipal council of Hopfgarten 60 years ago. At the time, a gondola lift had been considered. For financial reasons, a surface lift was finally built and then, 50 years ago, a single-seater chairlift followed.

### **SkiWeltbahn: Bottom station conveniently accessed by surface lift**

The SkiWeltbahn from Brixen to Choralmbahn is accessed using the surface lift. This takes skiers along a 230 m stretch in the valley plain from the trail to the bottom



Hansjörg Kogler (CEO, Bergbahnen Westendorf), Walter Eisenmann (CEO, Berg- und Skilift Hochsöll), Angelika Pastler (Marketing, Berg- und Skilift Hochsöll), Friedl Eberl (CEO, Bergbahnen Hohe Salve-Hopfgarten-Itter-Kelchsau), Rudi Köck (Director, Bergbahnen Brixen im Thale AG), Christine Haselsberger (CEO Bergbahnen Scheffau), Hans Haselsberger (Member of the Board, Bergbahnen Brixen and Bergbahnen Scheffau).



station. A loading carpet ensures optimal convenience for users. Both the surface lift and its loading carpet system are solar-powered. The photovoltaic installation generates 50 percent more electricity than is required for operation and the excess is fed back into the power grid.

To get to the opposite mountain, users take the Hochbrixen lift, a 6-MGD from Doppelmayr built in 1986. A new pedestrian bridge over the busy major road provides safe and convenient access from the SkiWeltbahn to the Hochbrixen lift.

#### ***Link with the Choralmbahn completes the ropeway network***

The special feature of the SkiWeltbahn is that it meets the Westendorf Choral-

bahn at the top of Choralpe<sup>1</sup>. This means that the entire SkiWelt now forms a consistent network for the first time; the shuttle bus which used to operate between Westendorf and Brixen has become a thing of the past. – This quantum leap in terms of convenience won the region highly acclaimed recognition: the hard-to-win title of "Best European Resort Development" awarded by the London-based "Where to Ski & Snowboard Guide".

The top stations of the SkiWelt and Choralmbahn lifts were built onto the mountain restaurant; they are located on the same level in a single building complex. The ski donning area above can be reached by an underground route via an escalator. This made it possible to accommodate everything in the limited space available and to handle traffic volumes of

up to 4,800 skiers. (A third gondola lift is planned for the future and provisions have already been made for its inclusion.) To reduce the impact of wind on the carriers, the ropeline was kept low enough to ensure protection from the summit. The stopping distance is integrated into the station. The mountain restaurant has an environmentally friendly heating system which uses the waste heat from the two gondola lifts.

The lift line of the Choralmbahn, which replaces the single-seater Alpenrose chairlift, has a 5° curve. The new lift features a DSD drive as well as the RPD system

<sup>1</sup>The gondola lift crosses the rail-road line, making special measures necessary for the construction.



8-MGD Salvenbahn II





8-MGD SkiWeltbahn, Brixen im Thale

from Doppelmayr, the world's only fail-safe rope position monitoring system.

#### **Silleralmbahn lift: Service room supplied ready-assembled**

Geological conditions posed a problem for the location of the bottom station of the Silleralmbahn. The construction itself was also special: Doppelmayr delivered the service room for the bottom station complete with switchgear cabinets ready-installed! The chairs for this lift are

parked in the stations.

#### **Visionary prospects**

SkiWelt – Austria's biggest interconnected ski area – is well placed in terms of transport links and can be easily reached by car from Munich, for example, in one and a half hours via highways and wide major roads. And there are yet more visions for the future: Linking up with the Kitzbühel resort would make this the world's third biggest interconnected ski area.

#### **8-MGD Choralmbahn**

Transport capacity	2,200 PPH
Trip time	8.0 min
Speed	6.0 m/s
Cabins	71
Interval	13.0 s
Inclined length	2,365 m
Vertical rise	891 m
Towers	19
Drive	Top
Tension	Bottom





8-MGD Choralmbahn, Westendorf



6-CLD-B Silleralm, Hochsöll

8-MGD Salvenbahn II		8-MGD SkiWeltbahn		6-CLD-B Silleralm	
Transport capacity	2,000 PPH	Transport capacity	2,200 PPH	Transport capacity	2,400 PPH
Trip time	5.7 min	Trip time	11.0 min	Trip time	3.5 min
Speed	6.0 m/s	Speed	6.0 m/s	Speed	5.0 m/s
Cabins	47	Cabins	96	Chairs	44
Interval	14.4 s	Interval	13.0 s	Interval	9.0 s
Inclined length	1,728 m	Inclined length	3,407 m	Inclined length	873 m
Vertical rise	645 m	Vertical rise	1,007 m	Vertical rise	303 m
Towers	11	Towers	21	Towers	9
Drive	Top	Drive	Top	Drive	Top
Tension	Bottom	Tension	Bottom	Tension	Bottom

## Orange bubbles A big hit in Stuhleck



**Since the winter season 2008/09, Styria's ski resort of Stuhleck has been spoiling its guests with a 6-CLD equipped with orange bubbles.**

**S**tuhleck, near Spital am Semmering, boasts a pioneering role in the history of Austrian winter sports. The region's highest mountain (1,782 m) was climbed using skis for the very first time in 1891, then seen as a highly unusual event. Nowadays, the resort operates four chairlifts as well as six surface lifts, 24 kilometers of trails with snowmaking equipment, a fun park for snowboarders and a five-kilometer-long natural toboggan run.

### *Increased feeder capacity*

The new 6-seater chairlift is part of an expansion project which was launched in 2005.

The reason behind this decision was the high level of capacity utilization in the higher reaches of the ski area, as Fabrice Girardoni, Board Member of the operating company, Berglift Stuhleck Österreichische Seilbahnen Bau- und Betriebsgesellschaft.m.b.H. & Cie. KG, explains.

It had been high time to extend the available transport capacity. This will be increased two and a half fold in the initial phase and threefold in the final expansion phase. "We also expect the shift in skier flows to alleviate the pressure on the mid station of the Stuhleckbahn, a quad chairlift built in 1992."

### *Improved offering leads to boom in demand*

Construction of the new lift was a logical consequence of the ski area expansion and the resulting increase in skier volumes. After the 6-CLD Steinbachalm went into service in 2005 and word got around about the subsequent enlargement of the upper reaches of the ski area, the transport capacity of the Weißenelschlag surface lift, which serves the adjacent slopes, soon proved to be inadequate.

### *Two rescue winches*

This Doppelmayr T-bar lift dating from 1967<sup>1</sup> has now been replaced by the 6-CLD-B. While the location of the top station remained virtually unchanged, the bottom station was moved so that it can be accessed from the entire ski area without having to cross other ski trails. The lift line nonetheless now crosses the snowmaking storage pond, which on the one hand is an attraction but on the other made it necessary to provide two rescue winches for this area. To the west of the unloading zone a building has been erected to house the technical infrastructure for the ropeway and the self-service mountain restaurant with a magnificent terrace offering seating for 450 guests.

### *Clear opinion among guests*

According to Fabrice Girardoni, "the great benefits of the new lift installation are the high transport capacity, the short trip time and the comfort". – Surveys conducted in the past have clearly shown that guests don't like using long surface lifts. Another argument in favor of an ad-



*Fabrice Girardoni, Managing Director of Bergbahnen Stuhleck: "The quality and performance of Doppelmayr lifts are impressive. We*

*find Doppelmayr's flexibility very helpful, and their project support and execution have always been a positive experience. The assistance given to us this time round in the preparation phase and with implementation was again excellent."*

<sup>1</sup> A twisted curve station was added in 1985 and the track extended uphill by one third.





6-CLD-B Weißeneif, Stuhleck. The majority of guests are drawn from the nearby, densely populated Vienna basin, Hungary and Slovakia. The lift is to be used exclusively in the winter season for taking skiers and pedestrians up the mountain as well as for the downhill transport of pedestrians.

ditional chairlift was the fact that the new panorama restaurant in the top station has also proved to be popular among walkers and hikers.

#### **Important for the entire region**

Raising the profile of the ski resort is of great economic importance for the region as a whole, as Bergbahnen Stuhleck ranks amongst the biggest employers in the area. That in itself is reason enough to make sure that the area remains as attractive as possible for tourists. Construc-

tion of the new lift met with wide support among the population and local politicians.

In any event, the investment zeal of the Upper Styrian lift operators continues unabated. Fabrice Girardoni has plans for the future: "Where lifts are concerned, the next investment is going to be in increasing the transport capacity of the Steinbachalm and Weißeneif lifts. An additional ski trail in Steinbachalm is also envisaged." He gives the time line for these projects as three to five years.

#### **6-CLD-B Weißeneif**

Transport capacity	3,000 PPH
Trip time	6.4 min
Speed	5.0 m/s
Chairs	107
Interval	7.2 s
Inclined length	1,811 m
Vertical rise	336 m
Towers	17
Drive	Top
Tension	Bottom

## Kreischberg: Sunshine and freedom



**Since mid December 2008, an orange bubble lift has been the new sensation in Kreischberg-Murau.**

The ski resort Kreischberg-Murau lies at an altitude of between 870 m and 2,100 m. It has 13 lifts<sup>1</sup> and 40 km of ski trails of all levels of difficulty, and now boasts a true highlight with the new "Orange Sixpack", a high-performance 6-seater chairlift with orange-tinted bubbles.

A magnificent view of the Niedere Tauern and Nockberge mountains can be enjoyed not only from the lift but also from the "Panorama-Schirm" viewing platform and the mountain restaurant not far from the top station as well as from the new ski slope. The top station of the orange six-pack with its modern, "Vision" facade is situated at an altitude of 2,000 m and in close proximity to the two Sunshine surface lifts which run parallel to one another. These serve the skiers arriving from the two-section 6-seater gondola lift (through operation), which acts as a feeder from St. Lorenzen. All the lifts can also be used for repeat trips up the mountain.

Up to now, the ski area was largely oriented towards the west. With the construction of the orange six-pack, the three-kilometer "panorama trail" was also built, opening up the southern side of the Kreischberg massif.

The area is famous for its high-performance snowmaking installations, Europe's biggest halfpipe, its racing trail, its two-kilometer-long natural toboggan run and – last but not least – its child-friendly facilities.

The guests come mostly from Styria and Hungary. – Hungarian entrepreneurs have built several hotels directly in front of the bottom station of the 6-CLD-B Kreischberg; there are a large number of chalet-style vacation houses and a new 260-bed hotel was recently completed.

### 6-CLD-B Orange Sixpack

Transport capacity	2,400 PPH
Trip time	6.0 min
Speed	5.0 m/s
Chairs	79
Interval	9.0 s
Inclined length	1,669 m
Vertical rise	384 m
Towers	16
Drive	Top
Tension	Bottom

<sup>1</sup>The Doppelmayr Group has been the exclusive supplier for this ski resort since it was established 32 years ago.



The "Orange Sixpack" on the Kreischberg will only run in the winter. Managing Director Karl Schmidhofer (center): "We expect to see a 15 percent increase in skiers throughout the ski area with the start-up of the new orange six-pack."



## Styrian climber



**The ski resort  
Veitsch/Brunnalm in  
Styria, the densely  
wooded "green heart of  
Austria", now has its first  
Doppelmayr chairlift:  
a fixed-grip quad.**

**V**eitsch lies at the foot of the 1,981 m high Veitschalpe in Upper Styria. This region is a popular destination for vacations in Eastern Austria, and also enjoys a good reputation as a ski resort, particularly as it can be reached in less than two hours from Vienna and Graz<sup>1</sup>.

Plans for a realignment of the ski resort were begun in earnest at the start of the new millennium: It was to offer comfort, remain attractive for families and provide fresh impetus for tourism. Managing Director Erwin Fraiß puts the situation in a nutshell: "We simply found that the expectations of our customers – and potential new customers – had changed."

These plans were finally implemented with the construction of the fixed-grip quad chairlift "Panoramalift Brunnalm", the modernization of the Mulden surface lift<sup>2</sup> and a new snowmaking system.

### The entire community supported the initiative

The ski resort was not considered in isolation when creating the concept but integrated into the big picture of municipal development. This is reflected, for example, in the opening of a 150-bed

youth and family guesthouse. "The economic conditions for these investments were met thanks to our proximity to the conurbations in the Vienna Basin and Styria." It was against this background that the decision was taken in favor of developing a relatively small ski resort, which until then only had surface lifts, through

the addition of a chairlift; nowadays, this is a rarity in Austria.

### The second upgrade: a modern long platter lift

Doppelmayr converted the Mulden lift from a twin T-bar into a long platter lift; at the same time it was shortened so that it would only serve the lower, easier section of the ski slope. The Panorama lift Brunnalm, on the other hand, is completely new, as are a large part of the ski trails which can be accessed from this lift. The ski resort now has over 11 kilometers of ski trails, a 15 percent increase over its previous infrastructure.

When building the new lift, special attention was focused on landscape protection and avalanche safety. The lift has a fixed drive ("Chairdrive") and a loading carpet. The chairs are fitted with comfort upholstery. Doppelmayr also supplied the fully equipped prefabricated operator huts. A material ropeway was used for tower installation and the construction work was organized by the customer.

<sup>1</sup> The ski resort Veitsch/Brunnalm was opened up back in 1957 with the Brunnalm surface lift. Two further surface lifts, the Sonnkogel lift and Mulden lift followed in 1968 and 1978.

<sup>2</sup> Doppelmayr, built in 1978; originally a T-bar lift with short Ts.



*Delighted with the new lift: Erwin Dissauer, Mayor of Veitsch, Operations Manager Eberhard Rosemann and Managing Director Erwin Fraiß (from left to right)*

### 4-CLF Panoramalift Brunnalm

Transport capacity	1,800 PPH
Trip time	7.9 min
Speed	2.6 m/s
Chairs	119
Interval	8.0 s
Inclined length	1,225 m
Vertical rise	317 m
Towers	13
Drive	Top
Tension	Bottom

## Serfaus has a world first in child-friendly design



**Doppelmayr has installed an 8-seater chairlift with a completely new child security feature in Serfaus: The Gampen family lift is fun for kids, lightens the load for ski instructors – and lets parents enjoy their vacation without having to worry.**

**S**erfaus is part of the interconnected ski area Serfaus-Fiss-Ladis which stretches between altitudes of 1,200 m and 2,800 m and has always known how to make a name for itself as a family ski resort. The ski trail offering is ideal: 185 kilometers of trails of all levels of difficulty; a wide range of opportunities for all common winter sports and age groups; 53 lifts with a capacity of 70,000 passengers an hour.

### *Double restraining bar with integrated safety handles*

In summer 2008, work started on the creation of a completely new child-friendly chairlift concept. The double restraining bar incorporates safety handles, so-called "Skippies", which fit between a child's legs and provide even better security against slipping out of the seat. To ensure that the children are seated in the correct position after loading, the chairs have special seat divisions. "Murkli" the marmot – the cheeky Serfaus mascot – is depicted at the front of the seat where it is well visible when the child is sitting correctly. (The ski school has a specially provided 8-seater chair where children practice sitting down in the right place before they are taken out onto the slopes. A demo chair is also set up in the bottom

station loading area.) The seats alternate between blue and yellow, the ski resort's colors, to make them easier to recognize. Transit speed in the loading area is slower than usual at just 0.35 m/s, giving children plenty of time to board without haste. Thanks to the slow speed and optical features, the chairlift crew have no trouble checking whether the children are correctly seated. The restraining bars close and open automatically. They cannot be opened by passengers on the line. Footrests were dispensed with.

### *Loading carpet with automatic height adjustment*

A height-adjustable loading carpet makes for easy boarding. The system features a passenger height recognition facility and automatically rises from "normal" to plus ten or 15 centimeters.

Doppelmayr chose a 90°-loading configuration. A special station design was necessary to accommodate the low



*Stefan Mangott, Managing Director of Seilbahn Komperdell GmbH in Serfaus, is extremely pleased with the ropeway installation. The old quad chairlift had to be replaced for reasons of comfort; and the company has been able to set a milestone in child transport with the new lift. "In view of the large numbers of kids around Gampen it's a great advantage that seven kids can ride with just one accompanying adult!"*

### **8-CLD-B Familienbahn Gampen**

Transport capacity	3,000 PPH
Trip time	3.0 min
Speed	5.0 m/s
Chairs	37
Interval	9.6 s
Inclined length	674 m
Vertical rise	140 m
Towers	8
Drive	Bottom
Tension	Bottom





*The Gampen lift is particularly child-friendly. That means it is perfect for the ski resort Serfaus-Fiss-Ladis, which prides itself on its child-friendly image. The region characterizes itself as “the Alpine paradise for families, leisure-seekers and active vacationers”.*

travel speed. The chairs make an extra loop and the support structure of the UNI-G station is extended in an L-shape.

#### **Seven children for one accompanying adult**

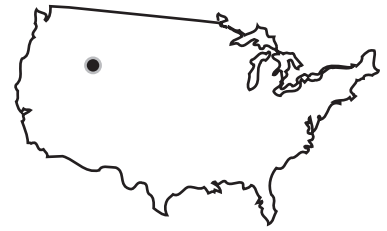
TÜV Austria approved the chairs – which are also comfortable for adults – for carrying seven children of 90 cm body height and above with just one ac-

companied adult. (Up to now, the rule has usually been one adult to accompany each child of this height.)

The architect cleverly designed the bottom station to reflect the natural topography, enabling the building to blend in harmoniously with the landscape in spite of its large volume, and creating generous space within it. The chairs are garaged on an underground dead-end parking rail in the bottom station.

The new Gampen family lift replaces half of a fixed-grip quad chairlift (Doppelmayr, built in 1989). This led over a hill and had a loading area at each end of the lift on either side at the drive and return station; the unloading station was at the top of the hill. The new lift now traces a route up one side of the hill – slightly offset from the old lift line – while the old, shortened lift operates on the opposite side.

## Stylish aerial tram for Jackson Hole



**The reversible aerial tramway at Jackson Hole Mountain Resort (JHMR), one of the most well-known skiing and hiking regions in the USA, has been replaced.**

**The tramway is the region's symbol, in the same way that the Eiffel Tower is for Paris or the Statue of Liberty for New York. It also boasts the longest vertical rise of any aerial tramway in North America.**



*President Jerry Blann, Jackson Hole Mountain Resort: Our confidence in the performance of the Doppelmayr Group's technology has certainly paid off. And the price-value relationship is impressive.*

Jackson Hole in the State of Wyoming is a valley carved deep into the Rocky Mountains which did not attract permanent settlers until the late 19th century.

The ski area – one of the few remaining family-owned resorts in the USA<sup>1</sup> – lies near Teton Village on the edge of the Grand Teton National Park, 12 miles northwest of the famous cowboy town of Jackson and a five hours' drive from Salt Lake City. It covers an area of 10 km<sup>2</sup> and has 116 ski trails and 12 lifts with a total transport capacity of 15,500 skiers and snowboarders per hour. Snowboarding is permitted throughout the ski region. In the summer, the tram and/or one gondola lift plus one chairlift are in operation.

Jackson Hole's President, Jerry Blann, is an icon among American ski resort managers, who is venerated by his

counterparts as their spiritual role model. "Jerry's kids", as Claire Walter describes them in Ski Area Management Magazine, manage the resorts of Kirkwood, Sierra-at-Tahoe and Alpine Meadows in California, The Canyons, Utah, and Killington, Vermont.

### *Jerry's quality seal*

If Jerry Blann picks a ropeway supplier, that's the equivalent of giving them a seal of quality.

When asked about the main requirements he expects a ropeway manufacturer to meet, his response is brief and to the point: "Operational reliability; safety and comfort for our guests." These are clearly the features that Doppelmayr has to offer. But then he adds one more: He sees depth of know-how and experience throughout all the companies in the Doppelmayr/Garaventa Group. This makes the Group unique and enables it to call upon the niche expertise of each individual company for the specific installation.

Jerry should know; his first contacts with Doppelmayr go back a long way, to "many years ago when I was working for the Aspen Skiing Company and we built the first quad detachable lift in Breckenridge, Colorado".

Doppelmayr CTEC is the contract partner for the new aerial tram with its 100-passenger cabins. The competence center for reversible aerial tramways at Garaventa Goldau (Switzerland) was responsible for manufacture and installation. The new tram replaces the iconic "red box" dating from 1966, which last carried 52 passengers in the winter and 45 in the summer season, and had less than half the transport capacity. Nonetheless, the new installation is not seen as a break with tradition among visitors – and that is particularly important for this region, which has developed its cowboy image as an integral part of its identity and utilizes nostalgia as a success factor.





The new “red box” combines the traditional and the modern. It can carry 100 passengers.

### **Integrated rescue system without rescue ropeway**

A special feature of the tram design is the integrated rescue system, which made it possible to dispense with a separate rescue ropeway. The rope guidance system in the terminals is based on a fail-safe principle, ensuring that the cabins can always be run back to the terminals or the nearest rope-down rescue point – for example, in the case of rope sheave or drive shaft failure, or deropement.

Virtually at the same time, President Jerry Blann achieved another stroke of genius: His ski resort is one of the very few which is certified to environmental quality standard ISO 14001. The key to recognition of JHMR’s environmental standards was the decision to offset 100% of its electricity usage with renewable energy from a mix of sources including wind, biomass, small hydro and geothermal as from 2007. – And that’s a lot of power, namely 9 million kWh. On an annual basis, Jackson Hole consumes the same amount of energy as 1,300 auto-

mobiles and therefore avoids emissions<sup>2</sup> of around 13,300 tons of CO<sub>2</sub>.

### **Good progress despite bad weather**

The decision to replace the famous aerial tram was announced in July 2005; the demolition work began in September 2007. From early October through to April the construction work was halted and the snow continued to fall almost daily right up to the end of June. On some days, the snowfall was so heavy that it was impossible to continue. The construction road was opened utilizing 6 snow cats for 3 weeks to cope with up to 6-meter drifts of snow! But thanks to their huge effort, the installation crews were able to make up for lost time and complete the project on schedule. The tramway was handed over in time for Christmas on December 20. The enthusiasm of the JHMR team for their accomplishment is electrifying: “The new tram will come to represent the true spirit of skiing.” And, looking at the bigger picture, Jerry Blann adds: “Considering the economic environment at this

time, the tram captures the commitment to, and the icon for, tourism in the State of Wyoming and the West.”

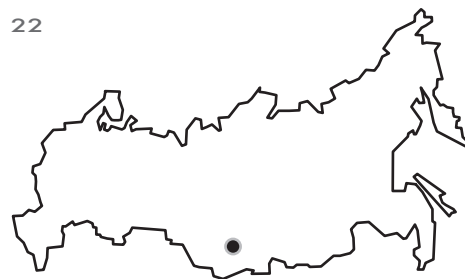
<sup>1</sup> Kemmerer family

<sup>2</sup> Source: Nature Fund

#### **100-ATW Jackson Hole**

Transport capacity	650 PPH
Trip time	9 min
Pure travel time	7.8 min
Travel speed	
max.	10 m/s
over towers 3, 4/1, 2, 5	10/8 m/s
Stopping time in stations	80 s
Inclined length	3,800 m
Vertical rise	1,262 m
Towers	5
Drive 670 kW	Bottom
Haul rope tension system	Top
Fixed track rope anchoring	Top + Bottom
Altitude of	
bottom station platform	1,931 m
top station platform	3,176 m

## Skiing in a coal-mining area



**The Sheregesh region in southwestern Siberia is well-known for coal mining – and as a ski center. Doppelmayr lifts go back a long way here. The latest Doppelmayr installation is a detachable quad chairlift with bubbles.**

Sheregesh lies on the edge of Zelenaya Mountain, to the north of the meeting point for the borders of Russia, Kazakhstan and Mongolia. It is surrounded by a ring of large cities and can be reached in 8 hours by car from Moscow. The beginnings of the ski resort go back 20 years. The Russian national skiing and snowboarding teams are regular visitors, particularly in view of the fact that both the hotel and lift infrastructures are well developed. – Doppelmayr also erected Russia's first combined lift here in 2006.

### Cautious entry into the skiing business

This region includes several independent and unlinked ski resorts. The Sheregesh-Mustag area, where Doppelmayr built its latest lift, belongs to mine owner Igor Prokudin, who produces premium-quality coking coal. His interest in investing in tourism is fairly recent. He began cautiously, starting off with the purchase of a second-hand double chairlift from Doppelmayr-Skado in 2006 and building small hotels in order to gain experience. – Mr. Prokudin is not a professional skier himself; his first advisers were primarily from the field of racing. He soon

realized that modern lifts for easier slopes which everyone likes to use were actually a good business proposition, especially in view of the growing popularity of skiing in Russia.

His new chairlift and the terrain are completely in tune with the tastes of a broad spectrum of guests – and meet the expectations of the customer. Doppelmayr Russia (based in Samara on the river Volga) was responsible for the ropeway equipment and control system; the owner contracted the construction work out to a local building firm.

### Satisfied customer

How does the customer see the lift and the work performed by Doppelmayr? Director Alexander V. Fjodorov from Kaskad-Podjem, the company which carried out the construction work on behalf of the general contractor Kaskad-Invest-Stroj, feels that the new lift has taken the pressure off the existing ropeway installations and made it possible to improve access to the terrain. The chairlift provides speed, reliability and comfort. ZAO Skado (Doppelmayr) did a perfect job. Fjodorov makes a point of emphasizing his satisfaction: "We would like to express our thanks for the outstanding cooperation and the excellent product quality!"

*Up to now, the number of summer visitors has been low. However, that is set to change with the construction of hotels and a network of bike trails.*

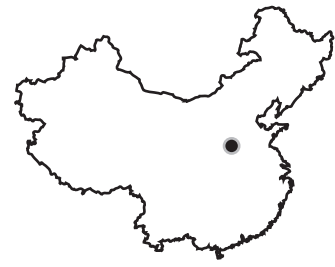


### 4-CLD-B Sheregesh – Mustag

Transport capacity	2,300 PPH
Trip time	6.8 min
Speed	5.0 m/s
Chairs	130
Interval	6.3 s
Inclined length	1,937 m
Vertical rise	521 m
Towers	17
Drive	Bottom
Tension	Bottom



## Shirenschan: New gondola lift



**Doppelmayr has built an 8-seater gondola lift in the famous recreation region of Shirenschan in Henan Province, Central China.**

Shirenschan lies in the eastern Funiu Mountains, near the five-million city of Pingdingshan, and is now easy to reach in two hours from Zhengzhou (population seven million) along the new Shirenschan highway. For inhabitants of the densely populated and highly industrialized catchment area, it is also a popular destination when seeking rest and relaxation. Pingdingshan is China's second most important city for coal mining.

### *Transport capacity had to be increased*

Although the region already had a ropeway, its capacity was far from sufficient, particularly in view of the fact that the provincial government wants to boost tourism in the mountains and is therefore rapidly expanding the transport infrastructure. The investor in the new ropeway is nonetheless a private entrepreneur who also owns amongst others a hotel and a 150m high statue of Buddha in Shirenschan.

The very steep, rocky terrain made it necessary for the new 8-MGD-LWI to incorporate two successive rope spans with lengths of 675m and 533m. As a result of the latest Chinese regulations, this meant building the lift with the un-

usually wide rope gauge of 9.5m. The ropeway has a fixed tensioning system in the top station and an underground vault drive in the bottom station.

### *Short delivery time*

The major factors in awarding the contract to Doppelmayr were the renowned Doppelmayr quality and the promise of a very short delivery. The order was placed in mid September 2007 and the first container load of ropeway components left Wolfurt in mid December. The lift was handed over to the customer on October 1, 2008.

### **8-MGD Shirenschan**

Transport capacity	1,200 PPH
Trip time	8.5 min
Speed	6.0 m/s
Cabins	43
Interval	24 s
Inclined length	2,746 m
Vertical rise	950 m
Towers	17
Drive	Bottom
Tension	Top

*From time immemorial, the Funiu Mountains near Shirenschan have been famous for their unique flora and fauna, bizarrely formed landscapes and hot springs. The rapid growth in tourism made it necessary to expand ropeway capacity.*

*Doppelmayr was responsible for the ropeway equipment, while the customer took charge of the building construction and the erection of a material ropeway for the installation work.*





## The world's longest 3S lift opens in style

The Peak-to-Peak Gondola was opened on schedule in Whistler Blackcomb, Canada, on December 12, 2008. Whistler Blackcomb can claim several world records for this gondola: It has the greatest height above ground at 436 m and the longest rope span for any aerial ropeway at 3,024 m. There was plenty to celebrate at the opening ceremony which was attended by many prominent guests from the world of politics and business.

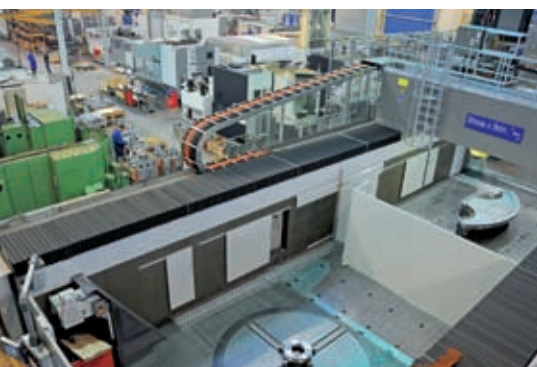
The photograph shows President and Chief Operating Officer Dave Brownlie during his inaugural speech. A detailed report on this installation will be included in the next issue of WIR Magazine.

## Canadian training center expanded

The training center at Doppelmayr CTEC in St. Jérôme/Canada has been extended. A major highlight is the practice rig for detachable stations on a scale of 1:1.



## New turning/milling center for large components



At the Hohe Brücke plant in Wolfurt, Doppelmayr put an ultra-modern turning and milling center into service which can turn large components of up to 5.5 m diameter and mill workpieces of up to 13 m in length, 4.4 m in width and 2 m in height. This now means that at least two high-performance machines are available for handling almost all components.

The new machine was designed in accordance with Doppelmayr specifications. It is very dynamic, requiring, for example, less than a minute to change the

tool head. Despite offering a wide range of technical features, the machine takes up just 18 m by 9 m of floor space. Some 520 m<sup>3</sup> of concrete were incorporated in the plant foundations. Excluding the concrete support, the machine weighs 200 t. The machining operations are constantly monitored using CCTV.

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