



Swiss Performance



# Swiss Performance – Swiss Innovation for your success

Swiss Performance is the latest generation of cable cars from Bartholet. The new developments offer even more ride comfort, higher capacities and low-noise operation. With Swiss Performance, maintenance work is significantly reduced. In addition, the new modular design enables simplified and fast assembly.

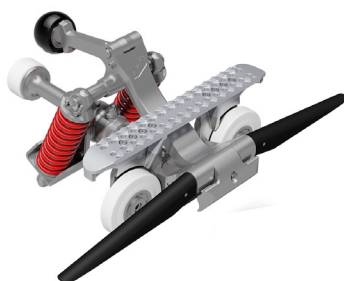
Let the Bartholet innovative spirit, the reliable Swiss quality and the unique design convince you!

## Swiss Performance – Clamp

The next generation of the Bartholet K3 clamp is our further development, the Swiss Performance clamp. The clamp convinces with its proven robust and maintenance-friendly design. Well thought-out solutions lead to an even greater reduction in revision and maintenance costs.

### THE MOST IMPORTANT ADVANTAGES AT A GLANCE:

- First clamp worldwide with a maximum rope diameter of 65 mm
- The only clamp that allows a function check on the system when installed (20 clamps per day can be checked by an expert)
- The only system with the clamping force test directly on the rope
- Payload:       2000 kg at 39° rope inclination  
                  1790 kg at 45° rope inclination
- Up to 25 % more capacity possible by expanding the area of application
- Small forces on the clamp ensure greater safety during maintenance and very low loads on the bearing points
- Developed for very heavy tracks with high rope inclination
- Redundant axle locking and only one type of bearing facilitate spare parts management
- Optimization of the number of individual parts
- No adjustment necessary
- Minimal noise emissions due to optimum lever geometry
- Backwards compatible: No station conversions necessary when changing from K3 to Swiss Performance terminal
- By optimising the contact geometry between the clamp and the rope pulley, the crossing at the supports is even smoother and smoother.



# Swiss Performance – Panoramic Gondola

## INCOMPARABLE FEELING OF SPACE

Together with the Porsche Design Studio, Bartholet developed the modern and comfortable panoramic gondola in the „Design by Porsche Design Studio“. Not only the appearance of the Panoramic gondola is unique, but also the feeling of space is extraordinary. Enjoy the view through the extra-large panorama windows, optionally made of polycarbonate or safety glass.

## ADVANTAGES

- Unique Design
- Unparalleled panoramic views
- Lightweight aluminium construction with honeycomb floor structure
- Compact doors, with 2-step locking
- Maintenance-free door automat
- Individual equipment possible
- Wide door opening for good wheelchair accessibility / goods transport (830 mm)
- Barrier free entry
- DFS Dual Feder System (spring package for a smooth ride and rubber bearings for elimination of high-frequency vibrations)
- UV-resistant polycarbonate panes or optional safety glass
- Large-scale drainage of the interior through slits in the floor



## EXECUTION

The Bartholet Swiss Performance Panoramic Gondola can be designed according to your wishes. The ventilation concept consists of opening windows in both driving directions as well as ventilation slots in the floor area. This guarantees optimum air circulation in the cabin at warm temperatures.

## PANORAMIC „VIP“

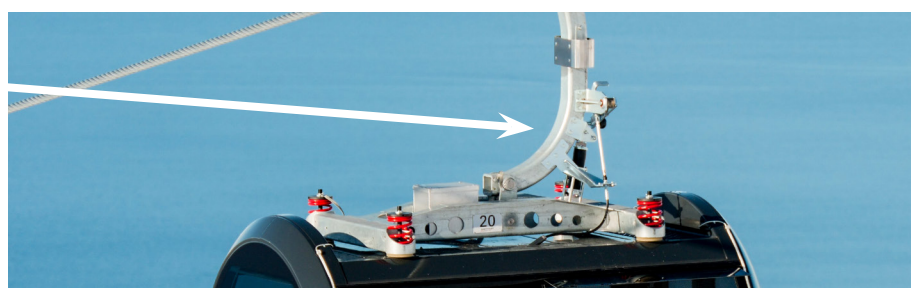
The wide range of our VIP gondolas leaves nothing to be desired. From the extensive entertainment offer to the champagne refrigerator, there are no limits to expectations.

The special feature here is to transform a normal gondola into a VIP gondola in no more than 30 minutes. The modular kit is easy to assemble, provides a noble ambience and is also a sales argument for the operator.



## GENTLE STATION ENTRY THANKS TO OPTIMIZED CAB DAMPING

In connection with the Swiss Performance further development, the mechanical system was optimized, which leads to a smoother, more comfortable station entrance.



# Swiss Performance – Station concept

## MODULE CONSTRUCTION

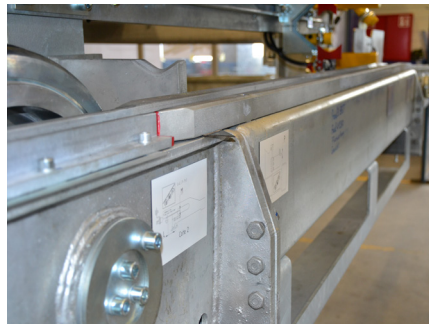
The Bartholet stations are pre-assembled in modules in the factory. These are delivered to the construction site in order to complete the station on site as quickly as possible. This method reduces the assembly time and is efficient in series production.



## NOISE REDUCTION IN THE STATIONS

A significant part of noise optimization begins at the station entrance. The entrance trumpet is spring-loaded on both sides so that the impacts on the guide roller are cushioned when entering the station.

In addition, in the course of the optimization, the running rails were underlaid with a damping insert in order to minimize noise when the vehicles pass through the station.



## WELL THOUGHT-OUT SOLUTION FOR ACCESSIBILITY IN THE STATIONS

The station is designed so that any work can be carried out ergonomically standing. The external platforms provide better and more convenient access to the components for inspection and maintenance purposes. In addition, the stations are equipped with transfer solutions from the inside to the outside.



The ascent to the station takes place either via a comfortable staircase with balcony at the front of the station or via a staircase at the rear of the station.





## FULLY AUTOMATIC STATION PARKING

Bartholet offers various garage systems and expansion stages, depending on the space available and the financial requirements.

We differentiate between stitch track, loop or station parking. Depending on customer requirements, garage parking can be manual, semi-automatic or fully automatic.



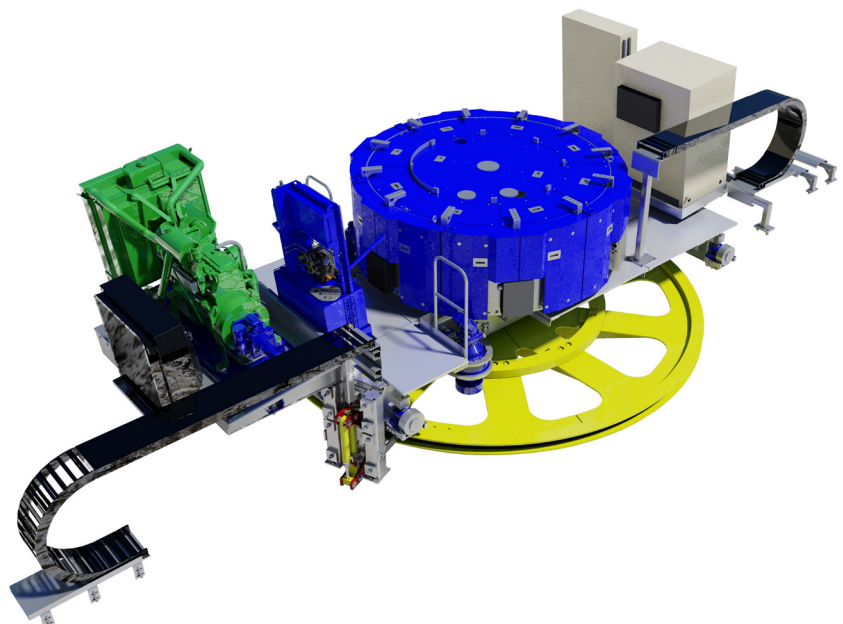
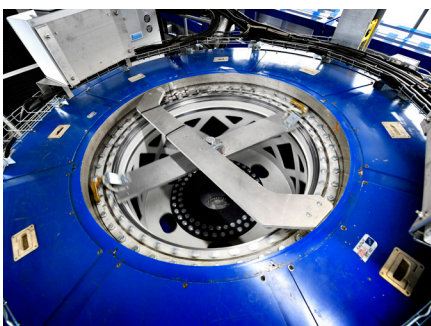
The convenient, fully automatic station parking system is the most space-saving variant in comparison to the classic vehicle parking systems. No additional constructions and components are required. The operator only issues the command „garage“ or „garage out“ via the control system. The vehicles are then parked in station circulation. The tyre conveyors are divided into individual segments which are driven by an electric motor with frequency converter. The segments can be controlled individually in order to enable a fully automatic process of parking and removal from the garage.

## DIRECT DRIVE

Bartholet's Direct Drive clearly differs from the direct drives already available on the market. The development of the Bartholet Direct Drive focused in particular on higher profitability for the operators. This is guaranteed by simpler maintenance, higher energy efficiency and optimized, redundant design.

The Bartholet Direct Drive is characterized by the following features:

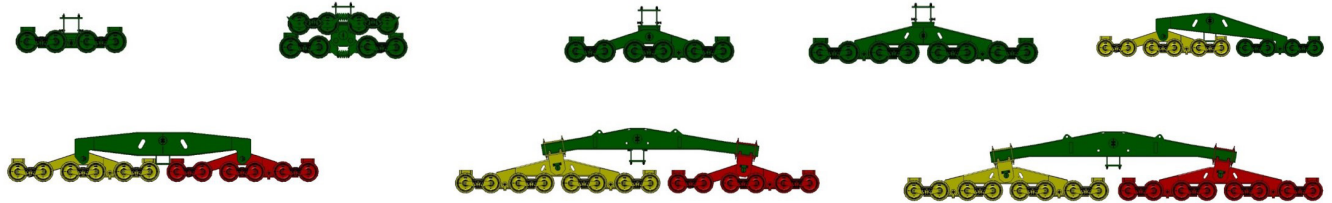
- Direct power transmission to the drive pulley
- Gearbox and cardan shaft no longer required
- Very low noise emission due to water-cooled engine
- Modular design (12 segments, 228 kW - 1380 kW)
- High redundancy in motor and power electronics (each motor segment has its own inverter)
- Maximum part weight 1200 kg (payload of a conventional helicopter)
- Segment design: Disassembly of individual segments can be carried out independently of others
- Energy-efficient: 92 % efficiency
- Value added of 85 % in own production
- Very good accessibility
- Low maintenance due to slowly rotating components
- Few bearing positions (2 pcs.)
- No oil



# Swiss Performance – Line concept

## TOWERS

In order to achieve more flexibility in the ropeway design, the supports are also manufactured in modular design. Thanks to the new development, the main rockers can be dismantled and assembled for inspection purposes with the small helicopter (max. 1200 kg). For flight assembly, the roller batteries can be divided into the following groups (colour-coded):

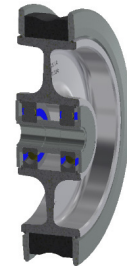


Special suspension devices make both disassembly and assembly with the helicopter considerably easier. This means that no additional securing of the roller battery against falling down is necessary during inspection work.



## OPTIMIZATION IN SPARE PARTS MANAGEMENT

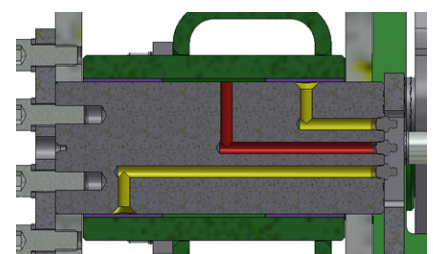
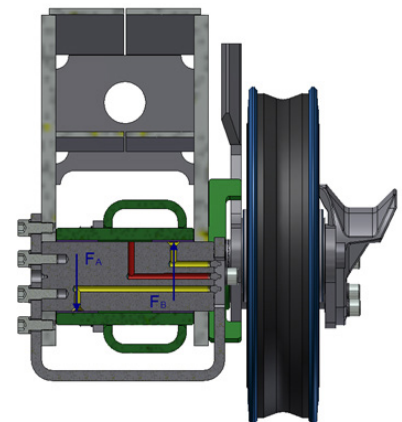
One and the same roller type is used on the track and in the stations. This saves costs for spare parts storage and reduces the space requirement in the spare parts warehouse.



## OPTIMAL LUBRICATION RESULTS DUE TO „MULTI-POINT-LUBRICATION“

The „Multi Point Lubrication“ is another unique development from Bartholet, which significantly reduces revision and maintenance work. The arrangement of the lubrication points ensures optimum forging at the bearing points and in the spaces between them. Moisture therefore has no chance of penetrating into the surroundings of the bolt. Corrosion is a thing of the past. The new arrangement of the lubrication points ensures optimum accessibility during maintenance.

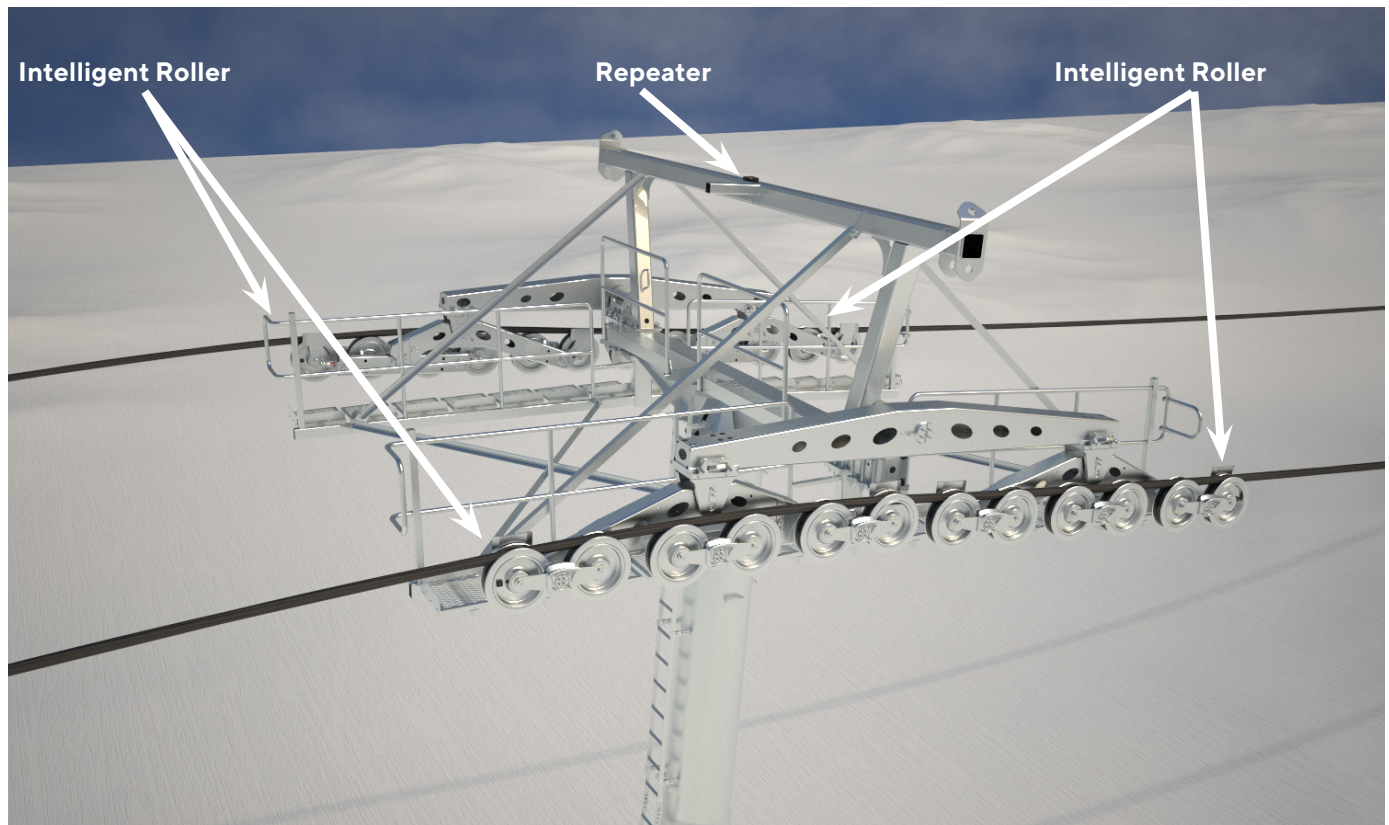
- 3 lubrication holes
- 2 x for the lubricant flow to the pressure side of the bearing (yellow)
- 1 x guide hole to prevent corrosion (red)





# Swiss Performance – Intelligent Roller

In the course of technical development, Bartholet has developed an intelligent roller. It is mounted at the beginning and end of the roller battery and measures various relevant data.

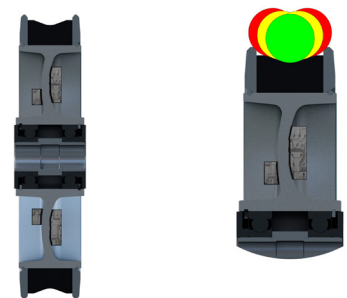


The intelligent roller works independently. The roller is designed in such a way that no cabling is necessary. The energy required at the sensors can be produced by the sheave itself.

The data is transmitted by radio from the roller to the repeater on the support head and further from support to support to the nearest station. There the measured values are displayed on the computer and archived.

The intelligent roller has several sensors which evaluate the following data and deviations from the actual condition:

- Rope position
- Wear of the bearing rings
- Condition of the bearings in the rollers
- Lateral force due to wind



## SWISS QUALITY PRODUCT

Bartholet Maschinenbau AG, headquartered in Flums, Switzerland, is an international leader in ropeway systems, amusement parks and mechanical engineering. A motivated and qualified team of more than 450 employees as well as a modern infrastructure guarantee a fast and customer-specific realization of complex projects. For more than 55 years Bartholet Maschinenbau AG has been planning and building ropeways in mountain areas and increasingly also in urban areas. Innovative ideas and the development of new, trend-setting products enjoy a high priority at Bartholet.

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