

# TR253 bearings programme (Singapore)



## Project description

Singapore is one of the most densely populated countries in the world, thus its transportation system is crucial for people to commute safely and easily throughout the city state.

Taking an interesting approach to bridge maintenance with the focus on key components rather than on individual structures as a whole, a programme of works was launched three years ago to replace the bearings of 36 bridges and viaducts across the country's main island.

The new bearings replacing the existing ones, had to be designed, fabricated and installed to exactly suit the layout, construction and dimensions of the existing bridge structures, which posed several challenges.

## mageba scope

While a number of the bridges required simple elastomeric bearings, many of them needed mechanical bearings of the pot type.

mageba met this need by supplying 273 RESTON®POT bearings, with a load capacity up to 15,500 kN and designed in accordance with BS5400.

However, at numerous locations, superstructure's movements since the time of the bridge construction resulted in an irreversible offset between the existing connection points to the superstructure and the substructure.

mageba therefore proposed the use of RESTON®POT HP bearings, which could be designed to suit the existing upper and lower connections in spite of the offset.

## Highlights & Facts

### mageba products:

Type: RESTON®POT and RESTON®POT HP bearings

Installation: 2017–2019

### Structure:

Country: Singapore

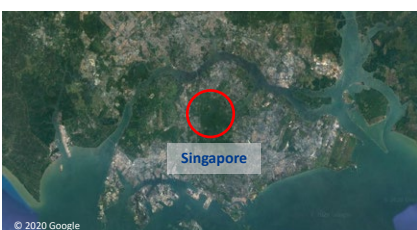
Type: Vehicular bridges

Main contractor: Gim Tian Civil Engineering Pte Ltd

Installation contractors: VSL Singapore Pte Ltd  
Utracon Structural Systems Pte Ltd

Owner: LTA Singapore

The vehicular bridges are located in Singapore



Casting of bearing plinth using non-shrink grout



Lowering of the bridge superstructure and transferring of load onto the new bearing

