

# M-3 Bridge, Astana (Kazakhstan)



## Project description

The M-3 Arch Bridge crosses the River Ishim in the city of Astana, capital of Kazakhstan. Its composite deck is supported by an arch at each side, connected by 28 stay cables per arch. The arches were formed from prefabricated steel elements, and were assembled individually using cranes and temporary supports.

The bridge spans 151.6 m and is 55 m wide. Its design called for four bearings in a standard arrangement, one at each corner.

## mageba scope

mageba designed and supplied the RESTON®SPHERICAL bearings that support the bridge's deck. A fixed bearing (type KF) at one corner forms the bridge's fixed point, and the other bearing at the same abutment is of the guided-sliding type, allowing transverse movements (type KEQ). The corresponding bearings at the other abutment have the same transverse fixities but allow longitudinal movements (types KE and KA respectively). Each bearing has a vertical load capacity (SLS) of over 30,000 kN.

## Highlights & facts

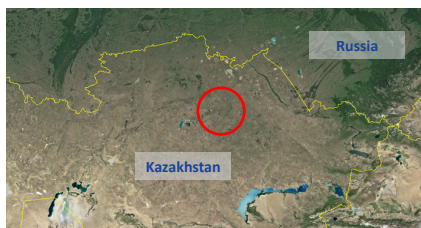
### mageba products:

Type: RESTON®SPHERICAL bearings (with CE label)  
Features: ROBO®SLIDE sliding material  
Installation: 2009

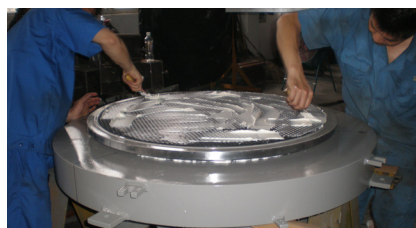
### Structure:

City: Astana  
Country: Kazakhstan  
Completed: 2009  
Type: Arch bridge  
Length: 150 m  
Engineer: Mostovik

The M-3 Bridge is located in Astana, northern Kazakhstan



Application of silicone grease to the upper (flat) sliding surface of a RESTON®SPHERICAL bearing



Assembly of a RESTON®SPHERICAL bearing in the factory (placing of upper part onto calotte)

