

With prize draw
3 iPods to be won
Page 28

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Wir



With its new gondola, the Lenzerheide region has proved that it is here to stay as a top skiing destination. p.8



Sensational ropeway projects

3S lifts in Austria and Russia, APMs in Venezuela and Qatar. pp.2-3

Funifor in Val di Sole

Doppelmayr Italia installs the eighth Funifor. p.5

Germany's first ski resort with 2 combined installations

Nesselwang attracts skiers and summer tourists to Allgäu. p.10

First gondola in US State of Washington

Crystal Mountain develops into full-fledged year-round resort. p.11

Bansko trusts exclusively in Doppelmayr

Bulgaria's number one ski resort builds 10 Doppelmayr lifts in 8 years. p.16

Four Doppelmayr gondolas in China

Major tourist projects are completed from the tropics to central China. p.20

Silvretta Arena upgrades its infrastructure. Ischgl and Samnaun have built two sophisticated 6-seater chair lifts with bubbles. pp.6-7

 **Doppelmayr®**

Magazine for
Customers and Employees



Olympic Games in Sochi: Both 3S lifts hold world records



3S in Ischgl: Exclusivity, comfort and top performance throughout

3S highlights

Doppelmayr is building spectacular 3S lifts in the Russian Olympic ski resort of Sochi as well as in the Ischgl-Samnaun Ski Arena on the Austro-Swiss border.

Two 3S lifts are to be constructed in the Olympic region. They will have good road and rail links to and from Sochi.

Record-breaking lifts for the Winter Olympics: The highest-capacity 3S ...

One of the 3S lifts takes passengers from Krasnaya Polyana to the Roza Khutor ski resort where the Olympic alpine events will be held. The resort's owner and operator is State Corporation Olympstroy which has been tasked with delivering the 2014 Winter Olympic Games in Sochi.

This lift is set to break world records:

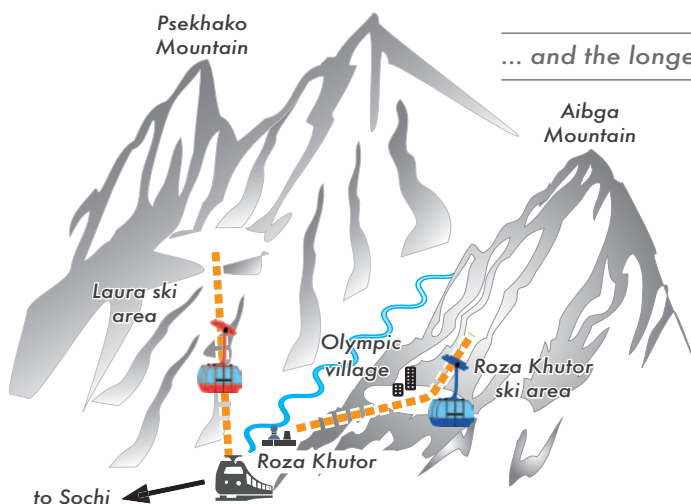
- A capacity of 4,500 PPH will make it the world's top-capacity passenger ropeway.
- It has two sections.
- It is designed to transport automobiles as well as passengers.

are to be held in 2014. The construction of both lifts is scheduled to begin in 2011, with completion planned for 2013. Psekhako is owned by the Russian Gazprom corporation, the world's biggest supplier of natural gas.

3S Ischgl: Greater comfort, better distribution of skier traffic

The Pardatschgrat 3S belonging to Ischgl-based Silvretta Seilbahn AG replaces the 4-MGD of the same name built in 1990. The new lift will take passengers directly up to the Pardatschgrat. The second section of the existing Pardatschgrat lift will be retained to serve skiers using the adjacent slopes. This will improve access to the attractive trails below the 2,800m Pardatsch. Construction will start in June 2011 and is planned for completion in November 2012.

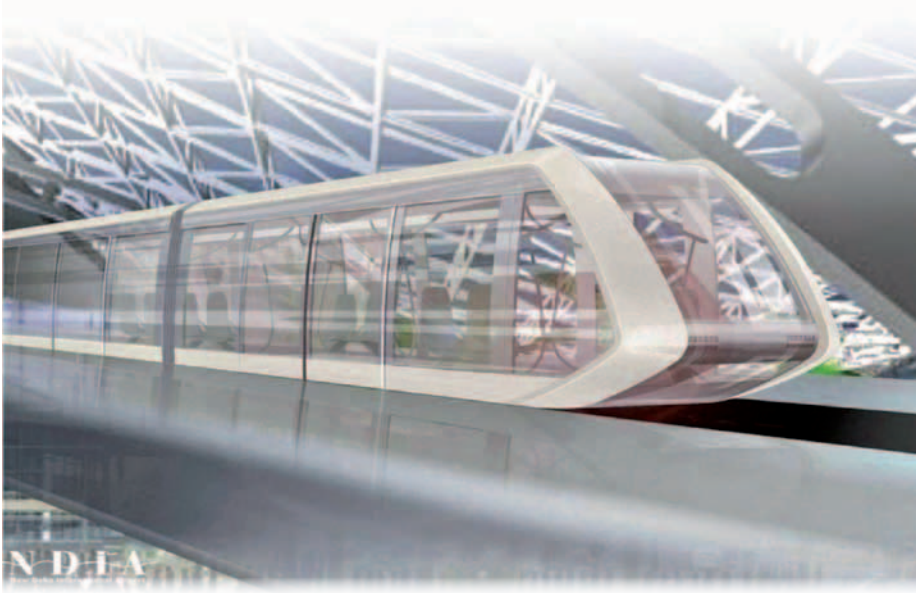
... and the longest 3S in the world



The other 3S will be the world's longest tricable ropeway with a total length of 5,383 m. It will carry guests to the opposite slopes in the Psekhako (Laura) ski area, which is where the Nordic events

The tricable system

3S lifts (3S stands for "3 Seile", i.e. 3 ropes) are a combination of gondola and reversible aerial tramway. They are detachable circulating ropeways with two track ropes and one haul rope. The hallmarks of these systems are particularly high wind stability, low energy consumption and the capability to cope with very long rope spans.



Following the expansion, Doha Airport in the Emirate of Qatar will be the biggest on the Arabian Peninsula, handling 50 million passengers a year.

Innovative APMs

DCC Doppelmayr Cable Car is building a Cable Liner Shuttle for the new airport in Doha, Qatar.

In Caracas, DCC is in the process of installing an automated people mover which will be integrated into the local public transit network.

DCC Doha nearing completion

The APM system in Doha is set to go into service when the airport opens in 2013.

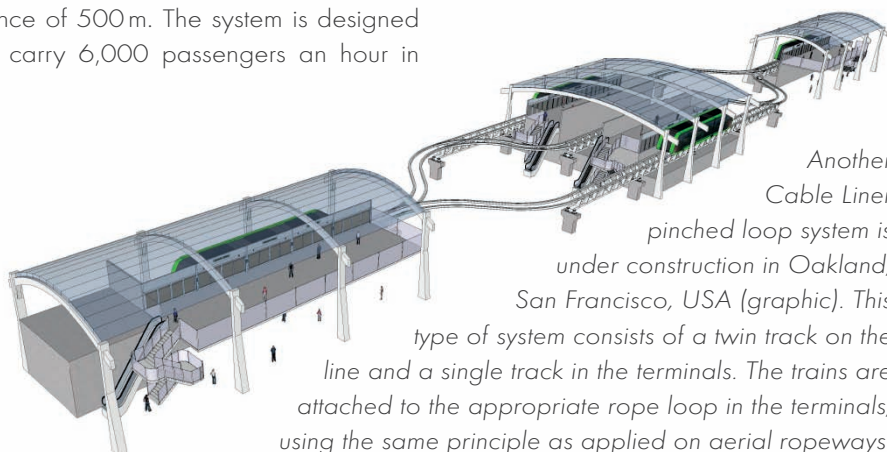
The twin-track Cable Liner Shuttle has a speed of 12.5 m/s and links the terminal building with the gates over a distance of 500m. The system is designed to carry 6,000 passengers an hour in

each direction and consists of two trains with five cars each.

"Cabletren Bolivariano" for Caracas

The Caracas Cable Liner is a pinched loop system. The guideway is elevated at a height of up to 16m to avoid any hindrance to road traffic. It will have four trains, each with four continuous cars. The drive will be housed in the intermediate station.

The Cabletren Bolivariano, as the Cable Liner Shuttle is known, will form part of the local public transit network belonging to Metro de Caracas and will connect the existing underground station Petare and the planned underground station Waraira Repano A. Completion is scheduled for 2012.



Another Cable Liner pinched loop system is under construction in Oakland, San Francisco, USA (graphic). This type of system consists of a twin track on the line and a single track in the terminals. The trains are attached to the appropriate rope loop in the terminals, using the same principle as applied on aerial ropeways.

Interalpin exhibition

At Doppelmayr, we are proud to have the opportunity to showcase the Group's key products and services at InterAlpin, and to yet again demonstrate our impressive capabilities to customers and prospects. Doppelmayr is always the trendsetter when it comes to technical development. Close collaboration with our customers is the engine that drives that development.

Innovative products such as the Penken combined lift (Mayerhofen, Tyrol) with 10-passenger cabins and 8-seater chairs, our 3S system solutions with leading edge recovery concepts, child-friendly chairlifts and modern aerial tramway carriages are recent examples of this interaction between customer input and Doppelmayr engineering expertise.

Concrete projects incorporating novel innovations are once again featured in this issue of WIR Magazine. These include three 3S lifts: two in the Winter Olympics resort of Sochi in Russia and the Pardatschgrat lift in Ischgl, Tyrol.

To enable this interaction to flourish, I call upon our customers to continue to set us challenging tasks in the future, which will be accomplished by leveraging our combined resources.

Michael Doppelmayr



The ski resort of Thurntaler places the emphasis on child-friendliness.

Yet more comfort in Sillian

Christmas 2010 saw the opening of a 6-CLD-B-S in the ski resort of Thurntaler on the border between East and South Tyrol.



The chairlift with bubbles and heated seats replaces a long surface lift dating back to the 1970s.

20 percent increase in passenger volumes

The new lift has already shown itself to be the right investment. And the ski resort has seen a 20 percent increase in passenger volumes, as Heinz Schultz, proprietor and CEO of the Schultz Group which owns the resort, is keen to point out.

Boost for tourism

Sooner or later, the enhanced popularity of the ski resort will positively affect tourism as a whole. Even now, the Schultz Group is having a major influence on the quality of accommodation. The Group runs the 250-bed four-star hotel "Dolomiten Residenz Sporthotel Sillian" which is located immediately next door to the feeder lift on the outskirts of Sillian, also supplied by Doppelmayr.



Heinz Schultz, proprietor and CEO of the Schultz Group, which owns the operating company Hochpustertaler Bergbahnen: "In Sillian, we built the 6-seater bubble lift with seat heating because it meets the quality expectations of our guests. – And we have also invested in modern lifts in the nearby ski resort Matrei-Kals."

6-CLD-B-S Thurntaler

Transport capacity	2,400 PPH
Trip time	6.7 min
Speed	5.0 m/s
Chairs	98
Interval	9.0 s
Inclined length	1,887 m
Bottom station altitude	1,970 m
Top station altitude	2,405 m
Vertical rise	435 m
Towers	15
Drive	Top
Tensioning	Bottom



Comfort and wind stability are the winning formula for the Pejo 3000 Funifor.

Pejo: A Funifor for the future

For the inhabitants of Trento (Trent), a long-held dream has become reality.

The ski trail in Val della Mite, the highest in “Val di Sole”, is to be accessed by a high-capacity, wind-stable ropeway: a Funifor from Doppelmayr.



With the Pejo 3000, Doppelmayr has now built the eighth Funifor. This ropeway system has proven particularly successful in locations that are exposed to strong winds.

The ropeway line from Tarlenta (altitude 2,000 m) in the municipality of Pejo up to the heart of the Ortler Cevedale Group is certainly located in an extremely exposed position. While this is much to the delight of the passengers, it made the construction and installation work all the more difficult.

Doppelmayr Italia was responsible for the ropeway technology and jointly responsible with Garaventa for the installation. The customer, Pejo Funivie SPA, took charge of the construction work.

The Funifor is the centerpiece of the tourism project “Pejo 3000” supported by the Autonomous Province of Trento. This provides for expansion of the entire ski area. Situated on the edge of the Stilfser Joch National Park, the ropeway will also be an important attraction for summer tourism.



Maurizio Vicenzi, Operations Manager of the 100-FUF Pejo 3000: “We decided on a Funifor because it can continue to operate in strong wind. Another important point is that the two tracks are run independently. This means that, in an emergency, we can run one cabin alongside the other, enabling stranded passengers to transfer.”

100-FUF Pejo 3000

Transport capacity	860 PPH
Trip time	5.6 min
Speed	10.0 m/s
Cabins	2
Inclined length	2,856 m
Vertical rise	990 m
Bottom station altitude	2,001 m
Top station altitude	2,991 m
Towers	3
Drive 2 x 900 kW	Bottom
Hydraulic tensioning	
Fixed track rope anchoring	Top + Bottom



The Lange Wand C5 chairlift provides access to the steepest ski trails in the Alps.

Lange Wand dons the Ischgl look

In November 2010, Silvrettaseilbahn AG put into service a 6-CLD-B-S of the special kind: the "Lange Wand C5". The new lift sports a black and red finish in line with Ischgl's corporate design.

The top station is situated at an altitude of 2,850 m. From this vantage point, visitors can enjoy a breathtaking panoramic view of the 3,000 m Silvretta and Samnaun Group. But that's not all! From here, skiers have their choice of idyllic ski trails in all directions of the compass and can ski down to the Austrian and Swiss sides of the Silvretta Arena.

Winter sports enthusiasts in Ischgl are always keen to make the most of this opportunity.

Stunning design

Both the stations and the chairs feature Ischgl's trademark design. The predominant colors are black and red. Great importance has been attached to top-quality finish and coordinated design down to the smallest detail. Even the leather upholstery bears the snazzy "Lange Wand C5 logo".

Right next to the new chairlift is one of the resort's highlights: ski trail 14a with a gradient of over 70%.



Directors Hannes Parth (left) and Markus Walser: "Top comfort, cutting edge technology and stunning design are the hallmarks of the lifts owned by Silvrettaseilbahn AG. In future, all new chairlifts in the Ischgl ski region will feature the elegant new look."

6-CLD-B-S Lange Wand C5

Transport capacity	2,400 PPH
Trip time	5.6 min
Speed	5.0 m/s
Chairs	74
Interval	9.0 s
Inclined length	1,545 m
Bottom station altitude	2,217 m
Top station altitude	2,850 m
Vertical rise	633 m
Towers	16
Drive	Bottom
Tensioning	Bottom





Muller lift: Transport link back from the Alp Bella area in the direction of Alp Trida and Austria as well as providing repeat trips for skiers.

6-seater chairlift with bubbles for Samnaun

Bergbahnen Samnaun have replaced their fixed-grip quad chairlift Alp Bella – Muller, built in 1991, by a detachable 6-seater chairlift with orange bubbles.

6-CLD-B-O Alp Bella - Muller

Transport capacity	3,000 PPH
Trip time	3.0 min
Speed	5.0 m/s
Chairs	50
Interval	7.2 s
Inclined length	792 m
Vertical rise	202 m
Bottom station altitude	2,303 m
Top station altitude	2,505 m
Towers	10
Drive	Bottom
Tensioning	Bottom

The lift line has remained virtually unchanged. The bottom station building has also been retained, while the layout of the interior had to be reorganized.

The only means of reaching the valley

There are three chairlifts in the immediate vicinity of the Muller lift. From the Alp Bella basin, however, the Muller lift is the only means of reaching the two aerial trams to Samnaun. That makes it vital to maintain operations at all times.

Emergency drive plus auxiliary drive

This requirement led to a very special technical solution. In the event of the main electric drive failing or damage to the gearbox, evacuating the line with an emergency diesel drive is not the only option available. In addition, there is a diesel hydraulic auxiliary drive which can be run for long periods at half speed. All three drives are housed in the bottom station

where a diesel generator has also been installed. This is used to maintain constant mains voltage, ensuring the effectiveness of the electrically controlled brakes and the rope tension system at all times.

Carrier parking in the parking area and in the stations

A carrier parking facility is built onto the existing bottom station building. At the request of the customer, roughly two thirds of the chairs are kept in the parking facility and one third in the station. After the close of operations, the operating crew are taken up to the top station in the 3-chair convoy as specified in the regulations. These chairs are then parked in the top station.

The Ischgl/Samnaun Silvretta Arena

lies in an area which straddles both Austrian and Swiss territory. Its 41 lifts have a total transport capacity of some 83,000 passengers an hour.



High tech in Lenzerheide

Since mid-December, a high-capacity 8-MGD has replaced the 4-seater gondola Canols – Scharmoin, built in 1975, in Switzerland's Lenzerheide ski area.

The new detachable 8-passenger gondola Canols – Scharmoin is the main feeder into the ski area on the eastern side of the valley (altitude 1,500m) at the foot of the 2,865m Rothorn.

Optimized passenger flows in the stations

The cash desks, a large sports equipment store and the offices of Lenzerheide Bergbahnen AG as well as its subsidiary, Lenzerheide Marketing and Support AG, are all located on the ground floor of the new two-story bottom station.

moins to the Rothorn summit (2,865 m) has also been integrated into the new top station of the gondola.

Wireless information system in the cabins

The cabins are fitted with a wireless information system for announcements from the ski resort, advertising, transport information, etc., and are powered by supercapacitors which replace the conventional rechargeable battery. These "supercaps" are recharged as the cabins pass through the stations.

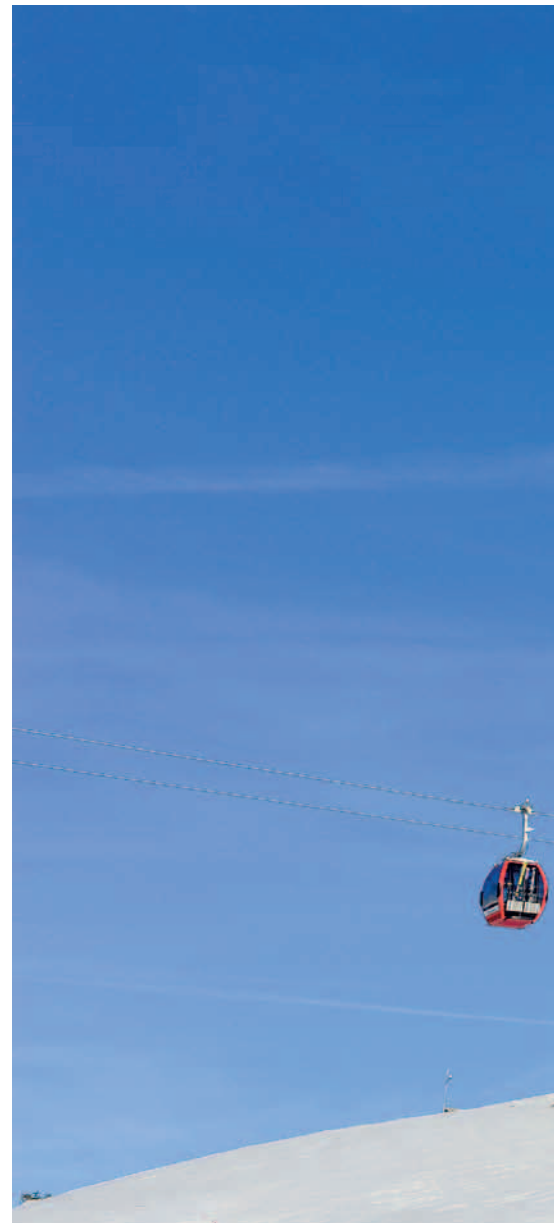
8-MGD Canols – Scharmoin

Transport capacity	2,200 PPH
Trip time	4.6 min
Speed	6.0 m/s
Cabins	42
Interval (final stage)	13.1 s
Inclined length	1,327 m
Vertical rise	411 m
Bottom station altitude	1,495 m
Top station altitude	1,906 m
Towers	8
Drive	Top
Tensioning	Bottom

The cabin loading area on the upper floor is accessed from the main entrance via an escalator or using the elevator located in the sports equipment store.

Second ropeway integrated into the top station

The top station is partly rebuilt and partly new. It houses among others the gondola parking facility, personnel cloakrooms and a workshop. The bottom terminal of the reversible aerial tramway from Schar-



Thomas Hunziker,
CEO of Lenzer-
heide Bergbahnen
AG: "Our guests
are really taken
with the new lift.
They particularly
like the comfort, the extensive range
of services on offer in the stations
and the improved connections to the
public transport system. The new lift
has created true added value for the
entire Lenzerheide region. As a modern
organization which is keen to invest,
we are sending out a clear signal that
we see the future as an opportunity."



The design of the station buildings is perfectly harmonized with the landscape and passenger flows in the stations have been optimized. The lift line remained unchanged, but during construction the ski trail was modified. This, combined with the lift's increase in comfort and capacity, has brought about a significant rise in passenger numbers. The cabin information system is shown above left.





Second combined installation in Nesselwang

Nesselwang in Germany's Allgäu region is the first ski resort with two cutting edge combined installations. The second section has been in service since December 2010/11. It replaces a single-seater chairlift dating back to 1967.

The first combined installation section went into operation in 2006/07. The quad chairs and 8-passenger cabins are normally combined in a ratio of 3:1. This type and mix of chairs and cabins was also retained on the second section. The carriers are parked directly within the support structure of the bottom station as well as on a dead-end parking rail to one side.

No through operation

The two lift sections are not connected. Having two sections enables the operators to cater for the differing expectations of guests. While the lower ski slopes are ideal for ski novices and children, the upper slopes are more demanding. The area offers plenty of viewing points for

enjoying the Allgäu scenery and can be accessed via hiking paths in the summer.

4/8-CGD Alpstizbahn II

Transport capacity	1,300 PPH
Trip time	3.7 min
Speed	5.0 m/s
Carriers	32
Interval	13.9 s
Inclined length	880 m
Vertical rise	271 m
Top station altitude	1,463 m
Bottom station altitude	1,192 m
Towers	10
Drive	Bottom
Tensioning	Bottom



The new combined installation ensures enjoyment for skiers, pedestrians and tobogganists alike.



First gondola in US State of Washington

The Mount Rainier gondola is the perfect solution for Crystal Mountain resort in Washington state. It has turned the ski area into a full-fledged year-round attraction.

Crystal Mountain is Washington's biggest ski area, and the first resort in the state to install a gondola. Thanks to this new lift, the popular winter destination can now look forward to a boost in summer tourism.

Nature lovers enjoy sightseeing by gondola

Deciding on the best type of lift was no easy task, as Mountain Operations Manager Scott Bowen explains. One of the main reasons for choosing to build a gondola was the ability to address the needs of nature lovers and not just skiers. In the summer season, the resort expects to attract visitors who can take in the flower-filled meadows and panoramic views

while enjoying the gentle pace of the gondola.

8-MGD Mt. Rainier Gondola

Transport capacity	900 PPH
Trip time	9.6 min
Speed	4.0 m/s
Cabins	36
Interval	32.0 s
Inclined length	2,107 m
Vertical rise	748 m
Top station altitude	2,090 m
Bottom station altitude	1,342 m
Towers	15
Drive	Bottom
Tensioning	Bottom



Buoyant mood: Washington's biggest ski area is now a full-fledged year-round resort.

Modern chairlifts in Slovakia



Doppelmayr installed two detachable 6-seater chairlifts at two Slovakian resorts owned by the same customer. Both are new investments.

Jasná, which can be reached in a matter of minutes when driving south from Liptovský Mikuláš, is Slovakia's largest ski resort. It is divided into a northern and southern side by the 2,024 m Chopok, the third highest mountain in the Low Tatras.

Integrated planning for towers and top station

It is here that the 6-CLD-B-O Záhradky-Priebyba was installed. A surface lift had to be realigned to enable skiers to make optimum use of the available ski trails.

The top station has been incorporated into the landscape to ensure protection against the strong side winds.

In the ski resort of Tatranská Lomnica in the High Tatras, Doppelmayr built the 6-CLD-B-S-O Štart.

In strong wind the bubbles are replaced by open chairs with ballast weight

Both areas are prone to strong winds. For this reason, a set of open chairs with ballast weight fitted beneath the seat were ordered in addition to the bubbles.



6-CLD-B-S-O Štart. The black and orange color scheme has been used in the station buildings as well as for the chairs (with black comfort upholstery), giving the lift a particularly elegant look.

The open chairs are used in the event of strong winds as they offer less wind resistance. When high transport capacity is required, these chairs can also be run on the line in a mix of one for every two chairs with bubble. The parking system automatically sorts the carriers. Both installations are equipped with RPD and loading carpet.

The owner and operator of both the Jasná and Tatranská Lomnica ski resorts is Tatry Mountain Resorts, a.s. Guests are primarily from Slovakia, Poland, Hungary and Romania.

6-CLD-B-O Záhradky-Priebyba (Jasná)

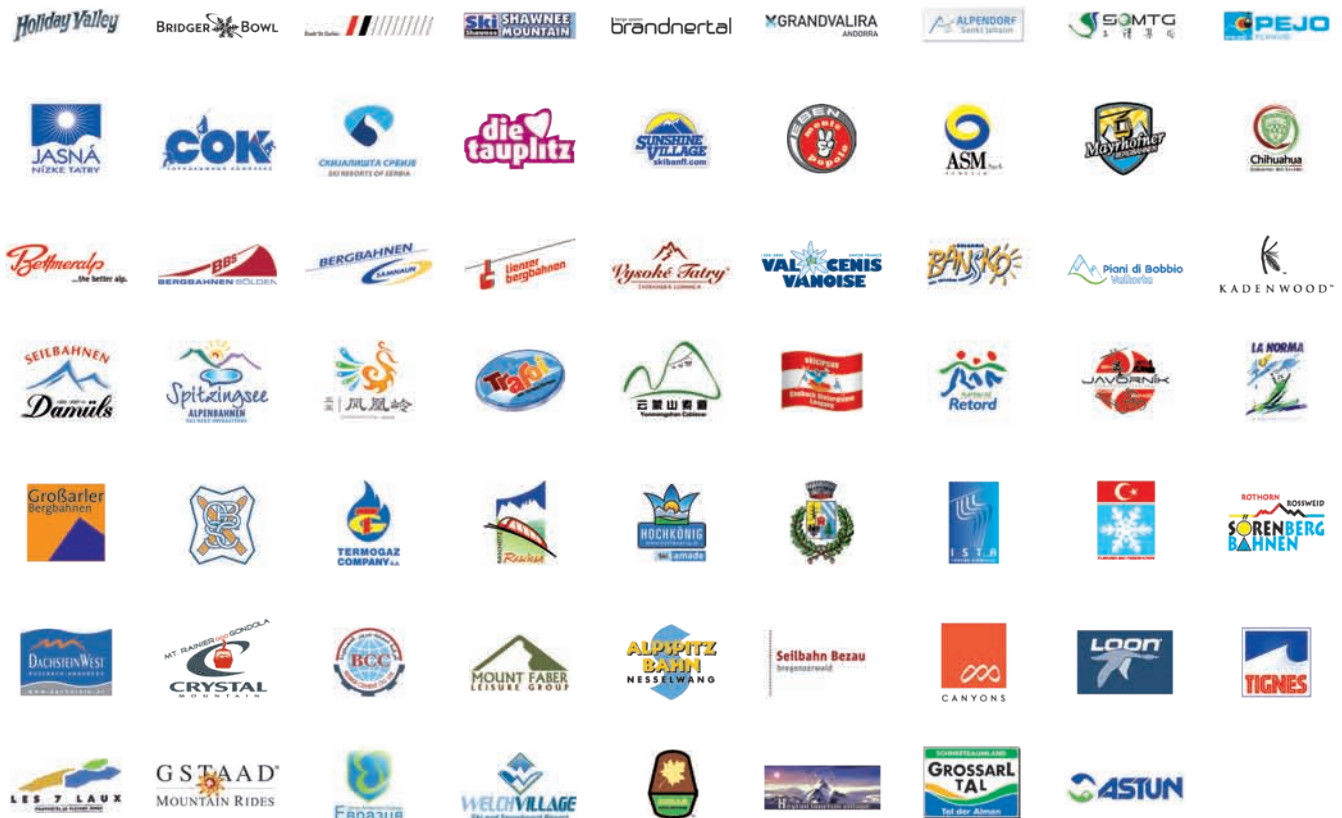
Transport capacity	2,400 PPH
Trip time	4.7 min
Speed	5.0 m/s
Chairs	62
Interval	9.0 s
Inclined length	1,285 m
Vertical rise	341 m
Bottom station altitude	1,042 m
Top station altitude	1,383 m
Towers	13
Drive	Bottom
Tensioning	Bottom

6-CLD-B-S-O Štart (Tatranská Lomnica)

Transport capacity	2,600 PPH
Trip time	6.7 min
Speed	5.0 m/s
Chairs	96
Interval	8.3 s
Inclined length	1,889 m
Vertical rise	281 m
Bottom station altitude	892 m
Top station altitude	1,173 m
Towers	19
Drive	Top
Tensioning	Bottom



With the 6-CLD-B-O Záhradky-Priebyba, Jasná has consolidated its reputation as Slovakia's biggest and best equipped ski resort.



**It is your trust
that drives us**



We would like to express our gratitude to all our customers worldwide for the outstanding and pleasant cooperation. Only professional partners like you allow us to yield peak performances. We see the trust you set in our quality and our productive capacity as an obligation, challenge and motivation for the future.



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Bansko: Continuing success story



In winter 2010/11, two detachable chairlifts from Doppelmayr went into operation in Bansko, Bulgaria. Based on its own estimation, Bansko is the biggest ski resort in Eastern Europe.

The picturesque little town of Bansko, 160 km from Sofia, lies on the edge of the Pirin National Park. The Doppelmayr success story began here in 2003 with a two-section 8-passenger gondola and three detachable quad chairlifts. Bansko had previously been a small ski area with two old chairlifts dating back to the 1980s along with a few surface lifts.

6-CLD Bunderishka-Kolarski pat

The 6-CLD Bunderishka-Kolarski pat replaces a fixed-grip quad chairlift, built

in 2004, which was no longer able to handle the explosion in visitor numbers¹. With the opening of the 6-seater chairlift, transport capacity has been virtually doubled and one of the ski resort's bottlenecks eliminated. The carriers are parked in the stations.

Minimum impact on the landscape during construction of the 4-CLD Plato

The 4-CLD Plato replaces a surface lift dating from 2002. As no access roads could be built due to the requirement to



¹ Doppelmayr has been contracted to reinstall this lift at another location within the resort in 2011 to replace a surface lift.

protect the natural environment, all materials had to be transported using helicopters. This meant splitting the two stations into sections weighing a maximum of 3,500 kg.

Installing the rope also proved to be a challenge. The haul rope was pulled from the base of the mountain, then over the towers of an existing chairlift and from there across to the bottom station of the new lift.

The ride across an existing quad chairlift is quite spectacular. This crossing point was necessary because the lift line was extended downhill in comparison with the old surface lift.



Ivan Hadzhiev, Technical Director of Ulen AD, the ski resort operating company: "We are planning to replace our old installations with new lifts – needless to say, from Doppelmayr." The ski area also uses roughly three percent of the Pirin National Park. This explains why the local authorities value Doppelmayr's experience of dealing with sensitive landscapes so highly, in addition to the safety of Doppelmayr lifts for their users.

6-CLD Bunderishka-Kolarski pat

Transport capacity	3,000 PPH
Trip time	2.9 min
Speed	5.0 m/s
Chairs	49
Interval	7.2 s
Inclined length	774 m
Vertical rise	316 m
Bottom station altitude	1,598 m
Top station altitude	1,914 m
Towers	8
Drive	Bottom
Tensioning	Bottom

4-CLD Plato

Transport capacity	2,200 PPH
Trip time	5.4 min
Speed	5.0 m/s
Chairs	98
Interval	6.6 s
Inclined length	1,513 m
Vertical rise	381 m
Bottom station altitude	2,141 m
Top station altitude	2,522 m
Towers	13
Drive	Bottom
Tensioning	Bottom

Since 2003, Doppelmayr has built no less than 15 ropeways in Bansko! The region offers 20,000 beds. Guests come from around the globe, and FIS World Cup races have been held here for some time.

Left: 6-CLD Bunderishka-Kolarski pat. This new lift went into operation just three months after the old one was dismantled!

Right: 4-CLD Plato. To increase wind stability, the chairs have perforated backrests as well as ballast weights under the seats.



Kazakhstan: 8-MGD is major access link to ski area



The Kazakh ski resort of Chimbulak has boosted its attractiveness with the installation of a new 8-MGD from Doppelmayr. Completed in November, the lift was Kazakhstan's advertisement for the Asian Winter Games in February 2011.

Up to now, it had only been possible to get to the ski resort via a narrow road leading past the Medeu ice stadium. Within the resort itself, however, car parking is in short supply. This situation has been improved with the construction of the ropeway. The bottom station is right next-door to the stadium which has ample parking space.

Popular destination for relaxation

The city of Almaty, with a population of one and a half million, is a 20-minute bus ride away from the ice stadium. With more and more Kazakhs discovering skiing as a hobby, it was high time to provide a modern access link. Many visitors also like to go to the Tien Shan Moun-

tains in the summer, when the air is cooler than down in the valley.

8-MGD Medeu – Chimbulak

Transport capacity	2,000 PPH
Trip time	13.7 min
Speed	6.0 m/s
Cabins	114
Interval	14.4 s
Inclined length	4,572 m
Bottom station altitude	1,626 m
Top station altitude	2,293 m
Vertical rise	667 m
Towers	22
Drive	Top
Fixed tensioning	Bottom



The lift crosses impassable terrain and a large mudflow control dam. It is the world's third longest gondola and has a fixed tensioning system because of its long rope spans and large overall length of 4.5 km.

The Pearl of the Orient is a funicular railway



Garaventa has completely renovated the funicular on the Malaysian island of Penang, famous throughout Asia. The "Pearl of the Orient" has now been restored as a true gem.

The funicular saves a steep, four-hour ascent to the 730m summit. Visitors come from Malaysia (mainly on weekends) as well as from overseas.

Weekend day-trippers, vacationers and sports enthusiasts

From Bukit Bendera, the local name for Penang Hill, views extend across the land to the Strait of Malacca in the Indian Ocean and the impressive Penang Bridge, which links the island with the mainland.

Attractions to be found near the summit include a hotel, a mosque and the Kek Lok Si Temple (one of Asia's oldest Buddhist temples) as well as hiking and mountain bike tracks.

Director Ir Soon Eng Kooi of Alam Langkawi SDN. BHD: "The Penang Hill has always been one of Penang's icons.

We are extremely pleased with the result of the construction and modernization performed by Garaventa."



High tech in vintage look

The railway's bottom terminal is located in Air Itam on the perimeter of the island's capital, George Town. The installation was originally built by Von Roll in 1923 with two independent sections, and was completely modernized by Garaventa in 2010. The old terminal buildings have been refurbished. The two terminals in the middle have been replaced by an intermediate station. Passengers can now travel straight through without stopping. The trip time has been reduced from 30 to 10 minutes and capacity increased from 80 to 100 passengers. A new feature incorporated in the cabins – which is greatly appreciated by users and also helps some to get over their nostalgia for the old cabins – is air conditioning.

A total of six intermediate stations facilitate access to the hotels and villas along the line. The machinery room of the old lower section top terminal has been turned into a museum; the drive is seen as a classic piece of British engineering heritage.

100-FUL Penang Hill

Transport capacity	1,000 PPH
Trip time	10.0 min
Speed	10.0 m/s
Inclined length	1,996 m
Vertical rise	691 m
Drive	Top



The rails and rail fasteners as well as the cabins and the drive are entirely new. If the main drive should fail, the cabins can be run to the stations at reduced speed using the emergency drive. The cabins are air-conditioned and have three rail brakes.

4 Doppelmayr gondolas in China

Doppelmayr installed four gondolas in China in 2010. They represent major improvements to popular vacation destinations and – thanks to their high transport capacities and long operating hours well into the night – cope with huge volumes of tourists.



Idyllic island in the south

On the edge of the city of Sanya on the tropical Hainan Island, a gondola up to the crest of the coastal mountain range has been in operation since the end of March 2010. From here, the stunning views of the China Sea and the city make it immediately obvious why the Chinese call Hainan the "Hawaii of the East".

Doppelmayr enjoys an outstanding reputation in the region. The 4-passenger gondola built in the 1990s on Monkey Island, 1 ½ hours' drive from Sanya, is extremely popular. No wonder then, that the operator in Sanya wanted another Doppelmayr lift.

Pilgrimage lift to the mountain of mysteries

In the Wudang Mountains, a Doppelmayr 8-MGD has replaced a Chinese-built 2-passenger gondola. A new lift was required as the old one was not equipped to handle with the huge numbers of visitors.

Known in China as the "mountain of mysteries", Wudang Shan lies in the northwest of Hubei Province. The many temples, monasteries, caverns and her-



8-MGD Sanqing Shan

mitages attract pilgrims from around the globe. Legend has it that the Taoist monasteries on Wudang Shan were the birthplace of the "internal martial arts" (shadow boxing).

The lift was installed in just two and a half months and went into regular service on October 1, 2010 – China's national holiday.

8-MGD	Fenghuang- ling	Qingcheng Shan	Sanqing Shan II	Wudang Shan
Transport capacity in PPH	1,500	1,200	2,000	2,000
Trip time in min.	5.8	4.0	7.6	5.0
Speed in m/s	5.0	5.0	6.0	6.0
Cabins	38	20	63	47
Interval in s	19.2	24.0	14.4	14.4
Inclined length in m	1,433	926	2,383	1,437
Bottom station altitude in m	46	848	657	818
Top station altitude in m	362	1,097	1,249	1,453
Vertical rise in m	316	249	592	635
Towers	13	6	14	10
Drive	Bottom	Bottom	Bottom	Bottom
Tensioning	Top	Top	Top	Top



8-MGD Fenghuangling



8-MGD Qingcheng Shan



8-MGD Wudang Shan

Comfort as major attraction

Last year, Doppelmayr built an 8-MGD in the Sanqing Shan tourist region in Jiangxi Province, 300 kilometers west of Shanghai. The other Doppelmayr lift installed here three years ago is so popular that the owner of the 12-year-old two-passenger basket lift on the opposite side of the mountain decided he would also opt for an 8-passenger gondola. The new installation largely uses the old lift line. In an emergency, a winch

rescue can be performed in one rope span which is over 500m long and up to 114m above ground. Another rope span with a length of 350m does not have sufficient gradient for a winch rescue and has consequently been equipped with a self-powered rescue carrier.

Utmost earthquake safety

In the Qingcheng Mountains in Sichuan Province, excursions are growing in popularity. The new gondola is not far

from the city of Dujiangyan, which has recently been linked up to Chengdu (population 10 million) by a rapid transit railway. As a result, huge numbers of visitors flocked to use the old 2-seater chairlift, making the construction of a high-capacity replacement urgently necessary.

Since the severe earthquake in 2008, which left 6 million inhabitants homeless in Sichuan, there has been a great emphasis on earthquake safety. Doppelmayr lifts are in any case always designed to withstand earthquakes.

Reversible aerial ropeway in the Sierra Madre

Against an impressive
natural backdrop
in Chihuahua,
Mexico's largest state,
Doppelmayr/Garaventa
has built an equally
impressive aerial ropeway.



The installation is situated in northern Mexico, in the Barranca del Cobre (Copper Canyon) of the Sierra Madre Occidental.

For Mexicans, the most spectacular canyon in North America

The Barranca del Cobre belongs to a network of canyons which the Mexicans consider to be even more impressive than the Grand Canyon. While the highland is largely desert, deep below lie raging rivers with mighty waterfalls. A remarkable tourism project is being created in this region, with the new aerial ropeway at its heart.

Rope span of almost 3 kilometers in length

From the large plateau, Mesa de la Barranca, the new ropeway takes passengers up to a huge rocky mount near the Indio village of Bacajipara. The line does not have a single tower within its 2,750m rope span. The rope height above ground varies between 180m and 40m. The rope gauge is unusually wide at 18m. For the terminals at the edge of the drop, the available space was very limited.

Thunderstorms and snow made construction work difficult

During construction, the crew was faced not only with searing heat but also with thunderstorms as well as snowstorms.

60-ATW Barrancas del Cobre

Transport capacity	510 PPH
Trip time	6.0 min
Speed	10.0 m/s
Inclined length	2,752 m
Vertical rise	320 m
Drive	Top
Haul rope counterweight	Bottom



Happy and proud: The Tarahumara Indios no longer have to rely on a mule track to reach their village. The new aerial tram facilitates access to the outside world – and helps to boost tourism.

Teamwork crossing continents

DCC/Doppelmayr Cable Car Mexico acted as contractor for the ropeway and took charge of operations during the first three months as well as the training for local personnel.

Input Projektentwicklungs GmbH, another member of the Doppelmayr/Garaventa Group, was responsible for developing the tourism master plan for the overall project and for selecting the ropeway location. Besides the ropeway, the project includes a climbing park and a five-kilometer zip-line – an attraction where the user is attached to a pulley and rides down an inclined rope.

Garaventa was responsible for the ropeway equipment. Supervision of the construction work was performed jointly by Garaventa and DCC.

A local firm was hired for the building work.



The contract was signed in January 2009 and delivered in fall 2010. This was a considerable feat in view of the extreme climatic and geological conditions – limited space for the terminals, impassable terrain – which made constructing the ropeway and installing the ropes a huge challenge. The impressive result is a sensational ride and an experience of a lifetime!

Existing installations: Value-added comfort

Even greater comfort and security – these are the goals that motivate chairlift operators to retrofit their installations with bubbles and child-friendly features

For the winter season 2010/11, several detachable chairlifts have been equipped with child-friendly CS10 chairs. This chair model is approved to carry children with a body height of 90 cm and above with just one accompanying adult.

Seat dividers, individual footrests, bubbles for most chairs built from 1998

Doppelmayr also has practical retrofit kits to ensure enhanced child security and also comfort on existing lifts. Most chairs built from 1998 onwards can be retrofitted with bubbles, seat dividers and individual footrests centered on each seat as well as comfort upholstery.

Although the restraining bars are not automatically locked, a child is no longer able to raise the restraining bar once an adult has placed their skis or feet on the footrest.

Kinder-Guard retrofit kit for all chair models

The Kinder-Guard retrofit kit is available for all chair models. These “handles” consist of a plastic element with a steel core which is clamped onto the restraining bar. The handles sit between the passenger’s legs when the restraining bar is closed, preventing the passenger from slipping out of the seat.

Just like a new lift ...

The retrofit kits are comfortable. They provide greater security for children and are readily accepted by frequent lift users. – In addition, many skiers get the impression that the upgraded lift is not just more comfortable, but must be entirely new.

One example is the 4-CLD Sattelbahn (Serfaus-Fiss-Ladis ski region; built in 1999). For winter 2010/11, the lift was fitted with completely new chairs featur-

Toni Kirchgasser,

Chief Operations Manager at Bergbahnen Flachau which owns the 6-CLD Reitlehenbahn II at Eben im Pongau on Monte Popolo. The ski resort sees itself as a particularly family-friendly ski area. “We took advantage of the individual footrest retrofit option to enhance child security on the lift. Skiers have reacted very positively. It also gives parents the reassurance that no child can slip out of the chair once the restraining bar is closed. The handling of the retrofit between the company, Doppelmayr and the authorities went very smoothly. On new lifts we shall certainly be incorporating this type of restraining bar.”



Georg Geiger,

Operations Manager of the Sattelbahn in Fiss: “The Sattelbahn was built in 1999 and has always been very popular with our guests.

The exposed position and the length of this lift often meant a cold and unpleasant ride experience. In view of the fact that most of our lifts are already state of the art, we decided to go for the retrofit in order to enhance the attractiveness of the installation and to offer our guests greater comfort.

The upgrade has been very well received by our guests. We have seen huge increases in usage. The retrofit went off extremely well and we’re very pleased.”



ing high backrests, comfort upholstery, seat dividers, footrests and yellow bubbles. As the stations have also been refurbished, every other skier was convinced they were riding on an entirely new lift. Thanks to the rapid increase in passenger numbers, the investment has already paid off in the first year.

Everybody is pleased

In the Monte Popolo ski region (Eben im Pongau, Salzburg), the chairs on the 6-CLD-B Reitlehen II (built in 2008) were upgraded in 2010. They are now fitted with seat dividers, upholstery colors to define the individual seats and individual footrests. The response from skiers has been extremely positive.

For the 2010/11 ski season, the operating company Bergbahnen Nauders ordered retrofit kits for all of its lifts. This step served to emphasize the resort's claim to be a family-friendly skiing destination.

Heinz Pfeifer,

Managing Director of Bergbahnen Nauders:

"We didn't see why only new chairlifts should be referred to as 'child-friendly'. That's why we decided on the retrofit. The reaction of our guests to these changes has been entirely positive; we haven't had a single negative response. The feedback from families with children, and even more so from ski schools (children's classes) has been particularly enthusiastic.

Despite the fact that the retrofit had to be carried out under time pressure just before the start of the season, it went without a hitch and in terms of the effort involved was entirely manageable. We must be the first ski resort worldwide that has child-friendly chairlifts throughout."



*Individual footrests:
Monte Popolo, Eben im Pongau, Salzburg*



*Yellow bubbles – for the sunny side of skiing whatever the weather.
Sattelbahn, Fiss, Tyrol.*



Retrofit kit: The Kinder-Guard is clamped onto the restraining bar and sits between the passenger's legs. Nauders ski resort on the Reschenpass.



RopeCon® carries limestone across the Nile

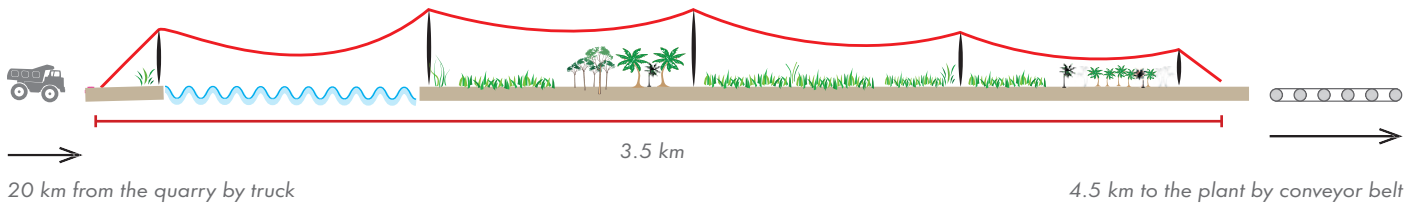
In spring 2011, a 3.5-kilometer RopeCon® system went into operation in Sudan. It transports up to 700 tons of limestone across the Nile on an hourly basis.

The installation lies 370 kilometers north of Khartoum, and is part of a brand-new cement production complex. The limestone is trucked in from the quarry 20 kilometers away to the west of the Nile and taken to the crushing plant. From here, it is carried across the Nile by the Ropecon® system and on to the production plant by a 4.5-kilometer

conventional conveyor. The plant has a daily output of 5,000 tons of cement.

Flood-proof

The foundations are up to 20 m deep and at 5 m above ground level are high enough to ensure that even the annual flood waters do not reach the towers.



In river oases, arable and pastureland is scarce and therefore precious. Of all the possible transport options, RopeCon® involved by far the smallest land use.

During this period, the Nile swells from a width of 400 m to almost one kilometer and the water level rises up from the deeply incised riverbed by seven meters.

No obstruction from road traffic

The operators decided in favor of a RopeCon® because building a road and a bridge would not only have meant more extensive land use, but also a far greater increase in traffic volumes as there is only one road bridge across the Nile within a radius of 100 kilometers!

The lack of transport infrastructure made logistics more complex. Equipment assemblies were sent to Port Sudan on the Red Sea and delivered from there by truck. Installation also involved tough conditions for the crew, who were confronted with temperatures of 50 °C as well as frequent sandstorms.

RopeCon® Berber Cement

Length	3,485 m
Conveyor width	650 mm
Conveying capacity	700 t/h
Speed	3.3 m/s

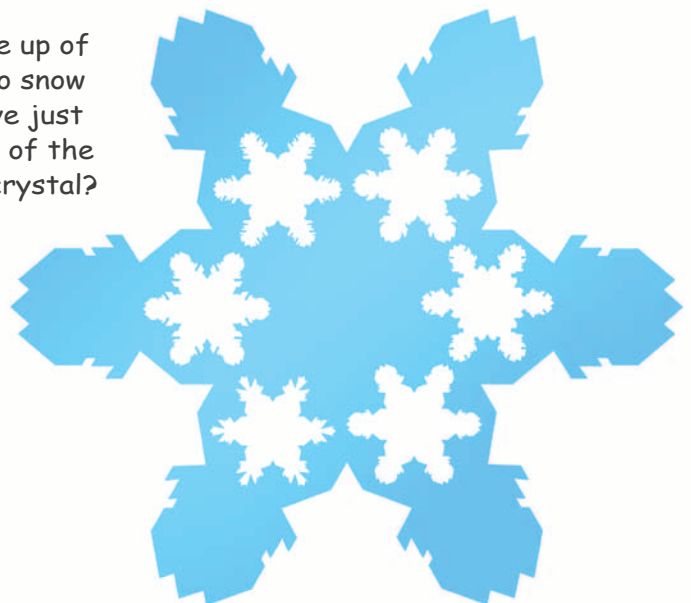
Ski fun with Skippy



Hi kids! It's me again, Skippy!
Today, I've brought along another
funny story for you and a puzzle.
Have fun!



No doubt you know that snowflakes are made up of beautiful snow crystals. But it's rare for two snow crystals to have exactly the same shape. I've just found two that do - the big blue one and one of the small white ones. Can you find the matching crystal?



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



Informative Doppelmayr stand at InterAlpin

Some of the focal points of the trade show presentation:

- After-Sales
- Ropeway components such as
 - CS10 chair (enhanced child security plus comfort for adults)
 - Garaventa areal ropeway carriage (special lightweight construction)
 - CWA cabins
 - DCC vehicles



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

The theme of the O.I.T.A.F. Congress 2011 in Rio de Janeiro (October 24 – 27) is "Cableways: safe, environmentally friendly, with success into the future". For further info visit: <http://www.oitaf2011.com.br> and <http://www.oitaf.org>

BUGA Koblenz opened on April 15

Germany's Federal Horticultural Show Koblenz 2011 (April 15 to October 16) is in full swing. The organizers expect to attract 2 million visitors.

3S is a major highlight

One of the highlights at BUGA is the Doppelmayr 3S which links the inner-city site (Electoral Palace) with the Ehrenbreitstein fortress site on the opposite bank of the Rhine.

Doppelmayr is also ropeway operator. As required by UNESCO, which recognizes the Upper Middle Rhine Valley as a World Heritage Site, the gondola is to be dismantled in three years' time.

Prize draw

The quiz question for May 2011 is: **Where is Doppelmayr building the world's longest 3S lift?** Three iPods are to be won. The judges' decision is final.

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

The correct answer to our prize draw question in issue No. 183/February 2011 was: "3,600 PPH".

The following lucky winners have been drawn from the correct answers: Jan Chalupsky, Zelezná Ruda (Czech Republic); Tobias Benthin, Garmisch-Partenkirchen (Germany); Pascal Wiget, Oberarth (Switzerland). Each wins an iPod. Congratulations to the winners!

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