



REPORT

2020

COMPANIES OF HIGH TECHNOLOGY INDUSTRIES

LEITNER®

POMA

agudio

Pinotti

DEMACLENKO

LEITWIND®

Forward-looking

The future belongs to modern technologies.
Our Group has used the past year intensively to promote research and development – so that we remain on course for success worldwide.



Creating the future: High Technology Industries



Cable-hauled passenger transport systems for use on mountains and in cities

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Cable-hauled passenger transport systems for use on mountains and in cities

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Material transport systems

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Snow groomers and tracked vehicles for all kinds of slopes and terrain

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Complete solutions for fully automatic technical snowmaking

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Megawatt-class gearless wind power plants

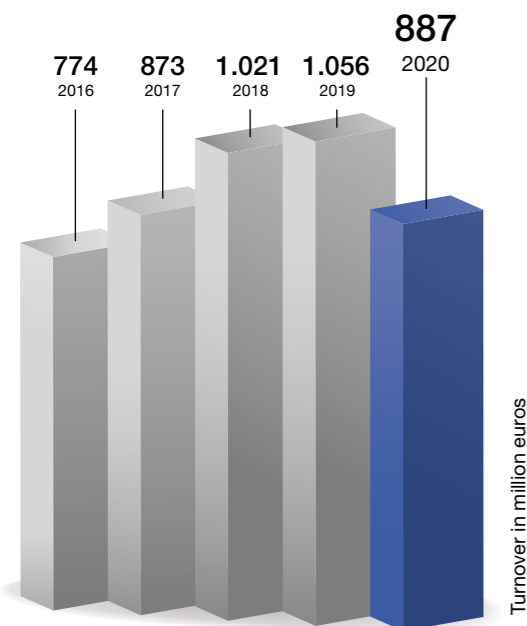
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Strength counts

Turnover

Group turnover amounted to 887 million euros in 2020.

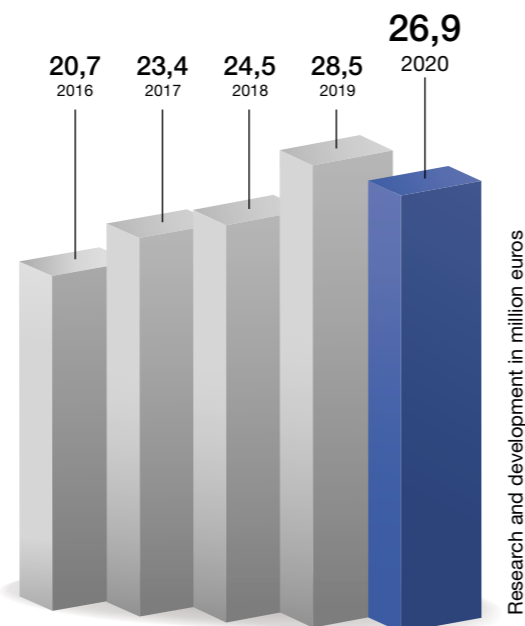
- 44 ropeway systems
- 6 wind power plants
- 746 snow groomers and tracked vehicles
- 1,500 snow guns



Research

Technological innovations are part and parcel of our HTI Group. This is why we invest heavily in R&D – the total figure for 2020 was 26.9 million euros.

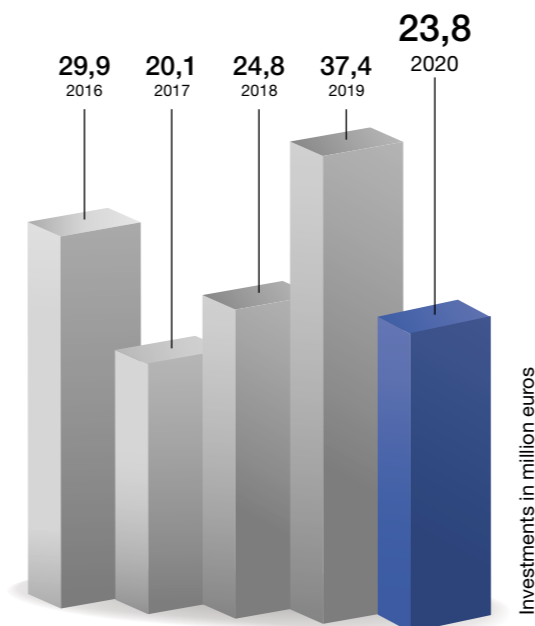
- Ropeway systems: Further development of the detachable gondola lifts
- Snow groomers and tracked vehicles: Further development of the Stage V vehicle generations and development of the LEITWOLF h2MOTION and HUSKY eMOTION high-end concept models
- Snow guns: Market launch of the Titan 4.0 fan gun, development of fully automatic systems for disinfection and fire-fighting
- 11 wind power plants and further development of the LTW42



Investments

HTI Group invested 23.8 million euros in 2020, expanding their capacities and network and thus helping to further extend our global market position.

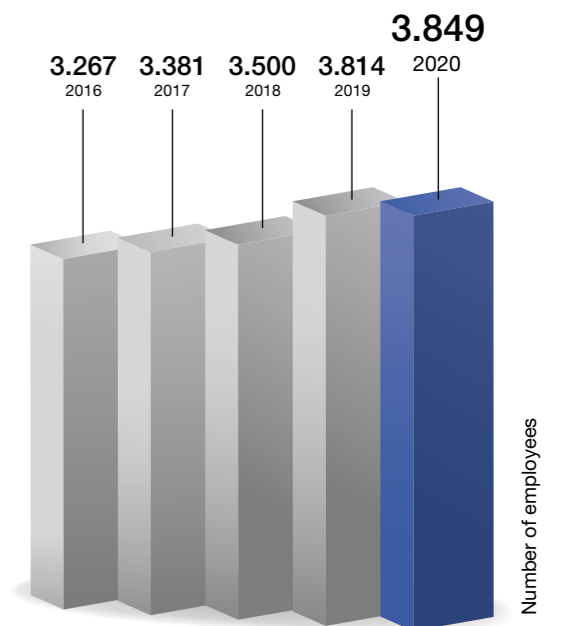
- Construction of the new LEITECH production site in Stará L'ubovna / Slovakia
- Extension of the office building in Casateia and Campi di Sotto in Vipiteno / Italy
- Property expansion at the headquarters in Voreppe / France
- Construction of the new DEMACLENKO headquarters in Campi di Sotto in Vipiteno / Italy



Employees

In 2020, the HTI Group employed 3,849 staff worldwide.

- Approx. 1.2. million euros for training and advanced training
- 15,515 hours of further education
- 119 internship positions
- 48 apprentices



Moving the future

LEITNER®

2020 was a challenging year for LEITNER, in which exciting projects were able to be realized, in spite of difficult circumstances.

The consequences of the pandemic continue to have an impact and have especially impaired the tourism industry, which is relevant for the company. It was all the more important last year that forward-looking steps were taken into the future with extensive investments in infrastructure and a clear commitment to research and development. Starting over again where it was left off bears witness to optimism and motivation: as a reliable partner and manufacturer of ropeways, who ensures modern movement with innovation and quality. LEITNER looks to the future with optimism, with the conviction of its products keeping pace with the times and often even being a step ahead.

The entrepreneurial stability and clear vision will also be the most important basis after the crisis, for being successful on the market and setting new standards.



ITALY – SESTO

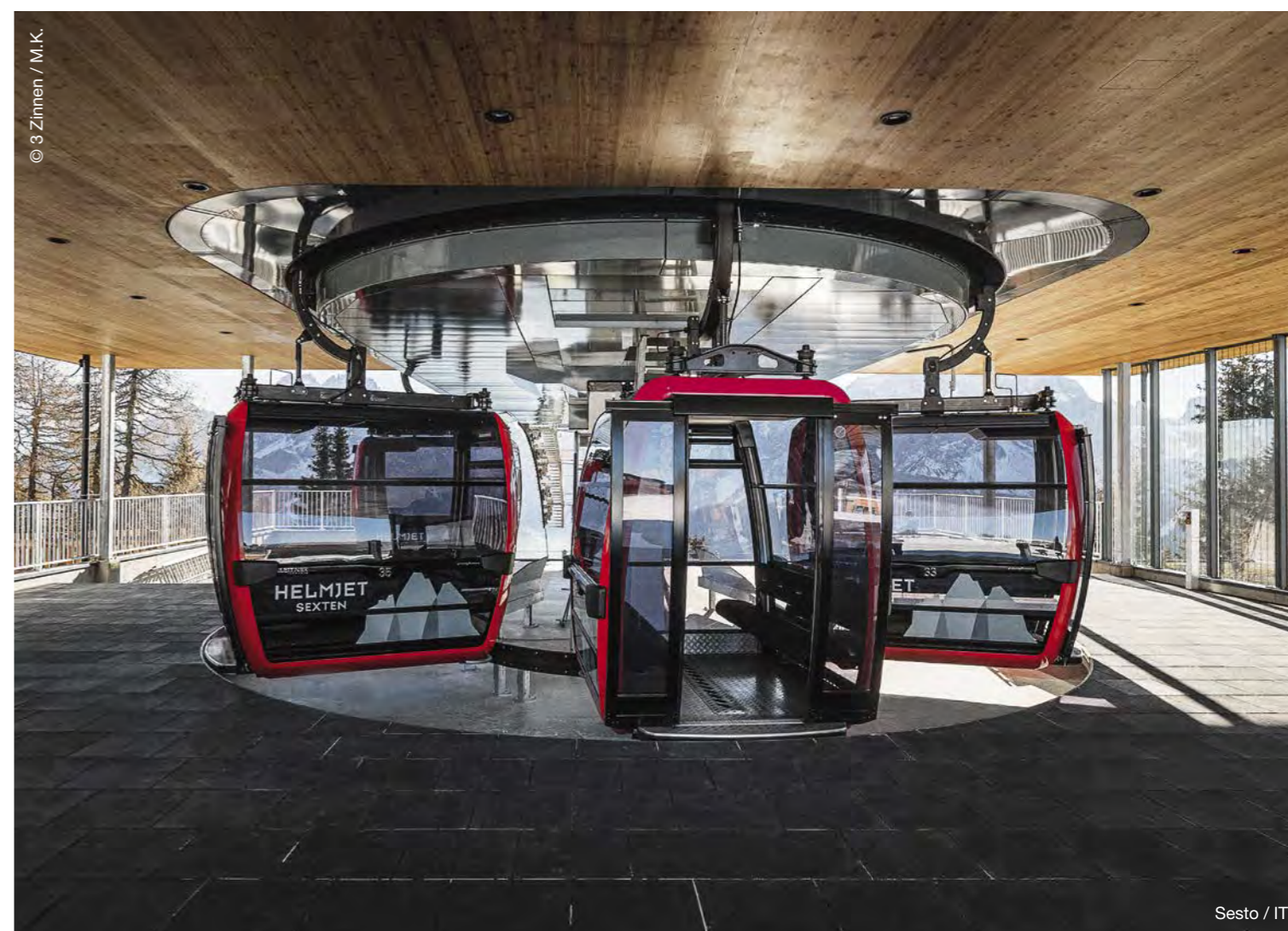
Elegance conquers the Dolomites

All signs point to innovation on the popular Helm ski mountain. With construction of the new 10-passenger “Helmjet” gondola lift, the 40-year-old aerial tramway became obsolete and made room for the system by LEITNER, which transports guests to the popular 3 Zinnen Dolomites area in only six minutes. The “Helmjet” is already the sixth system within six years that the company has realized in the renowned ski resort. The new installation impresses with its elegant luxury Symphony 10 cabins in a Pininfarina design, including seat benches with loden upholstery and ski racks inside. The gondola lift is over two kilometers long and

overcomes a height difference of 728 meters and is powered by a high-performance LEITNER DirectDrive.

GD10 Helmjet

Inclined length:	2,206 m
Vertical rise:	728 m
Drive power:	1,196 kW
Transport capacity:	2,400 p/h
Number of towers:	16
Number of cabins:	58



AUSTRIA – SCHLADMING

Fast, elegant and comfortable

With the new construction of the “Lärchkogelbahn”, a new, efficient system by LEITNER was created in the Planai - Schladming ski resort with a key function. Previously, a 4-seater chairlift connected the three main slopes, Kraitersabfahrt, Lärchkogelabfahrt and WM-Startstrecke. With the construction of the 8-seater chairlift, guests not only benefit from more comfort, but also shorter waiting times and higher capacity. The installation, fitted with premium EVO seats, including seat heating and weather protection bubbles, transports 3,500 passengers per hour, thereby nearly doubling the carrying capacity. Apart from the performance increase, the station in Pininfarina design impresses with its clas-

sic Planai look in yellow-green, LEITNER DirectDrive and extra comfort when getting in and out, due to improved snow protection at the stations.

CD8C Lärchkogelbahn:

Inclined length:	1,228 m
Vertical rise:	423 m
Drive power:	747 kW
Transport capacity:	3,500 p/h
Number of towers:	14
Number of chairs:	61



Kopaonik / RS



Schladming / AT

SERBIA – KOPAONIK

Open all year round

Serbia's largest ski resort, Kopaonik, is once again counting on LEITNER's quality and innovation. For the first time, the new 10-passenger gondola lift is catering for a direct connection between the tourist destination Brzeće and Mali Karaman in the middle of the Kopaonik Mountains. The almost four-kilometer-long GD10 gondola lift at Brzeće can carry up to 2,400 passengers per hour and overcomes a height difference of 843 meters with a middle station. Due to the transport option for bikes, appropriate infrastructure was also created with the new gondola lift for the popular summer season. In winter, the installation is the new heart of the entire ski resort, thus enabling optimum distribution of guests over the 55 km of slopes.

GD10 Brzeće 1+2

Inclined length:	3,787 m
Vertical rise:	843 m
Drive power:	1,540 kW
Transport capacity:	2,400 p/h
Number of towers:	28
Number of cabins:	109 + 1 VIP

Trip to modernity

ITALY - COMPLETE ROPEWAY PROGRAMME

In Roccaraso, at an elevation of over 1,200 meters, the new “Pallottieri” 10-passenger gondola lift is setting new quality standards. It contributes to a significant increase in capacity and, above all, will guarantee a safe ride for the many small passengers. The Diamond 10 cabins offer a comfortable ride along the unchanged route and, with 100 kg of additional weight each, they provide even better wind stability.

A double investment was even made in Alta Badia: LEITNER realized the new “La Brancia” 6-seater chairlift

here. Furthermore, instead of the old “Costoratta” fixed 4-seater chairlift, a modern 8-seater chairlift with premium EVO seats and individual footrests and weather protection bubbles is in operation, in order to guarantee a safe ride for big and small skiers.

There is also news from Veneto: At the Asiago plateau, a 6-seater chairlift by LEITNER, including blue weather protection bubbles, links the Verenetta Hut with Monte Verena.



Allemond-Oz en Oisans / FR



Roccaraso / IT

GERMANY, FRANCE – CUSTOMIZED MODERNIZATION

With extensive investments, the Söllereck in the Oberstdorf-Kleinwalsertal ski region is being bolstered as a family resort. The new heart of this is the GD10 “Söllereckbahn” with two technically separate sections. Due to the local conditions, the first section only extends over 348 meters from the parking lot to the former bottom station. The skiing students are transported in cabins that are marked with the stickers of the ski area mascot and they only ride the first section up to the intermediate station. However, more advanced skiers can ride up to the mountain. There are also two separate entrances at the bottom station.

On the Geißkopf, a popular mountain sports area, all year round in the Bavarian Forest near Obermais, the old ropeways that are now 50 years old have moved aside for a new 6-seater chairlift by LEITNER. Up to six walkers or three bikers per chair can be transported in the summer. The chairlift particularly provides significant improvements when it comes to speed and comfort, which the winter sports enthusiasts are particularly pleased about in the winter. The ride up to the mountain

takes just under five minutes and is significantly less than the previous time of 14 minutes. The modern seats with comfortably upholstery, footrests and special racks for transporting sports equipment ensure a particularly pleasant ride experience.

Modernization and optimization were also the priority in several French ski resorts for this year’s winter season. The picturesque village of Oz en Oisans at an elevation of 1,350 meters, offers access to the two ski resorts Oz - Vaujany and the large ski resort of Alpe d’Huez. Previously, Oz en Oisans was reached with a 20-minute car journey from Allemond, a town that is a 45-minute drive away from Grenoble. With the new Eau d’Olle Express gondola lift as a direct link from Allemond to the mountain village, Oz en Oisans can now be reached directly in only eight minutes without a car. In the La Forêt Blanche (Vars - Risoul) ski area, LEITNER is continuing the modernization of the ski resort in the middle of a larch forest: Here in Sainte-Marie, one of the four villages belonging to the Vars ski area, the new “Bois Noir” 6-seater chairlift will provide more comfort.

Outlook 2021

GERMANY – OBERSTDORF

2S and Symphony newly combined

A striking modernization step was also taken on the Nebelhorn, which is steeped in tradition – only three kilometers away from Söllereck as the crow flies. The new “Nebelhornbahn” bicable gondola lift combines LEITNER’s completely newly developed bicable technology with the luxury Symphony 10 cabins for the first time. A new overall product was therefore developed in the bicable gondola lift segment. The Nebelhornbahn is the first bicable gondola lift that is operated with the energy-efficient and resource-conserving LEITNER DirectDrive. In addition to significantly improving comfort, long waiting times will also be cut down in future. Thanks to the Symphony 10 luxury cabin designed by Pininfarina, guests experience a new feeling of comfort from the moment they step into the cabin. Due to the warming seat covering made of loden, it was not necessary to install seat heating.



Oberstdorf / DE



Cortina / IT

ITALY - CORTINA

Sustainable attraction

Shortly after the completion of the “Col Druscié”, LEITNER is already providing a new highlight in Cortina: With the construction of the “Son dei Prade – Bai de Dones” gondola lift, the link between the Tofane ski resorts and those of Cinque Torri on the Falzarego pass, a superlative structural project was realized: The new installation will be 4.5 km long altogether and fitted with 54 state-of-the-art 10-passenger cabins and will connect the ropeways of Pocol with Cinque Torri in

two sections via a middle station in Cianzopè. The link is predominantly intended to trigger two effects with a sustainable impact: On the one hand, it is a key part of the strategy for future tourism development of Cortina and on the other hand, it will provide relief for the busy road between Cortina and the Falzarego and consequently also have a positive impact from an ecological perspective.



Oberstdorf / DE

LEITNER

SPAIN – BARCELONA

Glow worm in motion

In Barcelona, new life is being breathed into a tourism ropeway classic: With the revitalization of the “Funicular del Tibidabo”, the ropeway, which was built more than 120 years ago on the local mountain of the same name in the Catalan metropolis, will ensure a modern ride experience from summer 2021. Within two years, among other things, the ropeway control unit, the two wagons, the rollers, rails and station equipment were refurbished. Furthermore, a new safety system was introduced. The speed of both new wagons is increasing from four to ten meters per second, the capacity is rising from 120 to 252 persons per journey. Thanks to the panoramic view the interactive information inside and the futuristic lighting, the ascent to the amusement park already becomes an entertaining experience. According to the design of the wagon, the ropeway bears the name “Cuca de Llum” – glow worm.



MEXICO – MEXICO CITY

24 ropeway kilometers

In Mexico's capital city, five new urban ropeways by LEITNER will be commissioned at the same time from 2021 and thereby provide further relief for the traffic situation in the metropolis. In the Iztapalapa district, in the southeast of the city, the total of nearly eleven-kilometer-long Cablebús 2 system will particularly offer the commuters a better and above all, safe link to the subway stations. In the Ecatepec de Morelos district, LEITNER already built Mexico's first urban ropeway in

2016 over a length of around five kilometers. Now, the Mexicable 2 (Linea Verde) ropeway system will follow in the same district, with a total of three gondolas that are connected to one another over a length of 8.5 kilometers. This connects five public transport systems with one another: the Mexicable Linea Verde ropeway, the subway network, the Metrobús and Mexibús express bus networks and another ropeway system.

At the height of time



2020 was a year in which POMA was severely put to the test with its worldwide activities. With combined forces and unwavering pioneering spirit, POMA succeeded in mastering the challenges and staying on course. Ongoing projects were successfully continued and new ones started. With several of these, previous records were even beaten. The longest tourist gondola lift in the world in Serbia and the first urban gondola lift in Ecuador are technological milestones.

The strong sense of team spirit that prevails in the company is also responsible for the outstanding performance, as well as the exemplary cooperation with the subcontractors. Everyone follows the same goal together: highest customer satisfaction. In 2021, we are closing ranks and continuing to work with the same confidence alongside our customers who operate skiing areas, with the view of creating new ropeway transportation projects that connect people, spaces and ideas. In urban areas, CO₂-free mobility is gaining further momentum and with tourism and leisure projects, new solutions are enabling a level of performance. Five urban gondola lifts are about to be completed. In Dubai the biggest Ferris wheel in the world will soon be turning – French know-how is making its way around the globe!



Traffic turnaround at the Pacific

Guayaquil, the most important port city on the Pacific coast of Latin America, successfully solved its mobility problem with the introduction of an emission-free urban transport system. Since December 2020, the “Aerovia” gondola lift completes the public transport network with five stations over a distance of 4 km. In a journey time of 17 minutes, it brings the passengers from the center to the opposite side of the Rio Guaya River. The “Aerovia” achieves peak values for transport capacity: its 155 10-passenger cabins carry up to 2,600 people per hour in each direction, around 40,000 passengers per day. The stations are situated at ideal locations for the residents and were planned such that they have the smallest possible footprint and nevertheless operate as fully-fledged service centers.

The project was implemented by consortium comprised of POMA and Sofratesa as part of a strategic alliance with the municipal administration of Guayaquil / MIMG and the ATM municipal transport authority. The consortium was also assigned with the operation and maintenance for a period of 28 years.

Transport capacity:	___ 2,600 p/h
Vertical rise:	___ 18.5 m
Inclined length:	___ 4,035 m
Number of cabins:	___ 155





Zlatibor / RS

GEORGIA – CHIATURA

Transported into the future

Around the mining town of Chiatura, there were once over a hundred small ropeways that transported everything from miners to manganese ore, right up to residents. These ropeways played an important role for the population. During the course of urban development, the old Russian ropeways were replaced with modern ones by POMA. The four urban lines, Sanatorium, Lezhubani, Naguti and Mukhadze, link the town center with the outer districts. Fitted with modern cabins for up to 15 passengers, a travel speed of 6 m/s and built on a few elegant towers, the new gondola lifts are the main method of transport for the local population. The town also sees major potential with tourism, which is why

the transport capacity was designed for more than 10,000 passengers. For the visitors, the excursion over the town already becomes an experience when boarding. The striking design of the stations originates from local architects and is kept futuristic in a Georgian style.

Transport capacity:	___ 300 p/h
Vertical rise:	_____ 180 m
Inclined length:	_____ 3,500 m
Number of cabins:	___ 8

SERBIA – ZLATIBOR

Panorama world record

POMA is already well known in the popular Tornik - Zlatibor ski and leisure resort in Western Serbia. In 2007, the first detachable chairlift in Serbia was installed here during the course of the modernization. What was achieved there within the scope of a large-scale tourism project is not only a record in Serbia: the longest panorama gondola lift in the world, the "Gold Gondola". In 25 minutes, it links the town of Zlatibor with its ski resort over a distance of 9 km. The municipality of Čajetina is ambitious and intends to develop the biggest adventure park in the Balkans at this exceptional location. POMA supports the ecological approach that the municipality

has committed itself to. The planning and construction of this detachable gondola lift were performed with the utmost respect for the environment. With an underground machine room, for example, the noise pollution was reduced significantly.

Transport capacity:	___ 1,000 p/h
Vertical rise:	_____ 530 m
Inclined length:	_____ 8,866 m
Number of cabins:	___ 90



Chiatura / GE

Mobility progress for the world

FRANCE

CONTEMPORARY SKIING EXPERIENCE

The Arêches Beaufort, Les Rousses, Sainte Foy Tarentaise, Meribel Mottaret and Valmorel ski resorts in the French Alps are pursuing a comprehensive renovation plan in order to increase their attractiveness for winter sports enthusiasts. With the investment in a gondola lift and four new detachable chairlifts, the operators of the ski resorts took a big step forward. The new ropeways keep what their modern design promises. With simplified access to the stations, smooth-running entry and exit and the highest ride comfort, they offer a contemporary skiing experience that leaves nothing to be desired. A particular advantage for winter sports enthusiasts and operators

are the reduced journey time, the increased capacity, the access to the highest ski runs of the respective resort, as well as a better link between the ski resorts. Also from an ecological perspective, important steps can be taken, such as the dismantling of old systems, the reduction in the number of towers or the fitting of new ropeways with the particularly sustainable DirectDrive. It would have been desirable for the five new ropeways to have started up as planned. However, due to the pandemic, in spite of extremely good snow conditions, it turned out differently and the only passengers were the children from the ski schools.



Snowmass / USA



Arêches Beaufort / FR

USA – SNOWMASS COMFORT UPGRADE

Snowmass, in western Colorado in the USA, forms the legendary winter sports resort, Aspen Snowmass, with Aspen Mountain, Aspen Highlands and Buttermilk. Famous for its celebrity guests, Snowmass is the biggest and most popular among the four resorts. The Aspen Skiing Company, operator of the ski resorts and a partner of LEITNER POMA of America since 1983, placed the order for the new construction of the

Big Burn chairlift, which had reached the end of its service life after more than 30 years. The new 6-seater chairlift with innovative DirectDrive not only offers significantly more transport capacity, an important objective of Snowmass, but also a completely new comfort level. Fitted with weather protection bubbles, the skiers conveniently and safely reach the Big Burn and its long, fantastic runs.

CHINA – ENSHI ENVIRONMENT SIGHTSEEING

The Enshi Grand Canyon in the province of Hubei is one of the most spectacular tourist parks in China. No visitors want to miss its 500-meter-high limestone formations. For the route to get there, POMA developed a sustainable mobility solution. A funicular brings the visitors from the tourism center, with its hotels, restaurants, parking spaces and the ticket counters, directly into the nature area. The funicular takes over the work of an entire fleet of buses and thereby contributes to the protection of the environment of this exceptional location. A premiere for the entire Asian region, the fact that the funicular is fitted with the innovative DirectDrive makes it equally environmentally friendly and high-performance. The four wagons of the funicular stop at the foot of the 8-passenger gondola lift, which POMA built here in 2013 and recently renovated.

BELGIUM – NAMUR RIVER CROSSING

In 2017, the City of Namur awarded the contract for the construction of a gondola lift to the POMA, Franki and Labellemontagne consortium. POMA will also support Labellemontagne for operation and maintenance. This is a reversible gondola ropeway with two groups of three cabins, which each accommodate 6 passengers. This technology, in combination with compact stations, guarantees optimal acoustic comfort for users and local residents. The route crosses the Sambre and the Old Town, right up to the Citadel, offering unique views of the historic center. The city center can be reached in just under three minutes. An environmentally friendly service that benefits all of the residents, including those people who live on the hill of the citadel. The Namur gondola lift is the first project by POMA in Belgium.



Luzenac / FR



Enshi / CN

FRANCE – LUZENAC BY AIR INSTEAD OF ROAD

Since 1975, Imerys, the global market leader for mineral-based specialist solutions, has been operating a material ropeway in the talc quarry of Trimouns in southwestern France. In order to optimally fulfill the environmental requirements, POMA was commissioned with the refurbishment of the installation. The newly constructive ropeway transports material quantities on its five-kilometer-long aerial route that would otherwise

have required 20,000 HGV journeys over a distance of 17 km – a significant reduction in environmentally damaging emissions. As it is fitted with DirectDrive, a central monitoring system for automatic adaptation to the load quantities and special sheave batteries, the maintenance intervals can be increased without sacrificing safety requirements. The construction took place during two winters, in order to avoid disrupting the quarry operations.

Outlook 2021

FRANCE – LA PLAGNE

Glacier connection

SAP (La Plagne Development Company - Société d'Aménagement de la Plagne), a subsidiary of Compagnie Des Alpes (CDA), awarded POMA the contract for a particularly challenging project: the construction of four gondola lifts, that connect the Bellecôte via the Roche de Mio Plateau with the Chiaupe Glacier. Within three years a new connection is to be created for the La Plagne ski resort.

These four new gondola lifts will replace the venerable 6-passenger gondola lifts that were also built by POMA in 1975 and 1978. As expected, the new installations will take a huge step forward in terms of performance,

speed and availability. The “Roche de Mio” reaches a capacity of 3,600 p/h at a speed of 7 m/s. To improve the comfort on the route, EVO Xline cabins – including two customized VIP cabins – will be used. The environmental requirements include the protection of the Chiaupe Glacier and its ecosystem. The number of towers was reduced by 23 in comparison to the old installation – in spite of nearly three times the capacity. Eco-efficient equipment is also used, such as grease-free LP 20 sheave batteries on the “Roche de Mio” gondola lift, as well as four DirectDrive units.



MONGOLIA – ULAN-BATOR

Urban priority

The population of the capital of Mongolia has more than tripled since 1990. At 1.5 million, it accounts for nearly half of the country's population today. Connecting the suburban settlements to the city center is one of the top priorities of Ulan-Bator. The Tuul River and the Transmongolian Railway are creating a major obstacle to this. Furthermore, the transport network is relatively underdeveloped. A state-of-the-art urban ropeway system turned out to be the most appropriate solution. In 2023, a 6-km-long gondola lift with 122 cabins will be operating between the northern districts of the city and the city center via three stations.

DOMINICAN REPUBLIC – SANTO DOMINGO

Network extension

The Dominican capital city counts on sustainable mobility. In 2018, a 5-km-long gondola lift was already commissioned here that links 23 districts. It has now been decided to build another 4.2-km-long installation with four stations in the northeastern part of the city. 395,000 inhabitants live in the catchment area, who will reach the city center more quickly and comfortably with the new line, thanks to its high capacity of 4,500 passengers per hour. The opening is planned for 2022.



FRANCE – GRENOBLE

Mobility development

Grenoble, the “Capital City of the French Alps”, is anticipating population growth of more than 6,000 inhabitants during the next ten years and growth of 5,000 jobs. The development of functional mobility for commuters is therefore of great importance for the city. On behalf of the Syndicat Mixte des Mobilités de l'Aire Grenobloise (SMMAG), a 3.7-km-long gondola lift is to be built with six stations in between three tram stations by 2024. The new installation will link the four districts of Fontaine, Sassenage, Grenoble and Saint-Martin-le-Vinoux in northwest Grenoble to one another.

RUSSIA / CHINA – BLAGOVESHCHENSK

Beyond borders

A new chapter in Chinese-Russian relations: POMA is building a 973-meter-long cross-border gondola lift over the Amur River. The ropeway will connect Blagoveshchensk in the Amur administrative district in Russia with Heihe in the Chinese Province of Heilongjiang. Customs and border controls can take place within the stations. The four cabins offer space for 60 passengers, which results in a capacity of 450 people per hour with a journey time of four minutes. For the year 2024, 1 million passengers are anticipated and a regional upturn for tourism and the economy. The completion is planned for the second half of 2022.



Promoting top performance



2020 was a positive year for AGUDIO. In spite of the difficulties in connection with the COVID-19 pandemic, important ongoing projects have been completed.

For the construction of dams, AGUDIO cable cranes have proven to be the most cost-effective and efficient solutions for transporting construction equipment and concrete. AGUDIO cable cranes were successfully used for the construction of the Daivoes and Alto Tamega dams in Portugal as well as Gibe III and Koyscha in Ethiopia.

Also in 2020 AGUDIO invested in the development of the flyingbelt technology designing the first high-capacity flyingbelt able to move 3'000 t/h of material over a single span of 600 meters. The flyingbelt will be put into operation for the construction of the Rogun dam in Tajikistan.

Benchmark for efficiency

CABLE CRANE IN KOYSHA, ETHIOPIA UPGRADE AND RELOCATION

The Ethiopian government has processed an extensive development programme for electricity generation from sustainable sources. On the Omo River, around 400 km southwest of the capital city, Addis Abeba, the three dams Gilgel Gibe I, Gibe II and Gibe III have already been realized. A fourth dam, called Koyssha, is currently under construction. For the transport of material and construction equipment, a radial cable crane by AGUDIO has been used. It was reconditioned, upgraded to 35 tons payload and relocated to the building site of the Koyssha dam. A reservoir, with a capacity of nine billion m³, is currently under construction.

CABLE CRANE DAIVONES, PORTUGAL RELIABILITY AND AVAILABILITY

In spring 2020, the Daivoes dam in Portugal was completed. The 77-meter-high and 264-meter-long dam of the Tamega River hydropower complex is 75 km away from Porto. For the construction of the dam, two parallel AGUDIO cable cranes (payload of 28 tons each) have transported 250,000 m³ of concrete in the last two years. The tight schedule for the construction of the dam as well as the reliability and performance of the AGUDIO cable cranes were decisive for the Ferroviária - MSF Baragens consortium to award the contract.



FLYINGBELT ROGUN, TAJIKISTAN NON-STOP INNOVATIONS

In 2020, AGUDIO has invested further in the flyingbelt technology, and the first high-capacity flyingbelt was designed and implemented with a conveying capacity of 3,000 t/h and a single span of 600 meters. This type of installation will be put into operation in Tajikistan during 2022, where the highest dam in the world (335 m)

will be built. The flyingbelt will be part of a reversible conveyor belts chain. The entire excavated material will be temporarily transported to a storage area. In a second phase, the direction of transportation will be reversed and the material will be reused for the construction of the dam.

Outlook 2021

The ongoing projects and numerous enquiries confirm the AGUDIO brand as a reliable and high-performance partner for the design and construction of material transport systems.

The development of the flyingbelt technology will also continue in 2021. Thanks to the newly developed hybrid

belts, one single rubber belt can run partially in traditional steel structures on the ground as well as partially in a rope suspended infrastructure. This kind of design allows an optimal investment and, at the same time, an optimal routing overcoming rivers and valleys.



Leading Innovation

Prinoth

After several record years in a row, the last financial year was a departure for PRINOTH, as the economic slump of 2020 did not pass by unnoticed here either. With its excellent reputation for quality and service, PRINOTH was nevertheless able to secure good orders. The snow grooming business once again proved that it is the partner of first choice for prestigious events in the international competition scene. Towards the end of the year, PRINOTH substantiated its position as a technology leader and set a milestone in the area of alternative drives with the introduction of two concept snow groomers.

After the initial reaction of the market to the corona virus, the vegetation management business returned quickly back to its customary strength. It posted strong results in the second half of the year, particularly with attachments. While the virus had a more notable impact in the Eastern European and South American markets, the business situation normalized very quickly in Europe and the USA and helped PRINOTH to achieve exceptionally positive results.

With a steady order book, 2020 offered solid demand for the PRINOTH tracked vehicles' PANTHER platform, especially in natural gas transmission and distribution. Additional key elements to the success of PRINOTH in 2020 were the diversification in markets like the UK and new applications for our vehicles. Examples of ensued collaboration are the development of the biggest and most efficient tracked concrete mixer with McNeilus and that of an off-road lime-spreader with Streumaster.

Snow groomers

In addition to durable hardware, PRINOTH continues to focus on upgrading digital functions and services. The 2020 financial year was particularly subdued in the winter industry, because of the uncertain economic situation. Although there are still likely to be restrictions in the near future, the winter sports industry is ready to make a comeback and there are many opportunities already presenting themselves. At the end of 2020, PRINOTH paved the way forward for sustainable skiing. The two zero-emission concept vehicles that were extremely well received around the world are already in demand.

PRINOTH Snow Groomers

- + Powerful, efficient, clean
- + Outstanding customer service
- + Digital solutions for increased efficiency
- + CLEAN MOTION philosophy for sustainability

LEITWOLF h₂MOTION

HUSKY eMOTION

LEITWOLF h₂MOTION & HUSKY eMOTION

Concept future

In mid-December, PRINOTH presented two new concept vehicles to the world in the area of alternative drives: LEITWOLF h₂MOTION and HUSKY eMOTION. With the LEITWOLF h₂MOTION, PRINOTH launched the world's first snow groomer with a hydrogen fuel cell and is thereby paving the future for sustainable slope management.

With the HUSKY eMOTION, the latest and lightest fully electric vehicle model also went into its active testing phase. PRINOTH is thereby setting an imposing innovative signal in two of the most promising drive energy segments, which perfectly coordinates zero-emission technologies with the challenging operations on difficult terrain.



World Championships 2020 in Antholz / IT

SPORTEVENTS

Partner of choice

PRINOTH is and remains the partner of choice for major winter sports events. The year 2020 began with the Biathlon World Championships in Antholz. PRINOTH supplied two snow groomers that were wrapped in the event design. PRINOTH is highly regarded worldwide for first-class support of events. As the supplier to the Alpine Junior World Ski Championships, PRINOTH guaranteed flawless slope conditions in Narvik, Norway

in March 2020 and the partnership also foreshadowed the World Ski Championships in 2021: PRINOTH already provided support with the organization of the Snowboard World Cup in December in Cortina. PRINOTH was also strongly represented at the races in Austria at the end of the year; not only for snow grooming, but also as part of the partnership with the PRINOTH-ÖSV Food Truck, which was already tried-and-tested in 2019.

AFTER SALES

360-degree service

Comprehensive innovations were implemented in AFTER SALES during 2020. The PRINOTH Academy was completely redesigned and supplemented with an attractive e-learning platform. The advanced training program is the most comprehensive in the industry and includes courses for drivers and technicians in all PRINOTH divisions: Snow Groomers, Tracked Vehicles and Vegetation Management. Work took place at full speed on the spare parts shop, which is integrated into the existing system landscape and provides maximum

added-value for customers. The digitization of the merchandise management system is also progressing at multiple locations. PRINOTH customers also benefit from the expanded license acquisition in 2020 for performing warranty work on MTU and CAT motors: PRINOTH service technicians can now perform these activities. PRINOTH AFTER SALES can therefore offer customers a modern one-stop service: practice-oriented advanced training, competent maintenance and short paths.



Tracked Vehicles

The year 2020 started with optimism running high for new pipeline projects and with PRINOTH's bold presence at CONEXPO, the biggest fair for the North American construction industry. However, crude pipeline demand for crawler carriers quickly plummeted first due to oil price declines as well as to delays related to the uncertainty in the regulatory environment caused by challenges to the Nationwide Permit 12 for the Clear Water Act and, of course due to COVID-19-related delays. On the other hand, the rising appeal for new technologies, services and power capabilities confirmed the expectation for high demand of cranes, digger derricks and aerial platforms installed on PANTHER vehicles to support the modernization of the US power grid. Natural gas remains central to a lower-carbon future in this transition. PRINOTH crawler carriers are being used in

different applications to support projects aiming to put in place an extensive, resilient natural gas transmission and distribution network.

PRINOTH Tracked Vehicles

- + Constant demand for PANTHER platform applications
- + Solid business situation in the North American natural gas sector
- + Expansion of market share in Great Britain and Germany



Bradley NTD T14R



Streumaster Lime-Spreader

PRINOTH & BRADLEY'S

First units sold in the UK

In the Spring of 2020, PRINOTH started working with a new distribution partner in the United Kingdom, the Bradley Group, located in the Manchester-Wigan area. Through collaboration with Bradley's, PRINOTH was able to secure sales to National Tracked Dumper Hire Ltd, the largest rental house of crawler dumpers in the UK, and is quickly gaining traction. Other orders are confirmed and the Great Britain market promises to introduce new applications with the tracked dumpers in the near future.

PRINOTH & STREUMASTER

The PANTHER among the lime spreaders

Many new applications were developed during the year as it is at the core of the Tracked Vehicles business. PRINOTH announced last fall a joint project with German-based company Streumaster, part of the Wirtgen Group, to create a lime-spreader on rubber tracks with the highest productivity and the best off-road performance. The two manufacturers collaborated to develop a 13- m3-sized lime-spreader on rubber tracks with the PANTHER T12 chassis as a base, making it the largest on the market built on rubber tracks.



Mc Neilus

Vegetation Management

In 2020 PRINOTH Vegetation Management had a robust order book. In the USA, the M450s-1900 continued to pick up: High demand and extremely positive feedback meant that the requests could hardly be fulfilled. The introduction of two additional working widths of 1600 and 2200 mm for the hydraulic mulcher came just at the right time. The introduction of new products strengthened PRINOTH's position as a top supplier for vegetation management solutions. The mulching product range was supplemented with the M450h lightweight brush mulcher for remote-controlled tracked mowers, as well as a M450m version for small tractors and with the new R800 rotovator, an innovation has been introduced into the product range in the area of subsoilers. The RAPTOR 500 with the M700 mulching attachment has established itself as an industry favorite, due to its optimal power/

weight ratio, reliability and low fuel consumption. It is similar with the RAPTOR 300 and M650 attachment – a combination that is very popular worldwide.

PRINOTH Vegetation Management

- + high demand for attachments and positive feedback
- + new product introductions
- + innovative solutions for new applications
- + As a real powerhouse, the RAPTOR 500 is impressive as a leader in its class.



M650m TURBO



RAPTOR 300r with snow blower

M650m

Safety advantage turbo coupling

For 30 years, PRINOTH has been working continuously on new versions of efficient mulchers. In the European environment, the M650m mulcher is a well-known, established machine for medium-heavy forestry applications. Now the best-seller is available with turbo coupling for even more safety when working with tractors in the 200-400 hp category. The main advantage of the turbo coupling is the overload protection, which reduces the risk of damage to the tractor during mulching to a minimum. The turbo coupling compensates load peaks that occur under tough working conditions, thereby protecting the entire drive system and making it easier to operate.

RAPTOR 300r

Clearing snow with grip

In spring 2020, the RAPTOR 300r self-propelled mulching carrier opened up an application outside of the forest: The 275 HP RAPTOR 300r with a snow blower was used for the first time on the 48-km long alpine road. Where tractors with a snow blower reach their performance limits, the RAPTOR 300r with its rubber track and mounted crampons provides the necessary grip on the icy track and proves to be an exciting alternative for snow clearance. Another advantage in comparison to the tractor attachment – from the RAPTOR 300r cockpit you have a clear view of the snow blower and the path to be cleared. The PRINOTH SNOW HOW software ensures targeted distribution of the snow masses, which prevents the destruction of path boundaries.



M450h

The future of snow



Also in 2020, the main focus for DEMACLENKO was on the core business of technical snowmaking and in spite of the difficult market situation, several important prestige products were able to be implemented. Without a doubt, the highlight of the year was the market launch of the new Titan 4.0 fan gun, which immediately convinced customers worldwide. With the tried-and-tested EOS, which is particularly known for its unbeatable energy efficiency and is also available as a powerful double-head version, DEMACLENKO has already stood out among the lance models for many years.

Digitization is advancing very quickly and thanks to the internally developed Snowvisual 4.0 visualization software, DEMACLENKO is able to offer a fully-developed tool for smooth-running control and monitoring of the snowmaking system. The software enables fully-automated and consequently, a very resource-conserving and sustainable operation.

2020 was also entirely marked by diversification for DEMACLENKO. The company intensively used the challenges of the COVID-19 pandemic to sound out new business fields and applications for the products. Due to an efficient disinfection system for gondola lifts and an extinguishing turbine for fire-fighting, a foothold was gained in two new sectors at the same time.



PROJECTS 2020

Projects worldwide

IN DEMAND ON THE SLOPES

In spite of the uncertain economic situation, DEMACLENKO was able to implement numerous international projects and therefore continues to stand its ground as one of the leading companies in the snowmaking sector. Particularly in Austria, many new installations were realized, such as in Mayrhofen, Gargellen, Silvretta Montafon, Flachau and Kitzbühel. DEMACLENKO, as the “Official Supplier of the Hahnenkamm Race”, also supplied the latter with a Titan 4.0 in a special white-red design that was installed on

the finishing slope of the world-famous “Streif”. Additional large-scale projects were realized in Germany on the Söllereck, in Italy with Plose and Dantercepies, in France with La Colmiane and Gourette and in Switzerland with Saas-Fee and St. Moritz. But investments were also made outside of the core market in the Alps: for example, with project in Voss and Geilo in Norway, Powderhorn in the USA, Didveli in Georgia and Polski Koleje Linowe in Poland, DEMACLENKO is also continuing its success course on the international stage.

TITAN 4.0 & EOS DUO

Innovation meets quality

When matured know-how meets hunger for progress and a pioneering spirit, maximum results are the logical outcome: With the Titan 4.0, launched in 2020, DEMACLENKO combines user friendliness with best-in-class performance and high-quality product design. The fan gun was immediately convincing and impressed customers internationally with the excellent snow quality, efficient energy consumption and record production output of 120 m³/h.

The EOS DUO, DEMACLENKO’s tried-and-tested lance model in an innovative double-head version, was also received very positively. With a spraying radius of 210°, the EOS DUO covers a large snowmaking area and is particularly suitable for targeted reinforcement of individual slope sections with appropriate wind conditions. It combines the unbeatable energy efficiency of the EOS basic model with a strong water flow of approximately 9 l/s, which significantly increases the snow production.



Pump station Gargellen / AT

KNOW-HOW OPENS UP NEW MARKETS

In 2020, a new foundation stone was laid: Together with WLP, DEMACLENKO founded the new company WLP Systems, and thereby sealed off a new differentiation strategy. Specializing in water vapor technology for combatting dust and odors, as well as disinfection and fire-fighting, the wide range of innovative products and services was thereby expanded. Similarly to snow guns, the technology is based on water atomization know-how. The products are used, for

example, on building sites, in production halls, in tunnel construction or on landfill sites and guarantee more efficient work processes and the health of the employees. The forward-looking synergy already proved itself at the beginning of the pandemic crisis: In the shortest time, an efficient disinfection system was developed that ensures fully-automated and gap-free disinfection of ropeway cabins.



Cortina / IT



Disinfection system

Outlook 2021

The Covid-19 pandemic poses major challenges for the world, however, DEMACLENKO looks to the future with optimism and confidence. A highlight of the year will be the Alpine World Ski Championships in Cortina d'Ampezzo, at which DEMACLENKO, together with its sister companies, LEITNER and PRINOTH, will ensure optimal competitive conditions as the official technical supplier and thereby emphasize the competence and quality.

The main focus in 2021 is on innovation and digitization, in order to continuously be able to offer the customers new solutions and technologies of the latest generation. Another focus is on the internal optimization of processes and the already successful path that has been taken in diversifying the product range.

Full of future energy



The wind sector, and hence also LEITWIND, did not remain unscathed by the global crisis in 2020. Once again, remaining optimistic, patient and focused held true and continues to hold true. The LEITWIND team is advancing current projects in the best possible manner to avoid or contain possible delays. The challenges in the various sectors (transport, logistics, assembly etc.) were great and there was a permanent need to keep up-to-date, particularly as the legal situation in the respective countries of customers, partners and suppliers was constantly changing. With exemplary consistency, LEITWIND's main aim in 2020 was to realise the project on the island of Guadeloupe and keep any delays within limits. Furthermore, LEITWIND succeeded in concluding new supply and service contracts: Five turbines were installed and commissioned in Greece, providing the area with clean, locally-sourced wind energy.



Investments boosted

FRANCE – GUADELOUPE

POMA LEITWIND IN THE CARIBBEAN

LEITWIND developed in 2019 a wind turbine with rotor blades able to withstand extreme wind forces of up to 250 km/h. The new LS39-H “typhoon class” rotor blade ultimately celebrated its premiere on the French island of Guadeloupe. Warm and humid days, violent storms and a high salt content in the air characterize the near-shore location of the six turbines, enhancing dramatically the complexity of this unique project. Ultimately, thanks to the careful planning and high expertise especially for customized solutions, POMA LEITWIND was able to successfully commission the first six LTW80 1.65 MW Class Typhoon LEITWIND plants.

GREECE

EXPANSION OF LOCAL WIND ENERGY

Since the beginning of 2021, five new LEITWIND wind turbines have supplied the “Land of the Gods” with green, locally generated wind energy. Two new LTW80 wind turbines (each 1.5 MW HH 80 m) form the Gaidourorachi Wind Park, which is situated amidst an impressive landscape between the Corinthian Gulf and the Parnassus mountain chain. In addition, other three LTW80 1.5MW (HH 50 meters) were installed for the Ipsoma project.



LTW42, Steinfeld / DE



LTW77, Rocchetta St. Antonio / IT

INNOVATION DRIVER LTW42

As usual, LEITWIND also invested in research and development projects. In contrast to the big wind turbine manufacturers, LEITWIND is increasingly concentrating on its own niche market: customised projects, repowering and own consumption. Thus, to become a leader in the decentralized, small-scale wind energy business, LEITWIND increased its investment in the LTW42. With a rated output range of 200kW to 500 kW, the LTW42 is the smallest wind turbine model from the LEITWIND portfolio. This turbine type offers an optimal solution for decentralised electricity generation and can feed it into low-voltage and medium-voltage grids, in addition to the direct generation of electricity for own consumption.

STRONG SERVICE BUSINESS

Service and maintenance, core competencies of LEITWIND, drive a steady and constant growth for the company, being a reliable source of revenues. In 2020, a total of 183 wind turbines were included in LEITWIND O&M arrangement, for a total capacity of 215 MW. The customers are distributed across two different continents and a total of 12 nations, which LEITWIND manages flawlessly thanks to its nine service centers across seven countries. The supervised wind parks are monitored 24/7 and the customer service is always available for ordinary and extraordinary maintenance operations. Indeed, the achieved technical availability (TA) of 98% for 2020, bear witness of the tremendous job LEITWIND's customer service is performing year over year.



LTW80 1.65 MW Class Typhoon, Guadeloupe / FR

Outlook 2021

Especially for the Italian market, LEITWIND senses an upturn for 2021. Due to the FER1 ministerial decree, after years of constitutional uncertainty, stability is returning and the investments in the renewable energies sector are growing. LEITWIND can naturally profit from this and take advantage of this upward trend for itself. The market-leading product from the LEITWIND portfolio is still the LTW90 wind turbine with a rated output of 1.0 MW. Due to the large rotor diameter, this wind turbine guarantees excellent electricity generation, even in areas with low to medium wind speeds.

The new orders confirmed so far include wind turbines in the regions of Apulia and Basilicata. LEITWIND is already very familiar with these regions: So far, just over 100 LEITWIND wind turbines have been commissioned in Southern Italy, featuring around 160 MW for the generation of clean energy.

With the signing of another contract, LEITWIND will also celebrate its debut on the Italian island of Sardinia in 2021, with a single LTW77 (950 kW) installation.

Digitally ahead

skadii RESORT
MANAGEMENT
REDEFINED

With the digital transformation, a new era of efficiency and sustainability is beginning for the operators of ski resorts.

The driving force of this development is the HTI Digital division with the Open Resort Management Platform Skadii that has been developed in-house. This combines the digital innovation of various areas of application and enables synergies in technology and development, which decisively advance the management of ski resorts.

With a single login, Skadii provides access to all operationally-relevant information in real time.



SKADII TAKING THE WORLD BY STORM

Whoever wants to keep pace with the leaders needs excellent ski resort management. The patented Open Resort Management Platform Skadii by HTI Digital is a model for innovation and increasing efficiency. The platform was already able to convince the customers immediately when it was presented at the Interalp trade fair in 2019. The simple access, many functions and options, as well as the clearly laid out information management are advantages that hardly anyone will want to miss. Skadii is already in use in more than 200 ski resorts worldwide.



Efficient task management with Skadii



Effective servicing with Skadii

DIGITAL ALL-ROUNDER

Skadii provides the ski resort operators with all of the operational live data for the ski resort at a glance – at any time, on the computer or mobile device. This means that day-to-day work is simplified significantly. In addition to the ongoing product improvement, many new applications were developed and successfully launched in 2020. The digital Task Manager offers a practical digital solution for the creation, distribution, and tracking of various tasks in the ski resort. When it is supplemented with time recording, simple and efficient task management can be achieved in the entire ski resort. A new, digital maintenance tool for the entire ski resort is the

Maintenance Overview application. Maintenance schedules of various manufacturers are automatically loaded and activities can be carried out in a clearly laid out and convenient manner. The map of the new Global Map function shows an overview of all systems, machines and technical installations. The Meteo APP enables accurate weather forecasts as an important decision-making basis for ski resort management. Innovative product solutions will also advance ski resort operators further with digitalisation in 2021. More efficient, effective and sustainable management of ski resorts is a task that the Group of companies is very committed to.

Principle of responsibility

The Group of companies has also continued to remain faithful to its principles in 2020 and is still trying to maintain a healthy balance between ecological, economic and social aspects. Acting with foresight means acting responsibly. That is why the entire Group of companies is particularly dedicated to its employees, their health and always up-to-date training and advanced training.

A special commitment is also devoted to better inclusion, integration and participation of disadvantaged groups. The people are the sturdy foundation on which forward-looking products are developed and can be produced. The Group of companies also fulfils societal expectations with production technology, monitoring the supply chains and dealing with suppliers and clients.

Usefully committed

ENVIRONMENTAL PROTECTION PUT INTO PRACTICE

The positive impact of self-initiative in environmental protection is shown at the Vipiteno headquarters in South Tyrol and at the location in Telfs, Austria. Since the introduction of personal glass bottles in 2019, 60,000 plastic bottles are saved there every year. Meanwhile, PRINOTH in Canada specifically collects wooden pallets and packaging boxes to convert them into biomass in local factories. It is also ensured that the remaining packaging material is recyclable. Another example of how the environment is taken into consideration is the internal company magazine,

Together Global, which is printed on FSC-certified paper. Shipping takes place in biodegradable films. The PRINOTH spare parts warehouse at the Telfs location in Austria shows how it can also be done completely without paper. A state-of-the-art scanner and barcode technology has been introduced here. The wellbeing of the environment also counts for POMA in France. The company awarded and certified for its sustainable management of the company's outdoor spaces. With prudent water management and the protection of biodiversity, POMA makes an important contribution to a stable ecosystem.



LED lighting in production



Paperless spare parts warehouse in Telfs / AT

SHINING EXAMPLE

Climate protection is at the forefront of people's awareness – and naturally also on the agenda of the Group of companies. That is why every opportunity is used to reduce environmentally harmful emissions. The savings potential is enormous with the lighting. Since the changeover to LED lighting during the course of 2016, the energy consumption has been reduced by 654,000 kWh. In addition to high energy efficiency and durability, LED lights offer another advantage: even, glare-free and flicker-free light with an optimal color temperature.

654.000 kWh
energy saving

New perspectives

UNLOCKING AND PROMOTING POTENTIAL

Particularly in times of uncertainty it is important to have a way forward in mind. Particularly young people, who are now starting their vocational training under difficult conditions or are still in the orientation phase, need motivation and support from the businesses. While vocational training positions were cancelled in many cases, the Group of companies was able to prove its endurance. Interns received insights into a state-of-the-art working environment and vocational trainees continue to complete sound theoretical and practical training over several years.

48
*Vocational
trainees*



LTW77, 1.0 MW

GREEN FUTURE

The avoidance of emissions is the most effective method of environmental protection. An enormous contribution is made to this with the urban projects all over the world. The realized installations for passenger transport meet the highest requirements when it comes to sustainability and provide considerable relief for city traffic. In addition to the reduction of climate-damaging CO2 emissions in the production facilities, the optimization of energy generation itself is a future topic that concerns the Group of companies. Moved by the wind, the installed wind turbines supplied 798,000,000 kWh of green generated energy in 2020.

798.000.000 kWh
green energy



Vocational trainees and interns

DONATION TRADITION

The Group of companies has traditionally had an open ear for societal concerns. Particularly in the catchment area of the various locations, through donations and sponsoring, the realization of projects is facilitated in diverse areas – social, cultural and sports. The Group of companies is also committed to social concerns internationally. Through the Gruppo Mis-

sionario Merano (IT), it has joined a donation initiative to promote the training of skilled workers in Africa. Students are being supported in Northern Benin are supported financially during their vocational training years. For example, the young people are trained as skilled workers for solar plants.

€ 912,580
were donated in 2020



Young people in the Liweitari Center of Natitingou



"Fondation d'Entreprise"

PROOF OF SOLIDARITY

The year 2020 was shaped by concern about health. An extreme amount of resources were bound by the pandemic and many branches of industry were restricted significantly due to numerous safety measures. So it is all the more gratifying that POMA was able to start its first activities within the scope of the foundation that it founded in 2019. The "Fondation d'Entreprise" of POMA, with 30 employees, supported the French Para Ski World Championships for fellow human beings with physical/mental disability. Furthermore, three employees helped children in the Institute for Paediatric Haematology and Oncology in Lyon to brighten up their daily lives. With the aid of templates, the little ones were able

to decorate their own canvasses with alpine huts, chairlifts, skiers and mountain animals. Afterwards, they decorated their hospital rooms with the finished pictures and little plush goats.

Another activity of the foundation was dedicated to people in precarious conditions, in cooperation with the "Ma Chance Moi Aussi" (Give Me A Chance Too) association. Within the scope of an educational project on the subject of mobility and travelling, children from socially weak families were given the opportunity to visit the ropeway in Grenoble.

Worldwide production and administration locations



Telfs / Austria



Grenoble / France



Gilly-sur-Isère / France



Vipiteno / Italy



Montmélan / France



Passy / France



Veryns / France



Vipiteno / Italy



Vipiteno / Italy



Castelnovo / Italy



Selva Gardena / Italy



Torino / Italy



Lacedonia / Italy



Stará L'ubovňa / Slovakia



Beijing / China



Chennai / India



Salt Lake City / USA



Herdwangen / Germany



Granby / Canada



Grand Junction (USA)

