

Third Bosphorus Bridge (Turkey)



Project description

The Third Bosphorus Bridge, officially named the Yavuz Sultan Selim Bridge, is the third bridge built across the Bosphorus Strait which connects the Black Sea to the Mediterranean via the Marmara Sea. Not only does the strait divide Istanbul, it also forms part of the boundary between Europe and Asia. The new structure is of enormous importance to the region, carrying both road and rail traffic. The hybrid cable-stayed / suspension bridge will have a main span of 1408 metres, 322 m-tall towers and a 58 m-wide deck – three world records for this bridge type. The bridge was opened to traffic in 2016.

mageba scope

mageba supplied extraordinary bearings for the construction of the bridge, including specially developed cylindrical pendulum bearings. In relation to load and displacement, the curved sliding plates of these bearings have extremely small radii in order to stabilise the bridge horizontally under railway traffic. The bearings weigh up to 34 tonnes each, designed for vertical loads of up to 120 MN (more than the weight of the Eiffel Tower), while facilitating longitudinal movements of ± 770 mm. Transverse forces at the pylons are resisted by shear keys, with the loads transmitted by vertically oriented RESTON®POT bearings with up to 78 MN capacity.

Highlights & facts

mageba products:

Type: Special cylindrical RESTON®PENDULUM bearings,
RESTON®POT bearings,
Temporary elastomeric bearings

Features: For loads up to 120 MN

Installation: 2014–2016

Structure:

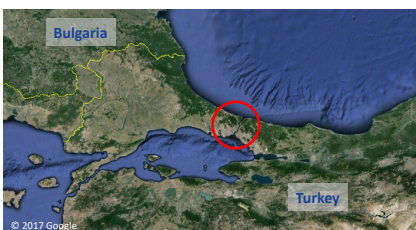
City: Istanbul

Country: Turkey

Completed: 2016

Type: Hybrid cable-stayed / suspension bridge

The bridge crosses the Bosphorus Strait, connecting Istanbul's European and Asian parts



A special cylindrical RESTON®PENDULUM bearing as fabricated, prior to delivery to site



Installation of a RESTON®POT bearing, vertically oriented for use on a shear key

