Vögele │ Footpath rehabilitation at an elevation of 2,300 m

Asphalt paving at Swiss mountain tourist hotspot

For the paving of a footpath and utility road at the summit of the Niesen, the lead contractor had to transport the Vögele MINI 500 paver by funicular railway to the summit station and feed material to it by helicopter.

Challenging location, logistics and weather conditions for the Vögele paver

On account of its striking shape, the 2,362 m high Niesen in the Bernese Oberland is also called the "Pyramid of the Alps". In order to prepare this popular tourist hotspot south of Lake Thun for the summer season, the footpath between the summit station and the Berghaus Niesen Kulm hotel/restaurant had to be resurfaced. The 170 m footpath is used for transporting food and beverages to the summit hotel and is frequented by around 1,000 visitors a day in the high season. As the summit of the Niesen can only be reached by the funicular railway or helicopter, the site logistics presented a major challenge. Due to the high quality requirements, the asphalt surface course had to be paved by machine to a width of between 1.8 and 4.3 m. Further difficulties were the extreme weather conditions at this altitude and the exposed location. As a result of the low temperatures, the paving team had only a narrow time window each day for the paving work.

Transport of the paver to the construction site by funicular railway

In view of the need to pave the new asphalt surface course efficiently and to a high quality standard, the lead contractor decided to use a MINI 500 paver from Vögele. The manufacturer's smallest road paver model is the ideal choice for applications where narrow paving widths, compact dimensions, low weight and high paving quality are required. Thanks to a transport length of 2.6 m, a width of 0.9 m and a weight of 1.4 t, the project team was able to transport the paver to the summit station on the Niesen funicular railway. The Niesenbahn is one of the world’s longest funicular railways and climbs to the summit station at gradients sometimes reaching 68%. ‘The job was a spectacular proposition, even before the actual paving began. Transporting a road paver on an historic funicular railway is not an everyday occurrence for us either’, says paving foreman Iwan Hachen. ‘The MINI 500 is extremely compact and was extremely practical in view of the requirements for this project.’

A helicopter flies in the asphalt mix for the MINI 500 every four minutes

The contractor hired a helicopter to keep the paver constantly supplied with asphalt mix. This allowed the hot asphalt mix to be transported to the paver as quickly as possible. It took on loads of mix from insulated and heated trucks 700 metres below the construction site and offloaded them directly into the material hopper of the MINI 500 at the summit at intervals of just under four minutes. Equipped with the AB 135 extending screed, including bolt-on extensions, the Vögele paver paved the 4 cm thick surface course over a width of 1.8 m - occasionally in several strips. The tightly scheduled material transfer ensured an uninterrupted paving process and enabled the team on-site to complete the surfacing work within a period of just two days – including the paving of verges.

**Photos:**

  
JV\_JR\_MINI\_500\_Niesen\_001\_PR.jpg  
An extraordinary paving project at the summit station. The lead contractor deployed a Vögele MINI 500 asphalt paver for the rehabilitation of a footpath on the summit of the Niesen mountain in Switzerland.

  
JV\_JR\_MINI\_500\_Niesen\_002\_PR.jpg

Difficult paving conditions with snow, wind and icy temperatures. A MINI 500 from Vögele was used to pave the new asphalt surface course efficiently and to a high quality standard.

  
JV\_JR\_MINI\_500\_Niesen\_003\_PR.jpg

A spectacular material feeding method. A helicopter offloaded fresh, hot asphalt mix to the MINI 500 every four minutes to keep it constantly supplied with sufficient material for continuous paving.

  
JV\_JR\_MINI\_500\_Niesen\_004\_PR.jpg  
The helicopter transferred the mix directly into the material hopper of the Vögele paver.

Please note: the photographs shown here are only previews. If you wish to publish them in other media, please download the higher resolution (300 dpi) versions from the link provided here.

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