

Hålogaland Bridge (Norway)



Project description

The Hålogaland Bridge is a 1,533 m-long suspension bridge which crosses the Rombaksfjorden in the municipality of Narvik in Nordland county, Norway.

The bridge forms part of the E6 Highway, a project which included the construction of two short tunnels, the Ornestunnelen and Storlikolltunnelen, as well as the construction of two new roads on both sides of the Hålogaland Bridge. Driving distance was shortened between Narvik to Bjerkvik by 18 km and between Narvik to Bjørnfjell by 5 km.

The 1.5 km Hålogaland Bridge is the second longest suspension bridge in Norway.

The span of the bridge was built as a closed steel box girder resting on five pillars with height ranging from 12 m to 30 m, with a clear height of 40 m and a clear width of 200 m.

The bridge is located near the Norwegian city of Narvik



mageba scope

mageba supplied two TENSA®MODULAR expansion joints of type LR17 with a total length of 27.8 m. The joints featuring the Quick-Ex system which in case of a joint replacement brings huge advantages. In 2020, mageba also installed a ROBO®MUTE noise reduction system below the LR17 joint in order to reduce noise emission to nearby residential areas.

The main pillars are supported by two RESTON®FORCE horizontal force bearings. They are designed for a maximum horizontal load of 1,800 kN (ULS) and longitudinal movements of ± 450 mm. The bearings featuring an elastomeric pad in between to accommodate vertical rotations.

Two RESTON®STU Shock Transmission Units designed with a maximum axial load of 10'400 kN (ULS), an axial stroke of ± 450 mm and a weight of 6 tons. Due to limited space on site, the units were designed with two separated chambers with different volume of oil.

Installation of a RESTON®FORCE horizontal force bearing



Highlights & Facts

mageba Products:

Type: TENSA®MODULAR expansion joint LR17 featuring Quick-Ex and ROBO®MUTE system
RESTON®FORCE Horizontal Force bearing of type FE-1800
RESTON®STU Shock Transmission Unit

Installation: 2018/2020

Structure:

City: Narvik
Country: Norway
Type: Suspension bridge
Main span: 1,145 m
Length: 1,533 m
Completion: 2018
Owner: Norwegian Public Roads
Contractor: Sichuan Road and Bridge Group
Engineer: COWI

Delivery of a TENSA®MODULAR expansion joint

