

Lifting Bridge Cassarate (Switzerland)



Project description

Due to recurring flood situations of the Cassarate River, which runs through Lugano to its mouth in Lake Lugano, a new lift bridge was built in the village that bears the river's name.

In case of flooding, the Cassarate Fula bridge can be raised by up to 1.6 meters. The required hydraulics and the bridge centering system are located in a shaft under the bridge. Once the road is closed off, the bridge can be raised using the control system. The load-holding and lowering brake valves are located directly on the cylinders, thus providing the mechanical safety. The bridge can stop at any height without the risk of accidental lowering.

mageba scope

To allow bridge movements of up to 30 mm, mageba supplied two sliding plate expansion joints in lengths of 13 m and 24 m. The joints are attached to the substructure of the bridge and build the transition between road and bridge in normal condition. In the event of high water, the bridge will be lifted together with a part the joint structures.

Additionally, mageba supplied special deformation bearings allowing movements in any direction with movement limitation, based on the LASTO®BLOCK type NBa elastomeric bearings. On its upper part the elastomer block is fixed to the bridge deck and can be raised from the substructure when the bridge is lifted.

Highlights & Facts

mageba products:

Type: LASTO®BLOCK
elastomeric bearings
type NBa
Sliding plate
expansion joint

Installation: 2010

Structure:

City: Lugano
Country: Switzerland
Type: Lifting bridge
Completion: 2010
Length: 20 m
Owner: City of Lugano
Contractor: Geo Edil SA, Lugano
Engineer: Passera & Associati,
Lugano

The road bridge with lifting function is located in Cassarate in the canton of Ticino



The specially designed elastomeric bearings and the lifting device with 4 hydraulic pistons



The sliding plate construction is fixed to the bridge substructure

