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BEARING, EXPANSION JOINTS & SEISMIC DEVICES



LIUZHOU OVM MACHINERY CO., LTD.
WWW.OVM.CN

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BRIEF

Thanks to more than 50 years of experience, OVM is now a leading product supplier and specialist contractor in China in the field of prestressing and other special construction techniques. The OVM rubber company is specializing in the R&D, production, sales and services of bridge and building bearings, expansion joints, seismic devices and other related products.

The company has an annual production capacity of 650,000 sets of rubber bearings, 200,000 sets of seismic devices, 20,000 sets of pot & spherical bearings, and 120,000 meters of expansion joints. All products can meet common AASHTO, EN, BS specifications or project customization needs.

In addition, the company has spread its marketing and service network over large and middle cities in China including Hong Kong, and set up branches at Vietnam, the Middle East and North Africa, etc.



CE CERTIFICATIONS



Elastomeric bearing

Pot bearing

Spherical bearing

Lead rubber bearings (LRB)

Elastomeric isolators (HDBR)

SYSTEM CERTIFICATIONS



Quality, Occupational Health and Safety, Environmental Management System

LABORATORY CERTIFICATIONS AND THIRD-PARTY REPORTING



CNAS LABORATORY ACCREDITATION CERTIFICATE



USL CTL Laboratory



ITALY POLITECNICO DI MILANO Laboratory

BEARINGS

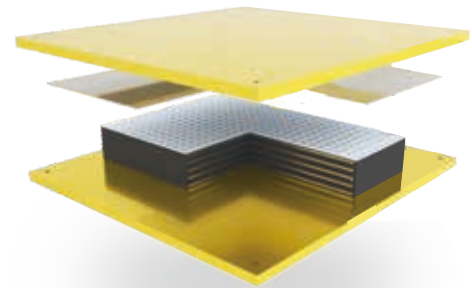
ELASTOMERIC BEARING



A laminated elastomeric bearing is a rubber block vulcanized elastomeric rubber with inner reinforcement steel plates. This bearing is a kind of connection between superstructure and substructure.

Characteristic:

- Sufficient vertical rigidities to bear and transmit normal loads;
- Good flexibilities for rotation in any direction;
- Considerable shear deformation to satisfy horizontal movement;



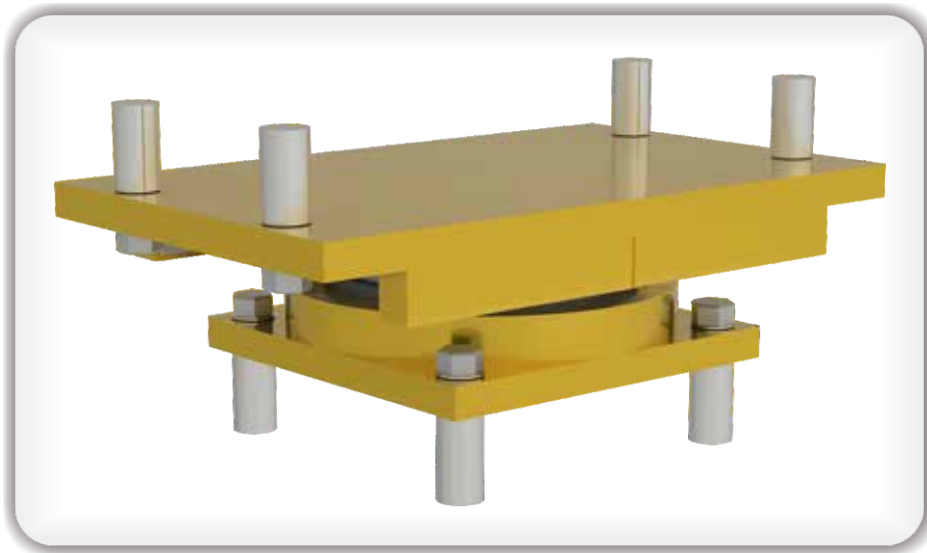
Perfect anti-vibration to reduce the impact of dynamic load. An Elastomeric bearing can also be bonded with PTFE plate to satisfy large horizontal movement in one or two directions.



POT BEARING GPZ

Pot bearing can be divided into three types: fixed, guided sliding, and free sliding. It can satisfy the requirements of large load capacity in three directions, great horizontal displacement and big rotation.

Pot bearing can be designed and manufactured according to AASHTO, EN1337, BS5400 Standards as well as customization.

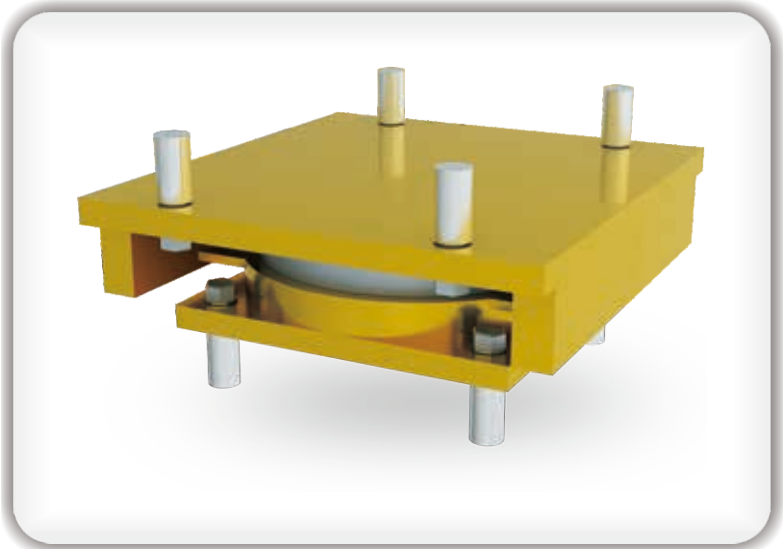


▲ CAMBODIA NCCB PROJECT

SPHERICAL BEARING QZ

Spherical bearing can be divided into three types: fixed, guided sliding, and free sliding. The spherical bearing not only has great capacity, large displacement, but also suitable for large rotation angle of 0.05rad or more in all directions, which is suitable for wide and curved bridges.

Spherical bearing can be designed and manufactured according to AASHTO, EN1337, BS5400 Standards as well as customization.

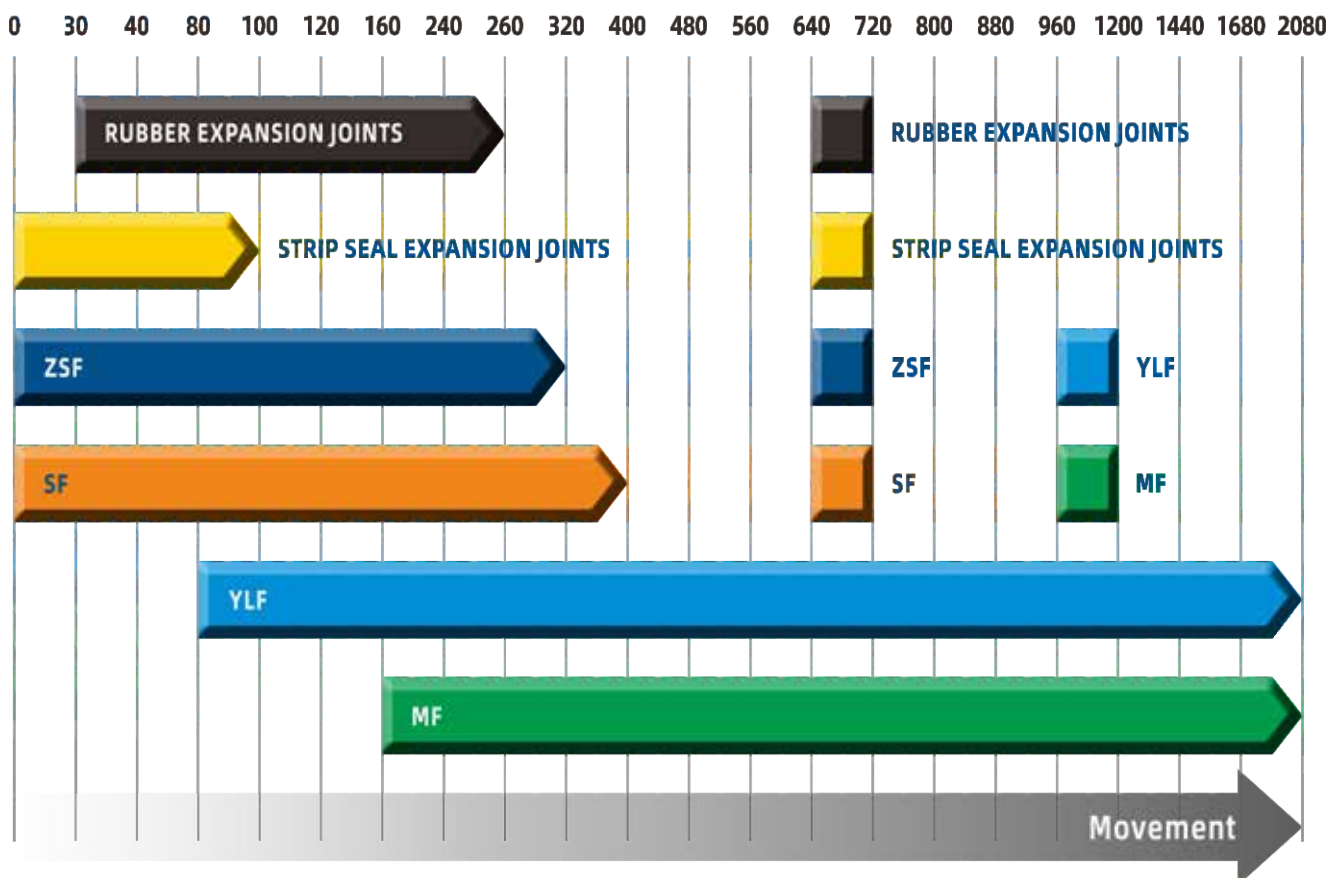


▲ Five-hundred-meter Aperture Spherical Telescope

EGYPT EL FERDAN ► RAILWAY BRIDGE



EXPANSION JOINTS



RUBBER EXPANSION JOINTS

Features and benefits

- Convenient installation
- Smooth driving
- low noise
- Light in weight

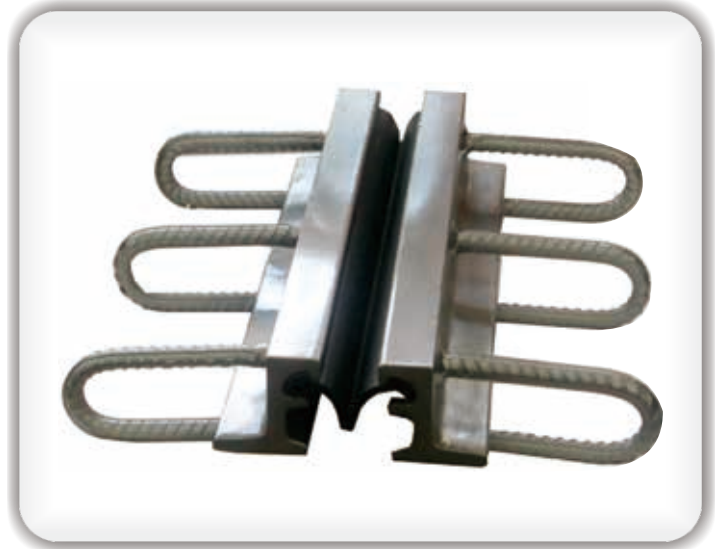


STRIP SEAL EXPANSION JOINTS

Features and benefits

- Simple structure
- Easy installation
- Excellent durability and reliability

The strip seal expansion joints have small height and simple structure, which is suitable for both old bridge replacement and new bridge build.

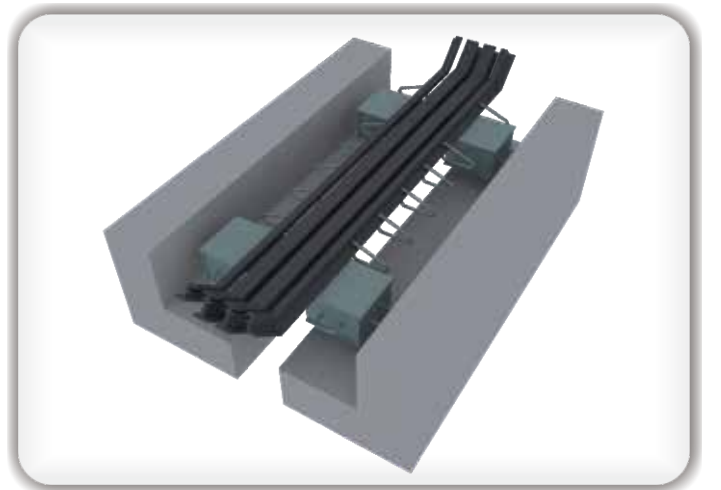


MODULAR EXPANSION JOINTS

Features and benefits

- Long service life
- Convenient installation and maintenance
- Smooth and stable for driving
- Excellent waterproof

The maximum displacement application for OVM modular expansion joints reaches 1840mm.

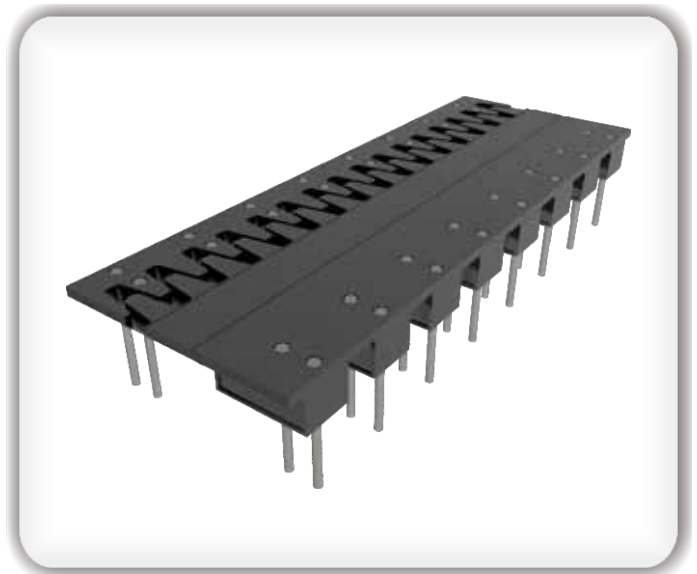
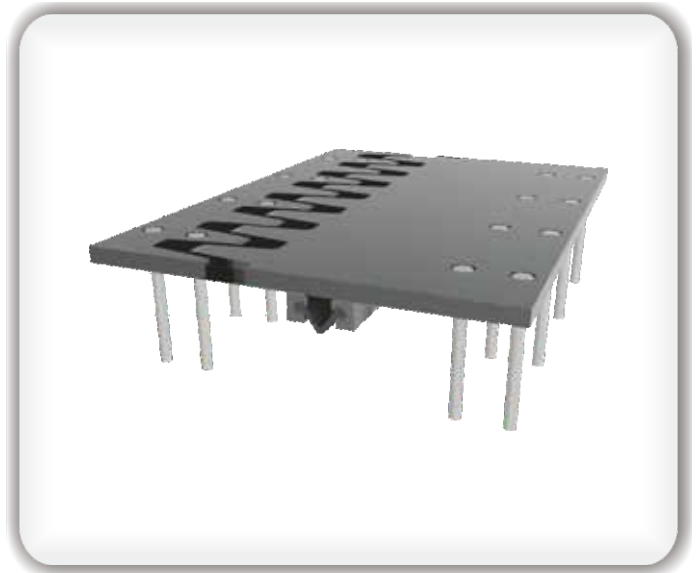


FINGER EXPANSION JOINTS

Features and benefits

- Long service life
- Convenient installation
- low noise
- Excellent waterproof

OVM prestressed multi-directional displacement finger expansion joints can meet the requirements of large displacement, multidirectional displacement, especially suitable for long-span cable-stayed bridges. The maximum displacement application for OVM finger expansion joints reaches 1600mm.



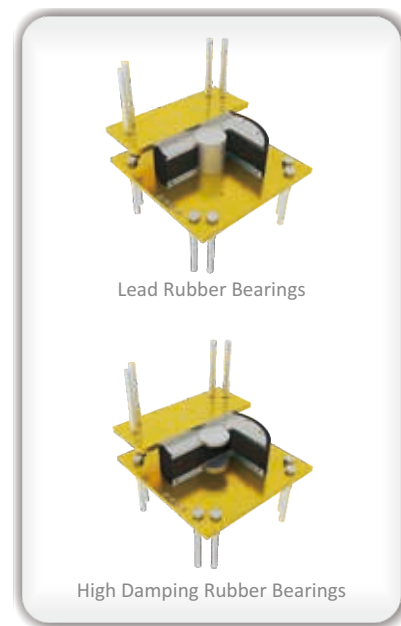
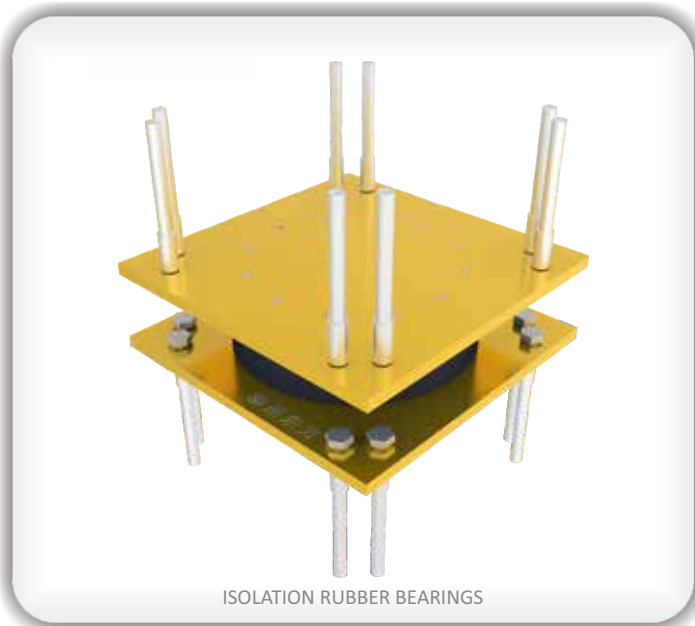
CHINA YANGSIGANG YANGTZE RIVER BRIDGE

SEISMIC DEVICES

ISOLATION RUBBER BEARINGS

Isolation rubber bearings are divided into lead rubber bearing and high damping rubber bearing, which is composed of compounded rubber layer, reinforcement steel plate or lead bar.

Isolation rubber bearings combines the characteristics of good vertical load capacity, excellent energy-dissipating capacity and great durability. Which is suitable for seismic isolation of bridges, buildings or other big structures.



CHINA THE HONGKONG-ZHUHAI-MACAO BRIDGE ▲

◀ CHINA TIANJIN LNG PROJECT

VISCOUS FLUID DAMPER

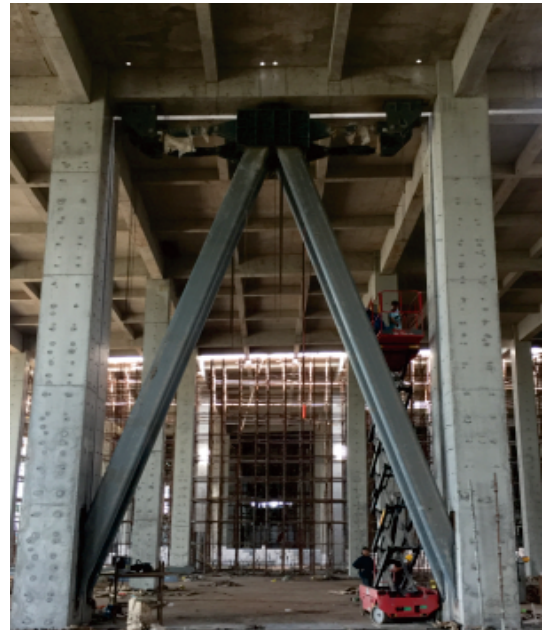
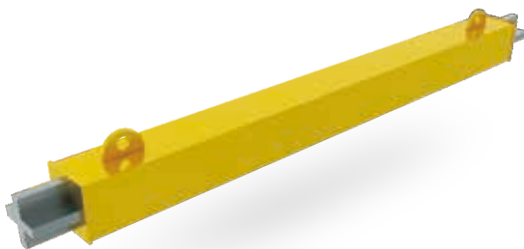
Viscous fluid damper is a kind of hydraulic device, which have no initial stiffness and no additional internal force to the structure, so it will not affect the structure's period, vibration mode, etc. But for rapid deformation cause by earthquake, it can rapidly consume energy and reduce the acceleration and displacement of the structures.

Viscous fluid damper has the advantages of smaller size, convenient installation and maintenance, great durability, and insensitive to temperature.



BUCKLING-RESTRAINED BRACE

The buckling-restrained brace is composed of core element, constraint element and sliding mechanism element. It has the characteristics of high bearing capacity, good ductility and hysteretic performance, and it's yield capacity is definitely. It can be used to protect the main structure from yielding or serious damage under the earthquakes, especially for bridges and buildings whose seismic intensity is 7 degree and above.



PERMANENT MAGNET ADJUSTABLE MAGNETORHEOLOGICAL DAMPER

Permanent magnet adjustable magnetorheological damper is an assembled vibration damper that use magnetorheological fluids to provide damping forces and use permanent magnets for regulation.

It is stable and reliable between the temperature of $-45^{\circ}\text{C} \sim 150^{\circ}\text{C}$, and is very suitable for vibration structure with high frequency and small displacement, such as bridge cable's vibration control.



EDDY CURRENT TUNED MASS DAMPER

Eddy current tuned mass damper is a vibration system composed of mass block, elastic element and damping element that can dissipates the vibration energy of the structure.

It is usually supported or suspended on the structure. When the structure vibrates under external excitation, the mass block will vibrate dissimilar to the main structure, and then producing opposing forces back to the structure to reduce the vibration response.

The OVM Eddy current tuned mass damper has using the eddy current damping technology instead of the traditional fluid viscous damping, which has the characteristics of ideal linear viscous damping, definite damping coefficient, no additional stiffness and no abrasion.



MOROCCO PHOTOVOLTAIC POWER PLANT

JOB REFERENCE

PROJECT APPLICATION (PARTIAL)			
YEAR	COUNTRY	PROJECT NAME	PRODUCTS
2021	GHANA	TAKORADI INTERCHANGE	PENDULUM BEARING
	SRI LANKA	CENTRAL EXPRESSWAY PROJECT	ELASTOMERIC BEARING
	TANZANIA	MAGUFULI BRIDGE	ISOLATION RUBBER BEARING POT BEARING EXPANSION JOINTS
	GEORGIA	E-60 HIGHWAY LOTI F1	ELASTOMERIC BEARING EXPANSION JOINTS
2020	GEORGIA	E-60 HIGHWAY LOTI F2	ISOLATION RUBBER BEARING EXPANSION JOINTS
	SRI LANKA	COLOMBO URBAN SOLID WASTE PROJECT	ISOLATION RUBBER BEARING POT BEARING EXPANSION JOINTS
	KENIA	KN88 PROJECT	ELASTOMERIC BEARING EXPANSION JOINTS
	INDONESIA	JALAN TOL UJUNG PANDANG SEKSI 3(JALAN LAYANG TOL AP PETTARANI)497	ISOLATION RUBBER BEARING
	PAKISTAN	KAROT HYDROPOWER PROJECT	ELASTOMERIC BEARING
	CAMBODIA	PHNOM PENH CHROY CHANGVAR BRIDGE	POT BEARING
	GHANA	POKUASE OVERPASS PROJECT	ELASTOMERIC BEARING EXPANSION JOINTS
2019	BOLIVIA	ESPION HIGHWAY PROJECT	ELASTOMERIC BEARING EXPANSION JOINTS
	VIETNAM	TRAN QUANG KHAI-BAC GIANG	ELASTOMERIC BEARING
	INDONESIA	JAPEK II ELEVATED	ISOLATION RUBBER BEARING
	ALGERIA	ALGERIA-PUR-MATERIAL-53KM-281	ISOLATION RUBBER BEARING
	MALDIVES	BRIDGE 1 TO 5 IN HULHUMALE	ELASTOMERIC BEARING EXPANSION JOINTS
	SRI LANKA	COLOMBO PORT CITY DEVELOPMENT PROJECT	ELASTOMERIC BEARING EXPANSION JOINTS
	SAUDI ARABIAN	LINK TAMA BY PASS VIA KING SALMAN ST. (PHASE 3)	POT BEARING
	GHANA	KUMASI ROADS AND DRAINAGE EXTENSION PROJECT	ELASTOMERIC BEARING EXPANSION JOINTS
	GEORGIA	E-60 HIGHWAY SECTION FROM ZEMO OSIAURI TO CHUMATELETI LOTI	ISOLATION RUBBER BEARING
	EGYPT	EL-FERDAN BRIDGE	SPHERICAL BEARING
2018	KAZAKHSTAN	FLOODED BRIDGE OVER THE URAL RIVER	POT BEARING
	SRI LANKA	OUTER CIRCULAR HIGHWAY	SPHERICAL BEARING EXPANSION JOINTS
	MALDIVES	BRIDGE 1 TO 5 IN HULHUMALE	ELASTOMERIC BEARING
	VIETNAM	MO RONG TUYEN DUONG BAO BIEN NUI BAI THO	POT BEARING
	SAUDI ARABIAN	TUNNEL AT INTERSECTION OF KING FAHD WITH KING ABDULLAH ROAD	EXPANSION JOINTS
	SRI LANKA	NORTH SOUTH HIGHWAY	ELASTOMERIC BEARING EXPANSION JOINTS
	ALGERIA	MASCARA HIGHWAY	ELASTOMERIC BEARING

*Job reference are not limited to the columns in the table.

APPLICATION



SRI LANKA COLOMBO PORT CITY



ALGERIA REALISATION DE LA SECTION AUTOROUTIERE
ENTRE LA CHIFFA ET BERROUAGHIA SUR 53KM



INDONESIA JAKARTA-CIKAMPEK II ELEVATED TOLL ROADS



SRI LANKA SOUTH HIGHWAY



KUWAIT JAHRA ROAD RA/166



QATAR EAST CORRIDOR



SAUDI ARABIA VIADUCT MINA-MUZDALIFA



GEORGIA E-60 HIGHWAY



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