

# UP

The Doppelmayr  
Group Magazine

Spring/Summer  
2023

## Space sensation STELLA

New cabin for TRI-Line and 20-MGD

## Next step for autonomous ropeways

AURO for chairlifts

## Making better use of energy

New energy storage system ESFOR





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# WIR becomes UP



Arno Inauen    Gerhard Gassner    Michael Köb    Thomas Pichler

**Executive Board  
Doppelmayr Group Management**

The Doppelmayr Group's customer magazine is enjoying a makeover: "WIR" is now "UP". And the new features don't stop at the name – because there are a lot of new developments in the Doppelmayr Group and we'll be proudly presenting them in time-honored fashion at INTERALPIN. This is a special issue of the magazine giving a foretaste of the latest product highlights and the future of the ropeway sector.

The determination to tread new paths and drive forward innovation has always set us apart. And that is precisely what the Doppelmayr Group's presentation at INTERALPIN represents. It will be possible to experience the hotly awaited TRI-Line with its new cabin STELLA. STELLA provides the link between tricable and monocable technology. We'll be premiering the 20-MGD, which closes the gap between the D-Line and the TRI-Line and creates entirely new possibilities for our customers. S-Line, the new surface lift generation, rounds off the system portfolio.

A lot of progress is also being made against the background of digitalization. We are presenting new customer training formats, the latest developments related to AURO – with autonomous chairlifts as the next step – and the Doppelmayr Group is delivering an impressive answer to the topic of energy management with ESFOR. In addition, our resort management platform clair is constantly evolving through the addition of new partners.

We look forward to joining you on upcoming projects with new technologies, optimized products and comprehensive services.

An aerial photograph of a mountain valley. The landscape is dominated by vibrant green grass and dense evergreen forests. In the foreground, a small village with several buildings, including a prominent red-roofed house, is visible. A river flows through the valley, creating a small waterfall. The background shows rolling hills and mountains under a clear blue sky.

# Alpine or urban: Ropeway systems for every situation

With the 20-MGD and the TRI-Line, Doppelmayr is expanding its portfolio of ropeway systems to cover every terrain and every challenge in cities, on mountains and at points of interest.





### **20-MGD: The new urban transit specialist**

The 20-MGD is a D-Line and destined for projects focusing on a high transport capacity. The new system can carry up to 8,000 passengers per hour and direction. "With the 20-MGD, our customers will be getting a cost-effective monocable system that is unrivaled in the urban environment. In terms of transport capacity, it comes into its own where other systems hit their limits," says Markus Beck, Doppelmayr's head of department for continuous-movement monocable gondolas who is responsible for this system. The 20-MGD features the new STELLA cabin (see page 10). This model provides room for twelve seated and eight standing passengers. The additional weight is held by the new D9000 double grip. With the option for doors on both sides and a wheelchair turning radius of 1.5 meters inside, STELLA also offers optimized barrier-free access. Passengers can look forward to a smooth, comfortable and wind-stable ride. The option for AURO operation ensures that the 20-MGD is fully equipped for the future.

Not every ropeway system is suitable for every application. But Doppelmayr has the right system for every situation. The company is now extending its range of gondola lifts to include the recently launched TRI-Line and the 20-MGD, alongside the 10-MGD and the 3S system. These two new versions close the gap between the tried-and-tested ropeway systems and provide entirely new possibilities for meeting the precise needs of Doppelmayr customers.



The TRI-Line epitomizes Doppelmayr's latest, highly innovative 3S technology.



The 8-wheel TRI-Line carriage is the centerpiece of the new ropeway system.

### **TRI-Line: The all-round talent**

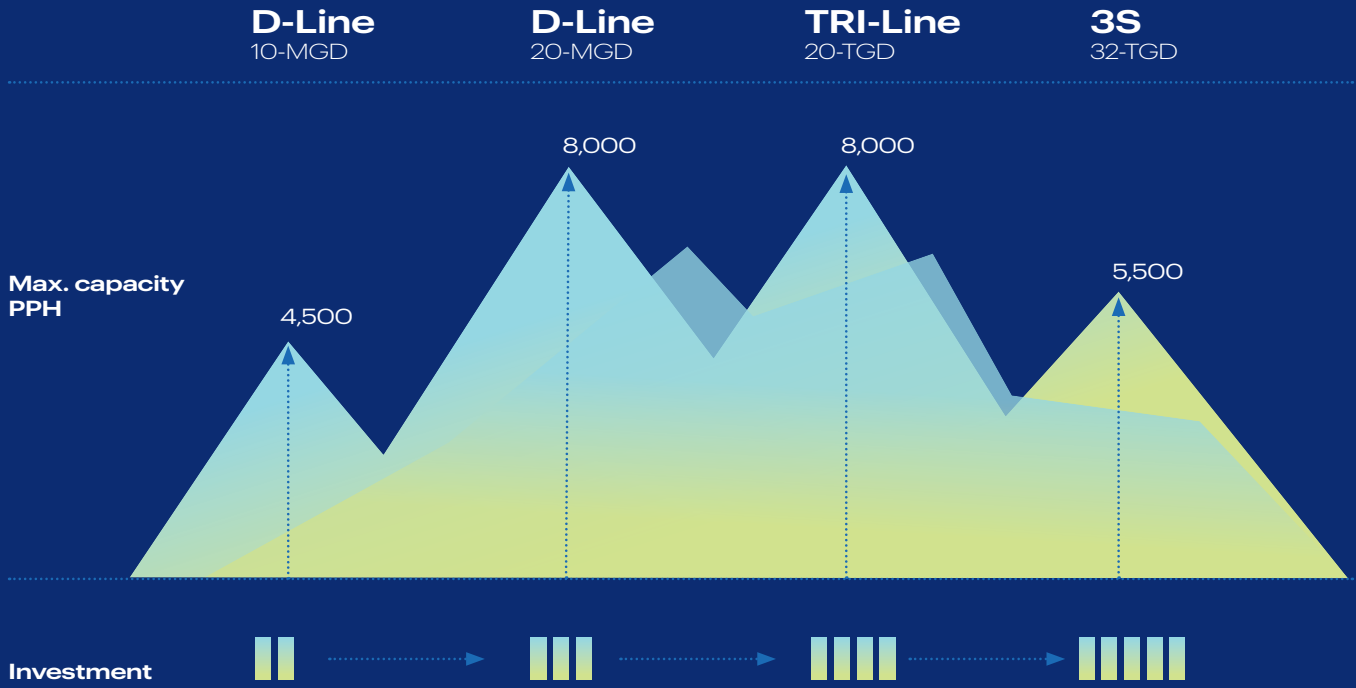
The TRI-Line demonstrates its strengths when long rope spans are necessary and large obstacles have to be crossed. Doppelmayr's head of development for the TRI-Line Peter Luger explains: "The TRI-Line is a detachable continuous-movement system and a compact development based on two proven ropeway systems. It combines the advantages of the D-Line with the benefits of a high-capacity 3S system." This enables it to score in particular when difficult terrain is involved. Large vertical rises and

high wind speeds of up to 110 km/h are no problem for the TRI-Line. In addition, it offers a record transport capacity of 8,000 passengers per hour and direction. Its compact stations and low structural footprint make it a genuine all-round talent that represents an exciting option for alpine and urban environments as well as points of interest. TRI-Line passengers will enjoy a comfortable, barrier-free ropeway experience. As with the 20-MGD, this is made possible by the new STELLA cabin.

### **Addressing different needs**

Every ropeway system has its benefits and applications. For transport capacities up to 4,500 passengers per hour and direction and short rope spans, the highly successful 10-MGD is unbeatably cost-effective. The 20-MGD is a true powerhouse and incorporates features that are tailored to the urban environment. While the 20-MGD and TRI-Line share a record transport capacity and the benefits of the new STELLA cabin, the TRI-Line also scores on top performance in difficult terrain and impresses with high wind stability. The 3S gondola lift, on the other hand, stands for maximum customizing options, with large cabins offering an unparalleled sense of space.

# System Overview



Main applications	Alpine POI Urban	Urban	Alpine POI Urban	Alpine POI Urban
Speed	up to 7 m/s	up to 7 m/s	up to 7 m/s	up to 8.5 m/s
Rope spans	medium	short	long	long
Vertical rise capability	●●●	●	●●	●●●
Wind stability (project-dependent)	up to approx. 80 km/h	up to approx. 80 km/h	up to approx. 110 km/h	up to approx. 110 km/h
Structural footprint	●	●●	●●	●●
On-board power	Battery module	Battery module	Carriage wheel generator	Carriage wheel generator
Doors on both sides	⊖	✓	✓	⊖
Comfort	●●●	●●●	●●●	●●●
Barrier-free access	✓	✓	✓	✓
AURO	✓	✓	✓	✓



BOARDING

seats free

CWA

# STELLA: Visionary new cabin from CWA

CWA is launching STELLA onto the market, a new cabin that can carry up to 8,000 passengers per hour and direction on TRI-Line and D-Line installations – an unprecedented achievement in the ropeway industry.



**20**  
passengers per cabin

**8,000 p/h/d**  
capacity

With the new cabin STELLA, which provides room for up to 20 passengers, the focus is on high transport capacities. The interior is both compact and spacious. Doors on both sides make lighter work of directing passenger flows and enable the more efficient carriage of people and freight. The generous dimensions create room for different modular seating concepts, for transport-

ing bicycles and strollers as well as for maneuvering a wheelchair and also ensure barrier-free transportation options.

## **Versatility is part of its DNA**

The features incorporated in STELLA make it the ideal addition to the range. It blends in perfectly between the OMEGA V and the ATRIA as part of the CWA product line for monocable continuous-movement ropeways and 3S systems. Like its sister products, STELLA is equally at home in alpine regions or in the urban environment and represents continuity and consistency in design language. Large windows provide a clear view of the surroundings, whether it's a mountain landscape or a cityscape. The uncluttered cabin design is continued through to the smallest detail and combines style with functionality.



### **Top performance through and through**

Other elements of the OMEGA V and the ATRIA can also be found in STELLA. The new cabin boasts outstanding acoustic and ergonomic features and simultaneously utilizes the high degree of modularity

and flexibility of the latest CWA product generation. Thanks to the lasting precision workmanship of its lightweight aluminum construction, the cabin benefits from low self-weight. In combination with the perfect use of space, the acoustic ceiling and the sophisticated ventilation concept, STELLA provides top comfort and a wide range of options – which make it possible to select equipment and fittings to suit the specific installation and the requirements of the customer.



**More info**

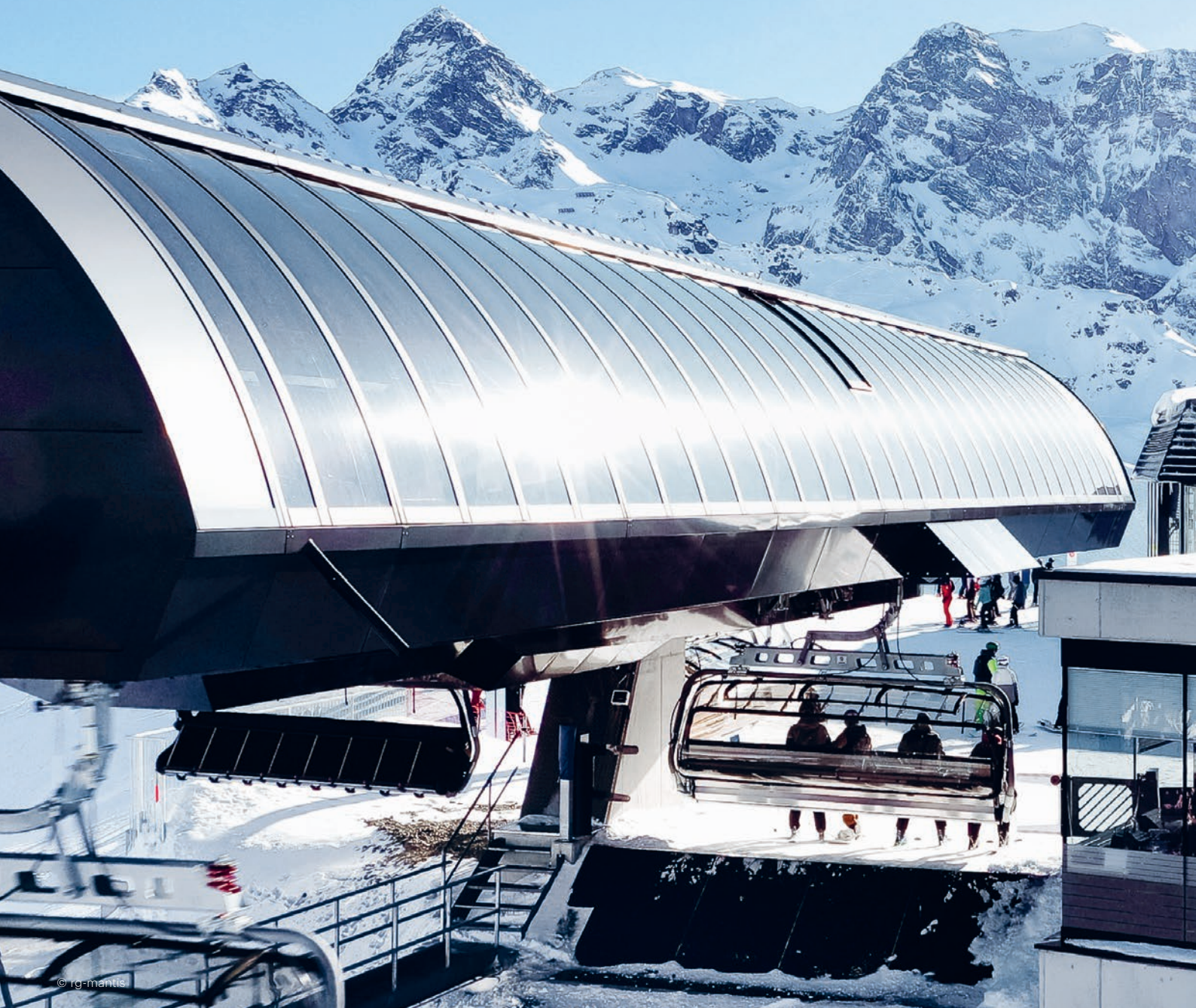


Modular seating concepts allow a flexible configuration of the interior.

## STELLA

- Up to 20 passengers per cabin
- Transport capacity of 8,000 passengers per hour and direction
- Flexible, modular seating concepts
- Barrier-free transport options thanks to generously sized interior
- Doors on both sides
- Durable lightweight aluminum construction
- Optimal use of space
- Acoustic ceiling
- Sophisticated ventilation system

# The future of autonomous ropeways





AURO takes its next evolutionary step: Autonomous operation will soon be possible on chairlifts as well as gondola lifts.

With its concept for Autonomous Ropeway Operation (AURO), Doppelmayr launched a true industry milestone onto the market. The system enables passenger service to run without ropeway operating personnel. Two AURO installations have already been successfully implemented: the Kumme gondola in Zermatt and the Valisera gondola in the Silvretta Montafon ski area. The experience gained from the first years of operation and the research conducted by Doppelmayr are paving the way for the continuous improvement of this groundbreaking system. The next evolutionary step is about to be completed. AURO for chairlifts is currently running in the prototype phase with passenger service.

#### **Safety first**

In view of the fact that the loading and unloading area of a gondola lift differs significantly from that of a chairlift, it was not possible to adopt the previous AURO concept one to one. Many tests and adjustments were necessary to achieve the same high level of safety as on a conventional lift. The goal is for passengers to feel just as safe when using an AURO chairlift despite the absence of operating personnel – and with the lift running at comparable transport capacity.

#### **Technology that learns from experience**

To address these challenges, Doppelmayr has brought dynamic development partner Mantis on board. The Swiss company focuses on smart monitoring technologies and relies on the concept of continuous learning. The goal is for a system to learn from different situations and constantly improve by itself. This technology in combination with Doppelmayr's many years of experience is aimed at achieving the proven availability on ropeway installations.



### **Control hub for all ropeway installations**

As in the case of gondola lifts, AURO for chairlifts is integrated into the Doppelmayr Connect control system. The level of compatibility will make it possible to monitor different ropeway systems simultaneously in future. This means that several ropeways – including gondolas and chairlifts – can be run from one shared Ropeway Operation Center (ROC).

And the ROC can be located independently of the lift installation. For ski resorts in particular, this enables operators to deploy personnel resources in a targeted fashion and maintain a high bar in terms of safety and transport capacity.

### **Test operation ongoing**

There are currently two chairlifts running in test operation in Austria and Switzerland. These tests are in the first phase, which is based on an unmanned top station monitored by AURO. Before the start of the winter season, the development team conducted an exclusive test run with several Doppelmayr collaborators. This involved simulating and trialing different situations under realistic conditions. With the start of the 2022/23

winter season, AURO began real-world operations under the observation of ropeway operatives. Their experiences and responses from passengers are extremely valuable and feed immediately into further development.

Official approval procedures are already well advanced and the required certification process has been successfully completed after two years of intensive work. This means the path is now clear for AURO operation of the two chairlifts with unmanned top station as from the 2023/24 winter season.

# »Seeing like a human«

4 questions for Carl Biagosch

Mantis cofounder Carl Biagosch explains in an interview how the self-learning system for AURO works:

## **Mr Biagosch, what's the role of Mantis in the AURO for chairlifts project?**

Mantis develops the computer vision system for AURO for chairlifts. Computer vision means intelligent image recognition – in other words, teaching a computer to see like a human with the aid of cameras. This enables the system to recognize a person falling or other conflict situations in the unloading area on the basis of live video images in order to trigger a response such as an emergency stop or slowdown in real time.

## **What are the special features involved in the work with ropeways?**

While the loading and unloading areas have clearly defined limits, they are difficult to equip with conventional sensor technology because passengers are constantly in motion. Those are ideal conditions for a “contactless” safety system as these areas can be observed from outside, similar to the way in which the human eye sees.

## **In future, the system will have to learn by itself from reactions. How can a layperson visualize that?**

A very effective strategy is for the computer to obtain a second opinion from an expert if necessary. The system not only identifies possible cases of conflict, but also calculates a value defining how certain it is that it has correctly recognized specific things. It can then send footage of a situation with a low level of certainty to an expert – in this case a Mantis employee – and learn from that employee's decision.

## **What in your view were the biggest challenges in this project?**

As a rule, chairlifts are found in very exposed locations. The variations in light conditions, weather and reflectance can be huge. In order to equip our system for the task, it was taught using images from five winter seasons, on nine different installations with different locations and configurations. That's the only way to be sure that it has really seen every weather scenario.

## **Thank you for your time.**



**Carl Biagosch**  
Mantis cofounder

# Full overview with clair

Snow cannons, access systems, rope condition – the resort management system clair now offers an enhanced overview thanks to new partnerships.

clair is Doppelmayr's answer to the growing trend toward digitalization in resort management. As clair product manager Saša Maretić explains: "Our software significantly simplifies operations and maintenance. We use a platform solution to bring together the infrastructure of a resort in one digital

application in order to maximize customer benefit." The goal is a rapid and efficient overview of all equipment and systems at one destination – and that goes beyond ropeways. New partnerships bring even more data into the equation. In future, snowmaking specialists TechnoAlpin, the steel rope manufacturer Fatzer and the experts for access systems Skidata and Axess will be making key data available in clair.

## Time savings for customers

This partner network is not entirely new but has largely been established from other projects and stands for reliable collaboration. "TechnoAlpin and Doppelmayr have

already cooperated on many projects in the past. This working relationship is now taking a major step forward. Together, we want to shape the digital future of ski resorts with clair. We're convinced that we can jointly create a huge added value for our customers," explains Patric Lenarduzzi, product manager for application software at TechnoAlpin. Integration





More info

# That's clair

## Operations

- Digital operations log
- Practical data visualization
- Automatic operations and machine reports

## Maintenance

- Clear task planning
- Intelligent display with trigger functions
- Comprehensive documentation

## Partner network

- Doppelmayr
- TechnoAlpin
- Fatzer
- Skidata
- Axess

of TechnoAlpin's SNOWMASTER software will in future enable clair to provide an overview of all key figures relating to the planning and progress of snowmaking operations. Patric Lenarduzzi sees huge benefits for customers: "Through the partnership with clair, we are enabling our customers to visualize and analyze all vital snowmaking data in the accustomed TechnoAlpin quality on a single common platform. That synergy represents a clear time saving."

### All on one platform

The integration of data from Fatzer provides a clear overview of the rope condition on lift installations in the clair user interface. Collaborations with Skidata and Axess make it possible to integrate access systems. This means, for example, that daily admissions can be shown in clair. A new feature in clair includes the first applications for the

condition-based maintenance (smart maintenance) of ropeway assembly groups. The first expansion stage will include central monitoring of the gear unit, bullwheel bearing assemblies, rope elongation and grip inspection. In future, the relevant data can be used as required for maintenance planning. All this is provided by clair on a clearly laid out platform. The modern and intuitive user interface provides simple access to the tool and, as clair is a cloud-based browser application, the program also can be used independently of the operating system.



**Patric Lenarduzzi**  
Product Manager  
Application Software,  
TechnoAlpin SpA

»clair makes managing a resort a whole lot easier.«

# Connect: The reliable control system for funiculars and aerial tramways

The Doppelmayr Group's proven ropeway control system – Connect – is now available for funicular railways and reversible aerial tramways.

Since 2016, Connect has provided an intuitive and clearly laid out control system for operating continuous-movement ropeways. This year, the success story is being continued. The engineers from Frey Stans have developed the concept for use with special ropeways, i.e. aerial tramways and funiculars. This means that in future there will be one harmonized operating philosophy for all ropeway systems supplied by the Doppelmayr Group.

## Established system

The experience gained in recent years has been incorporated in the control system. Frey Stans has created a new version that is nonetheless proven through and through right from the start.

Anyone who has already worked with the Connect system for continuous-movement ropeways will have no difficulty familiarizing themselves with the new version. And even those with no previous experience will find that the intuitive control system ensures reduced training time for operating personnel and therefore short familiarization periods. A modern, app-based user interface with touchscreen provides a rapid overview and simple operation. This means that users have all detailed information available at all times – including data from integrated test measurements. The data connection to the cloud ensures the rapid transfer of complete system statuses.

## You can rely on Connect

Connect also impresses in an emergency. An integrated deactivation system ensures that ropeway operations can continue safely in the

## What Connect has to offer

- Intuitive operation with modern user interface on touchscreen
- Direct access to detailed information
- Data connection to cloud
- Integrated deactivation system
- Same spare parts across all ropeway systems
- Simple service support



The first aerial tramway with Connect will be the Sörenberg-Brienzer Rothorn in Sörenberg (CHE).



event of individual sensors failing. Full functionality is also available when operating with emergency or standby drive. User-friendly error reports are shown with direct information on how to solve the problem. For an optimized power supply, it is also possible to integrate the ESFOR energy storage system into the control system.

### **Leveraging synergies**

Operating companies running different types of ropeways benefit in particular from switching to Connect. All Connect control systems have the same spare parts and the same documentation. That makes it easier for the operators themselves to resolve any errors. A harmonized system also means harmonized servicing processes. The point of

contact for Connect remains the same, irrespective of the ropeway installation involved – based on the principle of everything from a single source. Another benefit: The harmonization of control systems will ensure that in future new digital products and services find their way to all ropeway types more rapidly. As a consequence, the changeover to Connect represents a clear technological leap in terms of functionality, operation and maintenance.

### **First installation on the Sörenberg**

The aerial tramway Sörenberg-Brienzer Rothorn is to be the pilot customer and the first ropeway of its kind worldwide to switch to Connect. The tramway in the greater area of Lucerne in Switzerland is to be newly built this summer and will operate with the new control system from the 2023 winter season. Operators Bergbahnen Sörenberg AG worked closely with Frey Stans on the implementation of this project and contributed their experience to develop a perfect product for their tramway.



**More info**



# ESFOR: Optimizing ropeway power and performance requirements

With the new ESFOR energy storage system, self-generated electricity can be better utilized and power consumption from the grid reduced.

ESFOR is a high-performance energy storage system that has been specially developed for ropeways by Frey Stans. The acronym stands for Energy Storage System For Ropeways – put simply, it enables ropeway operators to store and manage their self-generated energy.

## **What does ESFOR achieve?**

ESFOR primarily smooths energy peaks and optimizes energy consumption. A ropeway installation requires a relatively high level of power for acceleration and comparatively little thereafter. Electricity

can actually be regenerated when braking. With this process – also known as recuperation – the energy obtained is fed back into the grid if no storage is available. When power is then required to accelerate the ropeway, that energy must be once again drawn from the grid, which increases the load on the power grid and is not financially lucrative. This is where ESFOR comes in. The system can store the recovered energy and feed it back when required in a targeted fashion.

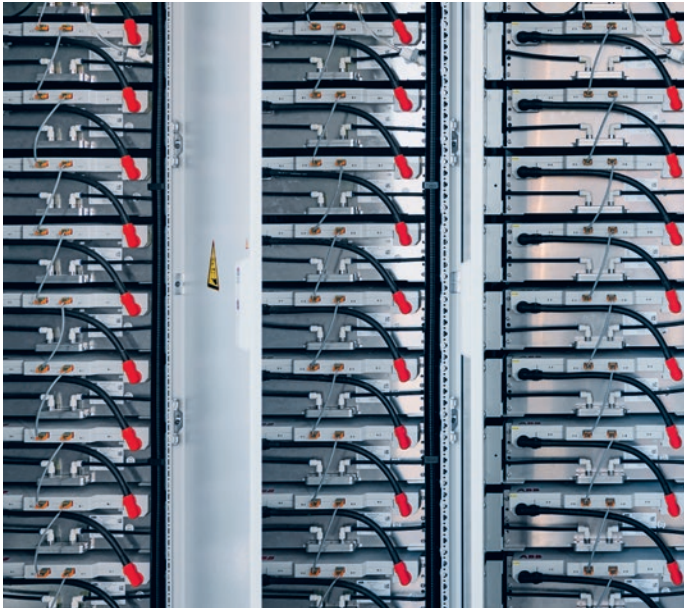
## **Dream team with PV installation**

ESFOR demonstrates its strengths in particular when ropeway operators rely on local power generating systems.

Photovoltaic installations, for instance, do not always produce energy at the time when it is needed – in other words, the sun may not be shining when the ropeway needs power, or energy is produced when the ropeway is stationary and cannot be utilized immediately. ESFOR's task is optimization. Consumption of the energy obtained from the environmentally friendly systems is increased thanks to the storage system and the level of self-sufficiency can be significantly improved.

# That's ESFOR

- Local storage of braking energy
- Intermediate storage of locally generated renewable energy (e.g. photovoltaics, wind)
- Smoothing of power peaks
- Improved voltage stability
- Return of ropeway in event of power outage of main supply
- Elimination of diesel engine emergency drive
- Increased energy self-sufficiency
- Efficient overall system that conserves resources



ESFOR stores energy in high-performance lithium titanate (LTO) batteries.



[More info](#)

## Goodbye diesel!

Another huge benefit of ESFOR is that a diesel engine for the emergency drive can be dispensed with. In the event of a power outage from the main source of supply, the ropeway can instead be returned to the station by using electricity from the energy storage system and the main drive. This does away with the need for a maintenance-intensive diesel engine. In the case of main drive failure, a replacement electric recovery drive is used, which is powered direct from the power grid.

## High efficiency and reliability

In terms of the technology, Frey Stans uses battery modules with a proven track record in trains, electric buses and ships. These modules are combined to form strings, the composition of which will depend on the energy and power requirements for the specific project. A string normally consists of eight battery modules and has a capacity of 20 kWh. In view of its high performance, the storage system is equipped with water-based cooling. The storage system feeds direct into the drive and is fully integrated into the ropeway control system.

For the initial phase, Frey has developed ESFOR for funiculars and aerial tramways. The system is being used for the first time on the funicular railway Sierre-Montana Gare in Switzerland. More projects with the energy storage systems are in the pipeline. One example is the replacement of the Schilthorn ropeways in the Bernese Alps (CHE) over the next five years, where five energy storage systems are to be installed. Here, a large focus will be placed on relieving the severe strain on the power grid.

# ESFOR premieres in Crans-Montana

The funicular railway Sierre–Montana Gare is the first installation to incorporate the innovative energy storage concept ESFOR.

Retaining the proven while adopting the new – that could be the motto of the Sierre–Montana Gare funicular because it combines a remarkable history with a permanent spirit of innovation. Europe's longest urban funicular looks back on a 112-year history and plays a decisive role for the region as it is integrated into the public transport network and links the town of Siders (Sierre) with the Swiss resort of Crans-Montana, which lies 930 meters higher up. In December 2022, Garaventa completed a comprehensive modernization of the funicular to equip it for the future. The biggest innovation: the energy storage system ESFOR.

## Energy storage system in practice

This makes the funicular the first installation to use the ESFOR system developed by Frey Stans. It utilizes the braking energy generated by the funicular and stores it with the aid of a high-performance battery system. This means the power produced is then available for the next acceleration phase. As a shining example of sustainability, the funicular combines the benefits of ESFOR with a photovoltaic system on the roof of the upper terminal. ESFOR can store the excess electricity produced by the photovoltaic system when the funicular is stationary. This significantly reduces power costs and marks another step toward energy self-sufficiency. In future, this environmentally friendly mode of operation will be making an important contribution toward the sustainability of the installation and paving the way for a carbon-neutral ropeway.

## Looking ahead and up

In addition to ESFOR, Garaventa's upgrade includes further improvements of the historic funicular. The new cars from CWA comfortably accommodate 120 people. The glazed roof is a real eye-catcher, enabling efficient air circulation when opened as well as offering optimal vistas for the passengers. The stations have also undergone comprehensive modernization and now feature a fresher look as well as barrier-free access for all passengers.

»In times where the focus is on the energy transition and the increasing costs of electricity, efficient ropeway operation is essential. The battery storage system enables the optimal use of PV and braking energy.«



**Patrick Cretton**  
CEO of SMC



[Watch video](#)

**4,192 m**  
Length

**928 m**  
Vertical rise

**480 PPH**  
Capacity

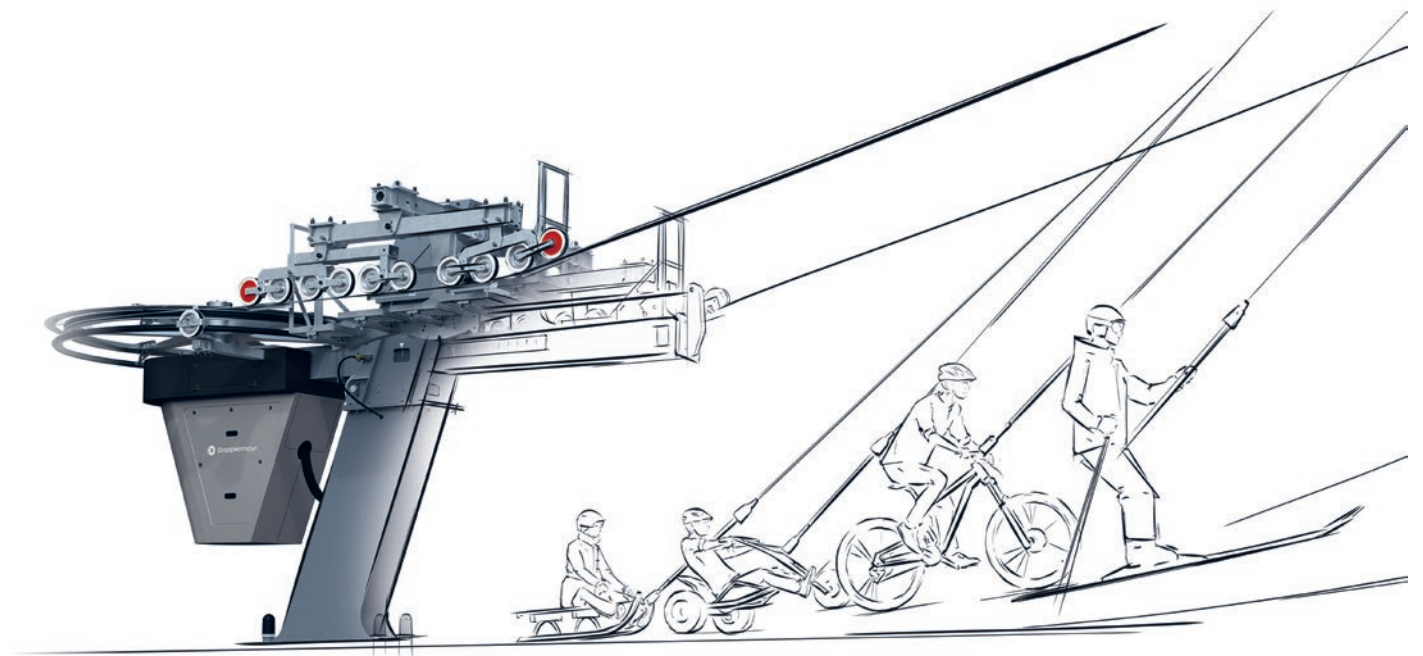
**8 m/s**  
Speed

**12/2022**  
Opened



# S-Line: The modern modular system for surface lifts

With the S-Line, Doppelmayr is optimizing its surface lift portfolio and introducing a maintenance-friendly modular system. A complete S-Line has already been built at Turracher Höhe in Styria (AUT).



Decades of experience have gone into the development of a smart concept for Doppelmayr's S-Line. As a modular system, the new surface lift combines significantly more convenient maintenance with a contemporary, modern design. The new S-Line is available in the versions small, medium and large (S, M, L) and enables shorter on-site installation times. When it comes to worker protection in stations and on towers, the S-Line is also state of the art. It has automatic hydraulic tensioning, and movable stations enable straightforward tension carriage adjustments. Optimized station and tower platforms ensure better access

for maintenance personnel as well as simpler helicopter installation. In addition, spoked bullwheels offer less area for snow accumulation, which is another benefit in terms of maintenance. S-Line towers feature vertical shafts.

## Comfortable and functional

Further advantages of the S-Line include optimized LED line illumination for night operations and, since all towers are vertical with respect to the centerline, horizontal clearance is maintained regardless of snow depth on the tow path. The aluminum sheave hubs are also state of the art and make corrosion a thing of the past. The components used have been designed to reduce wear and

optimize service life. The optional S-Line control room is delivered on a turnkey basis and features consistent styling in terms of color finish and technical design. Generously dimensioned glazing ensures an improved overview. The new S-Line is also compatible with current T-bar and platter towing outfits.

## First S-Line at Turracher Höhe resort

The first S-Line, complete with all system components of the new modular concept, has been built for the Hirschkogel lift



**766 m**  
Inclined length

**176 m**  
Vertical rise

**2.2 m/s**  
Speed

**1,078 PPH**  
Capacity

**2**  
Stations



**Watch video**

on the Turracher Höhe in Styria (Austria). The operating company Bergbahnen Turracher Höhe decided in favor of the new installation to expand their offer for the Snow and Fun Park. Since the 2022/23 winter season, up to 1,078 passengers can be carried to the park entrance in a 6-minute trip. The largest version (L) of the new S-Line modular system was used on this project. Numerous other S-Line projects are already in the pipeline. Orders can be placed now.

»The new S-Line surface lift modular system benefited from over 30 years of experience in the areas of manufacturing, assembly and sales. Above and beyond that, we took insights from customer support into consideration and placed a huge emphasis on ergonomic access.«

**Thomas Berbig**  
Doppelmayr's Surface Lifts and  
Engineering Department

# All good things come in threes: The Doppelmayr training offer

At the Ropeway Training Center, direct on the customer's premises or digital, Doppelmayr's training program is set up to address a wide range of needs.



# Doppelmayr Training



**Digital**



**On Site**



**Ropeway Training Center**

Customer training at Doppelmayr is aimed at acquiring ropeway know-how and is geared to the specific needs of the customer. That's why customer support is offering digital training courses in addition to sessions at the top-class Ropeway Training Center in Dornbirn and on-site trainings. These courses can be completed at any time and place, and eliminate traveling time and costs as well as organizational effort.

## **Maximum flexibility**

Doppelmayr is setting up a dedicated training platform for its digital training courses. Users can complete courses on this platform, document their learning progress, and manage their profile. User administration can be carried out centrally or individually. The platform's role management makes this possible. This means that an entire team wishing to take part in a training course can be created by one person – and the respective participants then simply complete the digital customer training using their individual user IDs. A small selection of digital training modules will be available in the initial phase. These modules range from ten to 40 minutes in length. If a participant interrupts a course, the last status is saved and it's possible to resume at the same point next time. This ensures a particularly flexible use of time.

## **Diverse offer**

The digital courses provide an ideal expansion of current training opportunities and associated learning methods. At the forefront of the training options are the excellent facilities to be found at the Ropeway Training Center in Dornbirn (Vorarlberg, Austria) and Uetendorf (Canton Bern, Switzerland). Here, know-how can be acquired direct from specialists with the aid of real-life ropeway components. These face-to-face courses offer the optimal training experience. Courses are also possible worldwide as Doppelmayr provides on-site training – either at a Doppelmayr subsidiary or direct on the customer's premises. On-site courses are organized as required, with the option of the individually equipped training container for expert training. This enables practice-oriented training and development on site without disturbing ropeway operations. Errors can also be comprehensively simulated and directly resolved.

## **Soft launch begins**

The digital customer training courses will start off with a soft launch. Customers who are interested in this option can now request time-limited access to the Doppelmayr training platform and benefit from the digital courses available. The market launch will begin in German and is aimed at continuously developing and expanding the platform and the digital training offer jointly with participating customers.



[training.doppelmayr.com](https://training.doppelmayr.com)

# Trends on the table

At INTERALPIN, Doppelmayr will be focusing on topics that move the ropeway world at the Trend Desk. This means the company will literally be putting the latest trends on the table.



The three focus areas Energy Efficiency, Regional & Sustainable and Perfect Flow are to take center stage at the Trend Desk. Doppelmayr will highlight what is already possible today in these areas in order to stay fit for the future and what developments are emerging. Doppelmayr invites you to exchange views on these concepts, ideas and possibilities and to take part in a discussion. Which topics concern you?



### **Perfect Flow**

Perfect passenger flows with short transit routes and barrier-free access significantly enhance the appeal of a mobility solution. This calls not only for technical tools, such as transport options for strollers, bicycles, etc., but also for optimized station concepts. Guidance and information systems help to control and facilitate passengers flows. The separation of operational and guest zones enables parallel and efficient processes. The resort-wide collection of capacity data provides a perfect overview, while the linked passenger information permits the smoothing and optimization of passenger flows. In other words, there are a lot of small cogs and bigger wheels that can be turned to achieve optimized operations.



### **Energy Efficiency**

Everybody is talking about reducing energy costs. Energy recovery and storage are the big buzzwords – not only in the context of innovative mobility solutions. But there is also the question of the surface areas required for producing renewable energy – such as for photovoltaic modules on station roofs – which contribute toward sustainable energy management and the reduced consumption of primary energy. There is a growing demand for options to improve the ability to plan resources and monitor energy consumption. Doppelmayr provides the latest examples and an outlook on future developments.



### **Regional & Sustainable**

Regionality and sustainability go hand in hand in many areas. Regional value creation and the use of local building materials can also help to improve the ecological footprint of ropeway installations. Green station roofs support biodiversity, capture air-borne particulates, increase retention capability and impress with a cooling effect. In comparison with roads, ropeways involve far less soil sealing. When implementing ropeway projects, Doppelmayr explores these and many other approaches that optimize sustainability in a region as well as safeguarding economic areas for the long term and retaining their attractiveness.



#### **Curious to find out more?**

If you would like more detailed information on trending topics or already have concrete points you would like to discuss with experts from Doppelmayr, please contact: [mobility@doppelmayr.com](mailto:mobility@doppelmayr.com)

# Thank you!

Visions. They empower us to continually rise to new heights. Ideas that we cherish. They enable us to strive for excellence. It was your visions and ideas that we implemented in 2022. Worldwide. Your trust is also our driving force for the future.

**And that's why we want to say thank you.**

