

AlpTransit Viaduct 781 (Switzerland)



Project description

The construction of the new AlpTransit / NEAT railway connection through the Alps mountains is one of the biggest building projects currently being undertaken in Switzerland. Its tunnels and viaducts will reduce the travel time between Zurich and Milan by a full hour, to just 2.5 hours. The new route is scheduled to open to rail traffic in 2019.

A railway viaduct on the north side, known as Lotto 781, connects the new Ceneri base tunnel to the existing railway line between Bellinzona and Locarno. It has a length of 1012m and is curved with a radius of 850m.

mageba scope

mageba is supplying large pot bearings and massive shear keys to support the viaduct's deck. These were designed to withstand the large acceleration and braking forces of railway traffic and the centrifugal forces resulting from the viaduct's curvature, and the fatigue loading resulting from deck deflections. They must also be designed to facilitate the ground settlements of up to 120mm that are expected due to local soil conditions. The shear keys (which prevent horizontal forces but carry no vertical loads) are designed for forces of up to 9,850 kN, and the pot bearings resist up to 31,000 kN.

18 RESTON®STU shock transmission units are also being supplied, designed for forces of up to 5000 kN.

Highlights & facts

mageba products:

Type: RESTON®POT bearings
RESTON®FORCE shear keys,
RESTON®STU shock transmission units

Features: Shear keys designed for fatigue loading

Installation: 2012 - 2019

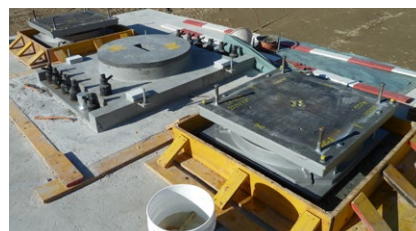
Structure:

Project: AlpTransit / NEAT
Country: Switzerland
Completed: 2019 (projected)
Type: Railway viaduct
Length: 1012 m

The viaduct is to the north of the new Ceneri Base Tunnel on the AlpTransit (NEAT) route.



The support of one pier (shear key at centre and a pot bearing at each side) during installation.



Installation of a RESTON®STU shock transmission unit in the viaduct's deck.

