

Tähtiniemi Bridge (Finland)



Project description

In 1993, the longest cable-stayed bridge in Finland to date, the Tähtiniemen Silta, or Tähtiniemi Bridge, was opened to traffic. It was built, at a cost of approximately 200 million euro, to carry Finnish Highway 4 (E75) across Lake Ruotsalainen, one of the many lakes in southern Finland.

The bridge has an overall length of 924 m, and includes a cable-stayed (harp-form) structure with main spans of 165 m either side of its 105-metre pylon. The width of the deck varies between 22 m and 30 m.

mageba scope

For this project, mageba supplied two TENSA®MODULAR expansion joints of type LR10. With 10 individual movement gaps per joint, they facilitate longitudinal movements of 800 mm each. They also facilitate significant transverse and vertical movements, and rotations about every axis. A TENSA®GRIP (type RS) single-gap joint was also required, for smaller movements at one axis.

In addition, mageba supplied 26 RESTON®POT bearings to support the bridge's deck. These have a maximum load capacity of 15,500 kN, and accommodate deck movements of up to +/-450mm.

Highlights & facts

mageba products:

Type: TENSA®MODULAR expansion joints (LR10), TENSA®GRIP joint (RS), RESTON®POT bearings

Installation: 1993

Structure:

City: Heinola
Country: Finland
Completed: 1993
Type: Cable-stayed bridge
Length: 924m (main span 165m)
Designer: Pekka Pulkkinen, WSP

The bridge is located in southern Finland, near the town of Heinola



A typical TENSA®MODULAR expansion joint, fully installed and under traffic



Illustration (exploded view) of a RESTON®POT bearing of type TE (guided sliding)

